Quick Start - SAP for Oracle *i*DataAgent

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INTRODUCTION

Calypso software provides a simplified end-to-end data protection for large scale SAP environments. It helps deliver a robust and comprehensive backup and recovery with significant speed performance and efficient use of disk and tape drives. It also assists you in full system rebuilds and eliminates recovery failures.

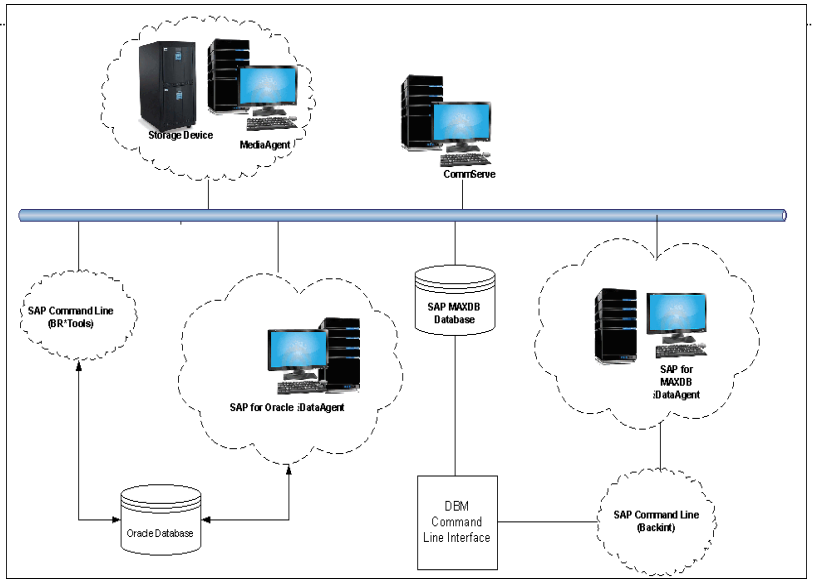
KEY FEATURES

The SAP *i*DataAgents offers the following key features:

FULL RANGE OF BACKUP AND RECOVERY OPTIONS

The SAP agents provide the flexibility to backup the SAP for Oracle database in different environments. This is very essential since SAP data is always subject to constant changes.

You can perform a full or incremental backup of the entire database or individual data files/ table spaces, or archive logs at any point of time. The following section describes the backups that can be performed in different environments.



OFFLINE BACKUP

When the database is shutdown and not available for use, you can perform a full backup of the database without the logs. This is especially used when the data is consistent and there are no transactions in the database.

ONLINE BACKUP

In cases, when you cannot bring down the database to perform an offline backup, you can use the online backup method. Here, you can perform full or incremental backups when the database is online and in ARCHIVELOG mode. This is very useful when you want to perform a point-in-time restore of the database.

You also have the facility the backup only the archive logs when the database is online. These logs can be applied to an online backup to recover the database to the current point-in-time.

You can also protect the non-database files and profiles using the appropriate File System *i*DataAgent.

SELECTIVE ONLINE FULL BACKUP

This *i*DataAgent allows you to backup and store copies of valid data from a source copy of a specific storage policy to all or one active secondary copy within a storage policy providing for a better tape rotation. An online full backup job is copied to a selective copy, if the full backup job cycle completes successfully thereby allowing you to select, store and protect your valuable data on a secondary copy for future restores in a more viable and economic mode.

SNAPPROTECT BACKUP

SAP for Oracle *i*DataAgent works in conjunction with hardware snapshot engines to create a point-in-time snapshot of the data to be used for various data protection operations. This is an efficient way of backing up live data and it facilitates frequent point-in-time backups and faster recovery time.

COMMAND LINE SUPPORT

Data protection and recovery operations can be initiated from the SAP command line as per SAP requirements. The *i*DataAgent is fully integrated with the

Oracle database using BRTOOLS and with the SAP MAXDB database through DBM CLI, a database management tool provided by SAP and supports backup and restore operations of database and parameter files using BACKINT interface from SAP Command Line.

In addition to SAP command line, you can also perform data protection and recovery operations from the command line interface using qcommands. You also have the facility to save the operations as a script file and execute them from the command line at a later point of time.

BACKUP AND RECOVERY FAILOVERS

In the event that a MediaAgent used for the backup or recovery operation fails, it is automatically resumed on alternate MediaAgents. In such cases, the backup or restore job will not restart from the beginning, but will resume from the point of failure. This is especially useful for backups and restores on large SAP databases.

In the event, that a network goes down, the backup and recovery jobs are resumed on alternate data paths. Similarly, in the event of a device failure, the jobs are automatically switched to alternate disk and tape drives.

EFFICIENT JOB MANAGEMENT AND REPORTING

You can view and verify the status of SAP backup and recovery operations from the Job Controller and Event Viewer windows within the CommCell Console. You can also track the status of the jobs using Reports, which can be saved and easily distributed. Reports can be generated for different aspects of data management. You also have the flexibility to customize the reports to display only the required data and save them to any specified location in different formats. For example, you can create a backup job summary report to view at-a-glance the completed backup jobs. Y

In addition, you can also schedule these reports to be generated and send them on email without user intervention.

BLOCK LEVEL DEDUPLICATION

Deduplication provides a smarter way of storing data by identifying and eliminating the duplicate items in a data protection operation.

Deduplication at the data block level compares blocks of data against each other. If an object (file, database, etc.) contains blocks of data that are identical to each other, then block level deduplication eliminates storing the redundant data and reduces the size of the object in storage. This way dramatically reduces the backup data copies on both the disk and tapes.

TERMINOLOGY

The SAP documentation uses the following terminology:

CLIENT	The computer in which the *i*DataAgent is installed and contains the data to be secured.
INSTANCE	The SAP for Oracle database to be used for the backup and restore operations.
SUBCLIENT	The SAP data to be backed up.
DBM CLI	DBM CLI (DBM Command Line Interface) is a Database Management Tool supplied with every SAP MAXDB that is used to perform backup and restore operations.
BACKINT	Backint is an interface program that allows DBM CLI to communicate with SAP MAXDB using streams/pipes to perform backup and restore operations.

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System Requirements - SAP for Oracle *i*DataAgent

System Requirements | Supported Features

The following requirements are for the SAP for Oracle *i*DataAgent:

APPLICATION/OPERATING SYSTEM		PROCESSOR
SAP BR*TOOLS 7.0, 7.1, 7.2 AND 7.4 FOR ORACLE 10G/11G (R1, R2 OR HIGHER) DATABASES ON:		
AIX	AIX 7.1	Power PC (Includes IBM System p)
	AIX 6.1	Power PC (Includes IBM System p)
	AIX 5.3	Power PC (Includes IBM System p)
HP-UX	HP-UX 11i v3 (11.31)	Itanium
	HP-UX 11i v3 (11.31)	PA-RISC
	HP-UX 11i v2 (11.23)	PA-RISC
	HP-UX 11i v2 (11.23)	Itanium
LINUX	**RED HAT ENTERPRISE LINUX/CENTOS**	
	Red Hat Enterprise Linux/CentOS 6.x with glibc 2.12.x	Intel Pentium, Itanium, x64, Power PC (Includes IBM System p) or compatible processors
	Red Hat Enterprise Linux/CentOS 5.x with glibc 2.5.x	Intel Pentium, Itanium, x64, Power PC (Includes IBM System p) or compatible processors
	Red Hat Enterprise Linux/CentOS 4.x with a minimum of glibc 2.3.4	Intel Pentium, Itanium, x64, Power PC (Includes IBM System p) or compatible processors
	SUSE LINUX (SLES)	
	SuSE Linux 11.x with glibc 2.9.x and above	Intel Pentium, Itanium, x64, Power PC (Includes IBM System p) or compatible processors
	SuSE Linux 10.x with glibc 2.4.x	Intel Pentium, Itanium, x64, Power PC (Includes IBM System p) or compatible processors
SOLARIS	Solaris 11.x	x64, Sparc5 (or higher recommended)
	Solaris 10.x	x64, Sparc5 (or higher recommended)
WINDOWS	**WINDOWS 2008**	
	Microsoft Windows Server 2008 Editions with a minimum of Service Pack 1* *Core Editions not supported	All Windows-compatible processors supported
	WINDOWS 2003	
	Microsoft Windows Server 2003 Editions with a minimum of Service Pack 1	All Windows-compatible processors supported

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

WINDOWS

112 MB minimum of hard disk space for software/ 498 MB recommended

50 MB of additional hard disk space for log file growth

725 MB of temp space required for install or upgrade (where the temp folder resides)

UNIX

230 MB minimum of hard disk space for software

MEMORY

WINDOWS

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

HP-UX

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

Swap space = 2*RAM size

SOLARIS

64 MB RAM per stream/drive minimum required beyond the requirements of the operating system and running applications

Swap space = 2*RAM size

SOLARIS ZONES/CONTAINERS SUPPORT

Data Protection of data residing on global and non-global zones is supported.

For a comprehensive list of supported components, see Unix Virtualization.

AIX LPAR/WPAR SUPPORT

Data protection on Logical Partitioning (LPAR) and Workload Partitioning (WPAR) is supported.

PERIPHERALS

DVD-ROM drive

Network Interface Card

MISCELLANEOUS

The File System *i*DataAgent will be automatically installed during installation of this software, if it is not already installed. For System Requirements and install information specific to the File System *i*DataAgents, refer to:

- System Requirements - Microsoft Windows File System *i*DataAgent
- System Requirements - AIX File System *i*DataAgent
- System Requirements - HP-UX File System *i*DataAgent
- System Requirements - Linux File System *i*DataAgent
- System Requirements - Solaris File System *i*DataAgent

On Solaris computers, the operating system must have been installed with at least the `user level software` option selected.

NETWORK

TCP/IP Services configured on the computer.

SELINUX

If you have SELinux enabled on the client computer, create the SELinux policy module as a root user before performing a backup. The SELinux Development package must be installed on the client.

To create an SELinux policy module, perform the following steps as user "root":

1. Create the following files in the `/usr/share/selinux/devel` directory:

File Name	Content of the File

`<directory>/<file_name>.te`
where:
`<directory>` is `/usr/share/selinux/devel`
`<file_name>` is the name of the Unix file, created to save the policy module statement. It is a good idea to use the same name for policy module and the file.
	The content of the file should be as follows:
	policy_module(<name>,<version>)
	`################################`
	where:
	`<name>` is the name of the policy module. You can give any unique name to the policy module,

For example: When you are creating a policy module for backup_IDA application, you can use the following file name: `backup_IDA.te`	such as a process or application name. `<version>` is the version of the policy module. It can be any number, such as 1.0.0. For Example: While creating a policy module for the backup_IDA application, you can use the following content. `policy_module(backup_IDA,1.0.0)`

`<directory>/<file_name>.fc`
where:
`<directory>` is `/usr/share/selinux/devel`
`<file_name>` is the name of the Unix file, created to save the policy module statement. It is a good idea to use the same name for policy module and the file.
For example: When you are creating a policy module for backup_IDA application, you can use the following file name: `backup_IDA.fc`
	The content of the file should be as follows:
	Note that the following list of files is not exhaustive. If the process fails to launch, check `/var/log/messages`. Also, if required, add it to the following list of files.
	`/opt/<software installation directory>/Base/libCTreeWrapper.so -- gen_context (system_u:object_r:texrel_shlib_t,s0)`
	`/opt/<software installation directory>/Base/libCVMAGuiImplgso -- gen_context (system_u:object_r:texrel_shlib_t,s0)`
	`/opt/<software installation directory>/Base/libdb2locale.so.1 -- gen_context (system_u:object_r:texrel_shlib_t,s0)`
	`/opt/<software installation directory>/Base/libdb2osse.so.1 -- gen_context (system_u:object_r:texrel_shlib_t,s0)`
	`/opt/<software installation directory>/Base/libDb2Sbt.so -- gen_context (system_u:object_r:texrel_shlib_t,s0)`
	`/opt/<software installation directory>/Base/libdb2trcapi.so.1 -- gen_context (system_u:object_r:texrel_shlib_t,s0)`
	`/opt/<software installation directory>/Base/libDrDatabase.so -- gen_context (system_u:object_r:texrel_shlib_t,s0)`
	`/opt/<software installation directory>/Base/libIndexing.so -- gen_context (system_u:object_r:texrel_shlib_t,s0)`
	`/opt/<software installation directory>/Base/libSnooper.so -- gen_context (system_u:object_r:texrel_shlib_t,s0)`

2. Create the policy file from command line. Use the following command. Ensure that you give the following commands in the `/usr/share/selinux/devel` directory.

```
[root]# make backup_IDA.pp
Compiling targeted backup_IDA module
/usr/bin/checkmodule: loading policy configuration from tmp/backup_IDA.tmp
/usr/bin/checkmodule: policy configuration loaded
/usr/bin/checkmodule: writing binary representation (version 6) to tmp/backup_IDA.mod
Creating targeted backup_IDA.pp policy package
rm tmp/backup_IDA.mod tmp/backup_IDA.mod.fc
[root]# semodule -i backup_IDA.pp
[root]#
```

3. Execute the policy module. Use the following command:

```
[root]# restorecon -R /opt/<software installation directory>
```

SELinux is now configured to work with this application.

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

Getting Started - Deploying on Windows

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The SAP for Oracle iDataAgent is used to protect SAP for Oracle databases. Follow the steps given below to install the SAP for Oracle iDataAgent.

INSTALLATION

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

METHOD 1: INTERACTIVE INSTALL

Use this procedure to install directly on a client computer.

METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

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

BEFORE YOU BEGIN

Download Software Packages

Download the latest software package to perform the install.

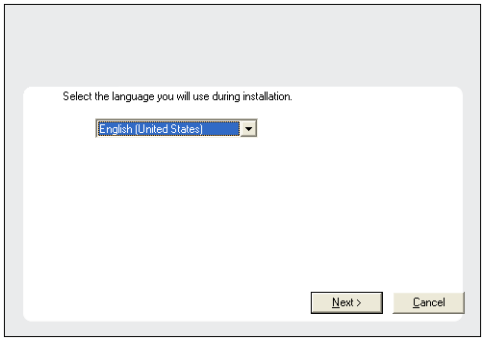
System Requirements

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

METHOD 1: INTERACTIVE INSTALL

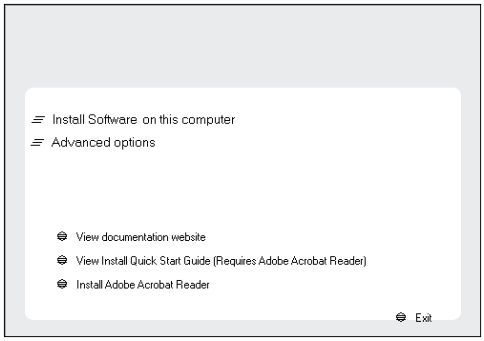
1. Run **Setup.exe** from the **Software Installation Disc** on Windows client computer where the SAP application resides.
2. Select the required language.

   Click **Next**.



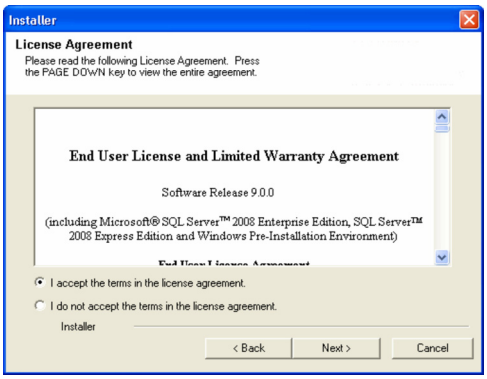
3. Select the option to install software on this computer.

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



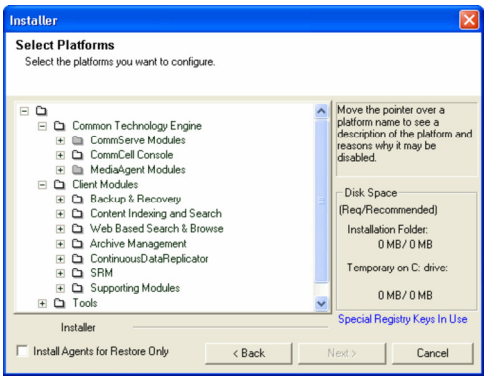
4. Select **I accept the terms in the license agreement**.

   Click **Next**.

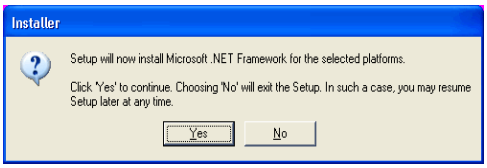


5. Expand **Client Modules** | **Backup & Recovery** | **Database** and select **SAP for Oracle**.

   Click **Next**.



6. Click **YES** to install Microsoft .NET Framework package.

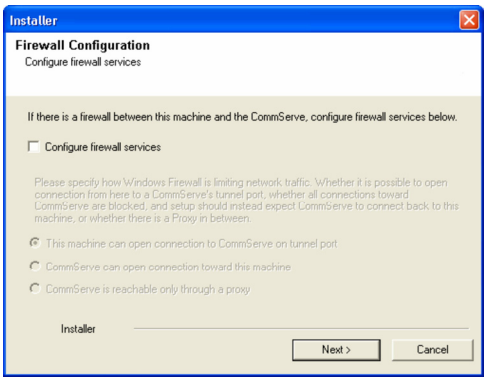


   - This prompt is displayed only when Microsoft .NET Framework is not installed.
   - Once the Microsoft .NET Framework is installed, the software automatically installs the Microsoft Visual J# 2.0 and Visual C++ redistributable packages.

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**.

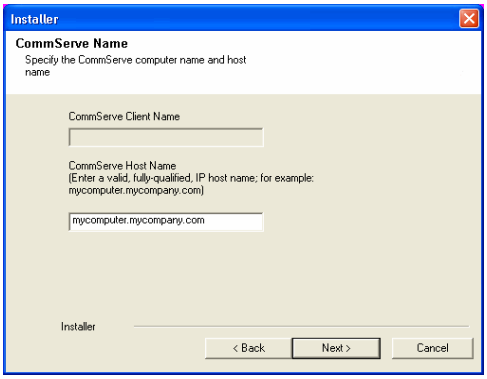


8. Enter the fully qualified domain name of the **CommServe Host Name**.

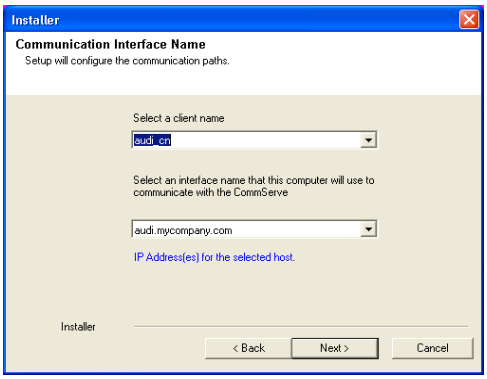
   Click **Next**.

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

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

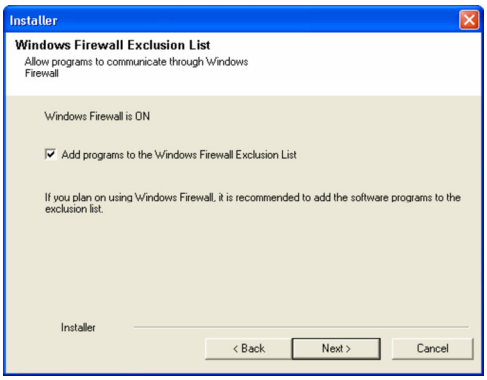


9. Click **Next**.



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

Click **Next**.



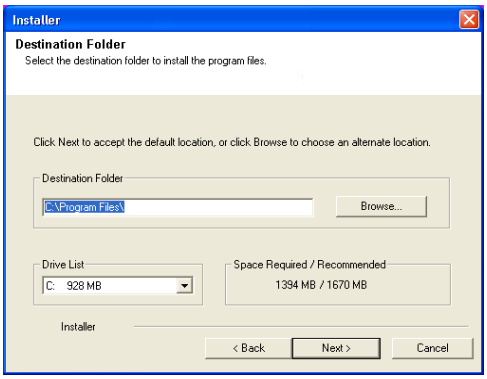
This option enables CommCell operations across Windows firewall by adding CommCell programs and services to Windows firewall exclusion list.

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**.



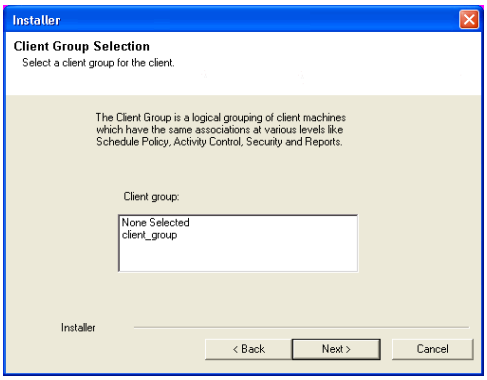
- Do not install the software to a mapped network drive.
- Do not use the following characters when specifying the destination path:

  / : * ? " < > | #

  It is recommended that you use alphanumeric characters only.

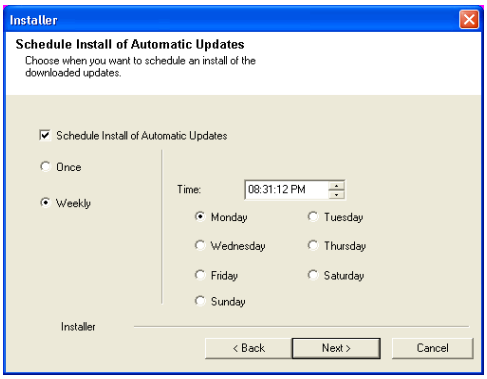
12. Select a Client Group from the list.

Click **Next**.

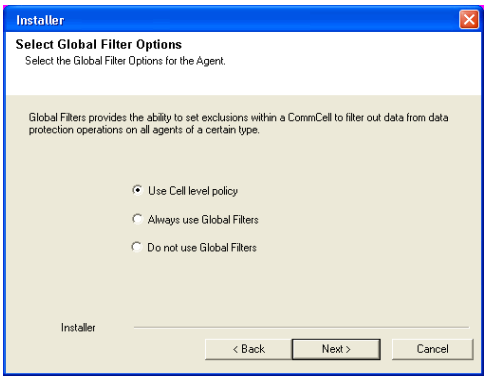


This screen will be displayed if Client Groups are configured in the CommCell Console.

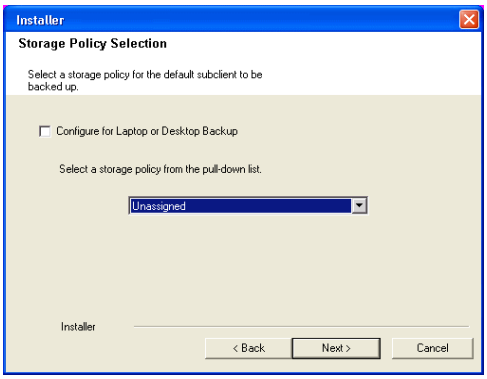
13. Click **Next**.



14. Click **Next**.

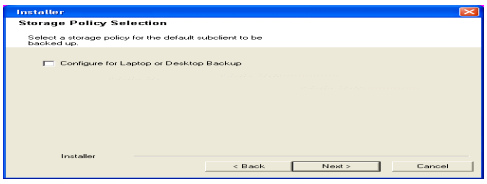


15. Select a **Storage Policy**.
Click **Next**.

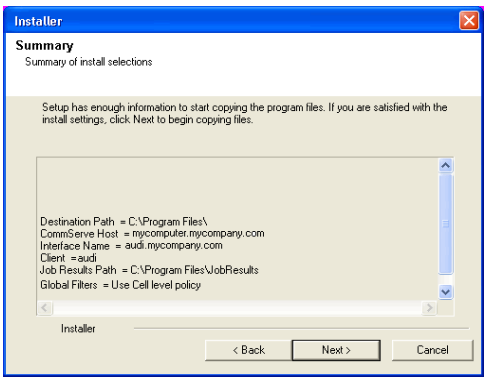


If you do not have Storage Policy created, this message will be displayed.
Click **OK**.

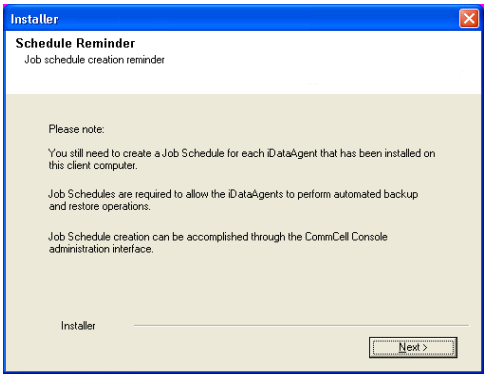
You can create the Storage Policy later in step 19.



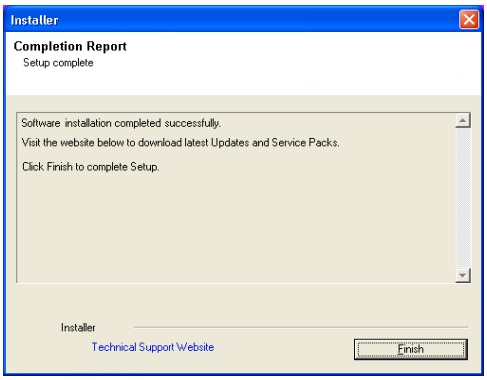
16. Click **Next**.



17. Click **Next**.



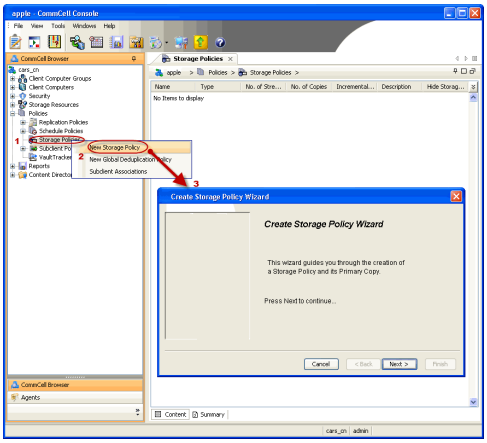
18. Click **Finish**.



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

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

19. Create a Storage Policy:



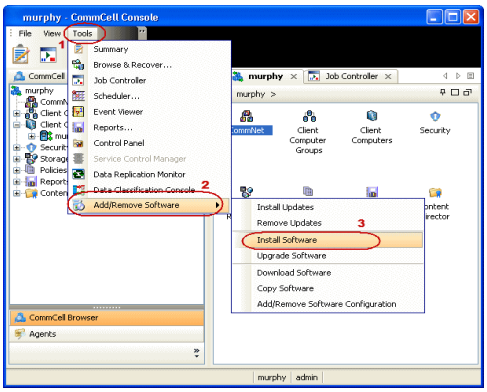
1. From the CommCell Browser, navigate to **Policies**.
2. Right-click the **Storage Policies** and then click **New Storage Policy**.
3. Follow the prompts displayed in the Storage Policy Wizard. The required options are mentioned below:
   - Select the Storage Policy type as **Data Protection and Archiving**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

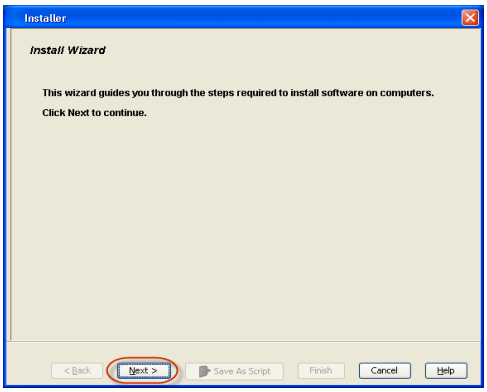
     Type the name of the folder in which the deduplication database must be located in the Deduplication Store Location or click the Browse button to select the folder and then click **Next**.
   - Review the details and click **Finish** to create the Storage Policy.

METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

1. From the CommCell Browser, select **Tools** | **Add/Remove Software** | **Install Software.**

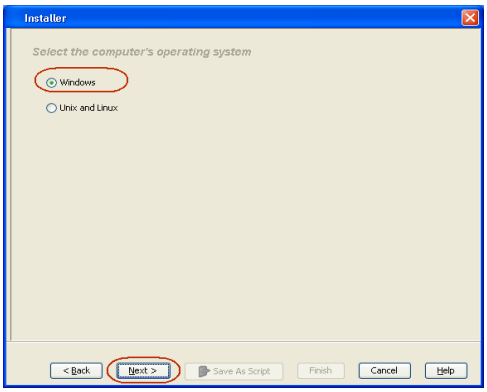


2. Click **Next**.



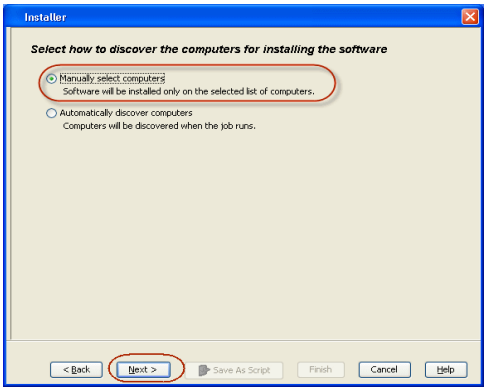
3. Select **Windows**.

   Click **Next**.



4. Select **Manually Select Computers**.

   Click **Next**.

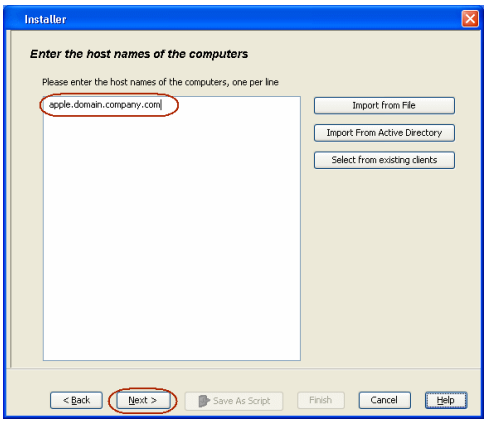


5. Enter the fully qualified domain name of the Windows client computer where the SAP for Oracle is resided.

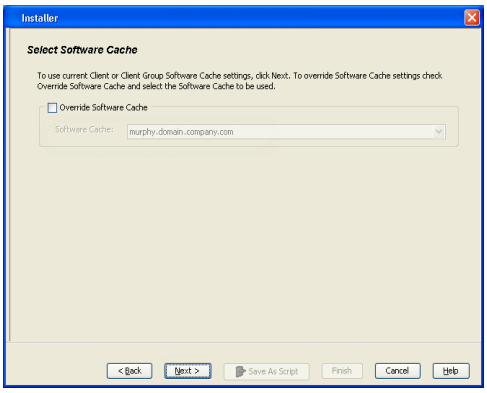
   For example: `apple.domain.company.com`

   The SAP for Oracle *i*DataAgent will be installed on this client computer.

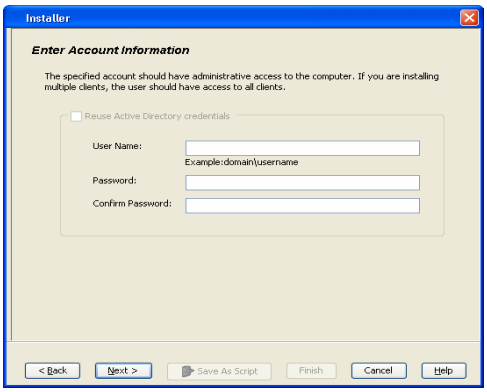
   Click **Next**.



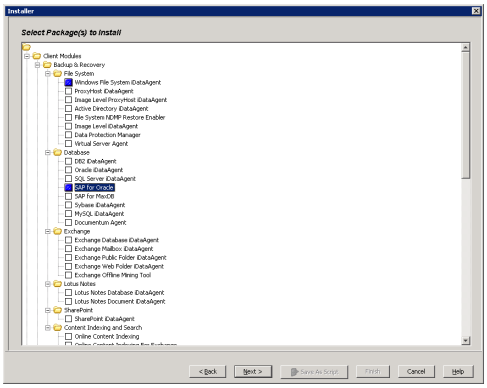
6. Click **Next**.



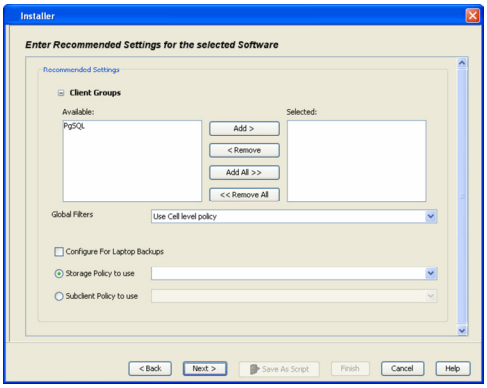
7. Specify **UserName** and **Password** of the computer.
   Click **Next**.



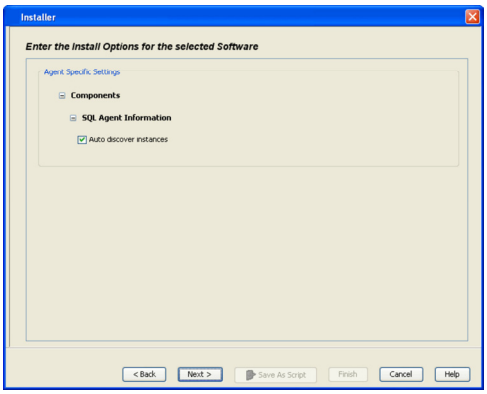
8. Select **SAP for Oracle**.
   Click **Next**.



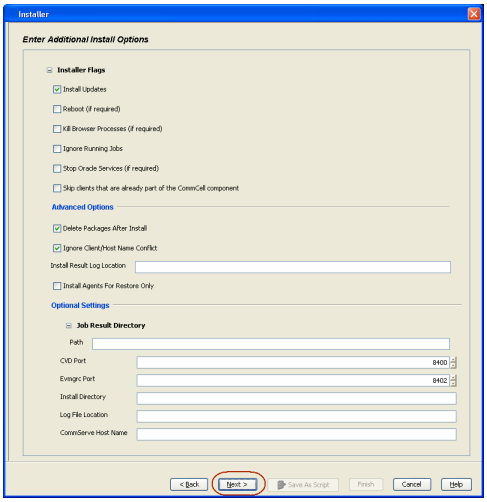
9. Click **Next**.



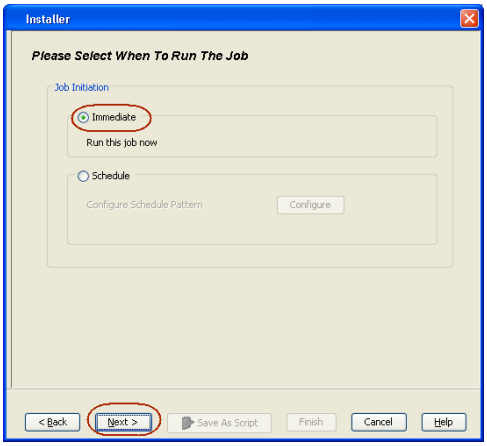
10. Click **Next**.



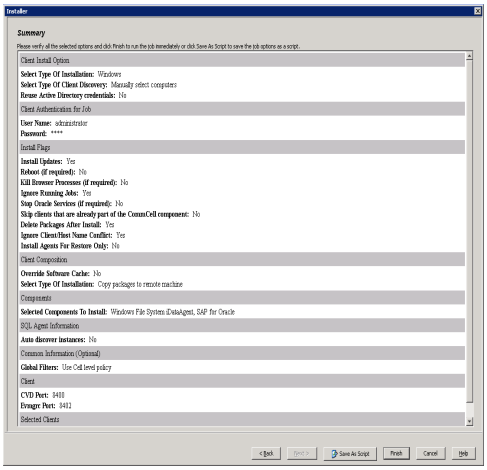
11. Click **Next**.



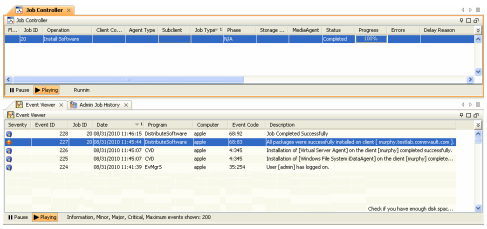
12. Select **Immediate**.
    Click **Next**.



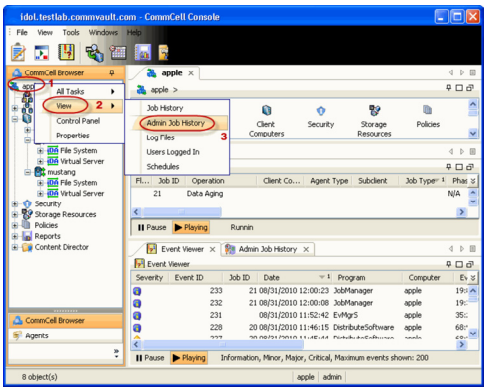
13. Click **Finish**.



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

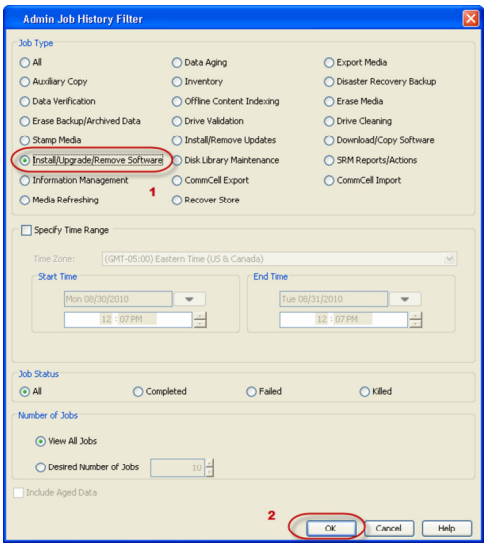


15. Once the job is complete, right-click the **CommServe** computer, click **View** and then click **Admin Job History**.



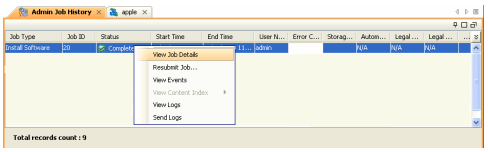
16. Select **Install/Upgrade/Remove Software**.

    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



Previous Next

Getting Started - Deploying in a Global Zone or Unix Servers

Previous Next

WHERE TO INSTALL

Install the software directly on the computer hosting the global zone or the Unix Server that you wish to protect. Make sure the computer satisfies the minimum requirements specified in the System Requirements.

It is recommended to install the software on the global zone to protect non-changing or static data on non-global zones. If the data is dynamic or contains application data, install the software on the non-global zone.

Use the following steps to install the SAP for Oracle *i*DataAgent on the following:

- Global Zone or a Solaris Server
- Any other supported Unix Server

INSTALLATION

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

METHOD 1: INTERACTIVE INSTALL

Use this procedure to install the software directly on client computer.

METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

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

RELATED TOPICS

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

Firewall
Provides comprehensive information on firewall.

METHOD 1: INTERACTIVE INSTALL

1. Run the following command from the Software Installation Disc:

   ```
   ./cvpkgadd
   ```

2. The product banner and other information is displayed.

   Press **Enter**.

3. Read the license agreement. Type **y** and press **Enter**.

4. Press **Enter**.

   ```
   Please select a setup task you want to perform from the
   list below:

   Advance options provide extra setup features such as
   creating custom package, recording/replaying user
   selections and installing External Data Connector
   software.

   1) Install data protection agents on this computer

   2) Advance options

   3) Exit this menu

   Your choice: [1]
   ```

5. If your computer is 32-bit, press **Enter**.

   If your computer is 64-bit, see Install Unix Agents on 64-bit Platform for step-by-step procedure.

   ```
   This machine supports both 32 bit and 64 bit binaries. By
   default, we will install 32 bit binary set that has full
   support for all the modules included in this package.
   Please note that 64 bit binary set currently only support
   limited modules.

   1) All platform (32 bit)

   2) FS and MA only (64 bit)

   Your choice: [1]
   ```

6. Press **Enter**.

   ```
   Certain Calypso packages can be associated with a virtual
   IP, or in other words, installed on a "virtual machine"
   belonging to some cluster. At any given time the virtual
   machine's services and IP address are active on only one
   of the cluster's servers. The virtual machine can "fail-
   over" from one server to another, which includes stopping
   services and deactivating IP address on the first server
   and activating the IP address/services on the other
   server.

   You now have a choice of performing a regular Calypso
   install on the physical host or installing Calypso on a
   virtual machine for operation within a cluster.

   Most users should select "Install on a physical machine"
   here.

   1) Install on a physical machine
   ```

```
2) Install on a virtual machine

3) Exit

Your choice: [1]
```

7. If you have only one network interface, press **Enter** to accept the default network interface name and continue.

If you have multiple network interfaces, enter the interface name that you wish to use as default, and then press **Enter**.

The interface name and IP addresses depend on the computer in which the software is installed and may be different from the example shown.

```
We found one network interface available on your machine. We will associate it with the physical machine being installed, and it will also be used by the CommServe to connect to the physical machine. Note that you will be able to additionally customize Datapipe Interface Pairs used for the backup data traffic later in the Calypso Java GUI.

Please check the interface name below, and make connections if necessary:

Physical Machine Host Name: [angel.company.com]
```

8. Press **Enter**.

```
Please specify the client name for this machine.

It does not have to be the network host name: you can enter any word here without spaces. The only requirement is that it must be unique on the CommServe.

Physical Machine Client name: [angel]
```

9. Type the appropriate number to install **SAP for Oracle *i*DataAgent**.

A confirmation screen will mark your choice with an "**X**".

Type **d** for **Done**, and press **Enter**.

```
Install Calypso on physical machine 172.19.99.62

Please select the Calypso module(s) that you would like to install.

[ ] 1) MediaAgent [1301] [CVGxMA]>

[ ] 2) UNIX File System iDataAgent [1101] [CVGxIDA]

[a=all n=none r=reverse q=quit d=done >=next <=previous ?=help]

Enter number(s)/one of "a,n,r,q,d,>,<,?" here:
```

10. Press **Enter**.

```
Do you want to use the agents for restore only without consuming licenses? [no]
```

11. Type the appropriate number to install the latest software scripts and press **Enter** to continue.

- Select **Download from the software provider website** to download the latest software scripts from your software provider website.

  Make sure you have internet connectivity when you are using this option.
- Select **Use the one in the installation media**, to install the software scripts from the disc or share from which the installation is performed.
- Select **Use the copy I already have by entering its unix path**, to specify the path if you have the software script in an alternate location.

```
Installation Scripts Pack provides extra functions and latest support and fix performed during setup time. Please specify how you want to get this pack.

If you choose to download it from the website now, please make sure you have internet connectivity at this time. This process may take some time depending on the internet connectivity.

1) Download from the software provider website.

2) Use the one in the installation media

3) Use the copy I already have by entering its unix path

Your choice: [1] 2
```

12. Press **Enter**.

```
Keep Your Install Up to Date - Latest Service Pack

Latest Service Pack provides extra functions and latest support and fix for the packages you are going to install. You can download the latest service pack from software provider website.

If you decide to download it from the website now, please make sure you have internet connectivity at this time. This process may take some time depending on the internet connectivity.

Do you want to download the latest service pack now? [no]
```

13. Press **Enter** to accept the default path and continue, or

Enter a path to modify the default path and press **Enter**.

Do not use the following characters when specifying the path:

!@#$%^&*():/?\

```
Please specify where you want us to install Calypso binaries.

It must be a local directory and there should be at least 176MB of free space available. All files will be installed in a "calypso" subdirectory, so if you enter "/opt", the files will actually be placed into "/opt/calypso".

Installation Directory: [/opt]
```

14. Press **Enter** to accept the default location for the log files and continue, or

Enter a path to modify the default location and press **Enter**.

All the modules installed on the computer will store the log files in this directory.

```
Please specify where you want to keep Calypso log files.

It must be a local directory and there should be at least 100MB of free space available. All log files will be created in a "calypso/Log_Files" subdirectory, so if you enter "/var/log", the logs will actually be placed into "/var/log/calypso/Log_Files".

Log Directory: [/var/log]
```

15. Type **no**.

If entering **Yes**, go to Step 17.

```
Most of Software processes run with root privileges, but some are launched by databases and inherit database access rights. To make sure that registry and log files can be written to by both kinds of processes we can either make such files world-writeable or we can grant write access only to processes belonging to a particular group, e.g. a
```

```
"calypso" or a "dba" group.

We highly recommend now that you create a new user group
and enter its name in the next setup screen. If you choose
not to assign a dedicated group to Software processes, you
will need to specify the access permissions later.

If you're planning to backup Oracle DB you should use
"dba" group.

Would you like to assign a specific group to Software?
[yes]
```

16. Type **d** for done.

```
Access Permissions for Other Users

Installer will assign full access rights to root user and
its belonging group
for all installed Software files and its processes.

For any other users, you can specify the access
permissions now.

However, since you chose not to assign a dedicated group
in previous step,
make sure you specify sufficient access rights for other
users if you are also
planning to install Software agents involving third party
software protection.

[X] 1) Allow read permission to other users
[X] 2) Allow write permission to other users
[X] 3) Allow execute permission to other users

[a=all n=none r=reverse q=quit d=done >=next <=previous ?
=help]
Enter number(s)/one of "a,n,r,q,d,>,<,?" here:
```

17. If you indicated **Yes** in Step 15., you will be prompted for the group name that must be used to launch processes.

Enter the group name and then press **Enter**.

> See your Unix systems administrator for assistance in creating a user group.

```
Please enter the name of the group which will be assigned
to all Software files and on behalf of which all Software
processes will run.

In most of the cases it's a good idea to create a
dedicated "calypso" group. However, if you're planning to
use Oracle iDataAgent or SAP Agent, you should enter
Oracle's "dba" group here.

Group name: dba

REMINDER

If you are planning to install Calypso Informix, DB2,
PostgreSQL, Sybase or Lotus Notes iDataAgent, please make
sure to include Informix, DB2, etc. users into group
"dba".
```

18. Type a network TCP port number for the Communications Service (CVD) and press **Enter**.

Type a network TCP port number for the Client Event Manager Service (EvMgrC) and press **Enter**.

```
Every instance of Calypso should use a unique set of
network ports to avoid interfering with other instances
running on the same machine.

The port numbers selected must be from the reserved port
number range and have not been registered by another
application on this machine.

Please enter the port numbers.

Port Number for CVD : [8600]

Port Number for EvMgrC: [8602]
```

19. If this computer and the CommServe is separated by a firewall, type **Yes** and then press **Enter**.

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

If you do not wish to configure the firewall services, type **No** and then press **Enter**.

```
Is there a firewall between this client and the CommServe?
[no]
```

20. Type the fully qualified domain name for **CommServe Host Name** and press **Enter**.

> Ensure that the CommServe is accessible before typing the name; otherwise the installation will fail.

```
Please specify hostname of the CommServe below. Make sure
the hostname is fully qualified, resolvable by the name
services configured on this machine.

CommServe Host Name:
```

21. Press **Enter**.

```
Commcell Level Global Filters are set through Calypso
GUI's Control Panel in order to filter out certain
directories or files from backup Commcell-widely. If you
turn on the Global filters, they will be effective to the
default subclient. There are three options you can choose
to set the filters.

1) Use Cell level policy

2) Always use Global filters

3) Do not use Global filters

Please select how to set the Global Filters for the
default subclient? [1]
```

22. Type the number of a Client Group and press **Enter**.

```
Client Group(s) is currently configured on CommServe
cs.company.com. Please choose the group(s) that you want
```

A confirmation screen will mark your choice with an "X". Type **d** for done with the selection, and press **Enter** to continue.

This screen will be displayed only if Client Groups are configured for the CommCell.

```
to add this client client.company.com to. The selected
group(s) will be marked (X) and can be deselected if you
enter the same number again. After you are finished with
the selection, select "Done with the Selection".

[ ] 1) Unix

[ ] 2) DR

[a=all n=none r=reverse q=quit d=done >=next <=previous ?
=help]

Enter number(s)/one of "a,n,r,q,d,>,<,?" here: 2
```

23. Enter the number corresponding to the storage policy through which you want to back up the External Data Connector and press **Enter**.

```
Please select one storage policy for this IDA from the
list below:

1) SP_StandAloneLibrary2_2

2) SP_Library3_3

3) SP_MagLibrary4_4

Storage Policy: [1]
```

CHOICE

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

You may not be prompted for user input.

```
There seem to be no Storage Policies configured on the
CommServe. Before you
can run any backups of this IDA, you will need to install
a MediaAgent, create a Storage Policy Adjusting modes and
permissions of files

Successfully installed Calypso
```

You can create the Storage Policy later in step 26.

24. Type the path of the **SAPEXE** directory and then press **Enter**.

```
Please specify the location of SAPEXE directory.

SAPEXE: /usr/sap/CER/sys/exe/run
```

25. Type **3** to the **Exit** option and press **Enter**.

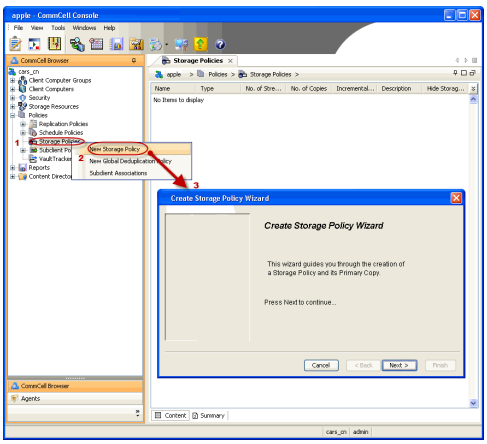
The installation is now complete.

```
Certain Calypso packages can be associated with a virtual
IP, or in other words, installed on a "virtual machine"
belonging to some cluster. At any given time the virtual
machine's services and IP address are active on only one
of the cluster's servers. The virtual machine can "fail-
over" from one server to another, which includes stopping
services and deactivating IP address on the first server
and activating the IP address/services on the other
server.

Currently you have Calypso installed on physical node
stone.company.com.

Now you have a choice of either adding another package to
the existing installation or configure Calypso on a
virtual machine for use in a cluster.

1) Add another package to stone.company.com
2) Install Calypso on a virtual machine
3) Exit

Your choice: [1]
```

If you already have a storage policy selected in step 24, click the Next button available on the bottom of the page to proceed to the Configuration section.

If you do not have Storage Policy created, follow the procedure given below.

26.



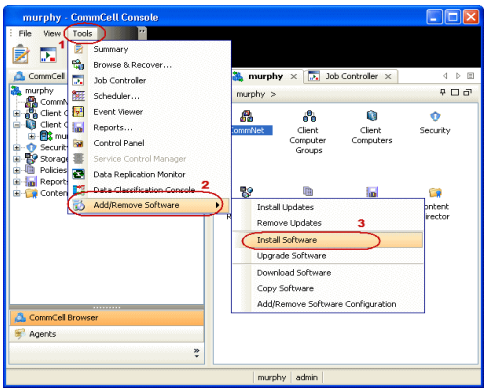
1. From the CommCell Browser, navigate to **Policies**.
2. Right-click the **Storage Policies** and then click **New Storage Policy**.
3. Follow the prompts displayed in the Storage Policy Wizard. The required options are mentioned below:
   - Select the Storage Policy type as **Data Protection and Archiving**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

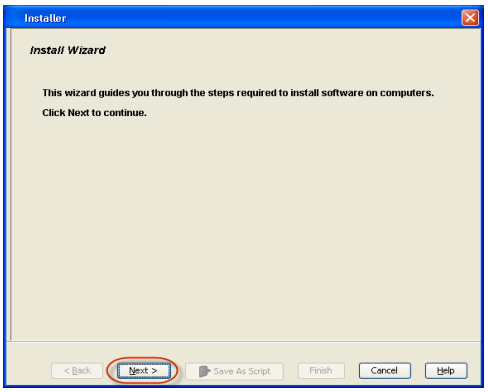
     Type the name of the folder in which the deduplication database must be located in the Deduplication Store Location or click the Browse button to select the folder and then click **Next**.
   - Review the details and click **Finish** to create the Storage Policy.

METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

1. From the CommCell Browser, select **Tools** | **Add/Remove Software** | **Install Software.**

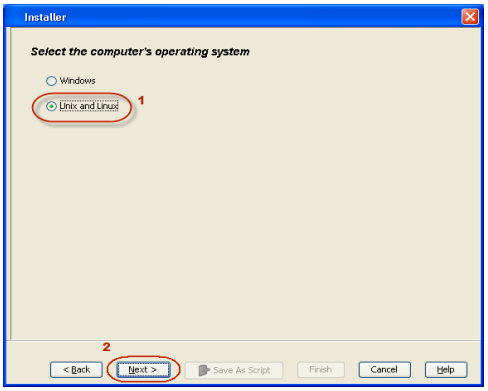


2. Click **Next**.



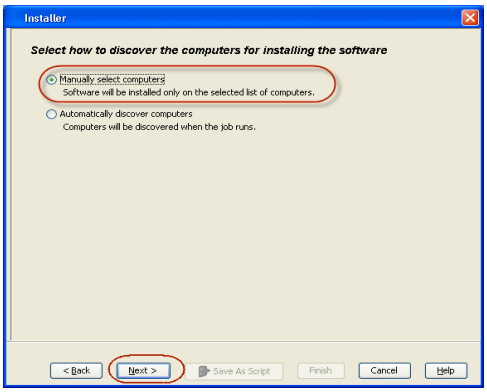
3. Select **Unix and Linux**.

   Click **Next**.

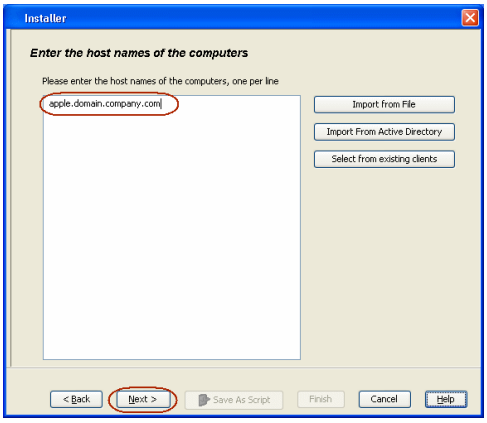


4. Select **Manually Select Computers**.

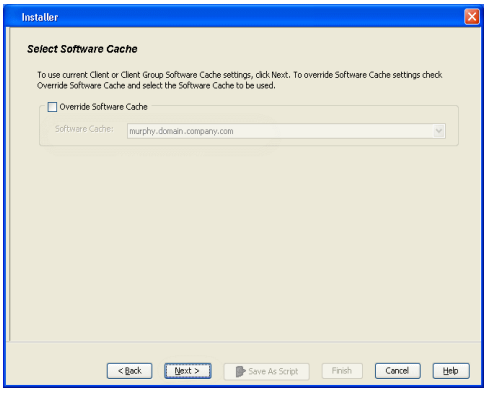
   Click **Next**.



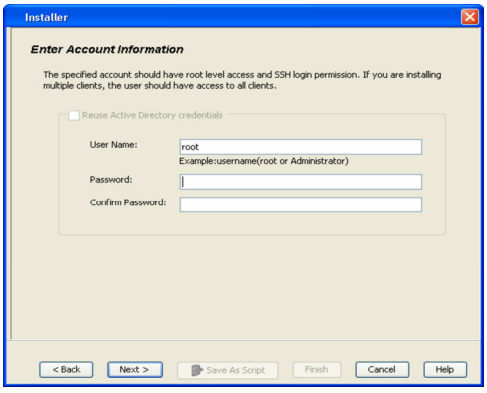
5. Enter the fully qualified domain name of the computer in which you wish to install.
   For example: `apple.domain.company.com`
   The SAP for Oracle *i*DataAgent will be installed on this client computer.
   Click **Next**.



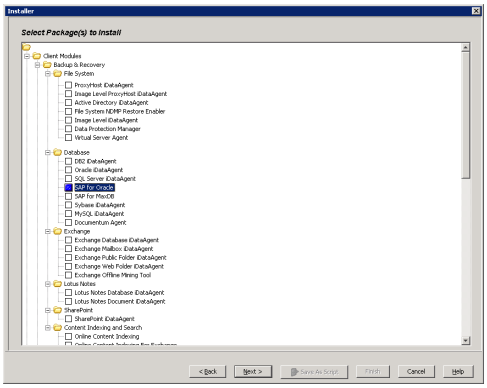
6. Click **Next**.



7. Specify **UserName** and **Password** of client computer.
   Click **Next**.



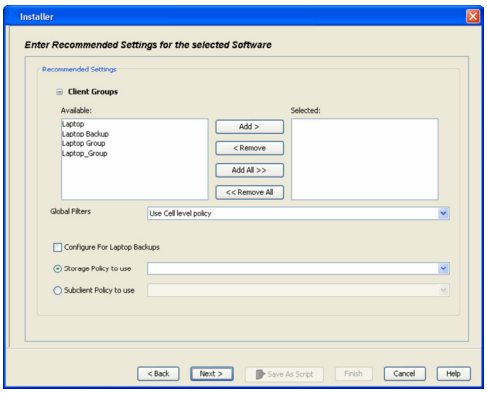
8. Select **SAP For Oracle**.
   Click **Next**.



9.

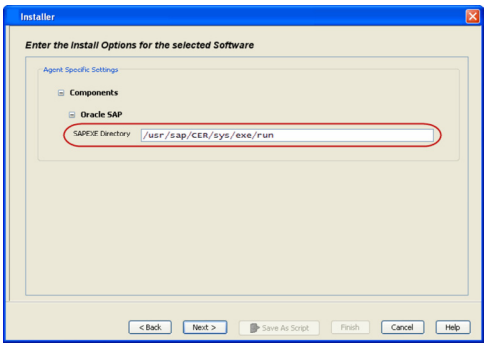
- Select **Client Group** from **Available** and click **Add**.

  Do not add more than one Client Group.
- Select a **Storage Policy** from the drop-down list. Click **Next**.

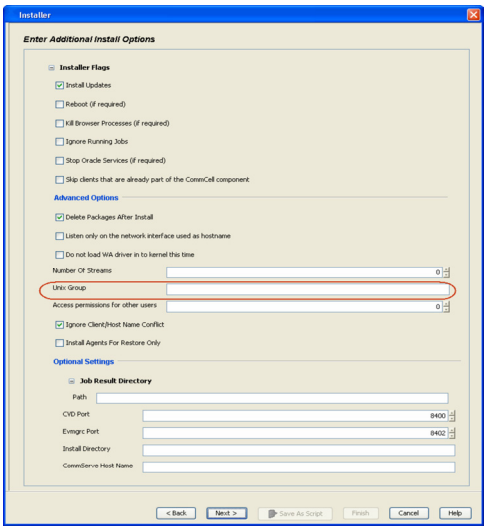


10. Type the path to **SAPEXE Directory**.

Click **Next**.

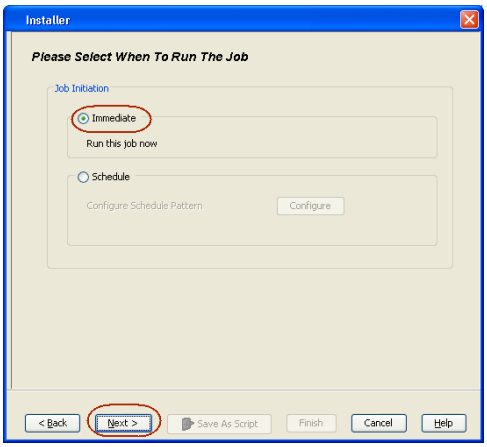


11. Click **Next**.

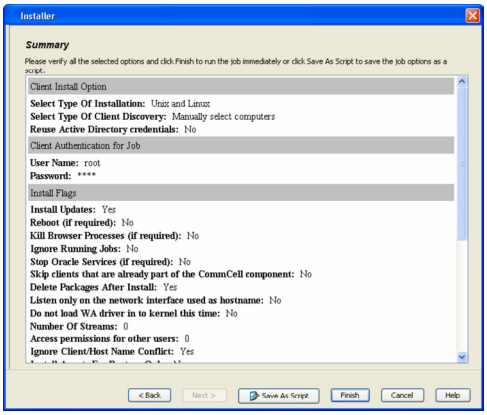


12. Select **Immediate**.

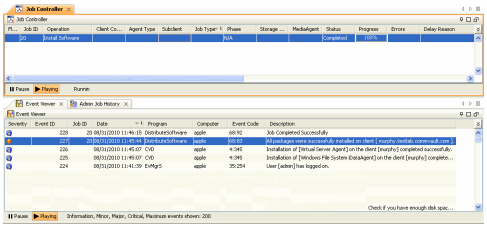
Click **Next**.



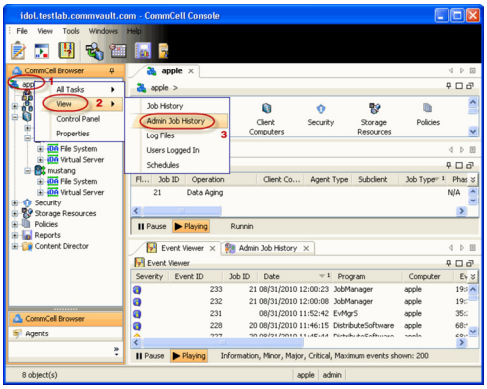
13. Click **Finish**.



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

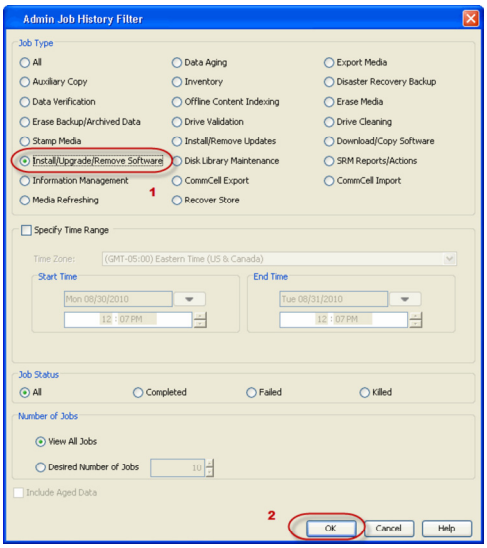


15. Once the job is complete, right-click the **CommServe** computer, click **View** and then click **Admin Job History**.

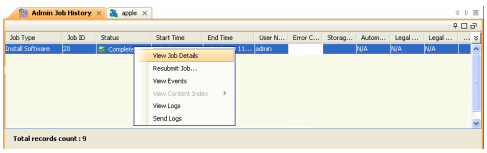


16. Select **Install/Upgrade/Remove Software**.

    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



Previous Next

Getting Started - Deploying in a Non-Global Zone

Previous Next

WHERE TO INSTALL

Install the software on each of the non-global zones where you have application data.

It is recommended to install the software on the global zone to protect non-changing or static data on non-global zones. If the data is dynamic or contains application data, install the software on the non-global zone.

INSTALLATION

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

METHOD 1: INTERACTIVE INSTALL

Use this procedure to install the software directly on client computer.

METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

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

RELATED TOPICS

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

Firewall
Provides comprehensive information on firewall.

METHOD 1: INTERACTIVE INSTALL

1. Mount the installation disc on the non-global zone.

   ```
   mkdir <Non-Global Zone root location>/<Non-Global Zone local directory>

   mount -F lofs <Global zone software Install Disc mount point> <Non-Global Zone root location>/<Non-Global Zone local directory>

   Connect to Non-Global Zone terminal
   ```

2. Run the following command from the Software Installation Disc:

   ./cvpkgadd

3. The product banner and other information is displayed.

   Press **Enter**.

4. Read the license agreement. Type **y** and press **Enter**.

5. Press **Enter**.

   ```
   Please select a setup task you want to perform from the list below:

   Advance options provide extra setup features such as creating custom package, recording/replaying user selections and installing External Data Connector software.

   1) Install data protection agents on this computer

   2) Advance options

   3) Exit this menu

   Your choice: [1]
   ```

6. If your computer is 32-bit, press **Enter**.

   If your computer is 64-bit, see Install Unix Agents on 64-bit Platform for step-by-step procedure.

   ```
   This machine supports both 32 bit and 64 bit binaries. By default, we will install 32 bit binary set that has full support for all the modules included in this package. Please note that 64 bit binary set currently only support limited modules.

   1) All platform (32 bit)

   2) FS and MA only (64 bit)

   Your choice: [1]
   ```

7. Press **Enter**.

   ```
   Certain Calypso packages can be associated with a virtual IP, or in other words, installed on a "virtual machine" belonging to some cluster. At any given time the virtual machine's services and IP address are active on only one of the cluster's servers. The virtual machine can "fail-over" from one server to another, which includes stopping services and deactivating IP address on the first server and activating the IP address/services on the other server.

   You now have a choice of performing a regular Calypso install on the physical host or installing Calypso on a virtual machine for operation within a cluster.

   Most users should select "Install on a physical machine" here.
   ```

```
1) Install on a physical machine

2) Install on a virtual machine

3) Exit

Your choice: [1]
```

8. If you have only one network interface, press **Enter** to accept the default network interface name and continue.

   If you have multiple network interfaces, enter the interface name that you wish to use as default, and then press **Enter**.

   The interface name and IP addresses depend on the computer in which the software is installed and may be different from the example shown.

```
We found one network interface available on your machine.
We will associate it with the physical machine being
installed, and it will also be used by the CommServe to
connect to the physical machine. Note that you will be
able to additionally customize Datapipe Interface Pairs
used for the backup data traffic later in the Calypso Java
GUI.

Please check the interface name below, and make
connections if necessary:

Physical Machine Host Name: [angel.company.com]
```

9. Press **Enter**.

```
Please specify the client name for this machine.

It does not have to be the network host name: you can
enter any word here without spaces. The only requirement
is that it must be unique on the CommServe.

Physical Machine Client name: [angel]
```

10. Type the appropriate number to install **SAP for Oracle *i*DataAgent**.

    A confirmation screen will mark your choice with an "**X**".

    Type **d** for **Done**, and press **Enter**.

```
Install Calypso on physical machine 172.19.99.62

Please select the Calypso module(s) that you would like to
install.

[ ] 1) MediaAgent [1301] [CVGxMA]>

[ ] 2) UNIX File System iDataAgent [1101] [CVGxIDA]

[a=all n=none r=reverse q=quit d=done >=next <=previous ?
=help]

Enter number(s)/one of "a,n,r,q,d,>,<,?" here:
```

11. Press **Enter**.

```
Do you want to use the agents for restore only without
consuming licenses? [no]
```

12. Type the appropriate number to install the latest software scripts and press **Enter** to continue.

    - Select **Download from the software provider website** to download the latest software scripts from your software provider website.

      Make sure you have internet connectivity when you are using this option.
    - Select **Use the one in the installation media**, to install the software scripts from the disc or share from which the installation is performed.
    - Select **Use the copy I already have by entering its unix path**, to specify the path if you have the software script in an alternate location.

```
Installation Scripts Pack provides extra functions and
latest support and fix performed during setup time. Please
specify how you want to get this pack.

If you choose to download it from the website now, please
make sure you have internet connectivity at this time.
This process may take some time depending on the internet
connectivity.

1) Download from the software provider website.

2) Use the one in the installation media

3) Use the copy I already have by entering its unix path

Your choice: [1] 2
```

13. Press **Enter**.

```
Keep Your Install Up to Date - Latest Service Pack

Latest Service Pack provides extra functions and latest
support and fix for the packages you are going to install.
You can download the latest service pack from software
provider website.

If you decide to download it from the website now, please
make sure you have internet connectivity at this time.
This process may take some time depending on the internet
connectivity.

Do you want to download the latest service pack now? [no]
```

14. Press **Enter** to accept the default path and continue, or

    Enter a path to modify the default path and press **Enter**.

    Do not use the following characters when specifying the path:

    !@#$%^&*():/?\

```
Please specify where you want us to install Calypso
binaries.

It must be a local directory and there should be at least
176MB of free space available. All files will be installed
in a "calypso" subdirectory, so if you enter "/opt", the
files will actually be placed into "/opt/calypso".

Installation Directory: [/opt]
```

15. Press **Enter** to accept the default location for the log files and continue, or

    Enter a path to modify the default location and press **Enter**.

    All the modules installed on the computer will store the log files in this directory.

```
Please specify where you want to keep Calypso log files.

It must be a local directory and there should be at least
100MB of free space available. All log files will be
created in a "calypso/Log_Files" subdirectory, so if you
enter "/var/log", the logs will actually be placed into
"/var/log/calypso/Log_Files".

Log Directory: [/var/log]
```

16. Type **no**.

    If entering **Yes**, go to Step 18.

```
Most of Software processes run with root privileges, but
some are launched by databases and inherit database access
rights. To make sure that registry and log files can be
written to by both kinds of processes we can either make
such files world-writeable or we can grant write access
```

```
only to processes belonging to a particular group, e.g. a
"calypso" or a "dba" group.

We highly recommend now that you create a new user group
and enter its name in the next setup screen. If you choose
not to assign a dedicated group to Software processes, you
will need to specify the access permissions later.

If you're planning to backup Oracle DB you should use
"dba" group.

Would you like to assign a specific group to Software?
[yes]
```

17. Type **d** for done.

```
Access Permissions for Other Users

Installer will assign full access rights to root user and
its belonging group
for all installed Software files and its processes.

For any other users, you can specify the access
permissions now.

However, since you chose not to assign a dedicated group
in previous step,
make sure you specify sufficient access rights for other
users if you are also
planning to install Software agents involving third party
software protection.

[X] 1) Allow read permission to other users
[X] 2) Allow write permission to other users
[X] 3) Allow execute permission to other users

[a=all n=none r=reverse q=quit d=done >=next <=previous ?
=help]
Enter number(s)/one of "a,n,r,q,d,>,<,?" here:
```

18. If you indicated **Yes** in Step 16., you will be prompted for the group name that must be used to launch processes.

Enter the group name and then press **Enter**.

> See your Unix systems administrator for assistance in creating a user group.

```
Please enter the name of the group which will be assigned
to all Software files and on behalf of which all Software
processes will run.

In most of the cases it's a good idea to create a
dedicated "calypso" group. However, if you're planning to
use Oracle iDataAgent or SAP Agent, you should enter
Oracle's "dba" group here.

Group name: dba

REMINDER

If you are planning to install Calypso Informix, DB2,
PostgreSQL, Sybase or Lotus Notes iDataAgent, please make
sure to include Informix, DB2, etc. users into group
"dba".
```

19. Type a network TCP port number for the Communications Service (CVD) and press **Enter**.

Type a network TCP port number for the Client Event Manager Service (EvMgrC) and press **Enter**.

```
Every instance of Calypso should use a unique set of
network ports to avoid interfering with other instances
running on the same machine.

The port numbers selected must be from the reserved port
number range and have not been registered by another
application on this machine.

Please enter the port numbers.

Port Number for CVD : [8600]

Port Number for EvMgrC: [8602]
```

20. If this computer and the CommServe is separated by a firewall, type **Yes** and then press **Enter**.

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

If you do not wish to configure the firewall services, type **No** and then press **Enter**.

```
Is there a firewall between this client and the CommServe?
[no]
```

21. Type the fully qualified domain name for **CommServe Host Name** and press **Enter**.

> Ensure that the CommServe is accessible before typing the name; otherwise the installation will fail.

```
Please specify hostname of the CommServe below. Make sure
the hostname is fully qualified, resolvable by the name
services configured on this machine.

CommServe Host Name:
```

22. Press **Enter**.

```
Commcell Level Global Filters are set through Calypso
GUI's Control Panel in order to filter out certain
directories or files from backup Commcell-widely. If you
turn on the Global filters, they will be effective to the
default subclient. There are three options you can choose
to set the filters.

1) Use Cell level policy

2) Always use Global filters

3) Do not use Global filters

Please select how to set the Global Filters for the
default subclient? [1]
```

23. Type the number of a Client Group and press **Enter**.

```
Client Group(s) is currently configured on CommServe
```

A confirmation screen will mark your choice with an "X". Type **d** for done with the selection, and press **Enter** to continue.

This screen will be displayed only if Client Groups are configured for the CommCell.

```
cs.company.com. Please choose the group(s) that you want
to add this client client.company.com to. The selected
group(s) will be marked (X) and can be deselected if you
enter the same number again. After you are finished with
the selection, select "Done with the Selection".

[ ] 1) Unix

[ ] 2) DR

[a=all n=none r=reverse q=quit d=done >=next <=previous ?
=help]

Enter number(s)/one of "a,n,r,q,d,>,<,?" here: 2
```

24. Enter the number corresponding to the storage policy through which you want to back up the External Data Connector and press **Enter**.

```
Please select one storage policy for this IDA from the
list below:

1) SP_StandAloneLibrary2_2

2) SP_Library3_3

3) SP_MagLibrary4_4

Storage Policy: [1]
```

CHOICE

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

You may not be prompted for user input.

You can create the Storage Policy later in step 27.

```
There seem to be no Storage Policies configured on the
CommServe. Before you
can run any backups of this IDA, you will need to install
a MediaAgent, create
a Storage Policy
Adjusting modes and permissions of files

Successfully installed Calypso
```

25. Type the path of the **SAPEXE** directory and then press **Enter**.

```
Please specify the location of SAPEXE directory.

SAPEXE: /usr/sap/CER/sys/exe/run
```

26. Type **3** to the **Exit** option and press **Enter**.

The installation is now complete.

```
Certain Calypso packages can be associated with a virtual
IP, or in other words, installed on a "virtual machine"
belonging to some cluster. At any given time the virtual
machine's services and IP address are active on only one
of the cluster's servers. The virtual machine can "fail-
over" from one server to another, which includes stopping
services and deactivating IP address on the first server
and activating the IP address/services on the other
server.

Currently you have Calypso installed on physical node
stone.company.com.

Now you have a choice of either adding another package to
the existing installation or configure Calypso on a
virtual machine for use in a cluster.

1) Add another package to stone.company.com
2) Install Calypso on a virtual machine
3) Exit

Your choice: [1]
```

If you already have a storage policy selected in step 24, click the Next button available on the bottom of the page to proceed to the Configuration section.

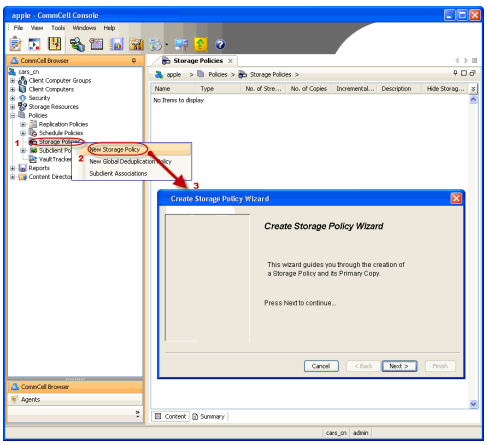
If you do not have Storage Policy created, follow the procedure given below.

27.

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**.

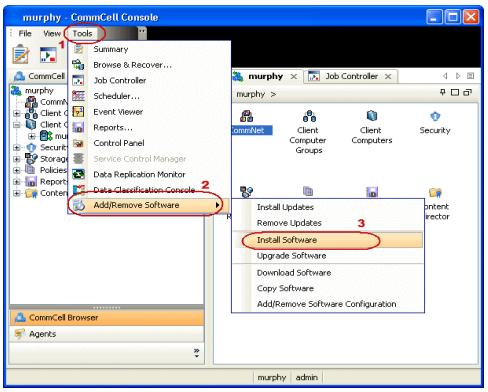
     Ensure that you select a library attached to a MediaAgent operating in the current release.
   - From the **MediaAgent** list, click the name of a MediaAgent that will be used to create the primary copy and then click **Next**.
   - For the device streams and the retention criteria information, click **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.

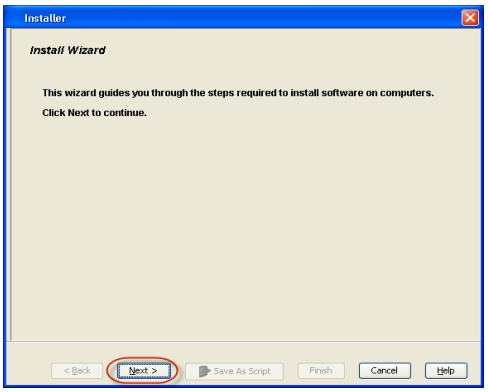


METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

1. From the CommCell Browser, select **Tools** | **Add/Remove Software** | **Install Software.**

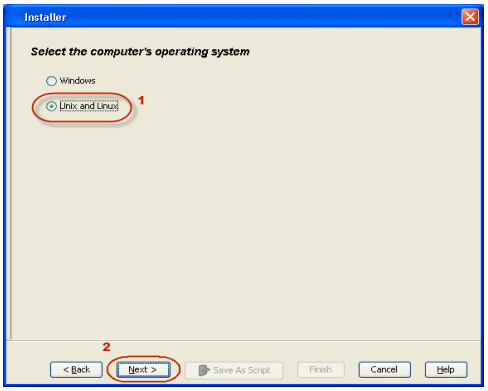


2. Click **Next**.



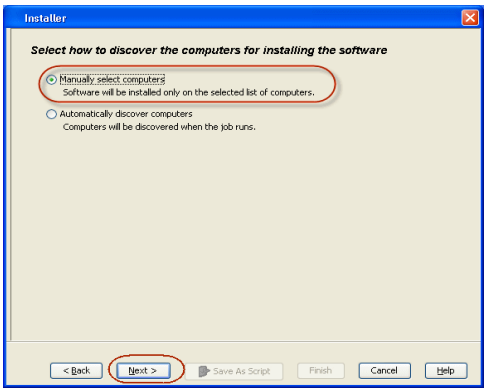
3. Select **Unix and Linux**.

   Click **Next**.



4. Select **Manually Select Computers**.

   Click **Next**.

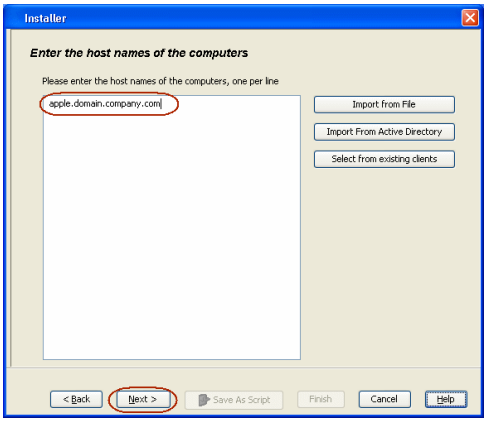


5. Enter the fully qualified domain name of the computer in which you wish to install.

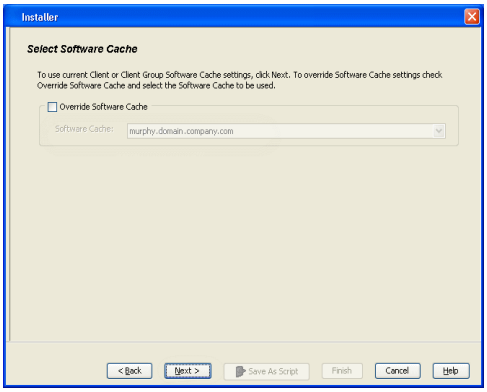
   For example: `apple.domain.company.com`

   The SAP for Oracle *i*DataAgent will be installed on this client computer.

   Click **Next**.

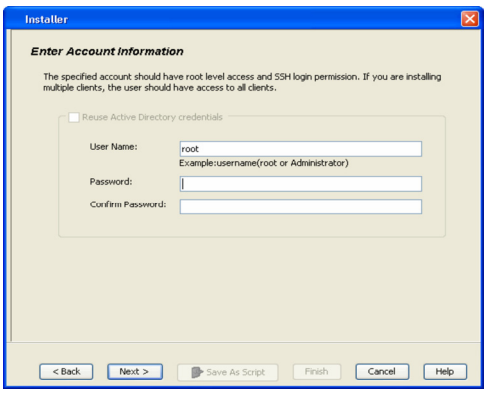


6. Click **Next**.



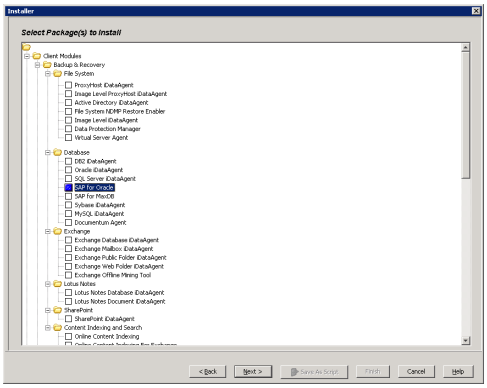
7. Specify **UserName** and **Password** of client computer.

   Click **Next**.



8. Select **SAP For Oracle**.

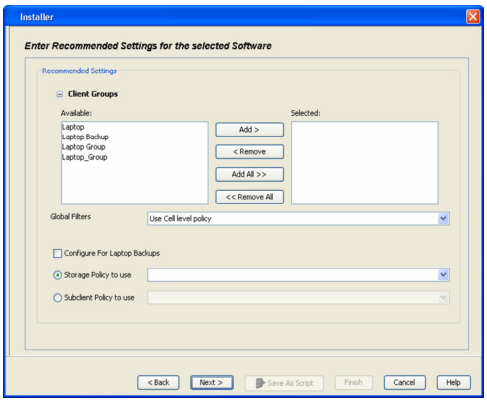
   Click **Next**.



9.

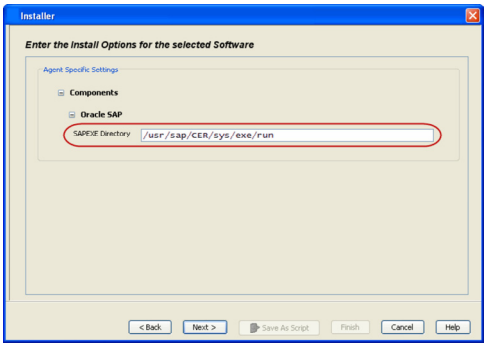
- Select **Client Group** from **Available** and click **Add**.

  Do not add more than one Client Group.
- Select a **Storage Policy** from the drop-down list. Click **Next**.

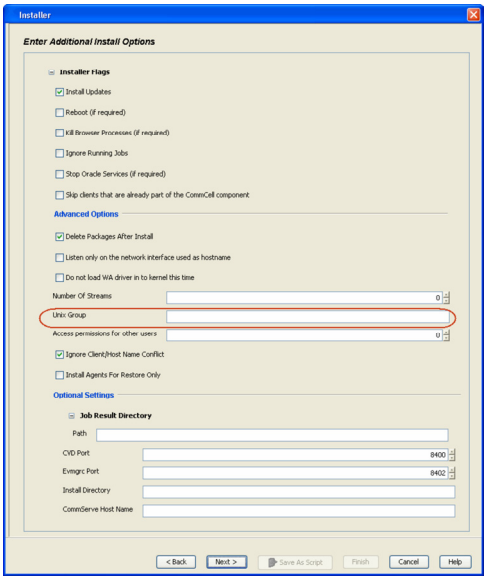


10. Type the path to **SAPEXE Directory**.

Click **Next**.

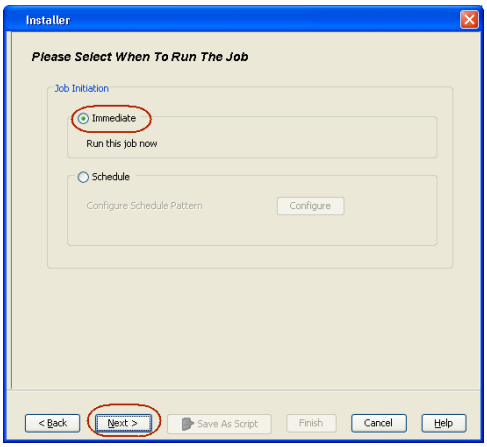


11. Click **Next**.

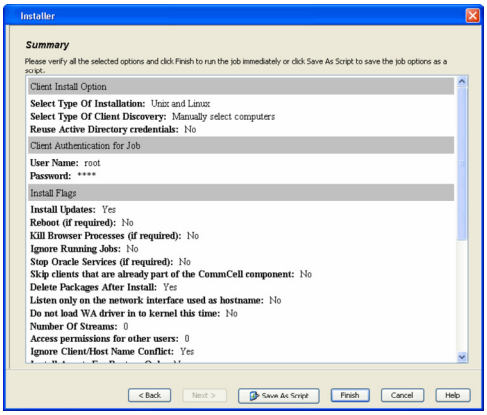


12. Select **Immediate**.

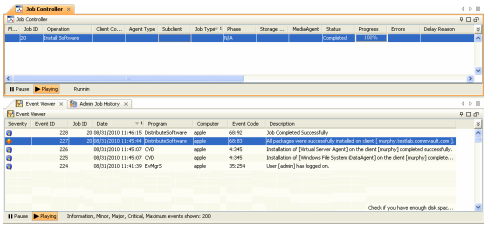
Click **Next**.



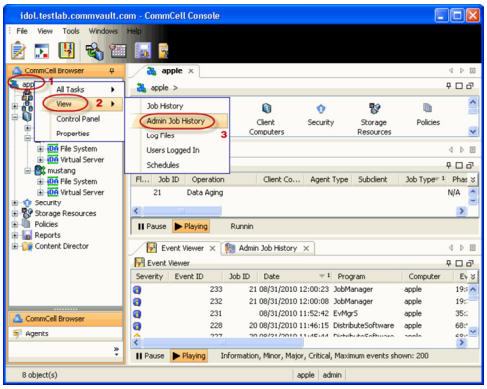
13. Click **Finish**.



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

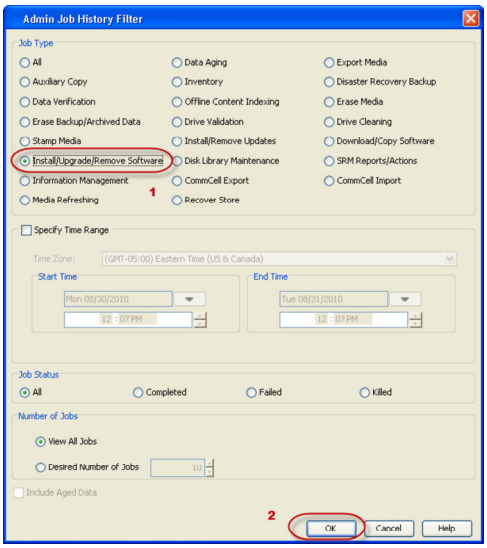


15. Once the job is complete, right-click the **CommServe** computer, click **View** and then click **Admin Job History**.

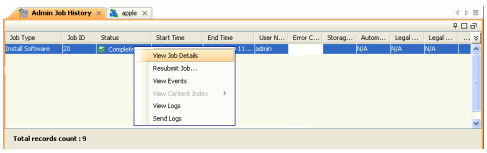


16. Select **Install/Upgrade/Remove Software**.

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



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Getting Started - SAP for Oracle Configuration

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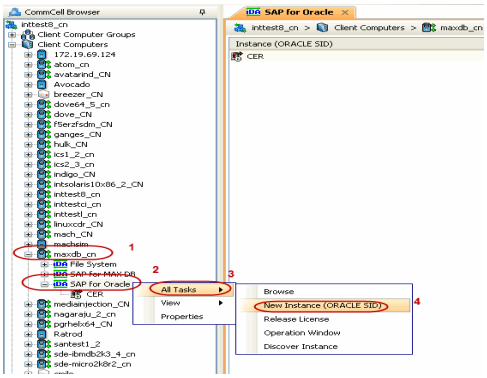
CONFIGURATION

Once the SAP for Oracle *i*DataAgent has been installed, configure an Instance to facilitate backups. Each instance references an Oracle database. Also it is recommended to create separate subclients for data and log backups. The following sections provide the necessary steps required to create and configure these components for a first backup of an Oracle database.

CREATING AN INSTANCE

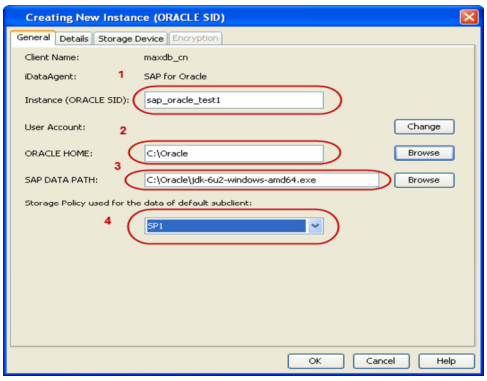
1.
   - From the CommCell Browser, navigate to ***<Client>* | SAP for Oracle**.
   - Right-click **SAP for Oracle | All Tasks** and click **New Instance (ORACLE SID)**.



2.
   - Enter the **Instance Name**.
   - **Browse** or enter the path to the Oracle application files in **Oracle Home**.
   - **Browse** or enter the path to the Oracle data and control files in **SAP DATA PATH**.
   - Select a **Storage Policy** from the drop down list.

     If you do not have a Storage Policy created, follow the steps given below to create a Storage Policy.

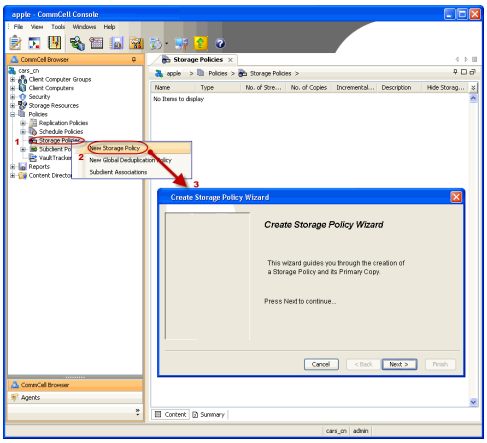
     If you have already created a Storage Policy skip to step 4.



3. 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.

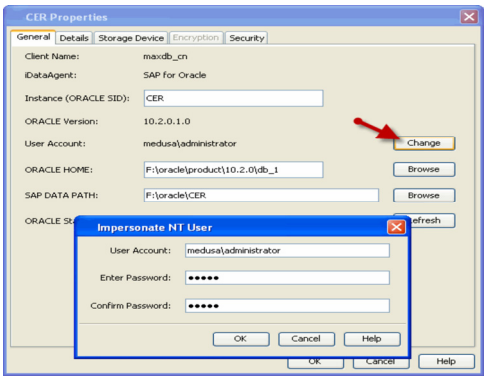


4. For Windows Client:

   - Click **Change**.
   - Enter the **User Name** and **Password** to access the Oracle application. Re-confirm the password.
   - Click **OK.**

   Use `<client_name>/<SID_name>adm`, in order to perform backup and restore operations from CommCell Console for the associated instance.

   Make sure that the user has administrator privileges to access the Oracle application.

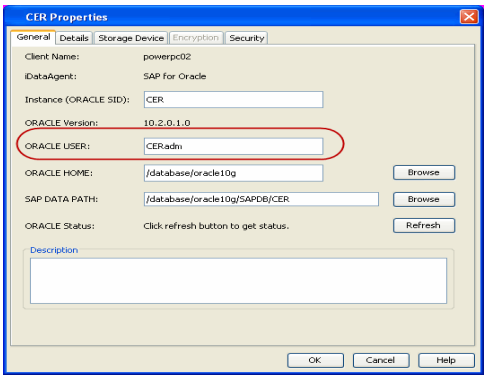


   For Unix Client:

   - Enter the user name in **ORACLE USER** to access the Oracle application on a Unix client.

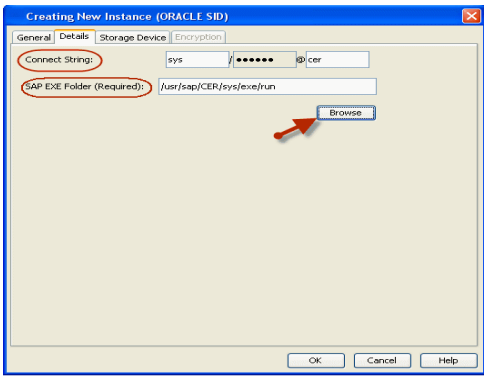
   Use `<SID_name>adm`, in order to perform backup and restore operations from CommCell Console for the associated instance.

   Make sure that the user has administrator privileges to access the Oracle application.



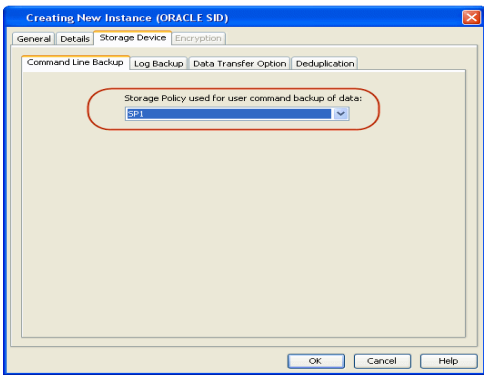
5. Click **Details** tab and add the following information:

   - Enter the target database connect string in **Connect String**.
   - **Browse** or enter the path to the SAP EXE folder in **SAP EXE Folder (Required)**.



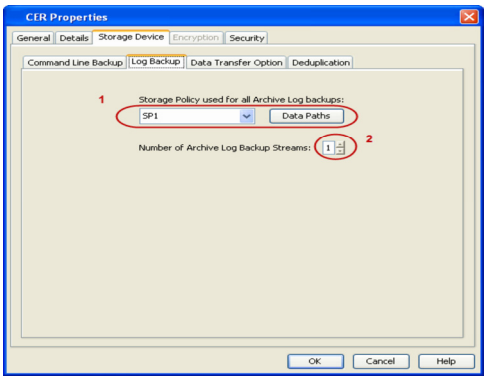
6. Click **Storage Device** tab.

   Select a **Storage Policy used for user command backup of data** from the drop down list.



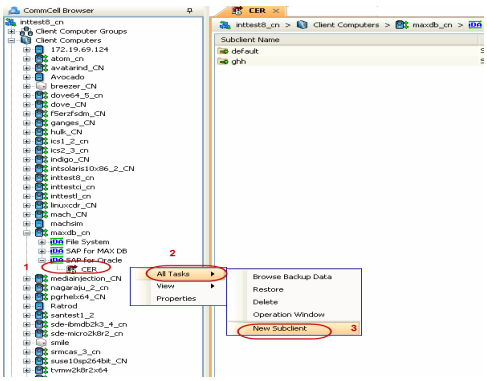
7. Click **Log Backup** tab.

   - Select a **Storage Policy used for all Archive Log backups** from the drop down list.
   - Click **Ok.**

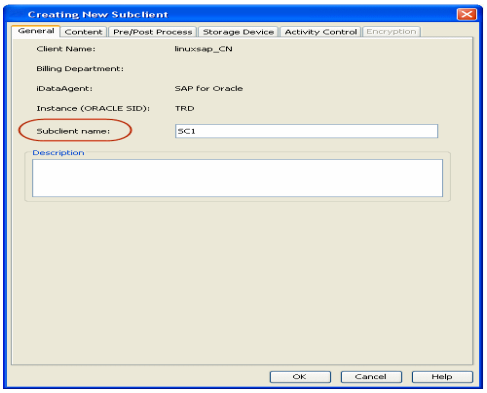


CREATING SUBCLIENT FOR DATA BACKUP

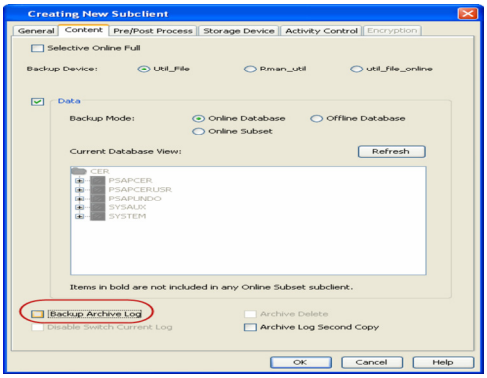
8. From the CommCell Browser, navigate to ***<Client>*** **| SAP for Oracle | Instance**.
   Right-click Instance | **All Tasks** and click **New Subclient**.



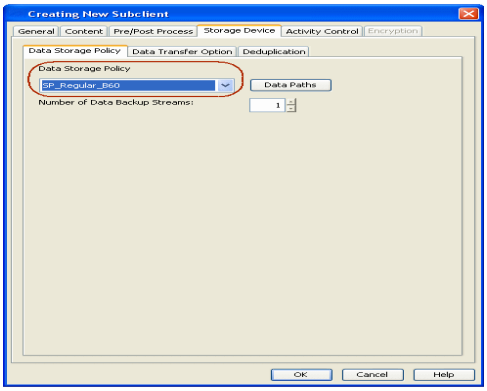
9. Enter the **Subclient Name**.



10. Click the **Content** tab and clear the check box for **Backup Archive Log**.



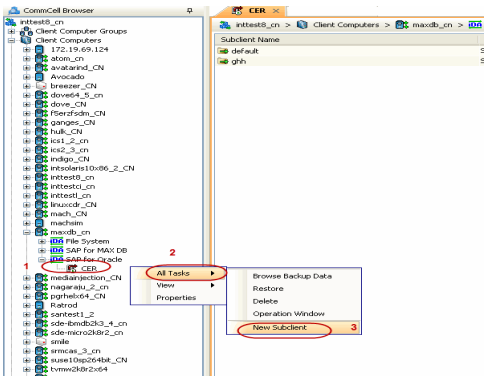
11. Click the **Storage Device** tab.
    - Select a **Data Storage Policy** from the drop down list.
    - Click **Ok.**



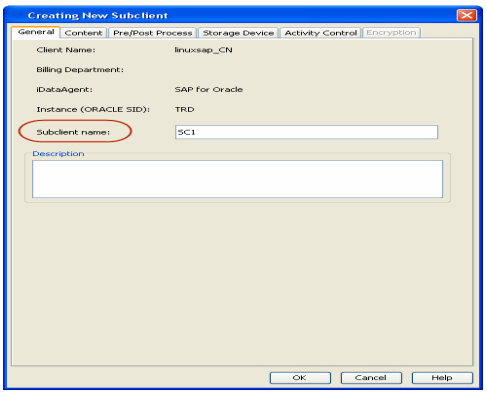
CREATING SUBCLIENT FOR LOG BACKUP

12. From the CommCell Browser, navigate to ***<Client>*** **| SAP for Oracle | Instance**.

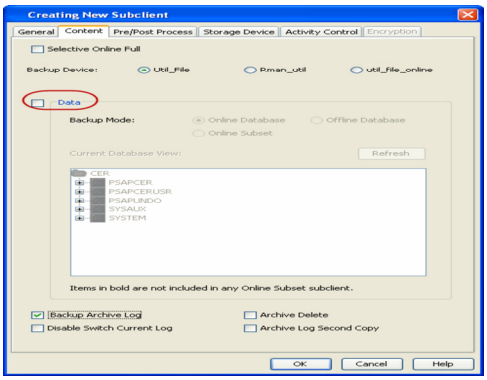
    Right-click Instance | **All Tasks** and click **New Subclient**.



13. Enter the **Subclient Name**.



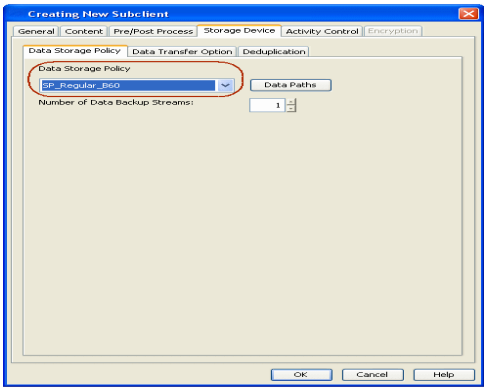
14. Click the **Content** tab and clear the check box for **Data**.



15. Click the **Storage Device** tab.
    - Select a **Data Storage Policy** from the drop down list.
    - Click **Ok.**

    Make sure that the storage policy selected uses the same

Media Agent used by data and logs.



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Getting Started - SAP for Oracle Backup

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After configuring your instance, and subclient, you are ready to perform your first backup.

PERFORM A BACKUP

WHAT GETS BACKED UP

The SAP for Oracle *i*DataAgent backs up the following:

- Oracle database files, which include data files (*.dbf) and control files (*.ctl)
- Archived redo logs
- Parameter files (P File/SP File)

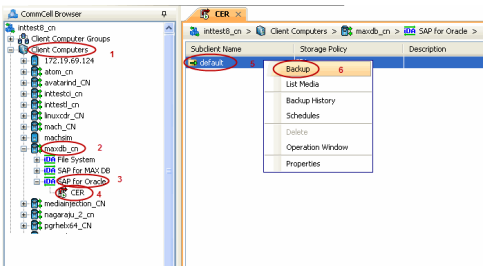
WHAT DOES NOT GET BACKED UP

The SAP for Oracle *i*DataAgent does not backup the following:

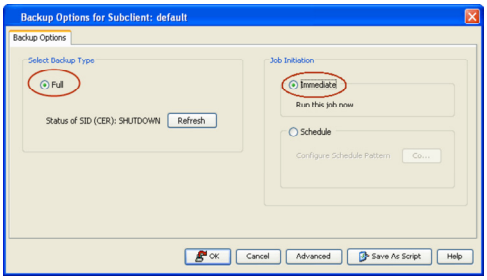
- Oracle application files associated with the Oracle installation

The following section provides step-by-step instructions for running your first full backup:

1.
   - From the CommCell Console, navigate to **Client Computers** | **<Client>** | **SAP for Oracle** | **<Instance>**
   - Right-click the **Subclient** and click **Backup**.

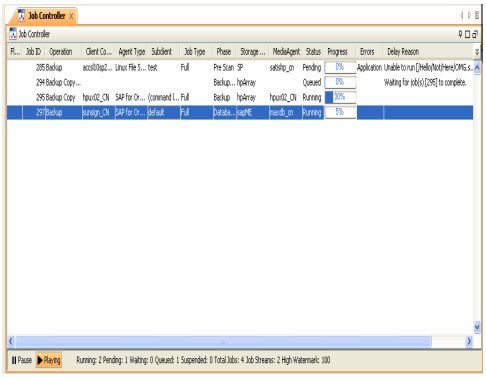


2.
   - Select **Full** as backup type and **Immediate** to run the job immediately.
   - Click **OK**.

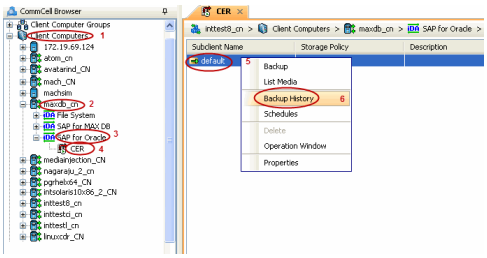


3. You can track the progress of the job from the **Job Controller** window of the CommCell console.

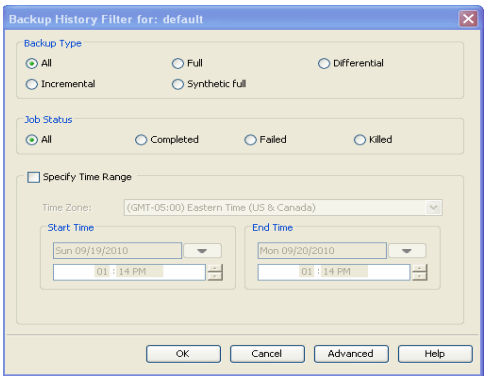
   If you are using a stand-alone drive, you are prompted to load a specific cartridge into the drive. If you are using a library, you will not receive this prompt. The system loads the tapes automatically. Your cartridges should be appropriately labeled. This will enable you to locate the correct cartridge for a restore job, if necessary.



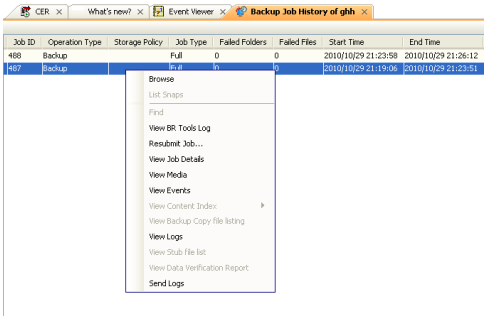
4. Once job is complete, view the details of job from the **Backup History**. Right-click the **Subclient** and select **Backup History**.



5. Click **OK**.



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



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Getting Started - SAP for Oracle Restore

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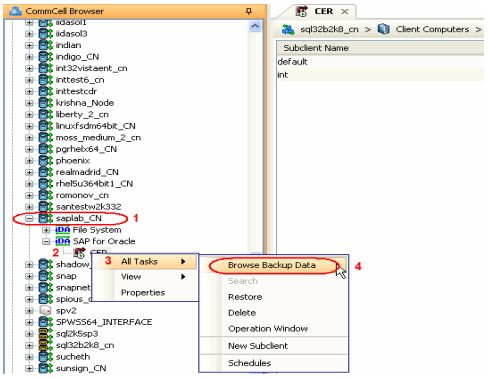
PERFORM A RESTORE

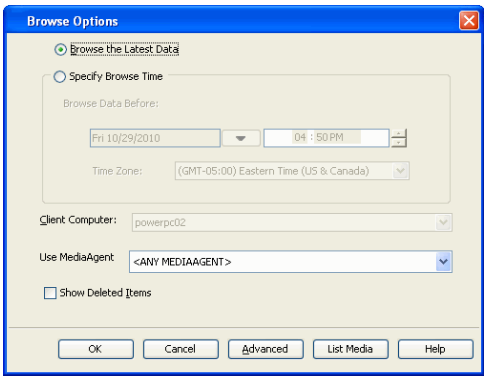
It is recommended that you perform a restore operation immediately after your first full backup to understand the process.

The following section comprehends the steps involved in restoring your entire database.

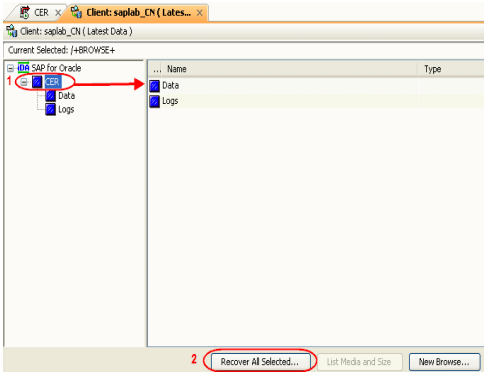
1.
   - From the CommCell Console, navigate to ***<Client>*** | **SAP for Oracle**.
   - Right-click the instance that contains the data you want to restore and click **All Tasks** | **Browse Backup Data**.



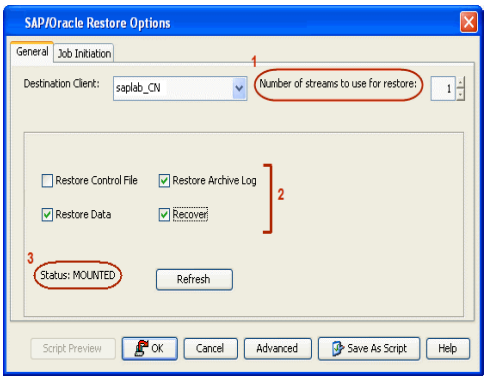
2. Click **OK**.



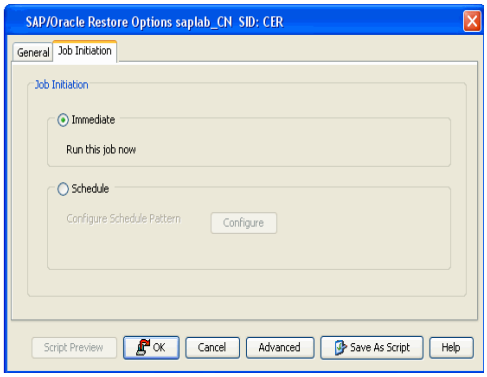
3.
   - Select the instance node in the left pane. The data and logs will be automatically selected in the right pane.
   - Click **Recover All Selected**.



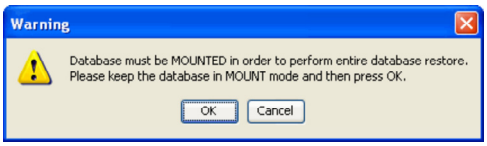
4.
   - Choose the **Number of streams to use for restore.**
   - Select the following options to restore the database**.**
     - **Restore Archive Log**
     - **Restore Data**
     - **Recover**
   - Verify that the Status of the database is displayed as MOUNTED; if necessary click **Refresh** to get the latest status.



5.
- Click the **Job Initiation** tab.
- Select **Immediate** to run the job immediately.
- Click **OK**.



If the database is not mounted, a warning dialog appears to remind you to set the database in MOUNT mode.

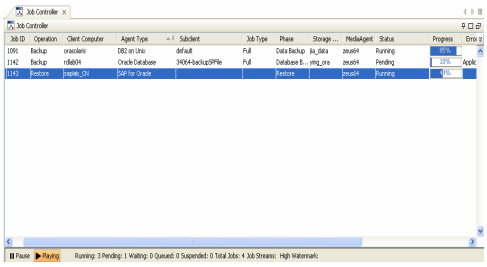


To mount the database, enter the following commands in the machine hosting the database:

```
[root]# export ORACLE_SID=<instance name>
[root]# sqlplus "/ as sysdba"
[root]# shutdown immediate;
[root]# startup mount;
```

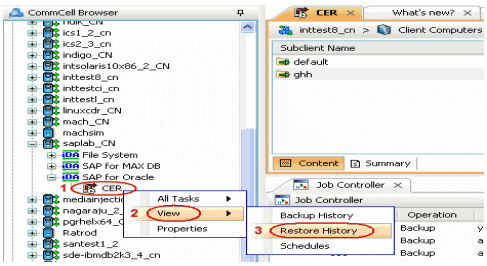
Once the database is mounted, click **OK.**

6. You can monitor the progress of the restore job in the **Job Controller** or **Event Viewer** window of the CommCell Console.

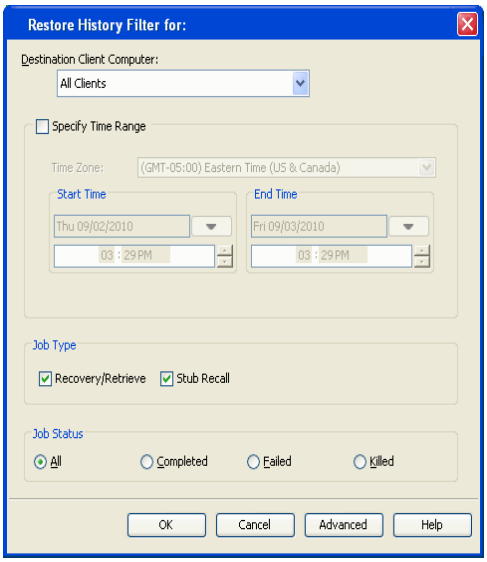


7. Once the restore job has completed, right-click the entity (e.g. agent, instance) and click **View** | **Restore History**.

If the entity chosen is the client computer, click **View** | **Job History**.

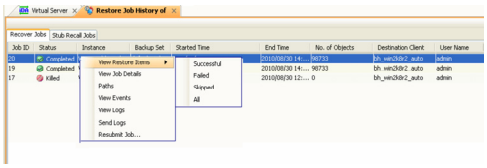


8. Click **OK**.



9. You can view the following details about the job by right-clicking the job:
   - View Restore Items

     You can view them as **Successful**, **Failed**, **Skipped** or **All**.
   - View Job Details
   - View Events of the restore job.
   - View Log files of the restore job.



10. The database is restored to the directory where it resides.

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