User Guide - Exchange Mailbox Archiver Agent

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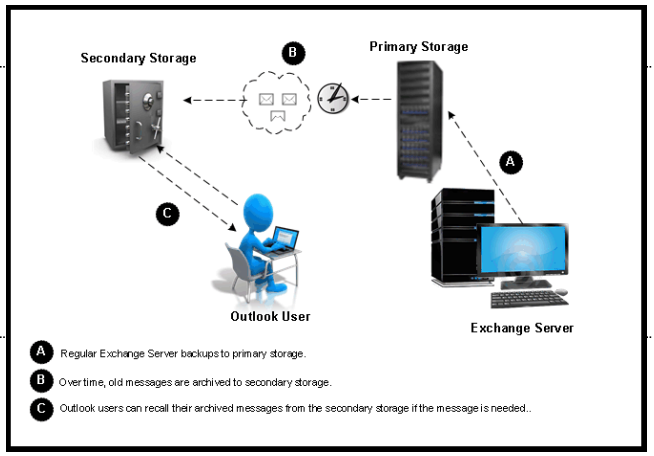
Install the Exchange Agents
Walks you through the process of installing the Exchange Agents.

INTRODUCTION

The Exchange Archiver Agents provide a seamless vehicle for moving old or infrequently used mailbox items to secondary storage. In doing so, regular backups of more vital Exchange data are more efficient, costs are saved by freeing up primary disk space, and end-user mailboxes become easier to manage. Added options for Outlook integration, compliance searches, and reporting help ensure all archived Exchange data is easily traceable and retrievable whenever the need arises.

KEY FEATURES

The Exchange Archiver Agents offer the following key features:



COMPREHENSIVE MAILBOX AND PUBLIC FOLDER ARCHIVE AND RECOVERY OPTIONS

The Exchange Mailbox and Public Folder Archiver Agents seamlessly move messages meeting specified criteria to secondary storage. Optionally, archived messages can be replaced with special header icons in the original mailbox, known as stubs, which contain information for recovery. Users can double-click the message stub in Outlook or Outlook Web Access (OWA) to recover the original message. Alternatively, users can also ask the administrator to browse the CommCell Console to recover the message.

SEARCH OPTIONS FOR COMPLIANCE USERS

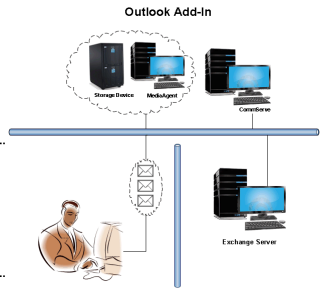
Exchange Compliance Archiver works in conjunction with the message journaling feature of Microsoft Exchange Server software to archive all incoming and outgoing messages and attachments. All incoming messages and outgoing messages are captured in the Exchange Journal Mailbox, which is then archived with the Exchange Compliance Archiver agent according the schedules you set. Incoming messages are written to the journal as they come into the Exchange Server. Therefore, all messages are recorded, regardless of whether the message recipient deletes the message in his or her mailbox.

The archived data remains available for retrieval for the length of time set by the retention rules. During this period the data is readily available for access and retrieval by authorized users. They can retrieve duplicate copies from the archive, which remains under the management of the Storage Policy. All archived data is protected from any edit or alteration from all users within the context of the archival system (i.e., the archived data on the storage media cannot be written to or altered).

ADD-ON COMPONENTS

OUTLOOK ADD-IN

Outlook Add-In fully integrates with Microsoft Outlook to provide users with a convenient way to browse, search and recover mailbox items directly from Outlook. All mailbox entities, including messages, attachments, calendar items, and notes, are retrievable from either the locally installed Outlook application or the Outlook Web Access web browser application.



DESKTOP BROWSE

Desktop Browse enables users to browse and restore data from a Web Browser, which provides the facility to access and restore data from anywhere.

CONTENT INDEXING AND SEARCH

Content Indexing and Search enables users to content index their data and later search the data from a user-friendly web interface. The users can also perform restore operations or other advanced actions on the searched data.

TERMINOLOGY

The Microsoft Exchange Server *i*DataAgent documentation uses the following terminology:

DATABASE	Includes all operational elements of the Exchange Server, such as Stores, Transaction Logs, Patch Files, and Exchange Organizational Data.
NON-EXCHANGE SERVER	A computer other than the Exchange Server on which the Mailbox and Public Folder *i*DataAgents may be installed. Using a non-Exchange Server often results in less overhead on the Exchange Server during backup and restore operations.
AFFINITY	An association between two entities used in Automatic Discovery scenarios. For example, automatic discovery of mailboxes by database affinity implies the mailbox is included in the selected database.

System Requirements - Exchange Mailbox Archiver Agent

System Requirements | Supported Features

The following requirements are for the Exchange Mailbox Archiver Agent:

APPLICATION

Microsoft Exchange 2003 32-bit Server up to the latest service pack
Microsoft Exchange 2007 64-bit Server up to the latest service pack
Microsoft Exchange 2010 64-bit Server up to the latest service pack

OPERATING SYSTEM

WINDOWS SERVER 2008

Microsoft Windows Server 2008 x64 Editions*

*Core Editions not supported

WINDOWS SERVER 2003

Microsoft Windows Server 2003 32-bit and x64 Editions with a minimum of Service Pack 1

CLUSTER - SUPPORT

The software can be installed on a Cluster if clustering is supported by the above-mentioned operating systems.

For information on supported cluster types, see Clustering - Support.

HARD DRIVE

1 GB of minimum disk space is required for installing the software.

256 MB of free disk space is required for job result directory.

256 MB of free disk space is required for log directory.

OWA PROXY ENABLER

256 MB minimum of hard disk space for installing the software.

OUTLOOK ADD-IN CLIENT

50 MB minimum of hard disk space for installing the software.

721 MB of temp space required for install.

Ensure that your setup has disk space to install the following:

Visual Studio Tools for Office

.NET Framework 4

MEMORY

32 MB RAM minimum required beyond the requirements of the operating system and running applications

PROCESSOR

All Windows-compatible processors supported

SUPPORTED COMPONENTS

OWA PROXY ENABLER

The OWA Proxy Enabler is supported on any platform supported by the Microsoft Exchange Server.

WEB PROXY AGENT

The Web Proxy Agent is supported on any platform supported by the Microsoft Exchange Server.

OUTLOOK ADD-IN CLIENT

The Outlook Add-In Client is supported with Microsoft Outlook 2003 or higher.

PERIPHERALS

DVD-ROM drive

Network Interface Card

MISCELLANEOUS

NETWORK

TCP/IP Services configured on the computer.

MICROSOFT VISUAL C++

Microsoft Visual C++ 2008 Redistributable Package is automatically installed. Note that Visual C++ 2008 Redistributable Package can co-exist with other versions of this software.

.NET FRAMEWORK

.NET Framework 2.0 is automatically installed. Note that .NET Framework 2.0 can co-exist with other versions of this software.

NOTES ON MICROSOFT EXCHANGE SERVER *i*DATAAGENT INSTALLATION

Microsoft Exchange 2007 64-bit Server Agents are 32-bit MAPI-based Agents installed on a Microsoft Windows x64 platform. See Installing 32-bit Components on a Microsoft Windows x64 Platform for information on installation and configuration requirements for these Agents.

- The Microsoft Exchange 2003 and 2007 Mailbox and Public Folder-based Agents can be installed in two ways:
  - directly on the Microsoft Exchange Server computer
  - as Proxy Agents on a separate computer running a supported 32-bit operating system

NOTES ON OUTLOOK OWA PROXY ENABLER INSTALLATION

Prior to configuring Web Access for Exchange 2007 Mailbox/Public Folder Archiver, Exchange WebProxy Archiver Agent, or OWA Proxy Enabler, ensure that the Client Access Role has been configured on the Exchange Server.

NOTES ON OUTLOOK ADD-IN CLIENT INSTALLATION

For Windows clients, JRE 1.7.0_17 is installed automatically with the Outlook Add-In software if it is not already installed.

.NET Framework is needed to support RPC over HTTP connection mode, as well as support for the Exchange Offline Mining Tool. It is not automatically installed by the MSI package and must be manually installed.

Update 331320 must be installed on the client in order to use RPC over HTTP. Contact Microsoft Product Support Services and refer to KB 331320 to obtain this patch.

The Microsoft Visual C++ 2008 Redistributable Package is not automatically installed for MSI installs. However, the required subset of files from Microsoft Visual C++ 2008 Redistributable Package are provided as part of the software and therefore, manual installation is not required.

DISCLAIMER

Minor revisions and/or service packs that are released by application and operating system vendors are supported by our software but may not be individually listed in our System Requirements. We will provide information on any known caveat for the revisions and/or service packs. In some cases, these revisions and/or service packs affect the working of our software. Changes to the behavior of our software resulting from an application or operating system revision/service pack may be beyond our control. The older releases of our software may not support the platforms supported in the current release. However, we will make every effort to correct the behavior in the current or future releases when necessary. Please contact your Software Provider for any problem with a specific application or operating system.

Additional considerations regarding minimum requirements and End of Life policies from application and operating system vendors are also applicable

Deployment - Exchange Server Agents

PLANNING YOUR INSTALLATION

The Microsoft Exchange Server Agents can be installed individually or in any combination. However, your installation options will differ depending on your environment and the combination of Agents you intend to install.

To ensure you select the appropriate installation option for your environment, first compile the following information:

EXCHANGE AGENTS TO BE INSTALLED

For complete protection, it is recommended all Agents be installed in your environment.

EXCHANGE SERVER VERSION

The Exchange Server Version can be 2010, 2007, or 2003.

WILL THE AGENTS BE INSTALLED ON THE EXCHANGE SERVER?

You can install Agents on the Exchange Server or another computer (Non-Exchange Server). The Database iDataAgent, however, must be installed on the Exchange Server.

IS THE COMPUTER 32-BIT OR 64-BIT?

Whether installing on the Exchange Server or a Non-Exchange Server, the bit-rate can be 32-bit or 64-bit.

WHAT VERSION OF OUTLOOK IS INSTALLED ON THE COMPUTER?

Outlook must be installed on the computer for all Agents except the Database iDataAgent and can be version 2010 or 2007.

IS THE OUTLOOK VERSION 32-BIT OR 64-BIT?

The Outlook bit-rate can be 32-bit or 64-bit.

WILL YOU BE INSTALLING THE AGENTS IN A CLUSTERED ENVIRONMENT?

INSTALLATION OPTIONS

Once you have compiled the above information, choose the appropriate installation procedure as described in the tables below.

EXCHANGE SERVER 2013

SERVER SETUP	OUTLOOK VERSION	INSTALLATION PROCEDURE	SUPPORTED AGENTS
INSTALLING ON THE EXCHANGE SERVER			
64-bit Exchange Server	N/A	Install the 64-bit Exchange Agents for Exchange Server 2013	Database Agent for Database Availability Group (DAG) Configuration

EXCHANGE SERVER 2010

SERVER SETUP	OUTLOOK VERSION	INSTALLATION PROCEDURE	SUPPORTED AGENTS
INSTALLING ON THE EXCHANGE SERVER			
64-bit Exchange Server	Outlook 2010 64-bit	Install the 64-bit Exchange Agents for Exchange Server 2010 or 2007	Database, Mailbox, and Public Folder iDataAgents Compliance, Mailbox, and Public Folder Archivers
64-bit Exchange Server	Outlook 2010/2007 32-bit	Install the 32-bit Exchange Agents for Exchange Server 2010 or 2007	Database, Mailbox, and Public Folder iDataAgents Compliance, Mailbox, and Public Folder Archivers

64-bit Exchange Server	N/A	Install the 64-bit Exchange Agents for Exchange Server 2010 or 2007	Database Agent for Database Availability Group (DAG) Configuration
INSTALLING ON A NON-EXCHANGE SERVER			
32-bit Non-Exchange Server	Outlook 2010/2007 32-bit	Install the 32-bit Exchange Agents on a Non-Exchange Server	Mailbox and Public Folder iDataAgents Compliance, Mailbox, and Public Folder Archivers
64-bit Non-Exchange Server	Outlook 2010/2007 32-bit	Install the 32-bit Exchange Agents for Exchange Server 2010 or 2007	Mailbox and Public Folder iDataAgents Compliance, Mailbox, and Public Folder Archivers
64-bit Non-Exchange Server	Outlook 2010 64-bit	Install the 64-bit Exchange Agents for Exchange Server 2010 or 2007	Mailbox and Public Folder iDataAgents Compliance, Mailbox, and Public Folder Archivers

EXCHANGE SERVER 2007

SERVER SETUP	OUTLOOK VERSION	INSTALLATION PROCEDURE	SUPPORTED AGENTS
INSTALLING ON THE EXCHANGE SERVER			
64-bit Exchange Server	Outlook 2010 64-bit	Install the 64-bit Exchange Agents for Exchange Server 2010 or 2007	Database, Mailbox, and Public Folder iDataAgents Compliance, Mailbox, and Public Folder Archivers
64-bit Exchange Server - Cluster	Outlook 2010 64-bit	Install the 64-bit Exchange Agents for Exchange Server 2010 or 2007 - Clustered Environment	Database, Mailbox, and Public Folder iDataAgents Compliance, Mailbox, and Public Folder Archivers
64-bit Exchange Server	Outlook 2010/2007 32-bit	Install the 32-bit Exchange Agents for Exchange Server 2010 or 2007	Database, Mailbox, and Public Folder iDataAgents Compliance, Mailbox, and Public Folder Archivers
64-bit Exchange Server - Cluster	Outlook 2010/2007 32-bit	Install the 32-bit Exchange Agents for Exchange Server 2010 or 2007 - Clustered Environment	Database, Mailbox, and Public Folder iDataAgents Compliance, Mailbox, and Public Folder Archivers
INSTALLING ON A NON-EXCHANGE SERVER			
32-bit Non-Exchange Server	Outlook 2010/2007 32-bit	Install the 32-bit Exchange Agents on a Non-Exchange Server	Mailbox and Public Folder iDataAgents Compliance, Mailbox, and Public Folder Archivers
64-bit Non-Exchange Server	Outlook 2010/2007 64-bit	Install the 64-bit Exchange Agents for Exchange Server 2010 or 2007	Mailbox and Public Folder iDataAgents Compliance, Mailbox, and Public Folder Archivers

EXCHANGE SERVER 2003

SERVER SETUP	OUTLOOK VERSION	INSTALLATION PROCEDURE	SUPPORTED AGENTS
INSTALLING ON THE EXCHANGE SERVER			
Exchange Server	Not Required	Install the Exchange Agents on Exchange Server 2003	Database, Mailbox, and Public Folder iDataAgents Compliance, Mailbox, and Public Folder Archivers
Exchange Server - Cluster	Not Required	Install the Exchange Agents on Exchange Server 2003 - Clustered Environment	Database, Mailbox, and Public Folder iDataAgents Compliance, Mailbox, and Public Folder Archivers
INSTALLING ON A NON-EXCHANGE SERVER			
Non-Exchange Server	Outlook 2010/2007 32-bit	Install the Exchange Agents for Exchange Server 2003 on a Non-Exchange Server	Mailbox and Public Folder iDataAgents Compliance, Mailbox, and Public Folder Archivers

Install the 64-bit Exchange Agents for Exchange Server 2010 or 2007

Previous Next

Follow the steps given below to install Exchange Agents on one of the following:

- 64-bit Exchange Server 2010
- 64-bit Exchange Server 2007
- 64-bit Non-Exchange Server

WHERE TO INSTALL

The Exchange Agents can be installed in one of two ways:

- Directly onto the Exchange Server. This method is referred to as an on-host installation and is useful if you want to preserve hardware resources.
- On a separate computer with connectivity to the Exchange Server. This method is referred to as an Non-Exchange Server installation and is useful if you want to offload the memory and processing resources required for backups and restores from the Exchange Server.

  Install the Exchange Agents on all the nodes on which backups have to be run in a DAG configuration.

INSTALLATION

The software can be installed using one of the following methods:

METHOD 1: INTERACTIVE INSTALL

Use this procedure to directly install the software from the installation package or a network drive.

METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

Use this procedure to remotely install the software on a client computer.

RELATED TOPICS

Download Software Packages
Provides step-by-step procedure to download the latest packages for software install.

System Requirements
Verify that the computer in which you wish to install the software satisfies the System Requirements.

Firewall
Provides comprehensive information on firewall.

PREREQUISITES

If you are installing the Exchange Agents on a 64-bit off-host proxy computer, perform the following pre-requisite task before installing these agents:

- Ensure that the proxy computer has been added to the same Domain in which the Exchange Server 2007 resides.
- Install Microsoft Outlook 2007 or higher on the off-host proxy computer in order to supply the software drivers necessary for Exchange-based agents to function in an off-host proxy configuration.

FOR EXCHANGE SERVER 2010

- Ensure that the service account is a member of Organization Management group.
- Ensure that the mail-enabled user is a member of the Local Administrator Group and have rights to all mailboxes on the server.

To assign full access follow the steps given below:

- Using ADSIEDIT navigate to Configuration | Services | Microsoft Exchange.
- Right-click your organization name, click Properties | Securities and click the Advanced tab.
- Click Edit to modify the permissions set for Organization Management group.
- Click to select Full Control, Receive As and Send As permissions and wait for replication.
- Click the Effective Permission tab and Select the name of the backup account.
- The backup account should display the following as selected:

  Full Control

  All Extended Rights

  Send As

  Receive As

- Start the PowerShell and type the following to add the backup account so it has full control over all the databases:

```
Get-MailboxDatabase -server (server name) | Add-ADPermission -user "backup account" -ExtendedRights Receive-As
```

Run the above PowerShell every time a new database is added.

- Navigate to the Exchange Management Console, right-click the <mailbox> and click Manage Full Access Permissions to view the mailbox listed under Full Access Permissions.

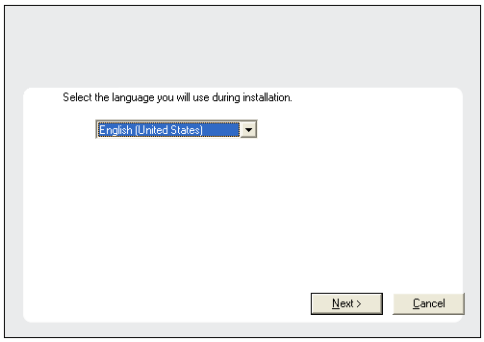
FOR EXCHANGE SERVER 2007

- Service account should be a member of Exchange Organization Administrators group.
- Ensure that the mail-enabled user is a member of the Local Administrator Group and have rights to all mailboxes on the server.

METHOD 1: INTERACTIVE INSTALL

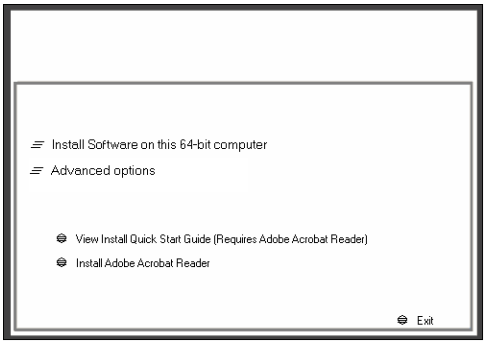
1. Log on to the computer using an account with the following privileges:
   - Administrator of the local computer
   - Administrator of the Exchange Server
2. Run **Setup.exe** from the Software Installation Package.
3. Select the required language.

   Click **Next**.



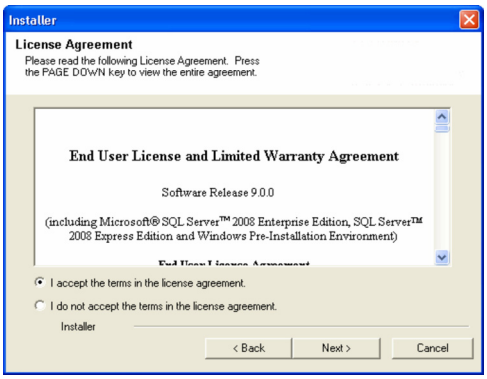
4. Select the option to **Install Calypso on this 64-bit computer**.

   Your screen may look different from the example shown.



5. Select **I accept the terms in the license agreement**.

   Click **Next**.

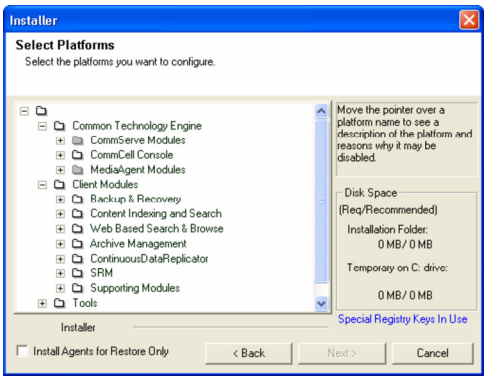


6. To install the **Exchange *i*DataAgents** expand **Client Modules | Backup & Recovery | Exchange,** and select one or more of the following:
   - **Exchange Database *i*DataAgent**
   - **Exchange Mailbox *i*DataAgent**
   - **Exchange Public Folder *i*DataAgent**

   To install the **Exchange Archiver Agents**, expand **Client Modules | Archive Management**, and select one or more of the following:
   - **Exchange Compliance Archiver**
   - **Exchange Mailbox Archiver Agent**
   - **Exchange Public Folder Archiver Agent**

Click **Next**.

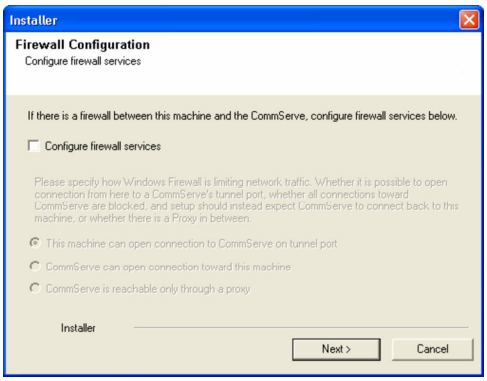
For Non-Exchange Server, Exchange Database *i*DataAgent will not be applicable.



7. If this computer and the CommServe is separated by a firewall, select the **Configure firewall services** option and then click **Next**.

   For firewall options and configuration instructions, see Firewall Configuration and continue with the installation.

   If firewall configuration is not required, click **Next**.

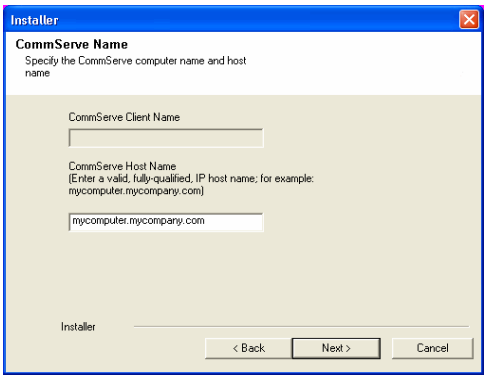


8. Enter the fully qualified domain name of the **CommServe Host Name**.

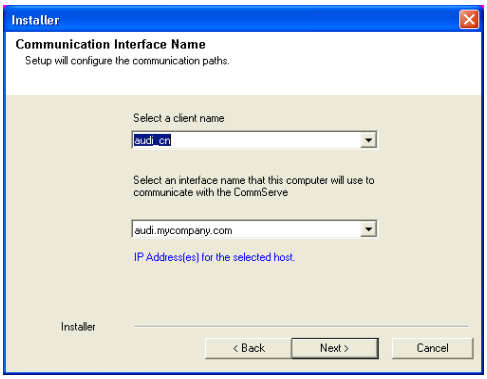
   Click **Next**.

   Do not use space and the following characters when specifying a new name for the CommServe Host Name:

   \|`~!@#$%^&*()+=<>/?,[]{}:;'"



9. Click **Next**.

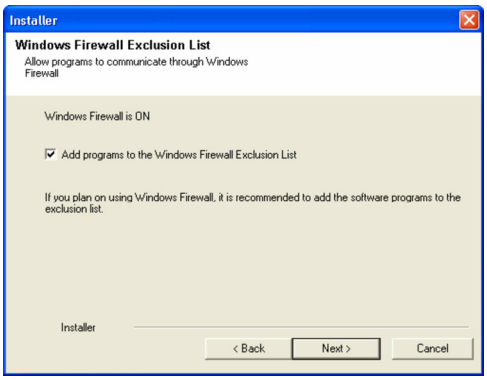


10. Select **Add programs to the Windows Firewall Exclusion List**, to add CommCell programs and services to the Windows Firewall Exclusion List.

    Click **Next**.

    This option enables CommCell operations across Windows firewall by adding CommCell programs and services to Windows firewall exclusion list.

    It is recommended to select this option even if Windows firewall is disabled. This will allow the CommCell programs and services to function if the Windows firewall is enabled at a later time.



11. Verify the default location for software installation.

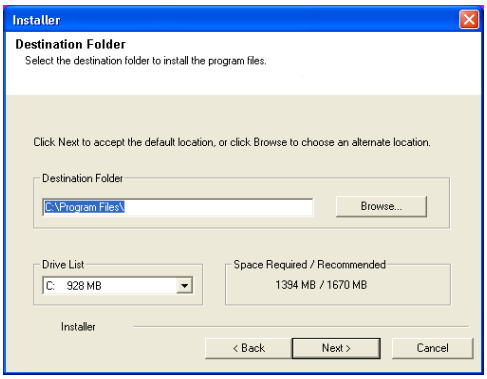
    Click **Browse** to change the default location.

    Click **Next**.

    - Do not install the software to a mapped network drive.
    - Do not use the following characters when specifying the destination path:

      / : * ? " < > | #

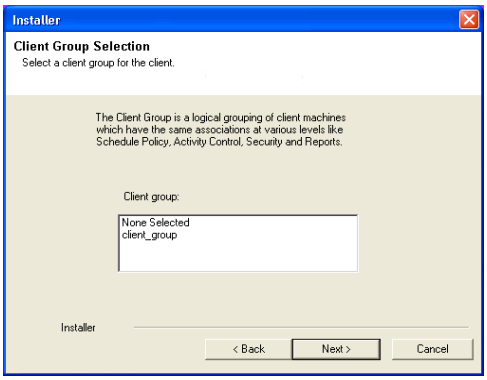
      It is recommended that you use alphanumeric characters only.



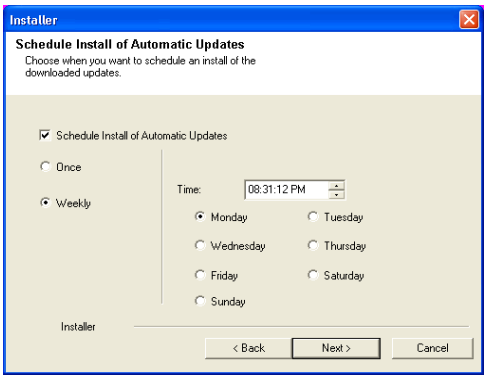
12. Select a Client Group from the list.

    Click **Next**.

    This screen will be displayed if Client Groups are configured in the CommCell Console.

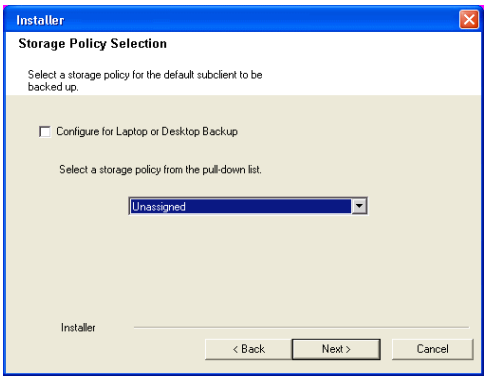


13. Click **Next**.



14. Select a **Storage Policy**.

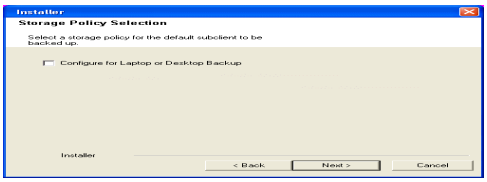
    Click **Next**.



If you do not have Storage Policy created, this message will be displayed.

Click **OK**.

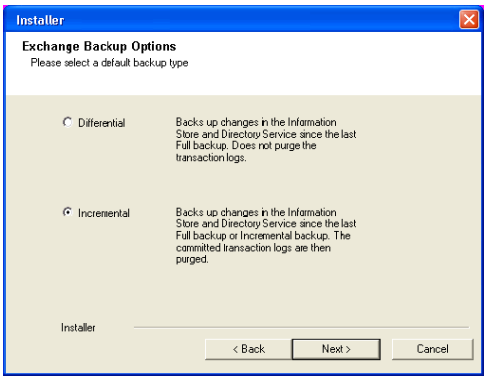
You can create the Storage Policy later in step 24.



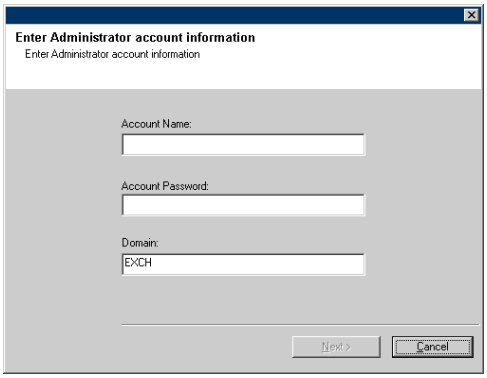
- If you are installing the Exchange Database *i*DataAgent on the Exchange Server, click Configure Exchange Database Specific Information.
- If you are installing the Exchange Agents on the Non-Exchange Server, skip to Configure Exchange Agents Specific Information.

CONFIGURE EXCHANGE DATABASE SPECIFIC INFORMATION

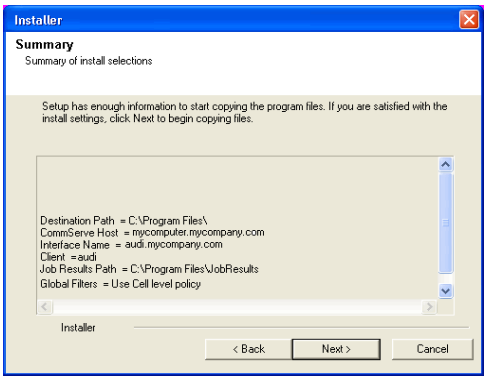
15. Select the backup type for Exchange Database backups. Choose either of the following options, then click **Next**.
    - **Differential** - Specifies that each non-full Exchange Database backup secures all data that has changed since the last full backup. Transaction lobs are not purged.
    - **Incremental** - Specifies that each non-full Exchange Database backup secures only that data that has changed since the last backup of any type. Committed transaction logs are purged.



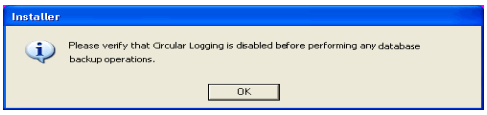
16. Enter the user credentials to access the Exchange Server to perform the backup operation.
    - The User Account must have Exchange Administrator privileges.
    - The installation detects the domain name. If necessary, you can modify the domain name by specifying Windows domain that the Exchange Server resides in.



17. Click **Next**.



18. The install program displays a reminder to verify that Circular Logging is disabled before performing any database backup operations. To verify that Circular Logging is disabled:



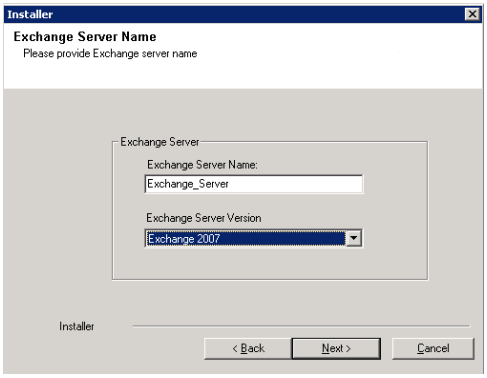
- From Exchange System Manager, navigate to and expand the server that the Database *i*DataAgent is being installed on.
- Verify that the Circular Logging check box has not been selected for each Storage Group. If Circular Logging has been enabled for a Storage Group, disable it at this time.

Click **OK**.

- If you are installing the Exchange Agents, then click Configure Exchange Agents Specific Information.
- If you are installing the Exchange Database *i*DataAgent, skip to Verify Summary of Install Options.

CONFIGURE EXCHANGE AGENTS SPECIFIC INFORMATION

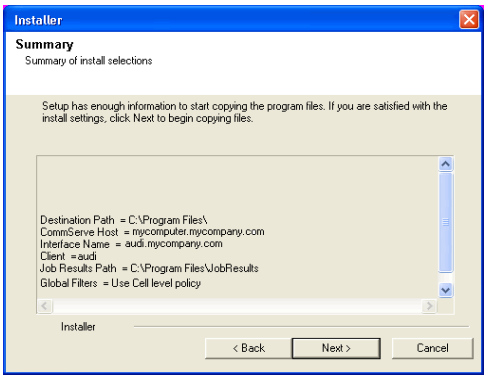
19. Select **Exchange Server Name** and **Exchange Server Version** from drop-down list.



Click **Next**.

This screen will appear when you are installing Exchange Agents on Non-Exchange Server.

20. Click **Next**.

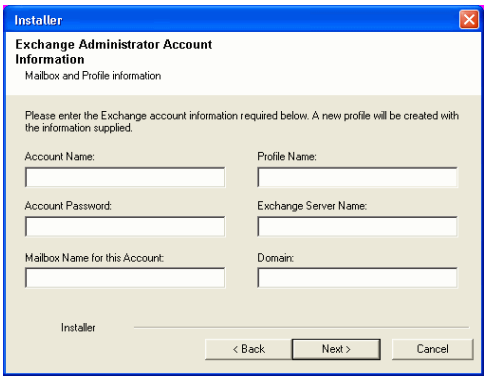


21. Enter the following Exchange Administrator information then click **Next**.
- **Account Name** - Domain user account created with the exchange server administrator permissions. Do not include the domain name here.
- **Account Password** - The password assigned to the domain user.
- **Mailbox Name for this Account** - Mailbox associated with the user above.
- **Profile Name** - Specify profile name to be created during agent install. This profile is associated with the domain user's mailbox.

- **Exchange Server Name** - Name of the Exchange Server that the agent will communicate with for data protection and recovery operations.

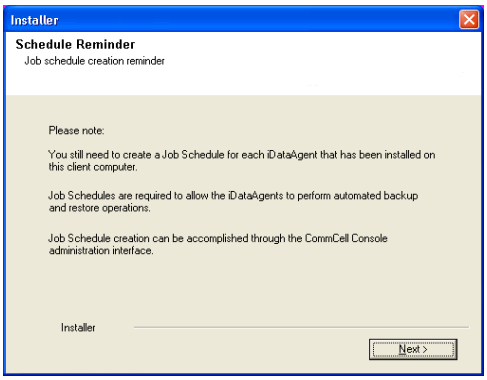
  Enter the Mailbox Role Server name (NetBIOS). After installation configure the roles as described in Configure Mailboxes in Database Availability Group (DAG) Servers.

- **Domain** - The installation detects and enters a domain name. If necessary, modify the domain name by specifying Windows domain that the Exchange Server resides in.

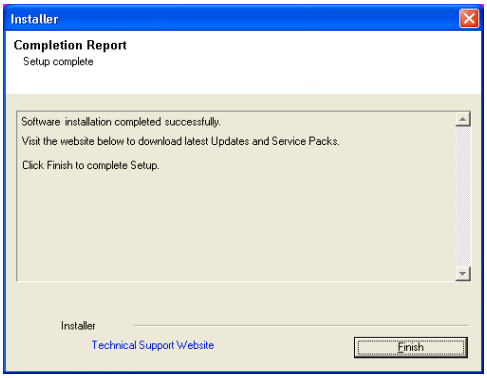


VERIFY SUMMARY OF INSTALL OPTIONS

22. Click **Next**.



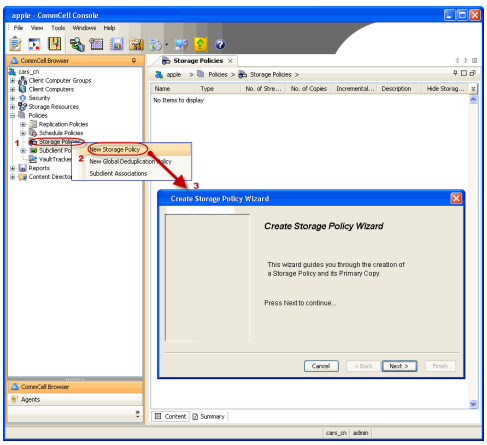
23. Click **Finish**.



CHOICE If you already have a storage policy selected in step 14, Click Next button available at the bottom of the page to proceed to the **Configuration** section.

If you do not have Storage Policy created, continue with the following step.

24. Create a Storage Policy:



1. From the CommCell Browser, navigate to **Policies**.
2. Right-click the **Storage Policies** and then click **New Storage Policy**.
3. Follow the prompts displayed in the Storage Policy Wizard. The required options are mentioned below:
   - Select the Storage Policy type as **Data Protection and Archiving** and click **Next**.
   - Enter the name in the **Storage Policy Name** box and click **Next**.
   - From the **Library** list, click the name of a disk library to which the primary copy should be associated and then click **Next**.

     Ensure that you select a library attached to a MediaAgent operating in the current release.

   - From the **MediaAgent** list, click the name of a MediaAgent that will be used to create the primary copy and then click **Next**.
   - For the device streams and the retention criteria information, click **Next** to accept default values.

- Select **Yes** to enable deduplication for the primary copy.
- From the **MediaAgent** list, click the name of the MediaAgent that will be used to store the Deduplication store.

  Type the name of the folder in which the deduplication database must be located in the Deduplication Store Location or click the Browse button to select the folder and then click **Next**.
- Review the details and click **Finish** to create the Storage Policy.

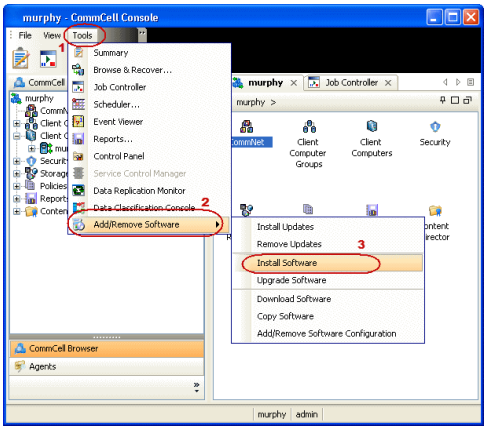
25. Enable the following registry key to create job specific profiles:

- From the CommCell Browser, navigate to Client Computers.
- Right-click the <Client> in which you want to add the registry key, and then click Properties.
- Click the Registry Key Settings tab.
- Click Add.
- Enter CreateProcessSpecificProfile in the Name field.
- Enter MSExchangeMBAgent in the Location field. (For Exchange Mailbox iDataAgent).

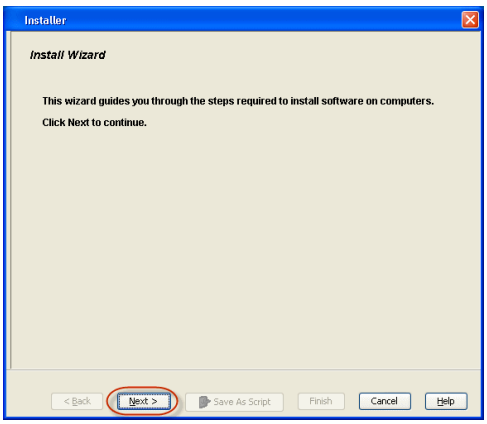
  Enter MSExchangeDMAgent in the Location field. (For Exchange Mailbox iDataAgent).
- Enter REG_DWORD in the Type filed.
- Enter 1 to enable and 0 to disable the key in the Value field.
- Click OK.

METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

1. From the CommCell Browser, select **Tools**, point to **Add/Remove Software**, and then click **Install Software.**

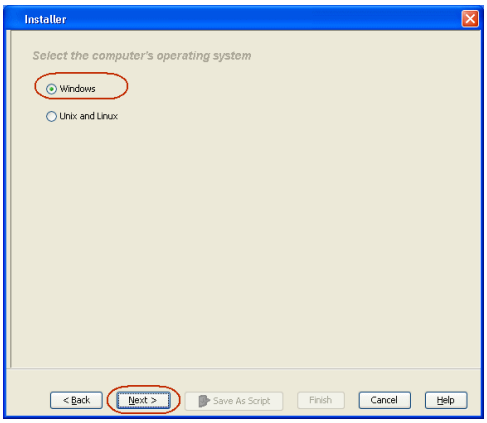


2. Click **Next**.



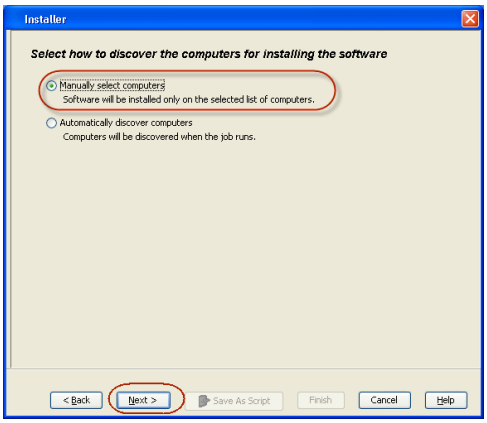
3. Select **Windows**.

   Click **Next**.



4. Select **Manually Select Computers**.

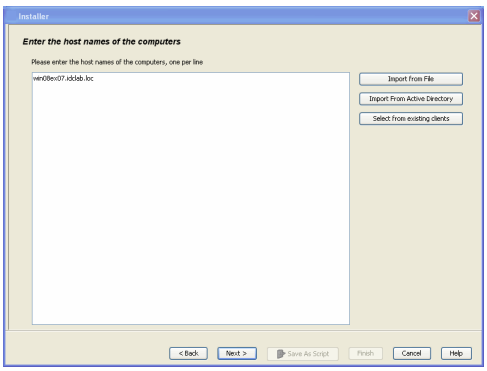
   Click **Next**.



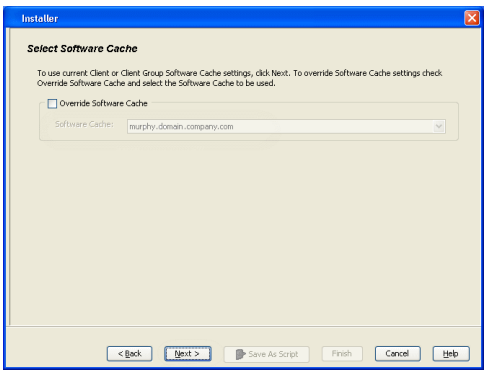
5. Enter the fully qualified domain name of the computer on which you have Exchange Server.

   For example: `win08ex07.idclab.loc`

   Click **Next**.

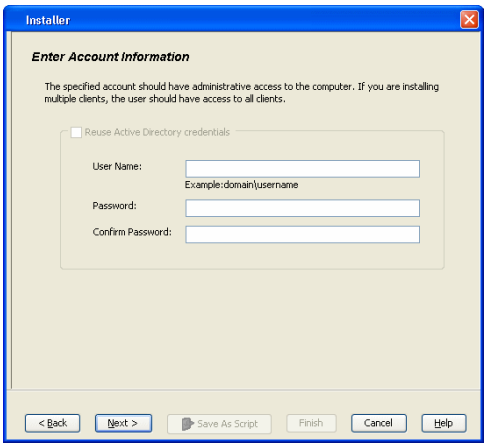


6. Click **Next**.



7. Specify **User Name** and **Password** that must be used to access the computer.

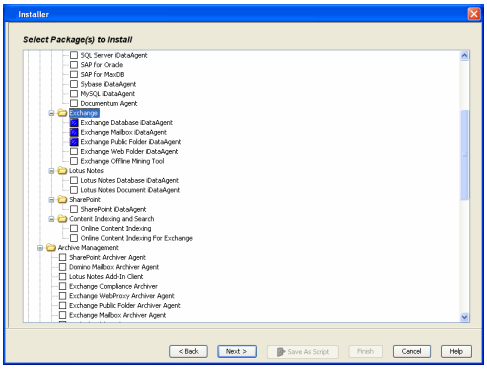
   Click **Next**.



8. To install the **Exchange *i*DataAgents** expand **Client Modules | Backup & Recovery | Exchange,** and select one or more of the following:
   - **Exchange Database *i*DataAgent**
   - **Exchange Mailbox *i*DataAgent**
   - **Exchange Public Folder *i*DataAgent**

   Click **Next**.

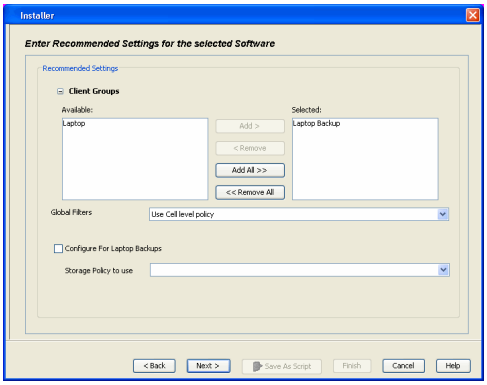
   For Non-Exchange Server, Exchange Database *i*DataAgent will not be applicable.



9.
   - Select **Client Group** from **Available** and click **Add**.
   - Select a **Storage Policy** from the drop-down list. Click **Next**.

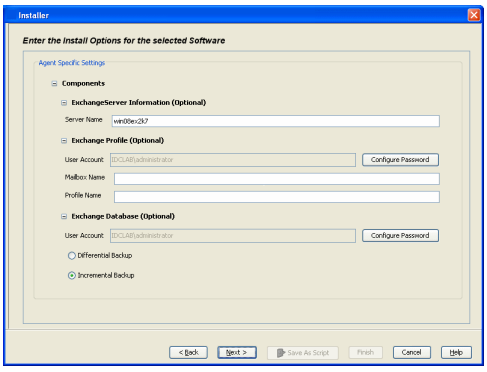
   NOTES:

   - Select the **Configure for Laptop or Desktop Backup** option to install **Backup Monitor** utility. This utility allows you to view the backup job summary from the client computer without opening the CommCell Console. See Monitor - Laptop User for more information.

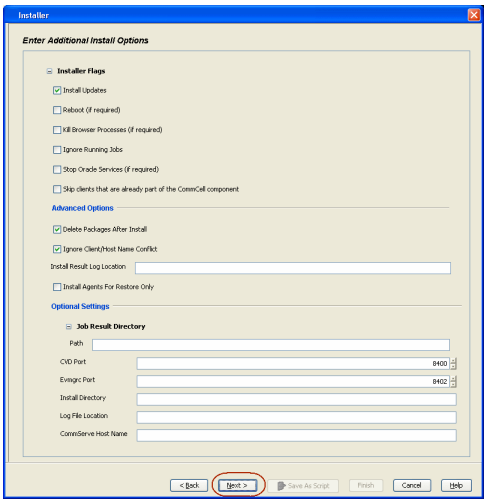


10. Type the Agent Specific Settings information.

    Click **Next**.

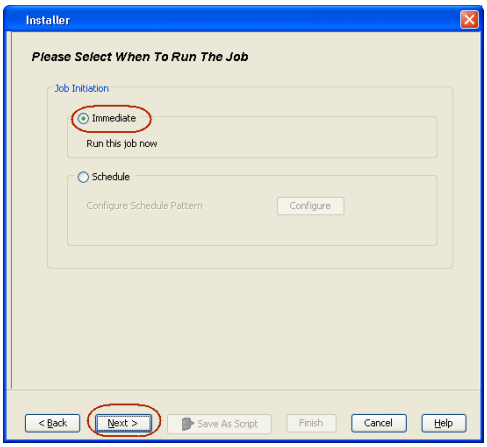


11. Click **Next**.

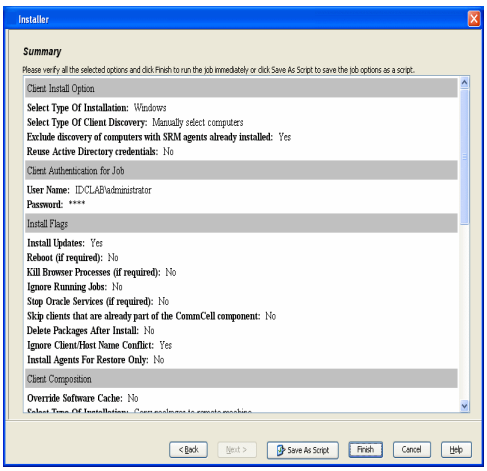


12. Select **Immediate**.

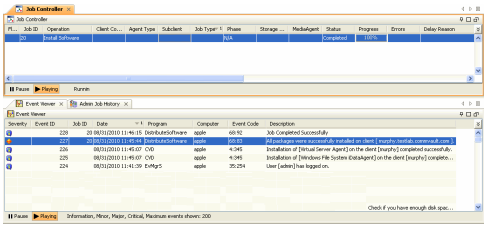
    Click **Next**.



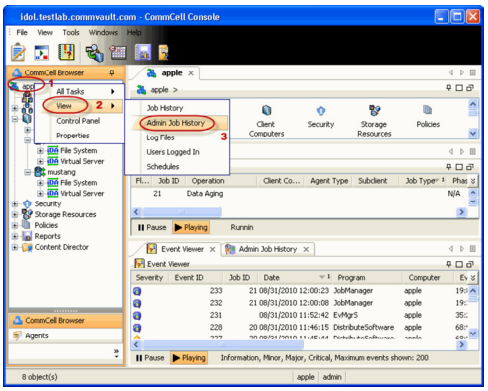
13. Click **Finish**.



14. You can track the progress of the job from the **Job Controller** or **Event Viewer** window.

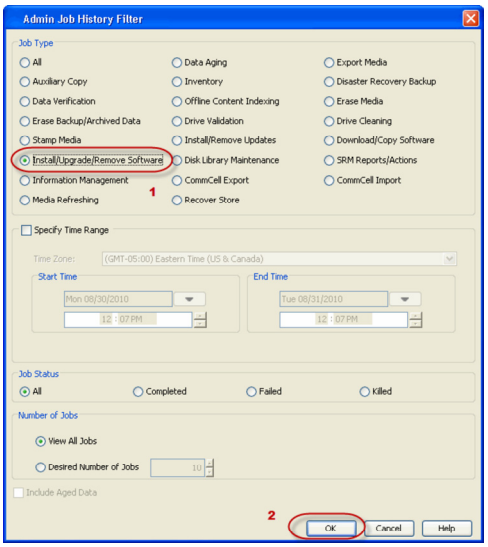


15. Once the job is complete, right-click the **CommServe** computer, click **View** and then click **Admin Job History**.

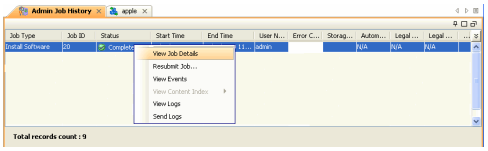


16. Select **Install/Upgrade/Remove Software**.

    Click **OK**.



17. You can view the following details about the job by right-clicking the job:
    - Items that succeeded during the job
    - Items that failed during the job
    - Details of the job
    - Events of the job
    - Log files of the job



18. Enable the following registry key to create job specific profiles:
    - From the CommCell Browser, navigate to Client Computers.
    - Right-click the <Client> in which you want to add the registry key, and then click Properties.
    - Click the Registry Key Settings tab.
    - Click Add.
    - Enter CreateProcessSpecificProfile in the Name field.
    - Enter MSExchangeMBAgent in the Location field. (For Exchange Mailbox iDataAgent).

      Enter MSExchangeDMAgent in the Location field. (For Exchange Mailbox iDataAgent).
    - Enter REG_DWORD in the Type filed.
    - Enter 1 to enable and 0 to disable the key in the Value field.
    - Click OK.

Previous Next

Install the 64-bit Exchange Agents for Exchange Server 2007 - Clustered Environment

Previous Next

Follow the steps given below to install the 64-bit Exchange Agents on Exchange Server 2007 or on Non-Exchange Server in a clustered environment.

WHERE TO INSTALL

The Exchange Agents can be installed in one of two ways:

- Directly onto the Exchange Server. This method is referred to as an on-host installation and is useful if you want to preserve hardware resources.
- On a separate computer with connectivity to the Exchange Server. This method is referred to as an Non-Exchange Server installation and is useful if you want to offload the memory and processing resources required for backups and restores from the Exchange Server.

RELATED TOPICS

Download Software Packages
Provides step-by-step procedure to download the latest packages for software install.

System Requirements
Verify that the computer in which you wish to install the software satisfies the System Requirements.

Firewall
Provides comprehensive information on firewall.

PREREQUISITES

If you are installing the Exchange Agents on a 64-bit off-host proxy computer, perform the following pre-requisite task before installing these agents:

- Ensure that the proxy computer has been added to the same Domain in which the Exchange Server 2007 resides.
- Install Microsoft Outlook 2007 or higher on the off-host proxy computer in order to supply the software drivers necessary for Exchange-based agents to function in an off-host proxy configuration.

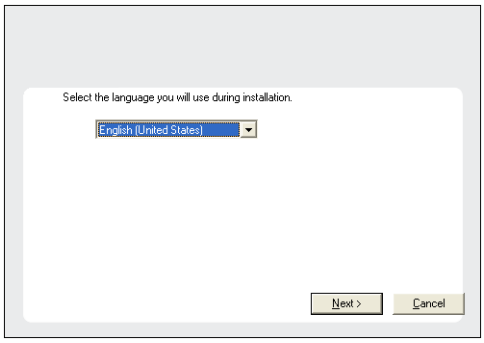
The below mentioned prerequisites are for Mailbox Agents only. Ensure that you have the following:

- Service account is a member of Exchange Organization Administrators group.
- The mail-enabled user is a member of the Local Administrator Group and have rights to all mailboxes on the server.
- Ensure that you assign full access to all mailboxes on the server. For details, see How do I Assign Full Access to All Mailboxes on a Server.

INSTALL PROCEDURE

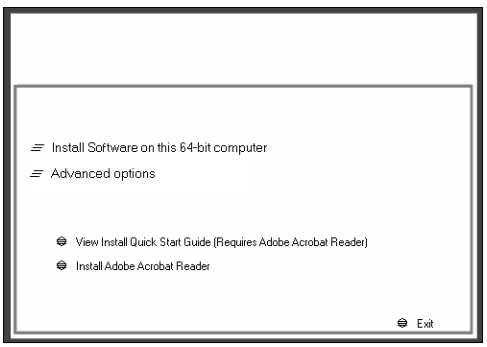
1. Log on to the computer using an account with the following privileges:
   - Administrator of the local computer
   - Administrator of the Exchange Server
2. Run **Setup.exe** from the Software Installation Package.
3. Select the required language.

   Click **Next**.



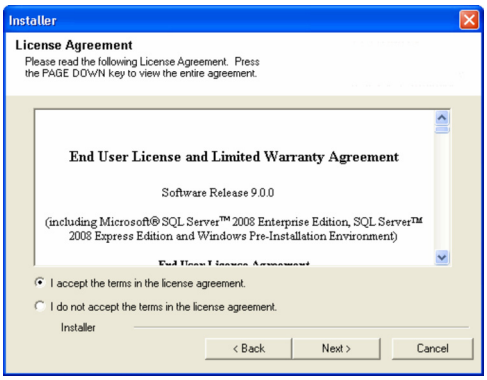
4. Select the option to **Install Calypso on this 64-bit computer**.

   NOTES:
   - Your screen may look different from the example shown.



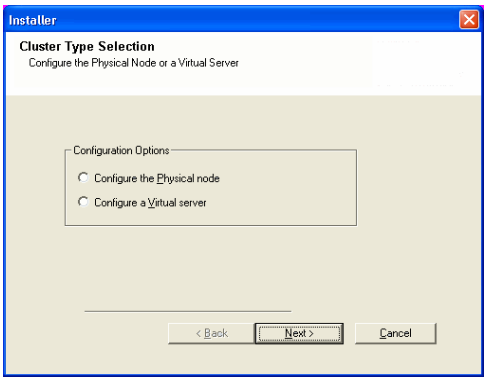
5. Select **I accept the terms in the license agreement**.

   Click **Next**.



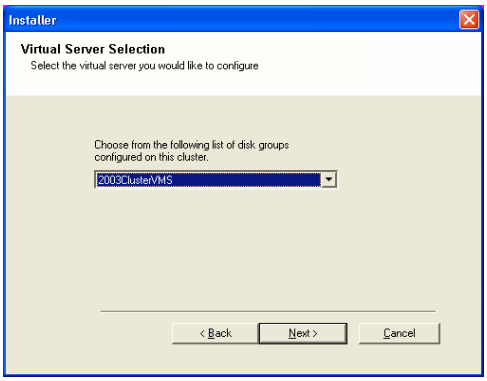
6. Select **Configure a Virtual Server**.

   Click **Next**.



7. Select the disk group in which the virtual server resides.

   Click **Next**.



8. To install the **Exchange *i*DataAgents** expand **Client Modules | Backup & Recovery | Exchange,** and select one or more of the following:

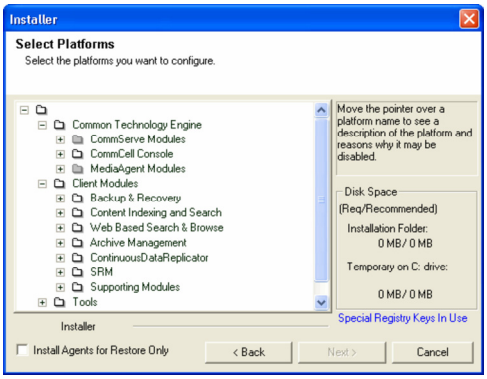
   - **Exchange Database *i*DataAgent**
   - **Exchange Mailbox *i*DataAgent**
   - **Exchange Public Folder *i*DataAgent**

   To install the **Exchange Archiver Agents**, expand **Client Modules | Archive Management**, and select one or more of the following:

   - **Exchange Compliance Archiver**
   - **Exchange Mailbox Archiver Agent**
   - **Exchange Public Folder Archiver Agent**

   Click **Next**.

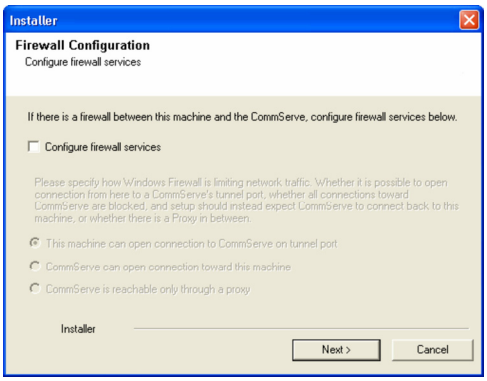
   For Non-Exchange Server, Exchange Database *i*DataAgent will not be applicable.



9. If this computer and the CommServe is separated by a firewall, select the **Configure firewall services** option and then click **Next**.

   For firewall options and configuration instructions, see Firewall Configuration and continue with the installation.

   If firewall configuration is not required, click **Next**.

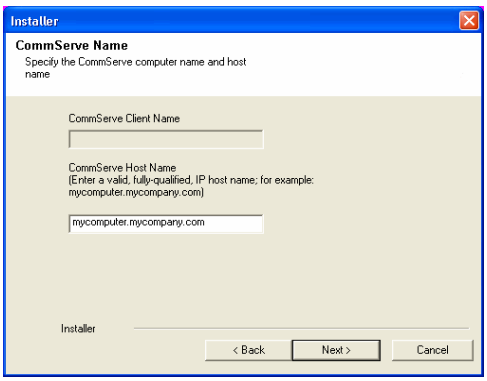


10. Enter the fully qualified domain name of the **CommServe Host Name**.

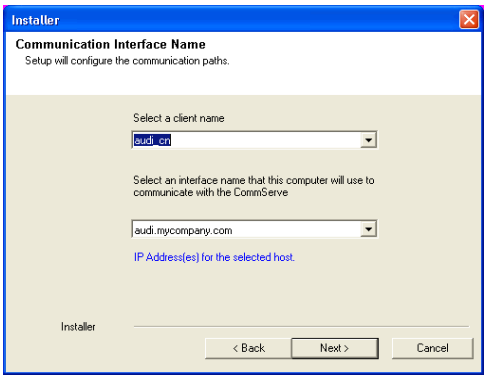
    Click **Next**.

    Do not use space and the following characters when specifying a new name for the CommServe Host Name:

    \|`~!@#$%^&*()+=<>/?,[]{}:;'"



11. Click **Next**.

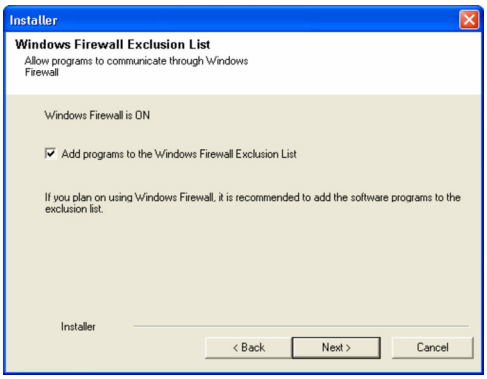


12. Select **Add programs to the Windows Firewall Exclusion List**, to add CommCell programs and services to the Windows Firewall Exclusion List.

    Click **Next**.

    This option enables CommCell operations across Windows firewall by adding CommCell programs and services to Windows firewall exclusion list.

    It is recommended to select this option even if Windows firewall is disabled. This will allow the CommCell programs and services to function if the Windows firewall is enabled at a later time.



13. Verify the default location for software installation.

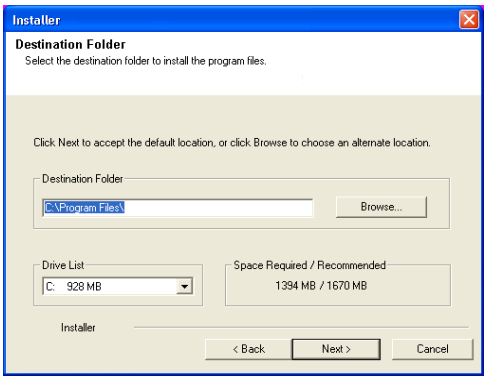
    Click **Browse** to change the default location.

    Click **Next**.

    - Do not install the software to a mapped network drive.
    - Do not use the following characters when specifying the destination path:

      / : * ? " < > | #

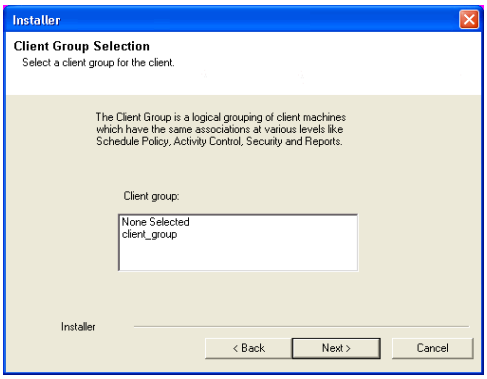
It is recommended that you use alphanumeric characters only.



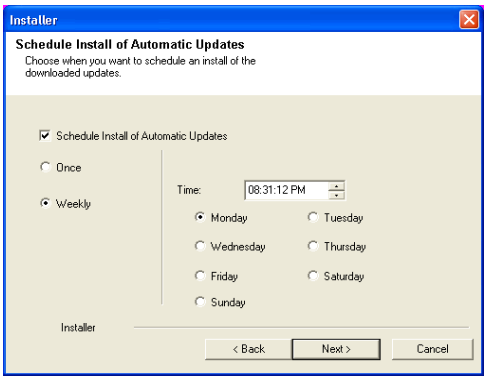
14. Select a Client Group from the list.

    Click **Next**.

    This screen will be displayed if Client Groups are configured in the CommCell Console.

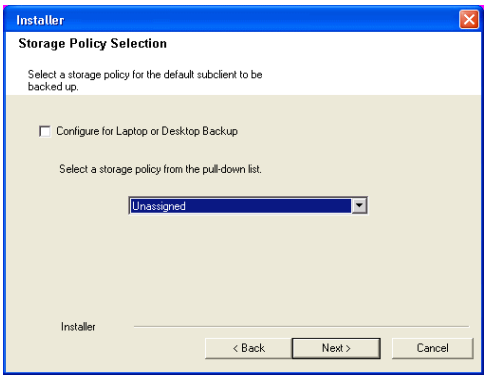


15. Click **Next**.



16. Select a **Storage Policy**.

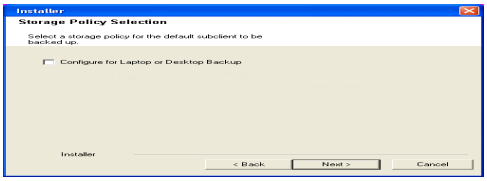
    Click **Next**.



If you do not have Storage Policy created, this message will be displayed.

Click **OK**.

You can create the Storage Policy later in step 31.

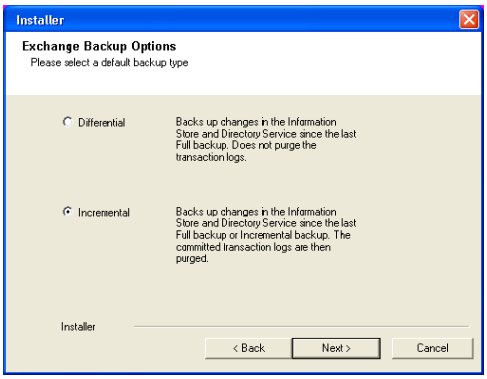


- If you are installing the Exchange Database *i*DataAgent on the Exchange Server, click Configure Exchange Database Specific Information.

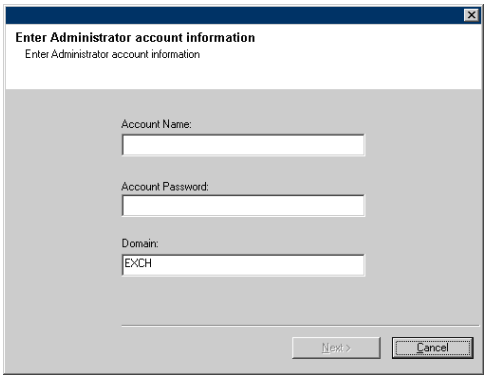
- If you are installing the Exchange Agents on the Non-Exchange Server, skip to Configure Exchange Agents Specific Information.

CONFIGURE EXCHANGE DATABASE SPECIFIC INFORMATION

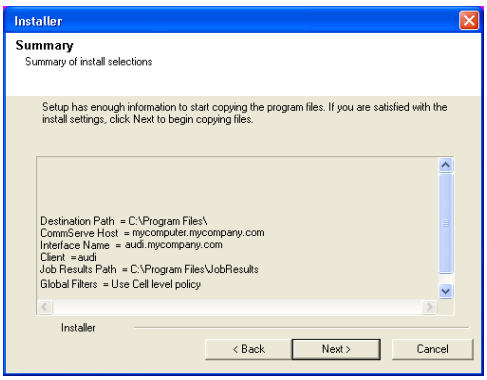
17. Select the backup type for Exchange Database backups. Choose either of the following options, then click **Next**.
    - **Differential** - Specifies that each non-full Exchange Database backup secures all data that has changed since the last full backup. Transaction lobs are not purged.
    - **Incremental** - Specifies that each non-full Exchange Database backup secures only that data that has changed since the last backup of any type. Committed transaction logs are purged.



18. Enter the user credentials to access the Exchange Server to perform the backup operation.
    - The User Account must have Exchange Administrator privileges.
    - The installation detects the domain name. If necessary, you can modify the domain name by specifying Windows domain that the Exchange Server resides in.

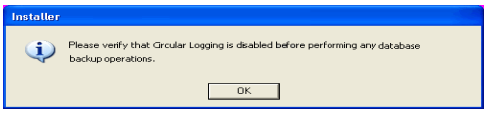


19. Click **Next**.



20. The install program displays a reminder to verify that Circular Logging is disabled before performing any database backup operations. To verify that Circular Logging is disabled:
    - From Exchange System Manager, navigate to and expand the server that the Database *i*DataAgent is being installed on.
    - Verify that the Circular Logging check box has not been selected for each Storage Group. If Circular Logging has been enabled for a Storage Group, disable it at this time.

    Click **OK**.



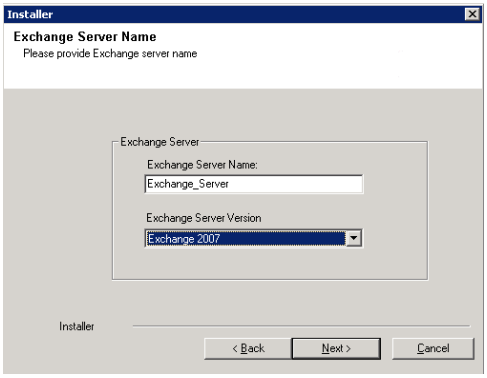
- If you are installing the Exchange Agents, then click Configure Exchange Agents Specific Information.
- If you are installing the Exchange Database *i*DataAgent, skip to Install Remaining Cluster Nodes.

CONFIGURE EXCHANGE AGENTS SPECIFIC INFORMATION

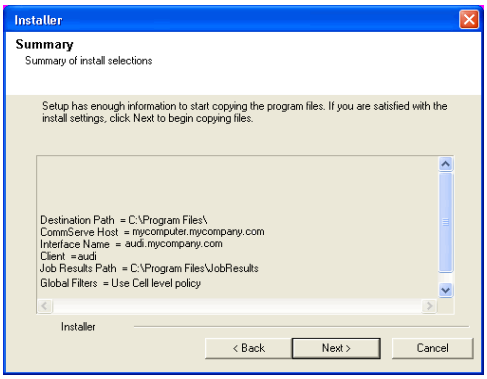
21. Select **Exchange Server Name** and **Exchange Server Version** from drop-down list.

Click **Next**.

This screen will appear when you are installing Exchange Agents on Non-Exchange Server.

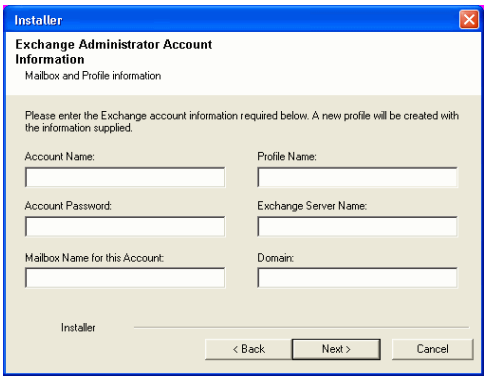


22. Click **Next**.



23. Enter the following Exchange Administrator information then click **Next**.

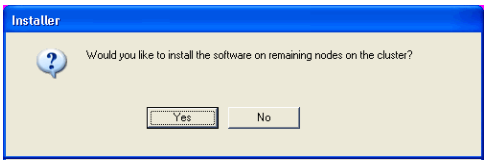
- **Account Name** - Domain user account created with the exchange server administrator permissions. Do not include the domain name here.
- **Account Password** - The password assigned to the domain user.
- **Mailbox Name for this Account** - Mailbox associated with the user above.
- **Profile Name** - Specify profile name to be created during agent install. This profile is associated with the domain user's mailbox.
- **Exchange Server Name** - Name of the Exchange Server that the agent will communicate with for data protection and recovery operations.
- **Domain** - The installation detects and enters a domain name. If necessary, modify the domain name by specifying Windows domain that the Exchange Server resides in.



INSTALL REMAINING CLUSTER NODES

24. To install the software on the remaining nodes of the cluster, click **Yes**.

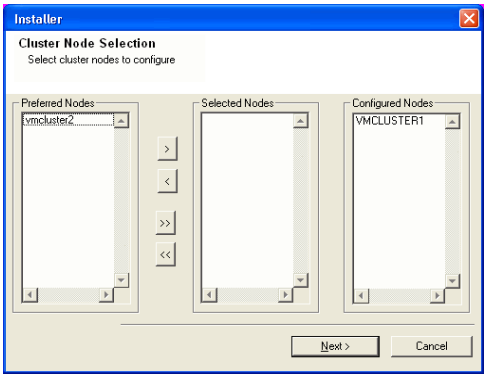
To complete the install for this node only, click **No**.



25. Select cluster nodes from the **Preferred Nodes** list and click the arrow button to move them to the **Selected Nodes** list.

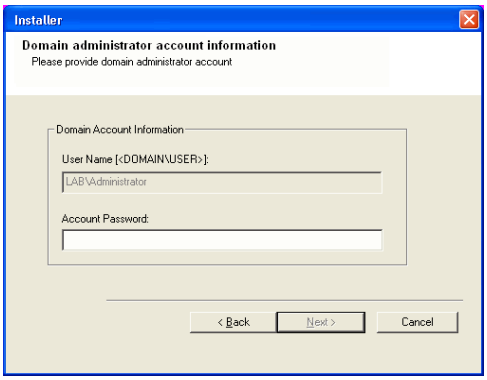
Once you complete your selections, click **Next**.

- The list of **Preferred Nodes** displays all the nodes found in the cluster; from this list you should only select cluster nodes configured to host this cluster group server.
- Do not select nodes that already have multiple instances installed.



26. Specify **User Name** and **Password** for the **Domain Administrator account Information** to perform the remote install on the cluster nodes you selected in the previous step.

Click **Next**.



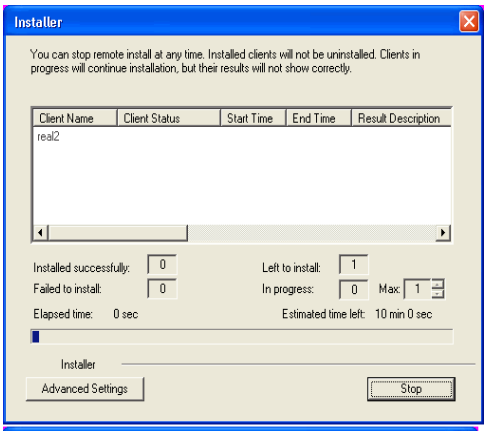
27. The progress of the remote install for the cluster nodes is displayed; the install can be interrupted if necessary.

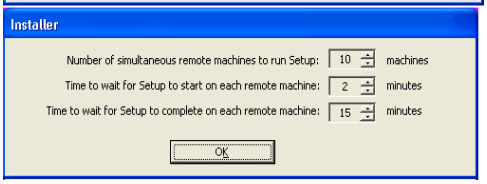
Click **Stop** to prevent installation to any nodes after the current ones complete.

Click **Advanced Settings** to specify any of the following:

- Maximum number of nodes on which Setup can run simultaneously.
- Time allocated for Setup to begin executing on each node, after which the install attempt will fail.
- Time allocated for Setup to complete on each node, after which the install attempt will fail.

If, during the remote install of a cluster node, setup fails to complete or is interrupted, you must perform a local install on that node. When you do, the install begins from where it left off, or from the beginning if necessary. For procedures, see Manually Installing the Software on a Passive Node.

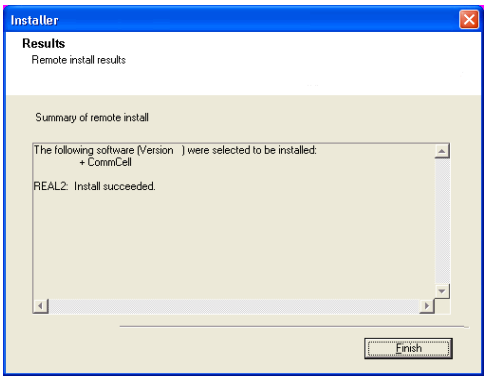




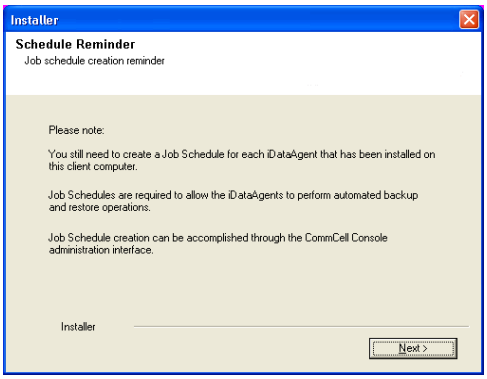
28. Read the summary for remote installation to verify that all selected nodes were installed successfully.

Click **Next**.

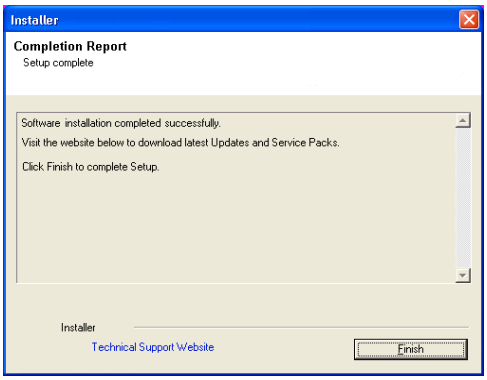
- If any node installation fails, you must manually install the software on that node once the current installation is complete. See Manually Installing the Software on a Passive Node for step-by-step instructions.
- The message displayed on your screen will reflect the status of the selected nodes, and may look different from the example.



29. Click **Next**.



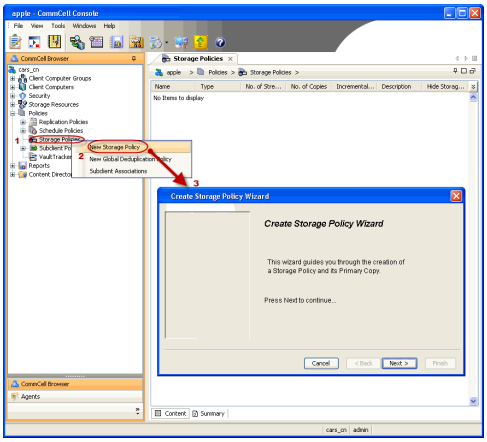
30. Click **Finish**.



CHOICE If you already have a storage policy selected in step 16, Click Next button available at the bottom of the page to proceed to the **Configuration** section.

If you do not have Storage Policy created, continue with the following step.

31. Create a Storage Policy:



1. From the CommCell Browser, navigate to **Policies**.
2. Right-click the **Storage Policies** and then click **New Storage Policy**.
3. Follow the prompts displayed in the Storage Policy Wizard. The required options are mentioned below:
   - Select the Storage Policy type as **Data Protection and Archiving** and click **Next**.
   - Enter the name in the **Storage Policy Name** box and click **Next**.
   - From the **Library** list, click the name of a disk library to which the primary copy should be associated and then click **Next**.

     Ensure that you select a library attached to a MediaAgent operating in the current release.
   - From the **MediaAgent** list, click the name of a MediaAgent that will be used to create the primary copy and then click **Next**.
   - For the device streams and the retention criteria information, click **Next** to accept default values.
   - Select **Yes** to enable deduplication for the primary copy.
   - From the **MediaAgent** list, click the name of the MediaAgent that will be used to store the Deduplication store.

     Type the name of the folder in which the deduplication database must be located in the Deduplication Store Location or click the Browse button to select the folder and then click **Next**.
   - Review the details and click **Finish** to create the Storage Policy.

32. Enable the following registry key to create job specific profiles:

- From the CommCell Browser, navigate to Client Computers.
- Right-click the <Client> in which you want to add the registry key, and then click Properties.
- Click the Registry Key Settings tab.
- Click Add.
- Enter CreateProcessSpecificProfile in the Name field.
- Enter MSExchangeMBAgent in the Location field. (For Exchange Mailbox iDataAgent).

  Enter MSExchangeDMAgent in the Location field. (For Exchange Mailbox iDataAgent).
- Enter REG_DWORD in the Type filed.
- Enter 1 to enable and 0 to disable the key in the Value field.
- Click OK.

Previous Next

Install the 32-bit Exchange Agents for Exchange Server 2010 or 2007

Previous Next

Follow the steps given below to install Exchange Agents on one of the following:

- 64-bit Exchange Server 2010
- 64-bit Exchange Server 2007
- 64-bit Non-Exchange Server

WHERE TO INSTALL

The Exchange Agents can be installed in one of two ways:

- Directly onto the Exchange Server. This method is referred to as an on-host installation and is useful if you want to preserve hardware resources.
- On a separate computer with connectivity to the Exchange Server. This method is referred to as an Non-Exchange Server installation and is useful if you want to offload the memory and processing resources required for backups and restores from the Exchange Server.

  Install the Exchange Agents on all the nodes on which backups have to be run in a DAG configuration.

INSTALLATION

The software can be installed using one of the following methods:

METHOD 1: INTERACTIVE INSTALL

Use this procedure to directly install the software from the installation package or a network drive.

METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

Use this procedure to remotely install the software on a client computer.

RELATED TOPICS

Download Software Packages
Provides step-by-step procedure to download the latest packages for software install.

System Requirements
Verify that the computer in which you wish to install the software satisfies the System Requirements.

Firewall
Provides comprehensive information on firewall.

PREREQUISITES

If you are installing the Exchange Agents on a 64-bit off-host proxy computer, perform the following pre-requisite task before installing these agents:

- Ensure that the proxy computer has been added to the same Domain in which the Exchange Server 2007 resides.
- Install Microsoft Outlook 2007 or higher on the off-host proxy computer in order to supply the software drivers necessary for Exchange-based agents to function in an off-host proxy configuration.

The below mentioned prerequisites are for Mailbox Agents only. Ensure that you have the following:

FOR EXCHANGE SERVER 2010

- Ensure that the service account is a member of Organization Management group.
- Ensure that the mail-enabled user is a member of the Local Administrator Group and have rights to all mailboxes on the server.

To assign full access follow the steps given below:

- Using ADSIEDIT navigate to Configuration | Services | Microsoft Exchange.
- Right-click your organization name, click Properties | Securities and click the Advanced tab.
- Click Edit to modify the permissions set for Organization Management group.
- Click to select Full Control, Receive As and Send As permissions and wait for replication.
- Click the Effective Permission tab and Select the name of the backup account.
- The backup account should display the following as selected:

  Full Control

  All Extended Rights

  Send As

  Receive As

- Start the PowerShell and type the following to add the backup account so it has full control over all the databases:

Get-MailboxDatabase -server (server name) | Add-ADPermission -user "backup account" -ExtendedRights Receive-As

Run the above PowerShell every time a new database is added.

- Navigate to the Exchange Management Console, right-click the <mailbox> and click Manage Full Access Permissions to view the mailbox listed under Full Access Permissions.

FOR EXCHANGE SERVER 2007

- Service account should be a member of Exchange Organization Administrators group.
- Ensure that the mail-enabled user is a member of the Local Administrator Group and have rights to all mailboxes on the server.

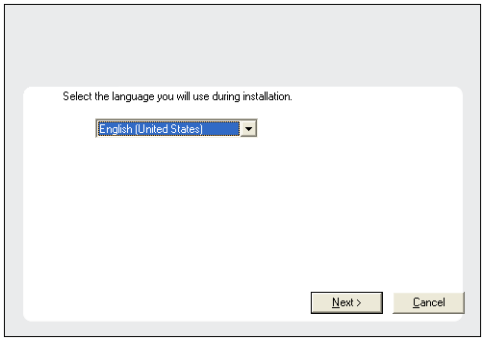
METHOD 1: INTERACTIVE INSTALL

INSTALL THE EXCHANGE DATABASE *i*DATAAGENT

The Exchange Database *i*DataAgent must be installed first. Follow the steps described below to install Exchange Database *i*DataAgent.

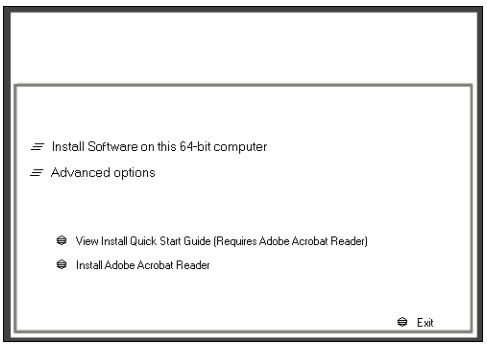
1. Log on to the computer using an account with the following privileges:
   - Administrator of the local computer
   - Administrator of the Exchange Server
2. Run **Setup.exe** from **Software Installation Package**.
3. Select the required language.

   Click **Next**.



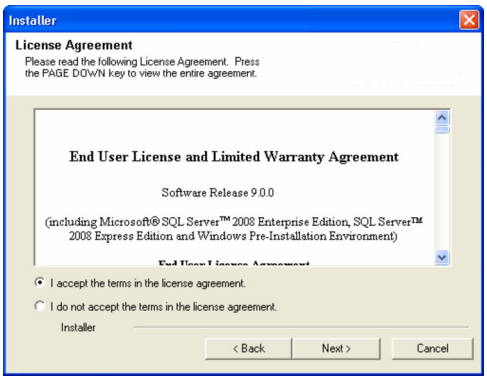
4. Select the option to **Install Calypso on this 64-bit computer**.

   Your screen may look different from the example shown.

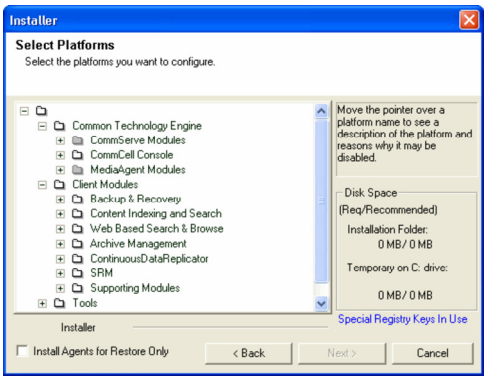


5. Select **I accept the terms in the license agreement**.

   Click **Next**.



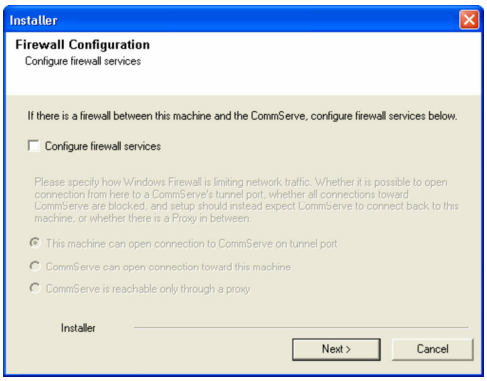
6. Expand **Client Modules | Backup & Recovery | Exchange | File System** and select **Exchange Database *i*DataAgent**.



7. If this computer and the CommServe is separated by a firewall, select the **Configure firewall services** option and then click **Next**.

   For firewall options and configuration instructions, see Firewall Configuration and continue with the installation.

   If firewall configuration is not required, click **Next**.

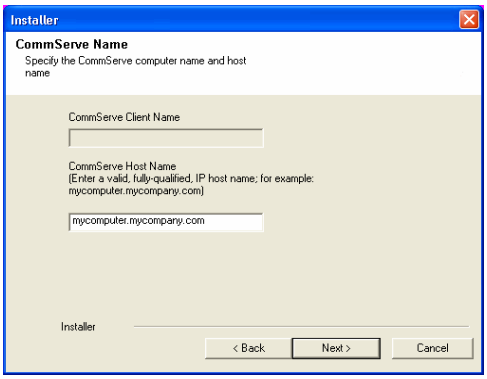


8. Enter the fully qualified domain name of the **CommServe Host Name**.

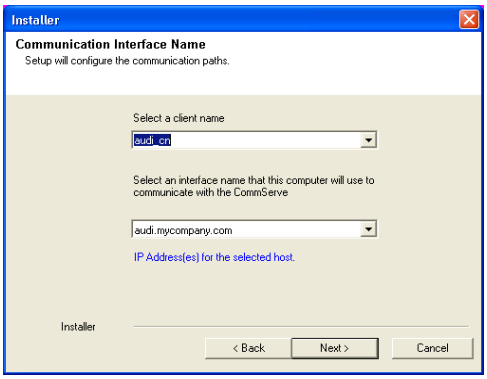
   Click **Next**.

   Do not use space and the following characters when specifying a new name for the CommServe Host Name:

   \|`~!@#$%^&*()+=<>/?,[]{}:;'"



9. Click **Next**.

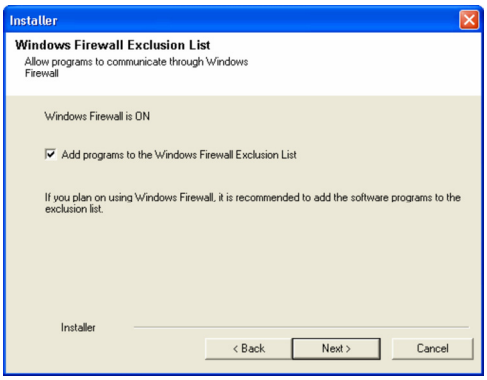


10. Select **Add programs to the Windows Firewall Exclusion List**, to add CommCell programs and services to the Windows Firewall Exclusion List.

    Click **Next**.

    This option enables CommCell operations across Windows firewall by adding CommCell programs and services to Windows firewall exclusion list.

    It is recommended to select this option even if Windows firewall is disabled. This will allow the CommCell programs and services to function if the Windows firewall is enabled at a later time.



11. Verify the default location for software installation.

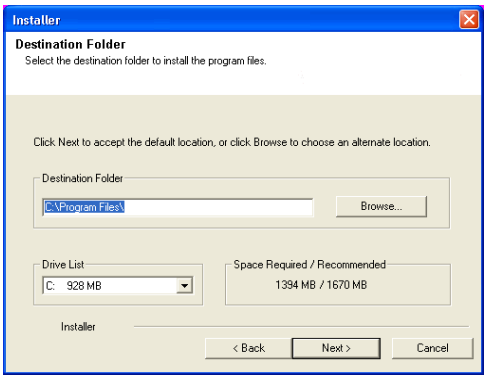
    Click **Browse** to change the default location.

    Click **Next**.

    - Do not install the software to a mapped network drive.
    - Do not use the following characters when specifying the destination path:

      / : * ? " < > | #

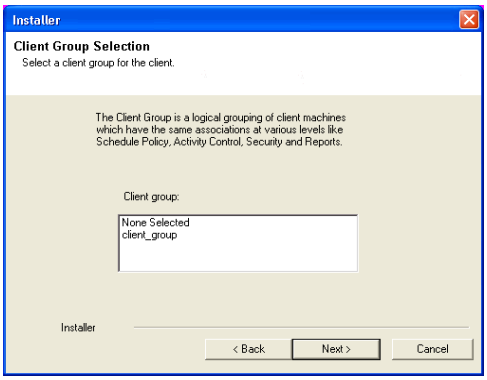
      It is recommended that you use alphanumeric characters only.



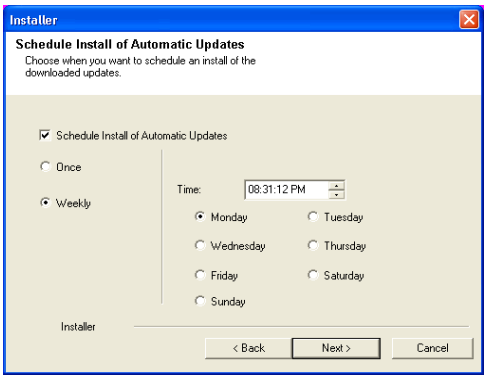
12. Select a Client Group from the list.

    Click **Next**.

    This screen will be displayed if Client Groups are configured in the CommCell Console.

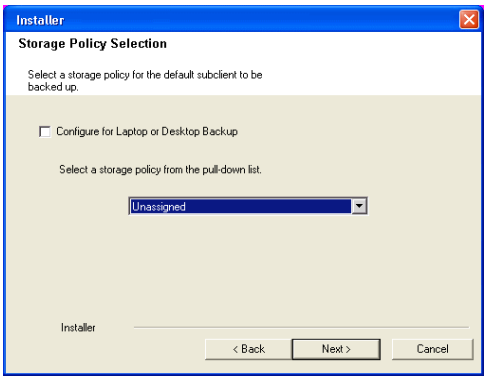


13. Click **Next**.



14. Select a **Storage Policy**.

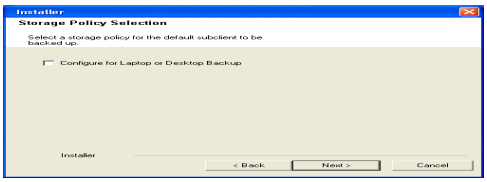
    Click **Next**.



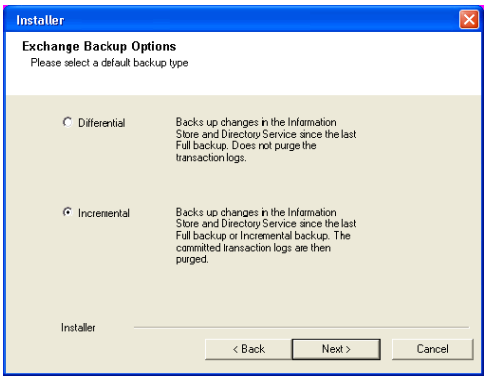
If you do not have Storage Policy created, this message will be displayed.

Click **OK**.

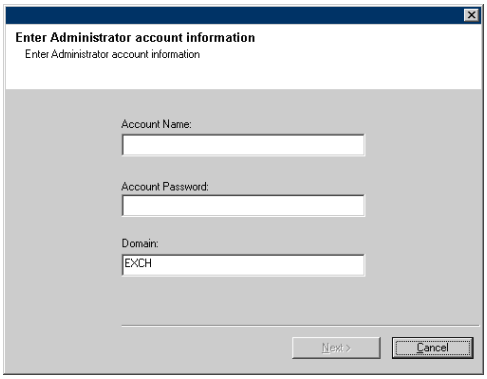
You can create the Storage Policy later in step 21.



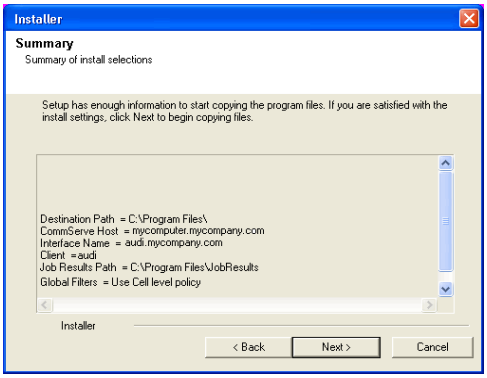
15. Select the backup type for Exchange Database backups. Choose either of the following options, then click **Next**.
    - **Differential** - Specifies that each non-full Exchange Database backup secures all data that has changed since the last full backup. Transaction lobs are not purged.
    - **Incremental** - Specifies that each non-full Exchange Database backup secures only that data that has changed since the last backup of any type. Committed transaction logs are purged.



16. Enter the user credentials to access the Exchange Server to perform the backup operation.
    - The User Account must have Exchange Administrator privileges.
    - The installation detects the domain name. If necessary, you can modify the domain name by specifying Windows domain that the Exchange Server resides in.



17. Click **Next**.

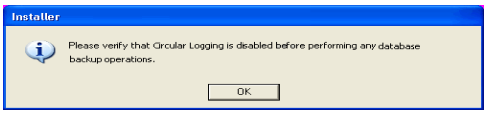


18. The install program displays a reminder to verify that Circular Logging is disabled before performing any database backup operations. To verify that Circular Logging is

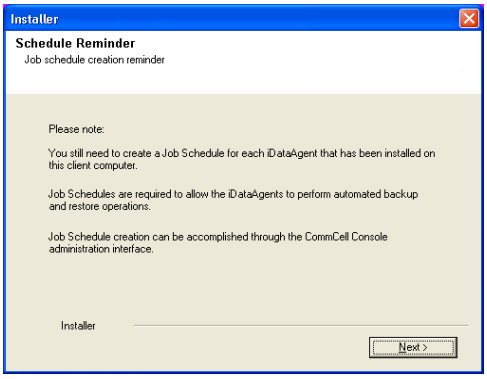
disabled:

- From Exchange System Manager, navigate to and expand the server that the Database *i*DataAgent is being installed on.
- Verify that the Circular Logging check box has not been selected for each Storage Group. If Circular Logging has been enabled for a Storage Group, disable it at this time.

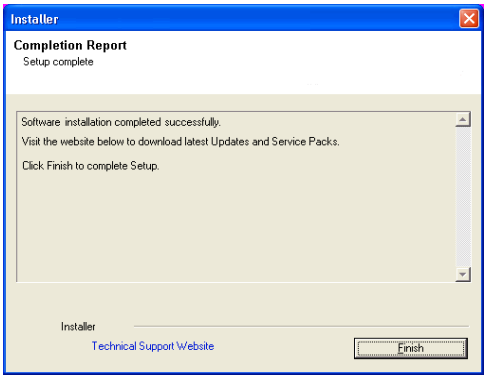
Click **OK**.



19. Click **Next**.



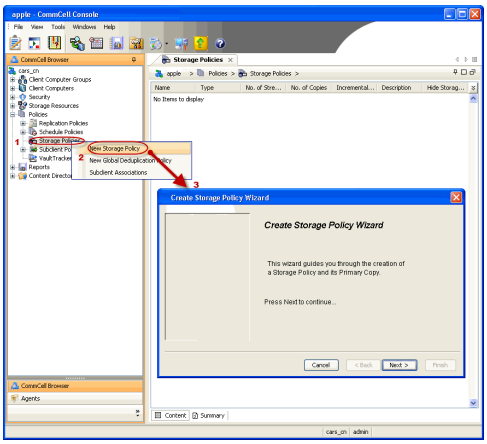
20. Click **Finish**.



CHOICE If you already have a storage policy selected in step 14, Click Next ➤ button available at the bottom of the page to proceed to the **Configuration** section.

If you do not have Storage Policy created, continue with the following step.

21. Create a Storage Policy:



1. From the CommCell Browser, navigate to **Policies**.
2. Right-click the **Storage Policies** and then click **New Storage Policy**.
3. Follow the prompts displayed in the Storage Policy Wizard. The required options are mentioned below:
   - Select the Storage Policy type as **Data Protection and Archiving** and click **Next**.
   - Enter the name in the **Storage Policy Name** box and click **Next**.
   - From the **Library** list, click the name of a disk library to which the primary copy should be associated and then click **Next**.

     Ensure that you select a library attached to a MediaAgent operating in the current release.
   - From the **MediaAgent** list, click the name of a MediaAgent that will be used to create the primary copy and then click **Next**.
   - For the device streams and the retention criteria information, click **Next** to accept default values.
   - Select **Yes** to enable deduplication for the primary copy.
   - From the **MediaAgent** list, click the name of the MediaAgent that will be used to store the Deduplication store.

     Type the name of the folder in which the deduplication database must be located in the Deduplication Store Location or click the Browse button to select the folder and then click **Next**.
   - Review the details and click **Finish** to create the Storage Policy.

- If you want to install Exchange Agents (such as Exchange Mailbox *i*DataAgent, Exchange Public Folder *i*DataAgent, Exchange Mailbox Archiver

and/or Exchange Public Folder Archiver), click Create the Registry Keys.

- If you are installing the Exchange Database *i*DataAgent, click Next button available at the bottom of the page to proceed to the **Configuration** section.

CREATE THE REGISTRY KEYS

Create the `bAllowMultiInstances` and `bAllow32BitInstallOn64Bit` registry keys.

22. Create the bAllowMultiInstances registry key.

To create the registry key, see the following steps:

1. Start the Registry Editor (Regedit.exe or Redegt32.exe)
2. Locate the directory under which you want to create a key, e.g., `HKEY_LOCAL_MACHINE\SOFTWARE\`.
3. Right click the `SOFTWARE` and click **New -> Key**.
4. Name the key as `GalaxyInstallerFlags`.
5. Right click the `GalaxyInstallerFlags` and select **New -> DWORD** value, name it as `bAllowMultiInstances` and by double clicking the `bAllowMultiInstances` key modify the **Value data** to 1.

23. Create the bAllow32BitInstallOn64Bit registry key.

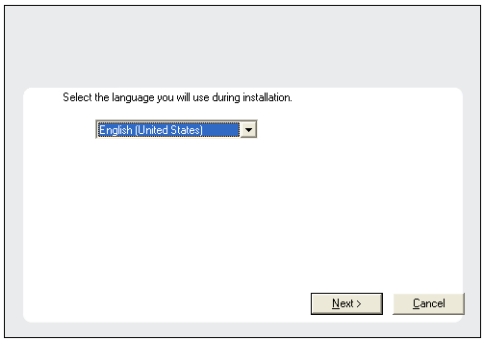
To create the registry key, see the following steps:

1. Start the Registry Editor (Regedit.exe or Regedit32.exe)
2. Locate the directory under which you want to create a key, e.g., `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node`.
3. Right click the `SOFTWARE` and click **New -> Key**.
4. Name the key as `GalaxyInstallerFlags`.
5. Right click the `GalaxyInstallerFlags` and select **New -> DWORD** value, name it as `bAllow32BitInstallOn64Bit` and by double clicking the `bAllow32BitInstallOn64Bit` key modify the **Value data** to 1.

24. Run **Setup.exe** from Software Installation Package.

25. Select the required language.

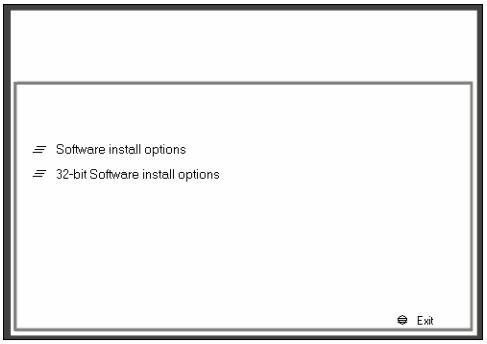
Click **Next**.



26. Select the **Calypso 32-bit Software install options** to install software.

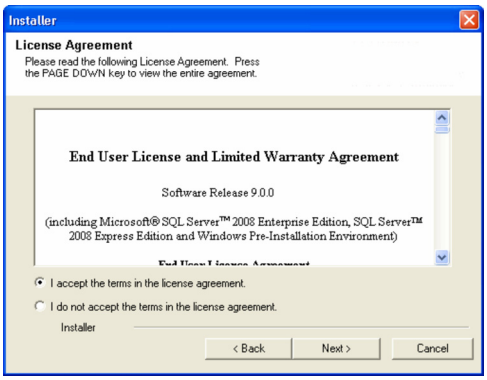
NOTES

- This screen will only appear when the `bAllow32BitInstallOn64Bit` registry key has been created and enabled on this computer.

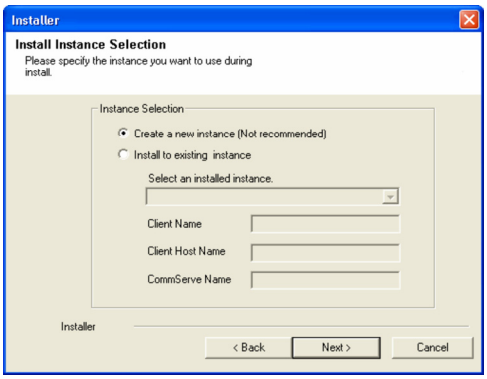


27. Select **I accept the terms in the license agreement**.

Click **Next**.



28. Select **Create a new instance** option to install the Exchange Agents on separate instance.



NOTES

- This screen will appear when the bAllowMultiInstances registry key has enabled on this computer.
- This screen will not appear if no other software components are installed on the computer.

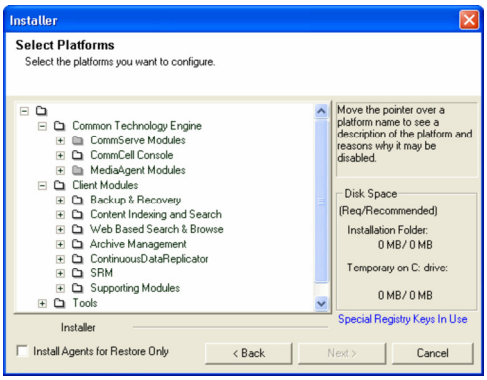
29. To install the **Exchange *i*DataAgents** expand **Client Modules | Backup & Recovery | Exchange,** and select one or more of the following:

- **Exchange Mailbox *i*DataAgent**
- **Exchange Public Folder *i*DataAgent**

To install the **Exchange Archiver Agents**, expand **Client Modules | Archive Management**, and select one or more of the following:

- **Exchange Compliance Archiver**
- **Exchange Mailbox Archiver Agent**
- **Exchange Public Folder Archiver Agent**

Click **Next**.

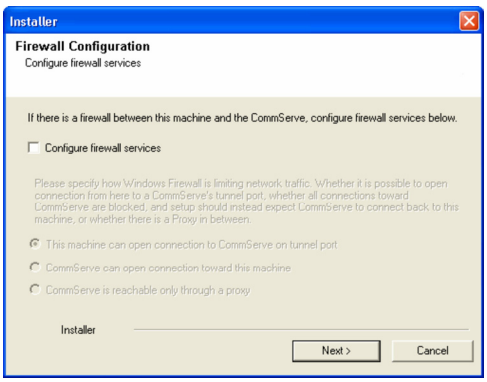


Note that the Exchange Database *i*DataAgents must be installed on the Exchange Server, see Install the Exchange Database *i*DataAgent for step-by-step procedure.

30. If this computer and the CommServe is separated by a firewall, select the **Configure firewall services** option and then click **Next**.

For firewall options and configuration instructions, see Firewall Configuration and continue with the installation.

If firewall configuration is not required, click **Next**.

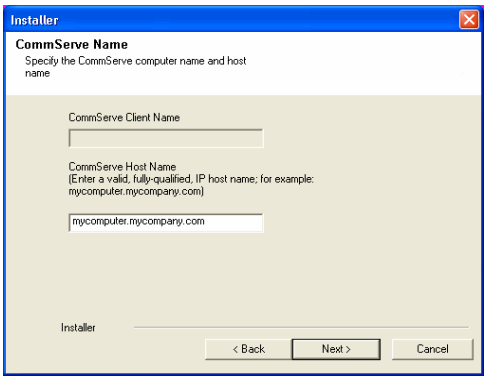


31. Enter the fully qualified domain name of the **CommServe Host Name**.

Click **Next**.

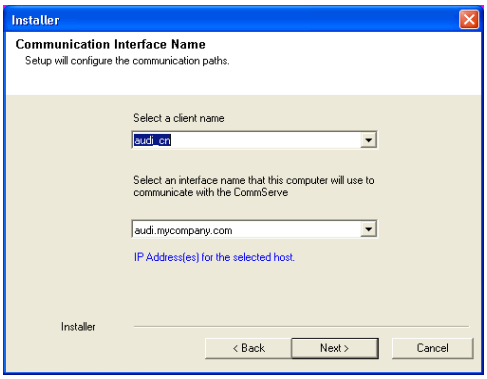
Do not use space and the following characters when specifying a new name for the CommServe Host Name:

\|`~!@#$%^&*()+=<>/?,[]{}:;'"



32. Click **Next**.

If there is any other instance installed on the computer, make sure that the host name does not match the client name entered in the **Select a client name** field in the previous instance.

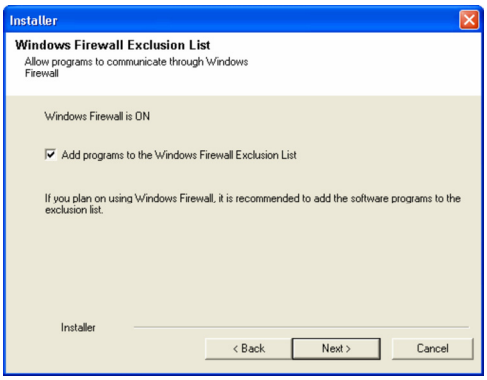


33. Select **Add programs to the Windows Firewall Exclusion List**, to add CommCell programs and services to the Windows Firewall Exclusion List.

Click **Next**.

This option enables CommCell operations across Windows firewall by adding CommCell programs and services to Windows firewall exclusion list.

It is recommended to select this option even if Windows firewall is disabled. This will allow the CommCell programs and services to function if the Windows firewall is enabled at a later time.



34 Verify the default location for software installation.

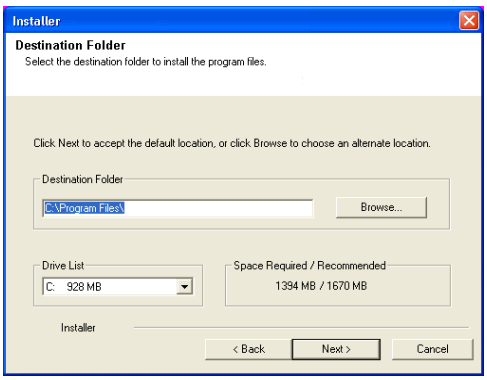
Click **Browse** to change the default location.

Click **Next**.

- Do not install the software to a mapped network drive.
- Do not use the following characters when specifying the destination path:

  / : * ? " < > | #

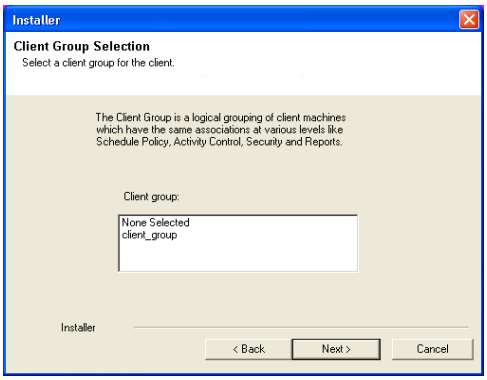
  It is recommended that you use alphanumeric characters only.



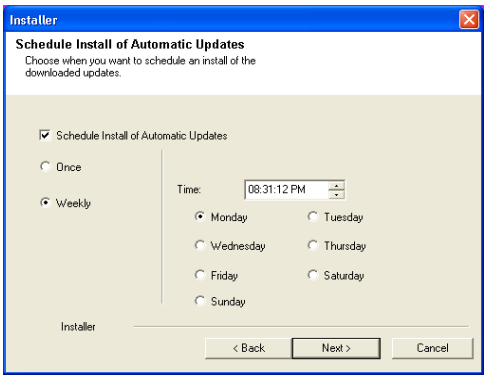
35. Select a Client Group from the list.

Click **Next**.

This screen will be displayed if Client Groups are configured in the CommCell Console.

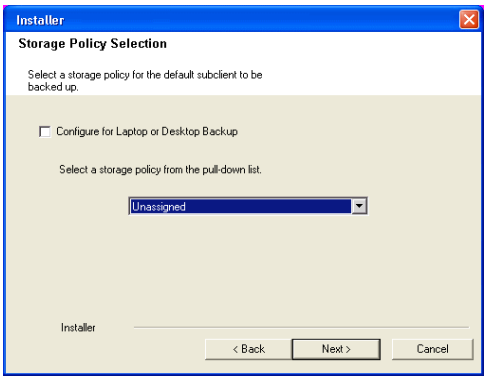


36. Click **Next**.



37. Select a **Storage Policy**.

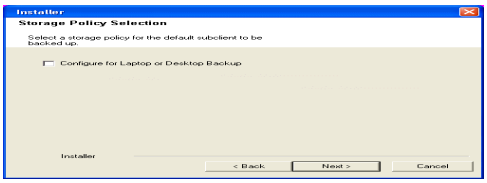
Click **Next**.



If you do not have Storage Policy created, this message will be displayed.

Click **OK**.

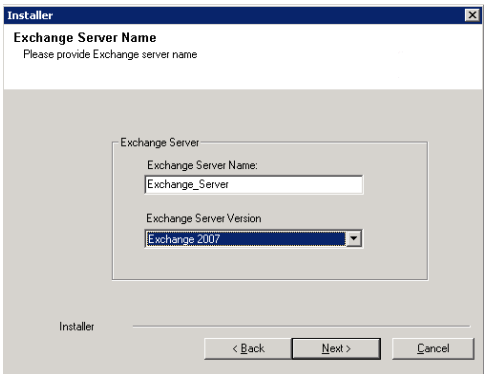
You can create the Storage Policy later in step 43.



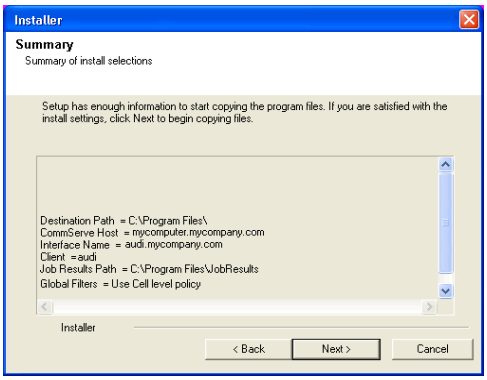
38. Select **Exchange Server Name** and **Exchange Server Version** from drop-down list.

Click **Next**.

This screen will appear when you are installing Exchange Agents on Non-Exchange Server.



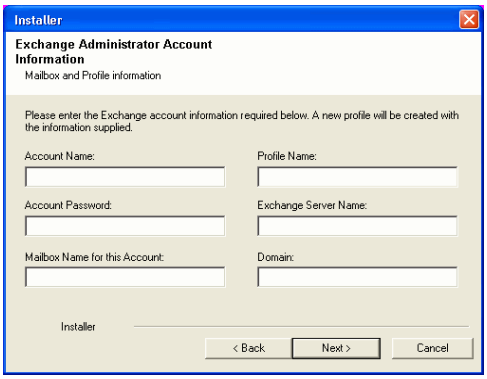
39. Click **Next**.



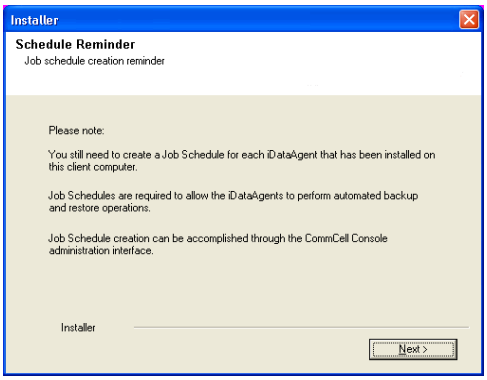
40. Enter the following Exchange Administrator information then click **Next**.

- **Account Name** - Domain user account created with the exchange server administrator permissions. Do not include the domain name here.
- **Account Password** - The password assigned to the domain user.
- **Mailbox Name for this Account** - Mailbox associated with the user above.
- **Profile Name** - Specify profile name to be created during agent install. This profile is associated with the domain user's mailbox.
- **Exchange Server Name** - Name of the Exchange Server that the agent will communicate with for data protection and recovery operations.

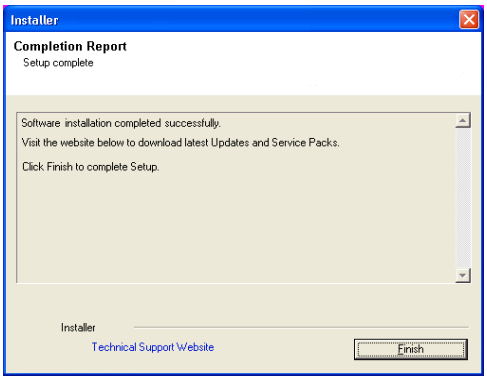
  Enter the Mailbox Role Server name (NetBIOS). After installation configure the roles as described in Configure Mailboxes in Database Availability Group (DAG) Servers.
- **Domain** - The installation detects and enters a domain name. If necessary, modify the domain name by specifying Windows domain that the Exchange Server resides in.



41. Click **Next**.



42. Click **Finish**.



If you already have a storage policy selected in step 37, Click Next ➤ button available at the bottom of the page to proceed to the **Configuration** section.

If you do not have Storage Policy created, continue with the following step.

43. Create a Storage Policy:

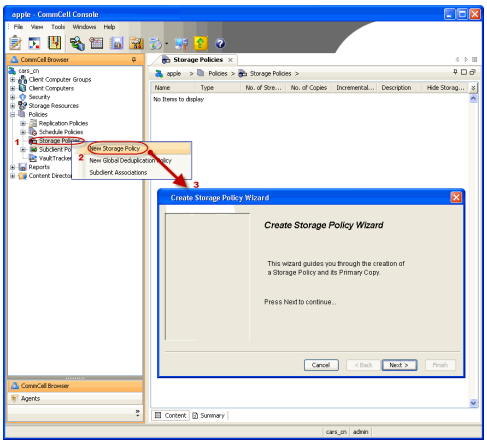
1. From the CommCell Browser, navigate to **Policies**.
2. Right-click the **Storage Policies** and then click **New Storage Policy**.
3. Follow the prompts displayed in the Storage Policy Wizard. The required options

are mentioned below:

- Select the Storage Policy type as **Data Protection and Archiving** and click **Next**.
- Enter the name in the **Storage Policy Name** box and click **Next**.
- From the **Library** list, click the name of a disk library to which the primary copy should be associated and then click **Next**.

  Ensure that you select a library attached to a MediaAgent operating in the current release.
- From the **MediaAgent** list, click the name of a MediaAgent that will be used to create the primary copy and then click **Next**.
- For the device streams and the retention criteria information, click **Next** to accept default values.
- Select **Yes** to enable deduplication for the primary copy.
- From the **MediaAgent** list, click the name of the MediaAgent that will be used to store the Deduplication store.

  Type the name of the folder in which the deduplication database must be located in the Deduplication Store Location or click the Browse button to select the folder and then click **Next**.
- Review the details and click **Finish** to create the Storage Policy.



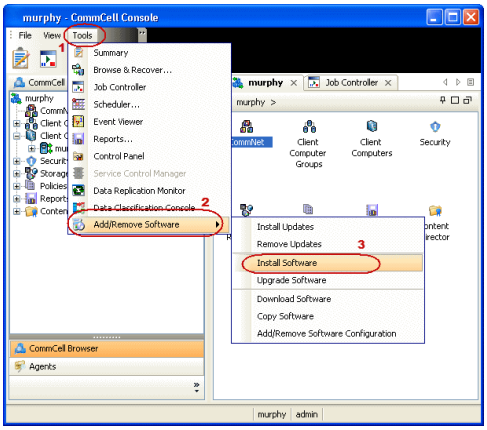
44. Enable the following registry key to create job specific profiles:

- From the CommCell Browser, navigate to Client Computers.
- Right-click the <Client> in which you want to add the registry key, and then click Properties.
- Click the Registry Key Settings tab.
- Click Add.
- Enter CreateProcessSpecificProfile in the Name field.
- Enter MSExchangeMBAgent in the Location field. (For Exchange Mailbox iDataAgent).

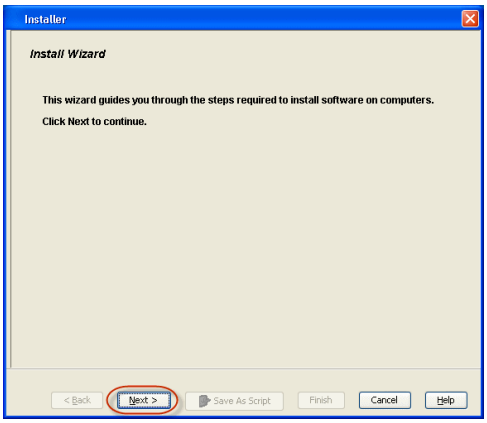
  Enter MSExchangeDMAgent in the Location field. (For Exchange Mailbox iDataAgent).
- Enter REG_DWORD in the Type filed.
- Enter 1 to enable and 0 to disable the key in the Value field.
- Click OK.

METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

1. From the CommCell Browser, select **Tools**, point to **Add/Remove Software**, and then click **Install Software.**

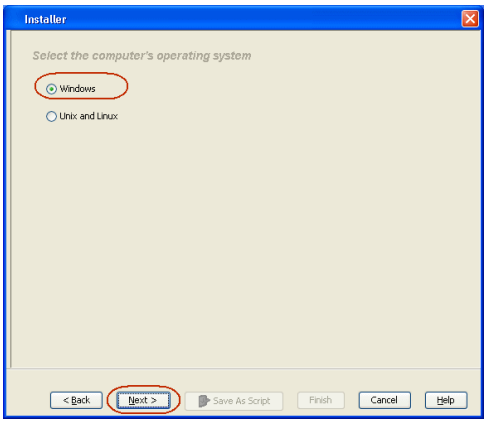


2. Click **Next**.



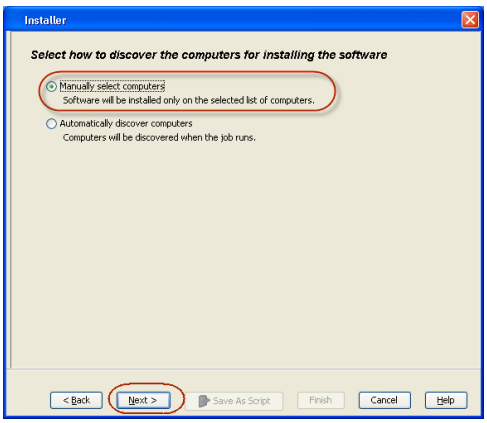
3. Select **Windows**.

   Click **Next**.



4. Select **Manually Select Computers**.

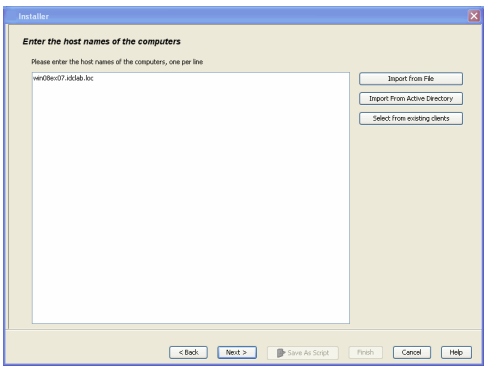
   Click **Next**.



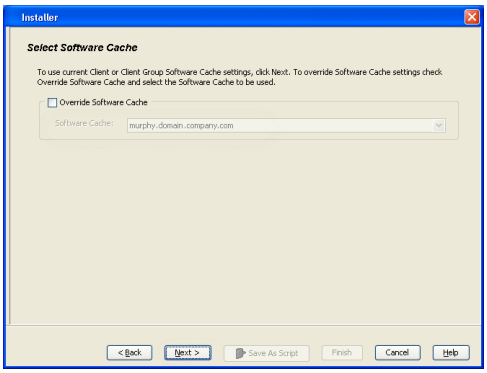
5. Enter the fully qualified domain name of the computer on which you have Exchange Server.

   For example: `win08ex07.idclab.loc`

   Click **Next**.

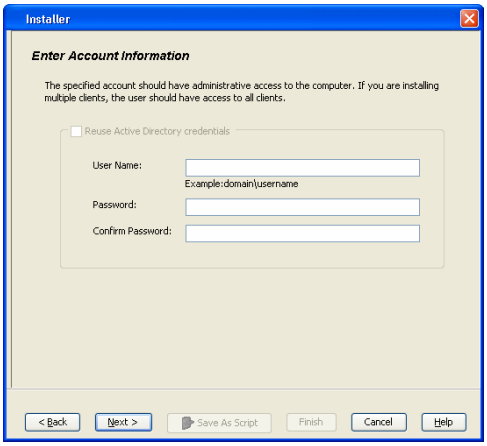


6. Click **Next**.



7. Specify **User Name** and **Password** that must be used to access the computer.

   Click **Next**.

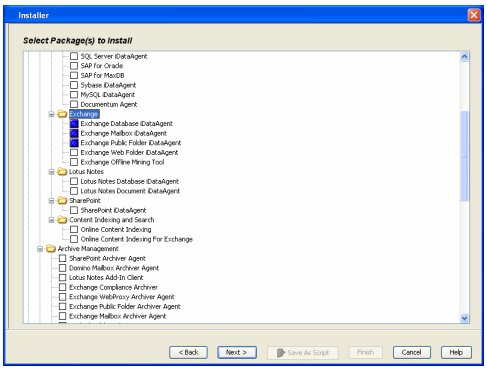


8. To install the **Exchange *i*DataAgents** expand **Client Modules | Backup & Recovery | Exchange,** and select one or more of the following:

   - **Exchange Database *i*DataAgent**
   - **Exchange Mailbox *i*DataAgent**
   - **Exchange Public Folder *i*DataAgent**

   Click **Next**.

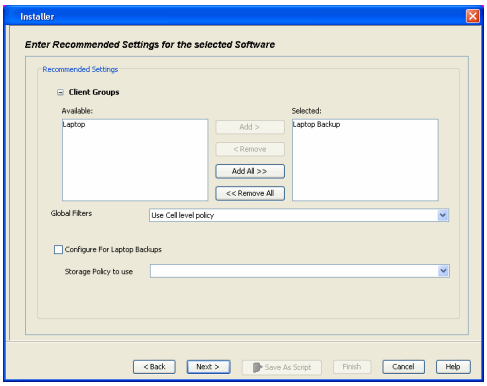
   For Non-Exchange Server, Exchange Database *i*DataAgent will not be applicable.



9. - Select **Client Group** from **Available** and click **Add**.
   - Select a **Storage Policy** from the drop-down list. Click **Next**.

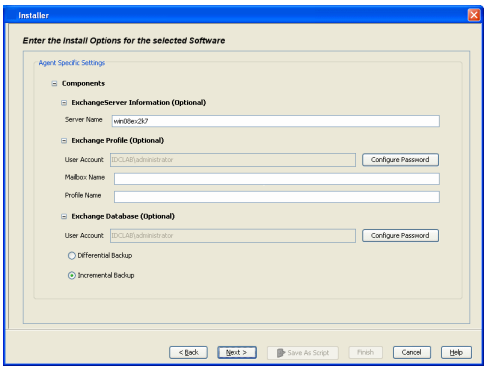
   NOTES:

   - Select the **Configure for Laptop or Desktop Backup** option to install **Backup Monitor** utility. This utility allows you to view the backup job summary from the client computer without opening the CommCell Console. See Monitor - Laptop User for more information.

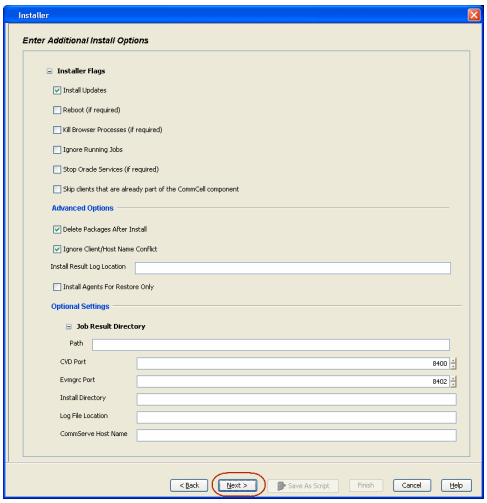


10. Type the Agent Specific Settings information.

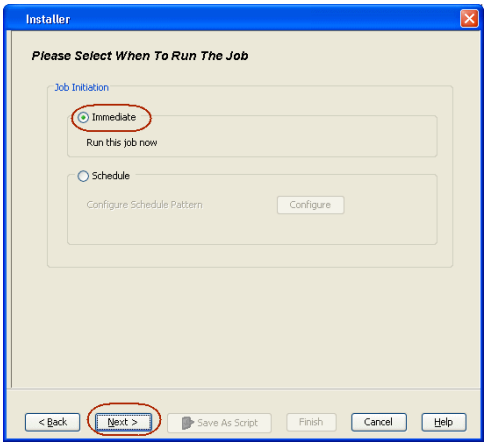
    Click **Next**.



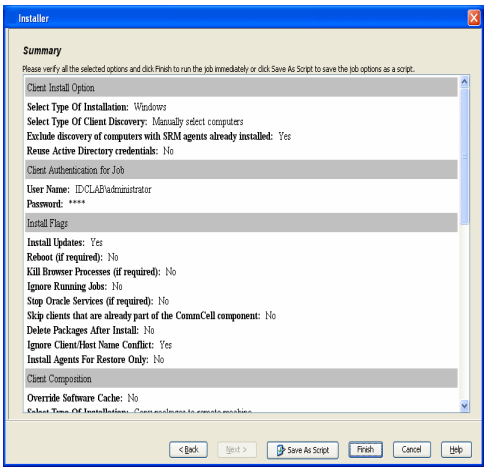
11. Click **Next**.



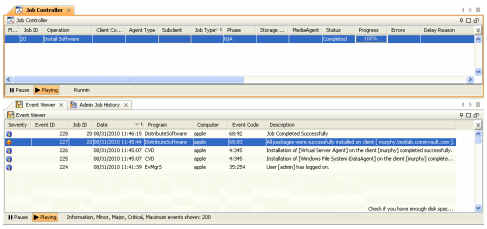
12. Select **Immediate**.
    Click **Next**.



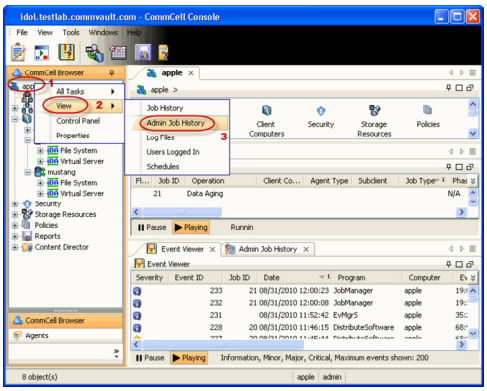
13. Click **Finish**.



14. You can track the progress of the job from the **Job Controller** or **Event Viewer** window.

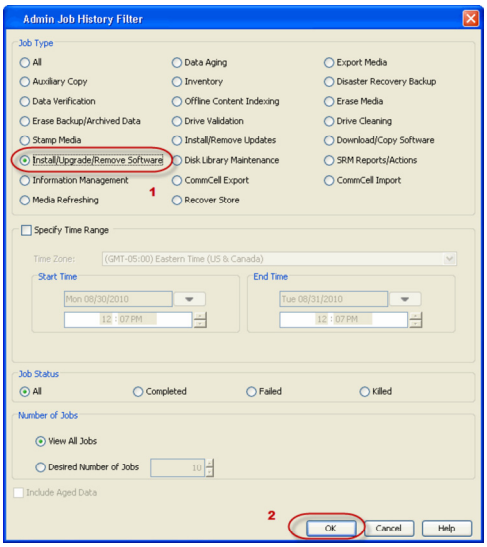


15. Once the job is complete, right-click the **CommServe** computer, click **View** and then click **Admin Job History**.



16. Select **Install/Upgrade/Remove Software**.

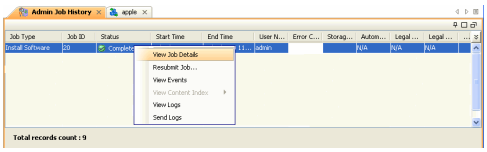
Click **OK**.



17. You can view the following details about the job by right-clicking the job:

- Items that succeeded during the job
- Items that failed during the job
- Details of the job

- Events of the job
- Log files of the job



18. Enable the following registry key to create job specific profiles:

- From the CommCell Browser, navigate to Client Computers.
- Right-click the <Client> in which you want to add the registry key, and then click Properties.
- Click the Registry Key Settings tab.
- Click Add.
- Enter CreateProcessSpecificProfile in the Name field.
- Enter MSExchangeMBAgent in the Location field. (For Exchange Mailbox iDataAgent).

  Enter MSExchangeDMAgent in the Location field. (For Exchange Mailbox iDataAgent).
- Enter REG_DWORD in the Type filed.
- Enter 1 to enable and 0 to disable the key in the Value field.
- Click OK.

Previous Next

Install the 32-bit Exchange Agents on Exchange Server 2007/2010 or 64-bit Non-Exchange Server - Clustered Environment

Previous Next

The Exchange Agents are designed to protect an entire Exchange Server database. Follow the steps given below to install the 64-bit Exchange Agents on Exchange Server 2007/2010 or on Non-Exchange Server.

WHERE TO INSTALL

The Exchange Agents can be installed in one of two ways:

- Directly onto the Exchange Server. This method is referred to as an on-host installation and is useful if you want to preserve hardware resources.
- On a separate computer with connectivity to the Exchange Server. This method is referred to as an Non-Exchange Server installation and is useful if you want to offload the memory and processing resources required for backups and restores from the Exchange Server.

Make sure the computer satisfies the minimum requirements specified in the System Requirements.

RELATED TOPICS

Download Software Packages
Provides step-by-step procedure to download the latest packages for software install.

System Requirements
Verify that the computer in which you wish to install the software satisfies the System Requirements.

Firewall
Provides comprehensive information on firewall.

PREREQUISITES

The below mentioned prerequisites are for Mailbox Agents only. Ensure that you have the following:

FOR EXCHANGE SERVER 2010

- Ensure that the service account is a member of Organization Management group.
- Ensure that the mail-enabled user is a member of the Local Administrator Group and have rights to all mailboxes on the server.

To assign full access follow the steps given below:

- Using ADSIEDIT navigate to Configuration | Services | Microsoft Exchange.
- Right-click your organization name, click Properties | Securities and click the Advanced tab.
- Click Edit to modify the permissions set for Organization Management group.
- Click to select Full Control, Receive As and Send As permissions and wait for replication.
- Click the Effective Permission tab and Select the name of the backup account.
- The backup account should display the following as selected:

  Full Control

  All Extended Rights

  Send As

  Receive As

- Start the PowerShell and type the following to add the backup account so it has full control over all the databases:

```
Get-MailboxDatabase -server (server name) | Add-ADPermission -user "backup account" -ExtendedRights Receive-As
```

Run the above PowerShell every time a new database is added.

- Navigate to the Exchange Management Console, right-click the <mailbox> and click Manage Full Access Permissions to view the mailbox listed under Full Access Permissions.

FOR EXCHANGE SERVER 2007

- Service account should be a member of Exchange Organization Administrators group.
- Ensure that the mail-enabled user is a member of the Local Administrator Group and have rights to all mailboxes on the server.

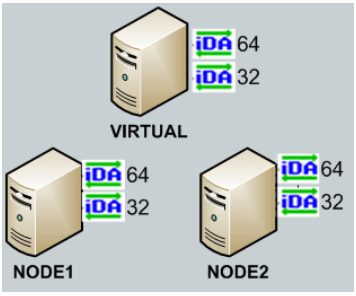
EXCHANGE AGENTS IN X64 CLUSTERS

When installing 32-bit agents on a x64 virtual server, the 32-bit File System *i*DataAgent must be installed on each physical node in the cluster prior to installing the 32-bit agents on the virtual server.

For example, to support a two-node cluster with one Exchange virtual server instance supporting both x64 and 32-bit Agents, a minimum of two installation instances (one 32-bit

and one x64) are required on the virtual server and each physical node. This configuration will result in six client objects in the CommCell console; three x64 instances and three 32-bit instances.

The sample image shown on the right illustrates the required configuration for installing 32-bit Exchange Agents in an x64 cluster.

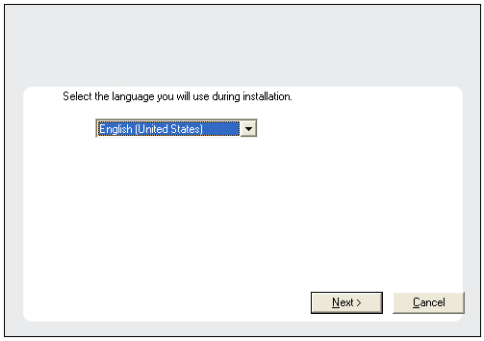


INSTALL THE EXCHANGE DATABASE *i*DATAAGENT

The Exchange Database *i*DataAgent must be installed first. Follow the steps described below to install Exchange Database *i*DataAgent.

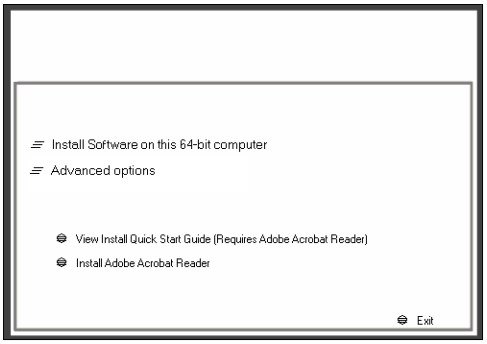
1. Log on to the computer using an account with the following privileges:
   - Administrator of the local computer
   - Administrator of the Exchange Server
2. Run **Setup.exe** from **Software Installation Package**.
3. Select the required language.

   Click **Next**.

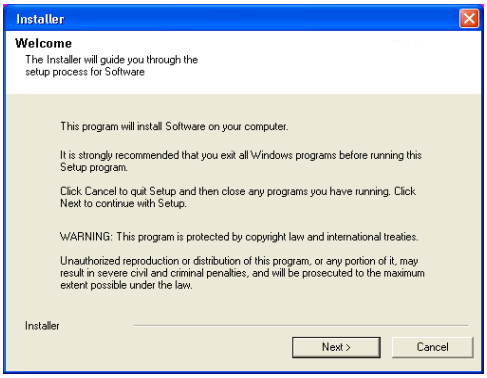


4. Select the option to **Install Calypso on this 64-bit computer**.

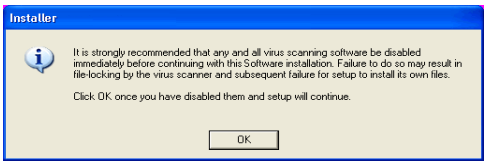
   NOTES:
   - Your screen may look different from the example shown.



5. Click **Next**.

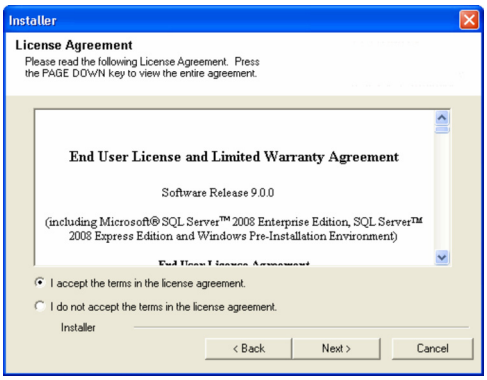


6. Click **OK**.



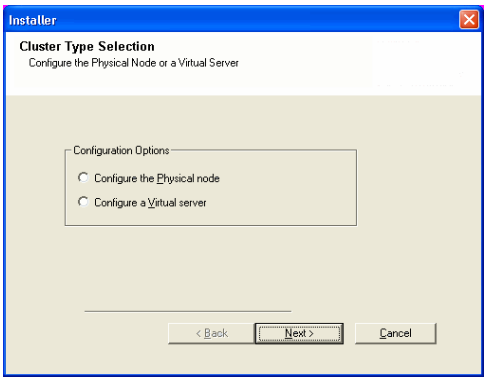
7. Select **I accept the terms in the license agreement**.

   Click **Next**.



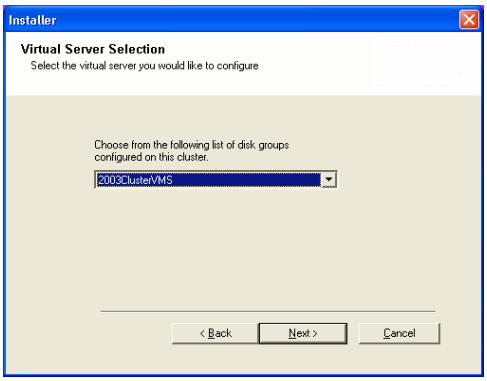
8. Select **Configure a Virtual Server**.

   Click **Next** to continue.

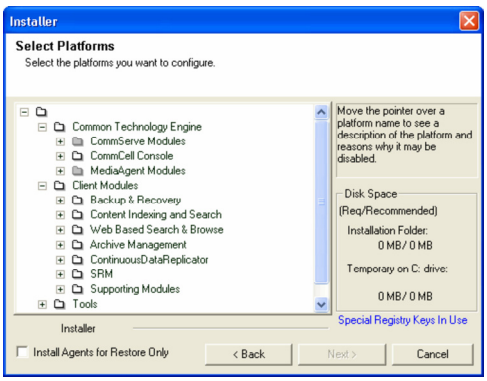


9. Select the disk group in which the cluster group resides.

   Click **Next** to continue.



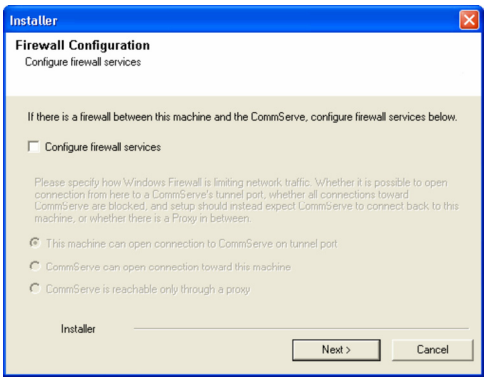
10. Expand **Client Modules** | **Exchange** | **File System** and select **Exchange Database *i*DataAgent**.



11. If this computer and the CommServe is separated by a firewall, select the **Configure firewall services** option and then click **Next**.

    For firewall options and configuration instructions, see Firewall Configuration and continue with the installation.

    If firewall configuration is not required, click **Next**.

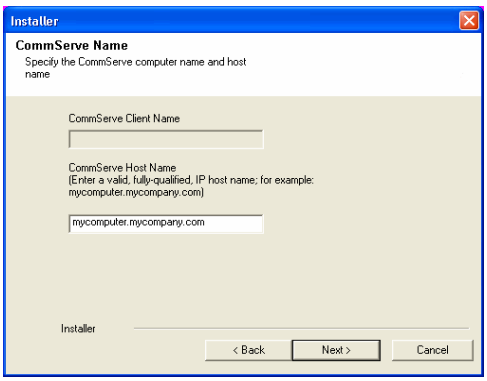


12. Enter the fully qualified domain name of the **CommServe Host Name**.

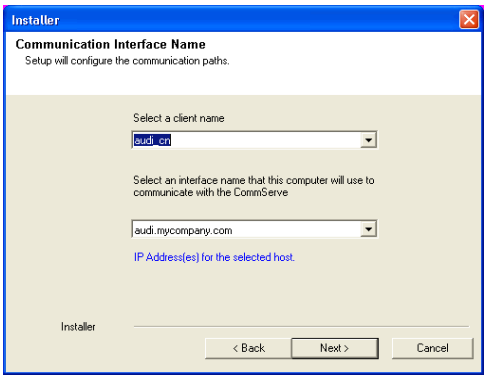
    Click **Next**.

    Do not use space and the following characters when specifying a new name for the CommServe Host Name:

    \|`~!@#$%^&*()+=<>/?,[]{}:;'"



13. Click **Next**.

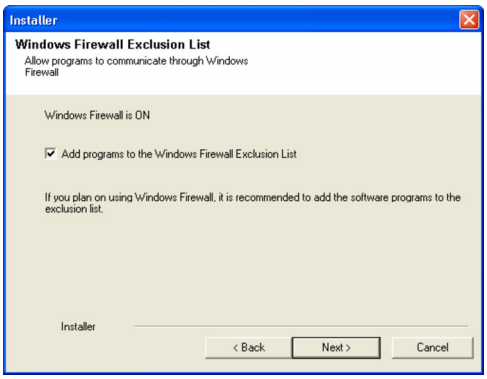


14. Select **Add programs to the Windows Firewall Exclusion List**, to add CommCell programs and services to the Windows Firewall Exclusion List.

    Click **Next**.

    This option enables CommCell operations across Windows firewall by adding CommCell programs and services to Windows firewall exclusion list.

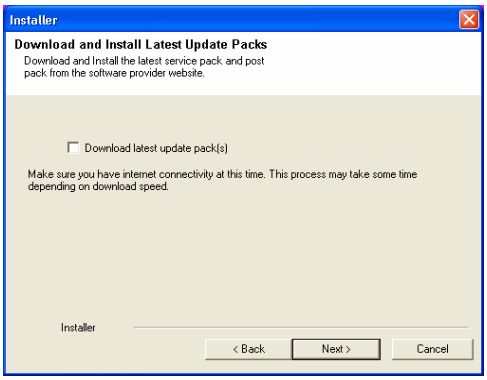
    It is recommended to select this option even if Windows firewall is disabled. This will allow the CommCell programs and services to function if the Windows firewall is enabled at a later time.



15. Click **Next**.

    NOTES

    - It is recommended to select the Download latest update pack(s) option to automatically install the available updates during installation.



16. Verify the default location for software installation.

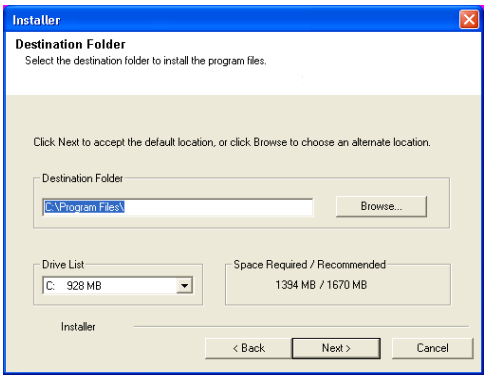
    Click **Browse** to change the default location.

    Click **Next**.

    - Do not install the software to a mapped network drive.
    - Do not use the following characters when specifying the destination path:

      / : * ? " < > | #

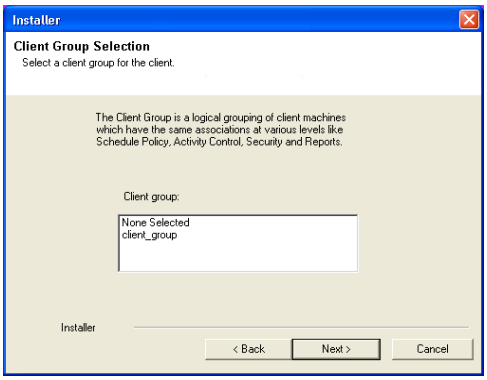
      It is recommended that you use alphanumeric characters only.



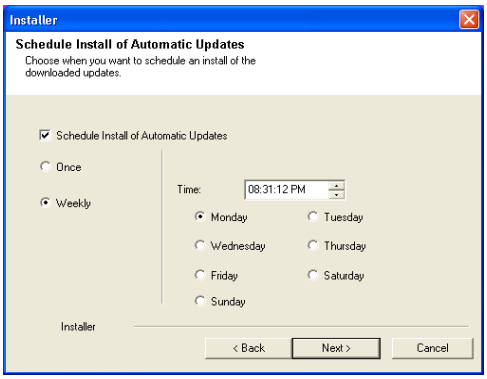
17. Select a Client Group from the list.

    Click **Next**.

    This screen will be displayed if Client Groups are configured in the CommCell Console.

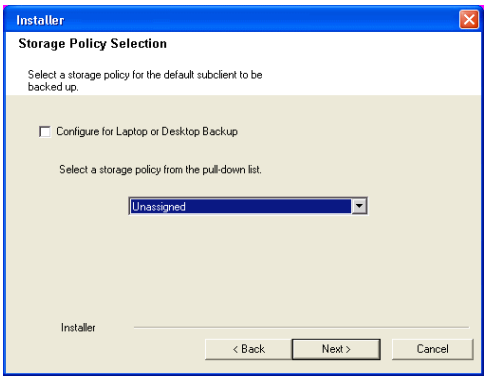


18. Click **Next**.



19. Select a **Storage Policy**.

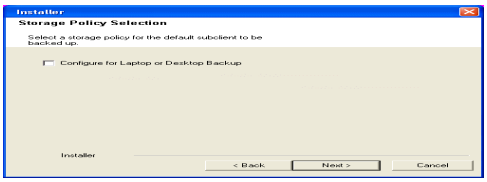
    Click **Next**.



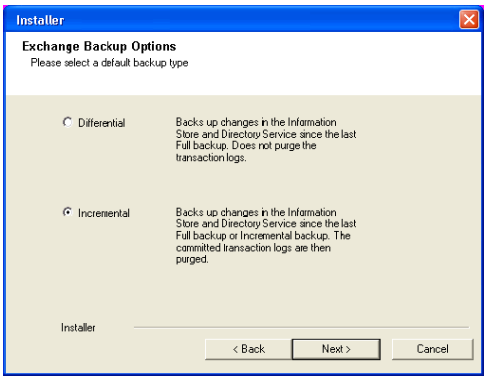
If you do not have Storage Policy created, this message will be displayed.

Click **OK**.

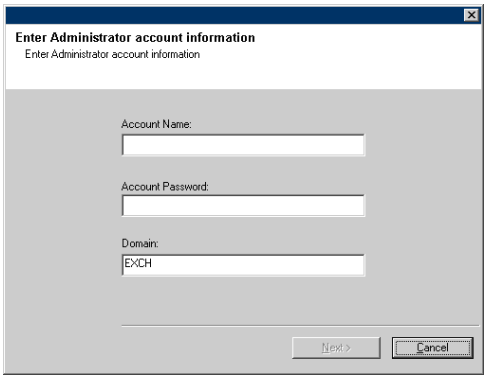
You can create the Storage Policy later in step 31.



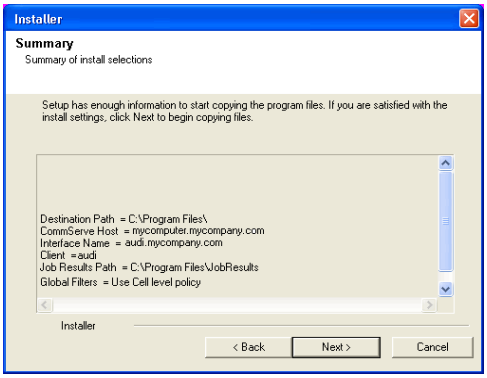
20. Select the backup type for Exchange Database backups. Choose either of the following options, then click **Next**.
    - **Differential** - Specifies that each non-full Exchange Database backup secures all data that has changed since the last full backup. Transaction lobs are not purged.
    - **Incremental** - Specifies that each non-full Exchange Database backup secures only that data that has changed since the last backup of any type. Committed transaction logs are purged.



21. Enter the user credentials to access the Exchange Server to perform the backup operation.
    - The User Account must have Exchange Administrator privileges.
    - The installation detects the domain name. If necessary, you can modify the domain name by specifying Windows domain that the Exchange Server resides in.



22. Click **Next**.

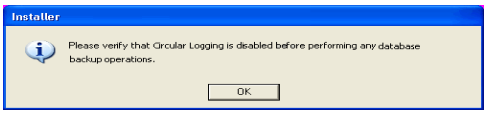


23. The install program displays a reminder to verify that Circular Logging is disabled before performing any database backup operations. To verify that Circular Logging is

disabled:

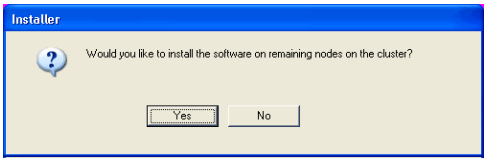
- From Exchange System Manager, navigate to and expand the server that the Database *i*DataAgent is being installed on.
- Verify that the Circular Logging check box has not been selected for each Storage Group. If Circular Logging has been enabled for a Storage Group, disable it at this time.

Click **OK**.



24. To install the software on the remaining nodes of the cluster, click **Yes**.

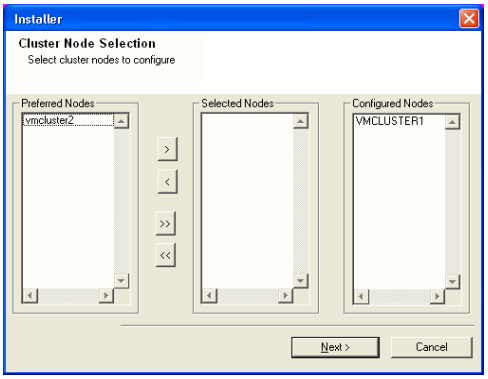
To complete the install for this node only, click **No**.



25. Select cluster nodes from the **Preferred Nodes** list and click the arrow button to move them to the **Selected Nodes** list.

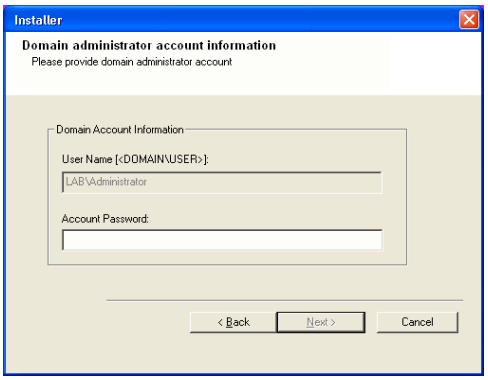
Once you complete your selections, click **Next**.

- The list of **Preferred Nodes** displays all the nodes found in the cluster; from this list you should only select cluster nodes configured to host this cluster group server.
- Do not select nodes that already have multiple instances installed.



26. Specify **User Name** and **Password** for the **Domain Administrator account Information** to perform the remote install on the cluster nodes you selected in the previous step.

Click **Next**.



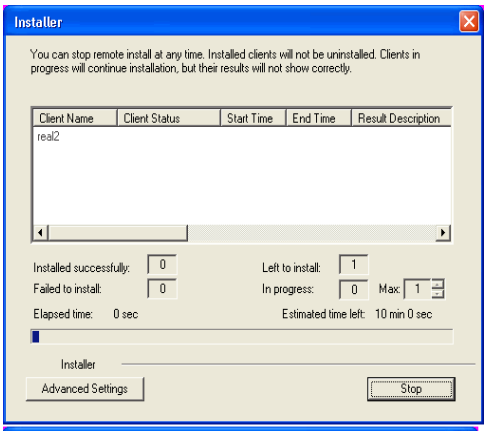
27. The progress of the remote install for the cluster nodes is displayed; the install can be interrupted if necessary.

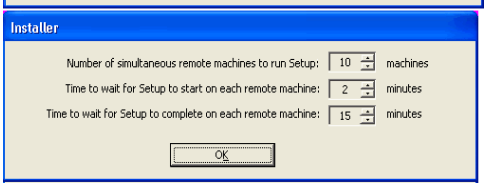
Click **Stop** to prevent installation to any nodes after the current ones complete.

Click **Advanced Settings** to specify any of the following:

- Maximum number of nodes on which Setup can run simultaneously.
- Time allocated for Setup to begin executing on each node, after which the install attempt will fail.
- Time allocated for Setup to complete on each node, after which the install attempt will fail.

If, during the remote install of a cluster node, setup fails to complete or is interrupted, you must perform a local install on that node. When you do, the install begins from where it left off, or from the beginning if necessary. For procedures, see Manually Installing the Software on a Passive Node.

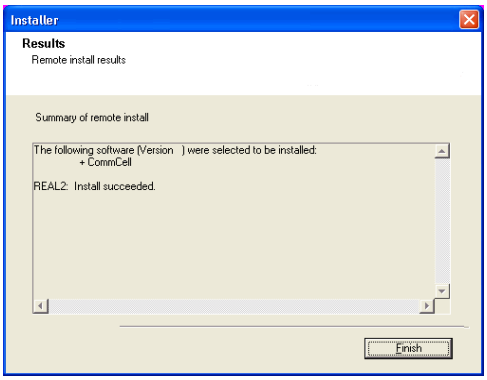




28. Read the summary for remote installation to verify that all selected nodes were

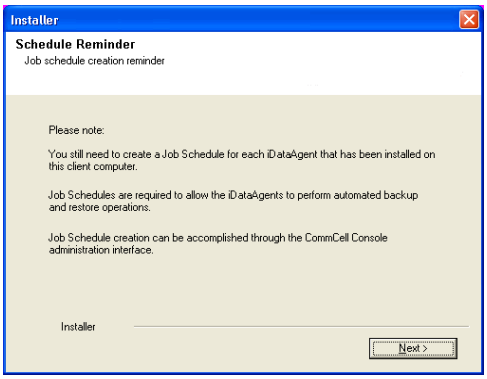
installed successfully.

Click **Next**.

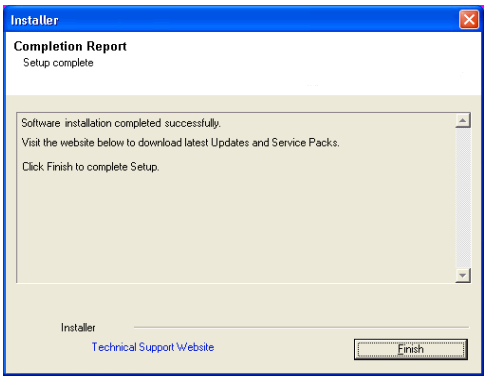


- If any node installation fails, you must manually install the software on that node once the current installation is complete. See Manually Installing the Software on a Passive Node for step-by-step instructions.
- The message displayed on your screen will reflect the status of the selected nodes, and may look different from the example.

29. Click **Next**.



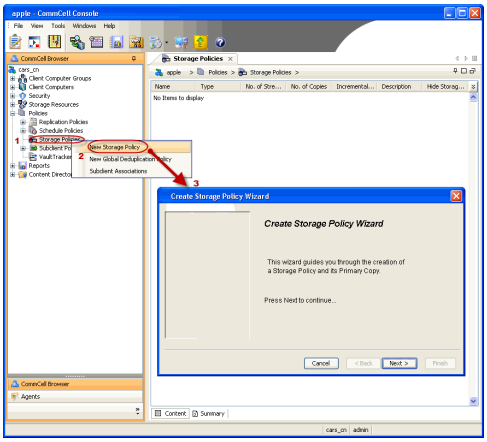
30. Click **Finish**.



CHOICE If you already have a storage policy selected in step 19, Click Next button available at the bottom of the page to proceed to the **Configuration** section.

If you do not have Storage Policy created, continue with the following step.

31. Create a Storage Policy:



1. From the CommCell Browser, navigate to **Policies**.
2. Right-click the **Storage Policies** and then click **New Storage Policy**.
3. Follow the prompts displayed in the Storage Policy Wizard. The required options are mentioned below:
   - Select the Storage Policy type as **Data Protection and Archiving** and click **Next**.
   - Enter the name in the **Storage Policy Name** box and click **Next**.
   - From the **Library** list, click the name of a disk library to which the primary copy should be associated and then click **Next**.

     Ensure that you select a library attached to a MediaAgent operating in the current release.
   - From the **MediaAgent** list, click the name of a MediaAgent that will be used to create the primary copy and then click **Next**.
   - For the device streams and the retention criteria information, click **Next** to accept default values.
   - Select **Yes** to enable deduplication for the primary copy.
   - From the **MediaAgent** list, click the name of the MediaAgent that will be used to store the Deduplication store.

Type the name of the folder in which the deduplication database must be located in the Deduplication Store Location or click the Browse button to select the folder and then click **Next**.

- Review the details and click **Finish** to create the Storage Policy.

32. Enable the following registry key to create job specific profiles:

- From the CommCell Browser, navigate to Client Computers.
- Right-click the <Client> in which you want to add the registry key, and then click Properties.
- Click the Registry Key Settings tab.
- Click Add.
- Enter CreateProcessSpecificProfile in the Name field.
- Enter MSExchangeMBAgent in the Location field. (For Exchange Mailbox iDataAgent).

  Enter MSExchangeDMAgent in the Location field. (For Exchange Mailbox iDataAgent).
- Enter REG_DWORD in the Type filed.
- Enter 1 to enable and 0 to disable the key in the Value field.
- Click OK.

INSTALL THE EXCHANGE AGENTS

The Windows File System *i*DataAgent must be first installed onto all of the physical nodes of the cluster. See Install the Microsoft Windows File System *i*DataAgent if you have not installed it on all of the physical nodes.

Once it has been installed onto the physical nodes, the Exchange Agents (such as Exchange Mailbox *i*DataAgent, Exchange Public Folder *i*DataAgent, Exchange Mailbox Archiver and/or Exchange Public Folder Archiver) and Windows File System *i*DataAgent can be installed from the active node to the virtual server using the following steps described below to install Exchange Agents.

The software can also be automatically installed on all available passive nodes when the software is installed onto the virtual server, or you can choose to install any passive node(s) separately.

CREATE THE REGISTRY KEYS

Before installing the Exchange Agents, create the `bAllowMultiInstances` and `bAllow32BitInstallOn64Bit` registry keys.

1. Create the bAllowMultiInstances registry key.

   To create the registry key, see the following steps:

   1. Start the Registry Editor (Regedit.exe or Redegt32.exe)
   2. Locate the directory under which you want to create a key, e.g., `HKEY_LOCAL_MACHINE\SOFTWARE\`.
   3. Right click the `SOFTWARE` and click **New -> Key**.
   4. Name the key as `GalaxyInstallerFlags`.
   5. Right click the `GalaxyInstallerFlags` and select **New -> DWORD** value, name it as `bAllowMultiInstances` and by double clicking the `bAllowMultiInstances` key modify the **Value data** to 1.

2. Create the bAllow32BitInstallOn64Bit registry key.

   To create the registry key, see the following steps:

   1. Start the Registry Editor (Regedit.exe or Regedit32.exe)
   2. Locate the directory under which you want to create a key, e.g., `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node`.
   3. Right click the `SOFTWARE` and click **New -> Key**.
   4. Name the key as `GalaxyInstallerFlags`.
   5. Right click the `GalaxyInstallerFlags` and select **New -> DWORD** value, name it as `bAllow32BitInstallOn64Bit` and by double clicking the `bAllow32BitInstallOn64Bit` key modify the **Value data** to 1.

INSTALL PROCEDURE

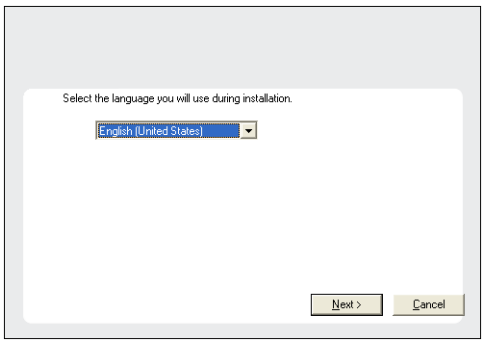
1. Log on to the computer using an account with the following privileges:
   - Administrator of the local computer

- Administrator of the Exchange Server

2. Run **Setup.exe** from Software Installation Package.

3. Select the required language.

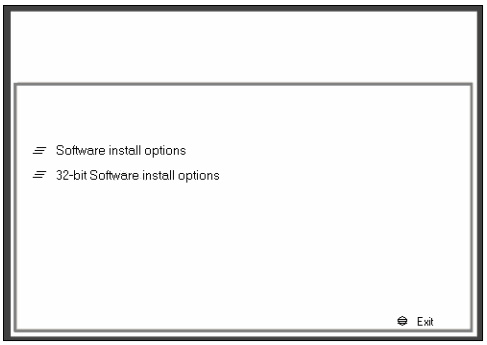
   Click **Next**.



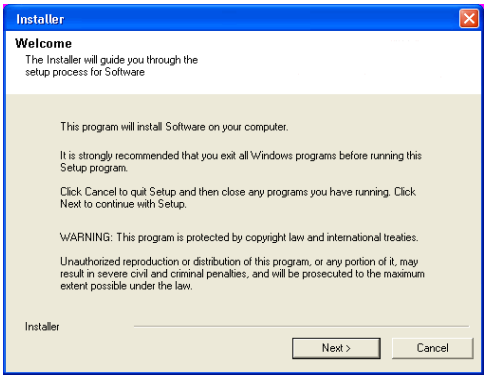
4. Select the **Calypso 32-bit Software install options** to install software.

   NOTES

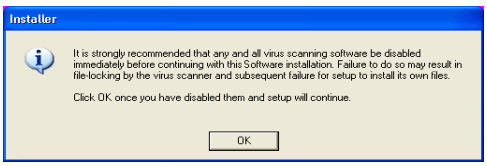
   - This screen will only appear when the `bAllow32BitInstallOn64Bit` registry key has been created and enabled on this computer.



5. Click **Next**.

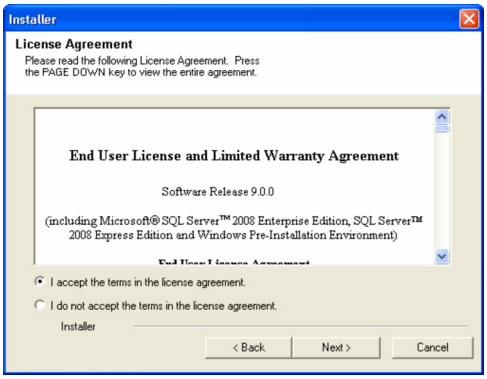


6. Click **OK**.



7. Select **I accept the terms in the license agreement**.

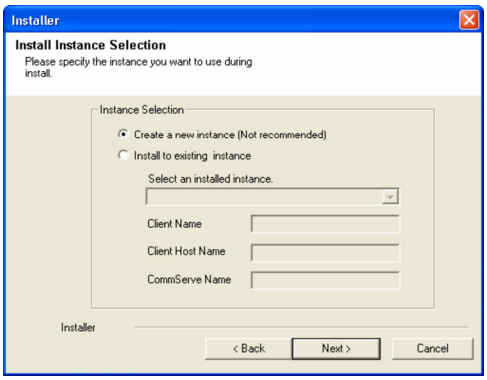
   Click **Next**.



8. Select **Create a new instance** option to install the Exchange Agents on separate instance.

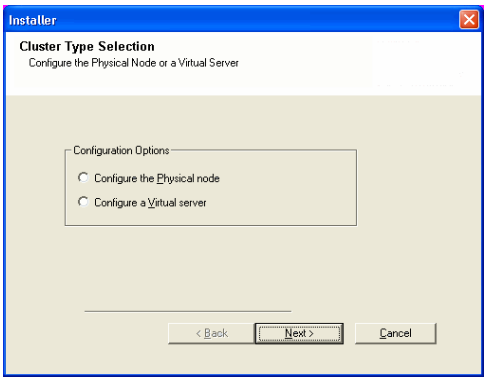
NOTES

- This screen will appear when the bAllowMultiInstances registry key has enabled on this computer.
- This screen will not appear if no other software components are installed on the computer.



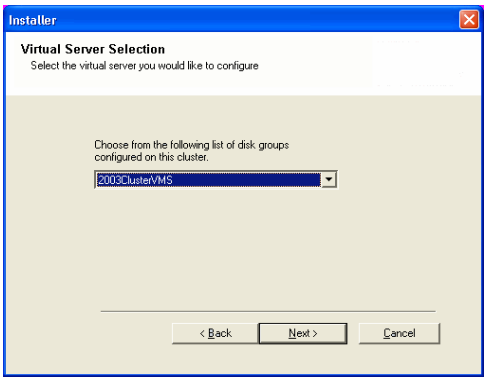
9. Select **Configure a Virtual Server**.

   Click **Next** to continue.



10. Select the disk group in which the cluster group resides.

    Click **Next** to continue.



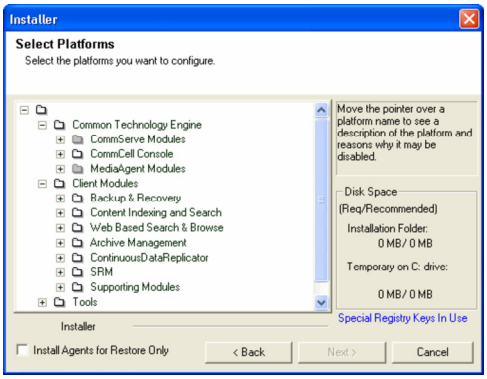
11. To install the **Exchange *i*DataAgents** expand **Client Modules | Exchange,** and select one or more of the following:

    - **Exchange Mailbox *i*DataAgent**
    - **Exchange Public Folder *i*DataAgent**

    To install the **Exchange Archiver Agents**, expand **Client Modules | Archive Management**, and select one or more of the following:

    - **Exchange Compliance Archiver**
    - **Exchange Mailbox Archiver Agent**
    - **Exchange Public Folder Archiver Agent**

    Click **Next**.

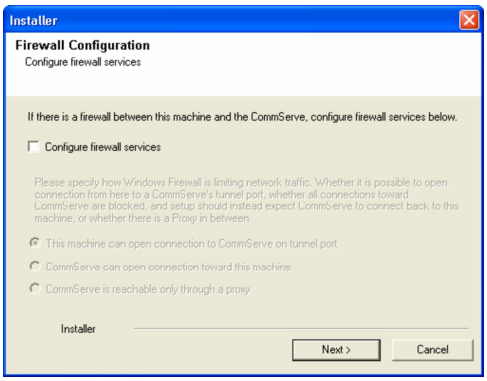


    Note that the Exchange Database *i*DataAgents must be installed on the Exchange Server, see Install the Exchange Database *i*DataAgent for step-by-step procedure.

12. If this computer and the CommServe is separated by a firewall, select the **Configure firewall services** option and then click **Next**.

    For firewall options and configuration instructions, see Firewall Configuration and continue with the installation.

    If firewall configuration is not required, click **Next**.

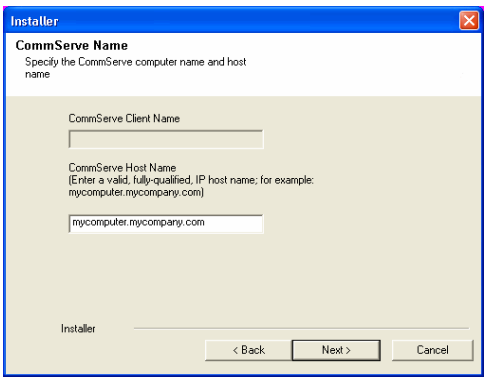


13. Enter the fully qualified domain name of the **CommServe Host Name**.

    Click **Next**.

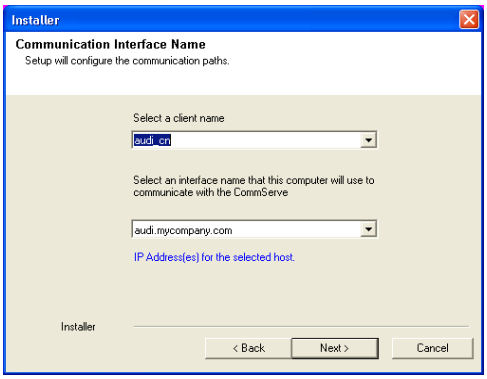
    Do not use space and the following characters when specifying a new name for the CommServe Host Name:

    \|`~!@#$%^&*()+=<>/?,[]{}:;'"



14. Click **Next**.

    If there is any other instance installed on the computer, make sure that the host name does not match the client name entered in the **Select a client name** field in the previous instance.

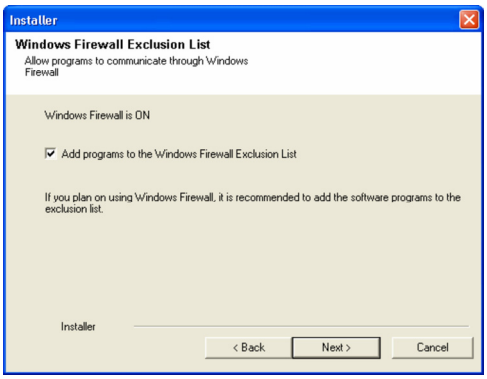


15. Select **Add programs to the Windows Firewall Exclusion List**, to add CommCell programs and services to the Windows Firewall Exclusion List.

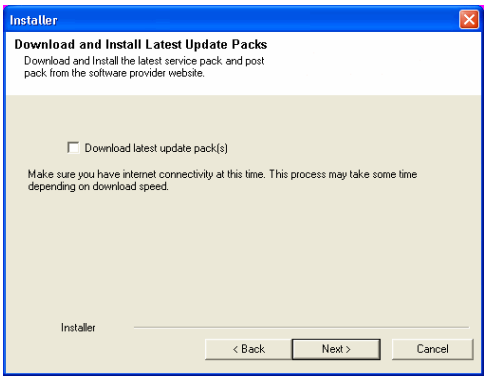
    Click **Next**.

    This option enables CommCell operations across Windows firewall by adding CommCell programs and services to Windows firewall exclusion list.

    It is recommended to select this option even if Windows firewall is disabled. This will allow the CommCell programs and services to function if the Windows firewall is enabled at a later time.



16. Click **Next**.



17. Verify the default location for software installation.

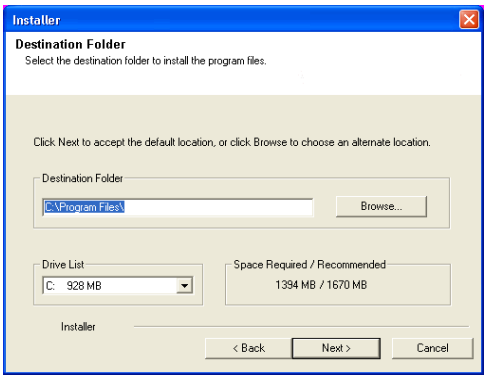
    Click **Browse** to change the default location.

    Click **Next**.

    - Do not install the software to a mapped network drive.
    - Do not use the following characters when specifying the destination path:

      / : * ? " < > | #

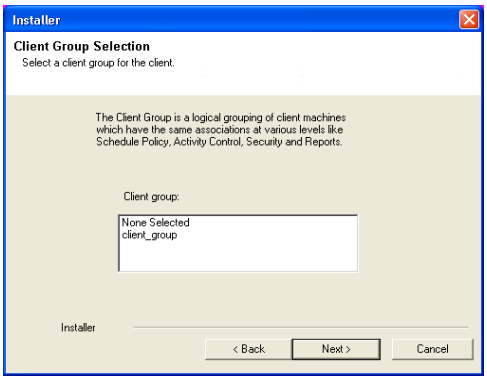
      It is recommended that you use alphanumeric characters only.



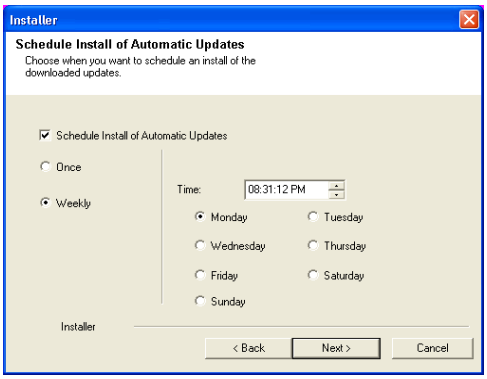
18. Select a Client Group from the list.

    Click **Next**.

    This screen will be displayed if Client Groups are configured in the CommCell Console.

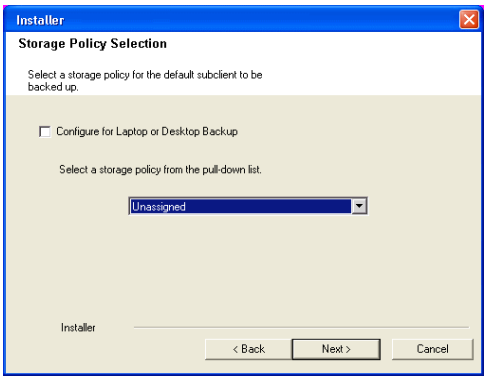


19. Click **Next**.



20. Select a **Storage Policy**.

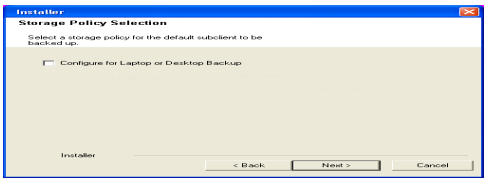
    Click **Next**.



If you do not have Storage Policy created, this message will be displayed.

Click **OK**.

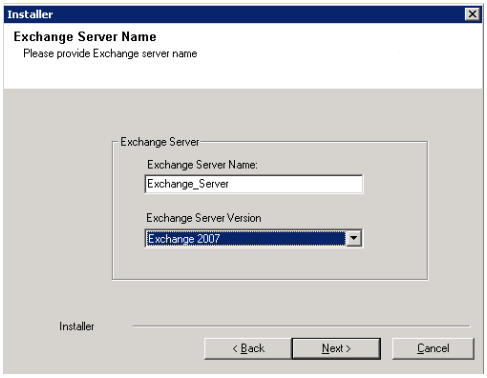
You can create the Storage Policy later in step 31.



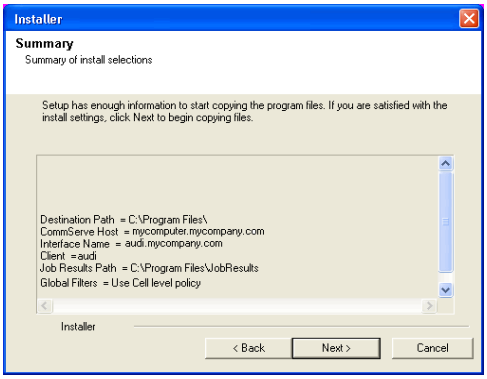
21. Select **Exchange Server Name** and **Exchange Server Version** from drop-down list.

    Click **Next**.

    This screen will appear when you are installing Exchange Agents on Non-Exchange Server.



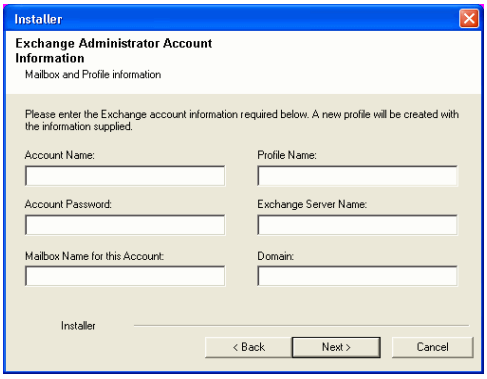
22. Click **Next**.



23. Enter the following Exchange Administrator information then click **Next**.

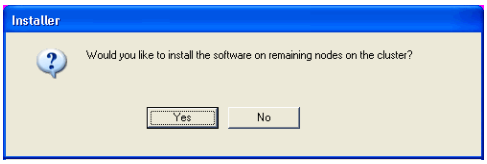
- **Account Name** - Domain user account created with the exchange server administrator permissions. Do not include the domain name here.
- **Account Password** - The password assigned to the domain user.
- **Mailbox Name for this Account** - Mailbox associated with the user above.
- **Profile Name** - Specify profile name to be created during agent install. This profile is associated with the domain user's mailbox.
- **Exchange Server Name** - Name of the Exchange Server that the agent will communicate with for data protection and recovery operations.

  For Exchange Server 2010, enter the Client Access Role. After installation configure the roles as described in Configure Mailboxes in Database Availability Group (DAG) Servers.
- **Domain** - The installation detects and enters a domain name. If necessary, modify the domain name by specifying Windows domain that the Exchange Server resides in.



24. To install the software on the remaining nodes of the cluster, click **Yes**.

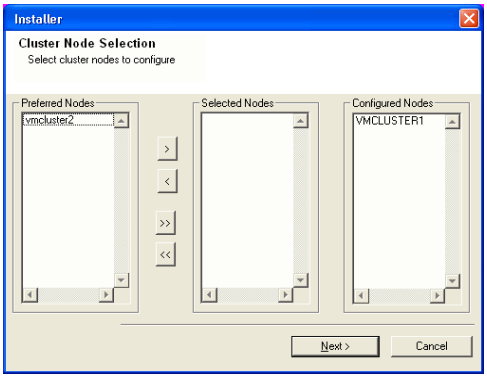
To complete the install for this node only, click **No**.



25. Select cluster nodes from the **Preferred Nodes** list and click the arrow button to move them to the **Selected Nodes** list.

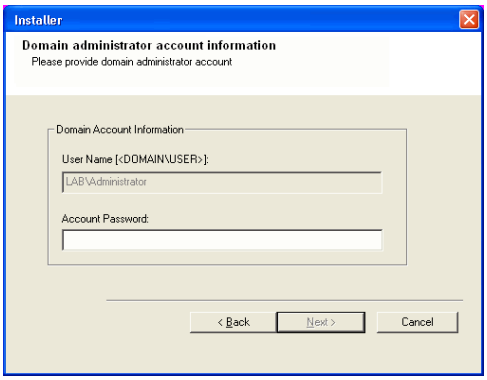
    Once you complete your selections, click **Next**.

    - The list of **Preferred Nodes** displays all the nodes found in the cluster; from this list you should only select cluster nodes configured to host this cluster group server.
    - Do not select nodes that already have multiple instances installed.



26. Specify **User Name** and **Password** for the **Domain Administrator account Information** to perform the remote install on the cluster nodes you selected in the previous step.

    Click **Next**.



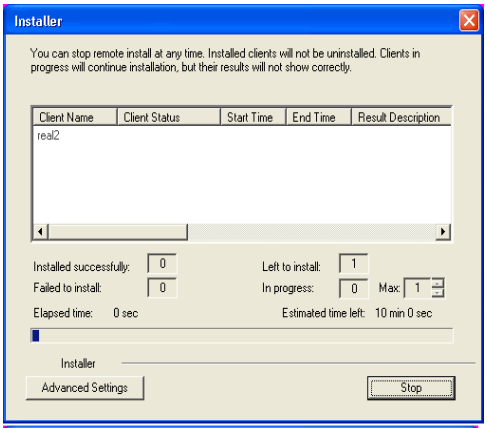
27. The progress of the remote install for the cluster nodes is displayed; the install can be interrupted if necessary.

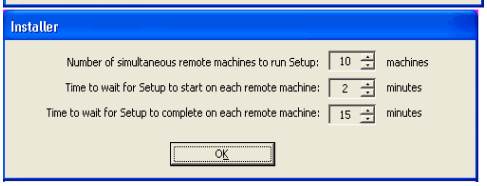
    Click **Stop** to prevent installation to any nodes after the current ones complete.

    Click **Advanced Settings** to specify any of the following:

    - Maximum number of nodes on which Setup can run simultaneously.
    - Time allocated for Setup to begin executing on each node, after which the install attempt will fail.
    - Time allocated for Setup to complete on each node, after which the install attempt will fail.

      If, during the remote install of a cluster node, setup fails to complete or is interrupted, you must perform a local install on that node. When you do, the install begins from where it left off, or from the beginning if necessary. For procedures, see Manually Installing the Software on a Passive Node.

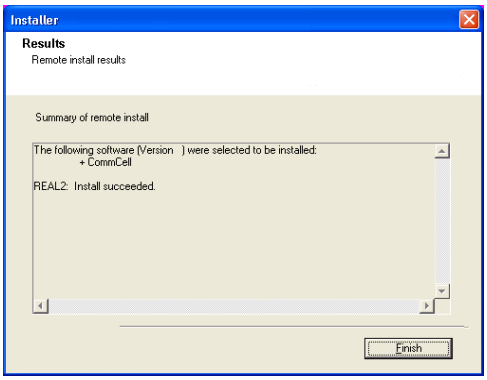




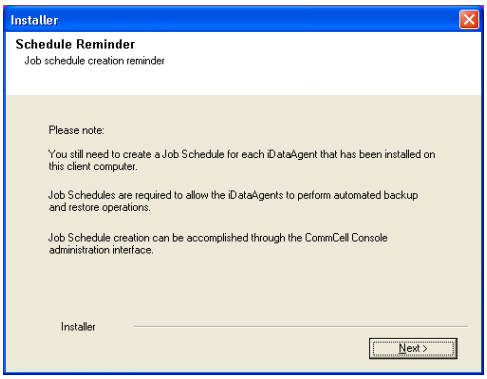
28. Read the summary for remote installation to verify that all selected nodes were installed successfully.

    Click **Next**.

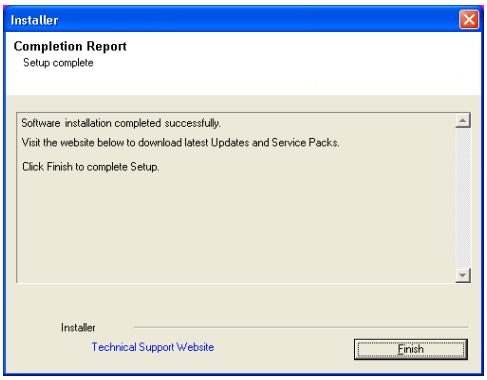
    - If any node installation fails, you must manually install the software on that node once the current installation is complete. See Manually Installing the Software on a Passive Node for step-by-step instructions.
    - The message displayed on your screen will reflect the status of the selected nodes, and may look different from the example.



29. Click **Next**.



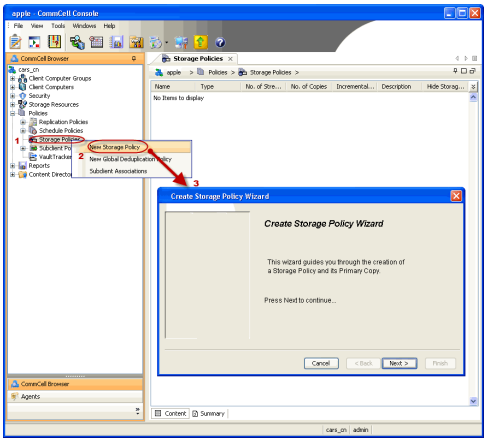
30. Click **Finish**.



CHOICE If you already have a storage policy selected in step 20, Click Next button available at the bottom of the page to proceed to the **Configuration** section.

If you do not have Storage Policy created, continue with the following step.

31. Create a Storage Policy:



1. From the CommCell Browser, navigate to **Policies**.
2. Right-click the **Storage Policies** and then click **New Storage Policy**.
3. Follow the prompts displayed in the Storage Policy Wizard. The required options are mentioned below:
   - Select the Storage Policy type as **Data Protection and Archiving** and click **Next**.
   - Enter the name in the **Storage Policy Name** box and click **Next**.
   - From the **Library** list, click the name of a disk library to which the primary copy should be associated and then click **Next**.

     Ensure that you select a library attached to a MediaAgent operating in the current release.
   - From the **MediaAgent** list, click the name of a MediaAgent that will be used to create the primary copy and then click **Next**.
   - For the device streams and the retention criteria information, click **Next** to accept default values.
   - Select **Yes** to enable deduplication for the primary copy.
   - From the **MediaAgent** list, click the name of the MediaAgent that will be used to store the Deduplication store.

Type the name of the folder in which the deduplication database must be located in the Deduplication Store Location or click the Browse button to select the folder and then click **Next**.

- Review the details and click **Finish** to create the Storage Policy.

32. Enable the following registry key to create job specific profiles:

- From the CommCell Browser, navigate to Client Computers.
- Right-click the <Client> in which you want to add the registry key, and then click Properties.
- Click the Registry Key Settings tab.
- Click Add.
- Enter CreateProcessSpecificProfile in the Name field.
- Enter MSExchangeMBAgent in the Location field. (For Exchange Mailbox iDataAgent).

  Enter MSExchangeDMAgent in the Location field. (For Exchange Mailbox iDataAgent).
- Enter REG_DWORD in the Type filed.
- Enter 1 to enable and 0 to disable the key in the Value field.
- Click OK.

Previous Next

Install the 32-bit Exchange Agents on a Non-Exchange Server

Previous Next

The following procedure describes the steps involved in installing the 32-bit Exchange Agents on 32-bit Non-Exchange Server computer.

WHERE TO INSTALL

The 32-bit Exchange Agents can be installed on a separate computer with connectivity to the Exchange Server. This method is referred to as an Non-Exchange Server installation and is useful if you want to offload the memory and processing resources required for backups and restores from the Exchange Server.

INSTALLATION

The software can be installed using one of the following methods:

METHOD 1: INTERACTIVE INSTALL

Use this procedure to directly install the software from the installation package or a network drive.

METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

Use this procedure to remotely install the software on a client computer.

RELATED TOPICS

Download Software Packages
Provides step-by-step procedure to download the latest packages for software install.

System Requirements
Verify that the computer in which you wish to install the software satisfies the System Requirements.

Firewall
Provides comprehensive information on firewall.

PREREQUISITES

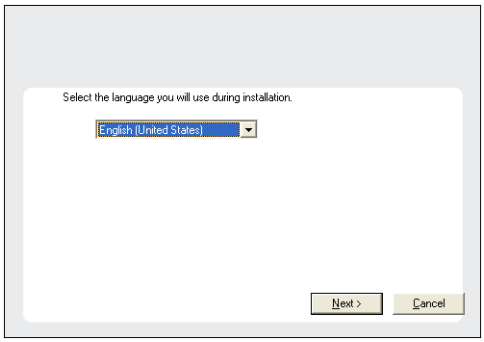
The below mentioned prerequisites are for Mailbox Agents only. Ensure that you have the following:

- Service account is a member of Exchange Organization Administrators group.
- The mail-enabled user is a member of the Local Administrator Group and have rights to all mailboxes on the server.
- Ensure that you assign full access to all mailboxes on the server. For details, see How do I Assign Full Access to All Mailboxes on a Server.

METHOD 1: INTERACTIVE INSTALL

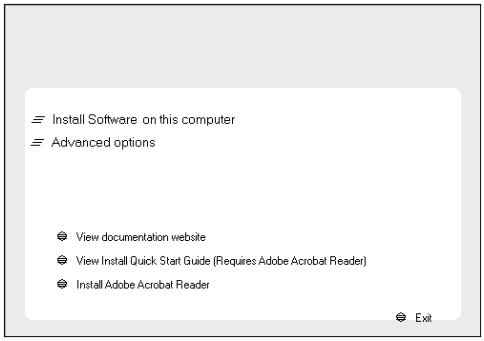
1. Log on to the computer using an account with the following privileges:
   - Administrator of the local computer
   - Administrator of the Exchange Server
2. Run **Setup.exe** from Software Installation Package.
3. Select the required language.

   Click **Next**.



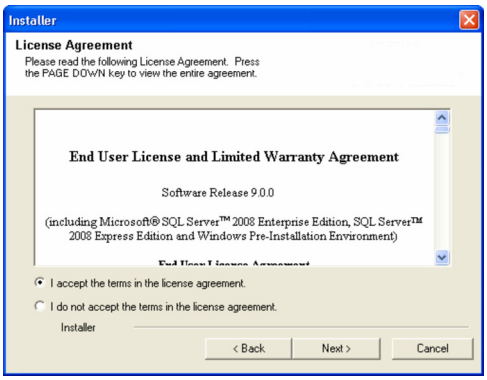
4. Select the option to **Install Calypso on this computer**.

   NOTES:
   - Your screen may look different from the example shown.

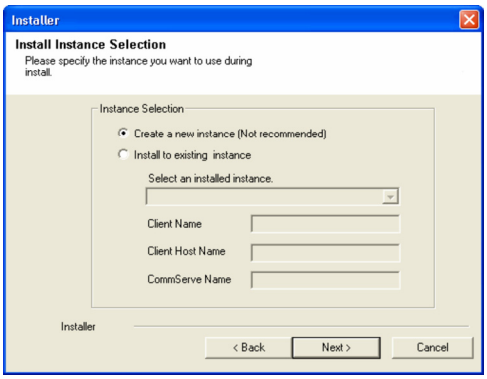


5. Select **I accept the terms in the license agreement**.

   Click **Next**.



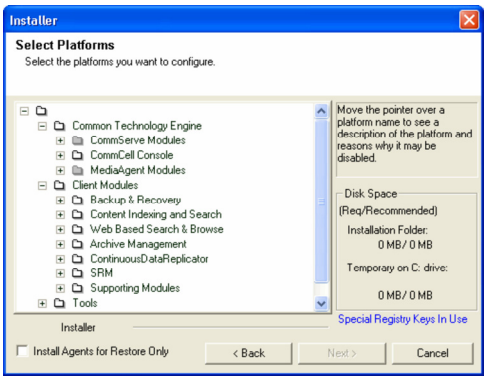
6. Select **Create a new instance** option to install the Exchange Agents on separate instance for the purpose of different Exchange Servers.



NOTES

- This screen will appear when the bAllowMultiInstances registry key has enabled on this computer.
- This screen will not appear if no other software components are installed on the computer.

7. To install the **Exchange *i*DataAgents** expand **Client Modules | Exchange,** and select one or more of the following:



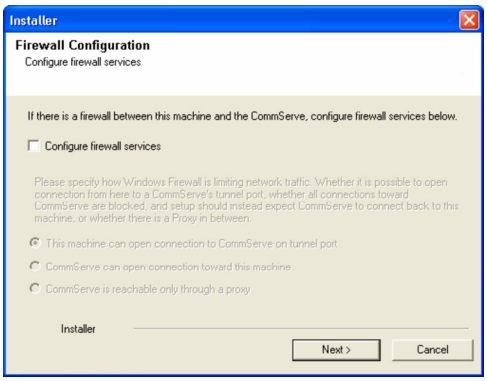
- **Exchange Mailbox *i*DataAgent**
- **Exchange Public Folder *i*DataAgent**

To install the **Exchange Archiver Agents**, expand **Client Modules | Archive Management**, and select one or more of the following:

- **Exchange Compliance Archiver**
- **Exchange Mailbox Archiver Agent**
- **Exchange Public Folder Archiver Agent**

Click **Next**.

8. If this computer and the CommServe is separated by a firewall, select the **Configure firewall services** option and then click **Next**.



For firewall options and configuration instructions, see Firewall Configuration and continue with the installation.

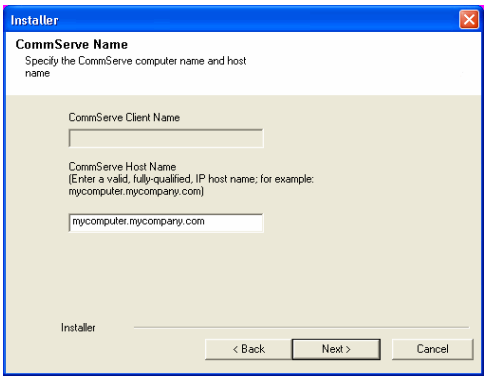
If firewall configuration is not required, click **Next**.

9. Enter the fully qualified domain name of the **CommServe Host Name**.

Click **Next**.

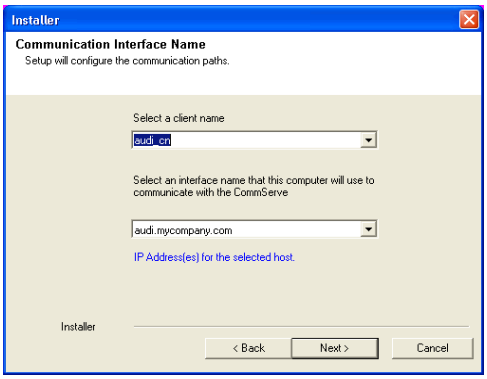
Do not use space and the following characters when specifying a new name for the CommServe Host Name:

\|`~!@#$%^&*()+=<>/?,[]{}:;'"



10. Click **Next**.

    If there is any other instance installed on the computer, make sure that the host name does not match the client name entered in the **Select a client name** field in the previous instance.

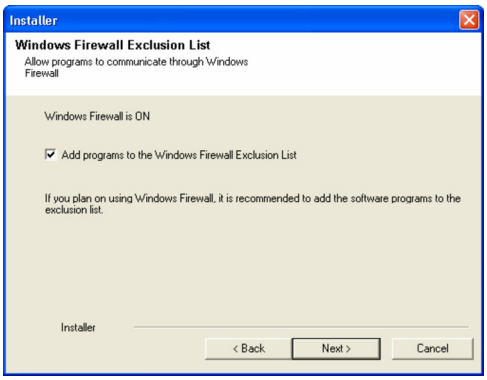


11. Select **Add programs to the Windows Firewall Exclusion List**, to add CommCell programs and services to the Windows Firewall Exclusion List.

    Click **Next**.

    This option enables CommCell operations across Windows firewall by adding CommCell programs and services to Windows firewall exclusion list.

    It is recommended to select this option even if Windows firewall is disabled. This will allow the CommCell programs and services to function if the Windows firewall is enabled at a later time.



12. Verify the default location for software installation.

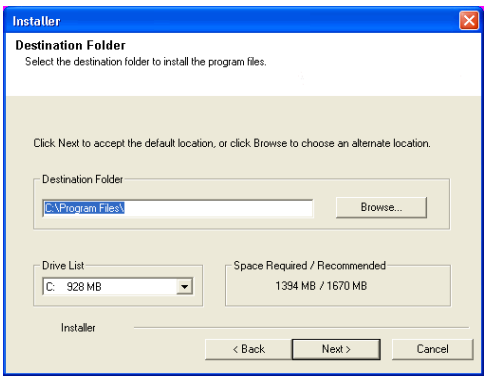
    Click **Browse** to change the default location.

    Click **Next**.

    - Do not install the software to a mapped network drive.
    - Do not use the following characters when specifying the destination path:

      / : * ? " < > | #

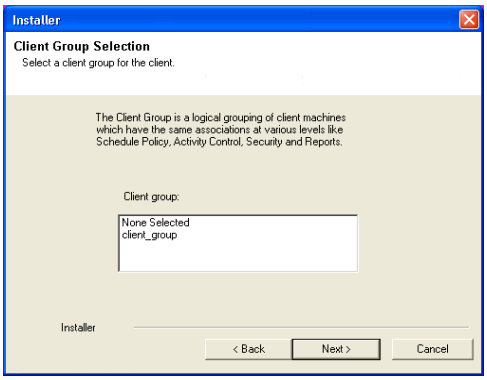
      It is recommended that you use alphanumeric characters only.



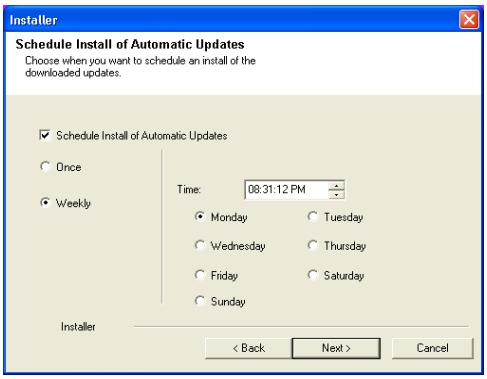
13. Select a Client Group from the list.

    Click **Next**.

    This screen will be displayed if Client Groups are configured in the CommCell Console.

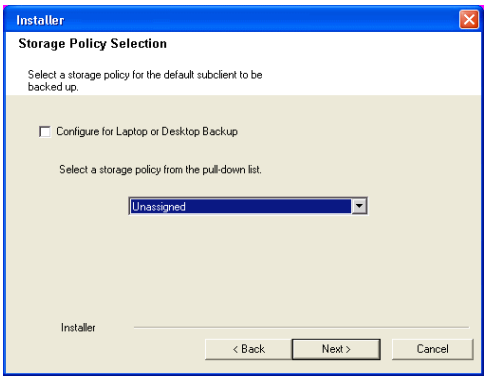


14. Click **Next**.



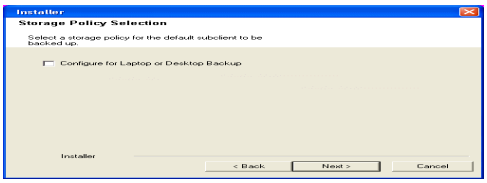
15. Select a **Storage Policy**.

Click **Next**.



If you do not have Storage Policy created, this message will be displayed.

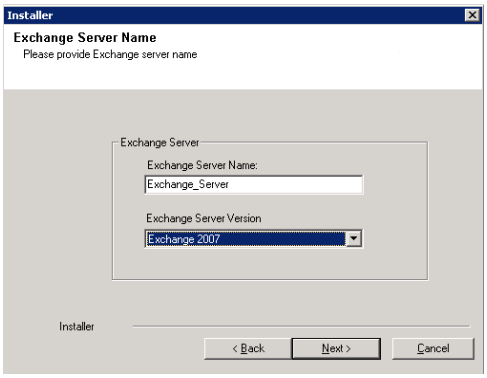
Click **OK**.



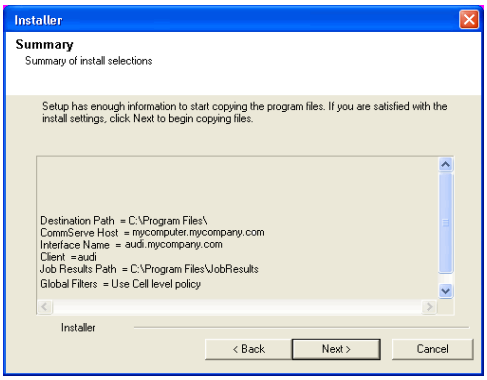
You can create the Storage Policy later in step 21.

16. Select **Exchange Server Name** and **Exchange Server Version** from drop-down list.

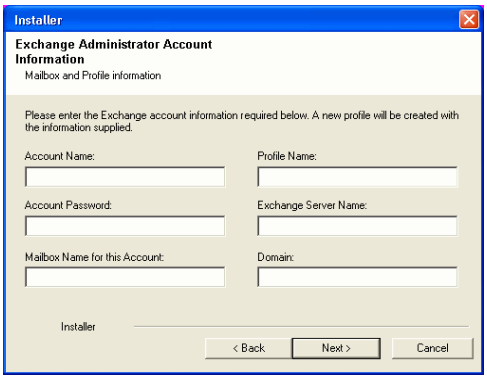
Click **Next**.



17. Click **Next**.



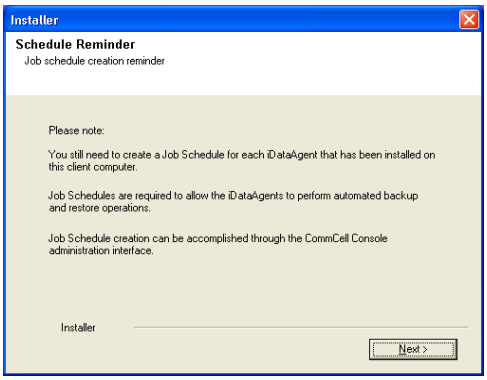
18. Enter the following Exchange Administrator information then click **Next**.



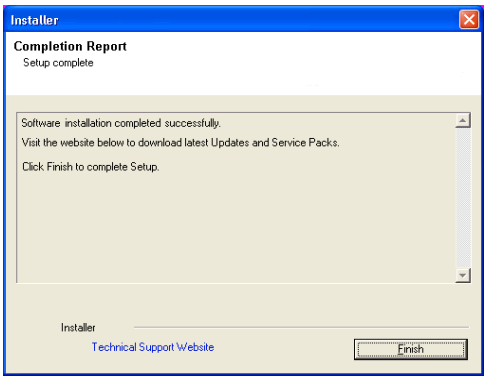
- **Account Name** - Domain user account created with the exchange server administrator permissions. Do not include the domain name here.
- **Account Password** - The password assigned to the domain user.
- **Mailbox Name for this Account** - Mailbox associated with the user above.
- **Profile Name** - Specify profile name to be created during agent install. This profile is associated with the domain user's mailbox.
- **Exchange Server Name** - Name of the Exchange Server that the agent will communicate with for data protection and recovery operations.

  Enter the Mailbox Role Server name (NetBIOS). After installation configure the roles as described in Configure Mailboxes in Database Availability Group (DAG) Servers.
- **Domain** - The installation detects and enters a domain name. If necessary, modify the domain name by specifying Windows domain that the Exchange Server resides in.

19. Click **Next**.



20. Click **Finish**.



If you already have a storage policy selected in step 15, Click Next ➤ button available at the bottom of the page to proceed to the **Configuration** section.

If you do not have Storage Policy created, continue with the following step.

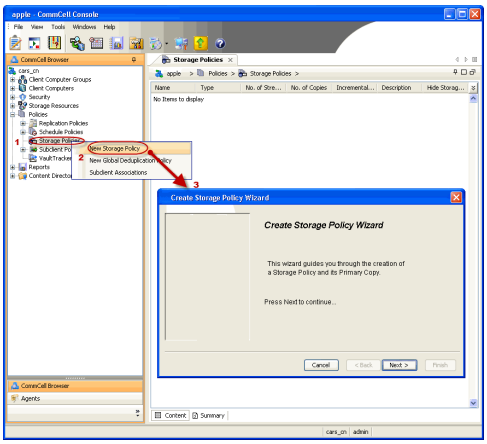
21. Create a Storage Policy:
    1. From the CommCell Browser, navigate to **Policies**.
    2. Right-click the **Storage Policies** and then click **New Storage Policy**.
    3. Follow the prompts displayed in the Storage Policy Wizard. The required options

are mentioned below:

- Select the Storage Policy type as **Data Protection and Archiving** and click **Next**.
- Enter the name in the **Storage Policy Name** box and click **Next**.
- From the **Library** list, click the name of a disk library to which the primary copy should be associated and then click **Next**.

  Ensure that you select a library attached to a MediaAgent operating in the current release.
- From the **MediaAgent** list, click the name of a MediaAgent that will be used to create the primary copy and then click **Next**.
- For the device streams and the retention criteria information, click **Next** to accept default values.
- Select **Yes** to enable deduplication for the primary copy.
- From the **MediaAgent** list, click the name of the MediaAgent that will be used to store the Deduplication store.

  Type the name of the folder in which the deduplication database must be located in the Deduplication Store Location or click the Browse button to select the folder and then click **Next**.
- Review the details and click **Finish** to create the Storage Policy.



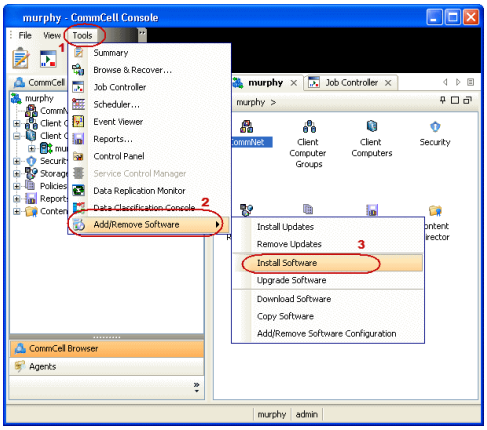
22. Enable the following registry key to create job specific profiles:

- From the CommCell Browser, navigate to Client Computers.
- Right-click the <Client> in which you want to add the registry key, and then click Properties.
- Click the Registry Key Settings tab.
- Click Add.
- Enter CreateProcessSpecificProfile in the Name field.
- Enter MSExchangeMBAgent in the Location field. (For Exchange Mailbox iDataAgent).

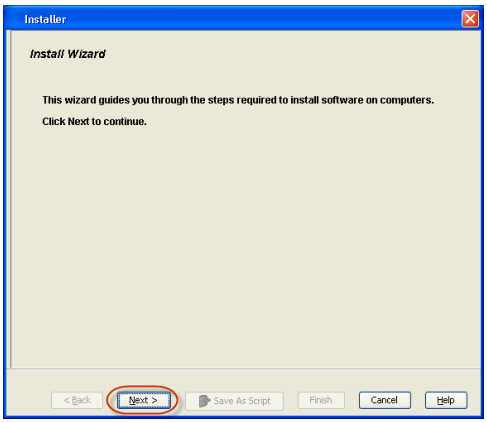
  Enter MSExchangeDMAgent in the Location field. (For Exchange Mailbox iDataAgent).
- Enter REG_DWORD in the Type filed.
- Enter 1 to enable and 0 to disable the key in the Value field.
- Click OK.

METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

1. From the CommCell Browser, select **Tools**, point to **Add/Remove Software**, and then click **Install Software.**

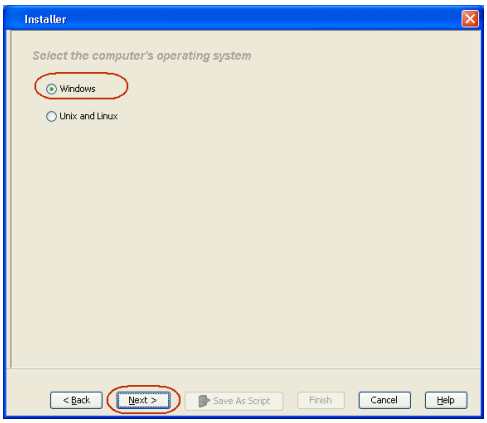


2. Click **Next**.



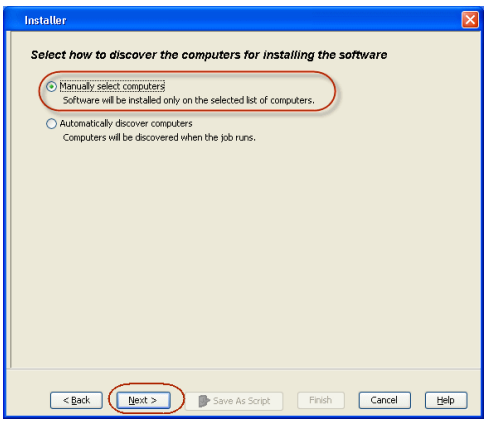
3. Select **Windows**.

   Click **Next**.



4. Select **Manually Select Computers**.

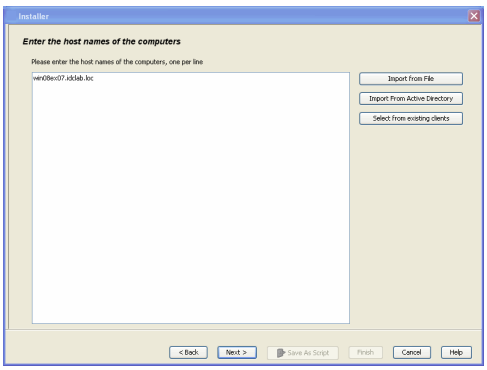
   Click **Next**.



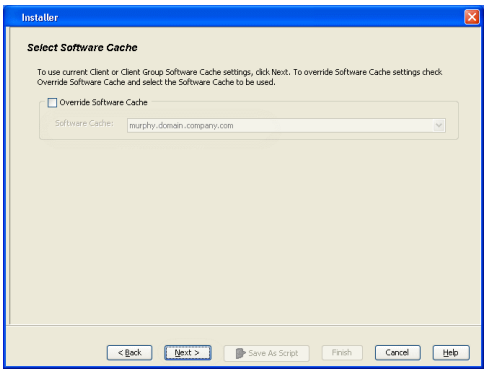
5. Enter the fully qualified domain name of the computer on which you have Exchange Server.

   For example: `win08ex07.idclab.loc`

   Click **Next**.

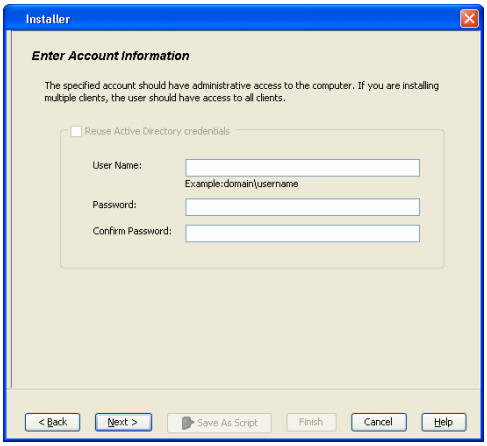


6. Click **Next**.



7. Specify **User Name** and **Password** that must be used to access the computer.

   Click **Next**.

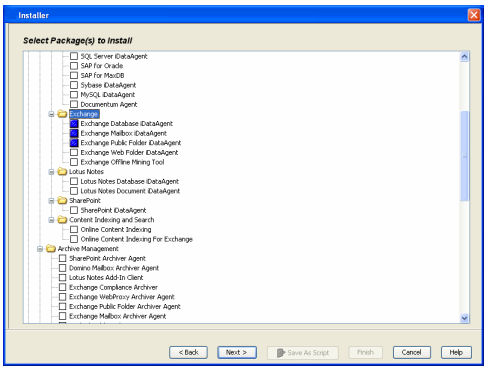


8. To install the **Exchange *i*DataAgents** expand **Client Modules | Backup & Recovery | Exchange,** and select one or more of the following:

   - **Exchange Database *i*DataAgent**
   - **Exchange Mailbox *i*DataAgent**
   - **Exchange Public Folder *i*DataAgent**

   Click **Next**.

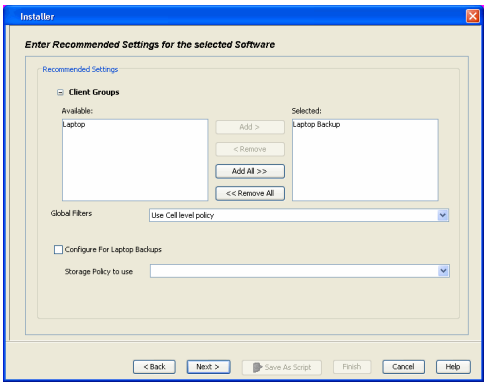
   For Non-Exchange Server, Exchange Database *i*DataAgent will not be applicable.



9. - Select **Client Group** from **Available** and click **Add**.
   - Select a **Storage Policy** from the drop-down list. Click **Next**.

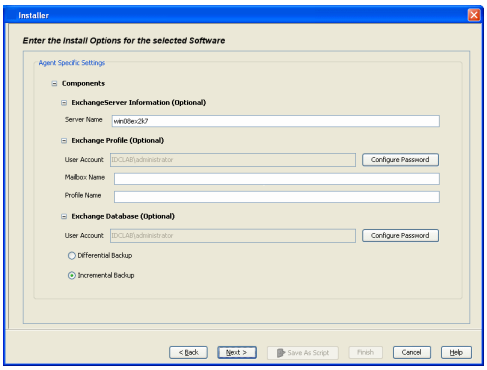
   NOTES:

   - Select the **Configure for Laptop or Desktop Backup** option to install **Backup Monitor** utility. This utility allows you to view the backup job summary from the client computer without opening the CommCell Console. See Monitor - Laptop User for more information.

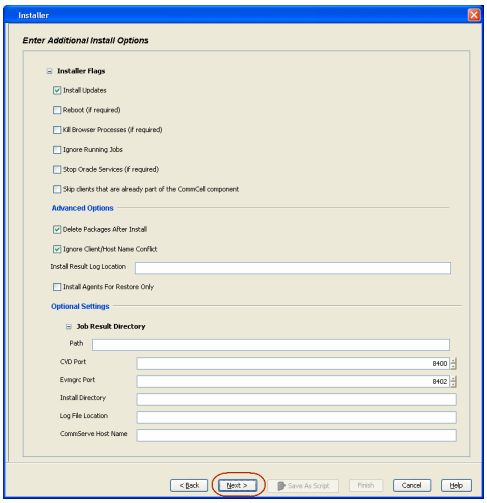


10. Type the Agent Specific Settings information.

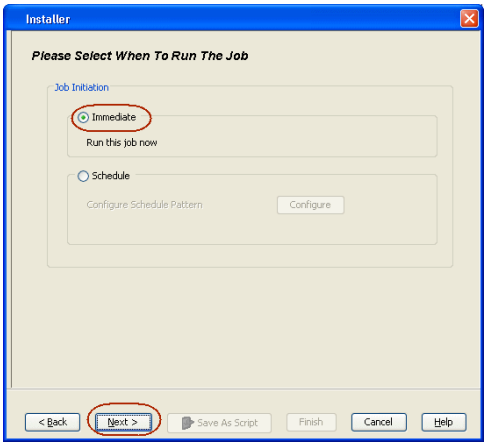
    Click **Next**.



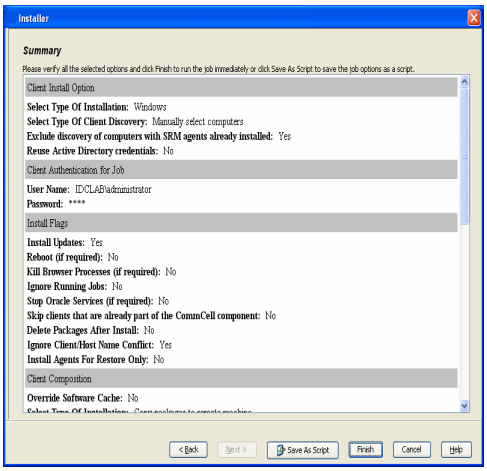
11. Click **Next**.



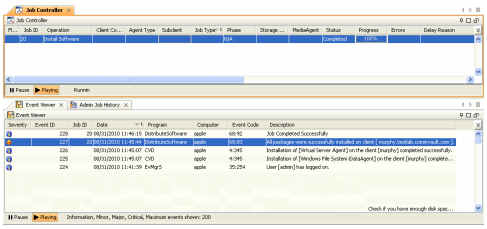
12. Select **Immediate**.
    Click **Next**.



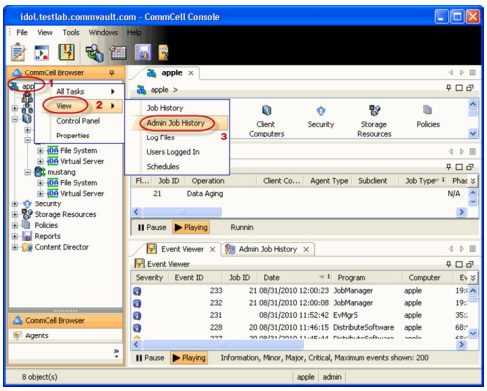
13. Click **Finish**.



14. You can track the progress of the job from the **Job Controller** or **Event Viewer** window.

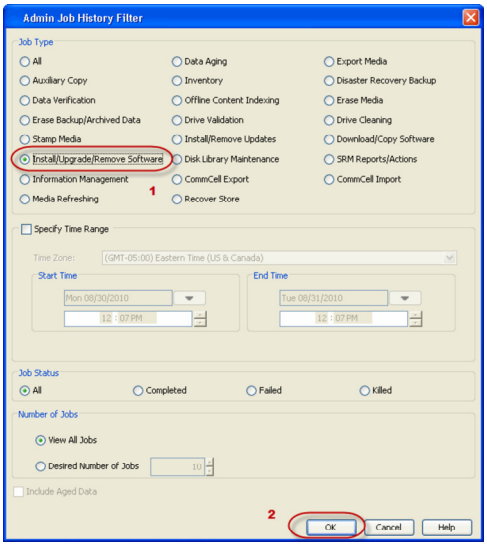


15. Once the job is complete, right-click the **CommServe** computer, click **View** and then click **Admin Job History**.



16. Select **Install/Upgrade/Remove Software**.

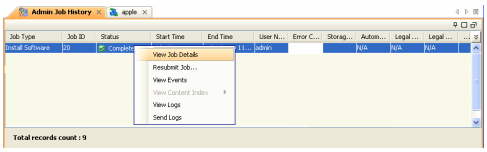
Click **OK**.



17. You can view the following details about the job by right-clicking the job:

- Items that succeeded during the job
- Items that failed during the job
- Details of the job

- Events of the job
- Log files of the job



18. Enable the following registry key to create job specific profiles:

- From the CommCell Browser, navigate to Client Computers.
- Right-click the <Client> in which you want to add the registry key, and then click Properties.
- Click the Registry Key Settings tab.
- Click Add.
- Enter CreateProcessSpecificProfile in the Name field.
- Enter MSExchangeMBAgent in the Location field. (For Exchange Mailbox iDataAgent).

  Enter MSExchangeDMAgent in the Location field. (For Exchange Mailbox iDataAgent).
- Enter REG_DWORD in the Type filed.
- Enter 1 to enable and 0 to disable the key in the Value field.
- Click OK.

Previous Next

Install the Exchange Agents on Exchange Server 2003

Previous Next

Follow the steps given below to install the Exchange Agents on Exchange Server 2003.

WHERE TO INSTALL

Install the software directly on the Exchange Server you wish to protect

INSTALLATION

The software can be installed using one of the following methods:

METHOD 1: INTERACTIVE INSTALL

Use this procedure to directly install the software from the installation package or a network drive.

METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

Use this procedure to remotely install the software on a client computer.

RELATED TOPICS

Download Software Packages
Provides step-by-step procedure to download the latest packages for software install.

System Requirements
Verify that the computer in which you wish to install the software satisfies the System Requirements.

Firewall
Provides comprehensive information on firewall.

PREREQUISITES

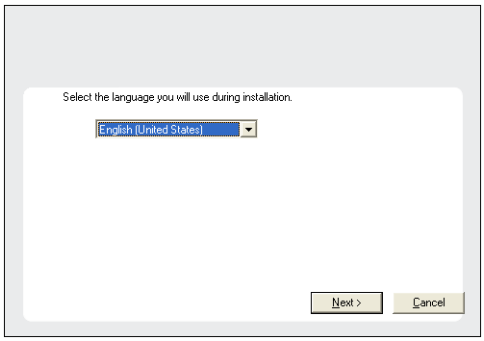
The below mentioned prerequisites are for Mailbox Agents only. Ensure that you have the following:

- The mail-enabled user is a member of the Local Administrator Group and have rights to all mailboxes on the server.
- Using the Exchange System Manager snap-in, right-click the organization object and delegate control.
- Using the Wizard, assign the MailboxAdmin user Exchange Full Administrator privileges.
- Ensure that you assign full access to all mailboxes on the server. For details, see How do I Assign Full Access to All Mailboxes on a Server.

METHOD 1: INTERACTIVE INSTALL

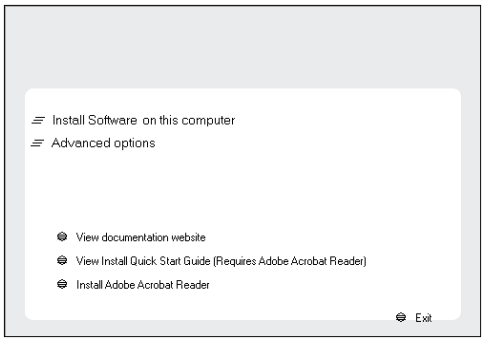
1. Log on to the computer using an account with the following privileges:
   - Administrator of the local computer
   - Administrator of the Exchange Server
2. Run **Setup.exe** from the Software Installation Package.
3. Select the required language.

   Click **Next**.



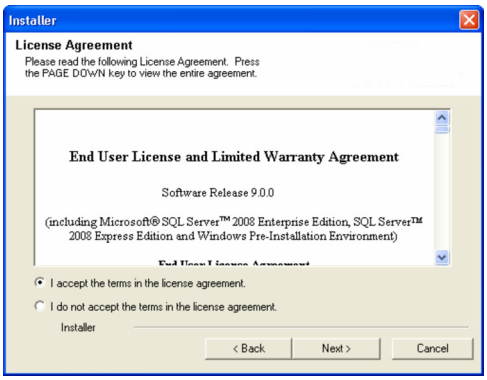
4. Select the option to install software on this computer.

   The options that appear on this screen depend on the computer in which the software is being installed.



5. Select **I accept the terms in the license agreement**.

Click **Next**.



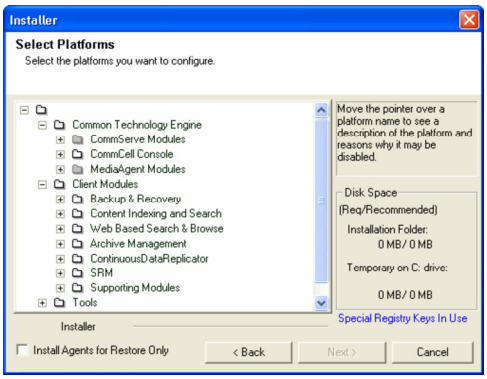
6. To install the Exchange *i*DataAgents expand **Client Modules | Backup & Recovery | Exchange**, and select one or more of the following:

   - **Exchange Database iDataAgent**
   - **Exchange Mailbox iDataAgent**
   - **Exchange Public Folder iDataAgent**

   To install the Exchange Archiver Agents, expand **Client Modules | Archive Management**, and select one or more of the following:

   - **Exchange Compliance Archiver**
   - **Exchange Mailbox Archiver Agent**
   - **Exchange Public Folder Archiver Agent**

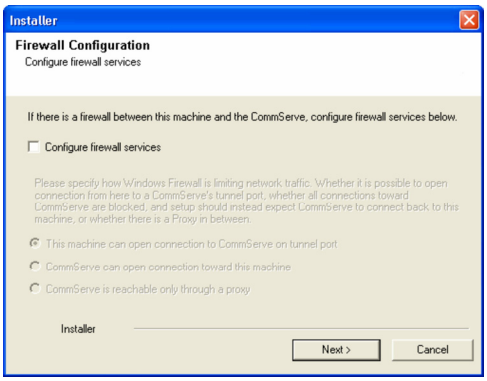
   Click **Next**.



7. If this computer and the CommServe is separated by a firewall, select the **Configure firewall services** option and then click **Next**.

   For firewall options and configuration instructions, see Firewall Configuration and continue with the installation.

   If firewall configuration is not required, click **Next**.

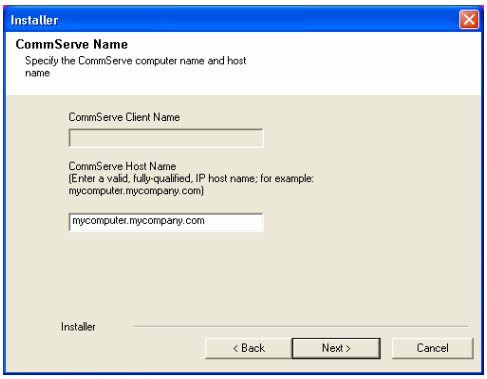


8. Enter the fully qualified domain name of the **CommServe Host Name**.

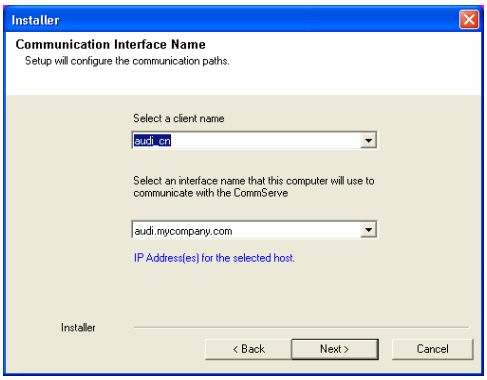
   Click **Next**.

   Do not use space and the following characters when specifying a new name for the CommServe Host Name:

   \|`~!@#$%^&*()+=<>/?,[]{}:;'"



9. Click **Next**.

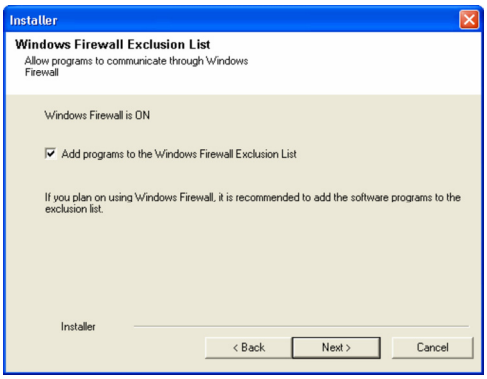


10. Select **Add programs to the Windows Firewall Exclusion List**, to add CommCell programs and services to the Windows Firewall Exclusion List.

    Click **Next**.

    This option enables CommCell operations across Windows firewall by adding CommCell programs and services to Windows firewall exclusion list.

    It is recommended to select this option even if Windows firewall is disabled. This will allow the CommCell programs and services to function if the Windows firewall is enabled at a later time.



11. Verify the default location for software installation.

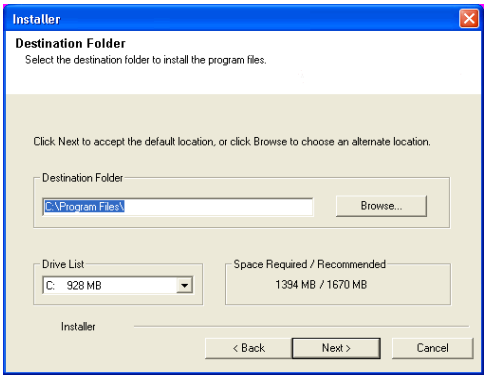
    Click **Browse** to change the default location.

    Click **Next**.

    - Do not install the software to a mapped network drive.
    - Do not use the following characters when specifying the destination path:

      / : * ? " < > | #

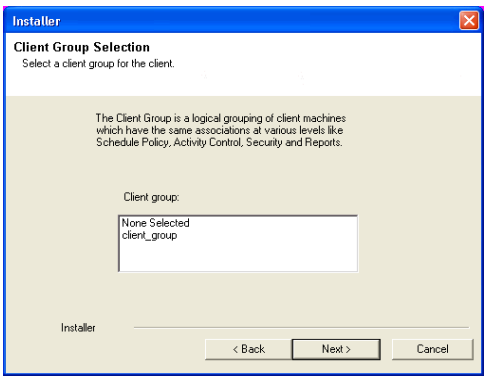
      It is recommended that you use alphanumeric characters only.



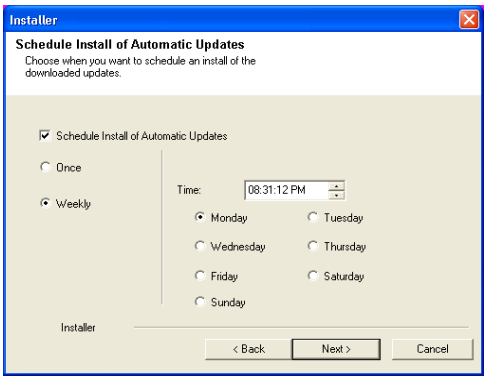
12. Select a Client Group from the list.

    Click **Next**.

    This screen will be displayed if Client Groups are configured in the CommCell Console.

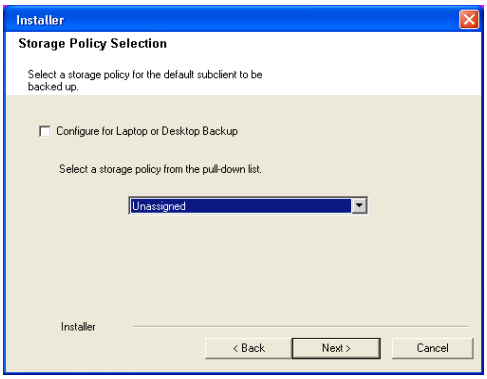


13. Click **Next**.



14. Select a **Storage Policy**.

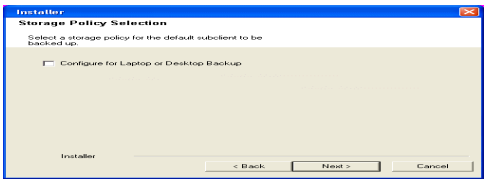
    Click **Next**.



If you do not have Storage Policy created, this message will be displayed.

Click **OK**.

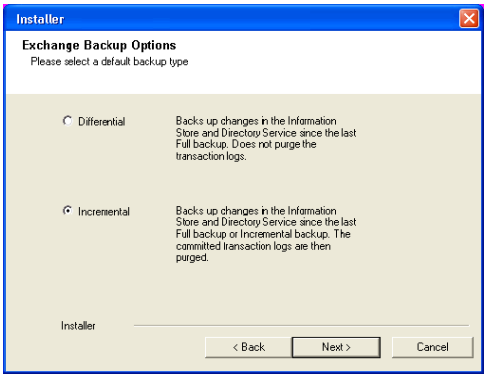
You can create the Storage Policy later in step 25.



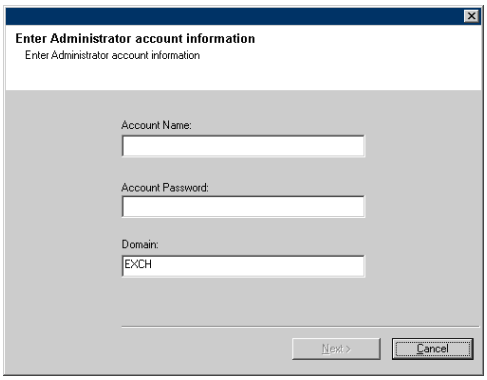
- If you are installing the Exchange Database *i*DataAgent, click Configure Exchange Database Specific Information.
- If you are installing the Exchange Agents, skip to Configure Exchange Agents Specific Information.

CONFIGURE EXCHANGE DATABASE SPECIFIC INFORMATION

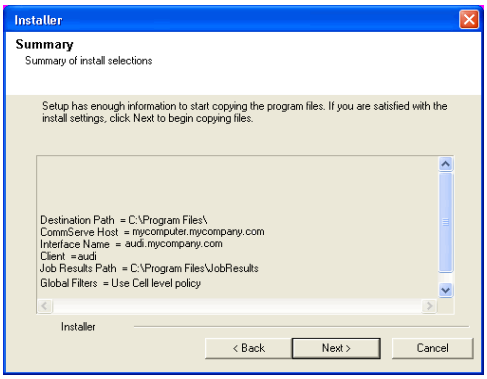
15. Select the backup type for Exchange Database backups. Choose either of the following options, then click **Next**.
    - **Differential** - Specifies that each non-full Exchange Database backup secures all data that has changed since the last full backup. Transaction lobs are not purged.
    - **Incremental** - Specifies that each non-full Exchange Database backup secures only that data that has changed since the last backup of any type. Committed transaction logs are purged.



16. Enter the user credentials to access the Exchange Server to perform the backup operation.
    - The User Account must have Exchange Administrator privileges.
    - The installation detects the domain name. If necessary, you can modify the domain name by specifying Windows domain that the Exchange Server resides in.

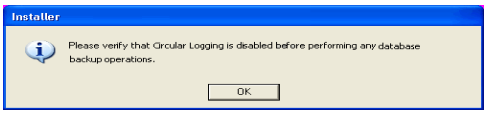


17. Click **Next**.



18. The install program displays a reminder to verify that Circular Logging is disabled before performing any database backup operations. To verify that Circular Logging is disabled:
    - From Exchange System Manager, navigate to and expand the server that the Database *i*DataAgent is being installed on.
    - Verify that the Circular Logging check box has not been selected for each Storage Group. If Circular Logging has been enabled for a Storage Group, disable it at this time.

    Click **OK**.



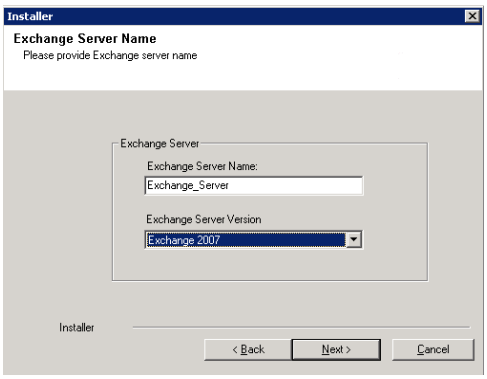
- If you are installing the Exchange Agents, then click Configure Exchange Agents Specific Information.
- If you are installing the Exchange Database *i*DataAgent, skip to Verify Summary of Install Options.

CONFIGURE EXCHANGE AGENTS SPECIFIC INFORMATION

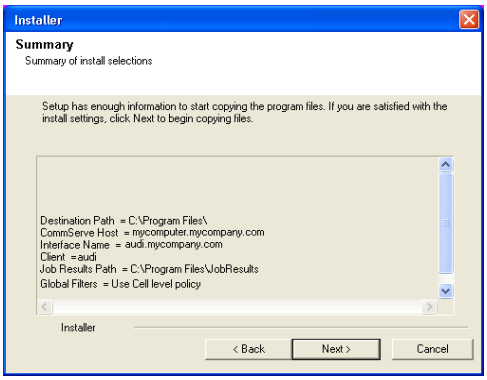
19. Select **Exchange Server Name** and **Exchange Server Version** from drop-down list.

    Click **Next**.

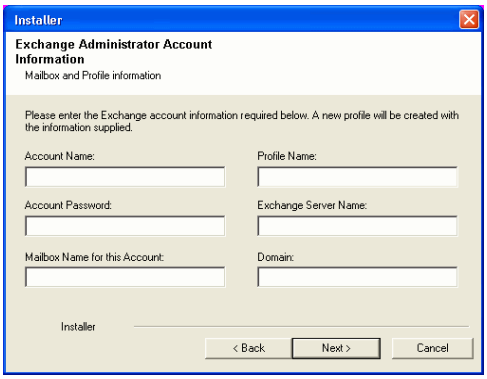
    This screen will appear when you are installing Exchange Agents on Non-Exchange Server.



20. Click **Next**.

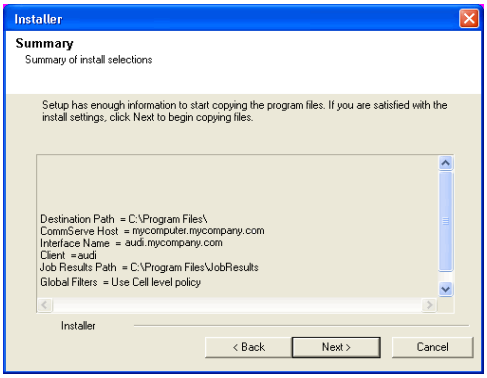


21. Enter the following Exchange Administrator information then click **Next**.
    - **Account Name** - Domain user account created with the exchange server administrator permissions. Do not include the domain name here.
    - **Account Password** - The password assigned to the domain user.
    - **Mailbox Name for this Account** - Mailbox associated with the user above.
    - **Profile Name** - Specify profile name to be created during agent install. This profile is associated with the domain user's mailbox.
    - **Exchange Server Name** - Name of the Exchange Server that the agent will communicate with for data protection and recovery operations.
    - **Domain** - The installation detects and enters a domain name. If necessary, modify the domain name by specifying Windows domain that the Exchange Server resides in.

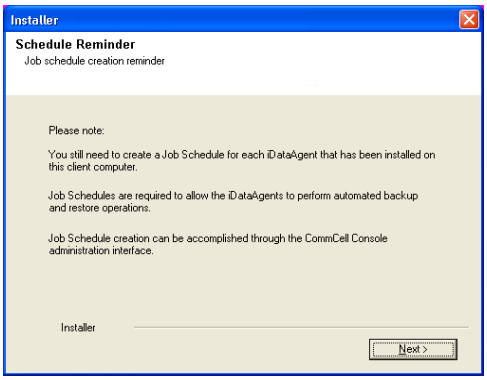


VERIFY SUMMARY OF INSTALL OPTIONS

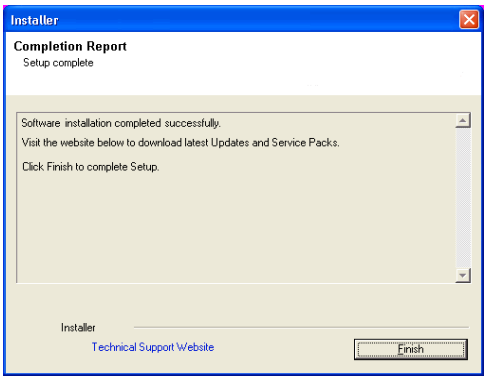
22. Click **Next**.



23. Click **Next**.



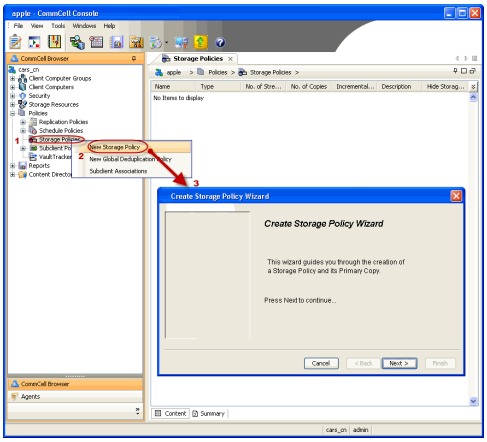
24. Click **Finish**.



CHOICE If you already have a storage policy selected in step 14, Click Next button available at the bottom of the page to proceed to the **Configuration** section.

If you do not have Storage Policy created, continue with the following step.

25. Create a Storage Policy:



1. From the CommCell Browser, navigate to **Policies**.
2. Right-click the **Storage Policies** and then click **New Storage Policy**.
3. Follow the prompts displayed in the Storage Policy Wizard. The required options are mentioned below:
   - Select the Storage Policy type as **Data Protection and Archiving** and click **Next**.
   - Enter the name in the **Storage Policy Name** box and click **Next**.
   - From the **Library** list, click the name of a disk library to which the primary copy should be associated and then click **Next**.

     Ensure that you select a library attached to a MediaAgent operating in the current release.
   - From the **MediaAgent** list, click the name of a MediaAgent that will be used to create the primary copy and then click **Next**.
   - For the device streams and the retention criteria information, click **Next** to accept default values.
   - Select **Yes** to enable deduplication for the primary copy.
   - From the **MediaAgent** list, click the name of the MediaAgent that will be used to store the Deduplication store.

     Type the name of the folder in which the deduplication database must be located in the Deduplication Store Location or click the Browse button to select the folder and then click **Next**.
   - Review the details and click **Finish** to create the Storage Policy.

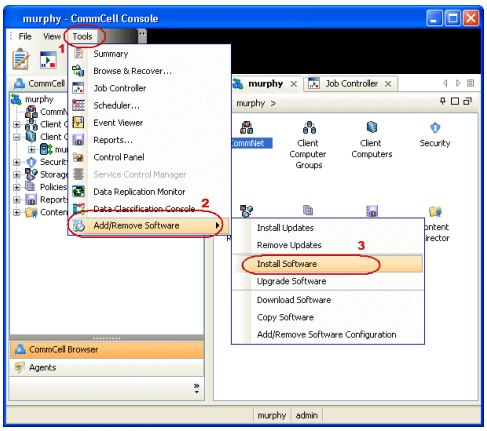
26. Enable the following registry key to create job specific profiles:

- From the CommCell Browser, navigate to Client Computers.
- Right-click the <Client> in which you want to add the registry key, and then click Properties.
- Click the Registry Key Settings tab.
- Click Add.
- Enter CreateProcessSpecificProfile in the Name field.
- Enter MSExchangeMBAgent in the Location field. (For Exchange Mailbox iDataAgent).

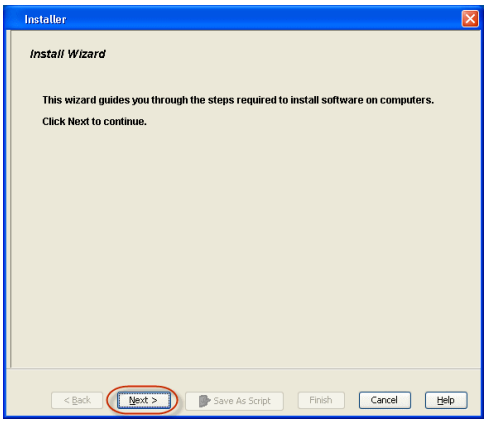
  Enter MSExchangeDMAgent in the Location field. (For Exchange Mailbox iDataAgent).
- Enter REG_DWORD in the Type filed.
- Enter 1 to enable and 0 to disable the key in the Value field.
- Click OK.

METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

1. From the CommCell Browser, select **Tools**, point to **Add/Remove Software**, and then click **Install Software.**

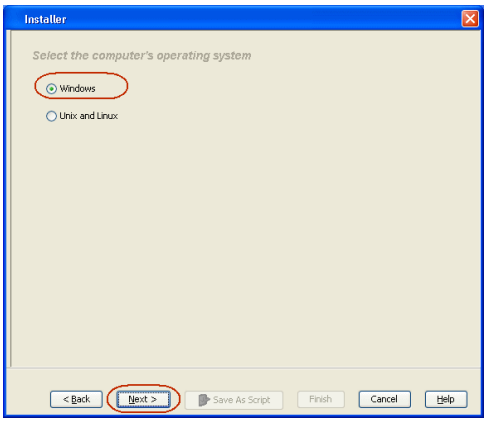


2. Click **Next**.



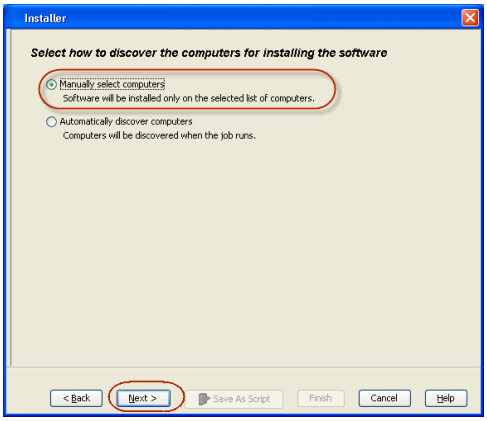
3. Select **Windows**.

   Click **Next**.



4. Select **Manually Select Computers**.

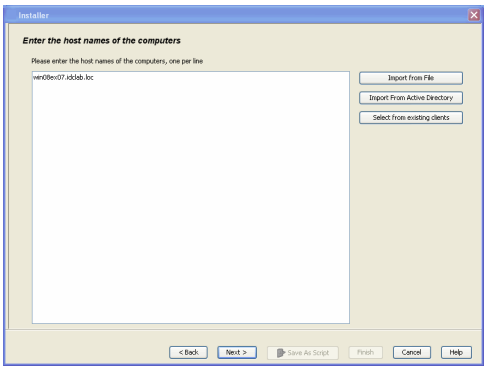
   Click **Next**.



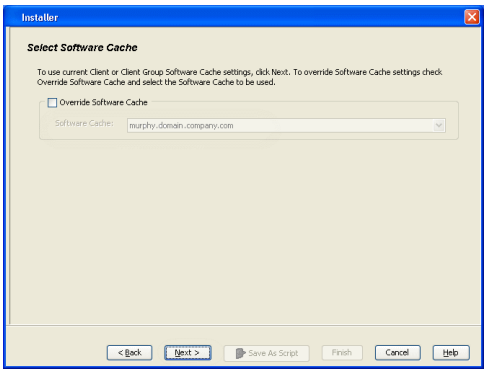
5. Enter the fully qualified domain name of the computer on which you have Exchange Server.

For example: `win08ex07.idclab.loc`

Click **Next**.

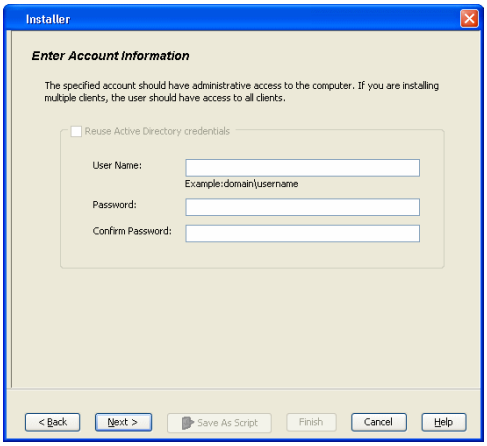


6. Click **Next**.



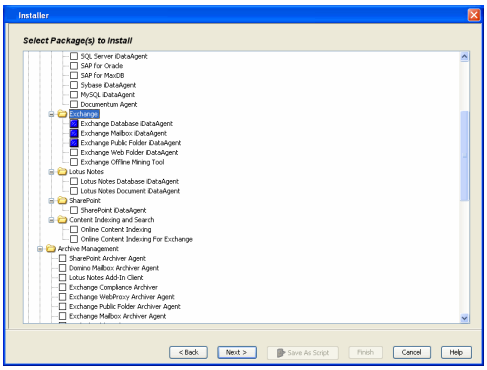
7. Specify **User Name** and **Password** that must be used to access the computer.

   Click **Next**.



8. To install the **Exchange *i*DataAgents** expand **Client Modules | Backup & Recovery | Exchange,** and select one or more of the following:
   - **Exchange Database *i*DataAgent**
   - **Exchange Mailbox *i*DataAgent**
   - **Exchange Public Folder *i*DataAgent**

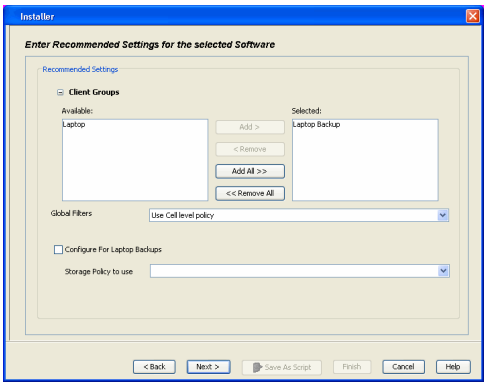
   Click **Next**.



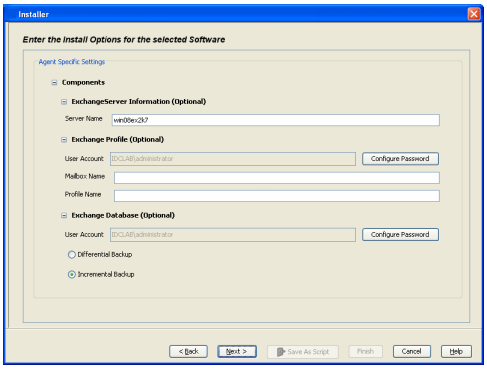
9. - Select **Client Group** from **Available** and click **Add**.
   - Select a **Storage Policy** from the drop-down list. Click **Next**.

   NOTES:

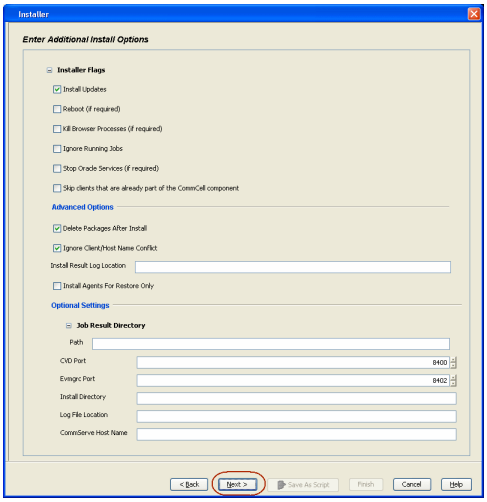
   - Select the **Configure for Laptop or Desktop Backup** option to install **Backup Monitor** utility. This utility allows you to view the backup job summary from the client computer without opening the CommCell Console. See Monitor - Laptop User for more information.



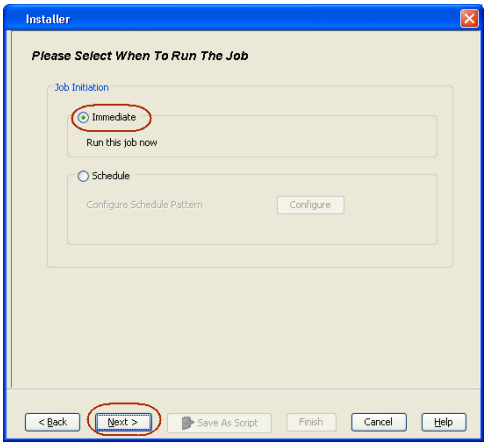
10. Type the Agent Specific Settings information.
    Click **Next**.



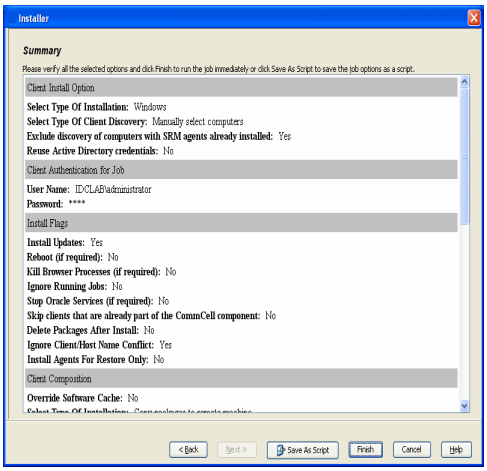
11. Click **Next**.



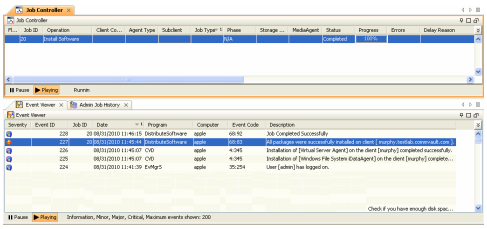
12. Select **Immediate**.
    Click **Next**.



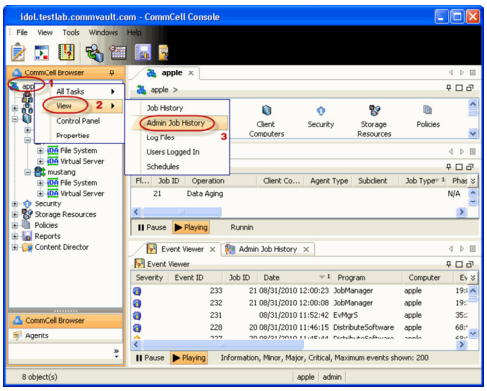
13. Click **Finish**.



14. You can track the progress of the job from the **Job Controller** or **Event Viewer** window.

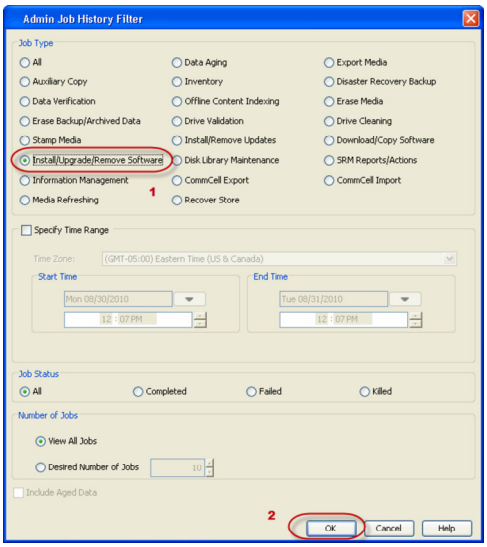


15. Once the job is complete, right-click the **CommServe** computer, click **View** and then click **Admin Job History**.



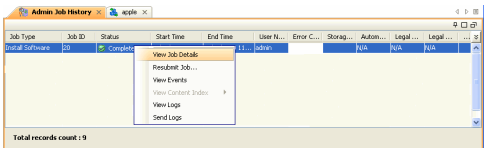
16. Select **Install/Upgrade/Remove Software**.

    Click **OK**.



17. You can view the following details about the job by right-clicking the job:
    - Items that succeeded during the job
    - Items that failed during the job
    - Details of the job

- Events of the job
- Log files of the job



18. Enable the following registry key to create job specific profiles:

- From the CommCell Browser, navigate to Client Computers.
- Right-click the <Client> in which you want to add the registry key, and then click Properties.
- Click the Registry Key Settings tab.
- Click Add.
- Enter CreateProcessSpecificProfile in the Name field.
- Enter MSExchangeMBAgent in the Location field. (For Exchange Mailbox iDataAgent).

  Enter MSExchangeDMAgent in the Location field. (For Exchange Mailbox iDataAgent).
- Enter REG_DWORD in the Type filed.
- Enter 1 to enable and 0 to disable the key in the Value field.
- Click OK.

Previous Next

Install the Exchange Agents for Exchange Server 2003 on a Non-Exchange Server

Previous Next

Follow the steps given below to install the Exchange Agents on Non-Exchange Server 2003.

WHERE TO INSTALL

The 32-bit Exchange Agents can be installed on a separate computer with connectivity to the Exchange Server. This method is referred to as an Non-Exchange Server installation and is useful if you want to offload the memory and processing resources required for backups and restores from the Exchange Server.

INSTALLATION

The software can be installed using one of the following methods:

METHOD 1: INTERACTIVE INSTALL

Use this procedure to directly install the software from the installation package or a network drive.

METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

Use this procedure to remotely install the software on a client computer.

RELATED TOPICS

Download Software Packages
Provides step-by-step procedure to download the latest packages for software install.

System Requirements
Verify that the computer in which you wish to install the software satisfies the System Requirements.

Firewall
Provides comprehensive information on firewall.

PREREQUISITES

The below mentioned prerequisites are for Mailbox Agents only. Ensure that you have the following:

- The mail-enabled user is a member of the Local Administrator Group and have rights to all mailboxes on the server.
- Using the Exchange System Manager snap-in, right-click the organization object and delegate control.
- Using the Wizard, assign the MailboxAdmin user Exchange Full Administrator privileges.
- Ensure that you assign full access to all mailboxes on the server. For details, see How do I Assign Full Access to All Mailboxes on a Server.

METHOD 1: INTERACTIVE INSTALL

1. Log on to the computer using an account with the following privileges:
   - Administrator of the local computer
   - Administrator of the Exchange Server
2. Create the bAllowMultiInstances registry key.

   NOTES:

   - If any 64-bit agent software is already installed on the Proxy Server, create `bAllowMultiInstances` registry key to install the Exchange *i*DataAgents on separate instance.

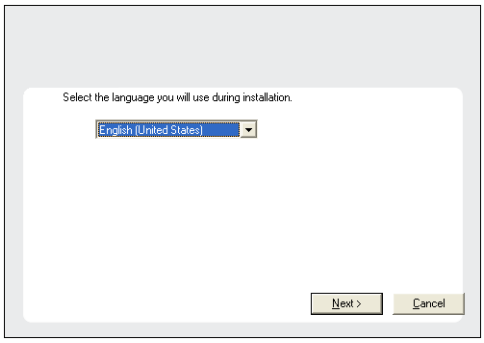
   To create the registry key, see the following steps:

   1. Start the Registry Editor (Regedit.exe or Redegt32.exe)
   2. Locate the directory under which you want to create a key, e.g., `HKEY_LOCAL_MACHINE\SOFTWARE\`.
   3. Right click the `SOFTWARE` and click **New -> Key**.
   4. Name the key as `GalaxyInstallerFlags`.
   5. Right click the `GalaxyInstallerFlags` and select **New -> DWORD** value, name it as `bAllowMultiInstances` and by double clicking the `bAllowMultiInstances` key modify the **Value data** to 1.
3. Create the bAllow32BitInstallOn64Bit registry key.

   To create the registry key, see the following steps:

   1. Start the Registry Editor (Regedit.exe or Regedit32.exe)
   2. Locate the directory under which you want to create a key, e.g., `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node`.
   3. Right click the `SOFTWARE` and click **New -> Key**.
   4. Name the key as `GalaxyInstallerFlags`.
   5. Right click the `GalaxyInstallerFlags` and select **New -> DWORD** value, name it as `bAllow32BitInstallOn64Bit` and by double clicking the `bAllow32BitInstallOn64Bit` key modify the **Value data** to 1.
4. Run **Setup.exe** from the Software Installation Package.
5. Select the required language.

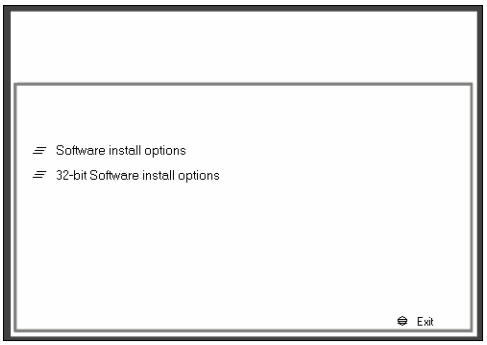
Click **Next**.



6. Select the **Calypso 32-bit Software install options** to install software.

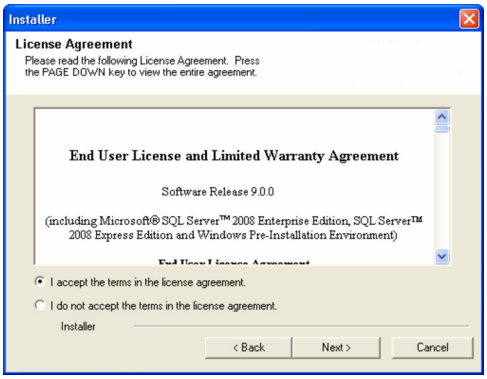
NOTES

- This screen will only appear when the `bAllow32BitInstallOn64Bit` registry key has been created and enabled on this computer.



7. Select **I accept the terms in the license agreement**.

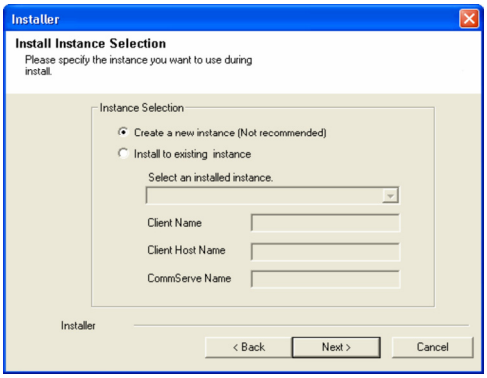
Click **Next**.



8. If any agent software is already installed on the Proxy Server, select **Create a new instance** option to install the Exchange *i*DataAgents on separate instance.

NOTES

- This screen will appear when the bAllowMultiInstances registry key has enabled on this computer.



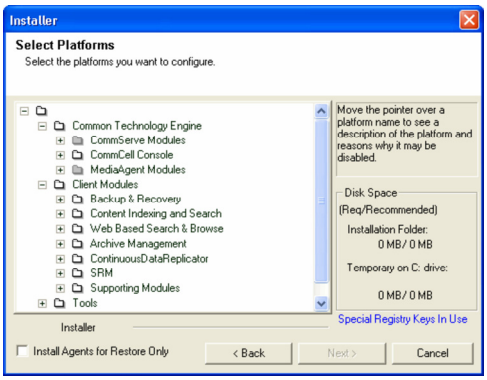
9. To install the Exchange ***i*DataAgents** expand **Client Modules | Exchange**, and select one or more of the following:

- **Exchange Mailbox *i*DataAgent**
- **Exchange Public Folder *i*DataAgent**

To install the **Exchange Archiver Agents**, expand **Client Modules | Archive Management**, and select one or more of the following:

- **Exchange Compliance Archiver**
- **Exchange Mailbox Archiver Agent**
- **Exchange Public Folder Archiver Agent**

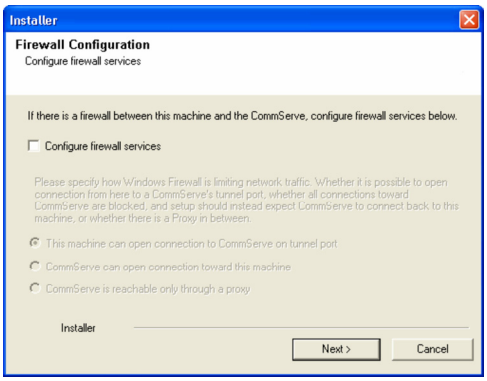
Click **Next**.



10. If this computer and the CommServe is separated by a firewall, select the **Configure firewall services** option and then click **Next**.

    For firewall options and configuration instructions, see Firewall Configuration and continue with the installation.

    If firewall configuration is not required, click **Next**.

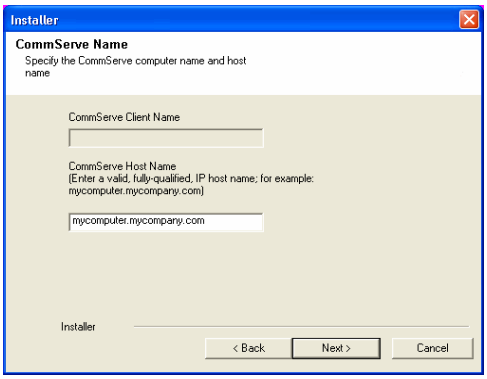


11. Enter the fully qualified domain name of the **CommServe Host Name**.

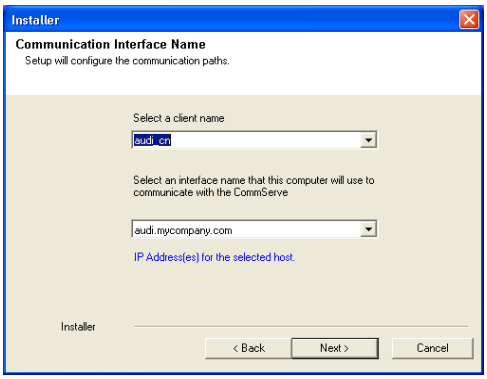
    Click **Next**.

    Do not use space and the following characters when specifying a new name for the CommServe Host Name:

    \|`~!@#$%^&*()+=<>/?,[]{}:;'"



12. Click **Next**.

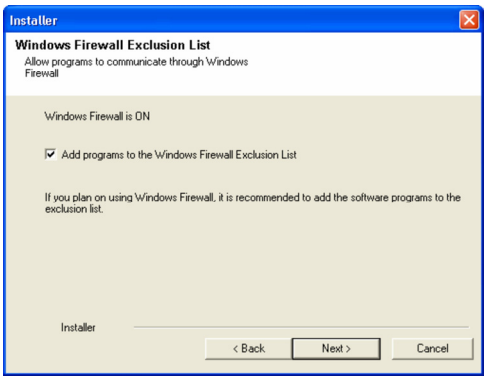


13. Select **Add programs to the Windows Firewall Exclusion List**, to add CommCell programs and services to the Windows Firewall Exclusion List.

    Click **Next**.

    This option enables CommCell operations across Windows firewall by adding CommCell programs and services to Windows firewall exclusion list.

    It is recommended to select this option even if Windows firewall is disabled. This will allow the CommCell programs and services to function if the Windows firewall is enabled at a later time.



14. Verify the default location for software installation.

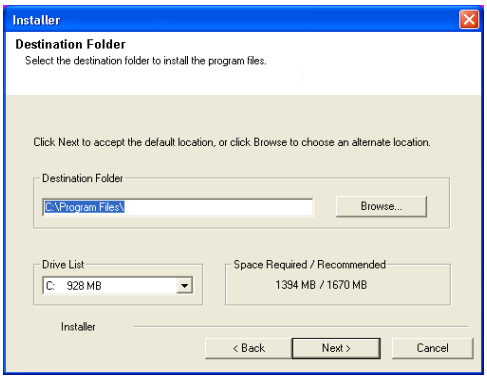
    Click **Browse** to change the default location.

    Click **Next**.

    - Do not install the software to a mapped network drive.
    - Do not use the following characters when specifying the destination path:

      / : * ? " < > | #

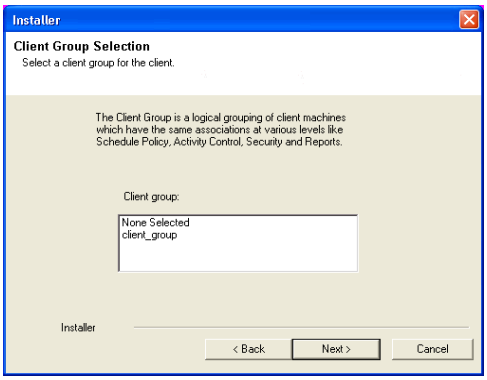
      It is recommended that you use alphanumeric characters only.



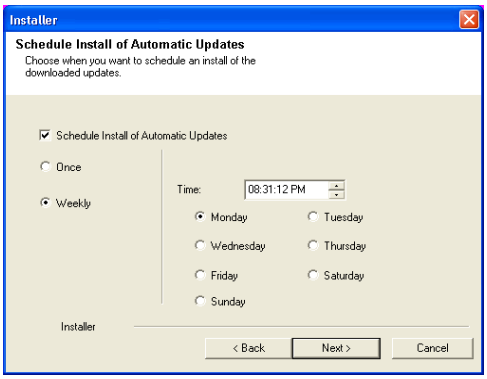
15. Select a Client Group from the list.

    Click **Next**.

    This screen will be displayed if Client Groups are configured in the CommCell Console.



16. Click **Next**.

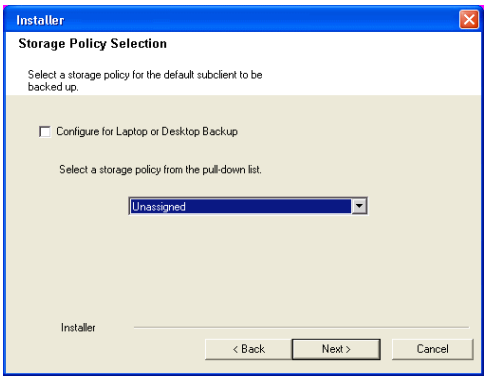


17. Select a **Storage Policy**.

    Click **Next**.

    NOTES

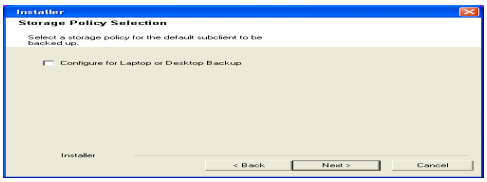
    - A storage policy directs backup data to a media library. Each library has a default storage policy.



If you do not have Storage Policy created, this message will be displayed.

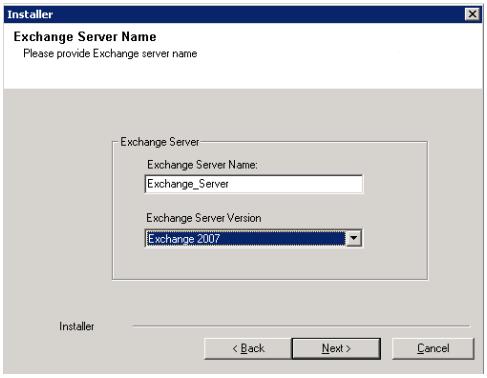
Click **OK**.

You can create the Storage Policy later in step 23.

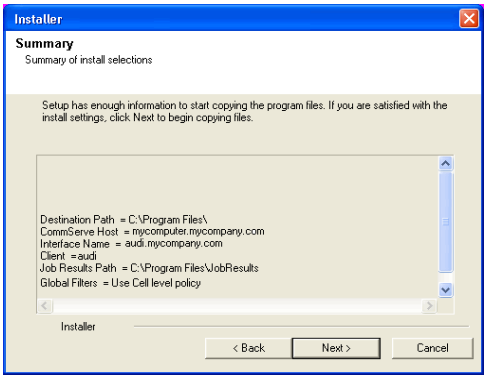


18. Select **Exchange Server Name** and **Exchange Server Version** from drop-down list.

    Click **Next**.

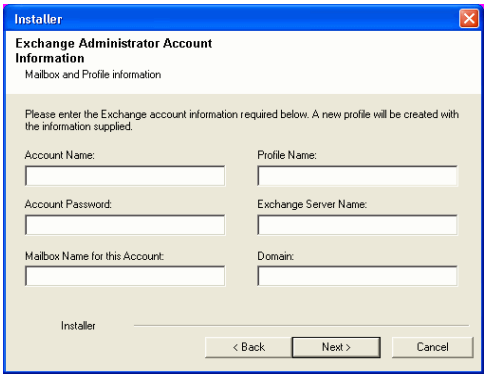


19. Click **Next**.

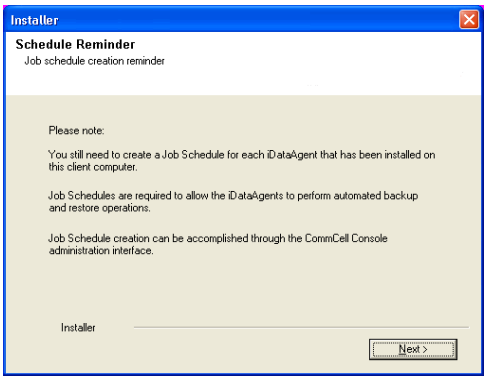


20. Enter the following Exchange Administrator information then click **Next**.
    - **Account Name** - Domain user account created with the exchange server administrator permissions. Do not include the domain name here.
    - **Account Password** - The password assigned to the domain user.
    - **Mailbox Name for this Account** - Mailbox associated with the user above.
    - **Profile Name** - Specify profile name to be created during agent install. This profile is associated with the domain user's mailbox.
    - **Exchange Server Name** - Name of the Exchange Server that the agent will communicate with for data protection and recovery operations.

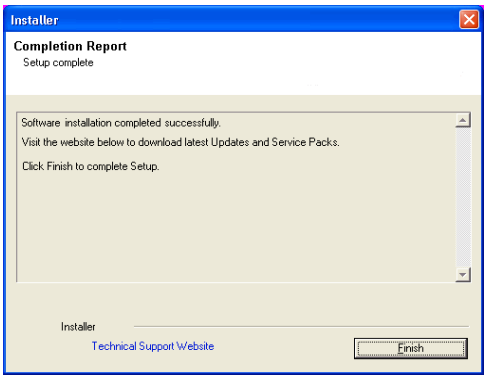
      For Exchange Server 2010, enter the Client Access Role. After installation configure the roles as described in Configure Mailboxes in Database Availability Group (DAG) Servers.
    - **Domain** - The installation detects and enters a domain name. If necessary, modify the domain name by specifying Windows domain that the Exchange Server resides in.



21. Click **Next**.



22. Click **Finish**.

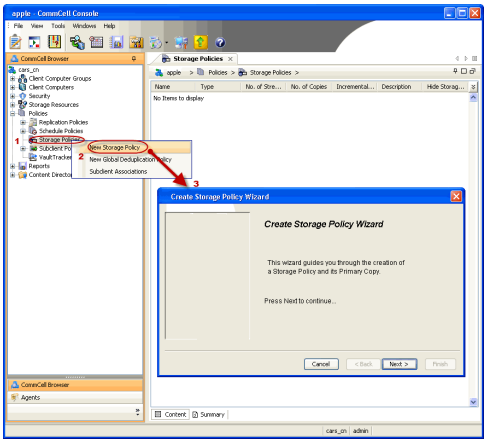


CHOICE

If you already have a storage policy selected in step 17, Click Next ➤ button available at the bottom of the page to proceed to the **Configuration** section.

If you do not have Storage Policy created, continue with the following step.

23. Create a Storage Policy:



1. From the CommCell Browser, navigate to **Policies**.
2. Right-click the **Storage Policies** and then click **New Storage Policy**.
3. Follow the prompts displayed in the Storage Policy Wizard. The required options are mentioned below:
   - Select the Storage Policy type as **Data Protection and Archiving** and click **Next**.
   - Enter the name in the **Storage Policy Name** box and click **Next**.
   - From the **Library** list, click the name of a disk library to which the primary copy should be associated and then click **Next**.

     Ensure that you select a library attached to a MediaAgent operating in the current release.
   - From the **MediaAgent** list, click the name of a MediaAgent that will be used to create the primary copy and then click **Next**.
   - For the device streams and the retention criteria information, click **Next** to accept default values.
   - Select **Yes** to enable deduplication for the primary copy.
   - From the **MediaAgent** list, click the name of the MediaAgent that will be used to store the Deduplication store.

     Type the name of the folder in which the deduplication database must be located in the Deduplication Store Location or click the Browse button to select the folder and then click **Next**.
   - Review the details and click **Finish** to create the Storage Policy.

24. Enable the following registry key to create job specific profiles:

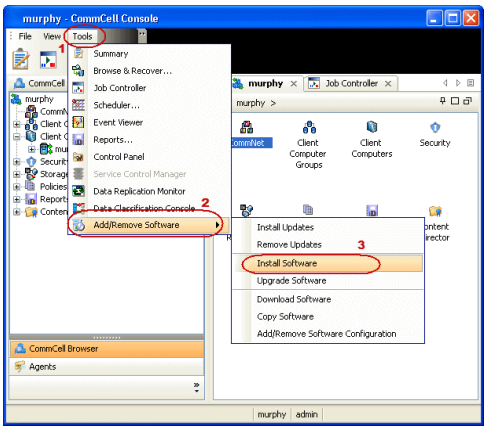
- From the CommCell Browser, navigate to Client Computers.
- Right-click the <Client> in which you want to add the registry key, and then click Properties.
- Click the Registry Key Settings tab.
- Click Add.
- Enter CreateProcessSpecificProfile in the Name field.
- Enter MSExchangeMBAgent in the Location field. (For Exchange Mailbox iDataAgent).

Enter MSExchangeDMAgent in the Location field. (For Exchange Mailbox iDataAgent).

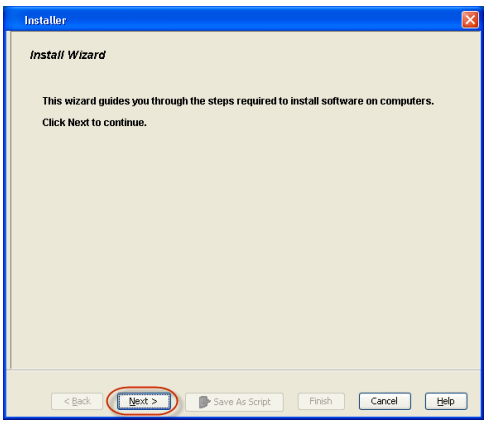
- Enter REG_DWORD in the Type filed.
- Enter 1 to enable and 0 to disable the key in the Value field.
- Click OK.

METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

1. From the CommCell Browser, select **Tools**, point to **Add/Remove Software**, and then click **Install Software.**

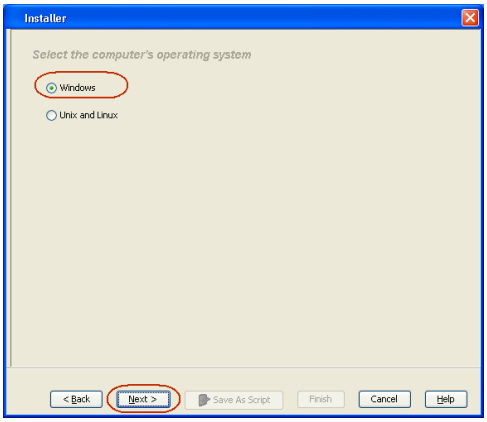


2. Click **Next**.



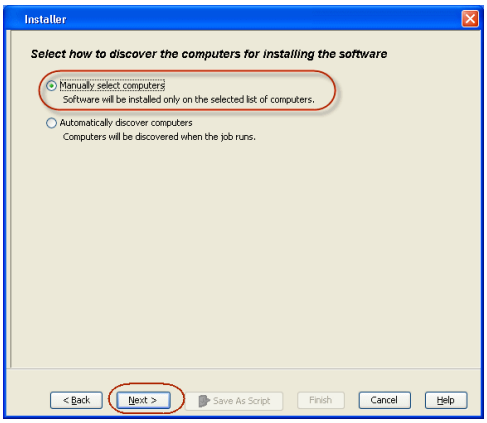
3. Select **Windows**.

   Click **Next**.



4. Select **Manually Select Computers**.

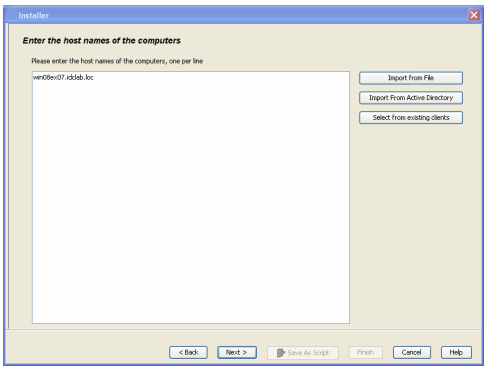
   Click **Next**.



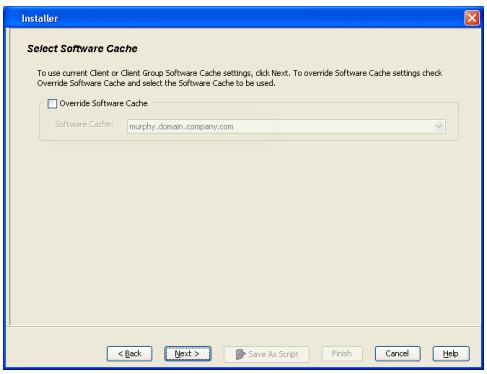
5. Enter the fully qualified domain name of the computer on which you have Exchange Server.

   For example: `win08ex07.idclab.loc`

   Click **Next**.

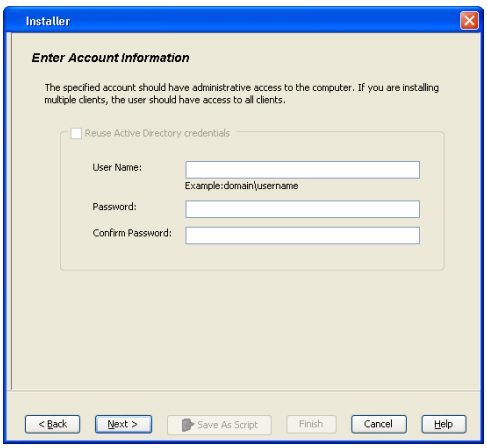


6. Click **Next**.



7. Specify **User Name** and **Password** that must be used to access the computer.

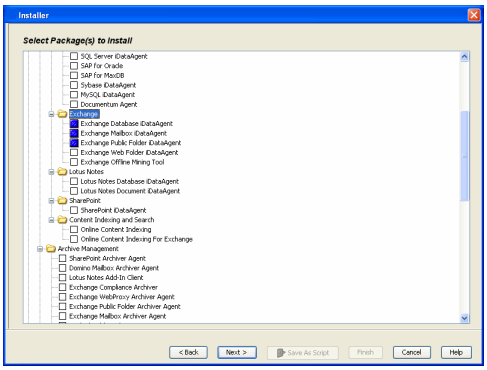
   Click **Next**.



8. To install the **Exchange *i*DataAgents** expand **Client Modules | Backup & Recovery | Exchange,** and select one or more of the following:
   - **Exchange Database *i*DataAgent**
   - **Exchange Mailbox *i*DataAgent**
   - **Exchange Public Folder *i*DataAgent**

Click **Next**.

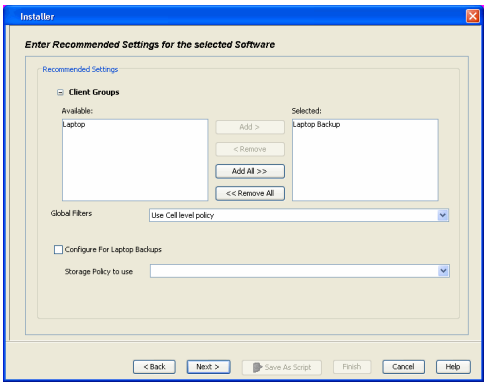
For Non-Exchange Server, Exchange Database *i*DataAgent will not be applicable.



9.
- Select **Client Group** from **Available** and click **Add**.
- Select a **Storage Policy** from the drop-down list. Click **Next**.

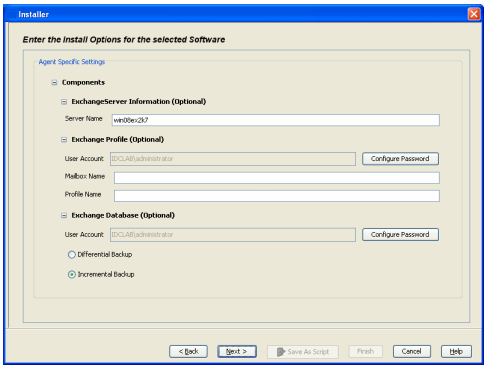
NOTES:

- Select the **Configure for Laptop or Desktop Backup** option to install **Backup Monitor** utility. This utility allows you to view the backup job summary from the client computer without opening the CommCell Console. See Monitor - Laptop User for more information.

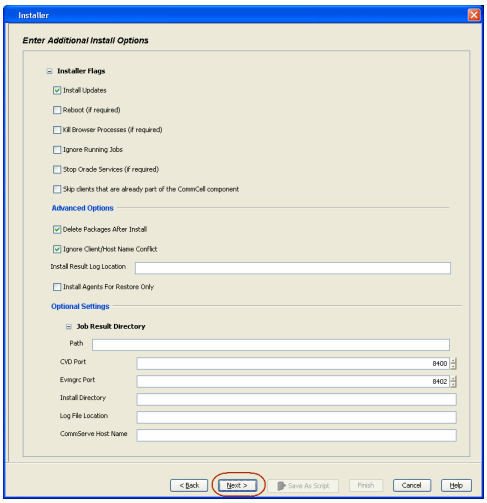


10. Type the Agent Specific Settings information.

Click **Next**.

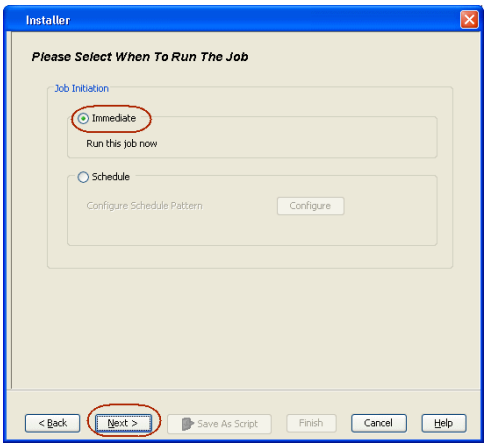


11. Click **Next**.

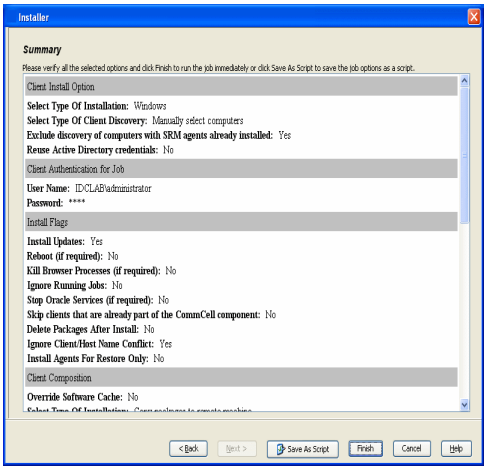


12. Select **Immediate**.

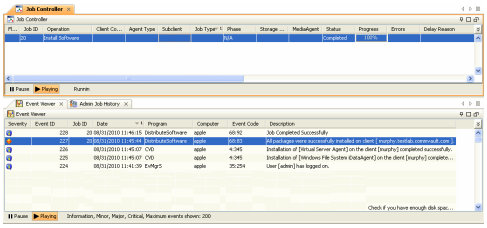
Click **Next**.



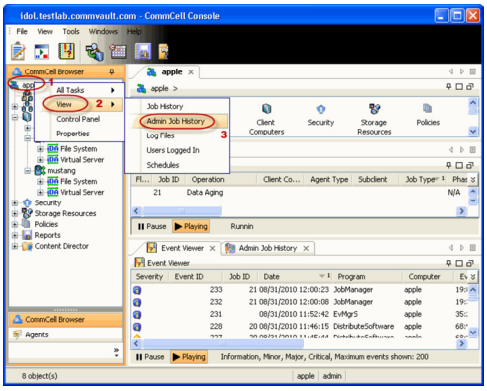
13. Click **Finish**.



14. You can track the progress of the job from the **Job Controller** or **Event Viewer** window.

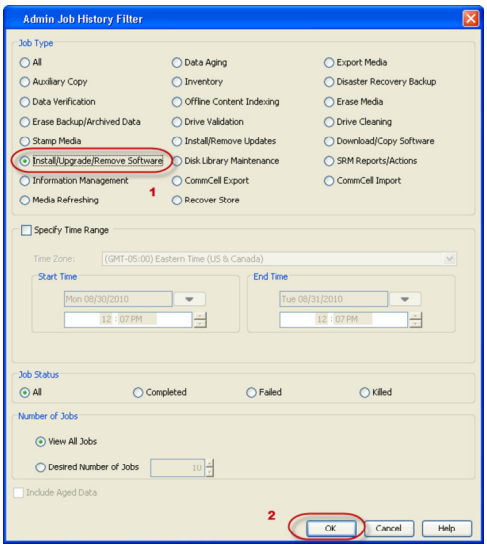


15. Once the job is complete, right-click the **CommServe** computer, click **View** and then click **Admin Job History**.

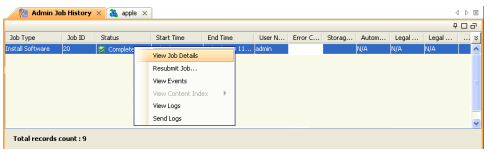


16. Select **Install/Upgrade/Remove Software**.

    Click **OK**.



17. You can view the following details about the job by right-clicking the job:



- Items that succeeded during the job
- Items that failed during the job
- Details of the job
- Events of the job
- Log files of the job

18. Enable the following registry key to create job specific profiles:

- From the CommCell Browser, navigate to Client Computers.
- Right-click the <Client> in which you want to add the registry key, and then click Properties.
- Click the Registry Key Settings tab.
- Click Add.
- Enter CreateProcessSpecificProfile in the Name field.
- Enter MSExchangeMBAgent in the Location field. (For Exchange Mailbox iDataAgent).

  Enter MSExchangeDMAgent in the Location field. (For Exchange Mailbox iDataAgent).
- Enter REG_DWORD in the Type filed.
- Enter 1 to enable and 0 to disable the key in the Value field.
- Click OK.

Previous Next

Install the Exchange Agents on Exchange Server 2003 - Clustered Environment

Previous Next

Follow the steps given below to install the Exchange Agents in clustered environment on the following:

- Exchange Server 2003
- Non-Exchange Server

WHERE TO INSTALL

The following procedure describes the steps involved in installing the Exchange Agents for Exchange Server 2003 on the following:

- Direct install on a Exchange Server or
- On an Non-Exchange Server computer. This may be used for the following circumstances:
  - In the configuration where a single non-Exchange client is used to backup multiple Exchange Servers.
  - To off-load the backup of Exchange Server, so that the performance of the Exchange Server will not be effected.

RELATED TOPICS

Download Software Packages
Provides step-by-step procedure to download the latest packages for software install.

System Requirements
Verify that the computer in which you wish to install the software satisfies the System Requirements.

Firewall
Provides comprehensive information on firewall.

PREREQUISITES

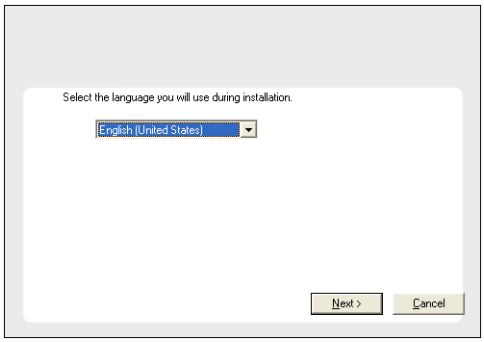
The below mentioned prerequisites are for Mailbox Agents only. Ensure that you have the following:

- The mail-enabled user is a member of the Local Administrator Group and have rights to all mailboxes on the server.
- Using the Exchange System Manager snap-in, right-click the organization object and delegate control.
- Using the Wizard, assign the MailboxAdmin user Exchange Full Administrator privileges.
- Ensure that you assign full access to all mailboxes on the server. For details, see How do I Assign Full Access to All Mailboxes on a Server.

INSTALL PROCEDURE

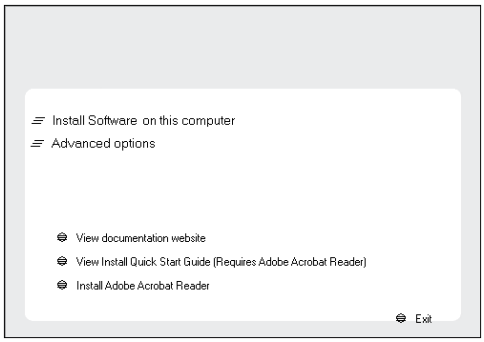
1. Log on to the computer using an account with the following privileges:
   - Administrator of the local computer
   - Administrator of the Exchange Server
2. Run **Setup.exe** from the Software Installation Package.
3. Select the required language.

   Click **Next**.



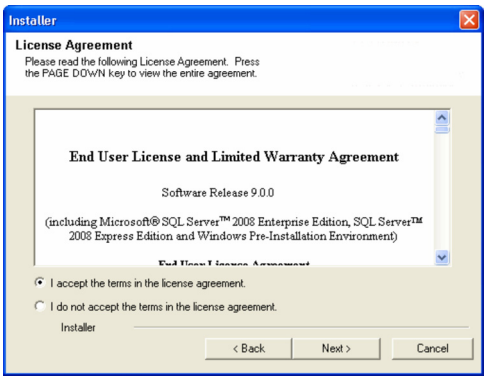
4. Select the option to install software on this computer.

   The options that appear on this screen depend on the computer in which the software is being installed.



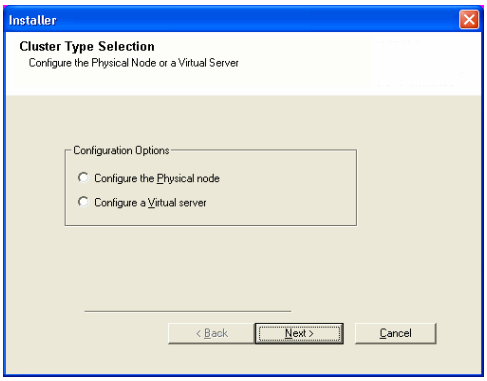
5. Select **I accept the terms in the license agreement**.

Click **Next**.



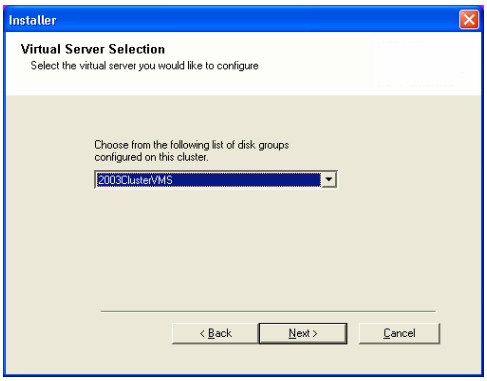
6. Select **Configure a Virtual Server**.

   Click **Next**.



7. Select the disk group in which the virtual server resides.

   Click **Next**.

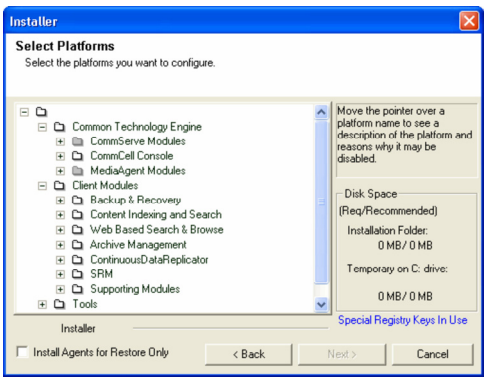


8. To install the Exchange *i*DataAgents expand **Client Modules | Exchange**, and select one or more of the following:
   - **Exchange Database iDataAgent**
   - **Exchange Mailbox iDataAgent**
   - **Exchange Public Folder iDataAgent**

   To install the Exchange Archiver Agents, expand **Client Modules | Archive Management**, and select one or more of the following:
   - **Exchange Compliance Archiver**
   - **Exchange Mailbox Archiver Agent**
   - **Exchange Public Folder Archiver Agent**

   Click **Next**.

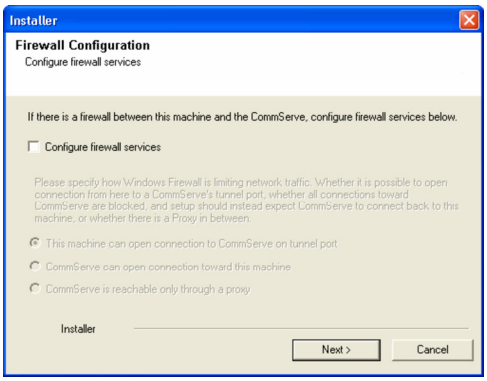
   For Non-Exchange Server, Exchange Database *i*DataAgent will not be applicable.



9. If this computer and the CommServe is separated by a firewall, select the **Configure firewall services** option and then click **Next**.

   For firewall options and configuration instructions, see Firewall Configuration and continue with the installation.

   If firewall configuration is not required, click **Next**.

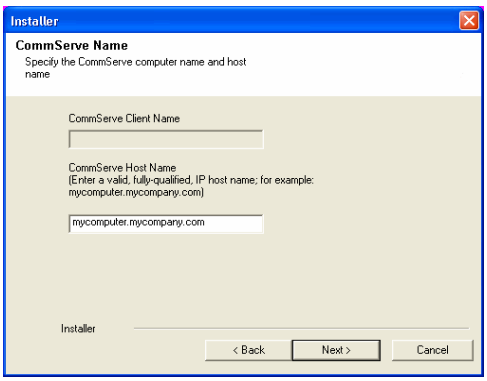


10. Enter the fully qualified domain name of the **CommServe Host Name**.

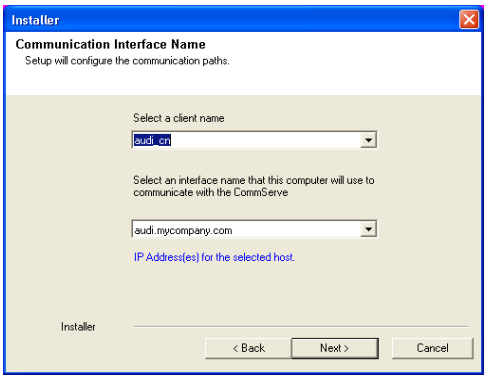
    Click **Next**.

    Do not use space and the following characters when specifying a new name for the CommServe Host Name:

    \|`~!@#$%^&*()+=<>/?,[]{}:;'"



11. Click **Next**.

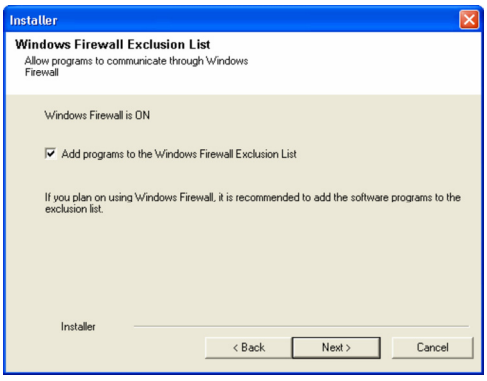


12. Select **Add programs to the Windows Firewall Exclusion List**, to add CommCell programs and services to the Windows Firewall Exclusion List.

    Click **Next**.

    This option enables CommCell operations across Windows firewall by adding CommCell programs and services to Windows firewall exclusion list.

    It is recommended to select this option even if Windows firewall is disabled. This will allow the CommCell programs and services to function if the Windows firewall is enabled at a later time.



13. Verify the default location for software installation.

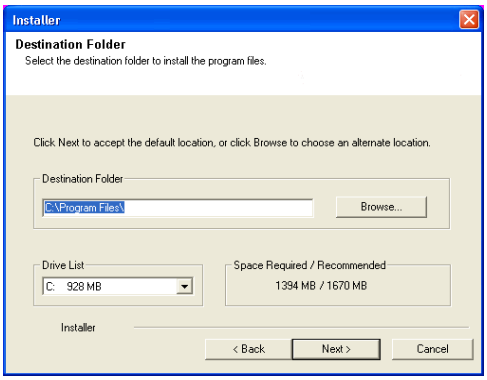
    Click **Browse** to change the default location.

    Click **Next**.

    - Do not install the software to a mapped network drive.
    - Do not use the following characters when specifying the destination path:

      / : * ? " < > | #

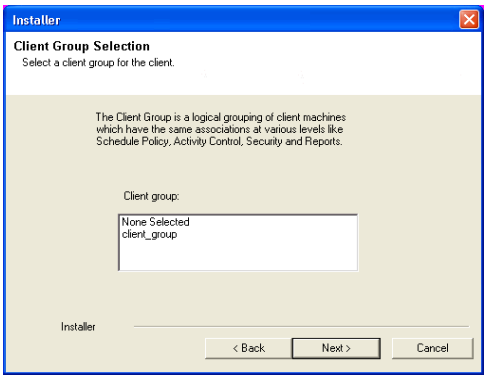
It is recommended that you use alphanumeric characters only.



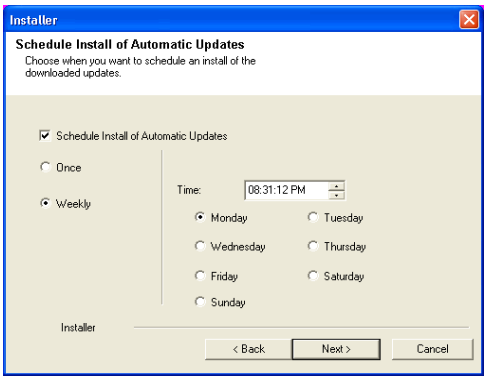
14. Select a Client Group from the list.

    Click **Next**.

    This screen will be displayed if Client Groups are configured in the CommCell Console.

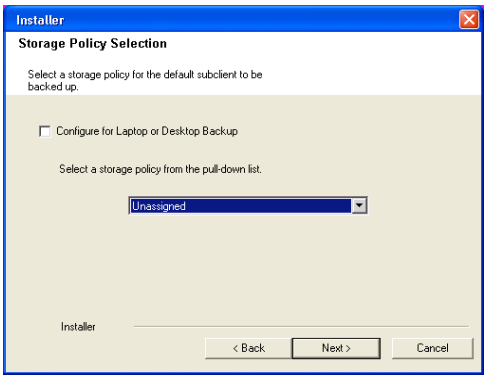


15. Click **Next**.



16. Select a **Storage Policy**.

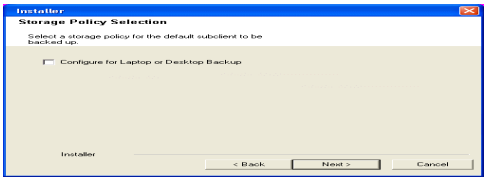
    Click **Next**.



If you do not have Storage Policy created, this message will be displayed.

Click **OK**.

You can create the Storage Policy later in step 32.

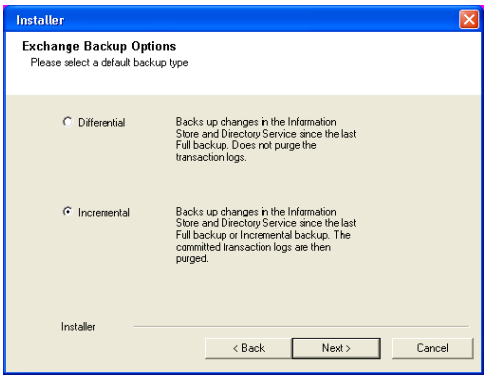


- If you are installing the Exchange Database *i*DataAgent on the Exchange Server, click Configure Exchange Database Specific Information.

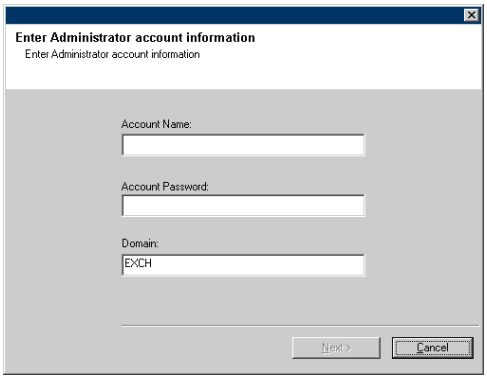
- If you are installing the Exchange Agents on the Non-Exchange Server, skip to Configure Exchange Agents Specific Information.

CONFIGURE EXCHANGE DATABASE SPECIFIC INFORMATION

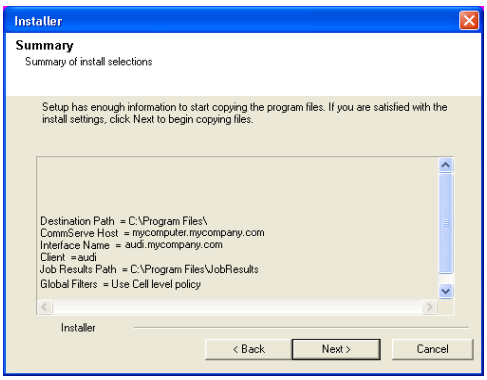
17. Select the backup type for Exchange Database backups. Choose either of the following options, then click **Next**.
    - **Differential** - Specifies that each non-full Exchange Database backup secures all data that has changed since the last full backup. Transaction lobs are not purged.
    - **Incremental** - Specifies that each non-full Exchange Database backup secures only that data that has changed since the last backup of any type. Committed transaction logs are purged.



18. Enter the user credentials to access the Exchange Server to perform the backup operation.
    - The User Account must have Exchange Administrator privileges.
    - The installation detects the domain name. If necessary, you can modify the domain name by specifying Windows domain that the Exchange Server resides in.

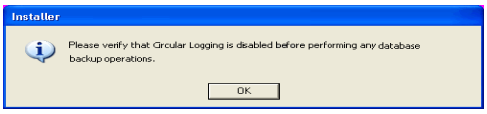


19. Click **Next**.



20. The install program displays a reminder to verify that Circular Logging is disabled before performing any database backup operations. To verify that Circular Logging is disabled:
    - From Exchange System Manager, navigate to and expand the server that the Database *i*DataAgent is being installed on.
    - Verify that the Circular Logging check box has not been selected for each Storage Group. If Circular Logging has been enabled for a Storage Group, disable it at this time.

    Click **OK**.



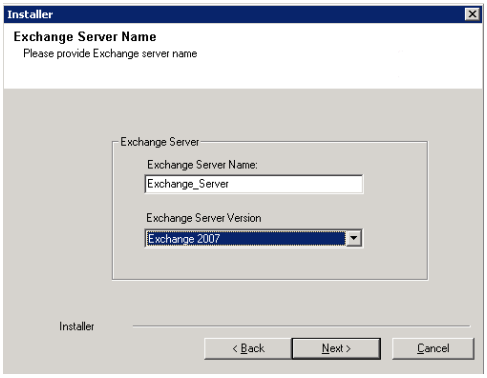
- If you are installing the Exchange Agents, then click Configure Exchange Agents Specific Information.
- If you are installing the Exchange Database *i*DataAgent, skip to Install Remaining Cluster Nodes.

CONFIGURE EXCHANGE AGENTS SPECIFIC INFORMATION

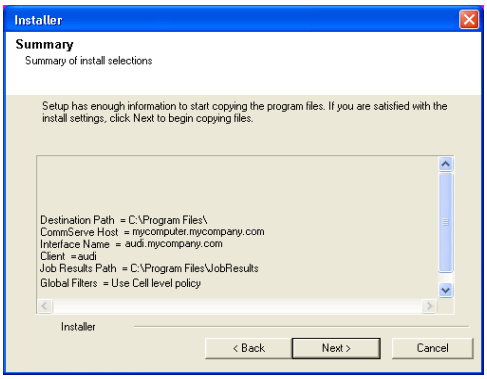
21. Select **Exchange Server Name** and **Exchange Server Version** from drop-down list.

Click **Next**.

This screen will appear when you are installing Exchange Agents on Non-Exchange Server.



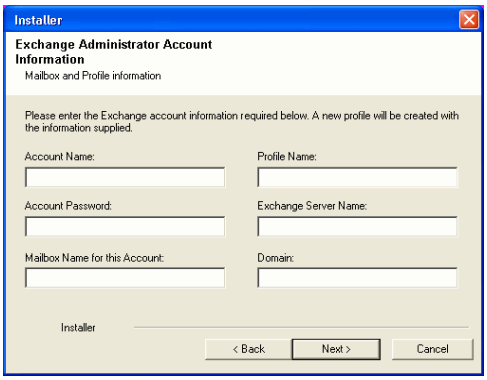
22. Click **Next**.



23. Enter the following Exchange Administrator information then click **Next**.

- **Account Name** - Domain user account created with the exchange server administrator permissions. Do not include the domain name here.
- **Account Password** - The password assigned to the domain user.
- **Mailbox Name for this Account** - Mailbox associated with the user above.
- **Profile Name** - Specify profile name to be created during agent install. This profile is associated with the domain user's mailbox.
- **Exchange Server Name** - Name of the Exchange Server that the agent will communicate with for data protection and recovery operations.

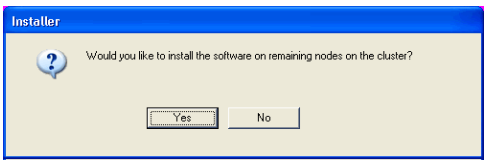
  For Exchange Server 2010, enter the Client Access Role. After installation configure the roles as described in Configure Mailboxes in Database Availability Group (DAG) Servers.
- **Domain** - The installation detects and enters a domain name. If necessary, modify the domain name by specifying Windows domain that the Exchange Server resides in.



INSTALL REMAINING CLUSTER NODES

24. To install the software on the remaining nodes of the cluster, click **Yes**.

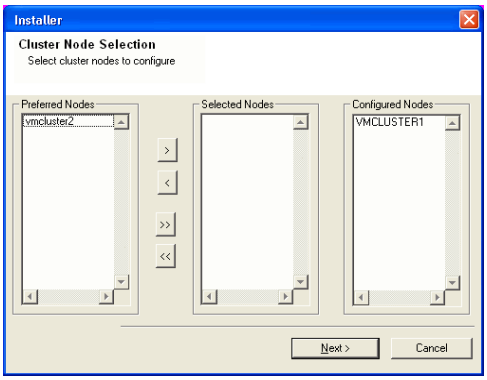
To complete the install for this node only, click **No**.



25. Select cluster nodes from the **Preferred Nodes** list and click the arrow button to move them to the **Selected Nodes** list.

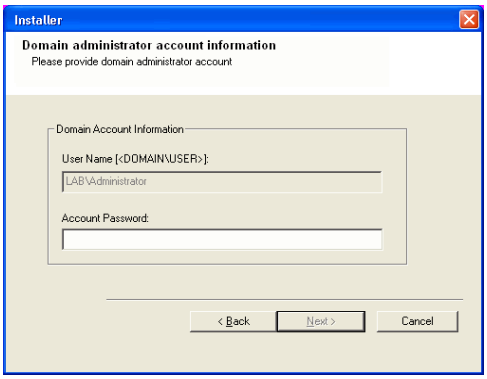
Once you complete your selections, click **Next**.

- The list of **Preferred Nodes** displays all the nodes found in the cluster; from this list you should only select cluster nodes configured to host this cluster group server.
- Do not select nodes that already have multiple instances installed.



26. Specify **User Name** and **Password** for the **Domain Administrator account Information** to perform the remote install on the cluster nodes you selected in the previous step.

Click **Next**.



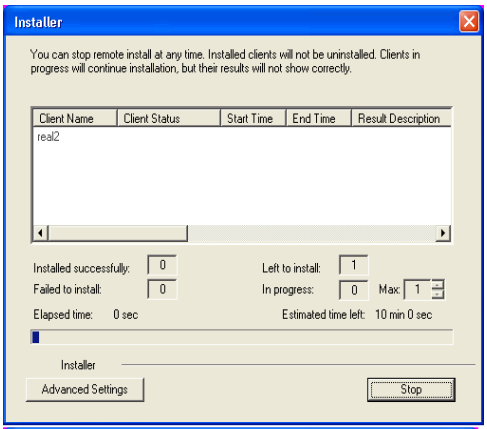
27. The progress of the remote install for the cluster nodes is displayed; the install can be interrupted if necessary.

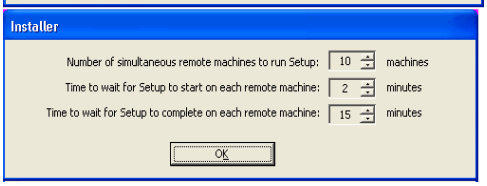
Click **Stop** to prevent installation to any nodes after the current ones complete.

Click **Advanced Settings** to specify any of the following:

- Maximum number of nodes on which Setup can run simultaneously.
- Time allocated for Setup to begin executing on each node, after which the install attempt will fail.
- Time allocated for Setup to complete on each node, after which the install attempt will fail.

If, during the remote install of a cluster node, setup fails to complete or is interrupted, you must perform a local install on that node. When you do, the install begins from where it left off, or from the beginning if necessary. For procedures, see Manually Installing the Software on a Passive Node.

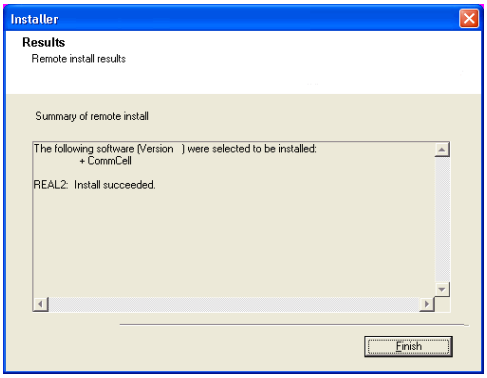




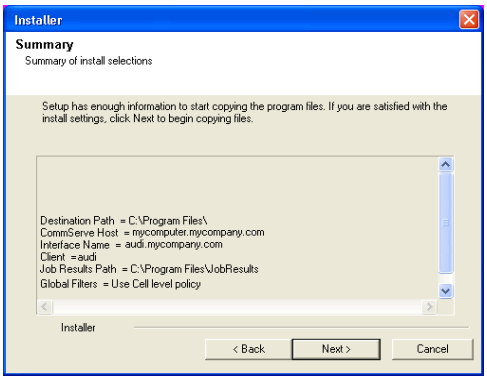
28. Read the summary for remote installation to verify that all selected nodes were installed successfully.

Click **Next**.

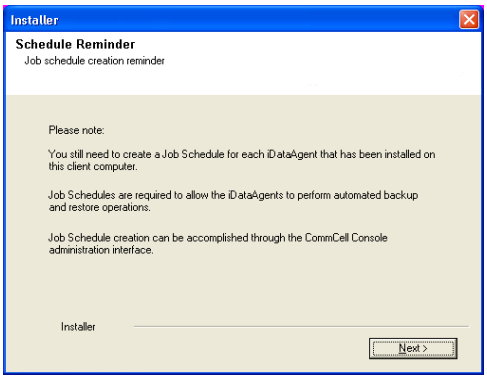
- If any node installation fails, you must manually install the software on that node once the current installation is complete. See Manually Installing the Software on a Passive Node for step-by-step instructions.
- The message displayed on your screen will reflect the status of the selected nodes, and may look different from the example.



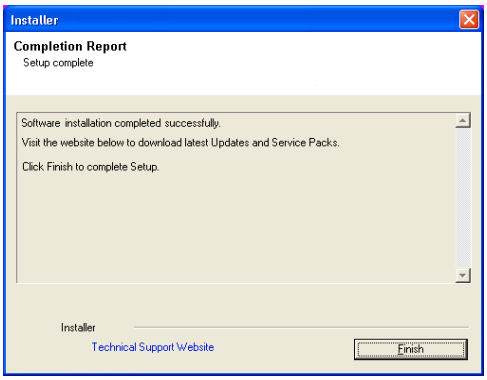
29. Click **Next**.



30. Click **Next**.



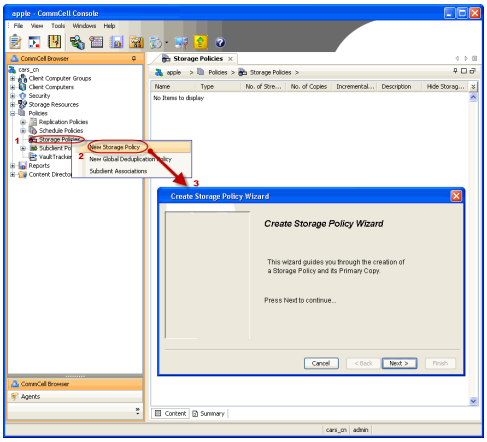
31. Click **Finish**.



CHOICE If you already have a storage policy selected in step 16, Click Next button available at the bottom of the page to proceed to the **Configuration** section.

If you do not have Storage Policy created, continue with the following step.

32. Create a Storage Policy:



1. From the CommCell Browser, navigate to **Policies**.
2. Right-click the **Storage Policies** and then click **New Storage Policy**.
3. Follow the prompts displayed in the Storage Policy Wizard. The required options are mentioned below:
   - Select the Storage Policy type as **Data Protection and Archiving** and click **Next**.
   - Enter the name in the **Storage Policy Name** box and click **Next**.
   - From the **Library** list, click the name of a disk library to which the primary copy should be associated and then click **Next**.

     Ensure that you select a library attached to a MediaAgent operating in the current release.
   - From the **MediaAgent** list, click the name of a MediaAgent that will be used to create the primary copy and then click **Next**.
   - For the device streams and the retention criteria information, click **Next** to accept default values.
   - Select **Yes** to enable deduplication for the primary copy.
   - From the **MediaAgent** list, click the name of the MediaAgent that will be used to store the Deduplication store.

Type the name of the folder in which the deduplication database must be located in the Deduplication Store Location or click the Browse button to select the folder and then click **Next**.

- Review the details and click **Finish** to create the Storage Policy.

33. Enable the following registry key to create job specific profiles:

- From the CommCell Browser, navigate to Client Computers.
- Right-click the <Client> in which you want to add the registry key, and then click Properties.
- Click the Registry Key Settings tab.
- Click Add.
- Enter CreateProcessSpecificProfile in the Name field.
- Enter MSExchangeMBAgent in the Location field. (For Exchange Mailbox iDataAgent).

  Enter MSExchangeDMAgent in the Location field. (For Exchange Mailbox iDataAgent).
- Enter REG_DWORD in the Type filed.
- Enter 1 to enable and 0 to disable the key in the Value field.
- Click OK.

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Getting Started Configuration – Exchange Mailbox Archiver Agent

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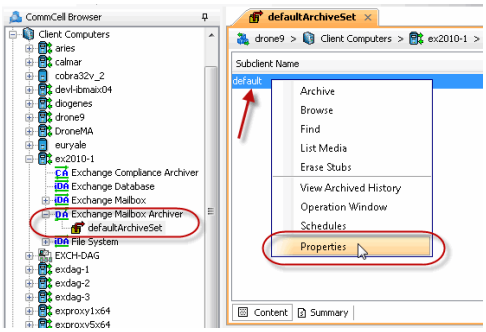
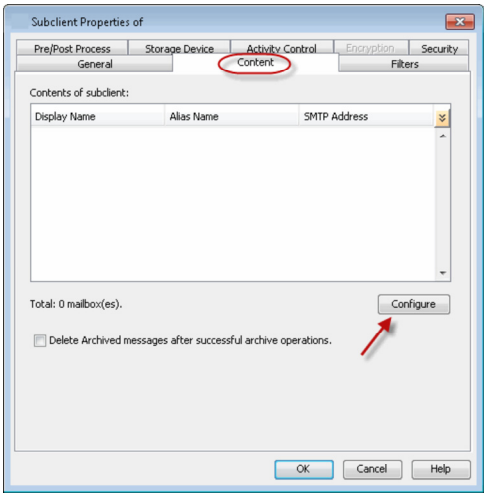
Once installed, configure an archive set and subclient as follows.

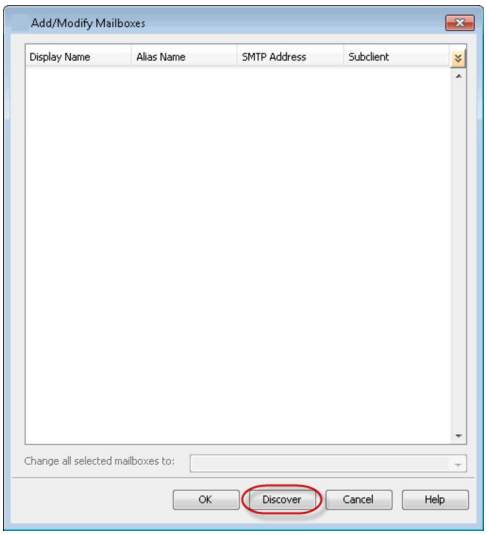
1.
   - From the CommCell Console, navigate to **Client Computers | <Client> | Exchange Mailbox Archiver | defaultArchiveSet**.
   - Right-click the default subclient and then click **Properties**.



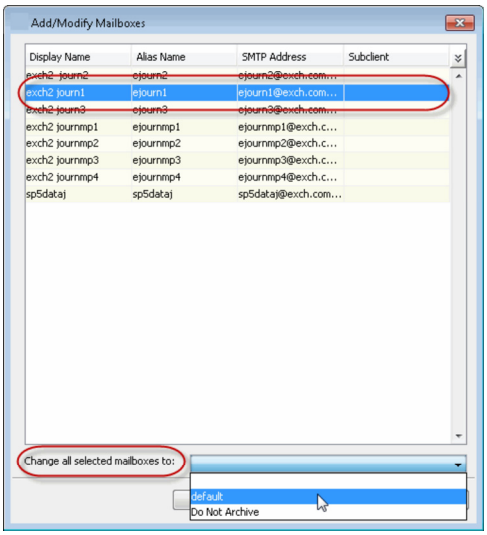
2.
   - Click the **Content** tab.
   - Click the **Configure** button.



3. Click **Discover**.

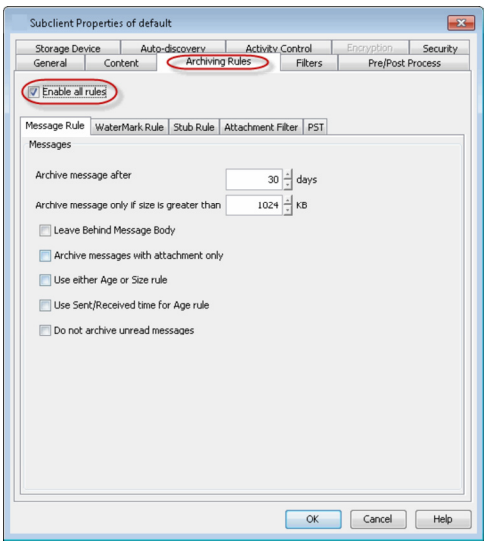


4.
   - Select one mailbox listed in the **Mailbox Name** list for your first archive.
   - In the **Change all selected mailboxes to** list, click **default**.
   - Click **OK**.



5.

- Click the **Archiving Rules** tab.
- Check the **Enable All Rules** check box.

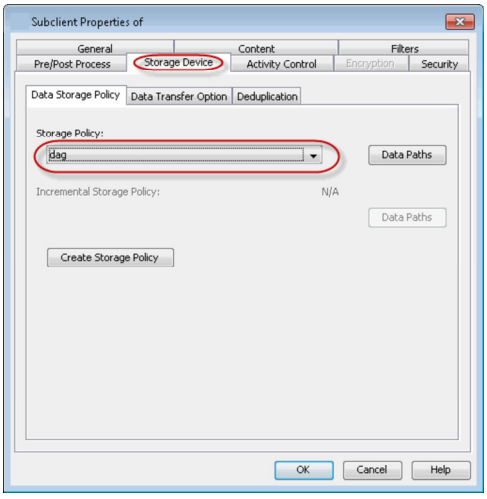


6.

- Click the **Storage Devices** tab.
- Select a **Storage Policy**.
- Click **OK**.

Click Next ➤ to continue.

If you do not have Storage Policy created, click **Create Storage Policy** and proceed to the next step.



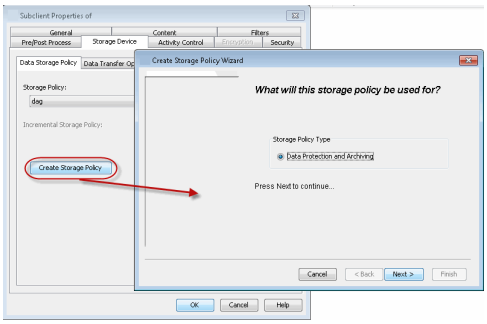
7.

1. From the CommCell Browser, navigate to **Policies**.
2. Right-click the **Storage Policies** and then click **New Storage Policy**.
3. Follow the prompts displayed in the Storage Policy Wizard. The required options are mentioned below:
   - Select the Storage Policy type as **Data Protection and Archiving** and click **Next**.

- Enter the name in the **Storage Policy Name** box and click **Next**.
- From the **Library** list, click the name of a disk library to which the primary copy should be associated and then click **Next**.

  Ensure that you select a library attached to a MediaAgent operating in the current release.
- From the **MediaAgent** list, click the name of a MediaAgent that will be used to create the primary copy and then click **Next**.
- For the device streams and the retention criteria information, click **Next** to accept default values.
- Select **Yes** to enable deduplication for the primary copy.
- From the **MediaAgent** list, click the name of the MediaAgent that will be used to store the Deduplication store.

  Type the name of the folder in which the deduplication database must be located in the Deduplication Store Location or click the Browse button to select the folder and then click **Next**.
- Review the details and click **Finish** to create the Storage Policy.



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Getting Started Archive - Exchange Mailbox Archiver Agent

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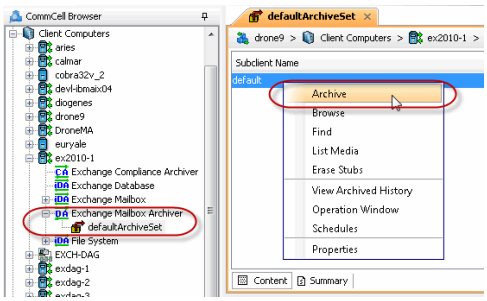
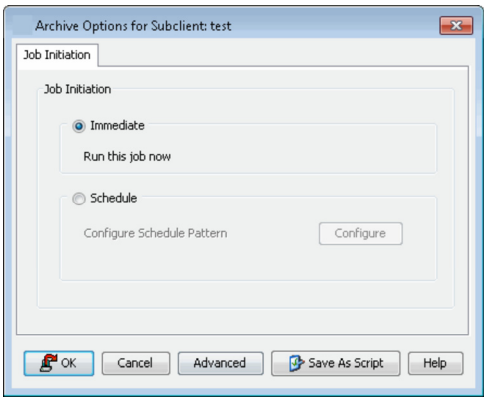
WHAT GETS ARCHIVED	WHAT DOES NOT GET ARCHIVED
By default, mailbox messages that meet the following criteria are archived: • Messages older than 30 days • Messages greater than 1024 KB in size	The following are not included in archive operations: • Messages sent within the last 30 days (see Configuring Archive Rules for information on modifying this setting) • Messages less than 1024 KB in size (see Configuring Archive Rules for information on modifying this setting) • Messages based on mailbox space quotas and disk space (see Configuring Archive Rules for information on modifying this setting) • Sticky Notes

1.
   - From the CommCell Console, navigate to **Client Computers | <Client> | Exchange Mailbox Archiver | defaultArchiveSet**.
   - Right-click the default subclient and click **Archive**.

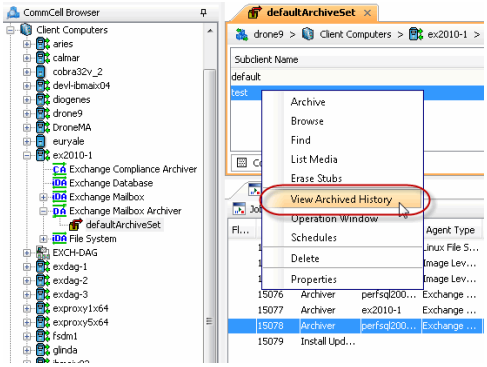


2.
   - Click **Immediate**.
   - Click **OK**.

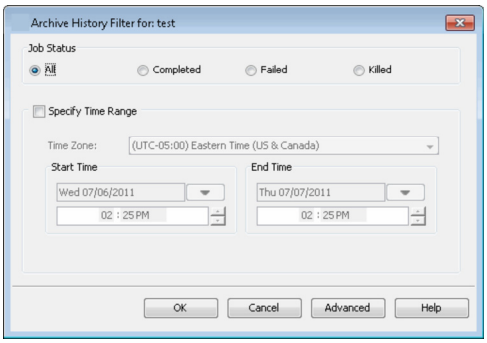


3. You can track the progress of the job from the **Job Controller**.

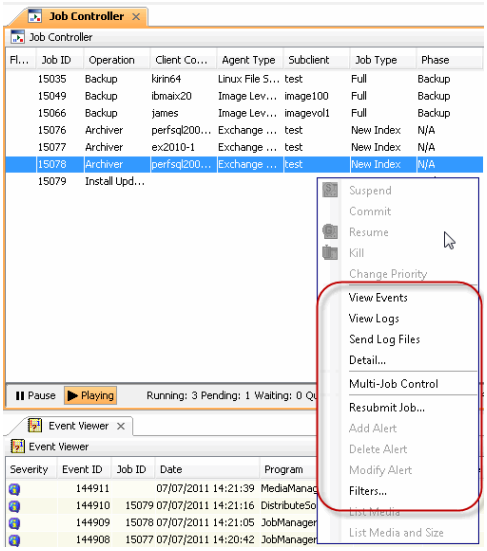
4. Once the job is complete, view the details of job by right-clicking the **Subclient** and selecting **Archive History**.



5. Click **OK**.



6. Right-click the job to:
   - View items that failed, if any, during the job.
   - Resubmit the job.
   - View job details, such as the number of mailboxes archived.
   - View events associated with the job.
   - Send the log file that is associated with the job.



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Getting Started Recover - Exchange Mailbox Archiver Agent

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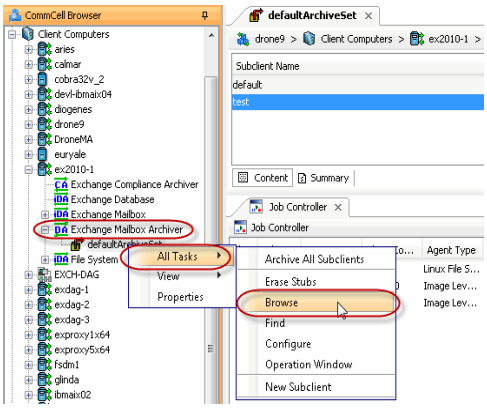
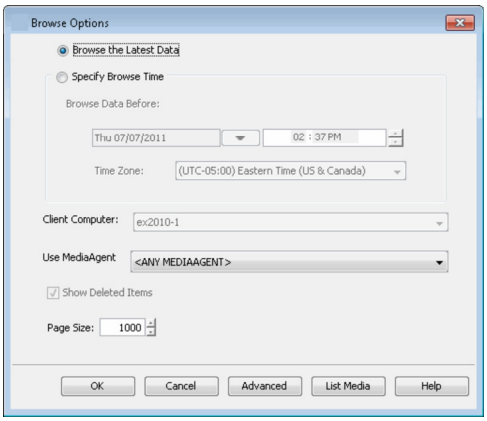
It is recommended that you perform a recover operation immediately after your first archive to understand the process.

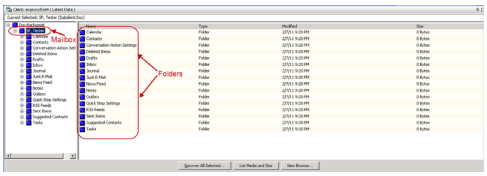
1.
   - From the CommCell Console, navigate to **Client Computers | *<Client>* | Exchange Mailbox Archiver**.
   - Right-click the default backup set and then click **All Tasks | Browse**.



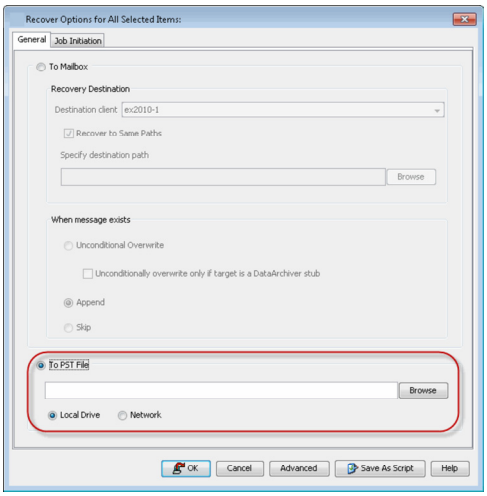
2. Click **OK**.



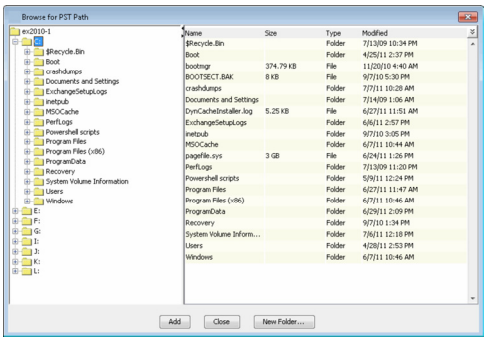
3.
   - Expand the **defaultArchiveset** and select the mailbox folder that you want to recover.
   - Click **Recover All Selected**.



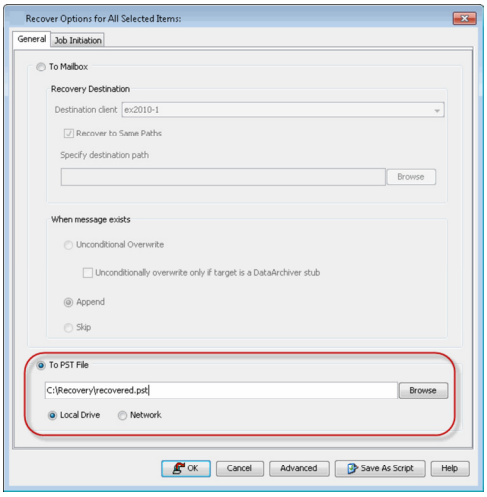
4.
   - Click **To PST File**.
   - Select **Local Drive**.
   - Click **Browse** to locate the path.



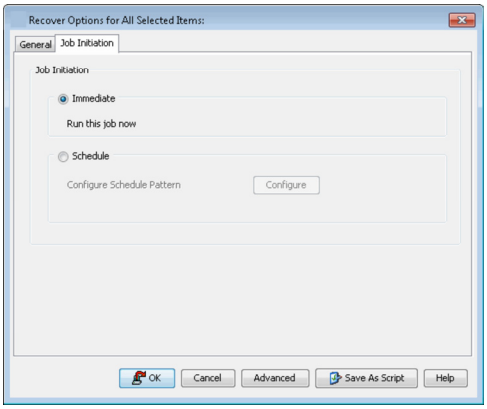
5.
   - Select the path and click **Add.**
   - Close the window.



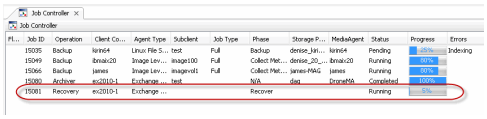
6. Append the path with the PST file name. Ensure to include the `.pst` file extension.



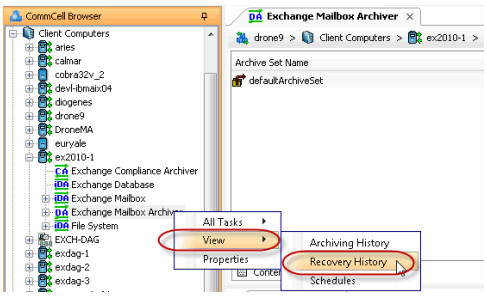
7.
- Click the **Job Initiation** tab and select **Immediate**.
- Click **OK**.



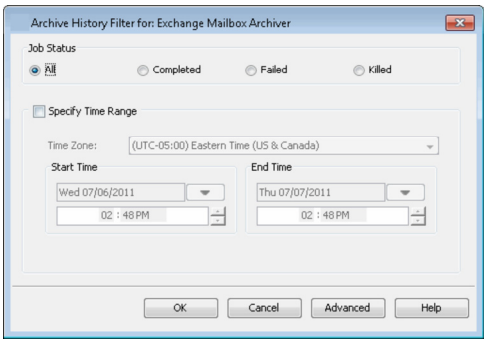
8. You can monitor the progress of the restore job from the **Job Controller**.



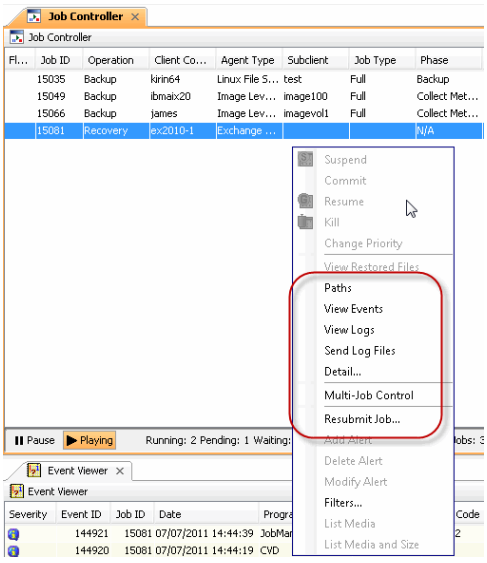
9. Once the restore job has completed, right-click the agent and click **View** | **Recover History**.



10. Click **OK**.

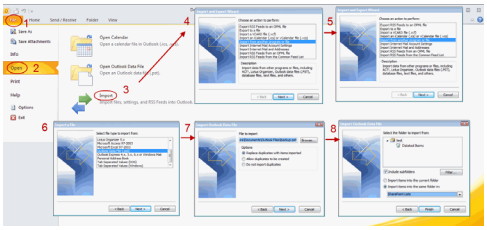


11. Right-click the job and do one of the following:
    - View Job Details.
    - View Paths.
    - View Events of the recover job.
    - View or send log files of the restore job.
    - Resubmit the job if the job is not too old.



12. Import the PST file into Outlook.

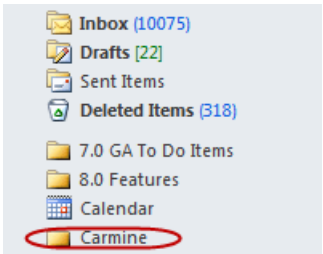
    This step is based on Outlook 2010. The steps and screen may be different if you are using another version of Outlook.



    - Click **File** and then click **Open**.
    - Click **Import**.
    - Select **Import from another program or file** option and click **Next**.
    - Under **File Type**, select **Outlook Data File (.pst)** and click **Next**.
    - Click **Browse** and choose the .pst that was restored and click **Next**.
    - Choose to import the file to the current folder or choose another folder and click **Finish**.

      When **Import items into the same folder** is selected, the data from the imported file will be added to the same folder in Outlook if the folder matches. If the folder doesn't match in Outlook, it will be created.

13. View the imported folder in Outlook.



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UNDERSTANDING THE COMMCELL CONSOLE

The Exchange Mailbox Archiver *i*DataAgent uses the following logical entities to manage archive and recovery operations from the CommCell Console.

AGENT

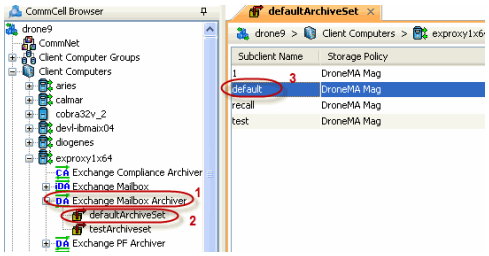
Defines the Exchange Server to be archived.

ARCHIVE SET

Facilitates automatic discovery of mailboxes.

SUBCLIENT

Defines the mailboxes to be archived.



GROUPING MAILBOXES INTO USER-DEFINED SUBCLIENTS

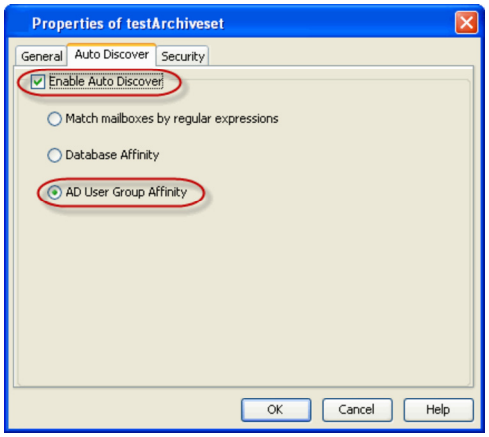
You can create user-defined subclients to divide mailbox archives into groups based on specific criteria. For example, you may want to archive mailboxes in the **Administrator** Active Directory User group on a nightly basis, whereas mailboxes in the **Accounting** Active Directory User group may only need to be archived once a week. Creating a user-defined subclient for each user group allows you to archive them at different intervals based on your resources and archival needs.

By default, the content of the Default Subclient contains all mailboxes on the Exchange server.

When you create a user-defined Subclient, the contents of the user-defined Subclient will be excluded from the Default Subclient.

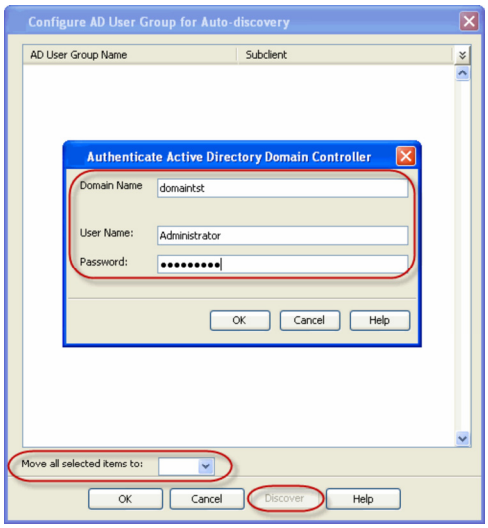
BY ACTIVE DIRECTORY USER GROUPS

You can choose to discover mailboxes based on the mailboxes Active Directory User Group. Any mailbox that resides in the specified Active Directory User Group will be discovered and automatically assigned to the user-defined subclient.



1. In cases where the CommServe and the Active Directory Server are across a firewall, ensure that port 389 is opened.
2. From the CommCell Browser, navigate to **Client Computes | *<Client>* | Exchange Mailbox Archiver**.
3. Right-click the ***<Archive set>*** for which you want to discover mailboxes, and then click **Properties**.
4. Click the **Auto Discover** tab.
5. Select the **Enable Auto Discover** check box, and then click **AD User Group Affinity**.
6. Click **OK**.
7. From the CommCell Browser, navigate to **Client Computers | *<Client>* | *<Archive Set>***.
8. Right-click the **Archive Set**, point to **All Tasks**, and then click **New Subclient**.
9. In the **Subclient Name** box, type a name.
10. Click the **Storage Device** tab, in the **Storage Policy** box, select a Storage policy, and then click **OK**.
11. Right-click the newly created subclient, and then click **Properties**.
12. Click the **Auto-discovery** tab, and then click **Configuration**.
13. Click **Discover**.
14. In the **Domain Name** box, type the Active Directory domain name for the mailbox.
15. In the **User Name** box, type the user account name.
16. In the **Password** box, type the password for the user account, and then click **OK**.
17. On the **Configure AD User Group for Auto-discovery dialog box**, click the **Subclient** column to assign the Active Directory User Group to a subclient.

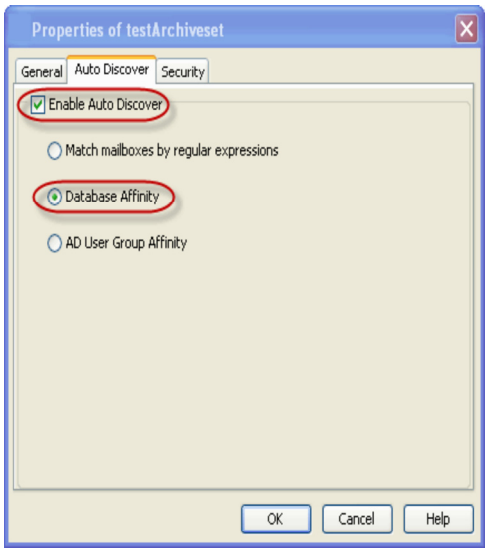
    Alternatively, you can select the desired Active Directory User group, and then select the subclient from the **Move all selected Items to** drop-down box.
18. Click **OK** to return the subclient **Properties** dialog box.
19. Click **OK**.



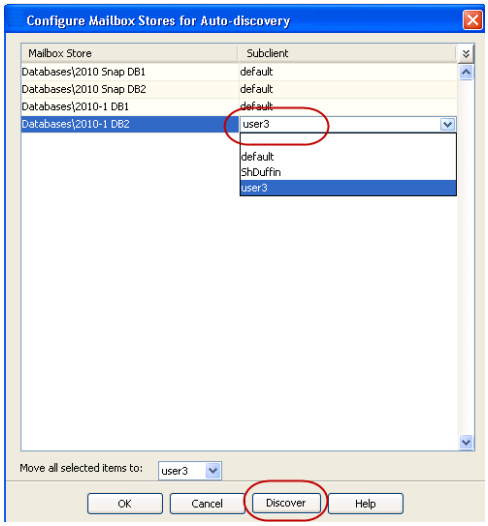
BY DATABASES

You can configure a user-defined subclient to automatically discover mailboxes created within a particular database. This is especially useful in cases where a number of databases exist.

1. From the CommCell Browser, navigate to **Client Computes | <*Client*> | Exchange Mailbox Archiver**.
2. Right-click the **Archive set** for which you want to discover mailboxes, and then click **Properties**.
3. Click the **Auto Discover** tab.
4. Select the **Enable Auto Discover** check box, and then click **Database Affinity**.
5. Click **OK**.
7. From the CommCell Browser, navigate to **Client Computers | <*Client*> | Archive Set**.
8. Right-click the **Archive Set**, point to **All Tasks**, and then click **New Subclient**.
9. In the **Subclient Name** box, type a name.
10. Click the **Storage Device** tab, in the **Storage Policy** box, select a Storage policy, and click **OK**.



11. Right-click the subclient, and then select **Properties**.
12. Click the **Auto-discovery** tab, and then click **Configuration**.
13. Click **Discover**. The mailbox stores will be displayed.
14. Assign the mailbox store to a subclient by clicking the **Subclient** column and selecting one from the drop-down list. Alternatively, you can assign all databases to one subclient in the **Move all selected items to** field.
15. Click **OK** to return the subclient **Properties** dialog box.
16. Click **OK**.



USING REGULAR EXPRESSIONS

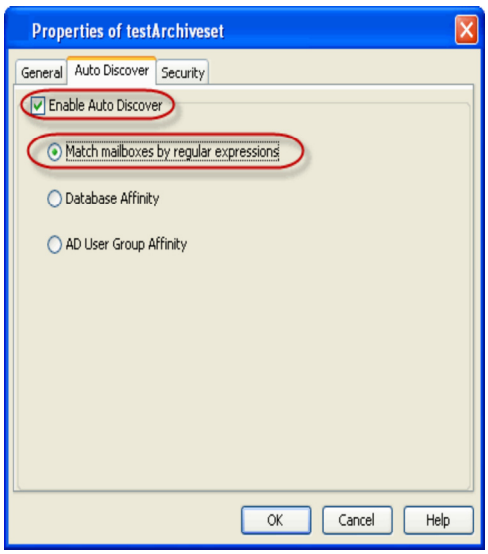
Regular expressions can be used to discover mailboxes based on unique patterns. For example, regular expressions can be used to discover all mailboxes containing a particular department name within its display name.

When mailboxes are discovered using regular expressions, any mailbox that matches the wildcard expressions are automatically assigned to the associated user-defined subclient. If a mailbox does not match the expressions, it is automatically assigned to the default subclient.

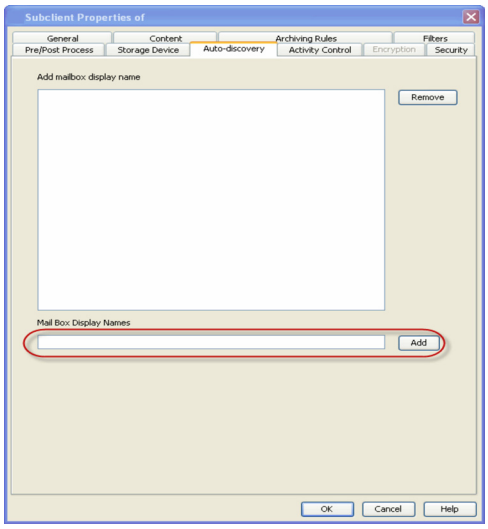
The following table provides some examples of useful regular expressions:

EXAMPLE	DESCRIPTION
Accounting*	Auto-discovers any mailbox display name that begins with **Accounting** followed by any number of any characters (e.g., Accounting Mailbox, Accounting Manager, etc.).
user_group?	Auto-discovers any mailbox display name that begins with **user_group** followed by any one character (e.g., user_groupA, user_group1, etc.).
[JT]im	Auto-discovers any mailbox display name that begins with **J** or **T** and ends with **im** (e.g., Jim, Tim).
[a-k]Lee	Auto-discovers any mailbox display name that begins with any character in the range of **a** through **k** inclusive and that ends with **Lee** (e.g., aLee, bLee, etc.)
[!ei]nsure	Auto-discovers any mailbox display name that ends with **nsure** but does not begin with **e** or **i** (e.g., unsure).
[!a-k]Lee	Auto-discovers any mailbox display name that does not begin with **a** through **k** and that ends with **Lee** (e.g., xLee, yLee, etc.).
[A-K]*	You can also use a combination of wildcards in a single expression, if the wildcards are supported for the type of operation you are performing. For example, if you wanted to auto-discover all mailbox display names beginning with any characters in the range of **A** through **K** inclusive followed by any number of any characters, you would enter the following wildcard combination.

1. From the CommCell Browser, navigate to **Client Computes | *<Client>* | Exchange Mailbox Archiver**.
2. Right-click the Archive set for which you want to discover mailboxes, and then click **Properties**.
3. Click the **Auto Discover** tab.
4. Select the **Enable Auto Discover** check box, and then click **Database Affinity**.
5. Click **OK**.
7. From the CommCell Browser, navigate to **Client Computers | *<Client>* | Archive Set**.
8. Right-click the ***<Archive Set>***, point to **All Tasks**, and then click **New Subclient**.
9. In the **Subclient Name** box, type a name.
10. Click the **Storage Device** tab, in the **Storage Policy** box, select a Storage policy, and click **OK**.



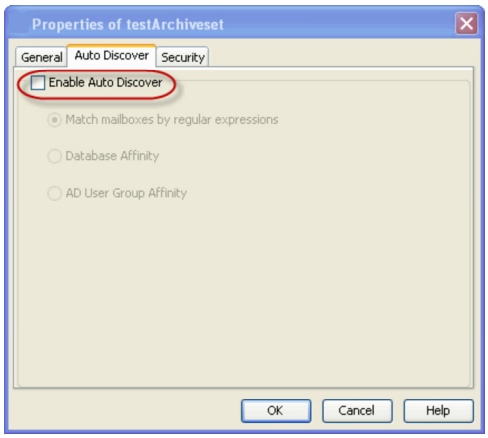
11. Right-click the subclient, and then select **Properties**.
12. Click the **Auto-discovery** tab.
13. In the **Mail Box Display Names** box, type a regular expression or wildcard pattern to specify that newly discovered mailbox display names matching that pattern during auto-discovery will be assigned to this subclient. For a comprehensive wildcard list, see Wildcards.
14. Click **Add**. Repeat this step to enter additional wildcard patterns.
15. Click **OK**.
16. Click **OK** to return the subclient **Properties** dialog box.
17. Click **OK**.



DISABLING AUTOMATIC DISCOVERY

Automatic discovery of mailboxes can be disabled in scenarios where it is no longer desired for mailboxes to automatically be included in routine archives. When automatic discovery is disabled, all mailboxes must subsequently be manually assigned to a subclient.

1. From the CommCell Browser, right-click the ***<Archive set>*** for which you want to disable auto-discovery of mailboxes, and then click **Properties**.
2. Click **Auto Discover** tab.
3. Clear the **Enable Auto Discover** option.
4. Click **OK**.



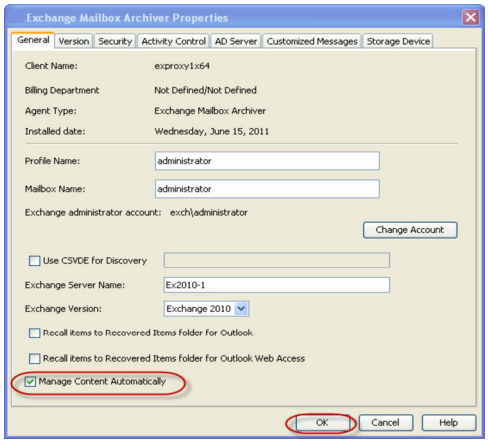
AUTOMATICALLY MANAGE MAILBOX GROUPINGS

By default, if a change is made to an automatically discovered mailbox that alters the association criteria it was discovered with, the next Archive will automatically reassign the mailbox to the appropriate subclient that satisfies the new criteria. For example, if a mailbox was assigned to a subclient based on its parent database and the mailbox is later moved to a different database, the next Archive will automatically move the mailbox to the subclient associated with the new database.

If a mailbox is manually assigned to a subclient, it is not rendered available for automatic grouping. However you can manually assign this mailbox to the blank subclient and during the subsequent data protection operation this mailbox gets automatically discovered and assigned to a relevant subclient.

In some cases, it may not be desirable for Archives to manage mailboxes in this manner. You can disable this functionality - or enable it again later if it has already been disabled - as follows:

1. From the CommCell Browser, right-click the **Exchange Mailbox Archiver** client, and then click **Properties**.
2. Clear or check the **Manage Content Automatically** option.
3. Click **OK**.
4. From the CommCell Browser, navigate to **Client Computes | *<Client>* | Exchange Mailbox Archiver**.
5. Right-click the ***<Archive set>*** for which you want to discover mailboxes, and then click **Properties**.
6. Click the **Auto Discover** tab.
7. Ensure that the **Enable Auto Discover** check box is selected together with either one of the following:
   - Active Directory User Group Affinity
   - Database Affinity
   - Match Mailbox by Regular Expressions



CONFIGURING ARCHIVE RULES

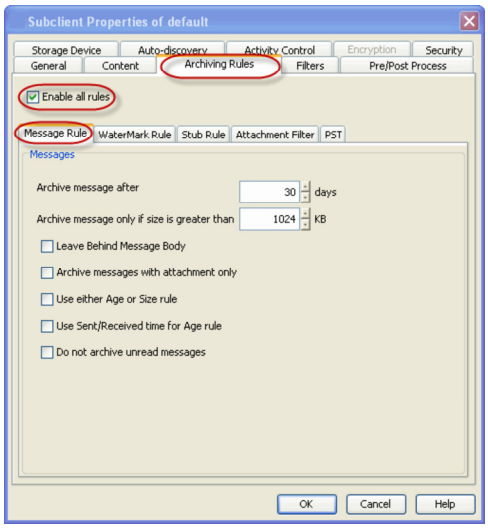
Archiving rules specify the criteria for the type of data to be archived. Messages that meet this criteria are rendered available for archiving if they satisfy any or all the archiving rules.

BASED ON MESSAGE PROPERTIES

You can set rules to archive messages based on the messages properties. All the messages matching with this criteria will be archived.

1. From the CommCell Browser, navigate to **Client Computers | *<Client>* | Archive Set**.
2. Right-click the **Subclient**, and then click **Properties**.
3. Select the **Archiving Rules** tab.

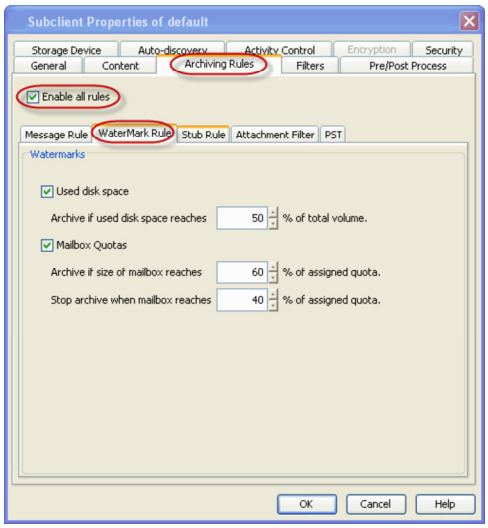
4. Select the **Enable all rules** check box.
5. In the **Archive message after** box, type or select the number of days old that a message must be in order for the message to be archived.
6. In the **Archive message only if size is greater than** box, type or select the size a message must be of in order for the message to be archived
7. You can select one or more from the following options:
   - Select the **Leave Behind Message Body** check box if you do not want the body of the message to be removed during the stubbing process.
   - Select **Archive messages with attachment only** check box to archive the messages that have attachments.
   - Select **Use either Age or Size rule** check box check box to archive if either the Age or Size of the message/item matches the respective rule.
   - Select the **Use Sent/Received time for Age rule** check box.
   - Select the **Do not archive unread messages** check box.
8. Click **OK**.



BASED ON DISK SPACE AND MAILBOX QUOTAS

You can set rules to archive based on a specified amount of used disk space on the database which hosts this mailbox. You can also establish a mailbox quota rule, which will archive messages when the mailbox has exceeded the specified threshold.

1. From the CommCell Browser, navigate to **Client Computers | <*Client*> | Archive Set**.
2. Right-click the **Subclient**, and then click **Properties**.
3. Select the **Archiving Rules** tab.
4. Select the **Enable all rules** check box.
5. Click the **WaterMark Rule** tab.
6. Select the **Used disk space** check box.
   - In the **Archive if used disk space reaches** box, type or select the size of the disk volume.
7. Select the **Mailbox Quotas** check box.
   - In the **Archive if size of mailbox reaches** box, type or select the mailbox size high watermark value.
   - In the **Stop archive when mailbox reaches** box, type or select the mailbox size low watermark value.

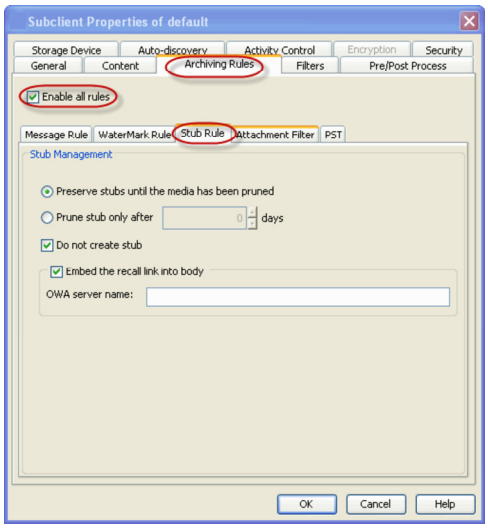


BASED ON STUBS

You can set rules to archive messages based on the stub properties. All the messages matching with this criteria will be archived.

1. From the CommCell Browser, navigate to **Client Computers | <*Client*> | Archive Set**.
2. Right-click the **Subclient**, and then click **Properties**.
3. Select the **Archiving Rules** tab.
4. Select the **Enable all rules** check box.
5. Click the **Stub Rule** tab.
6. Click **Preserve stubs until the media has been pruned** to allow stubs to exist in a mailbox or public folder until the media retention time has been met and data aging has been run.
7. In the **Prune stub only after** box, type or select the number of days after which the stubs should be pruned.
8. Select the **Do not create stub** check box if you do not want to have a stub to be created after archiving.
9. Select the **Embed the recall link into body** to embed the recall link into the message body.

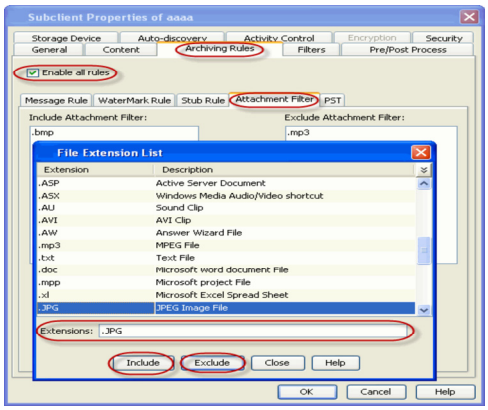
10. In the OWA server name box, type the URL and host name of the server that will perform the recall. For example: https://exchangeservername



BASED ON ATTACHMENTS

You can include or exclude attachments from an archive operation. When attachment filters are specified, the age/size rules are ignored as archiving criteria for attachments of the specified type. When attachment filters are not specified, age/size rules will determine whether the attachments will be archived. Use the following steps to configure an attachment filter.

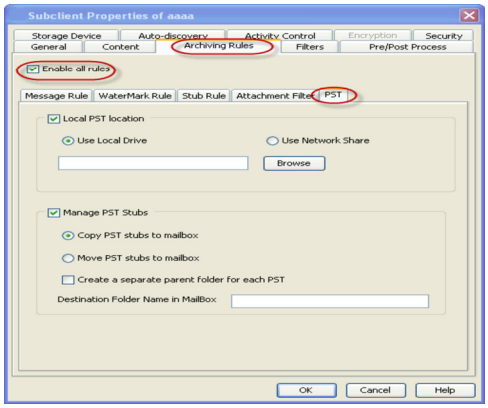
1. From the CommCell Browser, navigate to **Client Computers | <*Client*> | Archive Set**.
2. Right-click the **Subclient**, and then click **Properties**.
3. Select the **Archiving Rules** tab.
4. Select the **Enable all rules** check box.
5. Click the **Attachment Filter** tab.
6. Click Add, double-click the file extension.
   - Click **Include** to include all the attachments with the selected extension in the Archive migration operation.
   - Click **Exclude** to exclude all the attachments with the selected extension in the Archive migration operation.
   - Click **Close**.
7. Click **OK**.



BASED ON PST FILES

Use the following steps to configure the archiving rules based on PST files.

1. From the CommCell Browser, navigate to **Client Computers | <*Client*> | Archive Set**.
2. Right-click the **Subclient**, and then click **Properties**.
3. Select the **Archiving Rules** tab.
4. Select the **Enable all rules** check box.
5. Click the **PST** tab.
6. Select the **Local PST location** check box
7. Click **Use Local Drive** to use the local drive.
8. Click the **Use the Network share** to use the network location.
9. Click **Browse** to select the location.
10. Select the **Manage PST Stubs**
    - Click **Copy PST stubs to mailbox**
    - Click **Move PST stubs to mailbox**
    - Select the **Create a separate parent folder for each PST**
11. In the **Destination Folder Name in Mailbox** box, type the destination folder name.



CONFIGURE END-USER MESSAGE RECOVERY

The Exchange Mailbox Archiver Agent provides the facility for end-users to recover messages directly from Outlook or Outlook Web Access (OWA). When configured, a special icon, referred to as a stub, will appear in the message header indicating that the message has been archived. By double-clicking the message header, the user can recover the archived message back to their inbox.

There are two tasks required for this capability:

- Publish OFL forms for the Exchange Server to display the stub icons.
- Enable stubbing from the CommCell Console.

These are described below.

CONFIGURE OFL

CREATING OFL FOR EXCHANGE 2000/2003

1. From the **Start** menu open the **Exchange System Manager** and expand the folders node.
2. Right-click **Public Folders** tree and select **View System Folders** from the **Context** menu.
3. Right-click the **EFORMS REGISTRY** system folder and select **New | Organizational Form.**
4. Enter **"DataArchiver Organizational Forms"** as the name of the new **Organization Form.**
   Ensure that the **Language** field is set to English (USA).
5. Select **Apply.**
6. Click **OK** and exit the **Exchange System Manager**.

CREATING OFL FOR EXCHANGE 2007

1. Refer to the CreateOFL instructions (located in the <base> folder) for creating a custom Public Folder using the Exchange Management Shell.
2. Run the CreateOFL tool to create the OFL.
3. Publish the Forms.

CREATING OFL FOR EXCHANGE 2010

1. From the **Start** menu open the **Exchange Management Console** and expand the folders node.
2. Create a public folder (e.g., `My Organizational Forms Library`) for the organizational forms library Public Folder.
3. Use the **ExFolders** tool to add the **PR_URL_NAME** property to the organizational forms library as follows:

   The **ExFolders** tool (`ExFolders.exe`) must exist in the <*Exchange_Installation_Path*>\V14\Bin directory. You can download the tool from one of the following locations:
   - If you're running Exchange 2010 Service Pack 1 (SP1), see ExFolders tool (Compatible with Exchange 2010 SP1 version).
   - If you're running the release to manufacturing (RTM) version of Exchange 2010, see ExFolders tool (Compatible with Exchange 2010 RTM version).

   After the download it is recommended to read the READMe that is available together with the `ExFolders.exe`.

   After the download, be sure to copy the `ExFolders.exe` file to the <*Exchange_Installation_Path*>\V14\Bin directory.

   a. Navigate to the <*Exchange_Installation_Path*>\V14\Bin directory, and then double-click `ExFolders.exe`.You must run the **ExFolders** tool from an Exchange 2010 server. You can't run it from a workstation as you could with the **PFDAVAdmin** tool. To learn more about the **ExFolders** tool, see the Exchange Server Team Blog article Exchange, Meet ExFolders.

      To perform this procedure, you must have administrative permissions to the public folders you're modifying. For more information, see Understanding Public Folder Permissions.

   b. In the **ExFolders** management console, navigate to **File > Connect**.
   c. In **Connect**, click **Public Folders**.
   d. Next to the **Global Catalog** box, click **Select**, and then select a global catalog server you want to use.
   e. Next to the **Database(s)** box, click **Select**, select the public folder database you want to use, and then click **OK**. A public folder hierarchy will appear in the **ExFolders** console tree.
   f. Expand **System Folders**, expand **EFORMS REGISTRY**, right-click the public folder you created for the organizational forms library, and then click **Property Editor**.

g. On the **Property** menu, click **Add Property To View**.

h. In **Add Property To View**, type **0x6707001E**, and then click **OK**.

i. Sort the **Name** column to find the **PR_URL_NAME** property you just added.

j. Right-click **PR_URL_NAME**, and then click **Edit Value.**

k. In the **Value** box, type **/NON_IPM_SUBTREE/EFORMS REGISTRY**, and then click **OK**.

l. Close the **ExFolders** tool.

4. Use MAPI editor (`Mfcmapi.exe`) to add the **PR_EFORMS_LOCALE_ID** property to the organizational forms library. To perform this procedure, you must use the Microsoft Exchange Server MAPI Editor (MFCMAPI) tool on a computer that's running the 64-bit version of Microsoft Outlook 2010. To download MFCMAPI, see Microsoft Exchange Server MAPI Editor. For a list of locales, see languagecode Field.

a. Open MFCMAPI.

b. On the **MDB** menu, click **Open Public Folder Store**, and then click **OK**. The Public Folder Management Console appears.

c. In the console tree, expand **Public Root**, expand **NON_IPM_SUBTREE**, expand **EFORMS REGISTRY**, and then click the public folder that you created for the organizational forms library.

d. In the result pane, in the **Property Name(s)** column, click the **PR_URL_NAME** property.

e. On the **Property Pane** menu, click **Modify 'Extra' Properties**.

f. In **Extra Properties**, click **Add**.

g. In **Property Tag Editor**, click **Select Property Tag**.

h. In **Property Selector**, click **PR_EFORMS_LOCALE_ID**, and then click **OK**.

i. Click **OK** to close **Property Tag Editor**, and then click **OK** to close **Extra Properties**.

j. To verify that the property was added, in the Public Folder Management Console, locate the newly created **PR_EFORMS_LOCALE_ID** property in the **Property Name(s)** column. A red exclamation point (!) is displayed as its icon.

k. Double-click **PR_EFORMS_LOCALE_ID** to open **Property Editor**.

l. In the **Unsigned Decimal** box, type the desired locale ID, and then click **OK**. For example, type **1033** for English, **1040** for Italian, and so on.

For more information about determining the locale ID, see languagecode Field.

m. Close MFCMAPI.

5. Edit the `.oft` files for the supported languages as described in Publish the Forms.

6. Create the configuration `.ini` file in the following format:

```
[FORMListToPublish]
Stub-Form = C:\Documents and Settings\administrator.SKY\Desktop\Base\Stub-ENU.oft
Cand-Form = C:\Documents and Settings\administrator.SKY\Desktop\Base\Cand-ENU.oft
LMCand-Form = C:\Documents and Settings\administrator.SKY\Desktop\Base\LMCand-ENU.oft
```

7. Publish the forms using the **DMEPublishForm** tool and the **Publish Manually using Config File** option. A search for an OFL that is configured with the same locale as Outlook on the local computer is performed. If an OFL is not found with that locale, it will publish to an English OFL if one exists.

PUBLISHING THE FORMS:

Follow the steps given below to publish the forms for the supported languages.

1. Navigate to the PublishForm tool and OFT forms available in the base folder and double-click the `DMEPublishForm.exe`.

2. Double-click `publishform.exe`

3. Click **Publish**.

4. The publish form program will prompt for a profile to use in order to publish the forms to the DataArchiver Organizational Forms (or previously existing OFL) folder.
   The profile used to publish the forms must have owner privileges to that folder.

5. Close the publish form program.

Follow the steps given below to publish the form for Exchange 2007 in any language other than the ones mentioned under supported languages:

1. Copy the following template forms from the resource pack:

- stub-ENU.oft: Form to show the stubs in English language.
- Cand-ENU.oft: Form to show the candidate messages in English language.
- LMCand-ENU.oft: Form to show the local migration candidates in English language.

2. Navigate to **Tools** in **Microsoft Outlook** inbox, select **Forms**.
3. Select **Design a Form.**
4. Select **"User template in File System"** in **Look In** from the dropdown list**.**
5. Translate the following string in the desired language:
   - In the **Stub** tab for **stub-ENU.oft:**
     "This message has been migrated by Bull Calypso. To recover the original message, please close this message, re-open it, and choose :Recover"(Bull Calypso Outlook Add-in required)
   - In the space provided for **Description** field in the **Properties** tab for **stub-ENU.oft, Cand-ENU.oft** and **LMCand-ENU.oft:**
     "This form is only used by migrated message(s). Please do not use it to create new message."

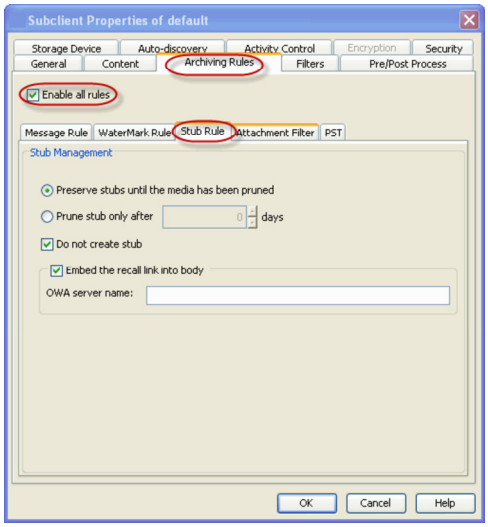
Follow the steps given below to publish the form for Exchange 2010 in any language other than the ones mentioned under supported languages:

1. Copy the following template forms from the resource pack:
   - stub-ENU.oft: Form to show the stubs in English language.
   - Cand-ENU.oft: Form to show the candidate messages in English language.
   - LMCand-ENU.oft: Form to show the local migration candidates in English language.
2. Navigate to **File** in **Microsoft Outlook** inbox, select **Options**.
3. Select **Customize Ribbon**.
4. Enable the **Developer** tab and select **Design a Form**.
5. Select **"User template in File System"** in **Look In** from the dropdown list**.**
6. Translate the following string in the desired language:
   - In the **Stub** tab for **stub-ENU.oft:**
     "This message has been migrated by Bull Calypso. To recover the original message, please close this message, re-open it, and choose :Recover"(Bull Calypso Outlook Add-in required)
   - In the space provided for **Description** field in the **Properties** tab for **stub-ENU.oft, Cand-ENU.oft** and **LMCand-ENU.oft:**
     "This form is only used by migrated message(s). Please do not use it to create new message."

See Resource Pack for more information on the Resource Pack.

ENABLE STUBBING

1. From the CommCell Browser, navigate to **Client Computers | <*Client*> | Archive Set**.
2. Right-click the **Subclient**, and then click **Properties**.
3. Select the **Archiving Rules** tab.
4. Select the **Enable all rules** check box.
5. Clear the **Do Not Create Stub** check box.
6. Click **OK**.



CONFIGURE RECOVERY FROM MOBILE DEVICES

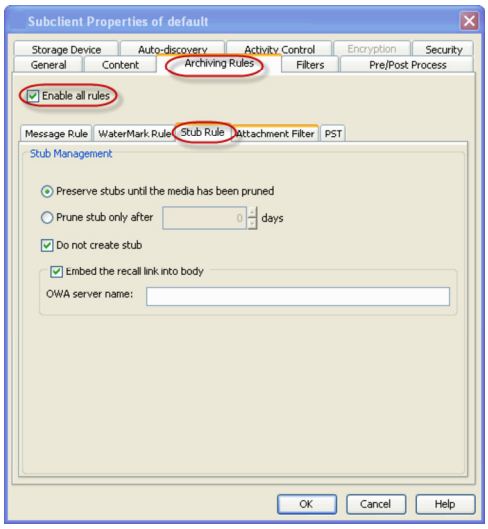
The Exchange Mailbox Archiver Agent provides a **Universal Stub** option to recall messages from any mobile device and is supported for Exchange Server 2007 or higher. When this feature is enabled, a hyperlink is embedded into the message's body during the stubbing phase. An end-user with access to their Outlook application, OWA, or any email-ready mobile device can recover this stubbed message by clicking the message, which will be automatically recalled into the

user's **Recovered Items** folder.

In order for Universal Stub recall to work, .NET 3.5 should be installed on the computer which has OWA Proxy Enabler installed.

1. From the Exchange Mailbox Archiver Agent's **Subclient Properties** dialog box, navigate to the **Archiving Rules | Stub Rules** tab and select the **Embed the recall link into body** option.
2. Enter the URL and host name of the server that will perform the recall in the **OWA Server Name** field. For example:

   `https://exchange07`
3. Click **OK**.

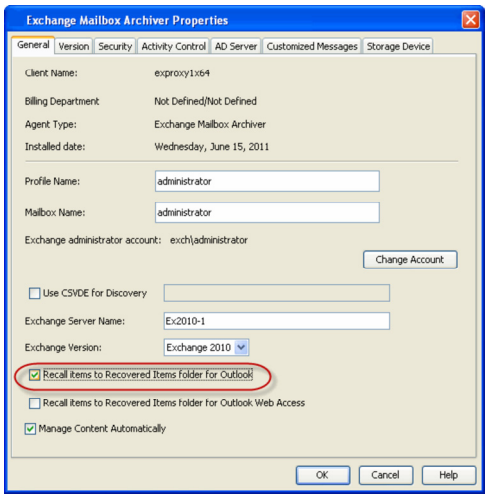


CONFIGURE RECALLS TO RECOVERED ITEMS FOLDERS

You can specify whether messages or items recalled from Outlook should be placed in the Recovered Items folder. When this option is enabled, data will be recalled to the Recovered Items folder. When disabled, data will be recalled to the original folder from which the data was archived.

OUTLOOK APPLICATION

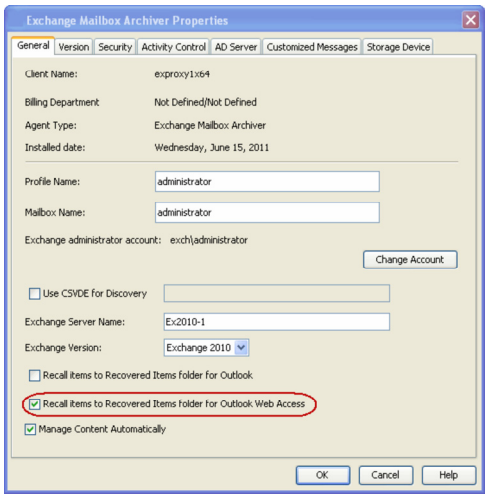
1. From the CommCell Browser, navigate to **Client Computers | *<Client>* |**
2. Right-click the **Exchange Mailbox Archiver**, and then click **Properties**.
3. Select the **Recall items to Recovered Items folder for Outlook** check box.
4. Click **OK**.



OUTLOOK WEB ACCESS (OWA)

You can specify whether messages or items recalled from Outlook Web Access (OWA) should be placed in the Recovered Items folder. When selected, data will be recalled to the Recovered Items folder. When disabled, data will be recalled to the original folder from which the data was archived.

1. From the CommCell Browser, navigate to **Client Computers | *<Client>* |**
2. Right-click the **Exchange Mailbox Archiver**, and then click **Properties**.
3. Select the **Recall items to Recovered Items folder for Outlook Web Access** check box.
4. Click **OK**.



PREVENT MESSAGES FROM BEING RECALLED MULTIPLE TIMES

If messages are recalled multiple times, the size of the mailbox begins to increase with unnecessary duplicate copies of the recalled messages. In such cases, the space saving benefit of message archiving become compromised over time.

If you would like to prevent messages from being recalled multiple times, you can configure Outlook clients to hide the Recovered Items folder (discussed in the above sections) while maintaining a cache of message stubs that is hidden from users. Message stubs are placed in this cache and remain viewable in the folder from which they were archived.

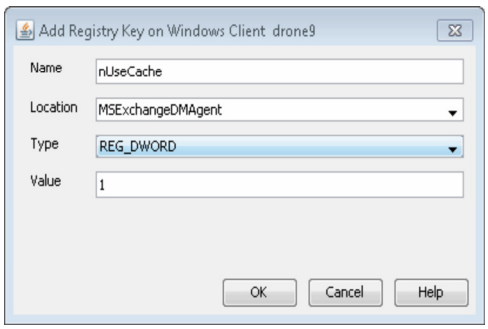
If a message recall is triggered, the software will first check the cache to determine if the message was previously recalled. Based on this, one of the following will take place:

- If the message had not been recalled, it will be recalled from the media and placed in the hidden cache. The message stub will remain in the original location.
- If the message had been recalled previously, the message will not be recalled again from the media. Rather, the copy of the previously recalled message will automatically be opened from the hidden cache.

This capability is not supported on Exchange 2003 clients.

Perform the following to configure this capability:

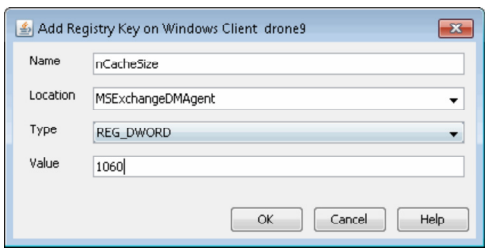
1. From the CommCell Browser, right-click the client computer that has Exchange Mailbox Archiver Agent installed.
2. Click **Properties**.
3. Select **Registry Key Settings**.
4. Click **Add**.
5. Enter `nUseCache` in the **Name** field.
6. Enter `MSExchangeDMAgent` in the **Location** field.
7. From the **Type** list, select DWORD.
8. Enter 1 to enable this feature.
9. Click **OK**.



SPECIFY A CACHE SIZE

By default, the hidden cache will be pruned during the next archive operation once the number of cached items reaches 100. This can be modified as follows:

1. From the CommCell Browser, right-click the client computer that has Exchange Mailbox Archiver Agent installed.
2. Click **Properties**.
3. Select **Registry Key Settings**.
4. Click **Add**.
5. Enter `nCacheSize` in the **Name** field.
6. Enter `MSExchangeDMAgent` in the **Location** field.



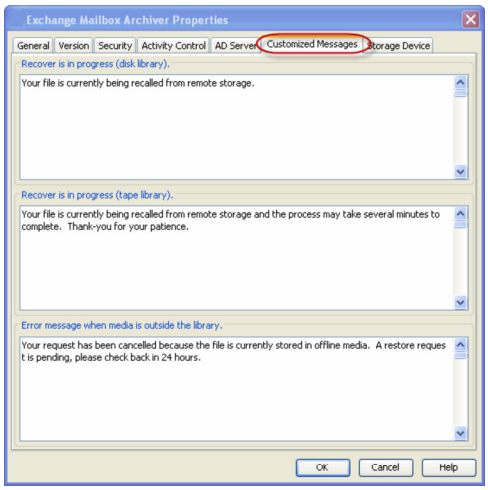
7. From the **Type** list, select DWORD.
8. Enter the maximum number of items to hold in the hidden cache.
9. Click **OK**.

CONFIGURE RECALL STATUS MESSAGES

You can customize the messages that will be displayed during stub recovery operations from Outlook Add-In.

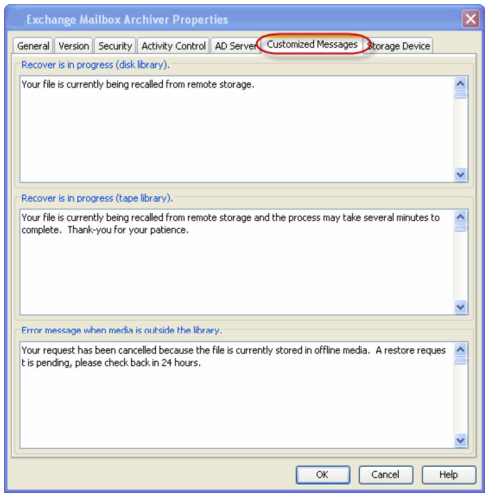
FOR RECALLS FROM DISK LIBRARY

1. From the CommCell Browser, navigate to **Client Computers | *<Client>* |**
2. Right-click the **Exchange Mailbox Archiver**, and then click **Properties**.
3. Select the **Customized Messages** tab.
4. Under **Recover is in progress (disk library)**, type the desired status message to be displayed in outlook during a stub recovery operation from a disk library.
5. Click **OK**.



FOR RECALLS FROM TAPE LIBRARY

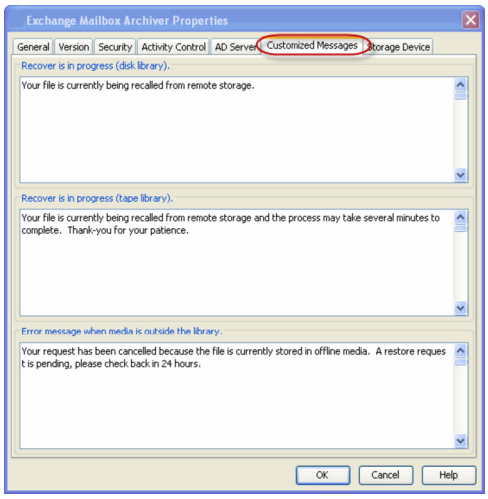
1. From the CommCell Browser, navigate to **Client Computers | *<Client>* |**
2. Right-click the **Exchange Mailbox Archiver**, and then click **Properties**.
3. Select the **Customized Messages** tab.
4. Under **Recover is in progress (tape library)**, type the desired status message to be displayed during a stub recovery operation from a tape library.
5. Click **OK**.



FOR RECALLS WHEN MEDIA IS OUTSIDE THE LIBRARY

When a recall is performed and the media is outside the library, you can configure an event to be displayed in the Event Viewer indicating this, as well as a Media Handling Request alert. This capability is useful for immediately notifying an administrator that the media is not available and the recall is pending the media's availability.

1. From the CommCell Browser, navigate to **Client Computers | *<Client>* |**
2. Right-click the **Exchange Mailbox Archiver**, and then click **Properties**.
3. Select the **Customized Messages** tab.
4. Under **Error message when media is outside the library**, type the desired status message to be displayed when a stub recovery operation is attempted for media outside the designated library..
5. Click **OK**.



CONFIGURE OFFLINE ARCHIVING

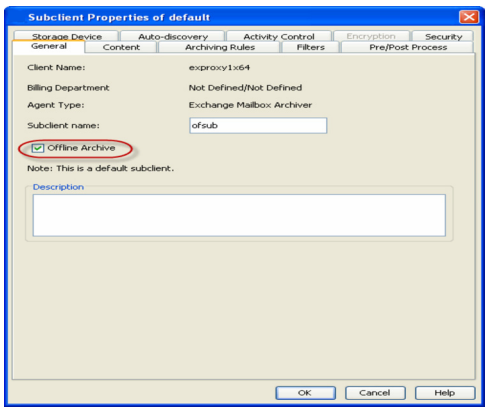
In cases where internet connectivity is not available (such as using a laptop on an airplane), it may be desirable for users to still have the facility to recall archived messages. This can be accomplished by configuring Outlook to retain a copy of the archived message in a local cache on the client computer.

By default IPM.Note message types qualify for Offline Archiving and other message class types such as IPM.Post, IPM.Task etc are stubbed during the archiving operation.

Use the following steps to enable offline archive operations on this subclient to allow Outlook Add-In users the capability of retaining a full copy of archived items in local cache on the Outlook client.

ENABLE OFFLINE ARCHIVING

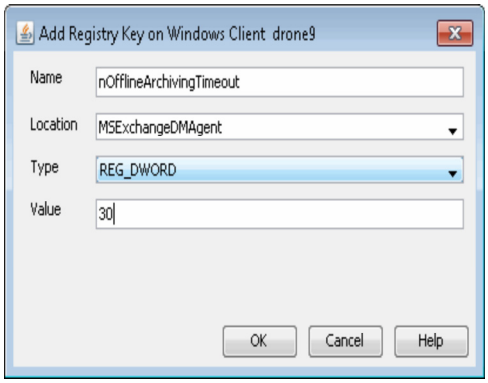
1. From the CommCell Browser, navigate to **Client Computers | <*Client*> | Exchange Mailbox Archiver | < Archive Set >**.
2. Right-click the **Subclient**, and then click **Properties**.
3. Select the **Offline Archive** check box.
4. Click **OK**.



SPECIFY OFFLINE ARCHIVE CANDIDATE PERIOD

You can specify the number of days after which a message will become a candidate for offline archiving as follows:

1. From the CommCell Browser, right-click the client computer that has Exchange Mailbox Archiver Agent installed.
2. Click **Properties**.
3. Select **Registry Key Settings**.
4. Click **Add**.
5. Enter `nOfflineArchivingTimeout` in the **Name** field.
6. Enter `MSExchangeDMAgent` in the **Location** field.
7. From the **Type** list, select DWORD.
8. Enter the number of days after which a message will be marked for offline archiving.
9. Click **OK**.



CONFIGURE ARCHIVES OF PST FILES

In a typical organization, end-users' personal folders (*.PST files) reside on their local hard drives, network shares or a combination of both. Since PST files can only be archived from either a local drive of the Exchange Server or a network share connected to the Exchange Server, the PST files need to be collected from various places and moved to the appropriate centralized location for archiving. After the PST files have been moved to a centralized location, they can be then archived to secondary storage by the Exchange Mailbox Archiver Agent.

There are four steps required to configure archives of PST files:

1. Ensure Outlook is installed on the computer hosting the PST files.
2. Match PST File Locations with the Exchange Server Directories
3. Configure the Exchange Server for PST Archiving
4. Configure the PST Files to be Archived

MATCH PST FILE LOCATIONS WITH THE EXCHANGE SERVER DIRECTORIES

Prior to archiving PST files, you must ensure the folders in which the PST files reside follow the same hierarchical structure as Exchange MAPI directory names. You can determine the MAPI directory name and container(s) as follows:

1. Run the following command string from a prompt to export the user list to a file:

   `csvde -l "DN,legacyExchangeDN" -r "msExchHomeServerName=*/cn=`**`your_exchange_servername`**`" -f `**`your_output_filename.csv`**

2. Look for the **legacyExchangeDN** field to find out the directory name and container(s). For example:

   MAPI DN: `o=org/ou=orgunit/cn/Recipients/cn=`**`user`**

   (in this example, the PST file folder name would be: **user**)

   MAPI DN: `o=org/ou=orgunit/cn/Recipients/cn=`**`us`**`/cn=`**`user`**)

   (in this example, the PST file folder would consist of 2 levels, the first folder called **us**, the sub-folder called **user**, such as **us\user**)

If the PST file location does not match the directory structure, create the structure in the location in which the PST files will reside.

> If any of the directory names or container names contain one or more of following characters:
>
> * ? < > / \ : | %
>
> then they need to be converted into format of %XX (where XX is the hex code of the character).

CONFIGURE THE EXCHANGE SERVER FOR PST ARCHIVING

1. Ensure a shared location is available on the Exchange Server. Configure permissions so that the user whom will be running this tool has write access. This will be the location where the PST files are copied (if applicable) and the `PSTDiscoveryGUI.exe` will be run after the discovery process is complete.
2. Get the latest version of the PSTDiscovery Tool from the Resource Pack. Copy this folder to a shared location that is accessible by all remote clients that will be running the tool.
3. Configure the `pst.ini` file within the PSTDiscovery Folder:

   SCANPATH

   Use this parameter to specify one or more paths to the drives you wish to scan. If left blank all drives will be scanned. Multiple drives are delimited by a semicolon.

   COPY

   Specifies whether to copy the PST files from the remote clients to the shared location on the Exchange Server. Valid values are "y" or "n". If "n" is specified, PST files will be scanned into the database but not copied to the shared location. If "y" is specified, all scanned PST files will be copied to the shared location.

   DELETE

   Specifies whether to delete the source PST files once they have been copied to the shared location. Valid values are "y" or "n".

   SIZE

   Specifies the minimum size (in KB) that a PST file must be in order to be scanned and/or copied to the shared location.

   MTIME

   Specifies the time in days since the PST file was last modified. Only PSTs older than this value will be scanned and/or copied to the shared location.

   LATIME

   Specifies the time in days since the PST file was last accessed. Only PSTs that have not been accessed since this time will be scanned and/or copied to the

shared location.

MEETALL

Specifies whether the **SIZE**, **MTIME** and **LATIME** criteria must all be met in order for the PST file to be scanned and/or copied to the shared location. Valid values are "y" or "n". If "y" is specified, the PST must meet all three conditions of **SIZE**, **MTIME** and **LATIME** for it to be scanned and/or copied to the shared location. If "n" is specified, the PST only has to meet one of the three conditions in order to be scanned and/or copied to the shared location.

Sample pst.ini configuration file:

```
SCANPATH="C:\;D:\"

COPY=y

DELETE=n

SIZE=10

MTIME=180

LATIME=180

MEETALL=n
```

Save any changes you have made to this configuration file.

4. On the client where the `PsExec` utility has been copied, create a file called "`clients.txt`" containing the list of clients that the PSTDiscovery Tool will be run against.
5. Using the following syntax, run the PSTDiscovery Tool.

   > ***PsExec.exe @C:\clients.txt -u username -p password \\Client\PSTDiscovery\PSTDiscovery.exe"\\ExchangeClient \SharedPSTLocation"***

   Where the username and password specified have execute permissions on the PSTDiscovery share, and write permissions to the shared location on the Exchange client. An example of this syntax is provided in `PSTDiscovery.bat` in the PSTDiscovery folder from the Resource Pack.
6. This procedure can also be scheduled for periodic scanning of the remote clients.
7. Once the scan and/or copy phase of the PSTDiscovery utility are completed, a database file will be created in the shared location containing information on all PST files that have been scanned and/or copied.

CONFIGURE THE PST FILES TO BE ARCHIVED

1. Open `PSTDiscoveryGui.exe` on the Exchange Server that has the specified shared location. In this PSTDiscovery Tool, two fields must be configured before you continue.

   Status Database

   Click to specify the local path of the database file created in the previous step. This will populate the display pane with information on all of the PST files that have been scanned and/or copied.

   Staging Path

   Click to specify the local path that you would like to use as a staging area to prepare PST files for archiving.

   The following information will be displayed on the screen:

   Machine Name

   Displays the source client name from which the PST was copied.

   Orig-Path

   Displays the original path of the PST file.

   Net-Path (Local Path)

   Displays the current local path of the PST file.

   Size

   Displays the size of the PST file in KB.

   Mailbox Alias

   Displays the alias of the mailbox this PST file was created from. To change the value, double-click on the field and enter a new alias. By default this value will be blank.

   File Owner

   Displays the current ownership of the PST file. To change the value, double-click on the field and enter a new owner.

   Status

Displays the current status of the PST file. COPIED, DISCOVERED, MARKED FOR MIGRATION, and MIGRATED are some of the possible values. To change a value, double-click on the field and select a new value from the list.

File Time

Displays the last Modified Date of the PST File.

Discover Time

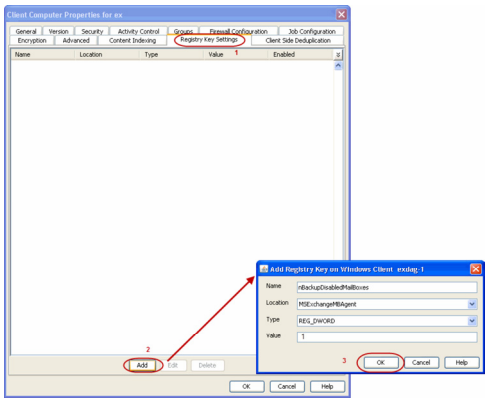
Displays the time of the scan operation that discovered the PST file.

2. If PST files have been added to this shared location since the last time a scan was run, the **Local Scan** button at the bottom of the tool can be used to scan the current folder location to import more PST files into the database which will then be displayed in the tool.
3. In order to prepare the PST files for archiving, the **Mailbox Alias** field must be manually edited. For each PST file double-click on this field and specify the alias associated with the PST file.
4. Once the Mailbox Alias field has been manually edited, choose the PSTs you wish to prepare for Archiving. For each of the desired PST files, change the value in the **Status** column to **`Mark for Migration`**.
5. Once you have selected all of the desired PST files, click **Stage** and the tool will prepare all the designated PST files for Archiving. Once preparation has completed, a pop-up window will display the number of PST files that are now ready for archiving.

CONFIGURING ARCHIVES OF DISABLED MAILBOXES

By default, the Mailboxes whose user accounts are disabled from the Active Directory are not archived. To include them in the archive operation, follow the steps given below:

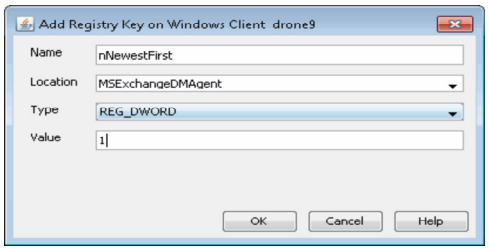
1. From the CommCell Browser, navigate to **Client Computers**.
2. Right-click the <***Client***> in which you want to add the registry key, and then click **Properties**.
3. Click the **Registry Key Settings** tab.
4. Click **Add**.
5. Enter `nBackupDisabledMailBoxes` in the **Name** field.
6. Enter `MSExchangeDMAgent`in the **Location** filed.
7. Enter REG_DWORD in the **Type** filed.
8. Enter 1 in the **Value** field.
9. Click **OK**.



CONFIGURE ARCHIVES OF NEWER MESSAGES FIRST

You can configure archive operations to archive the newest messages first. This process cycles through each folder and determines the most recent messages in the folder, which are then included in the archive operation.

1. From the CommCell Browser, right-click the client computer that has Exchange Mailbox Archiver Agent installed.
2. Click **Properties**.
3. Select **Registry Key Settings**.
4. Click **Add**.
5. Enter `nNewestFirst` in the **Name** field.
6. Enter `MSExchangeDMAgent` in the **Location** field.
7. From the **Type** list, select DWORD.
8. Enter 1 to archive the newer messages first.
9. Click **OK**.



CUSTOMIZE OUTLOOK FOR END-USERS

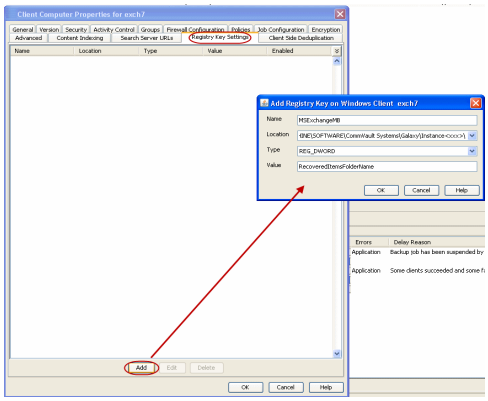
Several options are available to customize the display and behavior of archived messages in Outlook. These capabilities are described in the following sections.

SPECIFY A NEW LOCATION FOR THE RECOVERED ITEMS FOLDER

You can specify a new folder name for the Recovered Items folder. This configuration is required on both the computer where the Exchange Archiver Agent is

installed as well as all computers containing the Outlook Add-In.

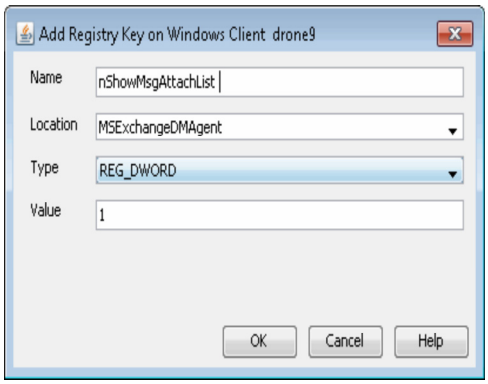
1. From the CommCell Browser, right-click the client computer that has Exchange Mailbox Archiver Agent installed.
2. Click **Properties**.
3. Select **Registry Key Settings**.
4. Click **Add**.
5. Enter `RecoveredItemsFolderName` in the **Name** field.
6. Enter `MSExchangeDMAgent` in the **Location** field.
7. Enter REG_DWORD in the **Type** filed.
8. Enter the new folder name in the **Value** field.
9. Click **OK**.



DISPLAY ATTACHMENT LISTS IN AN ARCHIVED MESSAGE BODY

You can save the list of attachments for a message in the message body in addition to the `Migrated Attachment List.txt` file as follows:

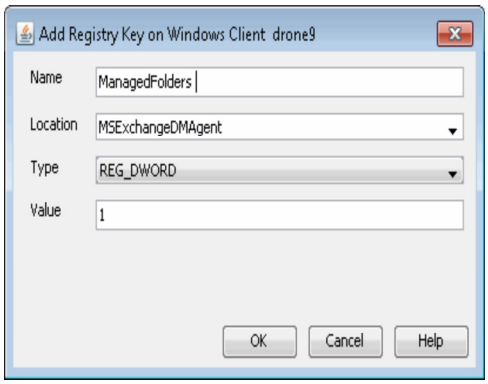
1. From the CommCell Browser, right-click the client computer that has Exchange Mailbox Archiver Agent installed.
2. Click **Properties**.
3. Select **Registry Key Settings**.
4. Click **Add**.
5. Enter `nShowMsgAttachList` in the **Name** field.
6. Enter `MSExchangeDMAgent` in the **Location** field.
7. From the **Type** list, select DWORD.
8. Enter 1 to display the list of attachments in the message body.
9. Click **OK**.



CONFIGURE CREATION OF CUSTOM FOLDERS FOR MAILBOXES

If you have folders specified in the **Folder Inclusion** section of the subclient properties **Content** tab, you can configure this folder to be created for all user's mailboxes as follows:

1. From the CommCell Browser, right-click the client computer that has Exchange Mailbox Archiver Agent installed.
2. Click **Properties**.
3. Select **Registry Key Settings**.
4. Click **Add**.
5. Enter `ManagedFolders` in the **Name** field.
6. Enter `MSExchangeDMAgent` in the **Location** field.
7. From the **Type** list, select DWORD.
8. Enter 1 to display the list of attachments in the message body.
9. Click **OK**.

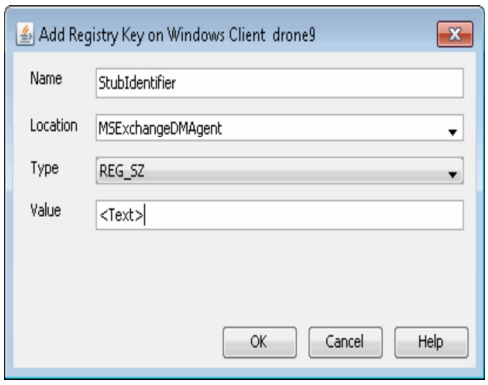


CUSTOMIZE SUBJECT LINE TEXT FOR ARCHIVED MESSAGES

You can add custom text to the subject line of archived messages for Outlook and OWA users. Note that this capability is not available for messages archived using Offline Archiving.

1. From the CommCell Browser, right-click the client computer that has Exchange Mailbox Archiver Agent installed.
2. Click **Properties**.
3. Select **Registry Key Settings**.
4. Click **Add**.

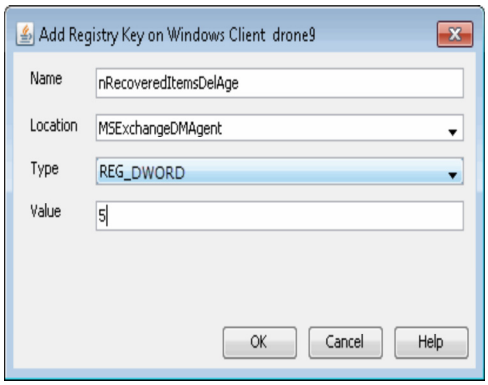
5. Enter `StubIdentifier` in the **Name** field.
6. Enter `MSExchangeDMAgent` in the **Location** field.
7. From the **Type** list, select REG_SZ.
8. Enter the text you would like to display in the subject line of archived messages.
9. Click **OK**.



DELETE MESSAGES FROM RECOVERED ITEMS FOLDER AFTER A SPECIFIED TIME

To help reduce mailbox sizes, you can configure messages in the Recovered Items folder to be deleted after a specified period of time as follows:

1. From the CommCell Browser, right-click the client computer that has Exchange Mailbox Archiver Agent installed.
2. Click **Properties**.
3. Select **Registry Key Settings**.
4. Click **Add**.
5. Enter `nRecoveredItemsDelAge` in the **Name** field.
6. Enter `MSExchangeDMAgent` in the **Location** field.
7. From the **Type** list, select REG_SZ.
8. Enter the number of days in which messages will be kept in the Recovered Items folder.
9. Click **OK**.



EXCLUDE EXCHANGE INTERPERSONAL MESSAGE (IPM) CLASSES FROM ARCHIVES

You can exclude certain Exchange IPM classes, such as tasks, calendar and contacts from archiving to save space on the Archive media as well as enhance archiving performance. For example to exclude IPM.Appointment, IPM.Contact, IPM.Schedule and IPM.Task the steps are as follows:

> Using Registry Editor incorrectly can cause serious problems that may require a reinstall of the operating system. Microsoft does not guarantee that problems resulting from the incorrect use of Registry Editor can be solved. Use Registry Editor at your own risk. You must also understand how to restore the registry if a problem occurs.

1. Open Registry Editor and create the following registry key:

   `HKEY_LOCAL_MACHINE\SOFTWARE\`COMPANY Systems\Galaxy\Instance<xxx>\`MSExchangeDMAgent`
2. Create the following String Value subkey:

   `MigrationExclusionList`
3. Enter IPM.<*class_type*>

   Where *class_type* can be one of the following: POST, APPOINTMENT, TASK, CONTACT, ACTIVITY, DISTLIST, or any other user-defined IPM class. However, only classes that start with "IPM." are excluded. The <*class_type*> field accepts wildcards (for example, IPM.TASK.*).
4. Close the Registry Editor.

> The IPM.NOTE class cannot be excluded, because this represents mail messages.

CONFIGURING FOR OPTIMIZED STUB RECALL

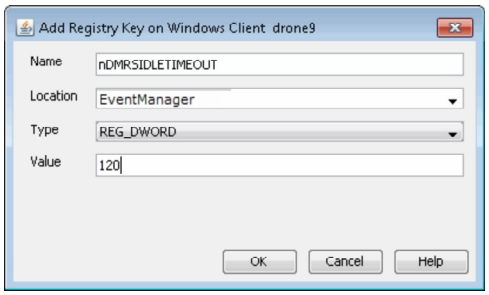
EXTEND THE PERSISTENT PIPELINE TIMEOUT

It is recommended to leave the persistent pipeline open for longer periods of time to cache important information for subsequent recall attempts. By default this timeout is set to 24 hours.

1. From the CommCell Browser, right-click the client computer that has Exchange

Mailbox Archiver Agent installed.

2. Click **Properties**.
3. Select **Registry Key Settings**.
4. Click **Add**.
5. Enter `nDMRSIDLETIMEOUT` in the **Name** field.
6. Enter `EventManager` in the **Location** field.
7. From the **Type** list, select REG_DWORD.
8. Enter the number of seconds after which the pipeline will close. The valid range is 0 to 2147483647 seconds.
9. Click **OK**.

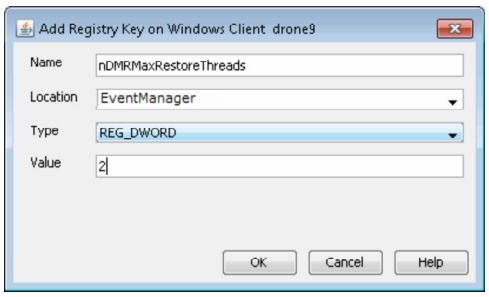


Once this key is activated, services must be restarted on the client computer.

LIMIT THE NUMBER OF PERSISTENT PIPELINE THREADS DURING RECOVERIES

You can increase the number of persistent pipeline threads allowed for recoveries, thereby potentially improving stub recall speed. The recommended number of threads would be the number of Media Agents, which could possibly be used for recoveries. By default two threads will be used. Therefore if more than two Media Agents are potential targets for stub recalls increase the number of threads accordingly as follows:

1. From the CommCell Browser, right-click the client computer that has Exchange Mailbox Archiver Agent installed.
2. Click **Properties**.
3. Select **Registry Key Settings**.
4. Click **Add**.
5. Enter `nDMRMaxRestoreThreads` in the **Name** field.
6. Enter `EventManager` in the **Location** field.
7. From the **Type** list, select REG_DWORD.
8. Enter the number of persistent pipelines to be allowed.
9. Click **OK**.

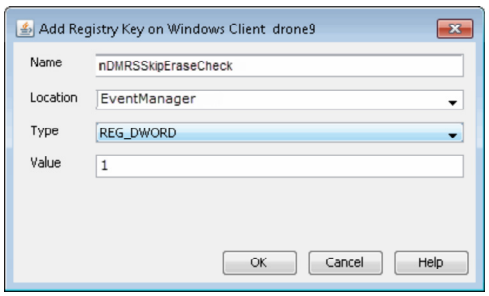


Once this key is activated, services must be restarted on the client computer.

ENHANCE THE STUB RECALL SPEED

By default during each stub recall operation a check is run to verify if the original data has been erased from the media. In case the Erase Data feature is not enabled on the CommServe you can create the nDMRSSkipEraseCheck key to skip the erase check and enhance the recall speed.

1. From the CommCell Browser, right-click the client computer that has Exchange Mailbox Archiver Agent installed.
2. Click **Properties**.
3. Select **Registry Key Settings**.
4. Click **Add**.
5. Enter `nDMRSSkipEraseCheck` in the **Name** field.
6. Enter `EventManager` in the **Location** field.
7. From the **Type** list, select REG_DWORD.
8. Enter 1 to disable Erase Check.
9. Click **OK**.



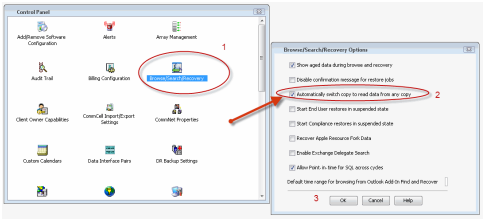
Once this key is activated, services must be restarted on the client computer.

STUB RECALL FROM ANY AVAILABLE DATA COPY

By default if the primary copy of the data is unavailable the stub recall will fail. However you can configure to trigger stub recall from an alternate data copy as follows:

1. In the Comcell Browser double-click the **Control Panel**.
2. Click the **Browse/Search/Recovery** option.
3. Select the **Automatically switch copy to read data from any copy** option.

4. Click **Ok**.



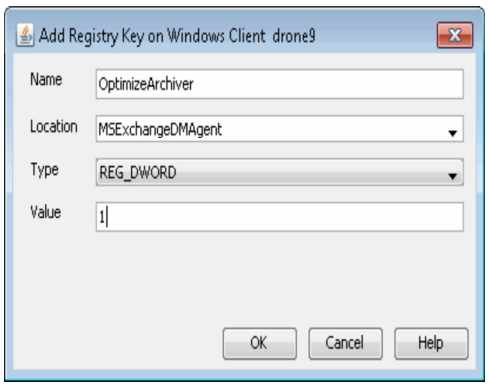
ENHANCING ARCHIVE AND RECOVERY PERFORMANCE

Several options are available for streamlining archive and recovery operations. Benefits include faster archive and recovery speed, reduced network bandwidth usage, and end-user computer resources. These options are described in the following sections.

OPTIMIZE ARCHIVING SPEED

By default, the Exchange Mailbox Archiver Agent cycles through each message in a mailbox to determine if the archiving rules have been met, which may cause certain archive operations to take a considerable amount of time to complete. The Exchange Mailbox Archiver Agent can be configured to take advantage of Exchange's own message cataloging to increase archiving speed as follows:

1. From the CommCell Browser, right-click the client computer that has Exchange Mailbox Archiver Agent installed.
2. Click **Properties**.
3. Select **Registry Key Settings**.
4. Click **Add**.
5. Enter `OptimizeArchiver` in the **Name** field.
6. Enter `MSExchangeDMAgent` in the **Location** field.
7. From the **Type** list, select REG_DWORD.
8. Enter 1 to enable the key.
9. Click **OK**.

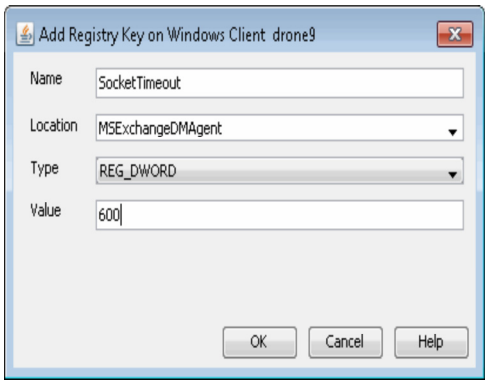


CONFIGURE STUB RECALL TIMEOUT

By default, stub recalls will time out if the recall is not successfully processed within 2 minutes (such as cases where the media is not loaded within that time). You can extend this timeout value up to 10 minutes by configuring the following registry key. This key must be configured as follows:

- If a proxy computer is used, this key is configured on the server containing the OWA Proxy Enabler as well as the Outlook client.
- If a proxy computer is not used, this key is configured only on the Outlook client.

1. From the CommCell Browser, right-click the client computer as described above.
2. Click **Properties**.
3. Select **Registry Key Settings**.
4. Click **Add**.
5. Enter `SocketTimeout` in the **Name** field.
6. Enter `MSExchangeDMAgent` in the **Location** field.
7. From the **Type** list, select REG_DWORD.
8. Enter the number of seconds after which the recall will time out. The valid range is 120-600 seconds.
9. Click **OK**.



ENHANCING MAILBOX DISCOVERY USING CSVDE FILTER

A Comma Separated Value Directory Exchange (CSVDE) filtering option is provided to increase performance for auto-discovery operations in cases where the discovery process may take a long time to complete.

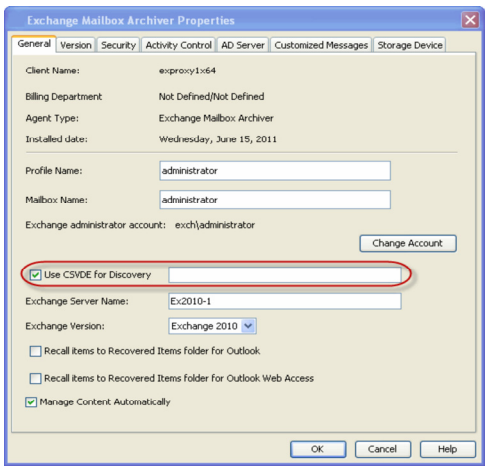
A CSVDE filtering example is provided below, which will filter out system mailboxes residing on the *SERVERNAME* server from discovery operations for these agents:

`"(&(msExchHomeServerName=*/cn=`*SERVERNAME*`)(!(CN=SystemMailbox{*)))"`

Use of this option requires expert-level knowledge of CSVDE, which is a Microsoft tool used for extracting and filtering information from Active Directory. Familiarity with constructing LDAP queries is beneficial for successful filtering. Incorrect use of the CSVDE filtering option can result in failed discovery and data protection operations. For more information on CSVDE, refer to documentation from Microsoft Corporation.

1. From the CommCell Browser, right-click the **Exchange Mailbox Archiver** client, and then click **Properties**.
2. Select the **Use CSVDE For Discovery** checkbox, and then specify the desired CSVDE filter in the **Use CSVDE for Discovery** box.
3. Click **OK**.

The next time a discovery operation is run, the user-specified CSVDE filter will be used.



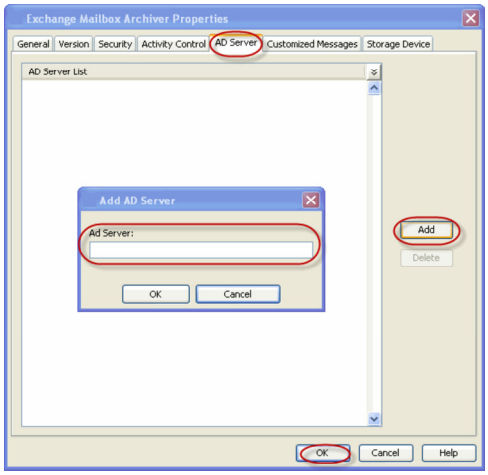
Specifying Domain Information

It may be necessary to specify additional domain names for Archives in the following circumstances:

- The Exchange Server is installed in a different domain from the schema master.
- Multiple domain controllers exist that may not replicate to each other.

To ensure complete protection in these circumstances, perform the following.

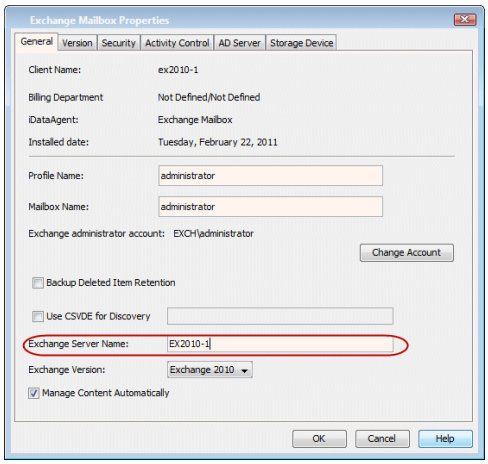
1. From the CommCell Browser, right-click the **Exchange Mailbox Archiver** client, and then click **Properties**.
2. Click the **AD Server** tab.
3. To include a domain name, click **Add**.
4. In the **AD Server** box, type the domain name. You can enter an IP address or the fully-qualified domain name of the Active Directory Server. Depending on the circumstances discussed above, the domains to include should be:
   - The schema master, or
   - Each domain controller in your environment
5. Click **OK**. The domain name will appear in the **AD Server List**.
6. Repeat the previous step for each domain name that you wish to include.
7. Click **OK**.



Configuring Mailboxes in Database Availability Group (DAG) Servers

When archiving Exchange 2010 Database Availability Group (DAG) servers, you need to configure the Mailbox and Client Access Server (CAS) roles as described below.

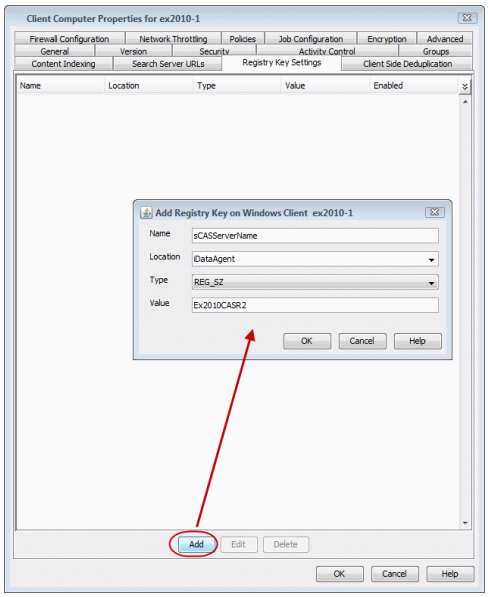
1. From the CommCell Browser, right-click the Exchange Mailbox Archiver Agent and click **Properties**.
2. In **Exchange Server Name**, enter the Mailbox server role. This role is used when performing archive and recovery operations. If more than one role is entered, separate them with semi-colons.
3. Click **OK**.



CONFIGURING MAILBOXES WHEN THE CAS ROLE IS NOT INSTALLED ON THE MAILBOX ROLE SERVER

In addition to the steps above, the following steps are required if the CAS Role is not installed on the Mailbox Role Server.

4. From the CommCell Browser, right-click the client computer that has Exchange Mailbox *i*DataAgent installed.
5. Click **Properties**.
6. Select **Registry Key Settings**.
7. Click **Add**.
8. Enter `sCASServerName` in the **Name** field.
9. Enter `MSExchangeDMAgent` in the **Location** field.
10. From the **Type** list, select REG_SZ.
11. Enter a CAS server name (e.g., `Ex2010CASR2`) in the **Value** field. The CAS server is used to create the profile.
12. Click **OK**.



FILTERING SUBCLIENTS

Use one of the following methods to filter mailboxes from being archived. Filters assist in minimizing usage of protected storage and prevents unnecessary folders (Junk, Spam) from being archived.

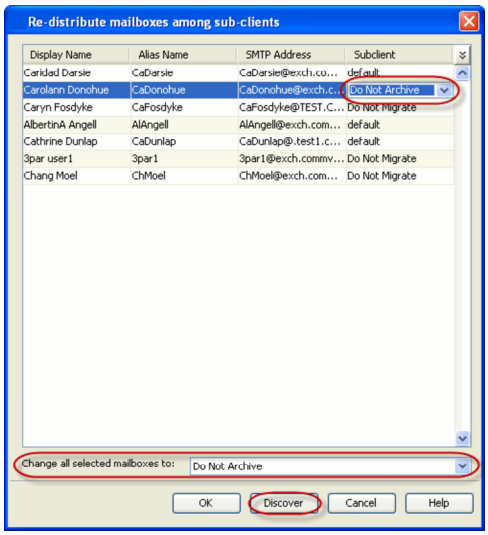
EXCLUDE SPECIFIC MAILBOXES

By default, the system creates a **Do Not Archive** subclient. You can assign mailboxes to this subclient so that they will not be archived.

1. From the CommCell Browser, navigate to **Client Computers | <*Client*> | Archive Set**.
2. Right-click the **Subclient**, and then click **Properties**.
3. Click the **Content** tab.
4. Click **Configure**.
5. Click **Discover** to reveal all mailboxes.
6. Under the **Subclient** column, select **Do Not Archive**.

   Alternatively, you can click the desired mailbox, and select **Do Not Archive** from the **Change all selected mailboxes to** box.
7. Click **OK**.

8. Click **OK**.



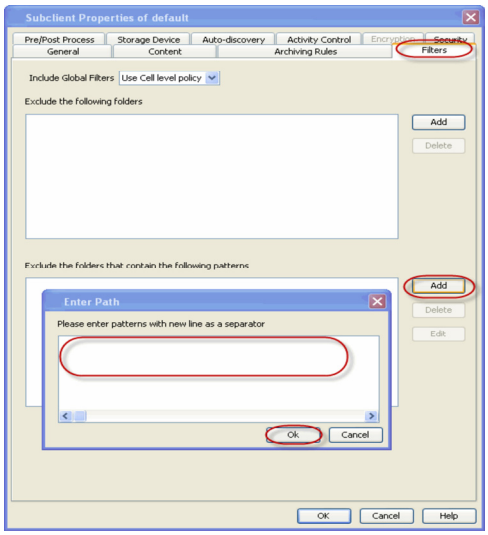
FILTER MAILBOXES USING REGULAR EXPRESSIONS

You can also apply regular expressions or wildcards patterns to filter folders in mailboxes from data protection. For example, you may want to exclude all Sent Items folders that are not essential for recovery. The pattern you enter will be applied to all content defined for the subclient.

WILDCARD EXAMPLES

EXAMPLE	DESCRIPTION
Sent*	To filter out a folder which begins with **Sent**, specify the name of the folder and the asterisk ***** wildcard with no delimiters.
Sent Items\test*	To filter out a subfolder called **test**, specify the full path including the leader **** backslash.
\test	To filter out any path that ends in a folder name, use the full path including the leader **** backslash and the asterisk ***** wildcard for the first level.

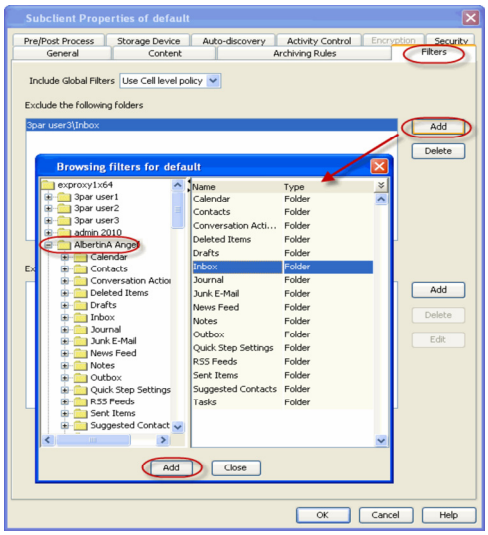
1. From the CommCell Browser, navigate to **Client Computers | <*Client*> | Archive Set**.
2. Right-click the **Subclient**, and then click **Properties**.
3. Click the **Filters** tab.
4. Click **Add** next to **Exclude the folders that contain the following patterns**.
5. Type the regular expressions or wildcard patterns, each on a separate line. For a comprehensive wildcard list, see Wildcards.
6. Click **OK**.
7. Click **OK**.



FILTER SPECIFIC FOLDERS

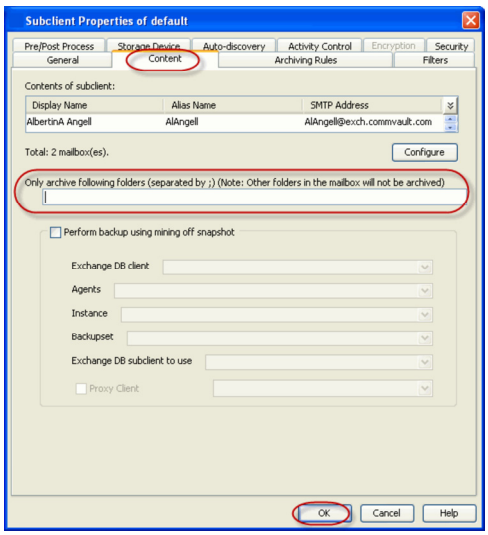
1. From the CommCell Browser, navigate to **Client Computers | <*Client*> | Archive Set**.
2. Right-click the **Subclient**, and then click **Properties**.
3. Click the **Filters** tab.
4. Click **Add** next to **Exclude the following folders**.
5. Select the desired mailbox user, and expand the folders to select the folders that you want to exclude from archive operation, and then click **Add**.

6. Click **OK**.



INCLUDE SPECIFIC FOLDERS

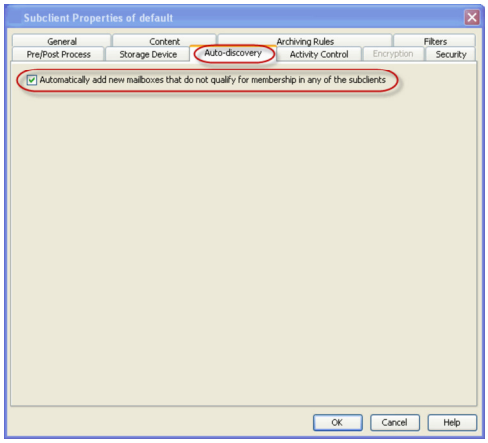
1. From the CommCell Browser, navigate to **Client Computers | *<Client>* | Archive Set**.
2. Right-click the **Subclient**, and then click **Properties**.
3. Click the **Content** tab.
4. In the **Only archive following folders** box, type or select the folder name.
5. Click **OK**.



ADD UNASSOCIATED MAILBOXES TO THE DEFAULT SUBCLIENT

By default, mailboxes not included in a user-defined subclient are not automatically included in archive operations. However, you can configure the default subclient to include any discovered mailbox not included in another subclient as follows:

1. From the CommCell Browser, navigate to **Client Computers | *<Client>* | Archive Set**.
2. Right-click the **Subclient**, and then click **Properties**.
3. Click the **Auto-discovery** tab.
4. Select the **Automatically add new mailboxes that do not qualify for membership in any of the subclients** check box.
5. Click **OK**.



MODIFYING AN AGENT, ARCHIVE SET, OR SUBCLIENT

There are several configurable properties available for your agent that can be modified from the agent, archiveset or subclient level as per your need.

It is recommended that that you do not modify the properties of a subclient when a job is in progress for that specific subclient. If a job is in progress, either wait for the job to complete or kill the job from the Job Controller.

The following table describes the properties that can be configured from the agent, archive set and subclient levels.

OPTION	DESCRIPTION	RELATED TOPICS
Change the Profile Name	By default if the profile name is changed in the Exchange server it is not reflected in the Exchange Mailbox Archiver Agent. However the profile name can be manually changed for the archiver agent as follows: 1. From the CommCell Browser, navigate to **Client Computes | <*Client*>.** 2. Right-click the **Exchange Mailbox Archiver**, and then click **Properties**. 3. In the **Profile Name** box, type the profile name. 4. Click **OK.**	
Change the Mailbox Name	By default if the Mailbox name is changed in the Exchange server it is not reflected in the Exchange Mailbox Archiver Agent. However the Mailbox name can be manually changed for the archiver agent as follows: 1. From the CommCell Browser, navigate to **Client Computes | <*Client*>.** 2. Right-click the **Exchange Mailbox Archiver**, and then click **Properties**. 3. In the Mailbox Name box, type the mailbox name. 4. Click **OK.**	
Change the Exchange Server Name	You can modify the name of the Exchange Server that is installed on the client computer. However, the Exchange server name should not be the same as Client or Host Name. 1. From the CommCell Browser, navigate to **Client Computes | <*Client*>**. 2. Right-click the **Exchange Mailbox Archiver**, and then click **Properties**. 3. In the **Exchange Server Name** box, type the Exchange Server name. 4. Click **OK.**	
Change the Exchange Version	You can select and modify the version of the Exchange Server from the list. You can modify the name of the Exchange Server that is installed on the client computer. However, the Exchange server name should not be the same as Client or Host Name. 1. From the CommCell Browser, navigate to **Client Computes | <*Client*>**. 2. Right-click the **Exchange Mailbox Archiver**, and then click **Properties**. 3. In the **Exchange Version** list, select the Exchange server version. 4. Click **OK**.	
Change User Account Details	You must have Exchange administrator privileges to access the Exchange Server and perform Archive and restore operations. In the case of Archive and restore operations from the CommCell Console, the user credentials to access the Exchange Server are provided initially when you installed the Agent. You can modify the user credentials from CommCell Console. On Windows clients, use `<domain>\<administrator_name>` To change the Exchange administrator account information associated with this agent: 1. From the CommCell Browser, navigate to **Client Computes | <*Client*>**. 2. Right-click the **Exchange Mailbox Archiver**, and then click **Properties**. 3. Click **Change Account.** 4. In **Exchange Administrator Account** box type the Account name. 5. In the **Password** box, type Password 6. In the **Confirm Password** box, type the password again. 7. Click **OK**.	
Rename Archive Set and Subclient	You can rename a Archive set and subclient: Renaming Archive sets: 1. From the CommCell Browser, navigate to **Client Computes | <*Client*> | Exchange Mailbox Archiver**. 2. Right-click the **Archive set**, and then click **Properties**. 3. In the **Archive Set** box, type the Archive set name.	

	4. Click **OK**. Renaming subclients: 1. From the CommCell Browser, navigate to **Client Computes | <*Client*> | Exchange Mailbox Archiver**. 2. Right-click the **Subclient**, and then click **Properties**. 3. In the **Subclient name** box, type the subclient name. 4. Click **OK**	
Change Storage Policies	You can modify the storage policies in any of the following situations: ● To include a different media for the backup operation. ● To use a storage policy with a different retention criteria. You can change the storage policies from the subclient level. 1. From the CommCell Browser, right-click the subclient. 2. Click **Properties**. 3. Click **Storage Device**. 4. Select the **Storage policy** from the drop-down menu. 5. Click **OK**.	Refer to Storage Policies.
Data Transfer Options	You can efficiently configure the available resources for transferring data secured by data protection operations from the subclient level. This includes the following: ● Enable or disable **Data Compression** either on the client or the MediaAgent. ● Configure the transfer of data in the network using the options for **Network Bandwidth Throttling** and **Network Agents**. You can configure the data transfer options. 1. From the CommCell Browser,right-click the subclient. 2. Click **Properties.** 3. Click **Storage Device.** 4. Click **Data Transfer Option** tab. 5. Choose the appropriate software compression option for this subclient. 6. Select **Throttle Network Bandwidth** and set the required bandwidth. 7. Click **OK.**	Refer to Data Compression and Network Bandwidth Throttling.
View Data Paths	You can view the data paths associated with the primary storage policy copy of the selected storage policy or incremental storage policy. You can also modify the data paths including their priority from the subclient level. 1. From the CommCell browser, right-click the subclient. 2. Click **Properties.** 3. Click **Storage Device.** 4. Select **Storage Policy** from the drop-down menu. 5. Click **Data Paths**.	
Configure a Subclient for Pre/Post Processing of Data Protection	You can add, modify or view Pre/Post processes for the subclient. These are batch files or shell scripts that you can run before or after certain job phases. 1. From the CommCell Browser, navigate to **Client Computes | <*Client*> | Exchange Mailbox Archiver** | **Archive set**. 2. Right-click the **Subclient**, and then click **Properties**. 3. Click the **Pre/Post Process** tab. 4. Click one of the following phases and type the full path of the process that you want to execute during that phase. Alternatively, click **Browse** to locate the process (applicable only for paths that do not contain any spaces). ○ **Pre-Archive** ○ **Post-Archive** 5. Click **OK**. 6. Select **Run Post archive Process for all attempts** to run a post archive process for all attempts. 7. For subclients on Windows platforms, **Run As** displays **Not Selected**. If you want to change the account that has permission to run these commands, click **Change**. a. In the **User Account** dialog box, select **Use Local System Account,** or select **Impersonate User** and enter the user name and password. Click **OK**.	Refer to Pre/Post Processes.

	b. If you selected Local System Account, click **OK** to the message advising you that commands using this account have rights to access all data on the client computer.	
Configure Activity Control	You can enable backup and restore operations from the agent and subclient level. However, you can enable restore operations only from the agent level. 1. From the CommCell browser, right-click the subclient. 2. Click **Properties.** 3. Click **Activity Control**, select or clear option(s) as desired. 4. Click **OK**.	Refer to Activity Control.
Configure User Security	You can configure user security from the agent or subclient level. You can perform the following functions: ● Identify the user groups to which this CommCell object is associated. ● Associate this object with a user group. ● Disassociate this object from a user group. 1. From the CommCell browser, right-click the subclient. 2. Click **Properties.** 3. Click **Security**. 4. Select the appropriate user groups to which you want to associate to the CommCell object from the **Available Groups** pane, and then move the user group to the **Associated Groups** pane. 5. Click **OK**.	Refer to User Administration and Security.
Enable/Disable Data Encryption	You can enable data encryption from the suclient level.Encryption must be enabled at the client level prior to configuring any instances residing on that client. 1. From the CommCell browser, right-click the subclient. 2. Click **Properties.** 3. Click **Encryption.** 4. Select the desired encryption. 5. Click **OK**.	Refer to Data Encryption.
View Software Version	The **Version** tab, at the Agent level displays the software version of the component. 1. From the CommCell browser, right-click the agent. 2. Click **Properties**. 3. Click **Version**. 4. Click **OK**.	
CommCell Configuration Report	The CommCell Configuration Report provides the properties of the CommServe, MediaAgents, clients, agents, SRM agents, subclients, and storage policies within the CommCell based on the selected filter criteria. 1. From the CommCell browser, click **Reports** icon. 2. Select **CommCell Configuration**. 3. Click **Run**.	Refer to CommCell Configuration.

DELETING AN AGENT, ARCHIVESET OR SUBCLIENT

The following sections describe the steps involved in deleting an agent, Archive set or subclient.

When you delete an instance or archiveset, the associated data is logically deleted and you can no longer access the corresponding data from CommCell Console for recovery purposes.

Refer to the troubleshooting article on Recovering Data Associated with Deleted Clients and Storage Policies for information on how to recover data if you accidentally delete an entity.

DELETING AN AGENT

You need to uninstall or deconfigure the agent software from the client computer before deleting from CommCell Browser. After you delete the client software, you can either leave the corresponding data intact for appropriate action or you can remove the data immediately. If you choose to remove the data immediately, you must delete the agent from the CommCell Browser. If you delete the agent, all of the agent's data is irretrievably lost.

- You cannot delete an agent while operations for that agent are running.

1. From the CommCell Browser, navigate to **Client Computers | *<Client>***.
2. Right-click the ***<Agent>***, and then click **Delete**.
3. A confirmation message is displayed with the following message:

```
This operation will permanently delete the data backed up from this level and it cannot be restored.
```

4. Click **OK** to continue with the deletion operation., or click **No** to abort the deletion.

DELETING AN ARCHIVESET

Consider the following before deleting a Archive Set:

- You cannot delete a default Archive Set.
- Schedules associated with the Archive Set are also automatically deleted.

1. From the CommCell Browser, navigate to **Client Computers | <*Client*> | <*Exchange Mailbox Archiver*>**.
2. Right-click the ***<Archive Set>***, Point to **All Tasks**, and then click **Delete**.
3. A confirmation message is displayed, asking if you want to delete the Archive Set.

   Click **No** to cancel the deletion and retain the Archive, or click **Yes** to continue the deletion.

DELETING A SUBCLIENT

Consider the following before deleting a subclient:

- You cannot delete a default subclient.
- Schedules associated with the subclient are also automatically deleted.

1. From the CommCell Browser, navigate to **Client Computers | <*Client*> | <Exchange Mailbox Archiver> | <Archive Set>**.
2. Right-click the ***<subclient>*** that you want to delete, and then click **Delete**.
3. A confirmation message is displayed, asking if you want to delete the subclient.

   Click **No** to cancel the deletion and retain the subclient, or click **Yes** to continue the deletion.

Advanced Archive – Exchange Mailbox Archiver Agent

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Scheduling an Archive Job

Running a Backup to Protect Stubs

Managing Jobs
Restarting Jobs
Controlling Jobs

Additional Options

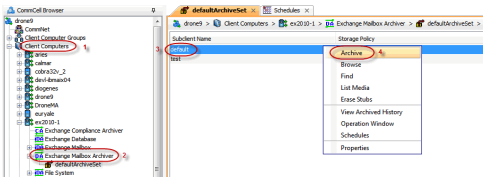
RELATED TOPICS

Scheduling
Provides comprehensive information on scheduling jobs.

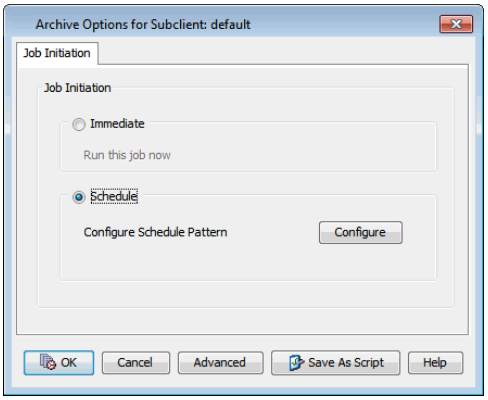
Job Management
Provides comprehensive information on managing jobs.

SCHEDULING AN ARCHIVE JOB

1.
   - From the CommCell Console, navigate to **<*Client*>** | **Exchange Mailbox Archiver**
   - Right-click the **Subclient** and click **Archive**

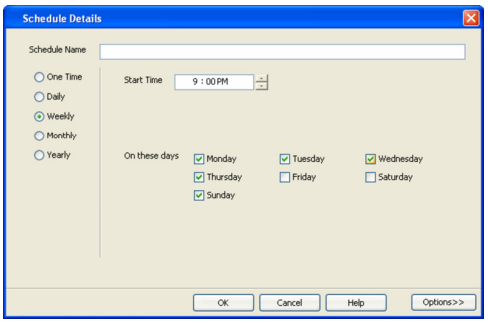


2.
   - Click **Schedule**
   - Click **Configure**



3. Select **Schedule Options**. For example:
   - Click **Weekly**
   - Check the days you want the run the archive job
   - Change the Start Time to 9:00 PM
   - Click **OK** to close the Schedule Details dialog box
   - Click **OK** to close the Archive Options dialog box

   The archive job will execute as per the schedule



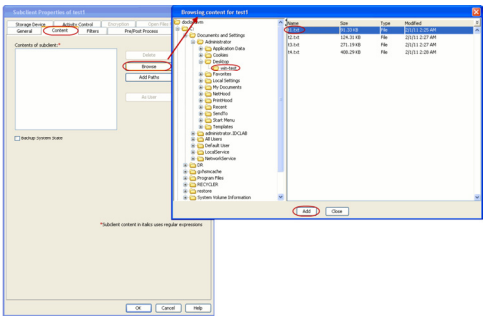
RUNNING A BACKUP TO PROTECT STUBS

The stubs of the archived data can be protected by running a full backup. Any backups other than a full backup (incremental, differential, etc.) will not protect stubs; as such, full backups must be used to provide stub protection.

Follow the steps given below:

1. From the CommCell Browser, navigate to **Client Computers | <*Client*> | Exchange Mailbox | defaultBackupSet**.
2. In the right pane right-click the new **Subclient** and click **Backup**.
3. Select **Full** as backup type and **Immediate** to run the job immediately.
4. Click **OK**.
5. You can track the progress of the job from the **Job Controller** window of the CommCell console.

6. Once job is complete, view the details of job from the **Backup History**.
7. Right-click the **Subclient** and select **Backup History**.
8. Click **OK**.



MANAGING JOBS

The following sections provide information on the various options available for job management.

RESTARTING JOBS

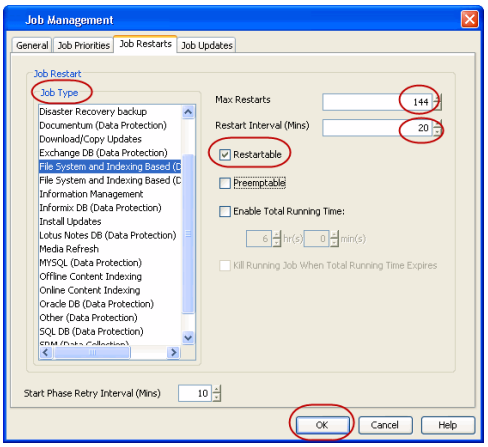
Jobs that fail to complete successfully are automatically restarted based on the job restartability configuration set in the Control Panel. Keep in mind that changes made to this configuration will affect all jobs in the entire CommCell.

To Configure the job restartability for a specific job, you can modify the retry settings for the job. This will override the setting in the Control Panel. It is also possible to override the default CommServe configuration for individual jobs by configuring retry settings when initiating the job. This configuration, however, will apply only to the specific job.

Backup jobs for this Agent are resumed from the point-of-failure.

CONFIGURE JOB RESTARTABILITY AT THE COMMSERVE LEVEL

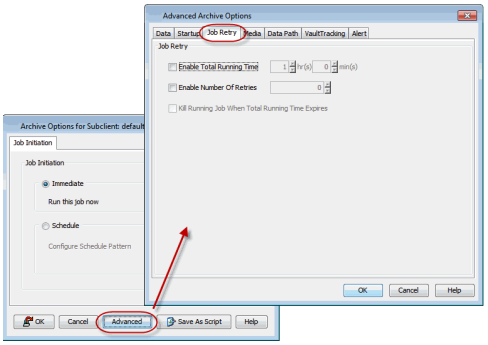
1. From the CommCell Browser, click **Control Panel** icon.
2. Select **Job Management.**
3. Click **Job Restarts** tab and select a **Job Type.**
   - Select **Restartable** to make the job restartable.
   - Change the value for **Max Restarts** to change the maximum number of times the Job Manager will try to restart a job.
   - Change the value for **Restart Interval (Mins)** to change the time interval between attempts for the Job Manager to restart the job.
4. Click **OK.**



CONFIGURE JOB RESTARTABILITY FOR AN INDIVIDUAL JOB

1. From the CommCell Console, navigate to ***<Client>*** | **Exchange Mailbox Archiver**.
2. Right-click the **Subclient** and select **Archive**.
3. Click **Advanced**.
4. In the **Advanced Archive Options** dialog box, click the **Job Retry** tab.
5. Select **Enable Total Running Time** and specify the maximum elapsed time before a job can be restarted or killed.

   Select **Kill Running Jobs When Total Running Time Expires** to kill the job after reaching the maximum elapsed time.
6. Select **Enable Number Of Retries** and specify the number of retries.
7. Click **OK**.



CONTROLLING JOBS

The following controls are available for running jobs in the Job Controller window:

SUSPEND	Temporarily stops a job. A suspended job is not terminated; it can be restarted at a later time.
RESUME	Resumes a job and returns the status to Waiting, Pending, Queued, or Running. The status depends on the availability of resources, the state of the Operation Windows, or the Activity Control setting.
KILL	Terminates a job.

SUSPENDING A JOB

1. From the Job Controller of the CommCell Console, right-click the job and select **Suspend**.
2. The job status may change to **Suspend Pending** for a few moments while the operation completes. The job status then changes to **Suspended.**

RESUMING A JOB

1. From the Job Controller of the CommCell Console, right-click the job and select **Resume**.
2. As the Job Manager attempts to restart the job, the job status changes to **Waiting**, **Pending**, or **Running**.

KILLING A JOB

1. From the Job Controller of the CommCell Console, right-click the job and select **Kill**.
2. Click **Yes** when the confirmation prompt appears if you are sure you want to kill the job. The job status may change to **Kill Pending** for a few moments while the operation completes. Once completed, the job status will change to **Killed** and it will be removed from the Job Controller window after five minutes.

ADDITIONAL OPTIONS

Several additional options are available to further refine your archive operations. The following table describes these options, as well as the steps for configuring them.

Be sure to read the overview material referenced for each feature prior to using them.

OPTION	DESCRIPTION	RELATED TOPICS
Create New Index	The Create New Index option generates an index of the data whenever an archive operation is run. During the restore process, the index is used for quick access to the appropriate archive file. 1. From the CommCell Browser, navigate to **Client Computers | <*Client*>** | ***i*DataAgent | Backup Set**. 2. Right-click the **Subclient** and click **Archive**. 3. From the **Archive Options** window, click **Advanced**. 4. Select **Data.** 5. Select the **Create new index** check box. 6. Click **OK**.	Refer to Index.
Catalog	Use the Catalog options to select index cache sharing and granular restartability options for the job. Note that these options are not applicable for the disaster recovery data protection. 1. From the CommCell Browser, navigate to **Client Computers | <*Client*>** | ***i*DataAgent | Backup Set**. 2. Right-click the **Subclient** and click **Archive**. 3. From the **Archive Options** window, click **Advanced**. 4. Select **Data** and choose one of the following: ○ **Use shared profile if present with transaction logging** if you wish to use the shared index cache profile of the MediaAgent (if configured) to save a copy of the job's index cache for index cache sharing *with* transaction logging feature for granular job restartability. ○ **Use shared profile if present without transaction logging** if you wish to use the shared index cache profile of the MediaAgent (if configured) to save a copy of the index cache for index cache sharing *without* transaction logging feature for granular job restartability. This is not a recommended configuration. ○ **Use transaction logging** to use transaction logging feature to provide granular job restartability (without using shared profile for index cache sharing). ○ **None** to use neither shared profile nor transaction logging. 5. Click **OK**.	
Startup Options	The Job Manager will use the startup priority setting when allocating the required resources. This is useful if you have jobs that are very important and must complete, or jobs that can be moved to a lower priority.	Refer to Job Priority and Priority Precedence.

	1. From the CommCell Browser, navigate to **Client Computers | <*Client*>** | ***i*DataAgent | Backup Set**. 2. Right-click the **Subclient** and click **Archive**. 3. From the **Archive Options** window, click **Advanced**. 4. Select **Startup**. 5. Select **Default Priority.** You can select **Change Priority** for a job, between 0 (highest priority) and 999 (lowest priority). 6. Select **Start up in suspended State** to specify the selected job to start in the Job Controller in a suspended state. 7. Click **OK**.	
Job Retry Options	The Job Retry option helps in configuring the retry behavior of the archive jobs. You can specify the maximum elapsed time before a job can be restarted or killed and the maximum number of restart attempts. 1. From the CommCell Browser, navigate to **Client Computers | <*Client*>** | ***i*DataAgent | Backup Set**. 2. Right-click the **Subclient** and click **Archive**. 3. From the **Archive Options** window, click **Advanced**. 4. Select **Job Retry**. 5. Select **Enable Total Running Time** and specify the maximum elapsed time in hours and minutes. 6. Select **Number Of Retries** and specify the number of retries. Based on this number, the Job Manager attempts to restart the job. 7. Select **Kill Running Jobs When Total Running Time Expires.** The job will be killed when the job is still in running status even after reaching the maximum elapsed time. 8. Click **OK**.	Refer to Job Management.
Start New Media	The Start New Media option helps in starting the archive operation on a new media. This media management feature provides a degree of control over where the data physically resides. 1. From the CommCell Browser, navigate to **Client Computers | <*Client*>** | ***i*DataAgent | Backup Set**. 2. Right-click the **Subclient** and click **Archive**. 3. From the **Archive Options** window, click **Advanced**. 4. Select **Media**. 5. Select **Start New Media**. 6. Click **OK**.	Refer to Start New Media.
Mark Media Full	The Mark Media Full on Success option marks the Media as Full, 2 minutes after the successful completion of the archive. This feature prevents any other data being written to the same media. 1. From the CommCell Browser, navigate to **Client Computers | <*Client*>** | ***i*DataAgent | Backup Set**. 2. Right-click the **Subclient** and click **Archive**. 3. From the **Archive Options** window, click **Advanced**. 4. Select **Media**. 5. Select **Mark Media Full on Success.** 6. Click **OK**.	Refer to Export Media.
Allow Other Schedules To Use Media Set	The Allow Other Schedules To Use Media Set option allows jobs that are part of the schedule or schedule policy and using the specific storage policy to start a new media. It also prevents other jobs from writing to the same set of media. 1. From the CommCell Browser, navigate to **Client Computers | <*Client*>** | ***i*DataAgent | Backup Set**. 2. Right-click the **Subclient** and click **Archive**. 3. From the **Archive Options** window, click **Advanced**. 4. Select **Media**. 5. Select **Allow Other Schedules To Use Media Set.** 6. Click **OK**.	Refer to Creating an Exportable Media Set.
Extend Job Retention	This option allows you to extend the retention end time of the selected job. You can extend the retention period to infinite period or for a specified number of days. You can also extend to storage policy default period.	

	1. From the CommCell Browser, navigate to **Client Computers | <*Client*>** | ***i*DataAgent | Backup Set**. 2. Right-click the **Subclient** and click **Archive**. 3. From the **Archive Options** window, click **Advanced**. 4. Select **Media**. 5. Select any of the following Extend Job Retention period options: **Infinite/Number of days/Storage Policy default.** 6. Click **OK**.	
Data Path Options	Data Protection operations use a specific data path (Library, MediaAgent, Drive Pool, and Drive) to perform the archive operations as configured in the CommCell. By default, the system automatically identifies the data path for the archive operations. The following are some of the important situations where you may need to change the data path: ● When the preferred MediaAgent, library or drive pool is not available during the archive. ● When you need to use a different MediaAgent, library or drive pool for load balancing purposes. ● When you need to direct that archive to a particular location for compliance purposes. 1. From the CommCell Browser, navigate to **Client Computers | <*Client*>** | ***i*DataAgent | Backup Set**. 2. Right-click the **Subclient** and click **Archive**. 3. From the **Archive Options** window, click **Advanced**. 4. Select **Data Path**. 5. Select the **MediaAgent** and **Library**. 6. Select the **Drive Pool** and **Drive** for optical and tape libraries. 7. Click **OK**.	Refer Change Data Path.
Vault Tracker	The VaultTracker feature provides the facility to manage media that are removed from a library and stored in offsite locations. The VaultTracker function provides the following capabilities in your day-to-day operations: ● Identifies media that must be sent off-site for storage or brought back from off site locations. ● Automatically moves the media in sequence in the library and provides a pick-up list for the operators. ● Identifies and tracks the media during transit. ● Records and tracks the movement of media not used by all MediaAgents or Foreign Media. 1. From the CommCell Browser, navigate to **Client Computers | <*Client*>** | ***i*DataAgent | Backup Set**. 2. Right-click the **Subclient** and click **Archive**. 3. From the **Archive Options** window, click **Advanced**. 4. Select **VaultTracking.** 5. Select the necessary options. 6. Click **OK**.	Refer to VaultTracker or VaultTracker Enterprise.
Alerts	The Alert option is used for setting up the criteria to raise notifications/alerts for job statuses such as failure, success, or any other conditions triggered by the archive job. Adding alerts helps the user or the user group to get the notification automatically about the status of the archive job. 1. From the CommCell Browser, navigate to **Client Computers | <*Client*>** | ***i*DataAgent | Backup Set**. 2. Right-click the **Subclient** and click **Archive**. 3. From the **Archive Options** window, click **Advanced**. 4. Select **Alert**. 5. Click **Add Alert**. 6. From the Add Alert Wizard window, select the **Threshold and Notification Criteria**. Click **Next.** 7. Select the **Notification Types.** Click **Next.** 8. Select the **Users and User Groups.** Click **Next.** 9. Verify the **Summary**. 10. Click **Finish**. 11. Click **OK**.	Refer to Alerts.
Command Line Backups	Command Line Interface enables you to perform backups from the command line. The	Refer to Command Line

	commands can be executed from the command line or can be integrated into your own scripts or scheduling programs. In addition, you can also generate scripts for specific operations from the CommCell Console using the **Save As Script** option. These scripts can later be executed using the commands from the command line interface.	Interface.
CommCell Readiness Report	The CommCell Readiness Report provides you with vital information about the condition of your CommCell.	Refer to CommCell Readiness Report.
Archive/ Compliance Archive Job Summary Report	The Archive/ Compliance Archive Job Summary Report provides the details of all the archive jobs of clients.	Refer to Archive/ Compliance Archive Job Summary Report.
Calendar Archive/ Compliance Archive Job Summary Report	The Calendar Archive/Compliance Archive Job Summary Report provides the total amount of archive jobs run (along with their job status) for a specified time period.	Refer to Calendar Archive/Compliance Archive Job Summary Report.

Advanced Recover - Exchange Mailbox Archiver Agent

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- Finding a Message Sent to a Specific User
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- Quick Search using Sampling
- Finding a Message Backed Up at a Specific Time
- Adding Search Results to a List
- Using Find from a Browse Window
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Recovering Messages Across Backup Cycles and Subclients

Scheduling a Recovery

Managing Recovery Jobs
- Restarting Jobs
- Controlling Jobs

Additional Recovery Options

RELATED TOPICS

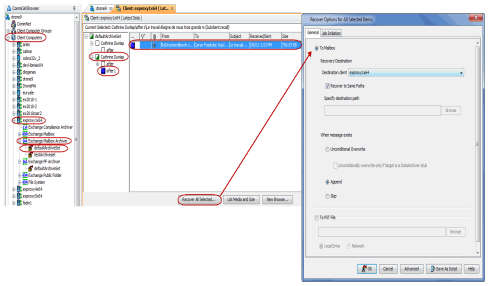
Scheduling
Provides comprehensive information on scheduling jobs.

Job Management
Provides comprehensive information on managing jobs.

RECOVERING A MESSAGE OR A MAILBOX ITEM

Follow the steps given below to browse an archiveset and recover an archived message or a mailbox item, such as a folder, a contact, or a calendar entry:

1. From the CommCell Browser, navigate to **Client Computers |<*Client*>| Exchange Mailbox Archiver**.
2. Right-click the ***<ArchiveSet>***, point to **All Tasks** and then click **Browse**.
3. Click **OK**.
4. Navigate to ***<ArchiveSet>*** **| <Mailbox Archiver> | <Folder>** in the left pane of the **Client Browse** window.
5. Select a message or a mailbox item from the right pane.
6. Click **Recover All Selected**.
6. Click **To Mailbox**.
7. In the **Destination Client** list, select the name of client computer.
8. Click **OK**.



FINDING AND RECOVERING

Use Find to search and locate messages from an archived mailbox. Find is available from a ArchiveSet, subclient, or by right-clicking a mailbox or message from a Browse and Recover operation.

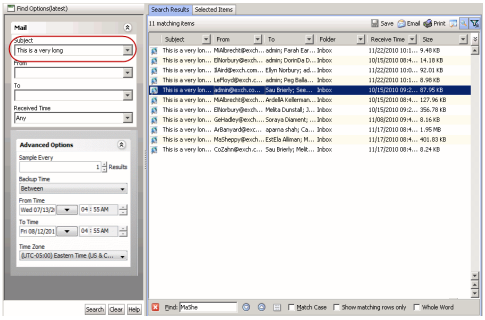
> When entering criteria, note that up to 24 characters are supported for Sender and Recipient entries. Similarly, up to 42 characters are supported for Subject entries.

FINDING A MESSAGE WITH A SPECIFIC SUBJECT

1. From the CommCell Browser, navigate to **Client Computers |<*Client*>| Exchange Mailbox Archiver**.
2. Right-click **ArchiveSet** or **Subclient**, point to **All Tasks** and then click **Find**.
3. Type the **Subject** name of the message to narrow the search by a specific subject line containing the specified text string or wildcard pattern. You can search for partial words without the need for wildcard characters at the beginning and/or end of the search string.

   These wildcards, or a combination of these wildcards, are supported in the **Subject** field:

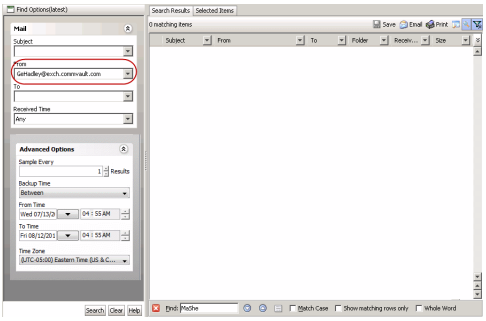
   - `*` for any number of characters e.g., `Accounting*`.
   - `?` for any one character e.g., `user_group?`.
   - `[]` for a range of characters e.g., `[a-k]Lee`.
   - `[!]` for a negation of a range of characters e.g., `[!a-k] Lee`.
4. Click **Search**.



The messages that match the criteria are displayed in Search Results.

FINDING A MESSAGE FROM A SPECIFIC USER

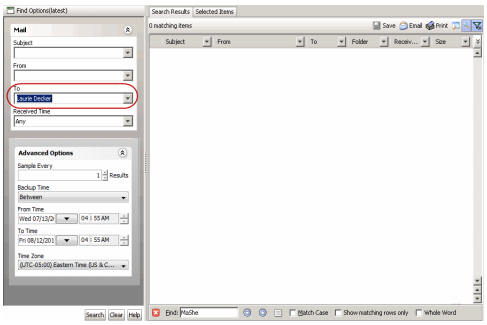
1. From the CommCell Browser, navigate to **Client Computers |<*Client*>| Exchange Mailbox Archiver**.
2. Right-click **ArchiveSet** or **Subclient**, point to **All Tasks** and then click **Find**.
3. In **From,** narrow the search by entering a specified user who sent the message.
4. Click **Search**.



The messages that match the criteria are displayed in Search Results.

FINDING A MESSAGE SENT TO A SPECIFIC USER

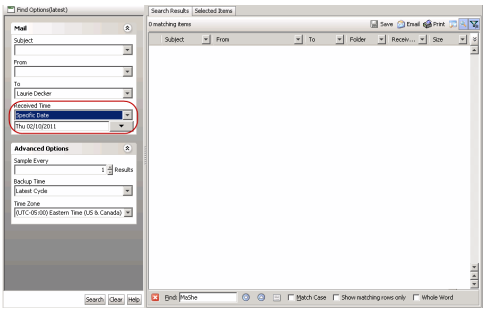
1. From the CommCell Browser, navigate to **Client Computers |<*Client*>| Exchange Mailbox Archiver**.
2. Right-click **ArchiveSet** or **Subclient**, point to **All Tasks** and then click **Find**.
3. In **To,** narrow the search by entering a specified user the message was addressed to. When searching Public Folder data using this field, keep in mind that only e-mails posted to mail-enabled Public Folders will be searchable. If you wish to search posts made to a Public Folder, use the **Subject** or **From** fields instead.
4. Click **Search**.



The messages that match the criteria are displayed in Search Results.

FINDING A MESSAGE RECEIVED IN A SPECIFIC TIME RANGE

1. From the CommCell Browser, navigate to **Client Computers |<*Client*>| Exchange Mailbox Archiver**.
2. Right-click **ArchiveSet** or **Subclient**, point to **All Tasks** and then click **Find**.
3. In **Received Time,** select an entry from the drop-down list to narrow the search to messages received on the specified date or within the specified date range according to date criteria (Any, Today, Yesterday, This Week, This Month, This Year, Is, After, Before, Between, Specific Date). Depending on your selection, additional date range fields may appear below the Received Time field.
4. Click **Search**.



The messages that match the criteria are displayed in Search Results.

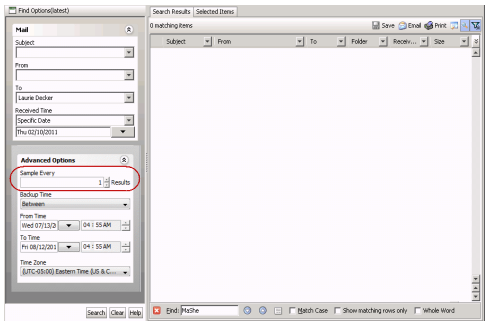
QUICK SEARCH USING SAMPLING

1. From the CommCell Browser, navigate to **Client Computers |<*Client*>| Exchange**

Mailbox Archiver.

2. Right-click **ArchiveSet** or **Subclient**, point to **All Tasks** and then click **Find**.
3. Click **Advanced Options** to expand and display the fields.
4. In **Sample Every,** specify the rate at which messages are sampled to determine whether they match the search criteria. The default value of `1` indicates that every message will be sampled. Keep in mind that the order in which messages are sampled is based on the order in which the messages were backed up.
5. Click **Search**.

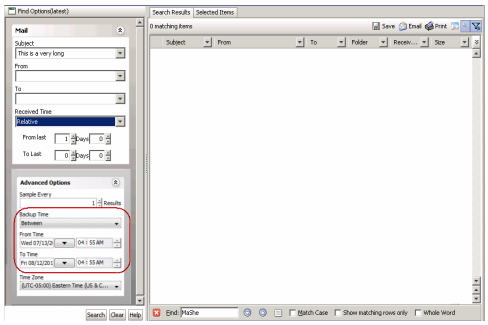
The messages that match the criteria are displayed in Search Results.



FINDING A MESSAGE BACKED UP AT A SPECIFIC TIME

1. From the CommCell Browser, navigate to **Client Computers |<*Client*>| Exchange Mailbox Archiver**.
2. Right-click **ArchiveSet** or **Subclient**, point to **All Tasks** and then click **Find**.
3. Click **Advanced Options** to expand and display the fields.
4. In **Backup Time,** specify a time or time range (Latest Cycle, After, Before, Between, Specific Date, Any, Today, Yesterday, This week, This Month, This Year, or Relative) to narrow searches to messages that were backed up within the time period specified.
5. Click **Search**.

The messages that match the criteria are displayed in Search Results.



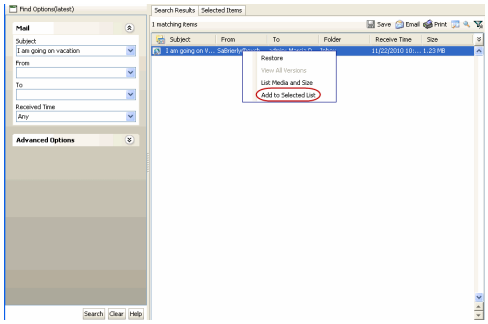
ADDING SEARCH RESULTS TO A LIST

Moving items to the Selected List lets you control the items you need to recover. You can narrow down the list from the Search Results so that you are able to recover only the items from the Selected List.

1. From the CommCell Browser, navigate to **Client Computers |<*Client*>| Exchange Mailbox Archiver**.
2. Right-click **ArchiveSet** or **Subclient**, point to **All Tasks** and then click **Find**.
3. Enter search criteria (e.g., Subject, From, To, etc.) as explained in the previous sections.
4. Click **Search**.

   The messages that match the criteria are displayed in Search Results.

   Right-click a message and select **Add to Selected List**.
5. Click the **Selected Items** tab and the message will be displayed.

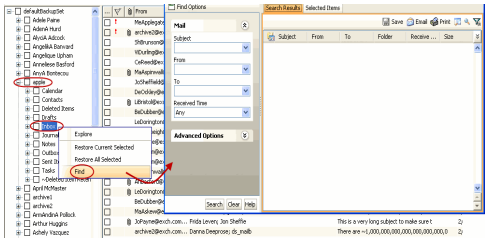


USING FIND FROM A BROWSE WINDOW

When you access Find as part of a Browse operation, keep in mind that the time range values are not pre-populated by any previously selected time range settings entered on the Browse Options or Advanced Browse Options dialog.

1. From the CommCell Browser, navigate to **Client Computers |<*Client*>| Exchange Mailbox Archiver**.
2. Right-click the **<*ArchiveSet*>**, point to **All Tasks** and then click **Browse**.
3. Click **OK**.
3. Right-click a mailbox or mailbox item (e.g., calendars, journals, etc.) and select **Find**.
4. Enter search criteria (e.g., Subject, From, To, etc.) as explained in the next few sections.
5. Click **Search**.

The search results are displayed in the right pane. You can optionally save the results, email, or print them.

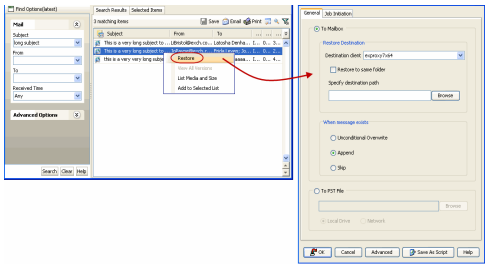


RESTORING A MESSAGE OR A MAILBOX ITEM FROM THE SEARCH RESULTS

1. From the CommCell Browser, navigate to **Client Computers |<*Client*>| Exchange Mailbox Archiver**.
2. Right-click **ArchiveSet** or **Subclient**, point to **All Tasks** and then click **Find**.
3. Enter search criteria and click **Search**.
4. Right-click a message or a mailbox item from the search results and then select **Recover**.
5. Click **To Mailbox**.
6. In the **Destination Client** list, select the name of client computer.

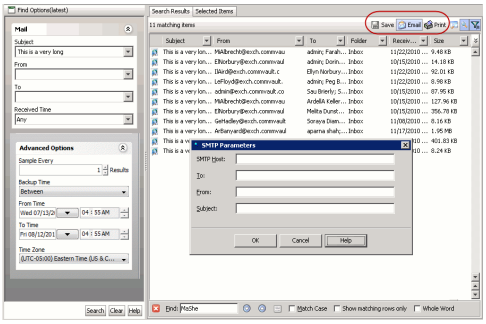
   In cases where the mailbox alias name has changed, it is strongly recommended to recover archived messages out-of-place to the current mailbox alias name. Otherwise, attempting to recover the data in-place to a mailbox alias that no longer exists will cause the recover operation to fail.

7. Click **OK**.



SAVE, EMAIL, OR PRINT SEARCH RESULTS

1. From the CommCell Browser, navigate to **<*Client*>**.
2. Right-click **ArchiveSet** or **Subclient**, point to **All Tasks** and then click **Find**.
3. Enter search criteria and click **Search**.
4. Click **Save**, **Email**, or **Print** in the upper-right corner of the window.
5. If **Email** is selected, enter the SMTP parameters (SMTP Host, To, From, Subject).



PERFORMING AN OUT-OF PLACE RECOVERY

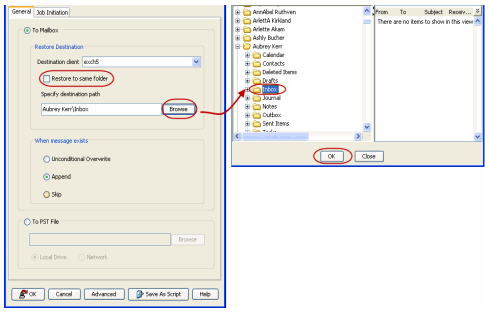
By default, the Exchange Mailbox Archiver *i*DataAgent recovers data to the client computer from which it originated; this is referred to as an in-place recovery. You can also recover the data to another client computer or another folder on the same client.

When you perform an out-of-place recovery, the recovered data assumes the rights (i.e., permissions) of the parent directory.

RECOVERING TO A DIFFERENT FOLDER ON THE SAME CLIENT

Follow the steps given below to recover data to a different folder on the same client from which data is backed up:

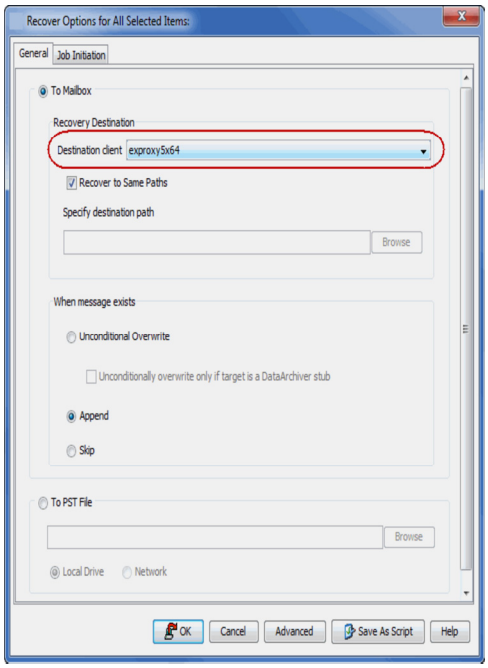
1. From the CommCell Browser, navigate to **Client Computers |<*Client*>| Exchange Mailbox Archiver**.
2. Right-click the **<*ArchiveSet*>**, point to **All Tasks** and then click **Browse**.
3. Click **OK**.
4. Select a mailbox or a message from a mailbox or a mailbox item from the **Client Browse** window and click **Recover All Selected**.
5. Click **To Mailbox** and clear the **Recover to Same Folder** check box.
6. Click **Browse** and select a folder on the Destination client.
7. Click **OK**.
8. Click **OK** to start the recovery.



RECOVERING TO A DIFFERENT CLIENT

1. From the CommCell Browser, navigate to **Client Computers |<*Client*>| Exchange Mailbox Archiver**.
2. Right-click the **<*ArchiveSet*>**, point to **All Tasks** and then click **Browse**.
3. Click **OK**.
4. Select a mailbox or a message from a mailbox or a mailbox item from the **Client Browse** window and click **Recover All Selected**.

5. Click **To Mailbox** .
6. In the **Destination client** list, select the client. The source and destination clients must reside in the same CommCell Console. The destination client must have the Microsoft Exchange Mailbox *i*DataAgent installed on it.
7. Click **OK** to start the recovery.

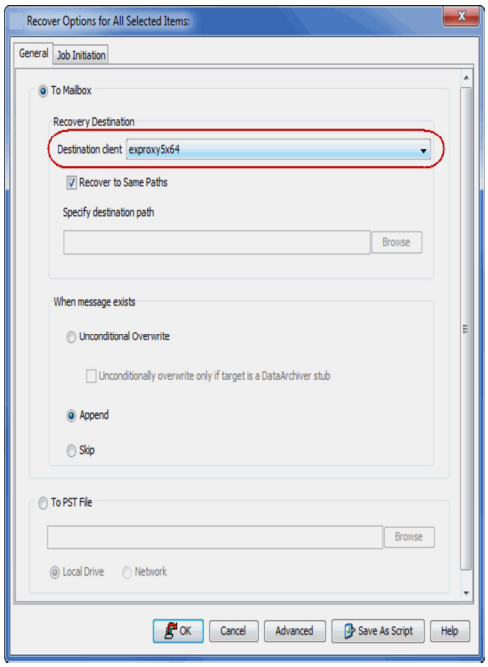


Recovering to a Different Exchange Version

When performing a cross-application recovery of Exchange mailboxes from a newer version of Exchange Server to an older version, it follows the same compatibility support provided by the Exchange Server, unless otherwise noted.

1. From the CommCell Browser, navigate to **Client Computers |<*Client*>| Exchange Mailbox Archiver**.
2. Right-click the ***<ArchiveSet>***, point to **All Tasks** and then click **Browse**.
3. Click **OK**.
4. Select a mailbox or a message from a mailbox or a mailbox item from the **Client Browse** window and click **Recover All Selected**.
5. Click **To Mailbox**.
6. In the **Destination client** list, select the client. The source and destination clients must reside in the same CommCell Console. The destination client must have the Microsoft Exchange Mailbox Archiver Agent installed on it.

   If you want to recover to a different folder, clear the **Recover to Same Folder** check box and specify the destination path.
7. Click **OK** to start the recovery.



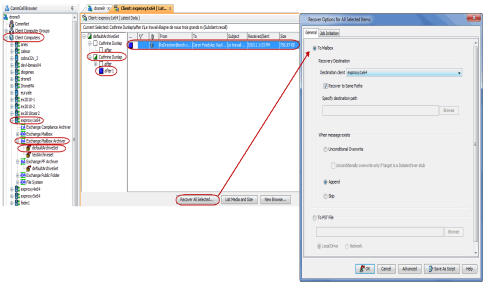
Recovering a Message Archived from a PST File

Follow the steps given below to browse and recover a message archived from a PST file:

1. From the CommCell Browser, navigate to **Client Computers |<*Client*>| Exchange Mailbox Archiver**.
2. Right-click the ***<ArchiveSet>***, point to **All Tasks** and then click **Browse**.
3. Click **OK**.
4. Expand the **Migrated From PST** folder and select the message that you want to

recover.

5. Click **Recover All Selected**.
6. Click **To Mailbox**.
7. In the **Destination Client** list, select the name of client computer.
8. Click **OK**.

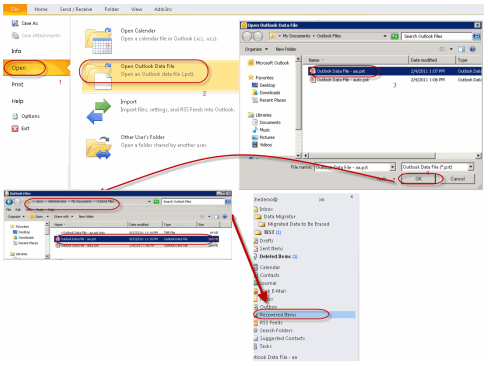


Recovering a Message from a Stub in an Archived PST File Using Outlook

Follow the steps given below to recover a message from a stub in an archived PST file using outlook:

1. Start Outlook
2. Enter your **Profile Name**.
3. Click **OK**.
4. On the **File** menu, click **Open | Personal Folders File (or Outlook Data File on XP)**.
5. Browse to the location where the PST files reside, and select the PST file you want to recover, then click **OK** to open the PST file.
6. Navigate to the folder where the message stub resides, then double-click the stub.
7. Click Recover.

   Note that the message will be recovered in the **Recovered Items** folder in the mailbox.

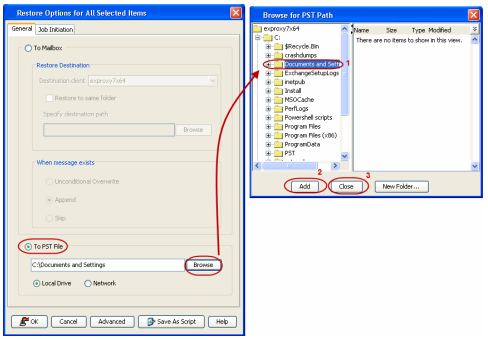


Recovering to a PST File

Follow the steps given below to recover a mailbox or a message or a mailbox item to a PST file:

1. From the CommCell Browser, navigate to **Client Computers |<*Client*>| Exchange Mailbox Archiver**.
2. Right-click the ***<ArchiveSet>***, point to **All Tasks** and then click **Browse**.
3. Click **OK**.
4. Select a mailbox or a message from a mailbox or a mailbox item from the **Client Browse** window and click **Recover All Selected**.
5. Click **To PST File**.
6. Click **Browse** and select the a folder on the client computer to save the PST file.

   You can also save the PST in a network location. Click **Network** and browse to select a folder on any other client in the domain.
7. Click **OK** to start the recovery.

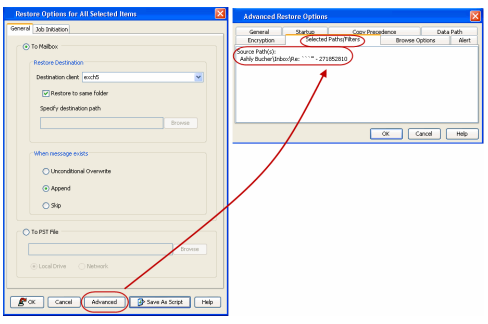


Reviewing Data Selected for Recovery

When you select multiple mailboxes, messages and mailbox items from multiple locations, you can review all the data and locations before starting the recovery. Follow the steps give below to review the data selected for recovery:

1. From the CommCell Browser, navigate to **Client Computers |<*Client*>| Exchange Mailbox Archiver**.
2. Right-click the ***<ArchiveSet>***, point to **All Tasks** and then click **Browse**.
3. Click **OK**.
4. Select a mailbox, a message, or a mailbox item from the **Client Browse** window and click **Recover All Selected**.
5. Click **To Mailbox**.
6. In the **Destination client** list, select the client. The source and destination clients must reside in the same CommCell Console. The destination client must have the Microsoft Exchange Mailbox *i*DataAgent installed on it.

   If you want to recover to a different folder, clear the **Recover to Same Folder** check box and specify the destination path.



7. Click **Advanced**.
8. Select the **Selected Paths/Filters** tab.
9. Click **OK**.
10. Click **OK** to start the recovery.

RECALLING MESSAGES FOR AN ENTIRE MAILBOX

All the archived Mailbox messages can be recalled using the MassRecall utility. Mailbox objects can either be recalled to the original Mailbox folder from which they were archived (such as the Inbox) or to a different Mailbox folder. This utility must be run on the client machine where the Exchange Mailbox Archiver Agent is installed.

To run this utility, use the same outlook profile that is set for the Archiver Account.

LIST STUBS PRIOR TO RECALL

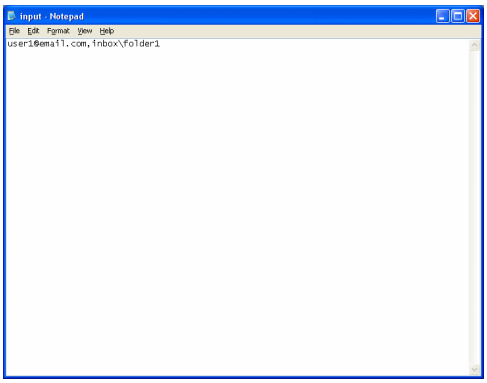
1. Create an argument file, for example `input.txt`.

   Specify the following parameters in the argument file, and save it to the local machine.

   ```
   user1@email.com,inbox\folder1
   ```

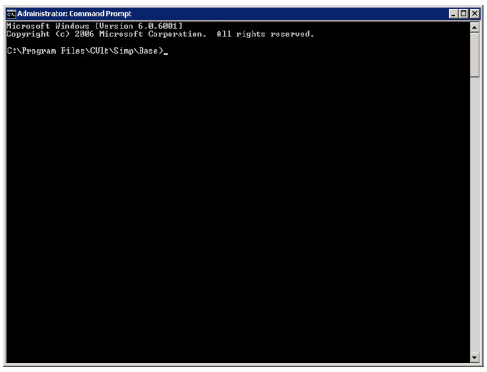
   where:

   - `user1@email.com` specifies the SMTP address.
   - `inbox\folder1` specifies the folder for which you wish to list the existing stubs. If this parameter is left blank, then all stubs in the entire Mailbox are listed.



2. Run this utility from the location where the Exchange Mailbox Archiver Agent is installed.

   1. Click **Start | Run.**
   2. Type **cmd**.
   3. Click **OK**.
   4. Navigate to the folder where the Exchange Mailbox Archiver is installed.



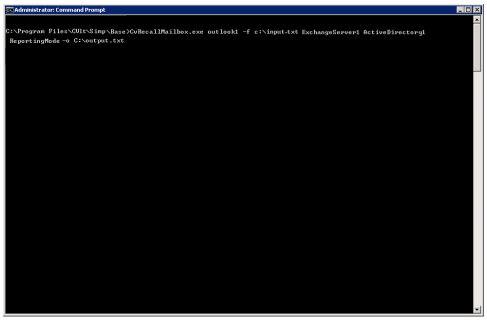
3. Run the following command to view the existing stubs in a Mailbox folder.

   ```
   CvRecallMailbox.exe outlook1 -f C:\input.txt ExchangeServer1
   ActiveDirectory1 ReportingMode targetserver target evmgrcport -o
   C:\output.txt
   ```

   where:

   - `outlook1` specifies the name of the outlook profile set for the Archiver account.
   - `C:\input.txt` specifies the argument file with the saved path.
   - `ExchangeServer1` specifies the name of the Exchange Server.
   - `ActiveDirectory1` specifies the name of the Active Directory Server.
   - `C:\output.txt` specifies the new text file that will be created.
   - `- o C:\output.txt` is optional. The output will be displayed on command prompt window if this parameter is left blank.
   - Target Server is the server where your Mailbox Archiver agent is installed.
   - Target EvMgrc Port is the port number where the EvMgrc is running on the Target Server.

   The newly created `output.txt` file contains the name of the Mailbox folder, number of stubs, and the size of the original messages which can be recalled in the Mailbox folder.



RECALLING MESSAGES TO THE SAME FOLDER IN A MAILBOX

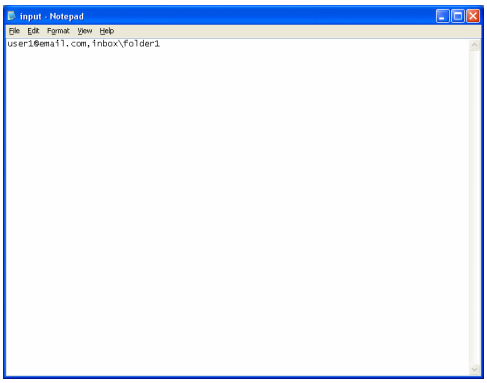
1. Create an argument file, for example `input.txt`.

   Specify the following parameters in the argument file, and save it to the local machine.

   `user1@email.com,inbox\folder1`

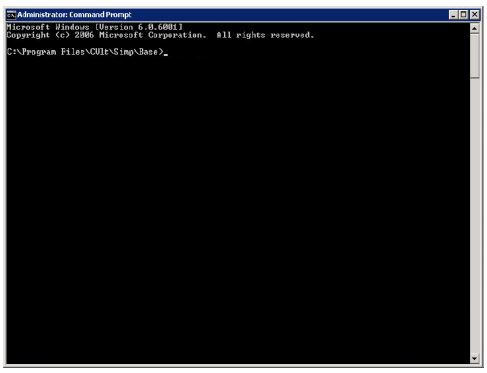
   where:

   - `user1@email.com` specifies the SMTP address.
   - `inbox\folder1` specifies the folder to be recalled.



2. Run this utility from the location where the Exchange Mailbox Archiver Agent is installed.

   1. Click **Start | Run**.
   2. Type **cmd**.
   3. Click **OK**.
   4. Navigate to the folder where the Exchange Mailbox Archiver is installed.



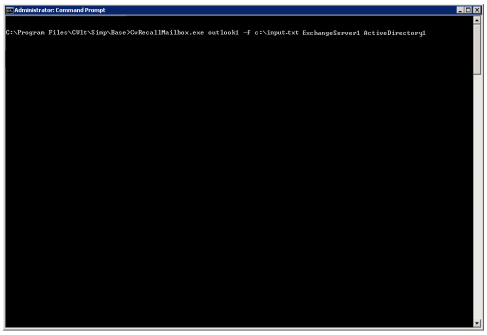
3. Run the following command to perform an in-place-recall of the objects present in the Mailbox folder.

   ```
   CvRecallMailbox.exe outlook1 -f C:\input.txt ExchangeServer1
   ActiveDirectory1 -targetserver -target evmgrcport
   ```

   where:

   - `outlook1` specifies the name of the outlook profile set for the Archiver account.
   - `C:\input.txt` specifies the argument file with the saved path.
   - `ExchangeServer1` specifies the name of the Exchange Server.
   - `ActiveDirectory1` specifies the name of the Active Directory Server.
   - Target Server is the server where your Mailbox Archiver agent is installed.
   - Target EvMgrc Port is the port number where the EvMgrc is running on the Target Server.

   All the archived messages in `folder1` will be recalled to the current location (all the stubs will be overwritten in the original location).



RECALLING MESSAGES TO A NEW FOLDER IN A MAILBOX

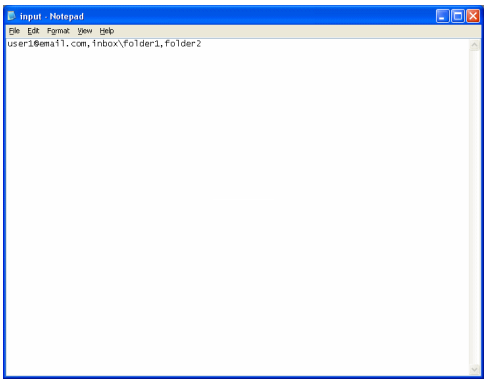
1. Create an argument file, for example input.txt.

   Specify the following parameters in the argument file, and save it to the local machine.

   `user1@email.com,inbox\folder1,folder2`

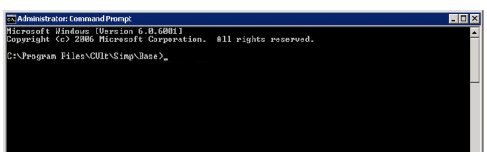
   where:

   - `user1@email.com` specifies the SMTP address.
   - `inbox\folder1` specifies the folder to be recalled.
   - `folder2` specifies the new destination folder.



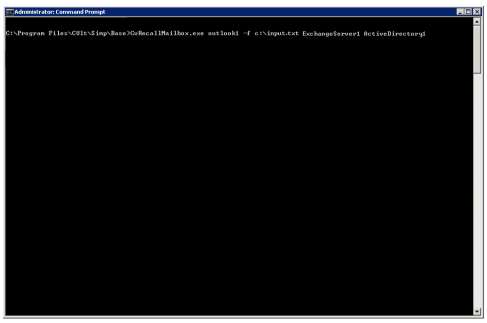
2. Run this utility from the location where the Exchange Mailbox Archiver Agent is installed.

   1. Click **Start | Run.**
   2. Type **cmd.**



3. Click **OK.**
4. Navigate to the folder where the Exchange Mailbox Archiver Agent is installed.

3. Run the following command to recall Mailbox objects to a different destination folder.



```
CvRecallMailbox.exe outlook1 -f C:\input.txt ExchangeServer1
ActiveDirectory1 -targetserver -target evmgrcport
```

where:

- `outlook1 specifies` the name of the outlook profile set for the Archiver account.
- `C:\input.txt` specifies the argument file with the saved path.
- `ExchangeServer1` specifies the name of the Exchange Server.
- `ActiveDirectory1` specifies the name of the Active Directory Server.
- Target Server is the server where your Mailbox Archiver agent is installed.
- Target EvMgrc Port is the port number where the EvMgrc is running on the Target Server.

All the archived messages in `folder1` will be recalled to `folder2`.

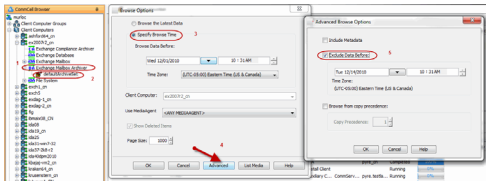
RECOVER MESSAGES ACROSS BACKUP CYCLES AND SUBCLIENTS

You can browse and recover data spanning multiple backup cycles or across subclients. By default a new cycle begins on the first day of the year with the creation of a new index. You can also schedule to create new index according to your individual backup requirements.

Browsing and recovering data across subclients within an archive set allows you to recover data from the mailboxes that have been moved from one subclient to another.

Browsing and recovering data across backup cycles also allows you to recover data, which was backed up before the last backup cycle. This is accomplished by specifying a time range during browse and recovery. The data that was backed up during the specified time period is marked as a candidate for recovery.

Follow the steps given below to browse and restore data spanning multiple subclients and backup cycles:

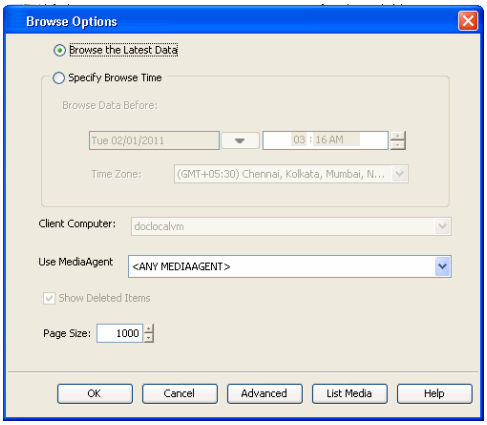


1. Install the MediaAgent on the CommServe computer.
2. From the CommCell Console, navigate to <***Client***> | **Exchange Mailbox Archiver**.
3. Right-click the archive set that contains the data you want to restore and click **All Tasks** | **Browse Backup Data**.
4. Select **Specify Browse Time**, select date and time from the **Browse data before** drop down menu.
5. Click **Advanced**.
6. Select **Exclude Data Before** and select the specific time range. Both the **FROM** and **TO** values are required.
7. Click **OK**.
8. Select the folder level under the backup set. Its entire contents will be automatically selected in the right pane.
9. Click **Recover All Selected**.
9. From the **General** tab, either specify **Recover to Same Paths** or **Specify destination path** by typing a path or clicking **Browse** to locate the desired destination.
10. Click the **Job Initiation** tab.
11. Select **Immediate** to run the job immediately.
12. Click **OK**.
13. You can monitor the progress of the restore job in the **Job Controller** of the CommCell Console.
14. This will restore the data in the specified destination.

SCHEDULING A RECOVERY

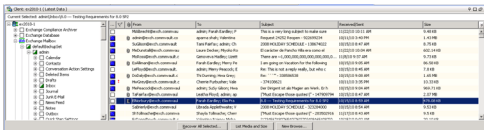
1.
   - From the CommCell Browser, navigate to **Client Computers** | **<Client>** | **Exchange Mailbox Archiver**.

- Right-click an <***ArchiveSet***> point to **All Tasks** and then click **Browse**.
- Click **OK**.



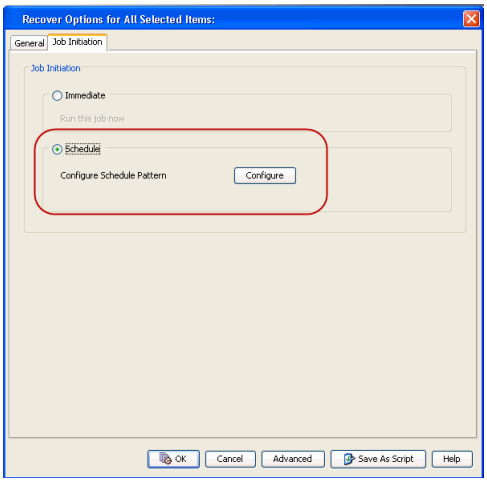
2.

- Select one or more mailboxes in the left pane. The mailbox items (e.g., calendars, journals, etc.) will be selected in the right pane.
- Click **Recover All Selected**.



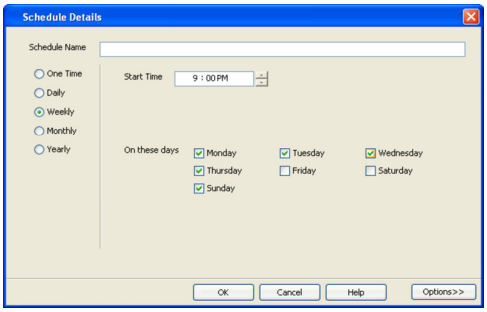
3.

- Click **Job Initiation** tab and click **Schedule**.
- Click **Configure**.



4. Select the appropriate scheduling options. For example:
   - Click **Weekly**.
   - Check the days you want the run the recovery job.
   - Change the Start Time to 9:00 PM
   - Click **OK** to close the Schedule Details dialog
   - Click **OK** to close the Recovery Options dialog

   The recovery job will execute as per the schedule.



MANAGING RECOVERY JOBS

Once you initiate the recovery operation, a recover job is generated in the Job Controller. Jobs can be managed in a number of ways. The following sections provide information on the different job management options available:

RESTARTING JOBS

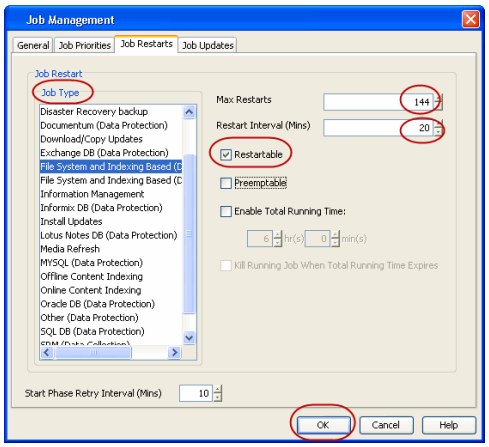
Jobs that fail to complete successfully are automatically restarted based on the job restartability configuration set in the Control Panel. Keep in mind that changes made to this configuration will affect all jobs in the entire CommCell.

To Configure the job restartability for a specific job, you can modify the retry settings for the job. This will override the setting in the Control Panel. It is also possible to override the default CommServe configuration for individual jobs by configuring retry settings when initiating the job. This configuration, however, will apply only to the specific job.

Backup jobs for this Agent are resumed from the point-of-failure.

CONFIGURE JOB RESTARTABILITY AT THE COMMSERVE LEVEL

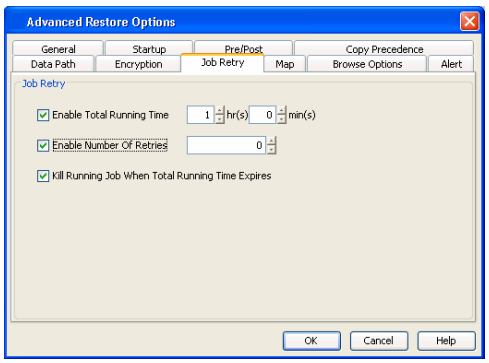
1. From the CommCell Browser, click **Control Panel** icon.
2. Select **Job Management.**
3. Click **Job Restarts** tab and select a **Job Type.**
   - Select **Restartable** to make the job restartable.
   - Change the value for **Max Restarts** to change the maximum number of times the Job Manager will try to restart a job.
   - Change the value for **Restart Interval (Mins)** to change the time interval between attempts for the Job Manager to restart the job.
4. Click **OK.**



CONFIGURE JOB RESTARTABILITY FOR AN INDIVIDUAL JOB

1. From the CommCell Browser, navigate to **Client Computers | *<Client>* | Exchange Mailbox | *<ArchiveSet>***.
2. Right-click the ***<Subclient>*** in the right pane and then click **Browse Backup Data**.
3. Click **OK**.
4. Select the data that you want to restore and click **Recover All Selected**.
5. Click **Advanced** and select the **Job Retry** tab
6. Select **Enable Total Running Time** and specify the maximum elapsed time before a job can be restarted or killed

   Select **Kill Running Jobs When Total Running Time Expires** to kill the job after reaching the maximum elapsed time.
7. Select **Enable Number Of Retries** and specify the number of retries.
8. Click **OK.**



CONTROLLING JOBS

The following controls are available for running jobs in the Job Controller window:

SUSPEND	Temporarily stops a job. A suspended job is not terminated; it can be restarted at a later time.
RESUME	Resumes a job and returns the status to Waiting, Pending, Queued, or Running. The status depends on the availability of resources, the state of the Operation Windows, or the Activity Control setting.
KILL	Terminates a job.

SUSPENDING A JOB

1. From the Job Controller of the CommCell Console, right-click the job and select **Suspend**.
2. The job status may change to **Suspend Pending** for a few moments while the operation completes. The job status then changes to **Suspended.**

RESUMING A JOB

1. From the Job Controller of the CommCell Console, right-click the job and select **Resume**.
2. As the Job Manager attempts to restart the job, the job status changes to **Waiting**, **Pending**, or **Running**.

KILLING A JOB

1. From the Job Controller of the CommCell Console, right-click the job and select **Kill**.
2. Click **Yes** when the confirmation prompt appears if you are sure you want to kill the job. The job status may change to **Kill Pending** for a few moments while the operation completes. Once completed, the job status will change to **Killed** and it will be removed from the Job Controller window after five minutes.

ADDITIONAL RECOVERY OPTIONS

Several additional options are available to further refine your recovery operations. The following table describes these options, as well as the steps to

implement them.

Be sure to read the overview material referenced for each feature prior to using them.

OPTION	DESCRIPTION	RELATED TOPIC
Skip Errors and Continue	This option enables you to to continue the restore job regardless of media errors and create a file that lists the full path names of the files that failed to get restored. Follow the steps given below to set this option: 1. From the CommCell Browser, click **Client Computers** | **<Client> | Exchange Mailbox Archiver**. 2. Right-click the <***ArchiveSet***> that contains the data you want to recover, point to **All Tasks** and then click **Browse**. 3. Click **OK**. 4. In the **Client Browse** tab, select the data to be recovered and click **Recover all Selected.** 5. Click **Advanced**. 6. In the **Advanced Restore Options** dialog box, click **General**. 7. On the **General** tab, select the **Skip errors and continue** check box. 8. Click **OK**.	
Startup Options	The Startup Options are used by the Job Manager to set priority for resource allocation. This is useful to give higher priority to certain jobs. You can set the priority as follows: 1. From the CommCell Browser, click **Client Computers** | **<Client> | Exchange Mailbox Archiver**. 2. Right-click the <***ArchiveSet***> that contains the data you want to recover, point to **All Tasks** and then click **Browse**. 3. Click **OK**. 4. In the **Client Browse** tab, select the data to be recovered and click **Recover all Selected.** 5. Click **Advanced**. 6. In the **Advanced Restore Options** dialog box, click **Startup**. 7. On the **Startup** tab, select **Change Priority**. 8. Enter a priority number - 0 is the highest priority and 999 is the lowest priority. 9. Select the **Start up in suspended State** check box to start the job in a suspended state. 10. Click **OK**.	Refer to Job Priority and Priority Precedence.
Copy Precedence	By default, the system retrieves data from the storage policy copy with the lowest copy precedence. If the data was pruned from the primary copy, the system automatically retrieves data from the other copies of the storage policy in the lowest copy precedence to highest copy precedence order. Once the data is found, it is retrieved, and no further copies are checked. You can retrieve data from a specific storage policy copy (Synchronous Copy or Selective Copy). If data does not exist in the specified copy, the data retrieve operation fails even if the data exists in another copy of the same storage policy. Follow the steps given below to retrieve the data from a a specific storage policy copy: 1. From the CommCell Browser, click **Client Computers** | **<Client> | Exchange Mailbox Archiver**. 2. Right-click the <***ArchiveSet***> that contains the data you want to recover, point to **All Tasks** and then click **Browse**. 3. Click **OK**. 4. In the **Client Browse** tab, select the data to be recovered and click **Recover all Selected.** 5. Click **Advanced**. 6. In the **Advanced Restore Options** dialog box, click **Copy Precedence**. 7. On the **Copy Precedence** tab, select the **Restore from copy precedence** check box. 8. Enter the copy precedence number. 9. Click **OK**.	Refer to Recovering Data From Copies.
Data Path Options	The data recovery operations use a default Library, MediaAgent, Drive Pool, and Drive as the Data Path. You can use this option to change the data path if the default data path is not available. Follow the steps given below to change the default data path: 1. From the CommCell Browser, click **Client Computers** | **<Client> | Exchange Mailbox Archiver**.	Refer to Change Data Path.

	2. Right-click the <***ArchiveSet***> that contains the data you want to recover, point to **All Tasks** and then click **Browse**. 3. Click **OK**. 4. In the **Client Browse** tab, select the data to be recovered and click **Recover all Selected.** 5. Click **Advanced**. 6. In the **Advanced Restore Options** dialog box, click **Data Path**. 7. On the **Data Path** tab, select the **MediaAgent** and **Library**. 8. Select the **Drive Pool** and **Drive** for optical and tape libraries. 9. Select the name of the **Proxy** server if you wish to restore using a proxy server. You can select the Proxy server only when you are restoring from a snapshot. This option is not available for a regular restore. 10. Click **OK**.	
Encryption	If the client's data is encrypted with a pass phrase, you must enter the pass-phrase to start the data recovery operation. Follow the steps given below to enter the pass-phrase: 1. From the CommCell Browser, click **Client Computers** | **<Client> | Exchange Mailbox Archiver**. 2. Right-click the <***ArchiveSet***> that contains the data you want to recover, point to **All Tasks** and then click **Browse**. 3. Click **OK**. 4. In the **Client Browse** tab, select the data to be recovered and click **Recover all Selected.** 5. Click **Advanced**. 6. In the **Advanced Restore Options** dialog box, click **Encryption**. 7. Enter the Pass Phrase. 8. Click **OK**.	Refer to Data Encryption.
Browse Options	Deleted files can be manually restored by the user. You can specify the time range for the deleted items to be restored. 1. From the CommCell Browser, click **Client Computers** | **<Client> | Exchange Mailbox Archiver**. 2. Right-click the <***ArchiveSet***> that contains the data you want to recover, point to **All Tasks** and then click **Browse**. 3. Click **OK**. 4. In the **Client Browse** tab, select the data to be recovered and click **Recover all Selected.** 5. Click **Advanced**. 6. From the **Browse Options** tab, select **Restore deleted items** option. 7. Select **Specify Time Range** option to specify the time zone, start time and end time for the deleted items to be restored. 8. Click **OK**.	Refer to Job Management.
Alerts	This option enables users or user groups to get automatic notification on the status of the data recovery job. Follow the steps given below to set up the criteria to raise notifications/alerts: 1. From the CommCell Browser, click **Client Computers** | **<Client> | Exchange Mailbox Archiver**. 2. Right-click the <***ArchiveSet***> that contains the data you want to recover, point to **All Tasks** and then click **Browse**. 3. Click **OK**. 4. In the **Client Browse** tab, select the data to be recovered and click **Recover all Selected.** 5. Click **Advanced**. 6. In the **Advanced Restore Options** dialog box, click **Alerts**. 7. Click **Add Alert.** 8. From the **Add Alert Wizard** dialog box, select the required threshold and notification criteria and click **Next**. 9. Select the required notification types and click **Next**. 10. Select the recipients and click **Next**.	Refer to Alert.

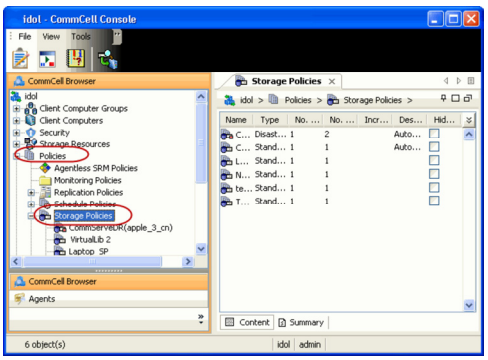
	11. Click **Finish**. 12. Click **OK**.	
Command Line Restores	Command Line Interface enables you to perform backups or restore from the command line. The commands can be executed from the command line or can be integrated into scripts. You can also generate command line scripts for specific operations from the CommCell Browser using the **Save As Script** option.	Refer to Command Line Interface.
CommCell Readiness Report	The CommCell Readiness Report provides you with vital information, such as connectivity and readiness of the Client, MediaAgent and CommServe. It is useful to run this report before performing the data protection or recovery job. Follow the steps given below to generate the report: 1. From the **Tools** menu in the CommCell Console, click **Reports**. 2. Navigate to **Reports | CommServe | CommCell Readiness**. 3. Click the **Client** tab and click the **Modify** button. 4. In the **Select Computers** dialog box, clear the **Include All Client Computers and All Client Groups** check box. 5. Select the client from the **Exclude** list. 6. Click the **Include >** button. 7. Click **OK**. 8. Click the **MediaAgent** tab. 9. Clear the **Include All MediaAgents** checkbox. 10. Select the MediaAgent from the **Exclude** list. 11. Click **Include >**. 12. Click **Run**. The generated report is displayed.	Refer to CommCell Readiness Report.
Restore Job Summary Report	The Restore Job Summary Report provides you with information about all the data recovery jobs that are run in last 24 hours for a specific client and agent. You can get information such as failure reason, failed objects, job options etc. It is useful to run this report after performing the restore. Follow the steps given below to generate the report: 1. From the **Tools** menu in the CommCell Console, click **Reports**. 2. Navigate to **Reports | Jobs | Job Summary**. 3. Click **Data Recovery** on the **General tab** in the right pane. 4. On the **Computers** tab, select the client and the agent for which you want to run the report. 5. Click **Run**.	Refer to Restore Job Summary Report.

Data Aging - Exchange Mailbox Archiver Agent

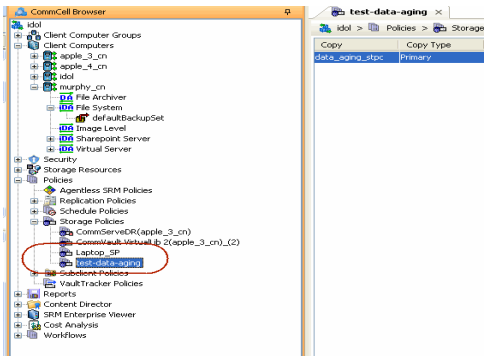
Data Aging is the process of removing old data from secondary storage to allow the associated media to be reused for future backups.

By default, all backup data is retained infinitely. However, you should change the retention of your data based on your needs. Note that if you continue to have infinite retention, you will also need infinite storage capacity.

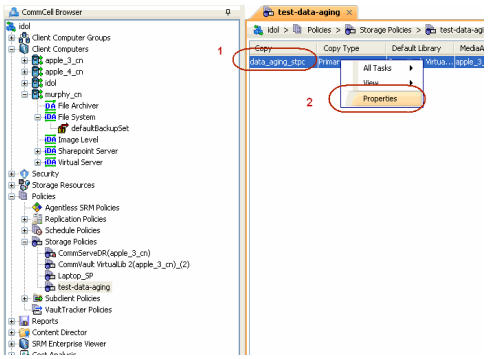
1. From the CommCell Browser, navigate to **Policies | Storage Policies**.



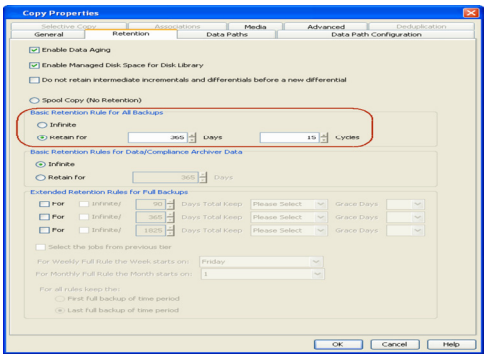
2. Highlight the **Storage Policy**.



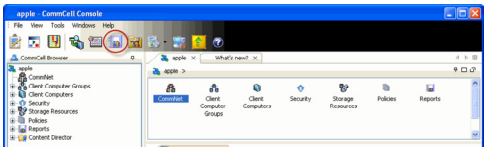
3. From the right pane, right-click the **Storage Policy Copy** and click the **Properties**.



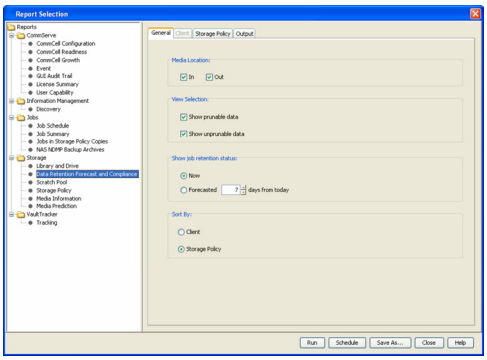
4.
   - Click the **Retention** tab.
   - Click the **Retain For** in the **Basic Retention Rules for All Backups** area.
   - Enter number of days to retain the data.
   - Enter number of cycles to retain the data.
   - Click **OK**.



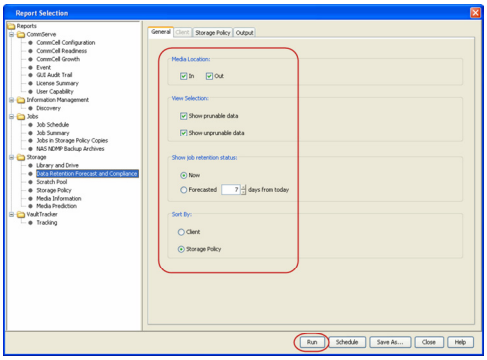
5. From the CommCell Browser, click the **Reports** icon.



6. Expand Reports and select **Data Retention Forecast and Compliance.**



7. Click **Run**.

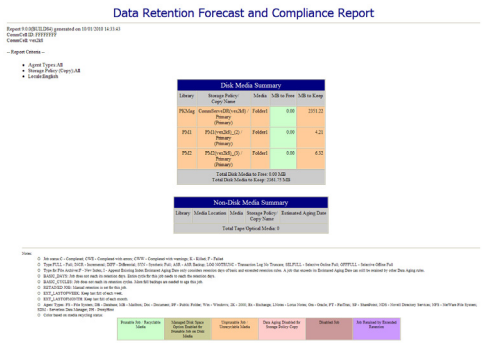


8. The report will display the data to be pruned when a data aging job is run.

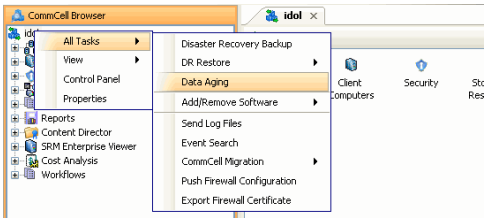
   To ensure only data intended for aging is actually aged, it is important to identify the data that will be aged based on the retention rules you have configured. Hence, ensure this report includes only the data you intend to age.

   If necessary, fine-tune your rules so that only the intended data is aged.

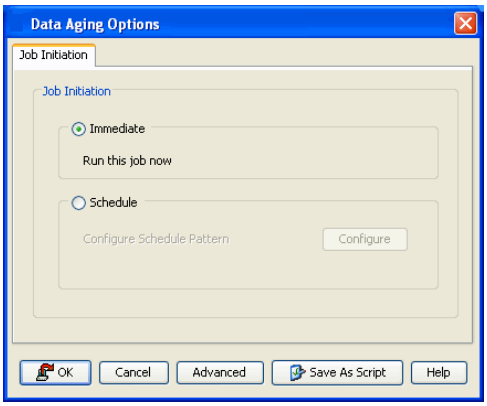
   Once you run a data aging job, the data will be lost.



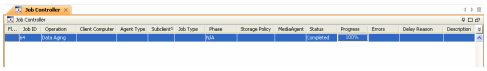
9. From the CommCell Console, right click the CommServe icon and click **All Tasks** | **Data Aging**.



10. Select **Immediate** in the Job Initiation section and click **OK**.



11. You can track the progress of the job from the **Job Controller** window. When the job has completed, the Job Controller displays **Completed**.



Make sure that the job completes successfully. If the job did not complete successfully, re-run the job.

ADVANCED TOPICS

Data Aging - Advanced
Provides comprehensive information on additional Data Aging capabilities.

Additional Operations - Exchange Mailbox Archiver Agent

TABLE OF CONTENTS

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Auxiliary Copy
Erasing Backup Data
Global Filters
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AUDIT TRAIL

The Audit Trail feature allows you to track the operations of users who have access to the CommCell. This capability is useful if a detrimental operation was performed in the CommCell and the source of that operation needs to be determined.

Audit Trail tracks operations according to four severity levels:

- **Critical**: This level records operations that will result in imminent loss of data.
- **High**: This level records operations that may result in loss of data.
- **Medium**: This level records changes to the general configuration of one or more entities. Such changes may produce unintended results when operations are performed.
- **Low**: This level records changes to status, addition of entities, and other operations that have minimal impact on existing CommCell functions.

To set Audit Trail retention periods:

1. From the **Tools** menu in the CommCell Console, click **Control Panel**, and then select **Audit Trail**.
2. From the **Audit Trail** dialog box, select the desired retention time (in days) for each severity level.
3. Click **OK**.

AUXILIARY COPY

An auxiliary copy operation allows you to create secondary copies of data associated with data protection operations, independent of the original copy.

1. Expand the **Policies** node, right-click storage policy for which you want to perform an auxiliary copy, click **All Tasks**, and then click **Run Auxiliary Copy**.
2. If you are starting the auxiliary copy operation from the CommServe level, select the storage policy for which you wish to perform the auxiliary copy.

   If you are starting the auxiliary copy operation from the Storage Policy level, the Storage Policy field is already populated with the name of the Storage Policy you selected.

3. If the source copy is configured with a shared library, select the **Source MediaAgent** for the auxiliary copy.
4. Click **OK** to start the auxiliary copy operation. A progress bar displays the progress of the operation.

ERASING BACKUP DATA

The Erase Data feature allows you to permanently erase any data that can be backed up. Using Erase Data, you can erase mailboxes, folders in a mailbox, messages within a folder, and attachments.

CONFIGURING ERASE DATA

To erase data, you need to first assign a Filter Storage Policy for Erasing Data. Follow the steps given below to assign a Filter Storage Policy:

1. From the CommCell Browser, right-click the storage policy that you want to use as a filter storage policy, then click **Properties**.
2. From the **General** tab of the **Storage Policy Properties** dialog box, select the **Allow Erase Data** check box.
3. Click **OK**.

4. From the CommCell Browser, right-click the ***<Agent>*** and then click **Properties**.
5. From the **Storage Device** tab of the agent **Properties** dialog box, select a filter storage policy from the **Filter Storage Policy** list.
6. Click **OK**.

RUNNING AN ERASE DATA JOB

After the configuration has been completed, you can now browse and erase data.

1. From the CommCell Browser, right-click the ***<Agent>***, select **All Tasks** and then click **Erase Data By Browsing**.
2. You are warned that the data will be permanently removed. Click **Yes** to continue.
3. From the **Erase Data by Browsing** dialog box, click **Browse**.
4. In the **Browse Options** dialog box, select a browse time range and any advanced browse options, and click **OK**.
5. From the browse selection window, select the data objects that you want to erase, and click **OK**.
6. In the **Job Initiation** tab, select **Immediate** to run the job immediately.

   You can track the progress of the job from the **Job Controller** or **Event Viewer**.

GLOBAL FILTERS

Global Filters are exclusions that filter data from backups across all Agents in a CommCell that support the feature. Global Filters serve as a template for files, folders, and entities that should always be excluded from all (or most) backups in a CommCell, such as temporary data a computer does not retain or data that is recoverable by means other than a restore. This saves space on media and enhances backup performance.

By default, filters configured for a particular subclient override any Global Filters configured for the CommCell. You can, however, configure subclients to include global filters along with any filters already configured for the subclient.

CONFIGURE GLOBAL FILTERS

1. From the CommCell Browser, right-click the CommServe, click **Control Panel**, and then click **Global Filters**.
2. Select **Use Global Filters on All Subclients**.
3. Click **Browse** to locate the files or folders to be excluded from backups and click **OK**.
4. Click **OK** to save your changes.

ENABLE/DISABLE GLOBAL FILTERS FOR A SUBCLIENT

1. From the CommCell Browser, right-click the subclient for which you want to enable Global Filters and click **Properties**.
2. Click the **Filters** tab.
3. Select one of the following values from the **Include Global Filters** list:
   - **ON** to enable Global Filters for this subclient.
   - **OFF** to disable Global Filters for this subclient.
4. Click **OK**.

LICENSE ADMINISTRATION

REQUIRED LICENSES

The Exchange Mailbox *i*DataAgent requires the ***i*DataAgent for Exchange Mailbox** license.

CONVERTING EVALUATION LICENSES TO PERMANENT LICENSES

If you installed the software using an Evaluation License, you can upgrade to a Permanent License as follows:

1. From the CommCell Browser, right-click the CommServe icon, click **Control Panel**, and then click **License Administration**.
2. Select the **Update License** tab and then click **Convert**.
3. Check the box that corresponds to the evaluation license you would like to upgrade and then click **Convert**.

The license information is updated in the **License Administration** window.

USING CAPACITY-BASED LICENSING

License Usage by Capacity is a licensing mechanism that allows you to obtain licenses based on the amount of data you back up. It provides the following features:

- Flexibility of usage on all agents, rather than being tied to number of server, agents, etc.
- Allows you to purchase licenses based on your data protection needs

Both **Core** and **Enterprise** license types are available. Refer to License Usage by Capacity for comprehensive information on utilizing this method.

RELEASING A LICENSE

If you no longer require a license on a computer, such as cases where the computer is being retired, you can release the license and use it later for another computer. Backup data from the retired computer can still be restored after the license is released provided the data is not aged.

1. From the CommCell Browser, right-click the name of the client from which you want to release a license, click **All Tasks**, and then click **Release License for Client**.
2. Click **OK** to continue releasing the license
3. Click **Yes** to confirm you want to release the license or **No** to abort.

ONLINE HELP LINKS

Use the following links to view the online help for the corresponding tabs in the CommCell Console:

OPERATIONS	ENTITY	ONLINE HELP LINKS	SUB LINKS
CONFIGURATION	Agent	Exchange Mailbox Properties (General) Exchange Mailbox Properties (Version) Exchange Mailbox Properties (Security) Exchange Mailbox Properties (Activity Control) Exchange Mailbox Properties (AD Server) Exchange Mailbox Properties (Storage Device)	Change User Account
	Backup Set	Backup Set Properties of: <*Backup Set*> (General) Backup Set Properties of: <*Backup Set*> (Auto Discover) Backup Set Properties of: <*Backup Set*> (Security)	
	Subclient	Subclient Properties of: <*Subclient Name*> (General) Subclient Properties of: <*Subclient Name*> (Content) Subclient Properties of: <*Subclient Name*> (Filters) Subclient Properties of: <*Subclient Name*> (Pre/Post Process) Subclient Properties of: <*Subclient Name*> (Storage Device) Subclient Properties of: <*Subclient Name*> (Auto-discovery) Subclient Properties of: <*Subclient Name*> (Activity Control) Subclient Properties of: <*Subclient Name*> (Encryption) Subclient Properties of: <*Subclient Name*> (Security)	Add/Modify Mailbox User Account (Pre/Post) Data Paths for <*Storage Policy Name*> Configure AD User Group for Auto-discovery Authenticate Active Directory Domain Controller Change Mailbox Stores for Auto-discovery
BACKUP	Backup Options	Backup Options for Subclient: <*Subclient Name*>	Save As Script Command Line XML Options
	Advanced Backup Options	Advanced Backup Options (Data) Advanced Backup Options (Startup) Advanced Backup Options (Job Retry) Advanced Backup Options (Media) Advanced Backup Options (Data Path) Advanced Backup Options (VaultTracking) Advanced Backup Options (Alert)	Alert Wizard
RESTORE	Restore Options	Restore Options for All Selected Items (General) Restore Options for All Selected Items (Job Initiation)	Save As Script Command Line XML Options
	Advanced Restore Options	Advanced Restore Options (General) Advanced Restore Options (Startup) Advanced Restore Options (Copy Precedence) Advanced Restore Options (Data Path) Advanced Restore Options (Encryption)	Alert Wizard

		Advanced Restore Options (Selected Path/Filters) Advanced Restore Options (Browse Options) Advanced Restore Options (Alert)	

OPERATING SYSTEM AND APPLICATION UPGRADES

Operating system upgrades are only supported when upgrading from one version of an OS to a different version of the same OS (e.g., Win2003 to Win2008). The two methods of upgrading are:

- **Seamless Upgrade -** This involves uninstalling the Agent software, upgrading the operating system, and then re-installing the Agent software.
- **Full OS Replacement -** This involves performing a clean install of a new version of the OS, re-installing any application software, then re-installing the CommServe, MediaAgent, and/or Agent software.

For Full OS Replacement, the client computer must be configured to have the CommServe, MediaAgent, and/or Client software re-installed to the same location, the same Fully Qualified Domain Name or short domain name, the same partitions, disk drive format (FAT, NTFS, et. al.), and IP configuration as previously.

> If it is necessary to remove Agent software to facilitate an operating system or application upgrade, do not delete the icon for the Agent from the CommCell Console, or all associated backed up data will be lost.

Use the following strategy to upgrade the operating system software:

- Identify the computers you want to upgrade and the CommCell components installed on each of these computers.
- Choose the type of upgrade procedure you want to use on each computer: seamless or full replacement.
- CommServe, MediaAgent, and Client computers can be upgraded in any order.

OPERATION WINDOW

By default, all operations in the CommCell can run for 24 hours. To prevent certain operations from running during certain periods of the day, you can define operation rules so that these operations are disabled during those times.

When operation rules are configured, operations that are started within the time window specified will go to a queued (as opposed to pending) state. Once the time window specified in the operation rule has elapsed, these queued or running operations will resume automatically.

1. In the CommCell Browser, right-click the appropriate entity, click **All Tasks,** and then click **Operation Window**.
2. Click **Add**.
3. From the **Operation Window** dialog box:
   - Enter the name of the rule in the **Name** field.
   - Select either an administration, data protection (either full or non-full), and/or a data recovery operation from the **Operations** pane.
4. Click **OK**.

SCHEDULE POLICY

A schedule policy is a defined schedule or group of schedules for specific operations to be performed on associated objects within the CommCell. When the schedules from a policy are run, the specified operations, (e.g., auxiliary copy, backup, etc.,) will be performed on the associated CommCell objects.

1. Expand the **Policies** node, right-click **Schedule Policies** and click **Add**.
2. Type the **Name** of the schedule policy.
3. Select the **Type** of schedule policy.
4. Select the **Agent Type**.
5. Type a description of the schedule policy.
6. Click **Add**.
7. Enter a Schedule Name in the **Schedule Pattern** tab.
8. Click **OK**.
9. On the **Associations** tab, select the objects to be associated with the schedule policy.
10. Click **OK**.

STORAGE POLICY

A Storage policy defines the data lifecycle management rules for protected data. Storage policies map data from its original location to a physical storage media

and determine its retention period.

1. Expand the **Policies** node, right-click **Storage Policies**, and select **New Storage Policy**.
2. Click **Next.**
3. Select **Data Protection and Archiving** to create a regular storage policy or **CommServe Disaster Recovery Backup** to backup the CommServe database and click **Next**.
4. Click **Next**.
5. Enter the name of storage policy and click **Next**.
6. Enter the name of the primary copy and click **Next**.
7. From the drop down box, select the default library for the primary copy and click **Next**.
8. From the drop down box, select the MediaAgent and click **Next**.
9. Enter number of data streams and set the retention period for the policy and click **Next**.
10. Click **Next**.
11. Click **Browse,** browse to your designated deduplication store location and click **Next**.
12. Confirm your selections and click **Finish**.

UNINSTALLING COMPONENTS

You can uninstall the components using one of the following method:

Method 1: Uninstall Components Using the CommCell Console

Method 2: Uninstall Components from Add or Remove Programs

METHOD 1: UNINSTALL COMPONENTS USING THE COMMCELL CONSOLE

1. From the CommCell Browser, right-click the desired Client Computer and click **All Tasks -> Add/Remove Programs** and click **Uninstall Software**.
2. **Uninstall Software Options** dialog will appear.
3. In the **Uninstall Software** tab, select **Uninstall All** to uninstall all the software packages.
4. In the **Job Initiation** tab, select **Immediate** to run the job immediately.

   You can track the progress of the job from the **Job Controller** or **Event Viewer**.

METHOD 2: UNINSTALL COMPONENTS FROM ADD OR REMOVE PROGRAMS

1. Click the **Start** button on the **Windows** task bar and then click **Control Panel**.
2. Double-click **Add/Remove Programs**.

   For Windows Vista/Windows 2008, click Uninstall a Program in the **Control Panel**.
3. Click **Remove** to uninstall the components in the following sequence:
   1. <Agent>
   2. File System *i*DataAgent
   3. Base Software

ADVANCED TOPICS

Provides comprehensive information about additional capabilities for the following features:

- Audit Trail
- Auxiliary Copy
- Erase Backup Data
- Global Filters
- License Administration
- License Usage by Capacity
- Operating System and Application Upgrades
- Operation Window
- Schedule Policy
- Storage Policies
- Uninstalling Components

Back to Top

Recall Messages - Outlook Application

Recalling Messages from Stubs

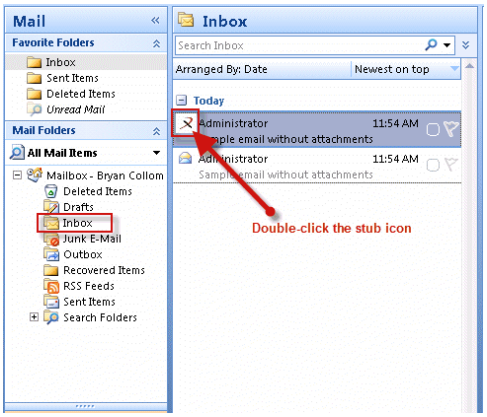
If your administrator has configured this capability, you can recall archived messages directly from Outlook. Archived messages appear in your Outlook mailbox with a special icon in the message header. You can bring back the original message content by clicking the special icon.

Use the following procedure to recall archived messages:

1. Obtain your Outlook user name and password from your administrator.
2. Open the Outlook application.

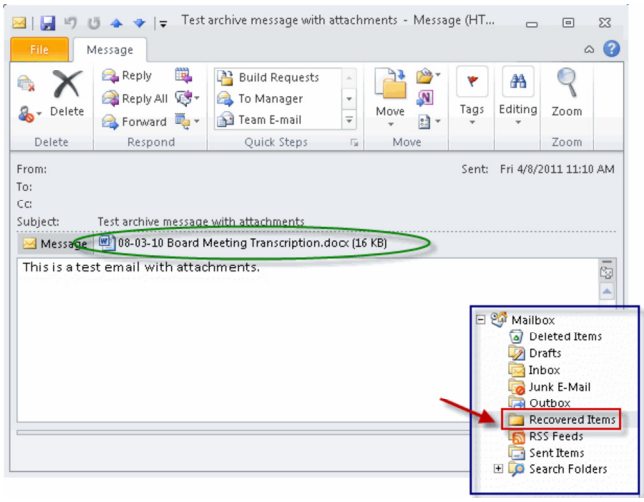
   If necessary, provide the user name and password provided by your administrator.
3. Locate the archived message you want to recall.

   Archived messages display a special icon in place of the typical envelope icon.



4.
   - Double-click the icon.
   - The message is automatically displayed along with any attachments.
   - The message is also placed in the **Recovered Items** folder. The message will remain in this folder until it is moved or deleted.
   - If the message includes attachments, you can double-click the attachment link to view the attachment or save it to your computer.

   If you want to recall the message again, you may do so by repeating the steps in this procedure.



Recalling messages from Universal Stub Link

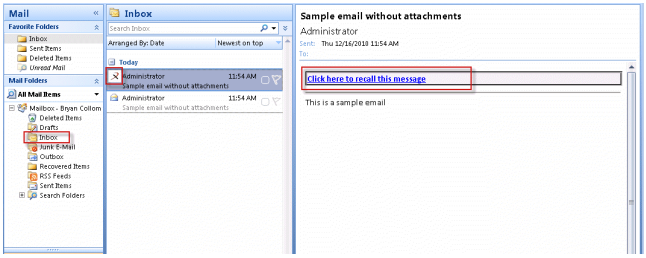
If your administrator has configured this capability, you can recall archived messages directly from Outlook. The body of the message includes a link that, by clicking it, brings back the original content of the message.

Use the following procedure to recall archived messages using the universal stub link:

1. Obtain your Outlook user name and password from your administrator.
2. Open the Outlook application.

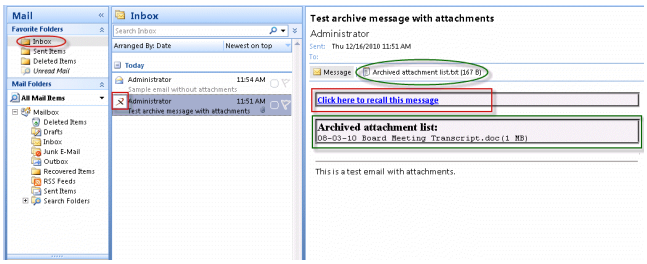
   If necessary, provide the user name and password provided by your administrator.
3.
   - Locate the archived message you want to recall.

     Archived messages display a special icon in place of the typical envelope icon.
   - Click the **Click here to recall this message** link to recall the message.



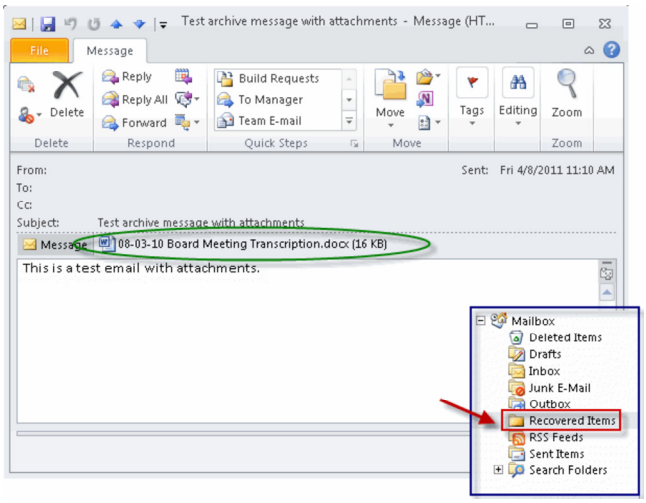
4.
- If the message contains attachments, those attachments are listed in a .txt file as well as in the message body.
- Click the **Click here to recall this message** to recall the message and the attachments.

  If prompted for a user name and password, enter the credentials you provided in Step 2.



5.
- The message is automatically displayed along with any attachments.
- The message is also placed in the **Recovered Items** folder. The message will remain in this folder until it is moved or deleted.
- If the message includes attachments, you can double-click the attachment link to view the attachment or save it to your computer.

If you want to recall the message again, you may do so by repeating the steps in this procedure.



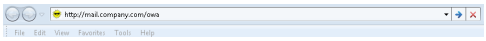
Recall Messages - Outlook Web Access (OWA)

Recalling Messages from Stubs

If your administrator has configured this capability, you can recall archived messages directly from the Outlook Web Access (OWA) interface in your web browser. Archived messages appear in your mailbox with a special icon in the message header, which can be clicked to access the original content of the message.

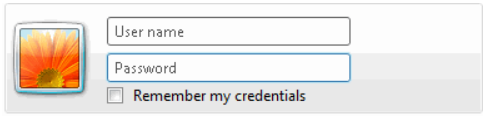
Use the following procedure to recall archived messages:

1. Type the Outlook Web Access URL provided by your administrator in the address line of your web browser.



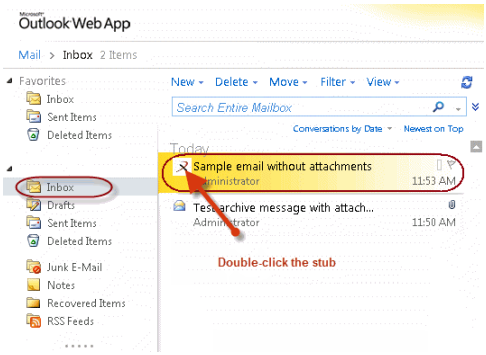
For example: `http://mail.company.com/owa`

2.
   - Type the user name and password provided by your administrator.
   - Click **OK.**



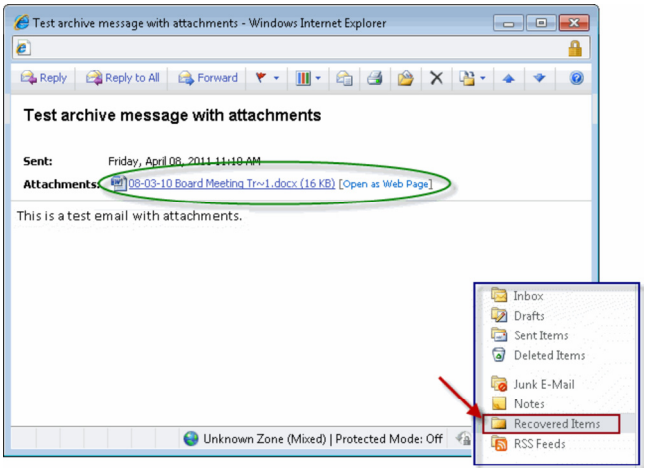
3. Locate the archived message you want to recall.

   Archived messages display a special icon in place of the typical envelope icon.



4.
   - Double-click the icon.
   - The message is automatically displayed along with any attachments.
   - The message is also placed in the **Recovered Items** folder. The message will remain in this folder until it is moved or deleted.
   - If the message includes attachments, you can double-click the attachment link to view the attachment or save it to your computer.

   If you want to recall the message again, you may do so by repeating the steps in this procedure.

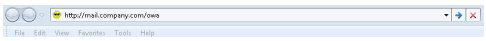


Recalling Messages from Universal Stub Link

If your administrator has configured this capability, you can recall archived messages directly from the Outlook Web Access (OWA) interface in your web browser. The body of the message includes a link that, by clicking it, brings back the original content of the message.

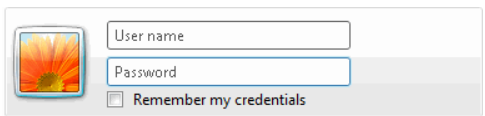
Use the following procedure to recall archived messages:

1. Type the Outlook Web Access URL provided by your administrator in the address line of your web browser.



For example: `http://mail.company.com/owa`

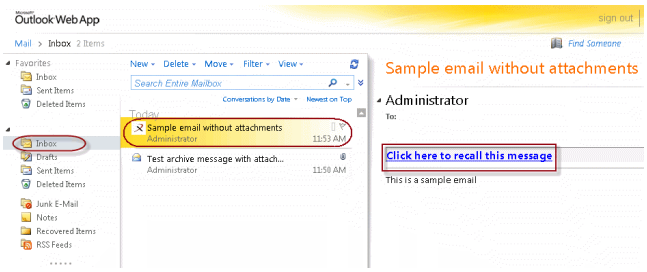
2.
   - Type the user name and password provided by your administrator.
   - Click **OK.**



3.
   - Locate the archived message you want to recall.

Archived messages display a special icon in place of the typical envelope icon.

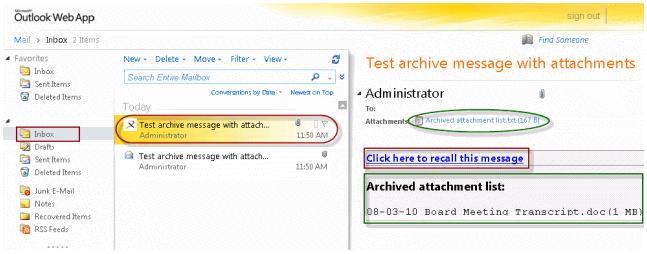
- Click the **Click here to recall this message** link included in the body of the message.



4.

- If the message contains attachments, those attachments are listed in a .txt file as well as in the message body.
- Click the **Click here to recall this message** to recall the message and the attachments.

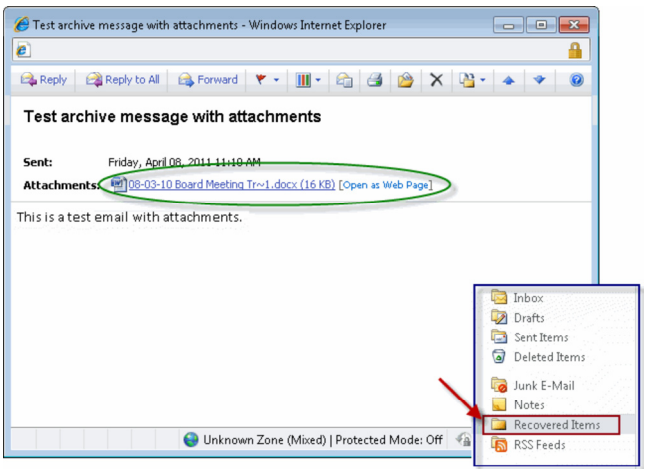
  If prompted for a user name and password, enter the credentials you provided in Step 2.



5.

- The message is automatically displayed along with any attachments.
- The message is also placed in the **Recovered Items** folder. The message will remain in this folder until it is moved or deleted.
- If the message includes attachments, you can double-click the attachment link to view the attachment or save it to your computer.

If you want to recall the message again, you may do so by repeating the steps in this procedure.



Desktop Browse - Exchange Mailbox Archiver Agent (Administrator)

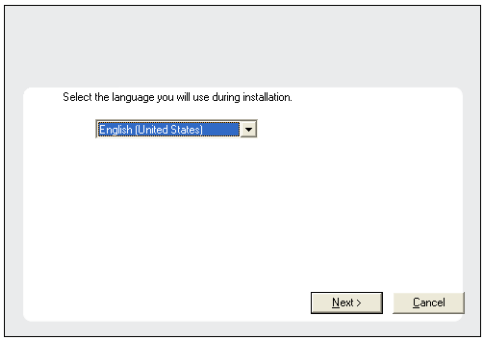
Desktop Browse enables users to browse data from an user-friendly Web interface from any remote location. To enable Desktop Browse operations, you need to first install the Web Search Server and the Web Search Client. The Web Search Server and Web Search Client can be installed on the same computer or on different computers.

Ensure that Service Pack 2 has been installed on the Client computer and Web Search Server prior to using this feature.

INSTALLING THE WEB SEARCH SERVER AND WEB SEARCH CLIENT

1. Ensure that the IIS is installed on the CommServe computer before installing the Web Search Server and Web Search Client.
2. Run **Setup.exe** from Software Installation Discs on the **CommServe** computer.
3. Select the required language.

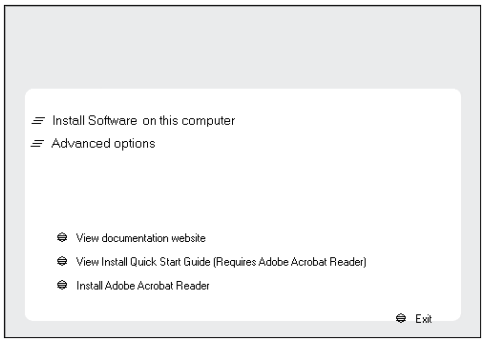
   Click **Next**.



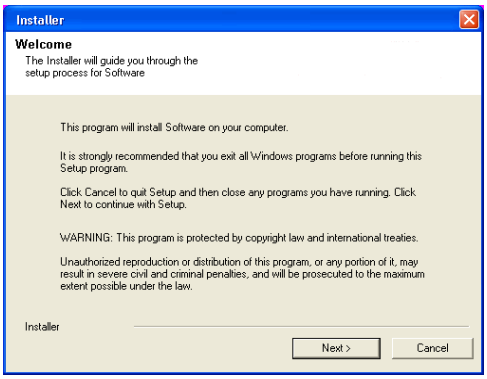
4. Select the option to install software on this computer.

   NOTES

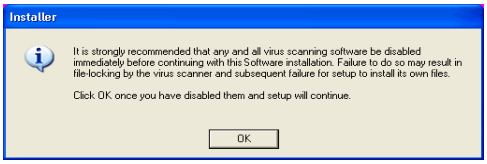
   - The options that appear on this screen depend on the computer in which the software is being installed.



5. Click **Next**.

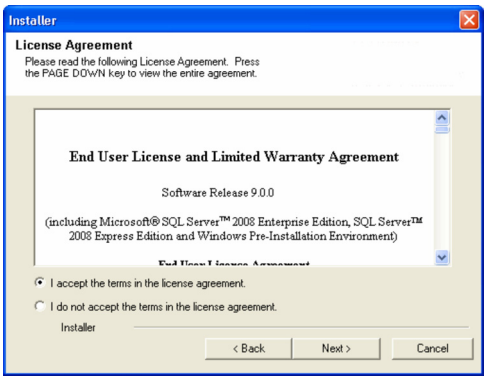


6. Click **OK**.



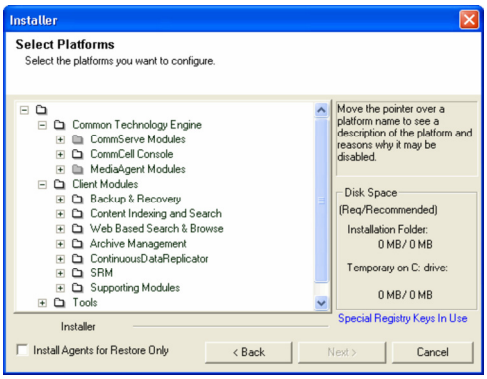
7. Select **I accept the terms in the license agreement**.

Click **Next**.

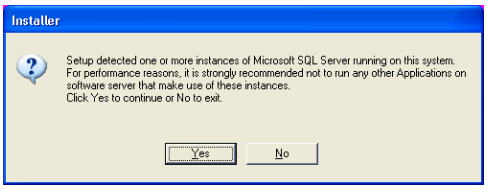


8. Expand **Client Modules** | **Web Search Server & Browse** and select **Web Search Server** and **Web Search Client**.

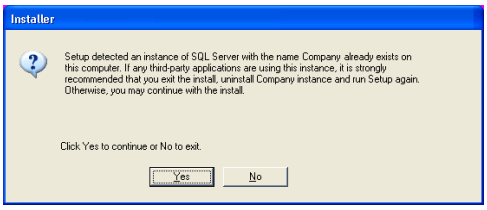
   Click **Next**.



9. Click **Yes**.



10. Click **Yes**.

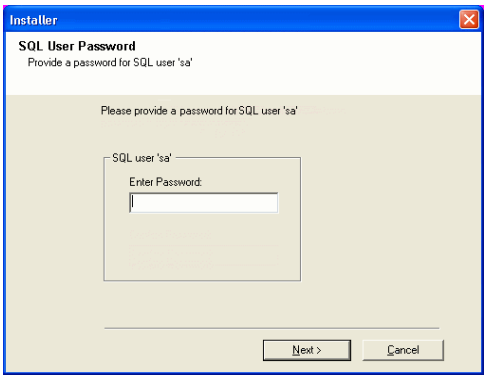


11. Specify the SQL Server System Administrator password.

    NOTES

    - This is the password for the administrator's account created by SQL during the installation.

    Click **Next**.

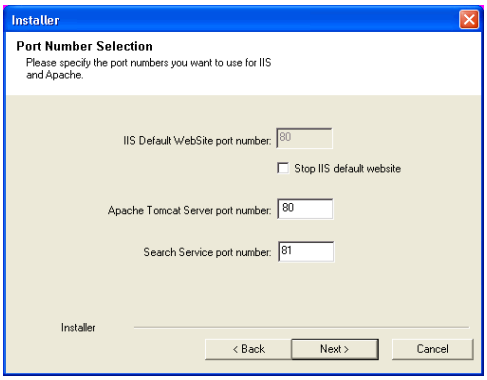


12. Modify **Apache Tomcat Server port number** to **82**.

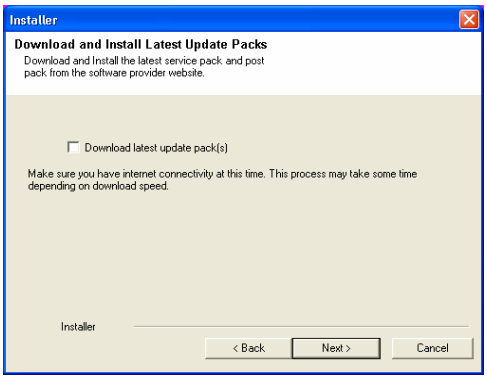
    Click **Next**.

    NOTES:

    - Ensure that these port numbers are different and are not already used by any other services or application.



13. Click **Next**.

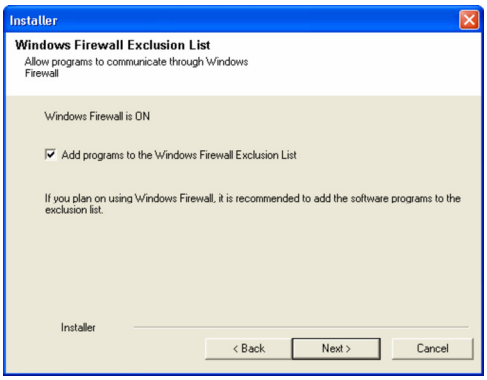


14. Select **Add programs to the Windows Firewall Exclusion List**, to add CommCell programs and services to the Windows Firewall Exclusion List.

    Click **Next**.

    This option enables CommCell operations across Windows firewall by adding CommCell programs and services to Windows firewall exclusion list.

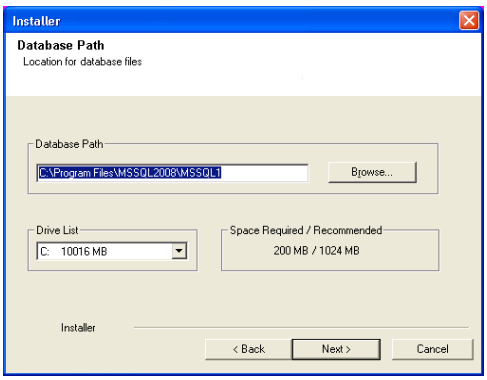
    It is recommended to select this option even if Windows firewall is disabled. This will allow the CommCell programs and services to function if the Windows firewall is enabled at a later time.



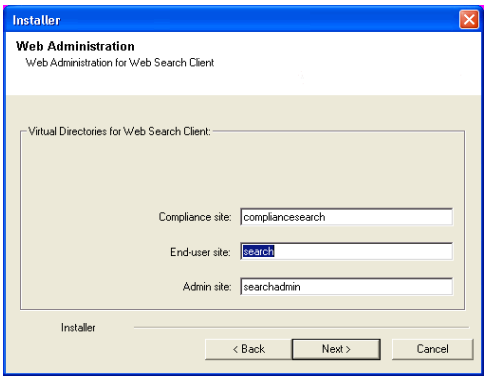
15. Enter the Web Search Server database installation path.

    Click **Browse** to modify the default location.

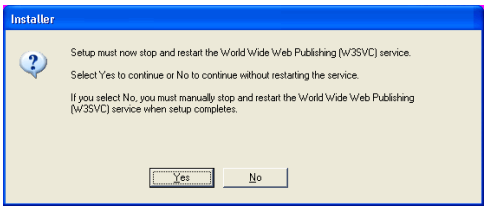
    Click **Next**.



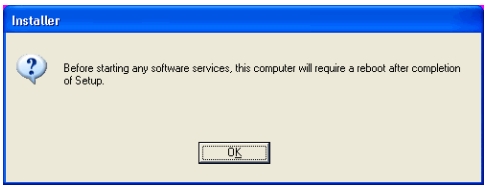
16. Click **Next**.



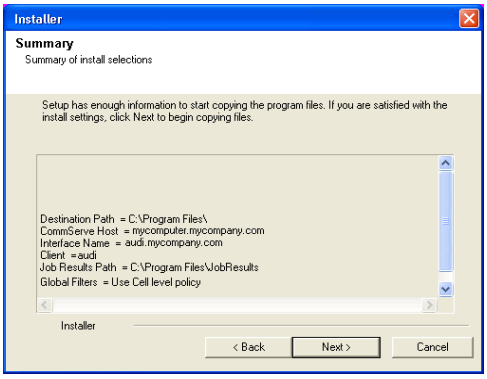
17. Click **Yes**.



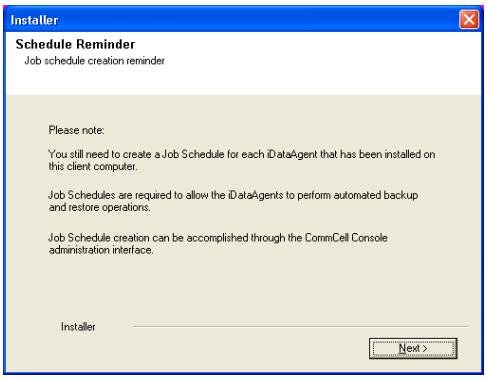
18. Click **OK**.



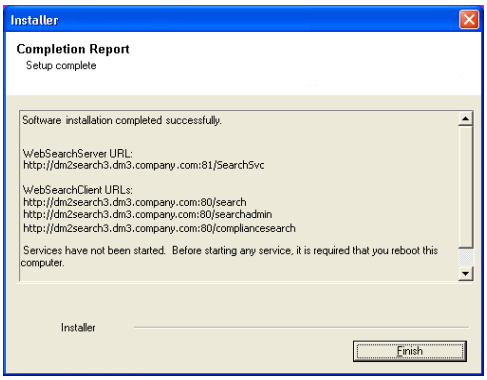
19. Click **Next**.



20. Click **Next**.



21. Click **Reboot** to finish the installation.



Previous Next

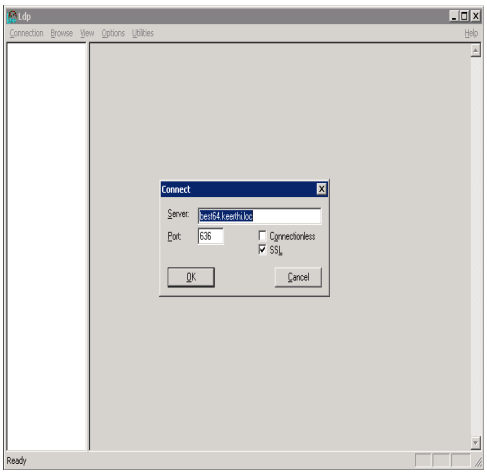
Desktop Browse - Exchange Mailbox Archiver Agent (Administrator)

Once the Web Search Server and Web Search Client are installed, perform the following configurations:

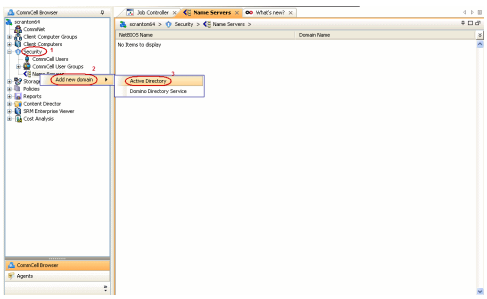
SETTING UP PERMISSIONS FOR END USERS

1. Obtain the domain name and fully qualified domain name of the Active Directory server.

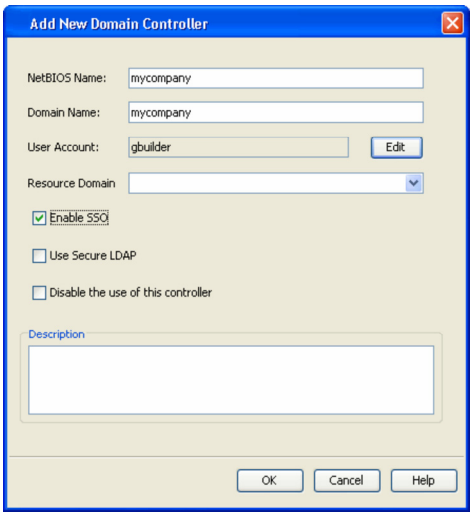
2. Ensure that LDAP is configured on the AD server:
   - From the Active Directory Server, select **Start | Run**.
   - Type **ldp** on the **Run** dialog box and click **OK**.
   - Click the **Connections** menu option, and select **Connect**.
   - From the **Connect** dialog box, enter the following information:
     - **Server**: Enter the name of the external domain server, e.g., `computer.domain.com`.
     - **Port**: Enter 636 as the port number for the external domain server.
     - **SSL**: Mark this checkbox to check for the proper certificate.
   - Click **OK**. If properly configured for LDAP, the external domain server details will be displayed in the LDP windowpane. If not configured for use with LDAP, an error message will appear indicating that a connection cannot be made using this feature.



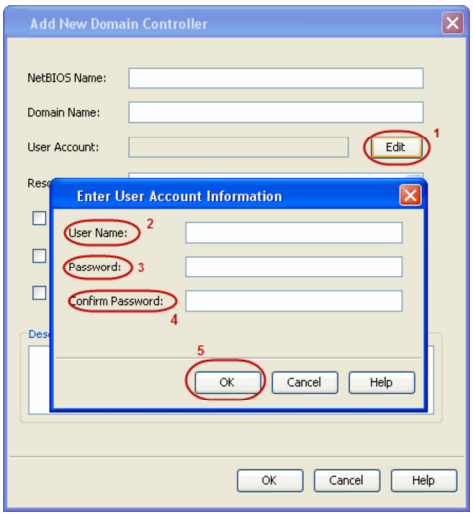
3. From the CommCell Browser, expand the **Security** node, right-click **Name Servers** | **Add New Domain** and click **Active Directory**.



4.
   - Enter the domain name in **NetBIOS Name** text box, e.g., `mydomain`.
   - Enter the Fully Qualified Domain Name (FQDN), e.g., `mydomain.mycompany.com` in the **Domain Name** text box.

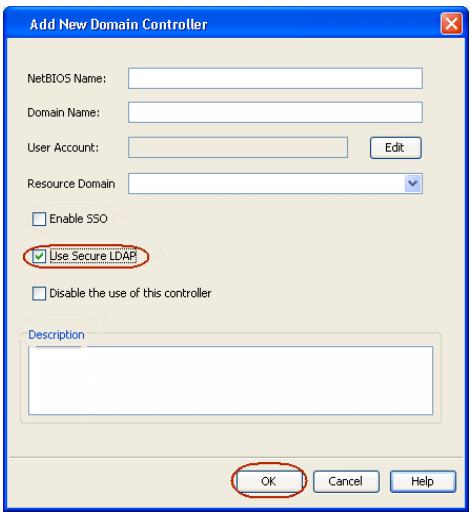


5.
   - Click **Edit** to enter the user account information for the domain.
   - Type **Username** and **Password** in **Enter User Account Information**.
   - Click **OK**.



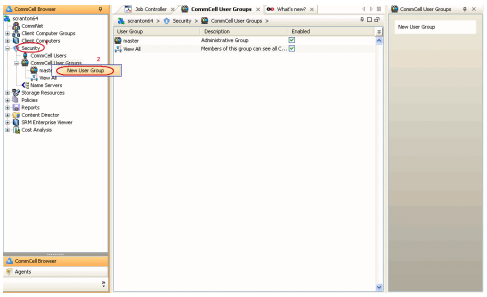
6.

- Select **Use Secure LDAP** to enable the secure Lightweight Directory Access Protocol (LDAP) with the external domain.
- Click **OK**.

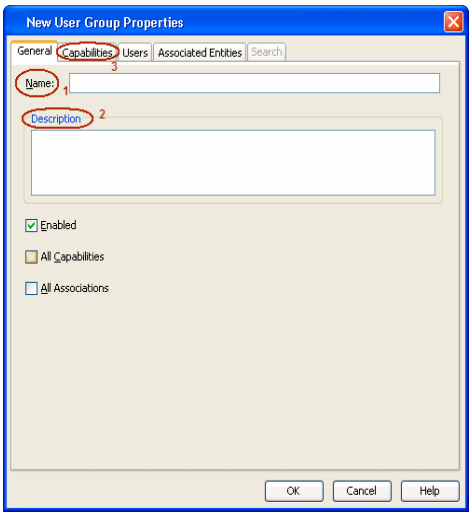


7. Once you have registered the Domain Controller, restart the IIS services on the Web Search Server.
   - From your **CommServe** computer, click the **Start** button on the Windows task bar and then click **Administrative Tools**.
   - Click **Services**.
   - In the **Services** window, select and right-click **IIS Admin Service** and click **Restart**.
   - **Restart Other Services** dialog will be displayed, click **Yes**.

8. From the CommCell Browser, expand the **Security** node, right-click **CommCell User Groups** and select **New User Group.**

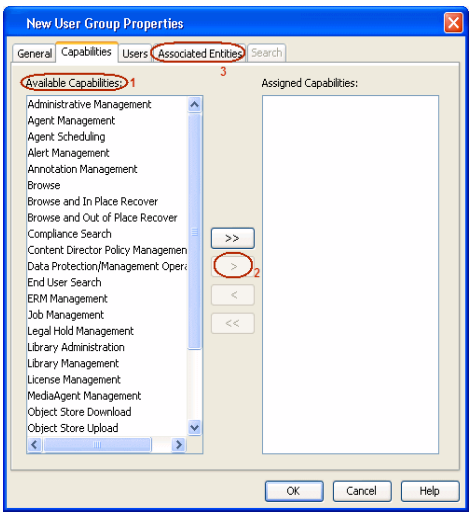


9.
   - Type the user group name in **Name** text box.
   - Type a description on the user group in **Description** box.
   - Click **Capabilities** tab.



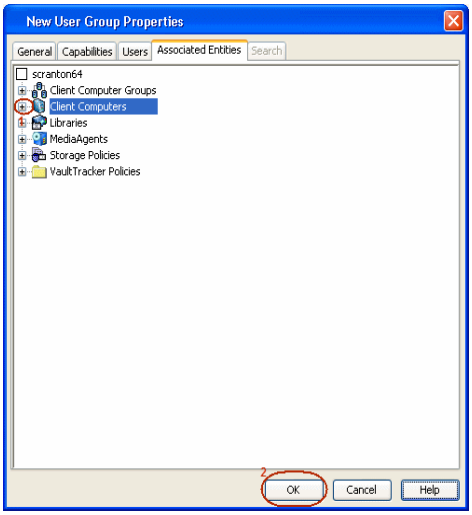
10.

- Press **Ctrl** key and select the following capabilities:
  - Browse
  - End user search
- Click **>** to move the selected capabilities to the **Assigned Capabilities** list box.
- Click **Associated Entities** tab.



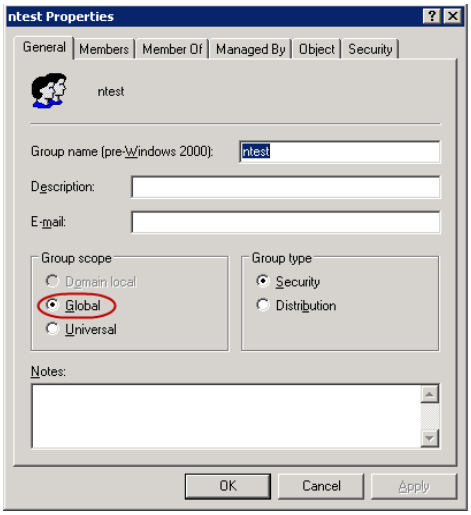
11.

- Expand **Client Computers** node and select the client computers to be browsed.
- Click **OK**.

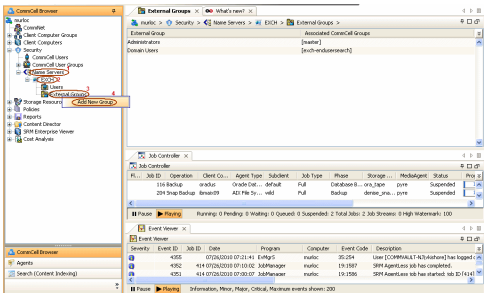


12. Ensure that the specific external user group in which the user belongs has Group Scope defined as `Global`on the Active Directory Domain:

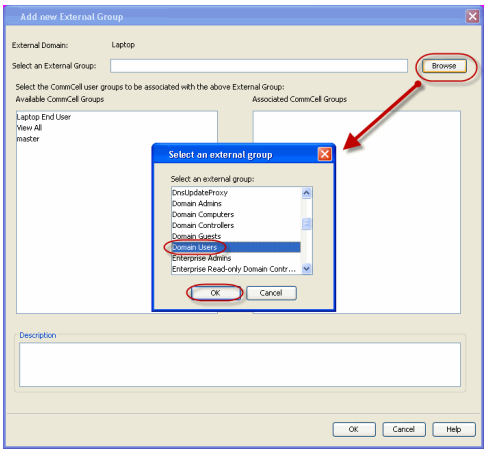
- Navigate to **Start | Administrative Tools | Active Directory Users and Computers**.
- Right-click the external group and select **Properties**.
- Select **Group** from **Group Scope** and click **OK**.



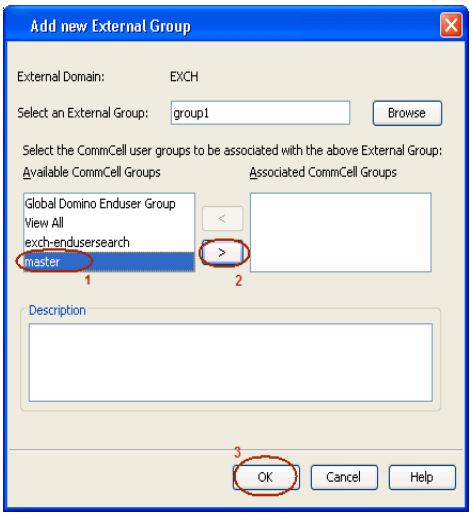
13. From the CommCell Browser, navigate to **Security | Name Server |<Domain Name>**, right-click **External Groups** and select **Add New Group**.



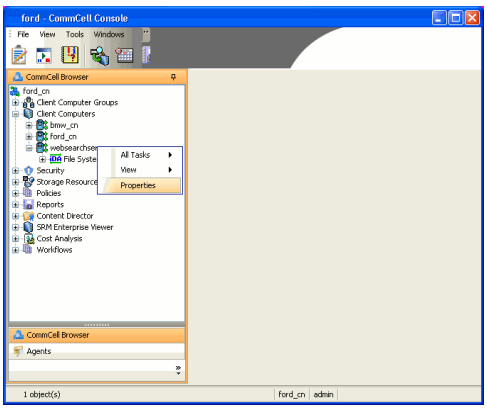
14.
- Click **Browse**.
- Select the <**external user group name**> in which the user belongs.



15.
- Select the **CommCell User Group** to associate with the specified external user group.
- Click **OK**.

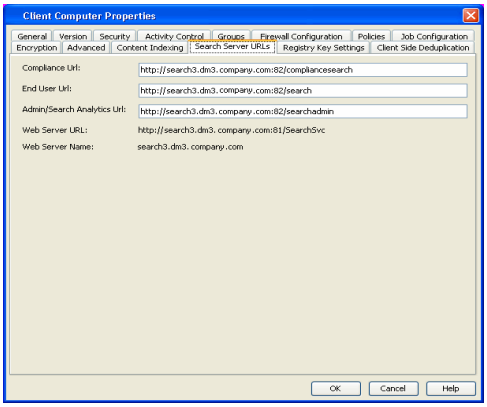


16. From the CommCell Browser, right-click to **<Client Computer>** on which Web Search Server is installed and click **Properties**.



17. Click **Search Server URLs** tab.

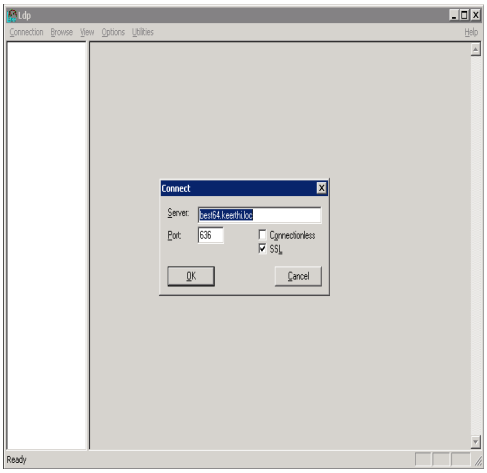
    Make a note of **End User Url** to provide the URL to the user to browse and recover the data.



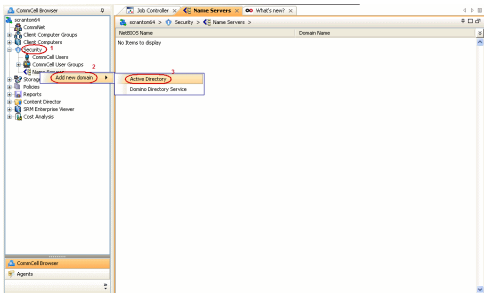
SETTING UP PERMISSIONS FOR COMPLIANCE USERS

1. Obtain the domain name and fully qualified domain name of the Active Directory server.
2. Ensure that LDAP is configured on the AD server:
   - From the Active Directory Server, select **Start | Run**.
   - Type **ldp** on the **Run** dialog box and click **OK**.
   - Click the **Connections** menu option, and select **Connect**.
   - From the **Connect** dialog box, enter the following information:
     - **Server**: Enter the name of the external domain server, e.g., `computer.domain.com`.
     - **Port**: Enter 636 as the port number for the external domain server.
     - **SSL**: Mark this checkbox to check for the proper certificate.
   - Click **OK**. If properly configured for LDAP, the external domain server details will be displayed in the LDP windowpane. If not configured for use with LDAP, an error

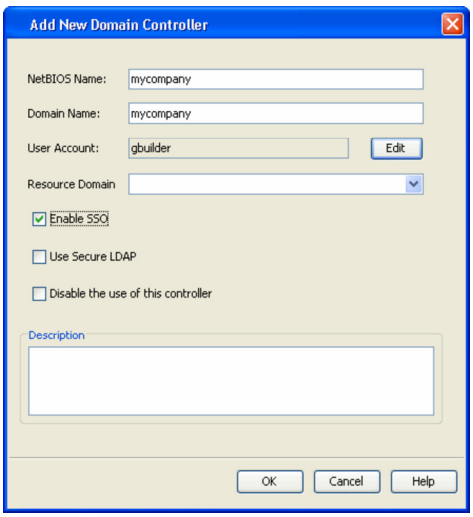
message will appear indicating that a connection cannot be made using this feature.



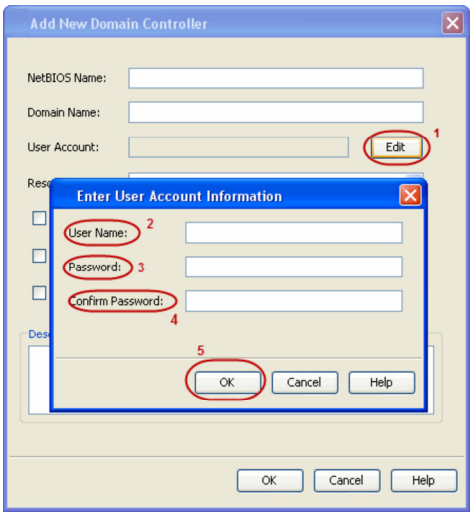
3. From the CommCell Browser, expand the **Security** node, right-click **Name Servers** | **Add New Domain** and click **Active Directory**.



4.
- Enter the domain name in **NetBIOS Name** text box, e.g., `mydomain`.
- Enter the Fully Qualified Domain Name (FQDN), e.g., `mydomain.mycompany.com` in the **Domain Name** text box.

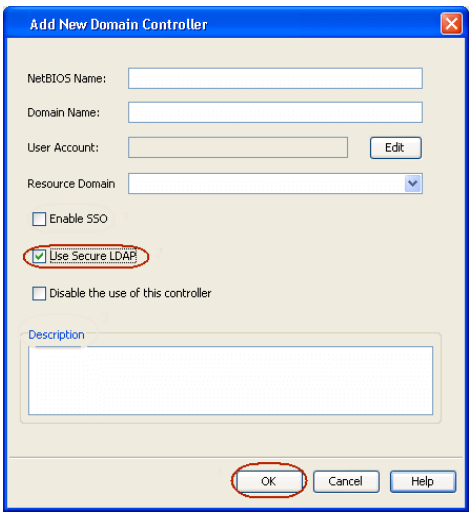


5.
- Click **Edit** to enter the user account information for the domain.
- Type **Username** and **Password** in **Enter User Account Information**.
- Click **OK**.



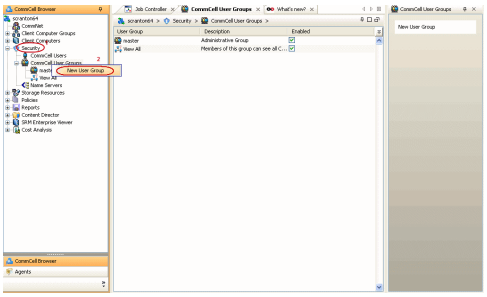
6.

- Select **Use Secure LDAP** to enable the secure Lightweight Directory Access Protocol (LDAP) with the external domain.
- Click **OK**.

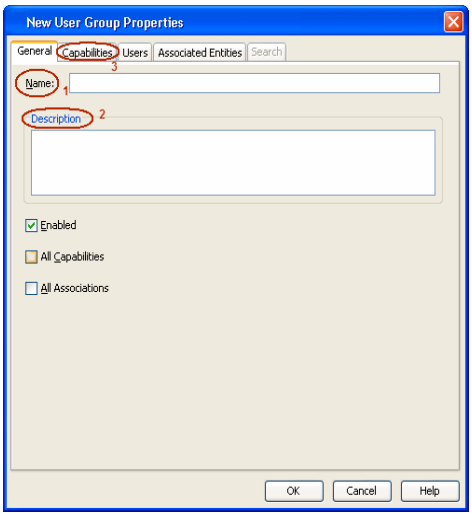


7. Once you have registered the Domain Controller, restart the IIS services on the Web Search Server.
   - From your **CommServe** computer, click the **Start** button on the Windows task bar and then click **Administrative Tools**.
   - Click **Services**.
   - In the **Services** window, select and right-click **IIS Admin Service** and click **Restart**.
   - **Restart Other Services** dialog will be displayed, click **Yes**.

8. From the CommCell Browser, expand the **Security** node, right-click **CommCell User Groups** and select **New User Group.**

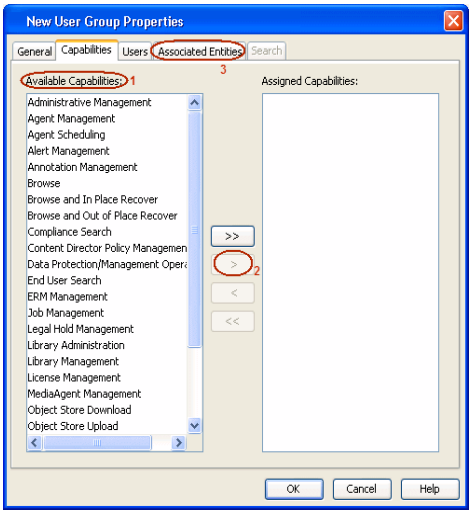


9.
   - Type the user group name in **Name** text box.
   - Type a description on the user group in **Description** box.
   - Click **Capabilities** tab.



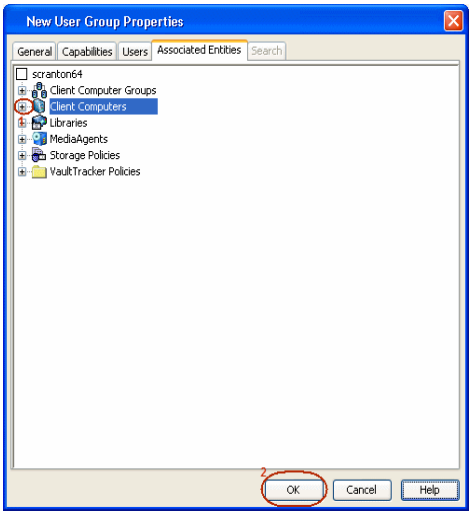
10.

- Press **Ctrl** key and select the following capabilities:
  - Browse
  - Compliance Search
  - Legal Hold Management
  - Annotation Management
  - Tag Management
  - ERM Management
- Click **>** to move the selected capabilities to the **Assigned Capabilities** list box.
- Click **Associated Entities** tab.



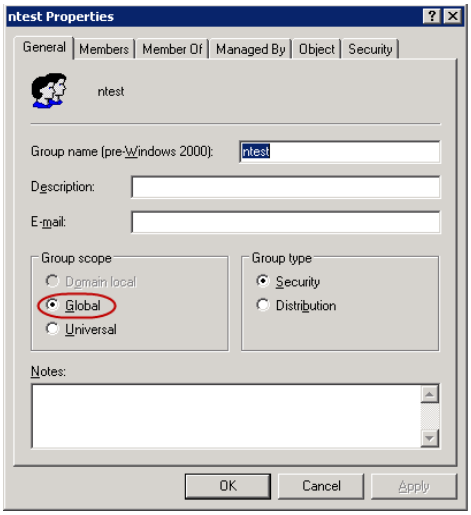
11.

- Expand **Client Computers** node and select the client computers to be browsed.
- Click **OK**.

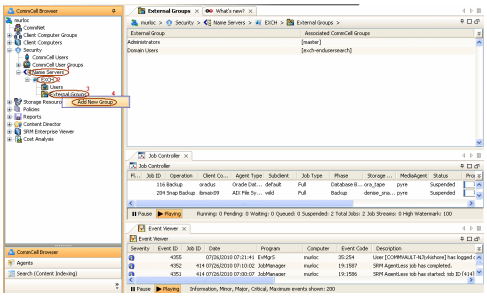


12. Ensure that the specific external user group in which the user belongs has Group Scope defined as `Global`on the Active Directory Domain:

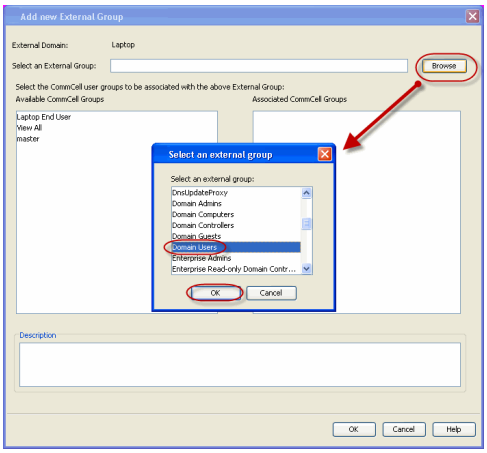
- Navigate to **Start | Administrative Tools | Active Directory Users and Computers**.
- Right-click the external group and select **Properties**.
- Select **Group** from **Group Scope** and click **OK**.



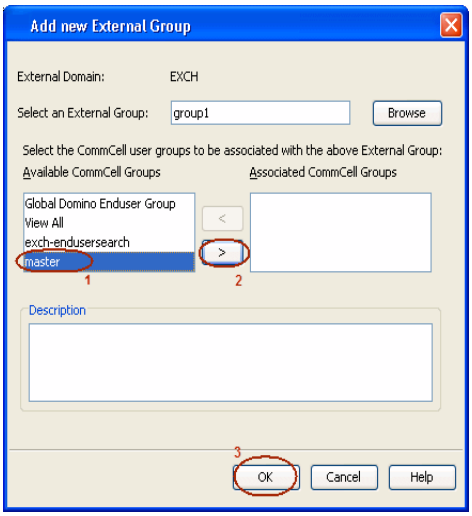
13. From the CommCell Browser, navigate to **Security | Name Server |<Domain Name>**, right-click **External Groups** and select **Add New Group**.



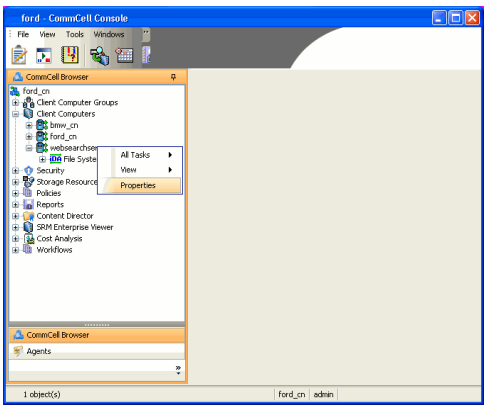
14.
- Click **Browse**.
- Select the <**external user group name**> in which the user belongs.



15.
- Select the **CommCell User Group** to associate with the specified external user group.
- Click **OK**.

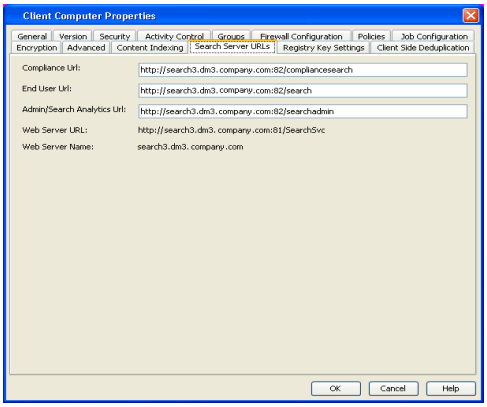


16. From the CommCell Browser, right-click to **<Client Computer>** on which Web Search Server is installed and click **Properties**.



17. Click **Search Server URLs** tab.

    Make a note of **End User Url** to provide the URL to the user to browse and recover the data.



ENABLING SECURED ACCESS FOR WEB SEARCH CLIENT

Use the following steps to enable secured access on the Web search client. This will allow you to access the Web Console using https instead of http.

INSTALL JAVA WITH ALL THE UPDATES

1. Stop the Tomcat services
2. If UAC is enabled, disable it.
3. Download and install the latest version of JAVA with all the updates on the Web client computer.
4. Open the command prompt window on the Web client computer, and execute the following command to verify if JAVA has been properly installed on the Web client computer:

   ```
   C:\java -version
   ```

   If you find that JAVA with the latest updates has not been installed, uninstall JAVA that you have installed and reinstall it again with all the updates.

Navigate to the command prompt on the Web client computer, and run the command specified in step 4 to verify if JAVA has been installed successfully.

Skip this step if the updates are installed successfully.

5. Start Tomcat services. If the Tomcat fails to start, point the JVM manually to Tomcat using the following steps:
   - Open the command prompt window on the Web client computer, navigate to `<PRODUCT_INSTALL_PATH>\Apache\bin` folder and execute the following command:

     `C:\<PRODUCT_INSTALL_PATH>\Apache\bin>tomcat6w.exe //ES//GxTomcatInstance001`

     where, `Instance001` is the instance installed on the WebClient computer.
   - On the Tomcat Services Instance properties dialog box, click the **Java** tab, and clear the **Use default** check box.
   - Restart Tomcat services

CONFIGURE SSL ON THE TOMCAT SERVER

Use the following steps for configuring SSL (Secure Socket layer) on the Tomcat Server:

1. Navigate to command prompt and run the following command:

   ```
   C:\Program Files\Java\jre6\bin>keytool -genkey -alias cvtomcat -keyalg RSA -keystore "C:\Program Files\company\product\Apache\cert\keystore"
   ```

2. Backup the server.xml file located in <product_install_path>\Apache\conf before making any changes to it.
3. In order to setup a JAVA JSSE connector to support SSL, search for the following entry in the server.xml:

   ```
   <Listener className="org.apache.catalina.core.AprLifecycleListener" SSLEngine="on" />
   ```

   Modify the above entry as following:

   ```
   <Listener className="org.apache.catalina.core.AprLifecycleListener" SSLEngine="off" />
   ```

4. Add the following entry to the `server.xml` file:

   ```
   <Connector port="443" protocol="org.apache.coyote.http11.Http11NioProtocol" SSLEnabled="true" maxThreads="150" scheme="https" secure="true" clientAuth="false" keystoreFile="C:/Program Files/CommVault/Simpana/Apache/cert/keystore" keystorePass="mnoettomcat" sslProtocol="TLS" />
   ```

5. Save the `server.xml` file, and restart the Tomcat services.

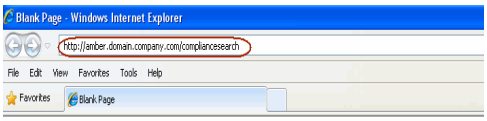
Previous Next

Desktop Browse - Exchange Mailbox Archiver Agent (User)

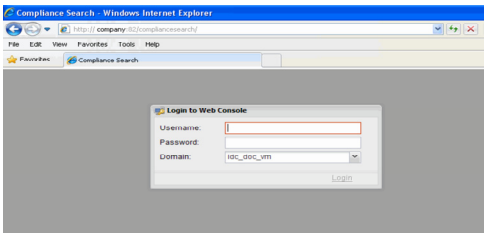
Desktop Browse enables users to browse and restore data using a web browser from any remote location without the need for installing the software.

Logging to Web Console

1. Open the supported Web Browser and type the Web Console URL in the address line. For example, `http://amber.domain.company.com/<web_alias_name>`

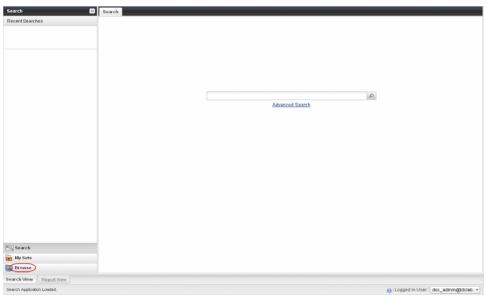


2.
   - Type the login credentials to access the Web Console.
   - Click **Login**.

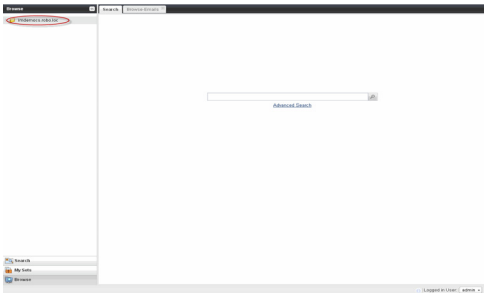


Browsing and Restoring Data

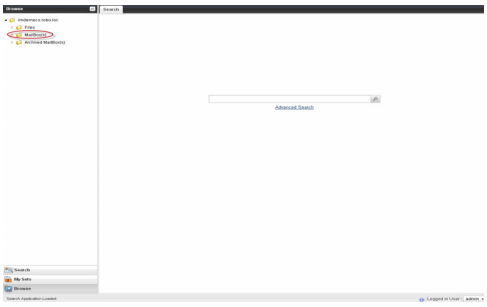
1. From the Web Console, click **Browse** on the left pane.



2. Double-click the **<CommServe computer name>**.

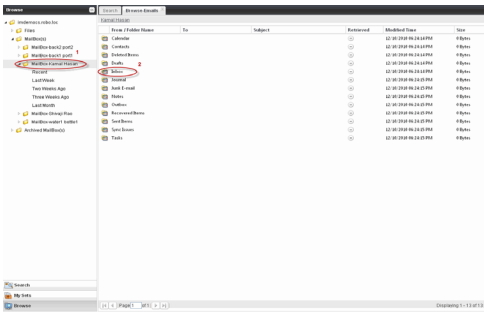


3. Double-click **<Archived MailBoxes>**



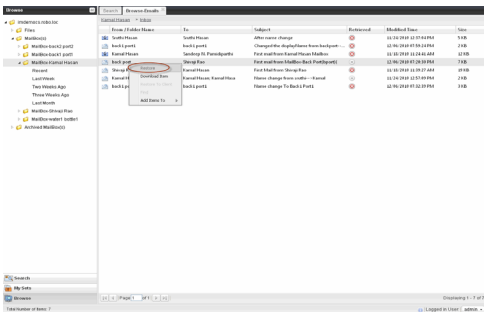
4.

- Click the **<Mailbox name>.**
- Double-click the Mailbox item from which you want to restore from the right pane.

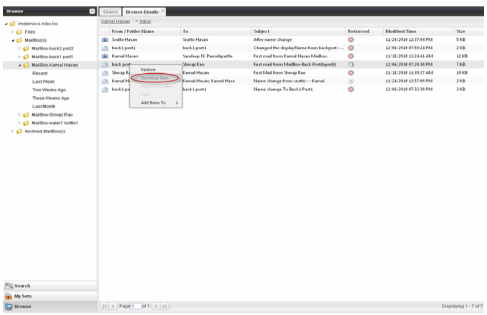


5. Right-click the item to be restored, and select **Restore.**

   The item is copied to the **MyReviewSe**t folder under **MySets** | **ReviewSet** node in the Web Console.

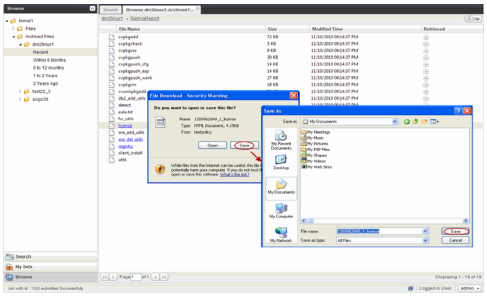


7. Right-click the item and select **Download Item**.



8.

- Click **Save** from the **File Download** dialog.
- Specify the location where the file needs to be downloaded in the Web Browser's download dialog box.
- Click **Save**.



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Desktop Browse - Exchange Mailbox Archiver Agent (User)

TABLE OF CONTENTS

Restoring Emails From a Specific Time Range

Finding Emails with a Specific Subject Name

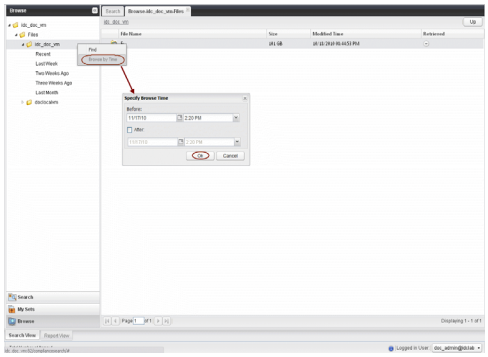
Finding Emails From a Specific User

Finding Emails To a Specific User

Finding emails with the Received time range

RESTORING EMAILS FROM A SPECIFIC TIME RANGE

You can also browse and restore emails that were backed up some time earlier or within a specific time range.

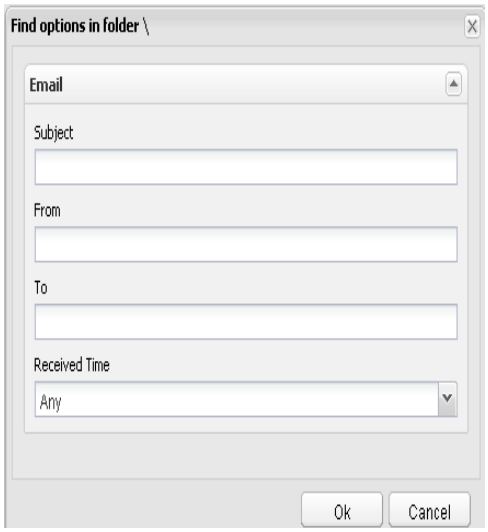


1. From the Web Console, click **Browse** on the left pane.
2. Double-click the **<CommServe computer name>**.
3. Double-click **Archived MailBoxes**.
4. Double-click the specific **<mailbox name>** and select one of the following options:
   - **Recent**
   - **Last Week**
   - **Two Weeks Ago**
   - **Three Weeks Ago**
   - **Last Month**
5. Right-click the **<mailbox>** and select **Browse By Time**.
6. Select the time range in the **Before** drop down boxes.
7. Click **After** and specify the time range.
8. Click **OK**.
9. Navigate to the mailbox item to be restored on the right pane**.**
10. Right-click the item and select **Restore.** The mailbox item is copied to the **MyReviewSet** folder under **MySets | ReviewSet** node in the Web Console.
11. Right-click the item and select **Download Item**.
12. Click **Save** from the **File Download** dialog.
13. Specify the location where the mailbox item needs to be downloaded in the Web Browser's download dialog box , and click **Save**.

FINDING EMAILS WITH A SPECIFIC SUBJECT NAME

You can use **Find** option to search and locate emails with a specific **Subject** name.

Follow the steps given below to find and locate Mailbox items with a specific **Subject** name.



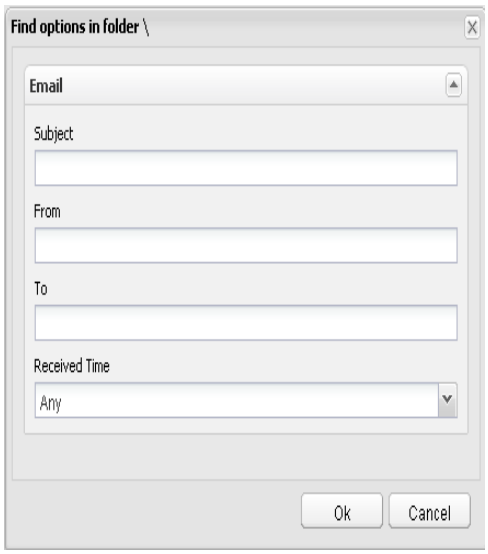
1. From the Web Console, click **Browse** on the left pane.
2. Double-click the **<CommServe computer name>**.
3. Double-click **Archived MailBoxes**.
4. Right-click the **<Mailbox name>** and select **Find**.
5. Type the **Subject** details of the email.
6. Click **OK**.

FINDING EMAILS FROM A SPECIFIC USER

You can use **Find** option to search and locate emails from a specific user.

Follow the steps given below to find and locate emails from a specific user..

1. From the Web Console, click **Browse** on the left pane.
2. Double-click the **<CommServe computer name>**.
3. Double-click **Archived MailBoxes**.
4. Right-click the **<Mailbox name>** and select **Find**.
5. Type the **From** details of the Email.
6. Click **OK**.

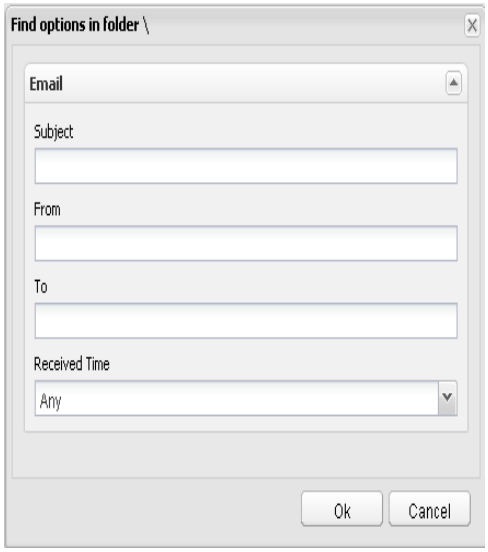


FINDING EMAILS TO A SPECIFIC USER

You can user **Find** option to find and locate emails to a specific user.

Follow the steps given below to find and locate emails to a specific user.

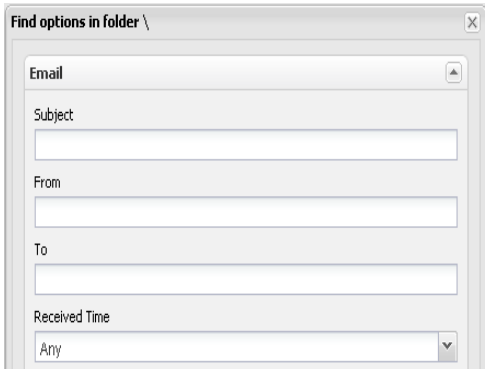
1. From the Web Console, click **Browse** on the left pane.
2. Double-click the **<CommServe computer name>**.
3. Double-click **Archived MailBoxes**.
4. Right-click the **<Mailbox name>** and select **Find**.
5. Type the **To** details of the Mailbox item.
6. Click **OK**.



FINDING EMAILS WITH THE RECEIVED TIME RANGE

Follow the steps given below to find and locate Mailbox items based on the **Received Time.**

1. From the Web Console, click **Browse** on the left pane.
2. Double-click the **<CommServe computer name>**.
3. Double-click **Archived MailBoxes**.
4. Right-click the **<Mailbox name>** and select **Find**.
5. Select **Received Time** from drop-down menu.
6. Click **OK**.



Desktop Browse - Exchange Mailbox Archiver Agent (User)

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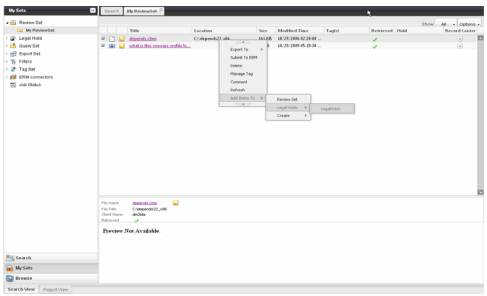
RETAINING AN EMAIL FOR LONG TERM

Compliance users can retain a specific mail for a longer term by moving them to a Legal Hold container.

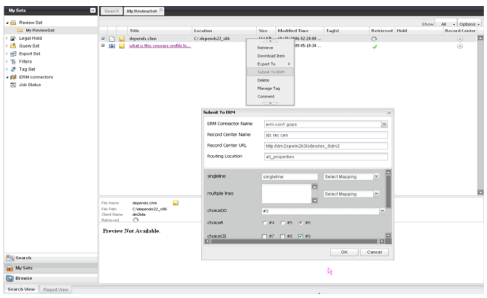
1. From the Web Console, click **MySets** on the left pane.
2. Double-click **Review Set** and click the <**Review Set Name>**.
3. Right-click the mail, navigate to **Add Item To** | **Legal Holds** and select <**Legal Hold Name**>.



MOVING AN EMAIL TO A RECORDS MANAGEMENT SITE

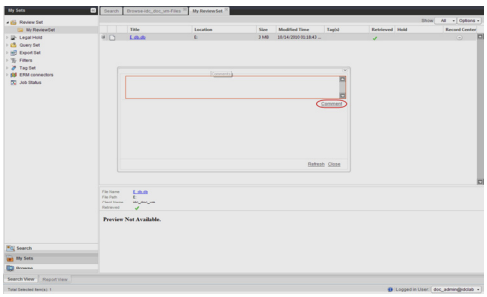
Compliance users can move mails to a Records Management Site (eg., Microsoft SharePoint Site) using an ERM Connector.

1. From the Web Console, click **MySets** on the left pane.
2. Double-click **Review Set** and click the <**Review Set Name>**.
3. Right-click the mail, and select **Submit To ERM**.
4. Click **ERM Connector Name** drop-down box and select the <**ERM Connector name**>.
5. Click **OK**.



ADDING COMMENTS TO AN EMAIL

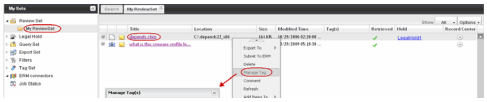
1. From the Web Console, click **MySets** on the left pane.
2. Double-click **Review Set** and click the <**Review Set Name>**.
3. Right-click the mail and select **Comment**.
4. Type the statement for comments and click **Comment**.
5. Click **Close** to exit the Comment window.



ADDING REVIEW TAGS TO AN EMAIL

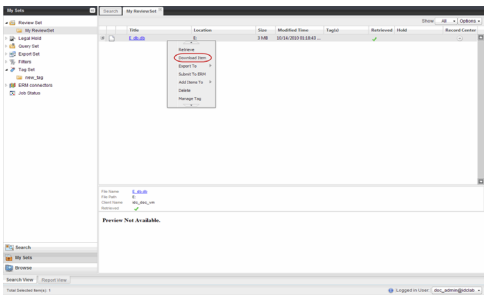
Compliance users can apply review tags to a mail to facilitate easy search based on tags at a later point of time.

1. From the Web Console, click **MySets** on the left pane.



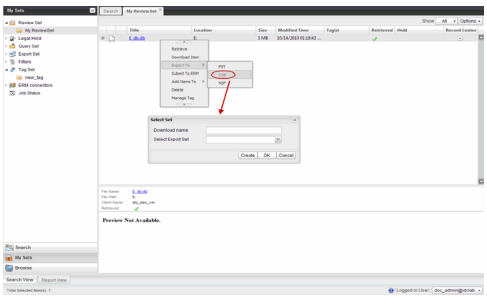
2. Double-click **Review Set** and click the <**Review Set Name>**.
3. Right-click the mail and select **Manage Tag**.
4. On the **Manage Tag(s)** window, select the tag to apply.
5. Click **Apply Tags**.

Downloading an Email



1. From the Web Console, click **MySets** on the left pane.
2. Double-click **Review Set** and click the <**Review Set Name>**.
3. Right-click the mail and select **Download Item**.
4. Specify the location where the mail needs to be downloaded in the Web Browser's download dialog box.

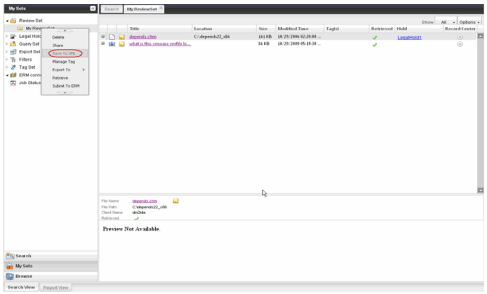
Downloading Multiple Emails



In order to download multiple mails, you can export the selected mails/folder to a compressed file format (CAB format) and then download the CAB file to your computer.

1. From the Web Console, click **MySets** on the left pane.
2. Double-click **Review Set** and click the <**Review Set Name>**.
3. Right-click the mail and select **Export To** | **CAB**.
4. Specify the **Download Name.**
5. Select the **Select Export** Set.
6. Click **OK**. The selected mail(s) are moved to the selected **Export Set** with the given name.
7. Click **MySets | Export Set**.
8. Click the Export Set which contains the CAB file.
9. Right-click the CAB file and select **Download**.
10. Click **Save** from the **File Download** dialog box.
11. Navigate to the location where you want to download the file.
12. Click **OK**.

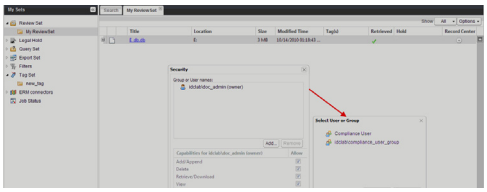
Saving an Email Properties



You can save the properties of all the mails in a review set as an XML file to your local computer.

1. From the Web Console, click **MySets** on the left pane.
2. Double-click **Review Set.**
3. Right-click the <**Review Set Name**> and select **Save to XML**.
4. Click **Save** from the File Download dialog.
5. Navigate to the location where you want to save the file.
6. Click **OK**.

Sharing Emails to Other Users



You can share and assign access permissions to all the mails in your Review Set folder to selected users.

1. From the Web Console, click **MySets** on the left pane.
2. Double-click **Review Set** and click the <**Review Set Name>**.
3. Right-click the review set and select **Share**.

4. Click **Add**.
5. Select the user/user groups from the **Select User or Group** window.
6. Click **OK.**
7. Select **Allow** check box to assign the respective privileges.
8. Click **OK**.

SHARING BROWSE RESULTS TO OTHER USERS

When browsing data, you can share the browse results with other users.

1. From the Web Console, click **Browse**.
2. Navigate to the Mailbox to be browsed.
3. Copy the URL of the browse result page from the browser's address bar and email to other users.

When the recipient users open the URL, they can directly view the browse result page as soon as they login to the Web Console.

Previous Next

Best Practices - Exchange Mailbox Archiver Agent

EXCLUDE CALENDAR, TASK, SCHEDULES AND CONTACTS TO ENHANCE ARCHIVING PERFORMANCE

While specifying the archiving rules, it is recommended to exclude certain Exchange IPM classes, such as tasks, calendar and contacts from archiving to enhance archive performance. For details to exclude the Exchange IPM classes, see Exclude Exchange Interpersonal Message (IPM) Classes from Archives.

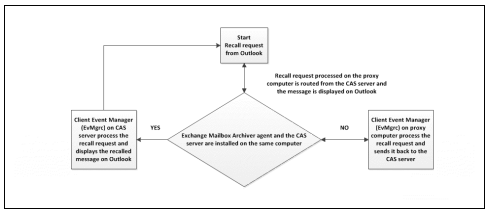
Frequently Asked Questions - Exchange Mailbox Archiver Agent

How does Stub Recall Work and What do I do if the Recall Fails?

For an end-user to successfully trigger stub recalls all the components involved should be configured as follows:

FOR EXCHANGE 2010

When a stub recall is triggered from the Outlook, by default the recall request is processed by the Bull Calypso Client Event Manager (EvMgrc) service on the CAS server. Subsequently the routing depends on location where the Exchange Mailbox Archiver agent is installed.



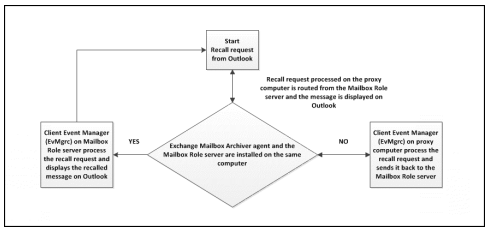
1. If the Exchange Mailbox Archiver agent and the CAS server are installed on the same computer then the recall request is processed on the CAS server.
2. If the Exchange Mailbox Archiver agent is installed on a proxy computer then the recall request is redirected to the EvMgrc service on the proxy computer. The recall is processed on the proxy computer.

Hence if you encounter recall failures:

1. Verify if the CAS server is running.
2. Verify if the Bull Calypso Client Event Manager (EvMgrc) service on the CAS server is running.
3. If applicable, check if the Bull Calypso Client Event Manager (EvMgrc) service on the proxy computer is running.
4. If applicable, check if the proxy has been enabled. See Configuration for details.

FOR EXCHANGE 2007

When a stub recall is triggered from the Outlook, by default the recall request is processed by the Bull Calypso Client Event Manager (EvMgrc) service on the Mailbox Role server. Subsequently the routing depends on location where the Exchange Mailbox Archiver agent is installed.



1. If the Exchange Mailbox Archiver agent and the Mailbox Role server are installed on the same computer then the recall request is processed on the Mailbox Role server.
2. If the Exchange Mailbox Archiver agent is installed on a proxy computer then the recall request is redirected to the EvMgrc service on the proxy computer. The recall is processed on the proxy computer.

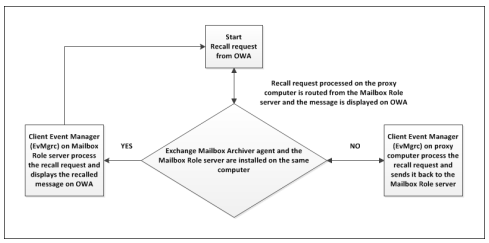
Hence if you encounter recall failures:

1. Verify if the Mailbox Role server is running.
2. Verify if the Bull Calypso Client Event Manager (EvMgrc) service on the Mailbox Role server is running.
3. If applicable, check if the Bull Calypso Client Event Manager (EvMgrc) service on the proxy computer is running.
4. If applicable, check if the proxy has been enabled. See Configuration for details.

OUTLOOK WEB ACCESS (OWA) RECALLS

When a recall request is triggered from OWA, an LDAP lookup using `msExchangeHomeMDB` reveals the name of the Mailbox Role /CAS server. The processing of this recall request depends on the following:

- If `uselocalcasforrecall` web.config key is present on the CAS server, then the request is handled on the local computer and the following scenarios apply:



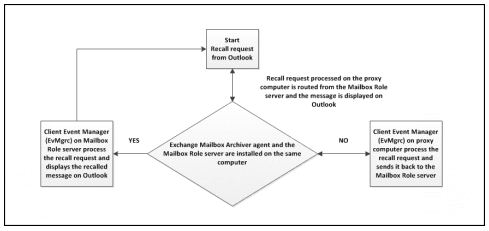
1. If the Exchange Mailbox Archiver agent and the CAS server are installed on the same computer then the recall request is processed on the CAS server.
2. If the Exchange Mailbox Archiver agent is installed on a proxy computer then the recall request is redirected to the EvMgrc service on the proxy computer. The recall is processed on the proxy computer.

Hence if you encounter recall failures:

1. Verify if the CAS server is running.
2. Verify if the Bull Calypso Client Event Manager (EvMgrc) service on the CAS server is running.
3. If applicable, check if the Bull Calypso Client Event Manager (EvMgrc) service on the proxy computer is running.
4. If applicable, check if the proxy has been enabled. See Configuration for details.

- If `uselocalcasforrecall` web.config key is not present, then the recall request is redirected to the Mailbox Role server and the following scenarios apply:

1. If the Exchange Mailbox Archiver agent and the Mailbox Role server are installed on the same computer then the recall request is processed on the Mailbox Role server.
2. If the Exchange Mailbox Archiver agent is installed on a proxy computer then the recall request is redirected to the EvMgrc service on the proxy computer. The recall is processed on the proxy computer.



Hence if you encounter recall failures:

1. Verify if the Mailbox Role server is running.
2. Verify if the Bull Calypso Client Event Manager (EvMgrc) service on the Mailbox Role server is running.
3. If applicable, check if the Bull Calypso Client Event Manager (EvMgrc) service on the proxy computer is running.
4. If applicable, check if the proxy has been enabled. See Configuration for details.

HOW DO I ASSIGN FULL ACCESS TO ALL MAILBOXES ON A SERVER

FOR EXCHANGE SERVER 2010

- Ensure that the service account is a member of Organization Management group.
- Ensure that the mail-enabled user is a member of the Local Administrator Group and have rights to all mailboxes on the server.

To assign full access follow the steps given below:

- Using ADSIEDIT navigate to Configuration | Services | Microsoft Exchange.
- Right-click your organization name, click Properties | Securities and click the Advanced tab.
- Click Edit to modify the permissions set for Organization Management group.
- Click to select Full Control, Receive As and Send As permissions and wait for replication.
- Click the Effective Permission tab and Select the name of the backup account.
- The backup account should display the following as selected:

  Full Control

  All Extended Rights

  Send As

  Receive As

- Start the PowerShell and type the following to add the backup account so it has full control over all the databases:

Get-MailboxDatabase -server (server name) | Add-ADPermission -user "backup account" -ExtendedRights Receive-As

Run the above PowerShell every time a new database is added.

- Navigate to the Exchange Management Console, right-click the <mailbox> and click Manage Full Access Permissions to view the mailbox listed under Full Access Permissions.

FOR EXCHANGE SERVER 2007

- Service account should be a member of Exchange Organization Administrators group.
- Ensure that the mail-enabled user is a member of the Local Administrator Group and have rights to all mailboxes on the server.

FOR EXCHANGE SERVER 2003

- The mail-enabled user is a member of the Local Administrator Group and have rights to all mailboxes on the server.
- Using the Exchange System Manager snap-in, right-click the organization object and delegate control.
- Using the Wizard, assign the MailboxAdmin user Exchange Full Administrator privileges.

HOW CAN I DO STUB RECALL WHEN THE PRIMARY COPY OFFLINE?

By default if the primary copy of the data is unavailable the stub recall will fail. However you can configure to trigger stub recall from an alternate data copy as follows:

1. In the Comcell Browser double-click the **Control Panel**.
2. Click the **Browse/Search/Recovery** option.
3. Select the **Automatically switch copy to read data from any copy** option.

4. Click **Ok**.

Troubleshooting - Exchange Mailbox Archiver Agent

Archive | Recover

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Error Message: Could Not Open the Exchange Private Message Store with Profile ExchAdm (E_FAIL (0x80004005))
Error Message: ERROR CODE [28:153]

UNABLE TO SELECT OFFLINE ARCHIVING

PROBLEM

While setting properties, the option to select Offline Archiving is not available.

SOLUTION

If you are unable to select Offline Archive, verify if the DisablePST key is enabled. In case it is enabled follow the procedure given in KB article 258277: Disabling the AutoArchive and Personal Folder File Features.

BACKUP PROCESS HANGS IN A PENDING STATE

PROBLEM

The backup processes may hang up in pending state because of incorrect permissions set at the service account level.

SOLUTION

To fix service account permission issues ensure the following:

- Service account is the local administrator on the client where the backups are run.
- Service account should be a member of Exchange Organization Administrators group for Exchange 2007 or Organization management group for Exchange 2010.

Follow the steps given below for fixing permission issues on Exchange 2010:

1. Using ADSIEDIT navigate to Configuration | Services | Microsoft Exchange.
2. Right-click your organization name, click Properties | Securities and click the Advanced tab.
3. Ensure that Organization Management group does not have "Receive As" or "Send As" access set to Deny.

Follow the steps given below for fixing permission issues on Exchange 2010 server:

1. On the Exchange 2010 server, open the command prompt.
2. Type `get-mailboxDatabase | add-adpermission -user <service account> -ExtendedRights Receive-As.`

MULTIPLE JOBS ARE FAILING WITH PROFILE ERRORS

PROBLEM

Multiple jobs will fail with profile errors when there is one profile for more than one job.

SOLUTION

Enable the following registry key to create job specific profiles:

1. From the CommCell Browser, navigate to **Client Computers**.
2. Right-click the <***Client***> in which you want to add the registry key, and then click **Properties**.
3. Click the **Registry Key Settings** tab.
4. Click **Add**.
5. Enter `CreateProcessSpecificProfile` in the **Name** field.
6. Enter `MSExchangeMBAgent` in the **Location** filed.
7. Enter REG_DWORD in the **Type** filed.
8. Enter 1 to enable and 0 to disable the key in the **Value** field.
9. Click **OK**.
10. From the CommCell Console, navigate to **<*Client*>** | **Exchange Mailbox** |**defaultBackupSet**.
11. Right click the subclient and click **Backup**.
12. Select **Full** as backup type and **Immediate** to run the job immediately.
13. Click **OK**.

    You can track the progress of the job from the **Job Controller or Event Viewer** window.

AUTOMATIC PROFILE CREATION IS FAILING

PROBLEM

Automatic profile creation process is failing as the service account name is not unique and have similar starting series.

SOLUTION

It is recommended to make the service account name unique for the process of auto discovery. It should not have similar starting series as any other account. Follow the steps given below to verify this manually:

1. Use Manual Profile Creation to create a new profile.
2. Enter the service account name and click **Check Name.**
3. If many names are displayed, it is recommended to change the service account name.

UNABLE TO LOG ON TO MICROSOFT INFORMATION STORE/PROFILE CREATION IS FAILING

PROBLEM

For Exchange Server 2010 you will not be able to log on to Microsoft Information Store and profile creation may also fail, if there is a mismatch in the Exchange Server name and the Exchange Server name specified in the agent properties that has the Client Access Role installed.

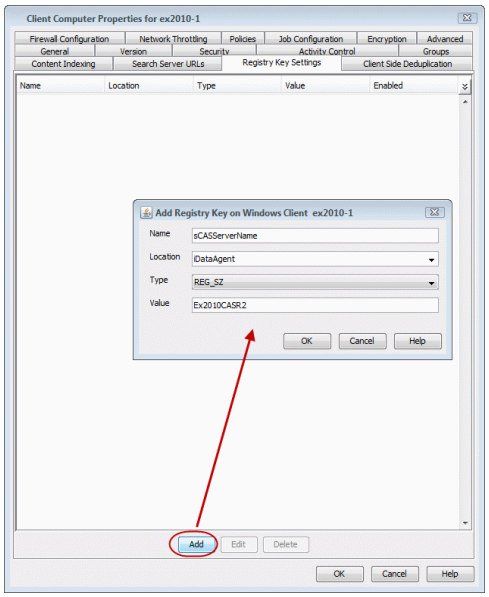
SOLUTION

For Exchange Server 2010 verify that the Exchange Server name specified in agent properties has the Client Access Role installed. In case the Exchange Server does not have the Client Access Role specified follow the steps given below to point to another server with client access role installed on it:

1. From the CommCell Browser, right-click the client computer that has Exchange Mailbox *i*DataAgent installed.
2. Click **Properties**.
3. Select **Registry Key Settings** tab.
4. Click **Add**.
5. Enter `sCASServerName` in the **Name** field.
6. From the **Location** list, select `iDataAgent`.
7. From the **Type** list, select REG_SZ.
8. Enter a CAS server name (e.g., `Ex2010CASR2`) in the **Value** field. The CAS server is

used to create the profile.

9. Click **OK**.



PROCESS HANGS WHILE ENABLING/DISABLING MAPI

PROBLEM

Process hangs while enabling/disabling MAPI because the Exchange client is unable to connect Twith the Global catalogue.

SOLUTION 1.

Create a new profile using Enable Referral Option by following one of the options mentioned below:

Open the command prompt.

Type `C:\>gcreconnect.`

Usage: `GCReconnect [-?] -m mailbox -s server [-e] [-x] [-n name] [-l] [-r] [-w]`

Options:

-m mailbox Specifies the mailbox to log on to.

-s server Specifies the Exchange server where the mailbox resides.

-e Enable referral and reconnect If referral and reconnect are not enabled, MAPI will connect directly to the Exchange server for name lookup

-x Enable additional referral and reconnect settings for Exchange 2007 Implies-e

-n name Specifies a name to resolve with ResolveName If not specified, QueryIdentity will be used instead

-l Loop over MAPILogonEx. Will log on and off repeatedly until key is hit

-r Loop over ResolveName. Will log on once and do name lookup repeatedly until key is hit Requires -n, not valid with -l

-w Wait for keyboard input before and after creating and configuring profile

-? Displays this usage information.

SOLUTION 2

Delete the existing profile and follow the steps given below:

1. From the CommCell Browser, navigate to **Client Computers**.
2. Right-click the <***Client***> in which you want to add the registry key, and then click **Properties**.
3. Click the **Registry Key Settings** tab.
4. Click **Add**.
5. Enter `enableReferral` in the **Name** field.
6. Enter `MSExchangeMBAgent` in the **Location** filed.
7. Enter REG_DWORD in the **Type** filed.

8. Enter 1 in the **Value** field.
9. Click **OK**.

ERROR DURING THE INSTALLATION OF MAPI CDO ON EXCHANGE 2003

PROBLEM

If you try to install MAPI CDO on Exchange 2003, you may encounter error messages during installation. This is due to lack of compatibility between MAPI CDO and Microsoft Exchange Server 2003.

SOLUTION

It is recommended to uninstall MAPI CDO and install MAPI by following the steps given below:

On Exchange Server:

1. Navigate to the **system32 folder**.
2. Run **FixMapi**.
3. Uninstall old **mapicdo**.
4. Reboot the computer.
5. Verify the presence of mapi32.dll and msmapi32.dll and rename them.

PROBLEM

On the Proxy Computer that has Outlook installed, in case there are any MAPI issues, follow the steps given below:

1. Uninstall old **mapicdo** if any.
2. Reboot the computer.
3. Install Outlook.
4. Navigate to the **system32** or the **syswow64 folder**.
5. Run **FixMapi**.
6. Reboot the computer.

MICROSOFT MAPI VERSION ERROR

PROBLEM

During Outlook installation, you might encounter a MAPI version error. This is because two MAPI versions cannot coexist.

SOLUTION

The MAPI version error may occur if you have a 32-Bit Outlook version and you are trying to install a 64-Bit Outlook version. This is because the 64-Bit MAPI and 32-bit MAPI cannot coexist on the same computer. It is recommended to uninstall one of the outlook versions.

ERROR MESSAGE: MAPI_E_FAIL_ON_PROVIDER (8004011D)

PROBLEM

You will get this error message if the Outlook profile is in the **Cache** mode.

SOLUTION

1. On the client computer, open the **Control Panel** and click the **Mail** icon.
2. Open the <***Profile***>, click the email account and select the related <***Account***>.
3. Click **Change**.
4. Verify that the **Use Cached Exchange Mode** box is unchecked.

ERROR MESSAGE: EXTASK.CPP:HRINITIALIZE(1342) INITIALIZING MAPI SUBSYSTEM

PROBLEM

You will get this error message when a backup process hangs due to the MAPI CDO conflict.

SOLUTION 1.

1. On the client computer navigate to the following files:

   Mapi32.dll

   msmapi32.dll

   emsmdb32.dll
2. Right-click the above mentioned files, click **Properties** and click the **Details** tab.
3. Click the **Version** tab and verify that all the files point to Outlook.

SOLUTION 2.

On the Proxy Computer:

1. Uninstall old **mapicdo**.
2. Reboot the computer.
3. Install Outlook.
4. Navigate to the **system32** or the **syswow64 folder**.
5. Run **FixMapi**.
6. Reboot the computer.

Note that running **FixMapi** will solve the above mentioned error on the proxy computer.

On Exchange Server:

1. Uninstall old **mapicdo**.
2. Reboot the computer.
3. Verify the presence of mapi32.dll and msmapi32.dll and rename them.
4. Install Outlook.

ERROR MESSAGE: MAPI_E_NETWORK_ERROR

PROBLEM

You will get this error message when there is no connectivity with Client Access Role server for Exchange 2010 and for Mailbox Role Server for Exchange 2007.

SOLUTION

Ensure for Exchange 2010 there is connectivity to the Client Access Role Server. In case of Exchange 2007, ensure connectivity to Mailbox Role Server.

ERROR MESSAGE: CANNOT OPEN FOLDER FOR MAILBOX "*USERNAME*" ERROR:MAPI_E_NOT_FOUND (0X8004010F)

PROBLEM

You will get this error message when the backup processes hangs in a pending state and the extended right on your service account is not set to **Receive As** on all databases on the Exchange Server.

SOLUTION 1

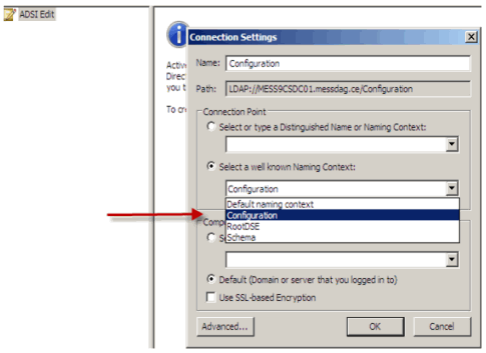
1. Open the profile in Outlook, it should open successfully.
2. Use **MFCMapi** utility to open the service account profile.
3. Click **Session** | **Logon** and click **Display Stores**.
4. Select the service account profile.
5. Click the **MDB** menu and click **Open Other Users Mailbox**.

6. Click the <***Mailbox***> and select the default flags to open it.
7. Navigate to the tree level for **Top of Information Store**, browse mailbox folders.

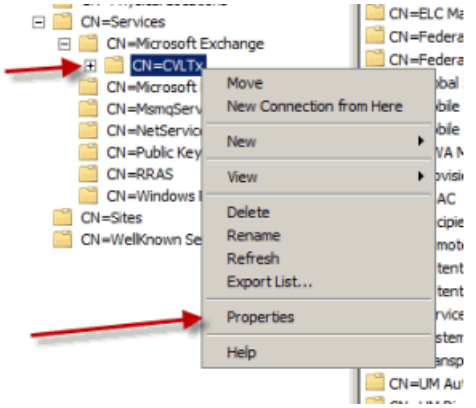
If there are no permission errors through the above mentioned process, then the service account should have the extended right set to **Receive-As** on all databases on the Exchange Server as follows:

SOLUTION 2

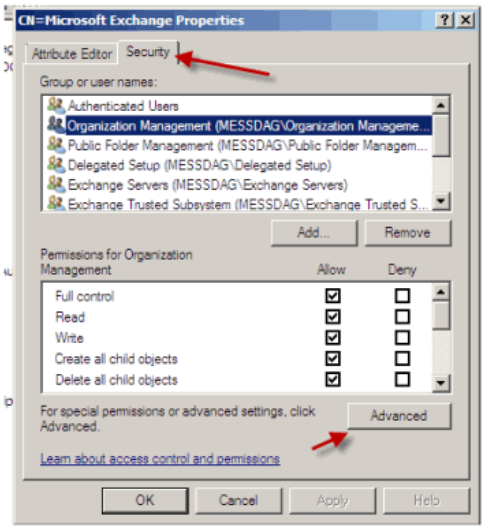
1. Using ADSIEDIT navigate to Configuration | Services | Microsoft Exchange.



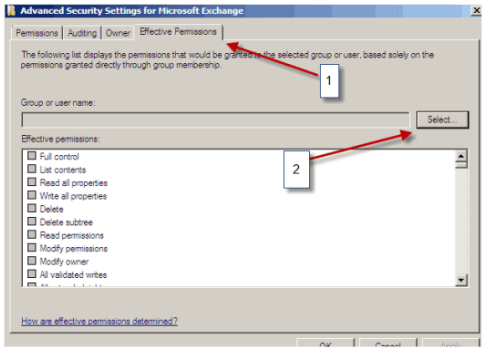
2. Right-click your organization name, click Properties | Securities and click the Advanced tab.



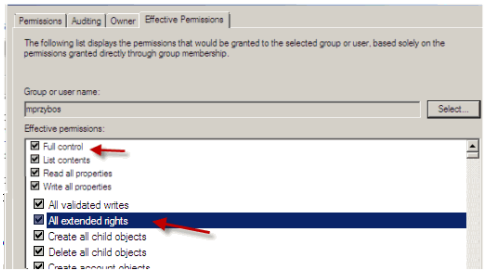
3. Click Edit to modify the permissions set for Organization Management group.



4. Click to select Full Control, Receive As and Send As permissions and wait for replication.
5. Click the Effective Permission tab and Select the name of the backup account.



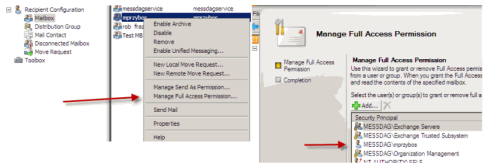
6. The backup account should display the following as selected:
   - Full Control
   - All Extended Rights
   - Send As
   - Receive As



7. Start the PowerShell and type the following to add the backup account so it has full control over all the databases:

   ```
   Get-MailboxDatabase -server (server name) | Add-ADPermission -user "backup account" -ExtendedRights Receive-As
   ```

8. Navigate to the Exchange Management Console, right-click the <mailbox> and click Manage Full Access Permissions to view the mailbox listed under Full Access Permissions.



SOLUTION 3

For Exchange 2010 and 2007 verify that the **Cache** mode is disabled on the Service Account. For more details, on Microsoft permission settings, see Allow Mailbox Access.

ERROR MESSAGE: COULD NOT OPEN THE EXCHANGE PRIVATE MESSAGE STORE WITH PROFILE EXCHADM (E_FAIL (0X80004005))

PROBLEM

You will get this error message when the extended right on your service account is not set to **Receive As** on all databases on the Exchange Server.

SOLUTION

1. Open the profile in Outlook, it should open successfully.
2. Use **MFCMapi** utility to open the service account profile.
3. Click **Session** | **Logon** and click **Display Stores**.
4. Select the service account profile.
5. Click the **MDB** menu and click **Open Other Users Mailbox**.
6. Click the <***Mailbox***> and select the default flags to open it.
7. Navigate to the tree level for **Top of Information Store**, browse mailbox folders.
8. If there are no permission errors through this process, the service account should have the extended right set to **Receive-As** on all databases on the Exchange Server.

ERROR MESSAGE: ERROR CODE [28:153]: THE MAILBOX PROFILE USED BY THIS PRODUCT IS INVALID. PLEASE TRY USING MDBVU, OUTLOOK OR ANY OTHER EXCHANGE CLIENT TO CHECK IF THE

PROFILE WORKS CORRECTLY

PROBLEM

You will get this error message when the extended right on your service account is not set to **Receive As** on all databases on the Exchange Server.

SOLUTION

1. Open the profile in Outlook, it should open successfully.
2. Use **MFCMapi** utility to open the service account profile.
3. Click **Session** | **Logon** and click **Display Stores**.
4. Select the service account profile.
5. Click the **MDB** menu and click **Open Other Users Mailbox**.
6. Click the <***Mailbox***> and select the default flags to open it.
7. Navigate to the tree level for **Top of Information Store**, browse mailbox folders.
8. If there are no permission errors through this process, the service account should have the extended right set to **Receive-As** on all databases on the Exchange Server.

Troubleshooting - Exchange Mailbox Archiver Agent

Archive | Recover

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RECALL FAILS WITH "COULD NOT CONNECT TO EVMGRC" ERROR

PROBLEM 1

If Outlook Add-In users are trying to recall items that are not available in Offline cache and they do not have connectivity to the Exchange Server.

SOLUTION 1

It is recommended for Outlook Add-In users to connect to the Exchange Server in order to recall items not available in Offline cache.

PROBLEM 2

In a DAG configuration if the home server is unavailable during a recall operation.

SOLUTION 2

By default in DAG configuration, recall requests are directed to the Home server, which never changes even if the server hosting the active copy changes.

If the home server is unavailable to process recall request it is recommended to place uselocalcasforrecall web.config key on the CAS server. This will enable the CAS server to process the recall request locally.

USAGE

```
<add key="CVOWA:UseLocalCASForRecall" value="true" />
```

USER CREDENTIALS ARE NOT ACKNOWLEDGED DURING A STUB RECALLS

PROBLEM

I keep getting prompted for my credentials over and over again when trying to do a stub recall.

SOLUTION

- Ensure that .NET 3.5 is installed on the computer, which has OWA Proxy Enabler installed on it.
- Log on to the IIS server installed on the computer, which has OWA Proxy Enabler installed. Navigate to the virtual directory cvwebrecall and ensure that

Basic and Integration authentication is enabled.

UNABLE TO ACCESS OWA SERVER WHEN RECALLING FROM MESSAGE STUBS

PROBLEM

The end-user is unable to access OWA server through the web as there could be a proxy or a load balance OWA server available through which the recall request are being routed to the mail OWA server.

SOLUTION

Places the CVOWA:CASProxyExternalUrl key in the web.config file located in `<Exchange_Install_Path>\ClientAccess\OWA`. This key allows the end-user to access OWA server available behind a proxy or a load balance OWA server.

USAGE

```
<add key ="CVOWA:CASProxyExternalUrl" value ="https://webmail.aaa.com" />
```

WHERE

Value - The name of the proxy or the load balancing server. For example there is a load balance server named "webmail.aaa.com" available in front of OWA servers. The end-user access OWA through url "https://webmail.aaa.com". In this case the value of this key should be set to "https://webmail.aaa.com".

UNABLE TO ACCESS OWA SERVER WHEN RECALLING FROM THE UNIVERSAL STUB LINK

PROBLEM

An end-user doing Universal recall is unable to access OWA server through the web.

SOLUTION

Places the CV:OwaRoot key in the web.config file located in `<Calypso installed location>\cvwebrecall`. This key provides an alternative OWA URL to be used for auto open when a load balance server is available with the OWA server. In such cases the OWA URL returned by the auto discover service may not accessible from outside.

USAGE

```
<add key ="CV:OwaRoot" value="https://webmail.aaa.com" />
```

WHERE

Value - Is the name of the proxy or the load balancing server. For example there is a load balance server named "webmail.aaa.com" available in front of OWA servers. The end-user access OWA through url "https://webmail.aaa.com". In this case the value of this key should be set to "https://webmail.aaa.com".

AUTO DISCOVER SERVICES ARE NOT AVAILABLE DURING OWA RECALLS WHEN RECALLING FROM MESSAGE STUBS

PROBLEM

For an end-user Exchange auto discover services on 'serverA' is not available when he is accessing OWA through 'serverA'.

SOLUTION

Places the CVOWA:AutoDiscoverUrl key in the web.config file located in `<Exchange_Install_Path>\ClientAccess\OWA`. If auto discover URL on the server is inaccessible, the following web setting key can be used to provide an alternative auto discover URL.

USAGE

```
<add key ="CVOWA:AutoDiscoverUrl" value ="https://serverB/autodiscover/autodiscover.xml" />
```

WHERE

Value - Is the set to Server B on which the Exchange auto discover services are available.

AUTO DISCOVER SERVICES ARE NOT AVAILABLE DURING OWA RECALLS WHEN RECALLING FROM THE UNIVERSAL STUB LINK

PROBLEM

For an end-user doing Universal recall, Exchange auto discover services on 'serverA' is not available.

SOLUTION

Places the CV:AutoDiscoverUrl key in the web.config file located in `<Exchange_Install_Path>\ClientAccess\OWA`. If auto discover URL on the server is inaccessible, the following web setting key can be used to provide an alternative auto discover URL.

USAGE

```
<add key ="CV:AutoDiscoverUrl" value ="https://serverB/autodiscover/autodiscover.xml" />
```

WHERE

Value - Is the set to Server B on which the Exchange auto discover services are available.

UNABLE TO SELECT AN ALTERNATE ACTIVE DIRECTORY SERVER DURING OWA RECALLS TO RETRIEVE MAILBOX INFORMATION WHEN RECALLING FROM MESSAGE STUBS

PROBLEM

By default OWA recall use the Active Directory server selected by Active Directory Domain Service on OWA server to get the details of the current OWA logged on user through the Active Directory query. This process would not be functional in case the user wants to use an alternate Active Directory server.

SOLUTION

Places the CVOWA:LdapPath key in the web.config file located in `<Exchange_Install_Path>\ClientAccess\OWA`. Add the name of the alternate Active Directory server as the value for the key to get the details of the current OWA logged on user.

USAGE

```
<add key ="CVOWA:LdapPath" value ="dc.domain.com" />
```

WHERE

Value - Is the AD alternate server name. For example if the user wants OWA recalls to use "dc.domain.com" as the Active Directory server to retrieve mailbox information.

UNABLE TO SELECT AN ALTERNATE ACTIVE DIRECTORY SERVER DURING OWA RECALLS TO RETRIEVE MAILBOX INFORMATION WHEN RECALLING FROM THE UNIVERSAL STUB LINK

PROBLEM

Universal recall utilize Exchange auto discover service to retrieve mailbox information. By default the Active Directory query generates the auto discover URL but the user is not able to retrieve auto discover URL information by using any other AD server.

SOLUTION

Places the CV:LdapPath key in the web.config file located in `<Exchange_Install_Path>\ClientAccess\OWA` if the user wants to use a specific Active Directory server to retrieve the Exchange auto discovery URL.

USAGE

```
<add key="CV:LdapPath" value="dc.domain.com" />
```

WHERE

Value - Is the AD alternate server name. For example if the user wants OWA recalls to use "dc.domain.com" as the Active Directory server to retrieve mailbox information.

OWA RECALL FAILS WITH PERMISSION ERROR IN A MULTIPLE SITE EXCHANGE ENVIRONMENT

PROBLEM

By default OWA recalls use the account of the current log on OWA user to communicate with EWS. If there are multiple sites involved, OWA request may be redirect to a CAS or mailbox Role server located in another site.

This may lead to loss of user account information during the OWA redirection and therefore the EWS call may fail.

SOLUTION

Places the CVOWA:UseArchiverAccount key in the web.config file located in `<Exchange_Install_Path>\ClientAccess\OWA`. This key provides a way to use Bull Calypso achiver account instead of current OWA log on user account to communicate with EWS.

USAGE

```
<add key ="CVOWA:UseArchiverAccount" value="true" />
```

For Exchange 2010

When using **CVOWA:UseArchiverAccount** key run the following power shell command on the Client Access Server against the account specified on the properties of the Exchange Archiver account:

```
New-ManagementRoleAssignment –Name:impersonationAssignmentName –Role:ApplicationImpersonation –User:ArchiverUser
```

For Exchange 2007

When using **CVOWA:UseArchiverAccount** key run the following power shell commands on the Mailbox Role server against the account specified on the properties of the Exchange Archiver account:

```
Get-ExchangeServer | where {$_.IsClientAccessServer -eq $TRUE} | ForEach-Object {Add-ADPermission -Identity $_.distinguishedname -User (Get-User -Identity ArchiverUser | select-object).identity -extendedRight ms-Exch-EPI-Impersonation}
```

```
Get-MailboxDatabase | ForEach-Object {Add-ADPermission -Identity $_.DistinguishedName -User ArchiverUser -ExtendedRights ms-Exch-EPI-May-Impersonate}
```

OWA RECALL FAILING WITH LDAP PERMISSION ERROR

PROBLEM

By default OWA recall does impersonation to do Active Directory query, but in case the logged on user does not have the permissions to run an Active Directory query the recalls will fail with LDAP permission errors.

SOLUTION

Places the CVOWA:ImpersonateUser key in the web.config file located in `<Exchange_Install_Path>\ClientAccess\OWA`. This key controls whether to impersonate the current OWA logged in user to query mailbox information from AD.

USAGE

```
<add key ="CVOWA:ImpersonateUser"value="true" />
```

WHERE

Value - can be set to False when the user does not have the correct LDAP permissions.

OWA IS ATTEMPTING TO RECALL FROM A SERVER THAT DOES NOT HAVE EXCHANGE WEB SERVICE (EWS)

PROBLEM

Recalls from OWA are failing when the user is trying to accesses OWA through server A from which the Exchange Web Service (EWS) is blocked. Where as the EWS is accessible from server B.

SOLUTION

By default OWA recall uses the same host server as that of Exchange Web Service (EWS). In case the user has the EWS configured on another server, they would require an alternate EWS host server name to complete the recall process.

This can be done by placing the CVOWA:NameResolution key in the web.config file located in `<Exchange_Install_Path>\ClientAccess\OWA`.

USAGE

```
<add key="CVOWA:NameResolution" value="Excforrecall" />
```

WHERE

Value- Is the EWS host server name.

EXCHANGE WEB SERVICE (EWS) IS NOT CONFIGURED AS SSL SITE FOR END-USER

PROBLEM

By default OWA recalls communicates with EWS with SSL http protocol. In case EWS is not configured as an SSL site, the end-user would not be able to recall from OWA.

SOLUTION

Place CVOWA:UseNonSSLForEws key in the web.config file located in `<Exchange_Install_Path>\ClientAccess\OWA`.

USAGE

```
<add key="CVOWA:UseNonSSLForEws"/>
```

UNABLE TO VIEW OWA RECALL LOGS

PROBLEM

You are unable to view the OWA recall logs from 'CvDiagnostics.

SOLUTION

Places the CVOWA:EventLog key in the web.config file located in `<Exchange_Install_Path>\ClientAccess\OWA`. If this key is enabled, the OWA recall logs will be written to 'CvDiagnostics' event entry.

USAGE

```
<add key ="CVOWA:EventLog" value="true"/>
```

PERMISSION RESTRICTIONS FOR END-USER TO RUN ACTIVE DIRECTORY QUERY

PROBLEM

For end-users the permissions set to run Active Directory query are restricted and therefore retrieving complete mailbox information is not possible for the end-user.

SOLUTION

Places the CVOWA:UseAutoDiscover key in the web.config file located in `<Exchange_Install_Path>\ClientAccess\OWA`. This key allows to modify the end-

user environment and allows him to retrieve complete mailbox information by replacing the Active Directory look up service with the Exchange auto discovery service.

USAGE

```
<add key ="CVOWA:UseAutoDiscover" value="true"/>
```

THE STUBS ARE NOT GETTING DELETED AFTER RECALLS

PROBLEM

The stubs still appear after a stub recovery operation.

SOLUTION

Places the CVOWA:DeleteStub key in the web.config file located in `<Exchange_Install_Path>\ClientAccess\OWA`. This key is used to set delete stub option globally. If the setting is set to 'true', the stub will be deleted after recovering. If the setting is set to 'false', the stub will not be deleted after recovering.

USAGE

```
<add key ="CVOWA:DeleteStub" value="true"/>
```

RECOVERING DATA ASSOCIATED WITH DELETED CLIENTS AND STORAGE POLICIES

The following procedure describes the steps involved in recovering data associated with the following entities:

- Deleted Storage Policy
- Deleted Client, Agent, Backup Set or Instance

BEFORE YOU BEGIN

This procedure can be performed when the following are available:

- You have a Disaster Recovery Backup which contains information on the entity that you are trying to restore. For example, if you wish to recover a storage policy (and the data associated with the storage policy) that was accidentally deleted, you must have a copy of the disaster recovery backup which was performed before deleting the storage policy.
- Media containing the data you wish to recover is available and not overwritten.
- If a CommCell Migration license was available in the CommServe when the disaster recovery backup was performed, no additional licenses are required. If not, obtain the following licenses:
  - IP Address Change license
  - CommCell Migration license

  See License Administration for more details.
- A standby computer, which will be used temporarily to build a CommServe.

RECOVERING DELETED DATA

1. Locate the latest Disaster Recovery Backup which contains the information on the entity (Storage Policy, Client, Agent, Backup Set or Instance) that you are trying to restore.
   - You can check the Phase 1 destination for the DR Set or use Restore by Jobs for CommServe DR Data to restore the data.
   - If the job was pruned and you know the media containing the Disaster Recovery Backup, you can move the media in the **Overwrite Protect Media** Pool. See Accessing Aged Data for more information. You can then restore the appropriate DR Set associated with the job as described in Restore by Jobs for CommServe DR Data.
   - If the job is pruned and you do not know the media containing the Disaster Recovery Backup, you can do one of the following:

     If you regularly run and have copies of the Data on Media and Aging Forecast report you can check them to see if the appropriate media is available.
2. On a standby computer, install the CommServe software. For more information on installing the CommServe, see CommServe Deployment.
3. Restore the CommServe database using the CommServe Disaster Recovery Tool from the Disaster Recovery Backup described in Step 1. (See Restore a Disaster Recovery Backup for step-by-step instructions.)

4. Verify and ensure that the **Bull Calypso Client Event Manager Bull Calypso Communications Service (EvMgrS)** is running.
5. If you did not have a CommCell Migration license available in the CommServe when the disaster recovery backup was performed, apply the IP Address Change license and the CommCell Migration license on the standby CommServe. See Activate Licenses for step-by-step instructions.
6. Export the data associated with the affected clients from the standby CommServe as described in Export Data from the Source CommCell.

   When you start the Command Line Interface to capture data, use the name of the standby CommServe in the `-commcell` argument.

7. Import the exported data to the main CommServe as described in Import Data on the Destination CommCell.

   This will bring back the entity in the CommServe database and the entity will now be visible in the CommCell Browser. (Press F5 to refresh the CommCell Browser if the entity is not displayed after a successful merge.)
8. If you have additional data that was backed up after the disaster recovery backup and before the deletion of the entity, use the procedure described in Import Metadata from a Tape or Optical Media to obtain the necessary information.
9. You can now browse and restore the data from the appropriate entity.

   As a precaution, mark media (tape and optical media) associated with the source CommCell as READ ONLY before performing a data recovery operation in the destination CommCell.

Agent Properties (General)

Use this dialog box to obtain or provide general and/or user account information for the agent.

Client Name

Displays the name of the client computer on which this Agent is installed.

Billing Department

Displays the name of the billing department, when the Agent is associated with a billing department.

***i*DataAgent**

Displays the identity of the Agent that is installed on the client computer.

Installed date

Displays the date on which the Agent was installed or upgraded on the client computer.

Profile Name

Displays the name of the profile that is associated with the appropriate Administrator Mailbox. Use this space to modify this name.

Mailbox Name

Displays the name of the mailbox that is associated with the appropriate Administrator profile. Use this space to modify this name.

Exchange Administrator Account

Displays the Exchange Administrator Account for the site in which this Exchange Server resides. Click **Change Account** to modify the account credentials.

Change Account

Click to change the Exchange Administrator Account associated with this agent. These credentials are initially provided during agent installation. Populate the resulting dialog box only if you changed the Exchange Administrator Account and it now differs from the one displayed in the **Exchange Administrator Account** field.

Backup Deleted Item Retention

Specifies whether to enable backups for Deleted Item Retention. By default, the Deleted Item Retention folder is not included in backups.

When cleared, backups of the Deleted Item Retention folder are disabled.

Use CSVDE For Discovery

Specifies whether to use CSVDE filtering for discovery operations. When selected, a CSVDE filter must be entered into the corresponding entry space.

Use of this option requires expert-level knowledge of CSVDE, which is a Microsoft tool used for extracting and filtering information from Active Directory. Incorrect use of the CSVDE filtering option can result in failed discovery and data protection operations.

The following example filters out system mailboxes residing on the SERVERNAME server from discovery operations:

```
"(&(msExchHomeServerName=*/cn=SERVERNAME)(!(CN=SystemMailbox{*)))"
```

When cleared, user-specified CSVDE filtering will not be used for discovery operations.

Exchange Server Name

Displays the hostname of the Exchange Server that is installed on the client computer. Use this space to modify the hostname if the name displayed is incorrect. If more than one hostname is entered, separate the hostnames with the semi-colon delimiter.

When backing up Exchange 2010 Database Availability Group (DAG) servers, enter the Mailbox server role that is used by backup and restore operations and configure the `sCASServerName` registry key to specify a CAS server for creating the profile.

Exchange Version

Lists the version of the Exchange Server that is installed on the client computer. To modify the version,select one from the list.

Manage Content Automatically

Specifies to automatically assign auto discovered content to the subclients.

By default, if a change is made to an automatically discovered mailbox that alters the association criteria it was discovered with, the next backup will automatically reassign the mailbox to the appropriate subclient that satisfies the new criteria.

Clear this option to disable this functionality.

Back to Top

Version

Use this dialog box to view the *i*DataAgent version.

Activity Control

Use this dialog box to enable or disable data management and data recovery operations on a selected client or client computer group.

Enable Backup

Specifies whether data management operations will occur from this agent.

If cleared:

- The button **Enable after a Delay** appears to the right side of this operation activity. It allows to pre-determine the date and time at which data management operations will begin on the selected agent.
- Data management operations from this agent cannot be started and are skipped.
- Running and waiting data management operations for this agent run to completion.
- Stopped data management operations for this agent cannot be resumed until this option is enabled.
- Pending data management operations for this agent do not run until this option is enabled.

(Job states are indicated in the Job Controller.)

Enable Restore

Specifies whether data recovery operations will occur from this agent.

If cleared:

- The button **Enable after a Delay** appears to the right side of this operation activity. It allows to pre-determine the date and time at which data recovery operations will begin on the selected agent.
- Data recovery operations for this agent cannot be started and are skipped.
- Running data recovery operations for this agent run to completion.
- Pending data recovery operations for this agent do not run until data recovery operations are enabled.

(Job states are indicated in the Job Controller.)

Security

Use this dialog box to:

- Identify the user groups to which this CommCell object is associated.
- Associate this object with a user group.
- Disassociate this object from a user group.

Available Groups

Displays the names of the user groups that are not associated with this CommCell object.

Associated Groups

Displays the names of user groups that are associated with this CommCell object.

Agent Properties (AD Server)

Use this dialog box to specify one or more Active Directory (AD) servers (i.e., domain controllers) that host an Exchange Server. Specifying additional AD Servers provides complete backup coverage of all Exchange mailboxes.

AD Server List

Displays the domain name of one or more Active Directory (AD) servers. You can use this space along with the **Add** and **Delete** buttons to include or remove Active Directory (AD) servers. For example, you may need to add an AD server in these scenarios:

- In cases where an Exchange Server is installed in a child domain and the schema master is in the parent domain, add the Active Directory (AD) server name of the schema master in the parent domain.
- In cases where a domain or forest has multiple domain controllers which may not fully replicate to each other, multiple domain controllers can be added to

ensure a complete list of mailboxes are backed up.

Add

Click to include an Active Directory (AD) server. Enter either a hostname, a fully-qualified domain name, or IP address.

Delete

Click to remove an Active Directory (AD) server.

Agent Properties (Storage Device)

Use this tab to view or change the filter storage policy for Erase Data by Browsing.

Filter Storage Policy

Displays the filter storage policy for Erase Data by Browsing that is associated with this agent. To associate a filter storage policy to a new agent or to change the filter storage policy associated with an existing agent, click one in the list.

Change User Account

Use this dialog box to view or change the Exchange Administrator account information that was set during installation.

Exchange Administrator Account

Displays the Exchange Administrator Account for the site in which this Exchange Server resides. Use this space to modify the account if it has changed and now differs from the one displayed here or if the account was incorrectly entered during installation.

Password

Use this space to specify or modify the Administrator Account password.

Confirm Password

Use this space to retype the password for confirmation.

Security

Use this dialog box to:

- Identify the user groups to which this CommCell object is associated.
- Associate this object with a user group.
- Disassociate this object from a user group.

Available Groups

Displays the names of the user groups that are not associated with this CommCell object.

Associated Groups

Displays the names of user groups that are associated with this CommCell object.

Save as Script

Use this dialog box to choose a name and path for the script file and the mode of execution.

Client

Enter or select the name of the client computer where the script will be created.

Path

Enter the path for the script that will be created.

Browse

Click this button to browse to a path for the command line script.

- Scripts are not supported on the Windows NT platform.
- It is recommended not to use any reserved device names (e.g., `LPT1`) as the name of the file.
- The file names are not case-sensitive.
- Do not end the file name with a trailing space or a period. Although the underlying file system may support such names, the operating system does not support them.

Mode

- **Synchronous**

  Specifies that the script execute in synchronous mode. A synchronous operation exits only when the operation has completed. This option is only available when scripting a single job.

- **Asynchronous**

  Specifies that the script execute in asynchronous mode. An asynchronous operation submits the job to the CommServe and exits immediately, returning control to the calling program or script.

Specify User Account to Run the Script

Specifies to use the given user account to save the operation as a script.

- **Use the Currently Logged in User Account**

  Click to use the same user account used for logging into the CommCell Console.

  - **User Name**

    Type the user name that was used for logging into the CommCell Console.

  - **Password**

    Type the password for the user account used for logging into the CommCell Console.

  - **Confirm Password**

    Type to re-confirm the password.

- **Use a Different User Account**

  Click to specify a different user account to save the operation as a script.

  - **User Name**

    Enter the different user name to be used for saving the operation as a script.

  - **Password**

    Enter the password for the user account to be used for saving the operation as a script.

- **Confirm Password**

  Type to re-confirm the password.

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Startup

Select from the following options. Note that all the options described in this help may not be available and only the options displayed in the dialog box are applicable to the operation for which the information is being displayed.

Priority

- **Use Default Priority**

  If selected, the default priority for this type of job will be used in determining how the Job Manager will allocate resources for this job.

- **Change Priority**

  Use this option to manually specify the priority for the job, between 0 (highest priority) and 999 (lowest priority). The Job Manager will use the priority setting when allocating the required resources. This is useful if you have jobs that are very important and must complete, or jobs that can be moved to a lower priority.

Start up in suspended state

Specifies that this job will start in the Job Controller in a suspended state and cannot run until the job is manually resumed using the **Resume** option. This

option can be used to add a level of manual control when a job is started. For example, you could schedule jobs to start in the suspended state and then choose which scheduled jobs complete by resuming the operation started in the suspended state.

Description

Use this field to enter a description about the entity. This description can include information about the entity's content, cautionary notes, etc.

Job Retry

Note that all the options described in this help may not be available and only the options displayed in the dialog box are applicable to the agent or operation for which the information is being displayed.

Enable Total Running Time

The maximum elapsed time, in hours and minutes, from the time that the job is created. When the specified maximum elapsed time is reached, as long as the job is in the "Running" state, it will continue; if the job is not in the "Running" state when the specified time is reached, Job Manager will kill the job.

Enable Number of Retries

The number of times that Job Manager will attempt to restart the job. Once the maximum number of retry attempts has been reached, if the job has still not restarted successfully, Job Manager will kill the job. Note that this job-based setting will not be valid if restartability has been turned off in the Job Management Control Panel.

Kill Running Jobs When Total Running Time Expires

Option to kill the job when the specified Total Running Time has elapsed, even if its state is "Running". This option is available only if you have specified a Total Running Time.

Vault Tracking

Select options to export and track media, using Vault Tracker.

Vault Tracking Options will be displayed only when a Vault Tracker license is available in the CommServe.

Vault Tracking options are only applicable for data protection operations using a storage policy associated with a library containing removable media (e.g., tape, optical or stand-alone.)

Export media after the job finishes

Specifies the media used by the data protection operation and media with the specific Media Status (if specified) will be exported and tracked by Vault Tracker.

Exclude Media Not Copied

When selected, allows you to exclude media with jobs that have to be copied.

Media Status

- **All**

  Click to select all media. Clear this option to select media with a specific status.

- **Active**

  Click to select media with its status marked as active.

- **Full**

  Click to select media with its status marked as full.

- **Overwrite Protected**

  Click to select media with its status marked as read-only .

- **Bad**

  Click to select media with its status marked as bad.

Export Location

Specifies the destination location and lists the stationary locations entered using the **Export Location Details** dialog box.

Track Transit

Specifies that transit information must be tracked, and lists the transit locations entered using the **Export Location Details** dialog box.

Use Virtual Mail Slots

Specifies the exported media is stored within the library in the virtual mail slots defined in the **Library Properties (Media)** dialog box.

Filter Media By Retention

Specifies that the system must automatically filter media based on whether the media has extended retention jobs or not.

- **Media with extended retention job(s)**

  Specifies that media with at least one extended retention job will be exported.

- **Media with no extended retention job(s)**

  Specifies that media with no extended retention jobs will be exported.

Alert

Use this tab to configure an alert for a schedule policy.

Configure Alert

- **Alert**

  The currently configured Alert.

- **Add/Modify Alert**

  When clicked, opens the Alert Wizard to configure alerts for this operation.

- **Delete Alert**

  When clicked, deletes any existing alerts that are already configured.

Alert Wizard

Threshold and Notification Criteria Selection

Use this step to select or modify the alert threshold and notification criteria. (See **Alerts and Monitoring** in *Books Online* for detailed information.)

Alert Criteria

Select the conditions that will initiate the alert. The alerts available are grouped into five categories:

- Application Management
- Automatic Updates
- Configuration
- Job Management
- Media Management

Send Individual Notification for This Alert

Enable this option to send an individual alert notification, instead of multiple alerts within a single alert notification, for the criteria selected.

Notification Criteria

Select whether the alert notification should be repeated, the frequency and whether notification should be sent when the condition clears.

Escalation Notification Criteria

Some alert notifications allow for configuration of an escalated alert. If this option is available, select the time at which the escalated alert notification should be sent, the frequency and whether notification should be sent when the condition clears.

Notify only when jobs qualify for extended retention*

Select this option when configuring a Job Management Data Protection alert. If selected, when a data protection job meets the thresholds of the configured alert criteria, users will only be notified of those jobs that are set for extended retention.

Notify only when job contains failed objects*

Select this option when configuring a Job Management Data Protection alert. If selected, when a data protection job meets the thresholds of the configured alert criteria, users will only be notified of those jobs that contain failed objects.

*This notification option is applicable for Job Management Data Protection alerts only.

ALERT CRITERIA

The following tables identify the types of available alerts within each category, the user capabilities needed for each alert, the entities the alert can be associated with, the types of criteria available, and a description.

APPLICATION MANAGEMENT

Alert Type	User Capabilities Needed for Each Alert type	Entities that can be Associated with the Alert	Criteria	Description
ContinuousDataReplicator	Agent Management or Alert Management capability with association at the object associated with the alert.	Clients Client Groups	Log File Volume Reached Low Watermark	One of the following has occurred: • A destination computer has imposed throttling on the source computer, based on the percentage of allocated log space remaining on the destination computer. • A destination computer has stopped the source computer from sending logs, based on the percentage of allocated log space remaining on the destination computer. • A source computer has run out of log space, and CDR has stopped monitoring the source paths for all the Replication Pairs, put the pairs in an aborted state, and deleted all log files. The free disk space thresholds are configurable in the ContinuousDataReplicator Properties (Operational Parameters) window.
			No transfer activity	There has been no data replicated from the source to the destination. The CommServe automatically checks for transfer activity every 15 minutes.
			Failed Replication	A Replication Pair's job has failed, been aborted by a user, or aborted by the system.
Exchange	Agent Management or Alert Management capability with association at the object associated with the alert.	Clients Client Groups	Journal Mailbox Threshold Exceeded	The journal mailbox exceeded its limit. (The mailbox threshold is set by the user in the CommCell console.) **NOTES** • See *Configure the Agent for a Journal Mailbox Threshold Alert* in Books Online for step-by-step instructions for setting the threshold limit on the agent. • If you would like to change the interval at which the threshold limit is checked or the time-out for the monitoring process, you can set these through the `nArcMonitorIntervalInMins` and `nArcMonitorTimeOutInMins` registry keys.
SharePoint	Agent Management or Alert Management capability with association at the object associated with the alert.	Clients Client Groups	New Virtual Servers Were Found. Restart IIS Services.	New virtual servers were found on the SharePoint server after an archive operation, which requires the Internet Information Services (IIS) to be restarted.
			SharePoint version is upgraded. Restart IIS.	The SharePoint server has been upgraded, which requires the Internet Information Services (IIS) to be restarted.

AUTOMATIC UPDATES

Alert Type	User Capabilities Needed for Each Alert type	Entities that can be Associated with the Alert	Criteria	Description
Download Updates	Administrative Management or Alert Management capability with CommCell association.		Job Failed	Updates failed to be downloaded.
			Job Succeeded	Updates were downloaded successfully.
			Job Succeeded with Errors	A download updates operation completed with errors.
Install Updates	Administrative Management or Alert Management capability with CommCell association.	Machines Client Groups	Job Failed	An update installation failed.
			Job Succeeded	An update installation completed successfully.
			Job Succeeded with Errors	An update installation operation completed with errors.
			Job Initiated	An update installation was initiated.
Updates Available to Download	Administrative Management or Alert Management capability with CommCell association.		Updates Available to Download	An update is available to be downloaded for installation. The frequency interval at which these updates are detected is configurable in the registry key.
Upgrades and Service Packs	Administrative Management or Alert Management capability with CommCell	Machines Client Groups	Release Upgrade Required	A new release software upgrade is required. (If configured, this alert occurs when a Client and/or MediaAgent software version is lower than that of the CommServe.)

	association.			The frequency interval at which these updates are detected is configurable in the registry key.
			Service Pack Required	A software update is required. (If configured, this alert occurs when a Client and/or MediaAgent service pack version is lower than that of the CommServe.) The frequency interval at which these updates are detected is configurable in the registry key.

CONFIGURATION

Alert Type	User Capabilities Needed for Each Alert type	Entities that can be Associated with the Alert	Criteria	Description
Clients	Agent Management or Alert Management capability with association at the object associated with the alert.	Clients Client Groups	Properties Modified	The properties of a client were modified, or there was an unauthorized attempt to alter properties.
			Disk Space Low	The minimum thresholds have been reached for the client software installation and system directories, which include the Job Results. The threshold for Job Results directory is configurable in the CommCell Console's Client Computers Properties window. The thresholds for the software installation and system directories and the frequency interval at which the directories are monitored are configurable in the registry key. If Data Classification Enabler is installed, this alert, if configured, will be sent if 85 percent or more of the volume's disk space is consumed. For computers where QSnap and either the Quick Recovery Agent or ContinuousDataReplicator are installed, this alert, if configured, will be sent if 80 percent or more of a volume's disk space is consumed, for all of the client computer's volumes. If Content Indexing Engine is installed, this alert, if configured will be sent for the following: • If 80 percent or more of the volume's disk space is consumed. • If the minimum free space falls below 10 GB.
		Agents	Properties Modified	The properties of an agent were modified, new content was added (for the Oracle agent only), or there was an unauthorized attempt to alter properties. This alert is also generated if the content, pre-post commands, or storage policy of a subclient were modified.
CommCell	Administrative Management or Alert Management capability with CommCell association		Alert every *n* failed login attempts	There were *n* failed attempts made to login to the CommCell.
			Alert CommServe License Expires With *n* Days	The CommServe license will expire in *n* days.
			Alert when License Consumed reaches *n* %	The CommServe license has reached *n* %. License Capacity Usage details get updated every 24 hours. It may also be updated if a Data Aging Job is run or if CommServe services are restarted.
			Properties Modified	The properties of the CommServe were modified, or there was an unauthorized attempt to alter properties.
			Alert Modified	A user was added or removed to an alert, an alert was modified, or there was an unauthorized attempt to modify the properties of an alert.
			Force De-configured	A user failed or successfully forced de-configured an Agent, Client, or MediaAgent.
			Disk Space Low	The minimum thresholds have been reached for the CommServe software installation and system directories or there is insufficient disk space for the CommServe database to grow. The threshold for the software installation and system directories and the frequency interval at which the directories are monitored are configurable in the registry key. The threshold for CommServe database directory, and the frequency interval at which the database directory is monitored, are configurable in the CommCell Console's Control Panel - System window (Database space check interval and Database Space Check Thresholds).

Library	Library Management or Alert Management capability with library association	Libraries	Properties Modified	The properties of a library were modified, an overwrite media option was selected for the library, or there was an unauthorized attempt to alter properties of a library.
MediaAgents	Media Management or Alert Management capability with MediaAgent association	MediaAgents	Properties Modified	The properties of a MediaAgent were modified, or there was an unauthorized attempt to alter the properties of a MediaAgent.
			Disk Space Low	The minimum thresholds have been reached for the MediaAgent software installation and system directories, which include the Index Cache. The threshold for MediaAgents Index Cache directory is configurable in the CommCell Console's MediaAgents Properties window. The threshold for the software installation and system directories and the frequency interval at which the directories are monitored are configurable in the registry key.
			DDB Store got corrupted	Deduplication Store of a MediaAgent is corrupted.
			MediaAgent went Offline	A MediaAgent was switched on/offline.
			Notify only if Condition persists for	Notify only if the condition persists for certain length of time.
			Repeat notification every	Repeat the notification for every *n* hours and *m* minutes. (*n* and *m* are set by the user at the time of configuration.)
Schedules	Alert Management capability with CommCell association		Scheduler Changes	A schedule was added, deleted, or modified, a job failed to be scheduled, a user added, removed, or modified a holiday.
Storage Policy	Storage Policy Management or Alert Management capability with storage policy association	Storage Policies	Properties Modified	The properties of a storage policy were modified, or there was an unauthorized attempt to alter the properties of a storage policy.

JOB MANAGEMENT

Alert Type	User Capabilities Needed for Each Alert type	Entities that can be Associated with the Alert	Criteria	Description
Auxiliary Copy	Administrative Management or Alert Management capability with CommCell association	Storage Policies Storage Policy Copies	Job Succeeded	An auxiliary copy operation completed successfully.
			Job Succeeded with Errors	An auxiliary copy operation completed with errors.
			Job Skipped	A scheduled auxiliary copy operation ran late, was skipped, or was skipped due to a holiday.
			Job Failed	An auxiliary copy operation failed, failed to start, or the operation was aborted by the system.
			Job Activity	An auxiliary copy operation was killed, resumed, or suspended by a user.
			Auxiliary Copy fallen behind alert	The following criteria have been met for the selected storage policy: • data to be copied is more than *n* GB • jobs have not been copied in more than *n* days (*n* is set by the user in the Storage Policy Properties (Advanced) window.) The interval at which the storage policy is checked for this criteria can be configured in the Media Management Configuration (Auxiliary Copy Configuration) window; the default **Interval (Hours) between Auxiliary Copy Fallen Behind alerts** is 24 hours.
			Delayed by *n* Hrs	An auxiliary copy operation was in a waiting state for *n* hours. (*n* is set by the user at time of configuration.)
			Alert every *n* attempt (Phase failures)	There were *n* attempts made to resume the auxiliary copy operation after a phase failure.
			Alert every *n* attempt (Network failures)	There were *n* attempts made to resume the auxiliary copy operation after a network failure.
Backup Copy Workflow	Administrative Management or Alert Management capability with CommCell association	Storage Policies	Job Succeeded	A backup copy operation completed successfully
			Job Succeeded with Errors	A backup copy operation completed with errors.
			Job Skipped	A scheduled backup copy operation ran late, was skipped, or was skipped due to a holiday.
			Job Failed	A backup copy operation failed, failed to start, or the operation was aborted by the system.
			Job Activity	A backup copy operation was killed, resumed, or suspended by a user.

			Job Started	A backup copy operation was started by a user.
Continuous Data Replication	Data Protection Operations or Alert Management capability at each associated entity.	Clients Agents Replication Sets	Job Succeeded	A Recovery Point creation, Consistent Recovery Point creation, or CopyBack operation completed successfully.
			Job Succeeded with Errors	A Recovery Point creation, Consistent Recovery Point creation, or CopyBack operation completed with errors.
			Job Skipped	A scheduled Recovery Point creation, Consistent Recovery Point creation, or CopyBack operation ran late, was skipped, or was skipped due to a holiday.
			Job Failed	A Recovery Point creation, Consistent Recovery Point creation, or CopyBack operation failed, failed to start, or the operation was aborted by the system.
			Job Activity	A Recovery Point creation, Consistent Recovery Point creation, or CopyBack operation was killed, resumed, or suspended by a user.
			Delayed by *n* Hrs	A Recovery Point creation, Consistent Recovery Point creation, or CopyBack operation was in a waiting state for *n* hours. (*n* is set by the user at time of configuration.)
			Alert every *n* attempt (Phase failures)	There were *n* attempts made to resume the Recovery Point Creation or CopyBack operation after a phase failure.
			Alert every *n* attempt (Network failures)	There were *n* attempts made to resume the Recovery Point Creation or CopyBack operation after a network failure.
Data Aging	Administrative Management or Alert Management capability with CommCell association		Job Succeeded	A data aging operation completed successfully.
			Job Succeeded with Errors	A data aging operation completed with errors.
			Job Skipped	A scheduled data aging operation ran late, was skipped, or was skipped due to a holiday.
			Job Failed	A data aging operation failed, failed to start, or the operation was aborted by the system.
			Job Activity	A data aging operation was killed by a user.
Data Classification	Alert Management capability	Clients Client Groups	Classification Failed	A data classification operation failed to write to the database.
Data Protection	Data Protection Operations or Alert Management capability at each associated entity.	Clients Client Groups Agents Backup Sets Instance/Partition All Subclients** Subclients	Job Succeeded	A data protection operation completed successfully.
			Job Succeeded with Errors	A data protection operation completed with errors.
			Job Skipped	A scheduled data protection operation ran late, was skipped, or was skipped due to a holiday.
			Job Failed	A data protection operation failed, failed to start, or was aborted by the system.
			Job Activity	A data protection operation was killed, resumed, or suspended by a user.
			No Data Protection	A data protection operation failed to start.
			Delayed by *n* Hrs	A data protection operation was in a waiting state for *n* hours. (*n* is set by the user at time of configuration.)
			No Backup for last *n* Days	A data protection operation did not complete successfully for the last *n* days. (*n* is set by the user at the time of configuration in the alert wizard.)
			Job exceeded running time of *n* Hrs	A data protection operation was in a suspended, running or in a pending state for more than *n* hours. (*n* is set by the user at the time of configuration in the alert wizard.)
			Alert every *n* attempt (Phase failures)	There were *n* attempts made to resume the data protection operation after a phase failure.
			Alert every *n* attempt (Network failures)	There were *n* attempts made to resume the data protection operation after a network failure.
			Increase in Data Size by *n*%	A data protection job is at least *n*% larger in data size than the previous data protection job of the same type (full, incremental, differential or synthetic full). Default is set at 10%. (*n* is the percentage of increase in data size, at which if met, will trigger the alert. The actual data size increase may be larger than the *n*%.)
			Decrease in Data Size by *n*%	A data protection job is at least *n*% smaller in data size than the previous data protection job of the same type (full, incremental, differential or synthetic full). Default is set at 10%. (*n* is the percentage of decrease in data size, at which if met, will trigger the alert. The actual data size decrease may be larger than the *n*%.)
			Notify only when jobs qualify for extension retention	The data protection job is set for extended retention.
			Notify only when job contains failed objects	The data protection job contains one or more failed objects.

Data Recovery	Browse and In Place Recover or Browse and Out of Place Recover or Alert Management capability at each associated entity.	Clients Client Groups Agents Backup Sets Instance/Partition	Job Succeeded	A data recovery operation completed successfully.
			Job Succeeded with Errors	A data recovery operation completed with errors.
			Job Skipped	A scheduled data recovery operation ran late, was skipped, or was skipped due to a holiday.
			Job Failed	A data recovery operation failed, failed to start, or the operation was aborted by the system.
			Job Activity	A data recovery operation was killed, resumed, or suspended by a user.
			Job Started	A data recovery operation was started by a user.
			List Media	A user requested a list of media used for the original data protection operation.
Data Verification	Administrative Management or Alert Management capability	Storage Policies Storage Policy Copies	Job Succeeded	A data verification operation completed successfully.
			Job Succeeded with Errors	A data verification operation completed with errors.
			Job Skipped	A scheduled data verification operation ran late, was skipped, or was skipped due to a holiday.
			Job Failed	A data verification operation failed, failed to start, or the operation was aborted by the system.
			Job Activity	A data verification operation was killed, resumed, or suspended by a user.
			Delayed by *n* Hrs	A data verification operation was in a waiting state for *n* hours. (*n* is set by the user at time of configuration.)
Disaster Recovery Backup	Administration Management or Alert Management capability with CommCell association.		Job Succeeded	A disaster recovery backup completed successfully, a backup set was pruned during the operation (default = 5 backup sets).
			Job Succeeded with Errors	A disaster recovery backup operation completed with errors/warnings.
			Job Skipped	A scheduled disaster recovery backup ran late, was skipped, or was skipped due to a holiday.
			Job Failed	A disaster recovery backup failed, failed to start, the operation was aborted by the system, or no storage policy was defined for the operation.
			Job Activity	A disaster recovery backup operation was killed by a user.
			Delayed by *n* Hrs	A disaster recovery backup operation was in a waiting state for *n* hours. (*n* is set by the user at time of configuration.)
Erase Data	Administration Management or Alert Management capability with CommCell association.	Clients Agents Backup Set Subclients	Job Succeeded	An erase data operation completed successfully..
			Job Succeeded with Errors	An erase data operation completed with errors/warnings.
			Job Skipped	A scheduled erase data operation ran late, was skipped, or was skipped due to a holiday.
			Job Failed	An erase data operation failed, failed to start, was killed by a user, was aborted by the system.
			Job Activity	An erase data operation was killed, resumed, or suspended by a user.
Media Erase	Library Management or Alert Management capability with library association	Libraries	Job Succeeded	A media erase operation completed successfully.
			Job Succeeded with Errors	A media erase operation completed with errors/warnings.
			Job Failed	A media erase operation failed, failed to start, or was killed by a user.
			Job Activity	A media erase operation was killed, resumed, or suspended by a user.
Media Inventory	Library Management or Alert Management capability with library association	Libraries	Job Succeeded	An inventory operation completed successfully.
			Job Succeeded with Errors	An inventory operation completed with errors.
			Job Failed	An inventory operation failed, failed to start, or was killed by a user.
Media Refreshing	Administrative Management or Alert Management capability with CommCell association	Storage Policies Storage Policy Copies	Alert every *n* attempt (Phase failures)	There were *n* attempts made to resume the data protection operation after a phase failure.
			Alert every *n* attempt (Network failures)	There were *n* attempts made to resume the data protection operation after a network failure.
			Delayed by *n* Hrs	An offline content indexing operation was in a waiting state for *n* hours. (*n* is set by the user at time of configuration.)
			Job Succeeded	An offline content indexing operation completed successfully.
			Job Succeeded with Errors	An offline content indexing operation completed with errors.
			Job Skipped	An offline content indexing operation ran late, was skipped, or was skipped due to a holiday.
			Job Failed	An offline content indexing operation failed, failed to start, the operation was aborted by the system.
			Job Activity	An offline content indexing operation was killed by a user.
Offline Content Indexing	Administrative Management or Alert Management capability	Storage Policies Storage Policy Copies	Job Succeeded	An offline content indexing operation completed successfully.
			Job Succeeded with Errors	An offline content indexing operation completed with errors.

	with CommCell association		Job Skipped	An offline content indexing operation ran late, was skipped, or was skipped due to a holiday.
			Job Failed	An offline content indexing operation failed, failed to start, the operation was aborted by the system.
			Job Activity	An offline content indexing operation was killed by a user.
			Delayed by *n* Hrs	An offline content indexing operation was in a waiting state for *n* hours. (*n* is set by the user at time of configuration.)
Information Management	Administrative Management or Alert Management capability with CommCell association		Job Succeeded	An information management operation completed successfully.
			Job Skipped	An information management operation ran late, was skipped, or was skipped due to a holiday.
			Job Succeeded with Errors	An information management operation completed with errors.
			Job Failed	An information management operation failed, failed to start, the operation was aborted by the system.
			Job Activity	An information management operation was killed by a user.
			Delayed by *n* Hrs	An information management operation was in a waiting state for *n* hours. (*n* is set by the user at time of configuration.)
Report	Administration Management capability with CommCell association.		Job Activity	A report operation was killed by a user.
			Job Failed	A report operation failed, failed to start, the operation was aborted by the system, or a report failed to be saved.
			Job Skipped	A report operation ran late, was skipped, or was skipped due to a holiday.
			Job Succeeded	A report operation completed successfully.
			Job Succeeded with Errors	A report operation completed with errors.
SRM Data Collection	Administration Management capability with CommCell association.	Clients Client Groups	Alert every n attempt (Phase failures)	There were n attempts made to resume the data collection operation after a phase failure.
			Alert every n attempt (Network failures)	There were n attempts made to resume the data collection operation after a network failure.
			Job Activity	A data collection operation was killed by a user.
			Job Failed	A data collection operation failed, failed to start, the operation was aborted by the system.
			Job Skipped	A data collection operation ran late, was skipped, or was skipped due to a holiday.
			Job Succeeded	A data collection operation completed successfully.
			Job Succeeded with Errors	A data collection operation completed with errors.
			No Data Protection	A data collection operation failed to start.

**DataArchiver agents only

MEDIA MANAGEMENT

Alert Type	User Capabilities Needed for Each Alert type	Entities that can be Associated with the Alert	Criteria	Description
Device Status	Library Management or Alert Management capability with CommCell association	Libraries	Drive went Offline	A drive in a library switched offline.
			Library went Offline	A library switched offline.
			Mount Path went Offline	A mount path went offline.
Library Management	Library Management or Alert Management capability with library association.	Libraries	Insufficient Storage	The number of spare media inside the library for a scratch pool and cleaning pool fell below the low water mark defined or there is no spare media inside the library. For a disk library, the free disk space fell below the low water mark or there is insufficient disk space.
			Maintenance Occurred	A drive cleaning operation completed successfully or failed.
			Maintenance Required	The library or drive has exceeded its threshold, a drive requires cleaning, or the mount path has exceeded its fragmentation threshold. The percentage threshold at which the mount path is deemed fragmented can be configured in the Media Management Configuration (Service Configuration) window, **Mount Path Fragmentation Threshold Percentage** option.
			Media Handling Errors	The system found a duplicate barcode/label in the library, or the system detected a media in the wrong library.
			Media Handling Required	A media is not in the library, or a media in a drive needs changing because the system detected wrong or no media in the drive.
			Media Mount and Usage Errors	A media is marked read only, bad or depreciated, or a mount or an unmount error has occurred.

			User Overwrite of Media	The media was overwritten due to an option selected by the user.
			Media Ready in Mail Slot	Media in mail slot is ready to be picked up by the user. **NOTES** ● This criterion is applicable to a VaultTracker media export (to mail slot) only, which requires a VaultTracker license. For more information, see License Administration in Books Online. ● It is recommended that the <MEDIA LIST> and <MORE MEDIA Y/N> tokens be added to the notification message when configuring this alert. For more information, see Alert Tokens in Books Online.
			Media Recalled	The media has been retrieved from an export location for a specific operation. For more information, see Recall Media in Books Online.
VaultTracker	Library Management or Alert Management capability with Library association.	Tracking Policies	Job Succeeded	A pending media movement completed successfully.
			Job Succeeded with Errors	A pending media movement completed with errors.
			Job Failed	A pending media movement failed.
			Job Initiated	A pending media movement was created.
			Media Handling Required	A media is moved to a virtual mail slot, or a media needs import.
			Media Picked Up	Media was picked up.
			Media Reached Destination	A media has reached the required destination.
			Media Returned to Source	A media was returned to the source.
			Rolled Back	A media movement was rolled back.

Browse Options

Use this dialog box to select the basic options under which you want to browse the data secured by a data protection operation in the selected client, agent, instance/partition, or backup set level depending on the functionality of a given agent.

The system provides several browse options. These options influence the behavior of the browse operation in the subsequent Browse window. Note that all the options described in this help may not be available and only the options displayed in the dialog box are applicable to the agent for which the information is being displayed.

Browse the Latest Data

Specifies whether the browse operation must display data from the most recent data protection operation (from now back to the last full backup) in the Browse window. (This option is selected by default.)

Specify Browse Time

Specifies whether the browse operation must display data, up to the specified date and time in the Browse window. Data secured after the specified date and time will be omitted in this window.

- **Browse Data Before/Browse to Point-In-Time**

  Specifies the date and time that must be used to display the data in the Browse window.

- **Time Zone**

  Lists the time zones. To change the time zone, click one in the list.

Select from Available Browse Times

Displays a list containing the time of different backup jobs available in the destination, from which data can be browsed. For Workstation Backup Agent, this option displays the list of recovery points available in the destination. Select the desired time.

Use MediaAgent

Specifies the name of MediaAgent that will be used to perform the browse (and restore) operation. If necessary, you can change the name of the MediaAgent. For example, if the library is shared and you wish to use a specific MediaAgent (instead of the system selected MediaAgent, or a MediaAgent which may be idle, or less critical) or if you know that the media containing the data you wish to restore is available in the library attached to the specified MediaAgent.

If the media containing the data is not available in the tape/optical library attached to the MediaAgent, the system will automatically prompt you to insert the appropriate media. In the case of a disk library, the operation will fail if the requested data is not available in the disk library attached to the specified MediaAgent.

Client Computer

Lists the client computers available for the browse operation. This option is available only when the browse operation is performed either from the client node in

the CommCell Browser, **Browse & Recover** option from the **Tools** menu in the CommCell Console or when the **New Browse** button is clicked in the Browse window.

Specify Browse Path

Specifies the starting point for the browse operation. Also provides a space for you to type the path.

Show Deleted Items

Specifies whether the operation will browse all the data (including deleted items) secured by all data protection operations for the selected backup set as of the specified browse items.

Table View

Specifies whether the backup data should be displayed as database tables during the browse operation.

Image Browsing

Specifies whether the operation will browse all the data (including deleted items) secured by all data protection operations for the selected backup set as of the specified browse times.

The main difference between image browse and no-image browse is that deleted items are shown only by the no-image browse.

Keep in mind that the display of deleted items depends on whether full backup transparency is enabled. If full backup transparency is disabled (the default), only those deleted items that existed back through the most recent full backup are shown. However if full backup transparency is enabled, the deleted items shown includes those that existed during the time interval from initial index creation through the time being browsed.

To determine whether full backup transparency is enabled or disabled, from the CommCell Browser, right-click the *i*DataAgent and then select **Properties.** Click the **Index** tab. If **Create new index on full backup** is selected, then full backup transparency is disabled.

File Level Browse (Restore individual files/folders from disk image)

Specifies whether the operation will browse all the files and folders secured by all data protection operations for the selected backup set as of the specified browse items.

Volume Level Browse (Restore the disk image/volume)

Specifies whether the operation will browse all the volumes secured by all data protection operations for the selected backup set as of the specified browse items.

Database

For SQL Server, specifies whether to browse individual databases.

File/File Group

For SQL Server, specifies whether to browse file groups and files for the databases.

Page Size

Use the space to enter the default number of objects to be displayed in the Browse window. This field reverts back to the default setting after use. In the Browse window, you can browse through each page list by selecting the appropriate page number.

Browse Data from SQL

Specifies that SharePoint documents can be mined from an offline mining database.

SQL Instance

For SharePoint Offline mining, specifies the SQL instance that is associated with the offline mining database. Click ... to select from a list or type the instance name.

User Account

For SharePoint Offline mining, specifies the Username and Password of the account that can access the instance. Click Edit to enter the username and password.

Config Database

For SharePoint Offline mining, specifies the Configuration Database that will be used to mine SharePoint documents. Click ... to select from a list or type the Configuration Database name.

Browse only volumes

Specifies that the browse operation must display only a list of volumes; required for a Volume Level Restore.

Advanced

Click to access additional browse capabilities.

List Media

Click to display media required for restore or index restore operations.

Type of Intended Restore (Virtual Server *i*DataAgent)

This section provides the facility to select the type of restore you want to perform following the Browse operation.

- **Individual Files/Folders**

  Select this option if you intend on performing a file/folder-level restore.

- **Entire Volume**

  Select this option if you intend on performing a volume-level restore.

- **Container Restore**

  Select this option if you intend on performing a disk-level restore.

Browse/Restore Directory Server data from database

For Active Directory Offline Mining, enter the path to the database from which you want to restore directory server data. For Active Directory Server databases, this file will be the `ntds.dit` file. For ADAM and Lightweight Server databases, this file will be the `adamntds.dit` file. Click **Browse** to locate the database or enter the complete database path in the **File Path** field.

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Advanced Browse Options

Use this dialog to access additional browse capabilities for the browse window. Note that all the options described in this help may not be available and only the options displayed in the dialog box are applicable to the agent for which the information is being displayed.

Use MediaAgent

Select the MediaAgent associated with the data you want to browse, or select **Any MediaAgent**.

Show Deleted Items

Specifies whether the operation will browse all the data (including deleted items) secured by all data protection operations for the selected backup set as of the specified browse items.

Page Size

Specifies the number of objects to be displayed in the browse window.

Include Metadata

Specifies that the browse operation results must also include data containing metadata information.

Exclude Data Before

Specifies that the browse operation must return data that has been backed up after the specified date. Also provides a space for you to type the date and time.

Browse from copy precedence

When selected, the system retrieves the data from the storage policy copy with the specified copy precedence number. If data does not exist in the specified copy, the operation fails even if the data exists in another copy of the same storage policy.

When cleared, (or by default) the system retrieves data from the storage policy copy with the lowest copy precedence. If the data was pruned from the primary copy, the system automatically retrieves the data from the other copies of the storage policy starting with the copy with the lowest copy precedence and proceeding through the copies with higher copy precedence. Once the data is found, it is retrieved, and no further copies are checked.

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List Media

Use this dialog box to select the options that must be used to predict the required media.

Media For the Latest Data

Specifies whether the list media operation must display media associated with the most recent data protection operation (from now back to the last full backup) This option is selected by default.

Specify Time Range

Specifies whether the whether the list media operation must display media associated with the specified date and time.

- **Data Before/Time Range**

  Specifies the date and time that must be used to display media.

- **Time Zone**

  Lists the time zones. To change the time zone, click one in the list.

Advanced

Click to access additional options.

Operation Window

Use this dialog box to add, modify, or delete operation rules for system operations.

Name

The friendly name assigned to the operation window.

Operations

The operations included in the rule.

Days

Displays the days in which the operations in this rule should not be run.

Do not run intervals

Displays the times in which the operations in this rule should not be run.

Add

Click this button to add an operation rule from the Operation Rule Details dialog box.

Modify

Click this button to modify an operation rule from the Operation Rule Details dialog box.

Delete

Click this button to delete an operation rule.

Ignore Operation Rules at Higher Levels (not applicable at the CommServe and Client group level)

Select this option to disable all operation rules set at levels above the currently selected entity.

Subclient Properties (General)

Use this dialog box to add, modify or view general information on the selected subclient.

Client Name

Displays the name of the Client computer to which this subclient belongs.

Billing Department

Displays the name of the billing department, when the subclient is associated with a billing department.

***i*DataAgent**

Displays the name of the Agent to which this subclient belongs.

Backup Set

Displays the name of the Backup Set to which this subclient belongs.

Subclient Name

Displays the name of this Subclient. You can use this space to enter or modify the name of the subclient.

Default Subclient

Displays whether this is the default subclient. When a subclient is designated as the default subclient, it will back up all the data for the subclient that is not assigned to any other subclients within the backup set, and it cannot be deleted.

Description

Use this field to enter a description about the entity. This description can include information about the entity's content, cautionary notes, etc.

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Subclient Properties (Content)

Use this tab to define the contents of a new subclient or to change the content of an existing subclient. Mailboxes that are listed in the **Contents of subclient** pane are backed up/migrated/archived/content indexed by the subclient.

Contents of subclient

Displays a list of mailboxes included as content for this subclient. The autodiscovered mailboxes are displayed in italics whereas manually discovered mailboxes are displayed in normal font. This is to differentiate which mailboxes will be qualified for Automatic Content Management.

- **Display Name**

  Displays the Display Name of the mailbox included as content for this subclient.

- **Alias Name**

  Displays the Alias Name of the mailbox included as content for this subclient.

- **SMTP Address**

  Displays the Simple Mail Transfer Protocol Address of the mailbox included as content for this subclient.

- **Mailbox Store**

  Displays the Mailbox Store in which the mailbox resides.

Configure

Click to discover and change the associations of the mailboxes to the subclients. Any mailboxes included as content for a user-defined backup set/subclient will be automatically excluded from the default backup set/subclient.

Delete Archived messages after successful archive operations

Specifies whether to delete the contents of the mailbox after the data has been successfully archived. Selecting this option will cause the system to delete the data from mailboxes included in subclient content after the data has been successfully archived.

Only backup following folders (separated by ;)

This allows you to configure the Exchange Mailbox *i*DataAgent to backup messages that reside in a specific root-level mailbox folder for the subclient of any backup set. Other folders in the mailbox will not be backed up.

Perform backup using mining off snapshot

Click to run a data protection job from an offline snapshot copy of the Exchange data. Snap mining can improve performance in that it offloads processing on the production application server.

Exchange DB client

Specifies the client computer where the Exchange Database is installed.

Client

Specifies the client computer that was used to create the snapshot.

Agents

Specifies the agent that was used to create the snapshot of the Exchange data.

Instance

Specifies the instance that was used to create the snapshot of the Exchange data.

Backupset

Specifies the backupset that was used to create the snapshot of the Exchange data.

subclient to use

Specifies the subclient that was used to create the snapshot of the Exchange data

Exchange DB subclient to use

Specifies the Exchange Database *i*DataAgent subclient to use for mining the SnapProtect backup.

Proxy Client

Click and select a proxy computer to run the data protection job of the snapshot on a Proxy Client.

Subclient Properties (Auto-discovery)

Use this dialog box to view and establish the criteria to automatically discover new mailboxes. The criteria that can be configured depends on the assignment method that was selected in **Backup Set Properties (Auto Discover)**. Assignment methods include:

- Regular Expressions
- Database Affinity
- Active Directory User Group Affinity

Automatically add new mailboxes that don't qualify for membership in any of the sub-clients

Specifies whether to assign auto-discovered mailboxes to the contents of this subclient. This is useful in cases where mailboxes have not been assigned to any other subclient within the Backup Set. This option applies only to the default subclient. Clearing this option will disable auto-discovery on the default subclient.

Add Mailbox Display Name

Displays a list of mailbox display name patterns i.e., regular expressions. Mailboxes that match the specified patterns entered in **Mailbox Display Names** will be automatically discovered and assigned to this subclient. This display pane is enabled when the **Match Mailboxes by Regular Expressions** option was selected in Backup Set Properties (Auto Discover).

Mailbox Display Names

Use this space to enter a mailbox display name pattern using regular expressions (i.e., wildcards). See Wildcards for a list of supported wildcards.

Wildcard Example	Description
`Accounting*`	Auto-discovers any mailbox display name that begins with Accounting followed by any number of any characters (e.g., Accounting Mailbox, Accounting Manager, etc.).
`[!ei]nsure`	Auto-discovers any mailbox display name that ends with nsure but does not begin with e or i (e.g., unsure).
`[!a-k]Lee`	Auto-discovers any mailbox display name that does not begin with a through k and that ends with Lee (e.g., xLee, yLee, etc.).

Add

Click to commit the mailbox display name pattern for auto-discovery entered in **Mailbox Display Names** and add it the **Add Mailbox Display Name** display pane. This button is enabled when the **Match Mailboxes by Regular Expressions** option was selected in Backup Set Properties (Auto Discover).

Remove

Click to delete the selected mailbox display name pattern. This button is enabled when the **Match Mailboxes by Regular Expressions** option was selected in Backup Set Properties (Auto Discover).

Newly discovered mailboxes from the following mailbox stores will automatically be associated with this subclient

Displays a list of databases. Mailboxes in these databases will be automatically discovered and assigned to this subclient. This display pane is enabled when the **Database Affinity** option is selected in Backup Set Properties (Auto Discover).

The new discovered mailboxes of the following AD User Group will be backed up to this subclient

Displays a list of the Active Directory User Groups. Mailboxes in these AD User Groups will be automatically discovered and assigned to this subclient. This display pane is enabled when the **AD User Group Affinity** option is selected in Backup Set Properties (Auto Discover).

Configuration

Click to configure the databases or AD User Groups that will be used to automatically discover mailboxes and assign them to this subclient.

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Configure Mailbox Stores for Auto-discovery

Use this dialog box to change the assignment of databases to subclients. Mailboxes in these databases will be automatically discovered and assigned to this subclient.

Mailbox Store

Displays the name of the database where newly discovered mailboxes for the assigned subclient will be backed up.

Subclient

Displays the name of the subclient whose newly discovered mailboxes will be backed up to the assigned database. To change the subclient assignment, click on the subclient and select a different one from the drop-down list.

Change all selected stores to:

Lists subclients that can be assigned to databases for auto-discovery. To change the subclient assignment, select one or more databases and click a subclient in the list.

Configure AD User Group for Auto-discovery

Use this dialog box to add or change Active Directory (AD) User Groups. Mailboxes in these AD User Groups will be automatically discovered and assigned to this subclient.

AD User Group Name

Displays the name of the Active Directory User Group where newly discovered mailboxes for this subclient will be backed up.

Subclient

Displays the name of the subclient that is assigned to the Active Directory User Group. Newly discovered mailboxes that reside in the AD User Group will be assigned to this subclient. To change the assignment, click on the subclient and select a different one from the drop-down list.

Move all selected items to:

Lists subclients that can be assigned to Active Directory User Groups. To change the subclient assignment, select one or more Active Directory User Groups and click a subclient in the list.

Discover

Specifies to discover an Active Directory User Group. When clicked, the Authenticate Active Directory Domain Controller dialog box will prompt you to provide authentication information before proceeding with the discovery process.

Configure Subclient Mailbox Affinity

Mailbox Affinity

Use this list to select the assignment method by which newly discovered mailboxes will be included in the contents of user-defined subclients. To change the assignment method, select one from the list. Choose from the following assignment methods:

- **Ad Hoc**

  Manual assignment of newly discovered mailboxes.

- **Mailbox**

  Automatic assignment of newly discovered mailboxes that match a wildcard pattern or mailbox name specified in the Subclient Properties (Mailboxes) dialog.

- **Active Directory User Group**

  Automatic assignment of newly discovered mailboxes by Active Directory User Group specified in the Subclient Properties (Mailboxes) dialog.

Subclient Properties (Pre/Post Process)

Use the Pre/Post Process tab to add, modify or view Pre/Post processes for the selected subclient.

Pre-Backup process

Displays the name/path of the backup that you want to run before the respective phase. You can use this space to enter a path for the backup process that will execute before this phase on the subclient . Click **Browse** to search for and select the name/path of the process. The system allows the use of spaces in the name/path, provided they begin with an opening quotation mark and end with a closing quotation mark.

Post-Backup process

Displays the name/path of the backup process that you want to run after the respective phase. You can use this space to enter a path for the backup process that will execute after this phase on the subclient. Click **Browse** to search for and select the name/path of the process. The system allows the use of spaces in the name/path, provided they begin with an opening quotation mark and end with a closing quotation mark.

Run Post Backup Process for all attempts

Specifies whether this process will execute for all attempts to run the phase. Selecting this option will execute the post backup process for all attempts to run the phase, including situations where the job phase is interrupted, suspended, or fails. Otherwise, when the checkbox is cleared the specified process will only execute for successful, killed, or failed jobs.

PreSnap process

Displays the name/path of the Snap process that you want to run before the respective phase. You can use this space to add or modify PreSnap processes for a subclient. Click **Browse** to search for and select the name/path of the process. The system allows the use of spaces in the name/path, provided they begin with an opening quotation mark and end with a closing quotation mark.

PostSnap process

Displays the name/path of the Snap process that you want to run after the respective phase. You can use this space to add or modify PostSnap processes for a subclient. Click **Browse** to search for and select the name/path of the process. The system allows the use of spaces in the name/path, provided they begin with an opening quotation mark and end with a closing quotation mark.

On Source

Specifies whether the PreSnap/PostSnap process will execute on the source computer.

On Proxy

Specifies whether the PreSnap/PostSnap process will execute on the proxy computer.

Browse

Click to search for and select the Pre/Post Process.

Run As / User Account

Displays either the Local System Account, or for added security, another account as having permission to run these commands.

Change

Click to add or modify the account that has permission to run these commands.

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Storage Device

Use this dialog box to establish the storage device related settings on the selected subclient. Note that all the options described in this help may not be available and only the options displayed in the dialog box are applicable to the agent or enabler for which the information is being displayed.

The following tabs are displayed:

- (Data) Storage Policy
- Data Transfer Option
- Deduplication

STORAGE POLICY

Use this tab to select or view storage policy settings on the selected subclient.

Data/Database/Transaction Log Storage Policy

Displays the storage policy to which this subclient is currently associated. To associate a storage policy to a new subclient or to change the storage policy associated with an existing subclient, click one in the list.

Incremental Storage Policy

Displays the name of the Incremental Storage Policy associated with this subclient, if the storage policy has the Incremental Storage Policy option enabled.

Data Paths

Click to view or modify the data paths associated with the primary storage policy copy of the selected storage policy.

Number of Data/Database/Transaction Log Backup Streams

Displays the number of streams used for backup operations. To change the number of streams, click one in the list. For DB2 DPF, be sure to set the appropriate number of streams for each database partition by double-clicking the appropriate **Stream** space and typing the desired number.

Client/Instance/Status/Stream

Displays the names of the instances according to current backup priority along with other associated information that are included in the Oracle RAC node. To change the backup priority of the instances, click the instance name as appropriate and use the directional arrows provided.

Maximum Backup Streams

For Informix, displays the maximum number of streams used for database backup operations, which is determined from the ONCONFIG file. The number of streams for backups cannot be set currently from the CommCell Console. Instead, you must set the BAR_MAX_BACKUP parameter in the $ONCONFIG file on the Informix client. Also, the number of streams specified by the storage policy must be greater than or equal to the number specified by the BAR_MAX_BACKUP parameter.

Data Threshold Streams

For Oracle RAC, specifies whether to run the backup job immediately when the total number of reserved streams is greater than or equal to the value in this field. If you click this option, use the space provided to change this value if desired.

Create Storage Policy

Click to launch the Create a Storage Policy wizard. Once the storage policy has been created, it will be displayed in the list of storage policies to which the selected subclient can be associated.

Buffer Size

Use this space to specify the size (in 4 KB pages) of each buffer to be used for building the backup image. The minimum value is 8, and the default value is 1024. If you select value 0, the value of the `backbufz` database manager configuration parameter will be used as the buffer allocation size.

DATA TRANSFER OPTION

Use this tab to establish the options for data transfer. Note that all the options described in this help may not be available and only the options displayed in the dialog box are applicable to the agent for which the information is being displayed.

Software Compression

Indicates whether software compression for the subclient or instance is enabled or disabled, and if enabled whether it is performed on the client or MediaAgent computer.

- **On Client**

  Click to enable software compression on the client computer.

- **On MediaAgent**

  Click to enable software compression on the MediaAgent computer.

- **Use Storage Policy Settings**

  Click to use the settings enabled on deduplicated storage policy copy.

  This option applies when subclient is associated with a storage policy copy that is deduplicated. See Copy Properties (Deduplication) - Advanced tab for compression settings on deduplicated storage policy copy.

- **Off**

  Click to disable software compression.

Note that hardware compression has priority over the software compression. Hardware compression is established in the Data Path Properties dialog box. The above software compression option will take effect when the data path is associated with a disk library, or when hardware compression is disabled in the data path associated with tape libraries.

For non-deduplicated storage policy copy, select **On Client** or **On MediaAgent** options to turn on compression, depending upon your environment.

Resource Tuning

Indicates the processes used by the client to transfer data based and whether bandwidth throttling is enabled or not.

- **Network Agents**

  Specifies the number of data pipes/processes that the client uses to transfer data over a network. Increasing this value may provide better throughput if the network and the network configuration in your environment can support it. On non-UNIX computers, the default value is 2 and a maximum of 4 can be established if necessary. On UNIX computers the default value is 1 and a maximum of 2 can be established if necessary.

- **Throttle Network Bandwidth (MB/HR)**

  Specifies whether the backup throughput is controlled or not. (By default this option is not selected and therefore the throughput is not controlled). When selected, use the space to specify a value for the throughput. By default, this is set to 500. The minimum value is 1 and there is no limit to the maximum value. (In this case the backup throughput will be restricted to the maximum bandwidth on the network.)

Use this option to set the backup throughput, based on the network bandwidth in your environment. Use this option to reduce the backup throughput, so that the entire network bandwidth is not consumed, especially in slow links. Increasing this value will end up consuming the bandwidth with the maximum throughput limited to the network bandwidth capability.

Note that throttling is done on a per Network Agent basis.

Application Read Size

This option specifies the amount of application data (such as SQL data, Windows File System data, and virtual machine data) backup jobs will read for each unit transferred to the MediaAgent.

The default value for this options is 64KB; however, this value may be increased to reduce the amount of data read from the given application, which in turn reduces the amount of I/O operations performed against it. As a result, overall backup performance may increase. However, backup memory usage may also increase, which may inadvertently consume additional resources from the application. Thus, it is recommended that this value be set at either the default value or match the block size directed by the application.

DEDUPLICATION

Use this tab to establish the options for deduplication on the subclient. It indicates whether deduplication for the subclient is enabled or disabled, and if enabled whether the signature generation (a component of deduplication) is performed on the client or MediaAgent computer.

Note that deduplication is supported on disk storage devices. So the deduplication options are applicable only if the subclient is associated with a Storage Policy containing disk storage.

On Client

Click to enable signature generation on the client computer.

On MediaAgent

Click to enable signature generation on the MediaAgent computer.

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Filters

Use this dialog box to add, modify, or view the filters on the selected subclient.

Include Global Filters

Displays a list of options for enabling or disabling Global Filters which can be used in addition to the filters set at the subclient level to exclude data from data protection operations for this subclient. To change the setting, select one of the following values from the list:

- **OFF** - Disables Global Filters for this subclient.
- **ON** - Enables Global Filters for this subclient.
- **Use Cell Level Policy** - Enables or disables Global Filters for this subclient depending on whether the **Use Global Filters on All Subclients** option is enabled or disabled on the Control Panel (Global Filters) dialog. If the **Use Global Filters on All Subclients** option is enabled, then the **Use Cell Level Policy** option will enable Global Filters on this subclient. If the **Use Global Filters on All Subclients** option is disabled, then the **Use Cell Level Policy** option will disable Global Filters on this subclient.

Exclude the following folders

Displays entries that will be excluded from data protection operations for this subclient.

Exclude the folders that contain the following patterns

Displays wildcard patterns to filter mailboxes from backups. The pattern you enter will be applied to all content defined for the subclient. Enter each wildcard pattern on a separate line. For a comprehensive wildcard list, see Wildcards.

Wildcard Example	Description
`Sent*`	To filter out a folder which begins with Sent, specify the name of the folder and the asterisk `*` wildcard with no delimiters.
`Sent Items\test*`	To filter out a subfolder called test, specify the full path including the leader `\` backslash.
`*\test*`	To filter out any path that ends in a folder name, use the full path including the leader `\` backslash and the asterisk `*` wildcard for the first level.

Add

Click to manually add an entry to be included in, or excluded from, data protection operations for this subclient.

Edit

Click to manually edit an entry to be included in, or excluded from, data protection operations for this subclient.

Delete

Click to delete a selected filter entry.

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Wildcards

The supported wildcards include:

Wildcards	Description

*	Any number of any characters. For example: **Accounting*** • For search operations, the above wildcard pattern returns search results for any messages or items that match the pattern "Accounting" followed by any number of any characters, found in any of the following fields (where applicable): Subject, From, To, Cc, Bcc, Content, or Attachment; (e.g., Accounting Meeting Minutes, Accounting Manager, Accounting Records, etc.). • For filtering operations, the above wildcard pattern filters any mailbox folder name that begins with "Accounting" followed by any number of any characters (e.g., Accounting Mailbox, Accounting Folder, etc.). For more filtering examples using this wildcard character, see the note at the bottom of this page. • For auto-discovery operations, the above wildcard pattern auto-discovers any mailbox display name that begins with "Accounting" followed by any number of any characters (e.g., Accounting Mailbox, Accounting Manager, etc.).
?	Any one character. For example: **user_group?** • For search operations, the above wildcard pattern returns search results for any messages or items that match the pattern beginning with "user_group" followed by any one character, found in any of the following fields (where applicable): Subject, From, To, Cc, Bcc, Content, or Attachment; (e.g., user_groupA, user_group1, etc.). • For filtering operations, the above wildcard pattern filters any mailbox folder name that begins with "user_group" followed by any one character (e.g., user_groupA, user_group1, etc.). • For auto-discovery operations, the above wildcard pattern auto-discovers any mailbox display name that begins with "user_group" followed by any one character (e.g., user_groupA, user_group1, etc.).
[ ]	Any range of characters. For example: **[JT]im** • For filtering operations, the above wildcard pattern excludes from data protection operations any mailbox folder name that begins with "J" or "T" and ends with "im" (e.g., Jim, Tim). • For auto-discovery operations, the above wildcard pattern auto-discovers any mailbox display name that begins with "J" or "T" and ends with "im" (e.g., Jim, Tim). **[a-k]Lee** • For filtering operations, the above wildcard pattern excludes from data protection operations any mailbox folder name that begins with any character in the range of "a" through "k" inclusive and that ends with "Lee" (e.g., aLee, bLee, etc.). • For auto-discovery operations, the above wildcard pattern auto-discovers any mailbox display name that begins with any character in the range of "a" through "k" inclusive and that ends with "Lee" (e.g., aLee, bLee, etc.). This wildcard cannot be used for search operations.
[!]	The negation of a range of characters. For example: **[!ei]nsure** • For filtering operations, the above wildcard pattern excludes from data protection operations any mailbox folder name that ends with "nsure" but does not begin with "e" or "i" (e.g., unsure). • For auto-discovery operations, the above wildcard pattern auto-discovers any mailbox display name that ends with "nsure" but does not begin with "e" or "i" (e.g., unsure). **[!a-k]Lee** • For filtering operations, the above wildcard pattern excludes from data protection operations any mailbox folder name that does not begin with "a" through "k" and that ends with "Lee" (e.g., xLee, yLee, etc.). • For auto-discovery operations, the above wildcard pattern auto-discovers any mailbox display name that does not begin with "a" through "k" and that ends with "Lee" (e.g., xLee, yLee, etc.). This wildcard cannot be used for search operations.
	You can also use a combination of wildcards in a single expression, if the wildcards are supported for the type of operation you are performing. For example, if you wanted to auto-discover all mailbox display names beginning with any characters in the range of "A" through "K" inclusive followed by any number of any characters, you would enter the following wildcard combination: **[A-K]*** Keep in mind that the path entered for the subclient filter is based on what level is being filtered out. The examples provided below illustrate this point: • To filter out a root folder called "Sent Items", specify the name of the folder and the asterisk "*" wildcard with no delimiters, as shown in the following example: **Sent*** • To filter out a subfolder called "test", specify the full path including the leader "\", as shown in the following example: **Sent Items\test*** • To filter out any path that ends in a folder name, use the full path including the leader "\" and the asterisk "*" wildcard for the first level, as shown in the following example: ***\test***

	• To filter all directories that begin with a particular word on all drives (e.g. My_Filter), use the global filter:
	`*:\**\My_Filter*\**`
	• If you know the drive letter to filter, use the subclient filter as follows:
	`C:\**\My_Filter*\**`
	• To filter every directory named "temp" on all drives, use the global filter:
	`*:\**\temp\**`
	• Or use the subclient filter:
	`C:\**\temp\**`
	• To filter every "recycler" directory on all drives, use the global filter:
	`*:\**\RECYCLER\**`
	• Or use the subclient filter:
	`C:\**\RECYCLER\**`
	Do not use "temp*" when all you want to filter is temp, as it will get "template" and other directories with word "temp".

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Encryption

Use this dialog box to select the data encryption options for the selected content. When accessing this dialog box from the Subclient Properties Encryption tab, this setting applies only to the selected subclient content for operations run from the CommCell Console. When accessing this dialog box from the Instance Properties Encryption tab, this setting applies only to third-party Command Line operations. The functionality is not propagated to the Subclient Properties Encryption tabs.

None

When selected, no encryption will take place during a data protection operations.

Media Only (MediaAgent Side)

When selected, for data protection operations, data is transmitted without encryption and then encrypted prior to storage. During data recovery operations, data is decrypted by the client.

When using this setting in conjunction with the client property **With a Pass-Phrase**, you will be required to provide a pass-phrase for data recovery operations unless you export the client pass-phrase to the destination client(s). When using pass-phrase security for third-party Command Line operations or DataArchiver Agents stub recovery operations, you must export the pass- phrase to the destination client.

Network and Media (Agent Side)

When selected, for data protection operations, data is encrypted before transmission and is stored encrypted on the media. During data recovery operations, data is decrypted by the client.

When using this setting in conjunction with the client property **With a Pass-Phrase**, you will be required to provide a pass-phrase for data recovery operations unless you export the client pass-phrase to the destination clients.

Network Only (Agent Encrypts, MediaAgent Decrypts)

When selected, for data protection operations, data is encrypted for transmission and then decrypted prior to storage on the media. During data recovery operations, data is encrypted by the MediaAgent and then decrypted in the client.

When using this setting in conjunction with the client property **With a Pass-Phrase**, you will not be required to provide a pass-phrase for data recovery operations.

Script Preview

Click to display the backup script, based on the current subclient configuration, that will be submitted to RMAN when backups are performed for the selected Oracle subclient.

Job Initiation

Select from the following options. Note that all the options described in this help may not be available and only the options displayed in the dialog box are applicable to the operation for which the information is being displayed.

Immediate

Run This Job Now

Specifies this job will run immediately.

Schedule

Specifies this job will be scheduled. When you click **Configure**, the Schedule Details dialog box will open and allow you to configure the schedule pattern.

Result file location on CommServe

This option is only applicable for List Media operations. Specifies the name of the file in which the results of the scheduled list media job must be saved. Click **Browse** to access to the **Directory Browse** dialog box which allows you to select the folder / file in the CommServe computer.

Automatic Copy

Specifies that an auxiliary copy operation will be performed at the interval specified. This operation will occur when new data that must be copied is found on the primary copy.

Interval

The time interval in which the Automatic Copy will be performed. The default interval is 30 minutes.

Save As Script

Click to open the Save As Script dialog, which allows you to save this operation and the selected options as a script file (in XML format). The script can later be executed from the Command Line Interface using `qoperation execute` command.

When you save an operation as a script, each option in the dialog will have a corresponding xml parameter in the script file. When executing the script, you can modify the value for any of these XML parameters as per need.

To view the XML values for each of the options in the dialog, see the following:

Operations Supporting Save As Script

Configure Alert

Provides the necessary options to configure the alerts associated with this operation.

- **Add/Modify Alert**

  When clicked, opens the Alert Wizard to configure necessary alerts for this operation.

- **Delete Alert**

  When clicked, deletes any existing alerts that are already configured.

Advanced

Click to select additional options.

Script Preview

Click to display the restore script, based on the selected restore options, that will be submitted to RMAN when restores are performed for the selected Oracle client.

Startup

Select from the following options. Note that all the options described in this help may not be available and only the options displayed in the dialog box are applicable to the operation for which the information is being displayed.

Priority

- **Use Default Priority**

  If selected, the default priority for this type of job will be used in determining how the Job Manager will allocate resources for this job.

- **Change Priority**

  Use this option to manually specify the priority for the job, between 0 (highest priority) and 999 (lowest priority). The Job Manager will use the priority setting when allocating the required resources. This is useful if you have jobs that are very important and must complete, or jobs that can be moved to a lower priority.

Start up in suspended state

Specifies that this job will start in the Job Controller in a suspended state and cannot run until the job is manually resumed using the **Resume** option. This option can be used to add a level of manual control when a job is started. For example, you could schedule jobs to start in the suspended state and then choose which scheduled jobs complete by resuming the operation started in the suspended state.

Description

Use this field to enter a description about the entity. This description can include information about the entity's content, cautionary notes, etc.

Alert

Use this tab to configure an alert for a schedule policy.

Configure Alert

- **Alert**

  The currently configured Alert.

- **Add/Modify Alert**

  When clicked, opens the Alert Wizard to configure alerts for this operation.

- **Delete Alert**

  When clicked, deletes any existing alerts that are already configured.