

Quick Start Guide - Sybase *iDataAgent*

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INTRODUCTION

The Sybase iDataAgent provides a unique, simplified end-to-end backup and recovery solution for Sybase system and user databases in your enterprise. In addition to complete protection of the system databases which contain user database characteristics, file locations etc., it also provides more granular backup and recovery of your enterprise's data, related administration files and transaction logs.

KEY FEATURES

FULL RANGE OF BACKUP AND RECOVERY OPTIONS

The Sybase iDataAgent provides the flexibility to backup the Sybase server which consists of system and user databases in different environments. This is very essential since the Sybase system and user databases are always subject to constant changes.

You can perform a full or transaction log backup of the entire Sybase Server at any point of time. The following section describes the backups that can be performed in different environments.

DATABASE BACKUPS

You can backup both the system and user-defined databases. You can comprehensively backup all the databases in an instance or schedule backups for the individual databases. You can also auto-discover new databases to comprehensively manage the backup of all databases in your environment.

TRANSACTION LOG BACKUPS

You also have the facility to backup only the transaction logs when the database is online. These logs can be applied to an online backup and recover the database to the current point-in-time. A transaction log backup contains only the new changes since the full or another transaction log backup. Each time a transaction log is backed up it is truncated to the exact time of the backup. No checkpoint is issued at this time, therefore dirty pages are not written to disk before or after a transaction log backup. Any transactions that are not completed at the time a transaction log backup is performed are rolled back during a restore involving a transaction log backup.

TRANSACTION LOG BACKUP OF A DAMAGED DATABASE

If a database fails and any data is lost, you will want to restore it to the point of failure. Sybase iDataAgent allows you to capture all transaction log events that occurred after the last backup job was performed.

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

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 of large amount of data.

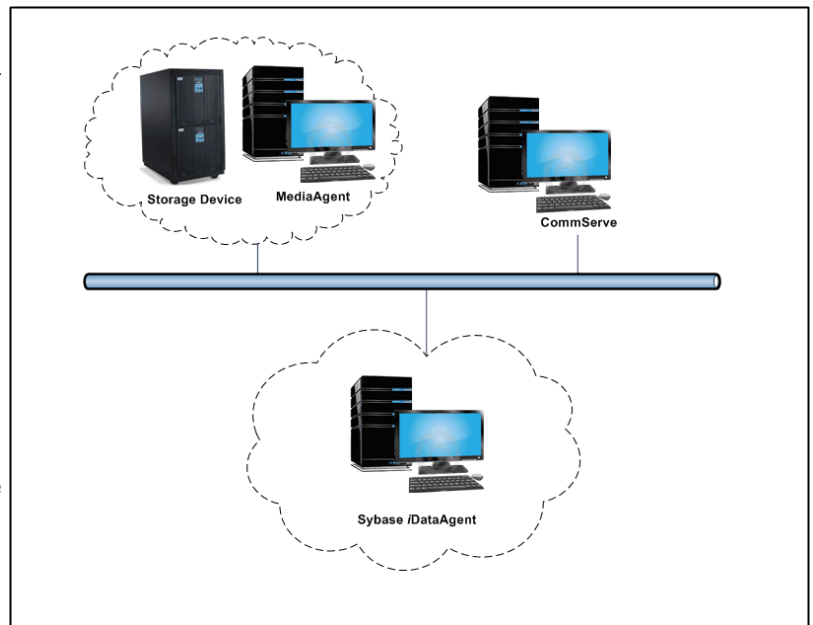
In the event, that a network goes down, the backup and recovery jobs are resumed on alternate data paths. Similarly, in the event of a device failure, the jobs are automatically switched to alternate disk and tape drives.

EFFICIENT JOB MANAGEMENT AND REPORTING

WHERE TO GO NEXT

Install the Sybase iDataAgent

Walks you through the process of installing the Sybase iDataAgent.



You can view and verify the status of 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.

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 Sybase iDataAgent documentation uses the following terminology:

CLIENT	The computer in which the iDataAgent is installed and contains the data to be secured.
INSTANCE	The Sybase Server to be used for the backup and restore operations.
SUBCLIENT	The Sybase databases to be backed up.
DEVICE	A physical storage locations in a disk such as a partition that is dedicated to holding the Sybase database.

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System Requirements - Sybase iDataAgent

System Requirements | Supported Features

The following requirements are for the Sybase iDataAgent:

APPLICATION/OPERATING SYSTEM		PROCESSOR
SYBASE ASE 15.7 64-BIT ON:		
AIX	AIX 7.1	Power PC (Includes IBM System p)
	AIX 6.1	Power PC (Includes IBM System p)
HP-UX	HP-UX 11i v3 (11.31)	Itanium
	HP-UX 11i v3 (11.31)	PA-RISC
LINUX	RED HAT ENTERPRISE LINUX	
	Red Hat Enterprise Linux 5.5, 5.6, 5.7 and 5.8	
	RED HAT ENTERPRISE LINUX/CENTOS	
	Red Hat Enterprise Linux/CentOS 6.x	x64
	SUSE LINUX (SLES)	
	SuSE Linux 11.x with glibc 2.9.x and above	Intel Pentium, Itanium, x64 or compatible processors
SOLARIS	Solaris 9 with a minimum of Service Packs 111711-16, 117560-06 and 111722-05	Sparc5 or higher recommended
	Solaris 10.x	x64
WINDOWS	WINDOWS 2008	
	Microsoft Windows Server 2008 R2 Editions	All Windows-compatible processors supported
SYBASE ASE 15.7 32-BIT ON:		
WINDOWS	WINDOWS 2008	
	Microsoft Windows Server 2008 R2 Editions	All Windows-compatible processors supported
SYBASE ASE 15.5 64-BIT ON:		
AIX	AIX 7.1	Power PC (Includes IBM System p)
	AIX 6.1	Power PC (Includes IBM System p)
	AIX 5.3 with technology level 6 (or higher) and runtime library xIC.rte 8.0.0.0 or higher	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	x64
	Red Hat Enterprise Linux/CentOS 5.x	x64
	Red Hat Enterprise Linux/CentOS 4.x	x64
	SUSE LINUX (SLES)	

	SuSE Linux 11.x with glibc 2.6.x	x64
	SuSE Linux 10.x with glibc 2.4.x	x64
SOLARIS	Solaris 9 with a minimum of Service Packs 111711-16, 117560-06 and 111722-05	Sparc5 or higher recommended
	Solaris 10.x	x64
WINDOWS	WINDOWS 2008	
	Microsoft Windows Server 2008 R2 Editions	All Windows-compatible processors supported

SYBASE ASE 15.5 32-BIT ON:

LINUX	RED HAT ENTERPRISE LINUX/CENTOS	
	Red Hat Enterprise Linux/CentOS 6.x	Intel Pentium or compatible processors
	Red Hat Enterprise Linux/CentOS 5.x	Intel Pentium or compatible processors
	Red Hat Enterprise Linux/CentOS 4.x	Intel Pentium or compatible processors
	SUSE LINUX (SLES)	
	SuSE Linux 11.x with glibc 2.6.x	Intel Pentium or compatible processors
	SuSE Linux 10.x with glibc 2.4.x	Intel Pentium or compatible processors
SOLARIS	Solaris 9 with a minimum of Service Packs 111711-02	Sparc5 or higher recommended
WINDOWS	WINDOWS 2008	
	Microsoft Windows Server 2008 R2 Editions	All Windows-compatible processors supported
	WINDOWS 2003	
	Microsoft Windows Server 2003 32-bit Editions with a minimum of Service Pack 2	All Windows-compatible processors supported

SYBASE ASE 15.0.X 32-BIT/64-BIT ON:

AIX	AIX 6.1 64-bit	Power PC (Includes IBM System p)
	AIX 5.3 64-bit with technology level 6 and runtime library xLC.rte 8.0.0.0 or higher	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 5.x	Intel Pentium, x64 or compatible processors
	Red Hat Enterprise Linux/CentOS 4.x	Intel Pentium, x64 or compatible processors
	SUSE LINUX (SLES)	
	SuSE Linux 11.x with glibc 2.6.x	Intel Pentium, x64 or compatible processors
	SuSE Linux 10.x with glibc 2.4.x	Intel Pentium, x64 or compatible processors
SOLARIS	Solaris 9 with a minimum of Service Packs 111711-02	Sparc5 or higher recommended
	Solaris 10.x with a minimum of SunOS (Sparc) Patch 119963-14	Sparc5 or higher recommended
WINDOWS	WINDOWS 2008	
	Microsoft Windows Server 2008 Editions	All Windows-compatible processors supported
	WINDOWS 2003	

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

674 MB minimum of hard disk space for Calypso and Job Results

10 MB of additional hard disk space for log file growth

4 KB for Job Results

LINUX

584 MB minimum of hard disk space for Calypso and Job Results

1 MB for Job Results

SOLARIS

2.73 GB minimum of hard disk space for Calypso and Job Results

34 MB for Job Results

MEMORY

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.

MISCELLANEOUS

The File System iDataAgent 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 iDataAgents, refer to:

- System Requirements - AIX File System iDataAgent
- System Requirements - HP-UX File System iDataAgent
- System Requirements - Linux File System iDataAgent
- System Requirements - Solaris File System iDataAgent

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
<pre><directory>/<file_name>.te where: <directory> is /usr/share/selinux/devel</pre>	<pre>The content of the file should be as follows: policy_module(<name>,<version>) #####</pre>

<p><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.</p> <p>For example: When you are creating a policy module for backup_IDA application, you can use the following file name: backup_IDA.te</p>	<p>where:</p> <p><name> is the name of the policy module. You can give any unique name to the policy module, such as a process or application name.</p> <p><version> is the version of the policy module. It can be any number, such as 1.0.0.</p> <p>For Example: While creating a policy module for the backup_IDA application, you can use the following content.</p> <pre>policy_module(backup_IDA,1.0.0)</pre>
<p><directory>/<file_name>.fc</p> <p>where:</p> <p><directory> is /usr/share/selinux/devel</p> <p><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.</p> <p>For example: When you are creating a policy module for backup_IDA application, you can use the following file name: backup_IDA.fc</p>	<p>The content of the file should be as follows:</p> <p>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.</p> <pre>/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)</pre>

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.

SUPPORTED FILE SYSTEMS

All the File Systems that are supported by your Operating system

The raw devices supported by your Operating system

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 Deployment on Windows - Sybase iDataAgent

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WHERE TO INSTALL

Install the Sybase iDataAgent on a computer on which the Sybase server resides, and satisfies the minimum requirements specified in the System Requirements.

PLANNING YOUR INSTALLATION

The Sybase iDataAgent installation may require a system reboot if a pending rename operation from a previously installed application is found in the operating system, hence, plan your installation at a convenient time.

INSTALLATION

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

METHOD 1: INTERACTIVE INSTALL

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

METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

Use this procedure to install remotely on a client computer.

METHOD 1: INTERACTIVE INSTALL

1. Log on to the client computer as Administrator or as a member of the Administrator group on that computer.
2. Run **Setup.exe** from the **Software Installation Package**.
If you are installing on Windows Server Core editions, navigate to Software Installation Package through command line, and then run **Setup.exe**.
3. Select the required language.
Click **Next**.

4. Select the option to install software on this computer.
The options that appear on this screen depend on the computer in which the software is being installed.

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

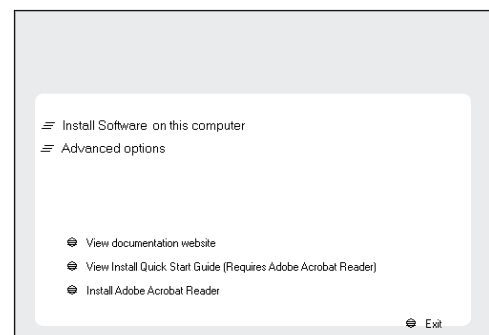
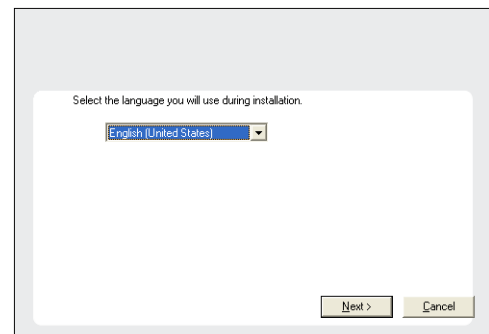
BEFORE YOU BEGIN

Download Software Packages

Download the latest software package to perform the install.

Verify System Requirements

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



- Expand **Client Modules | Backup and Recovery | Database**, and then click **Sybase iDataAgent**.

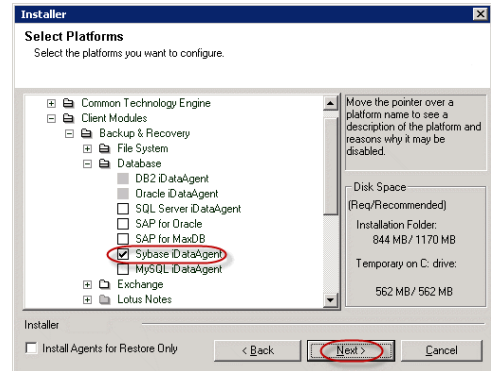
Click **Next**.



- 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**.

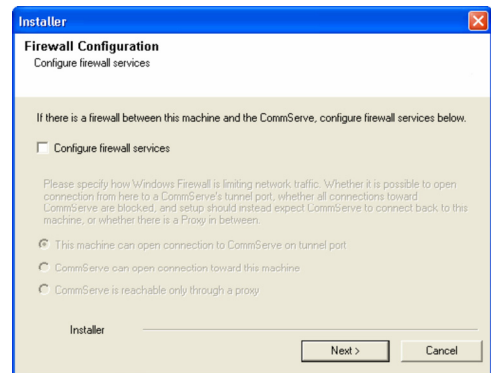


- Enter the fully qualified domain name of the **CommServe Host Name**.

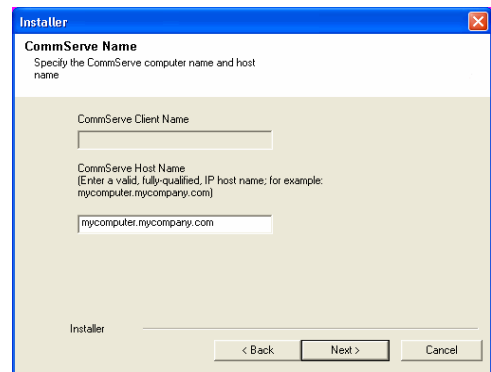
Click **Next**.

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

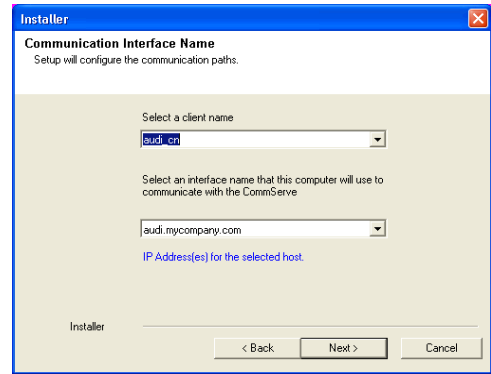
`\|`~!@#$$%^&*()+=<>/?,[\]{};:;'"`



- Click **Next**.



- Click **Next**.

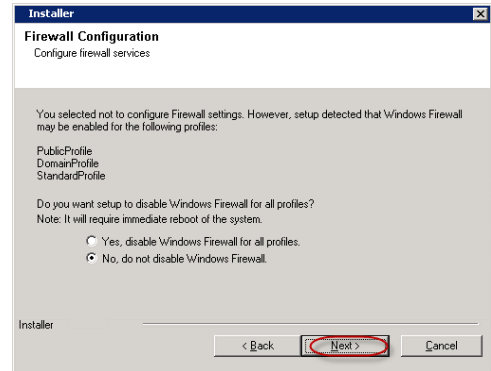


- Select **Add programs to the Windows Firewall Exclusion List**, to add CommCell programs and services to the Windows Firewall Exclusion List.

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.



- Verify the default location for software installation.

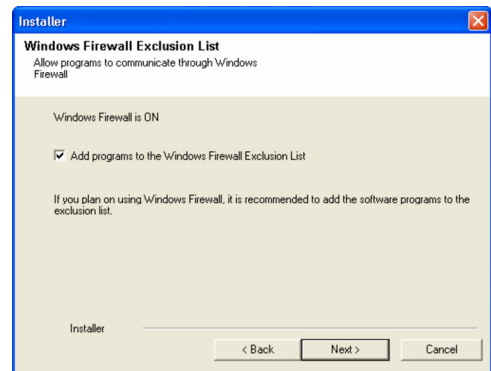
Click **Browse** to change the default location.

Click **Next**.

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

/ : * ? " < > | #

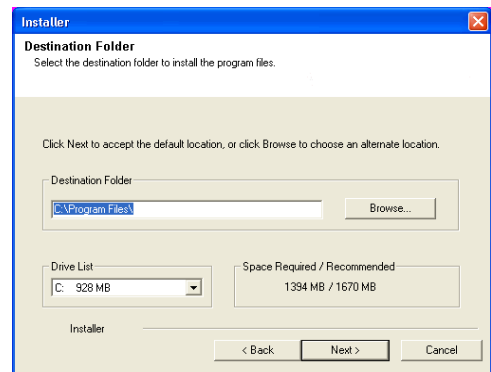
It is recommended that you use alphanumeric characters only.



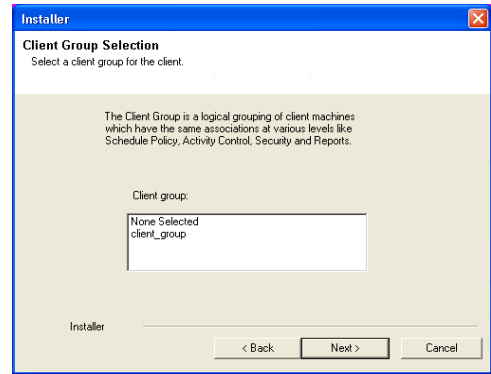
- Select a Client Group from the list.

Click **Next**.

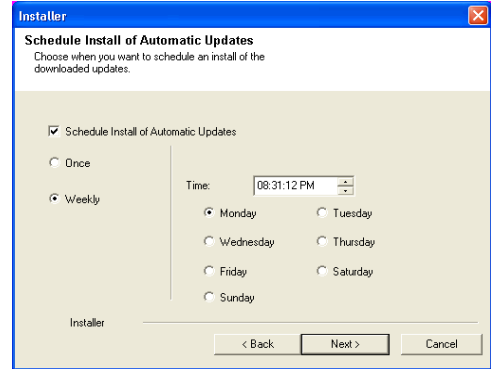
This screen will be displayed if Client Groups are configured in the CommCell Console.



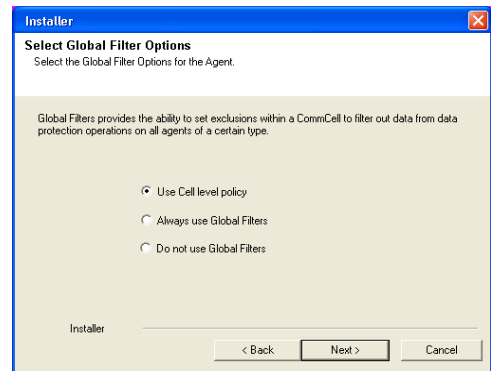
14. Click **Next**.



15. Click **Next**.



16. Select a **Storage Policy** from the drop-down list.
Click **Next**.

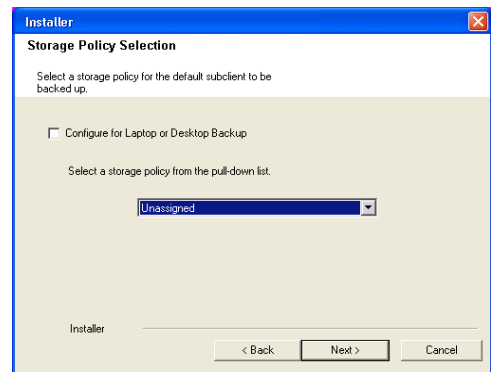


If you do not have Storage Policy created, this message will be displayed.

Click **Next**.

You can create the Storage Policy later in step 21.

17. Click **Browse** to select the path to **Sybase ASE Library Path**.
The Sybase ASE (Adaptive Server Enterprise) server library is generally located under the Sybase ASE server install directory.




Click **Next**.

18. Click **Next**.

19. Click **Next** to continue.

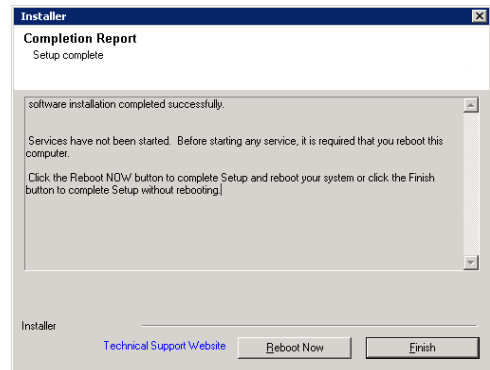
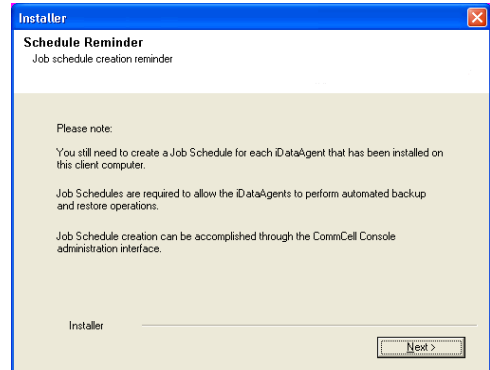
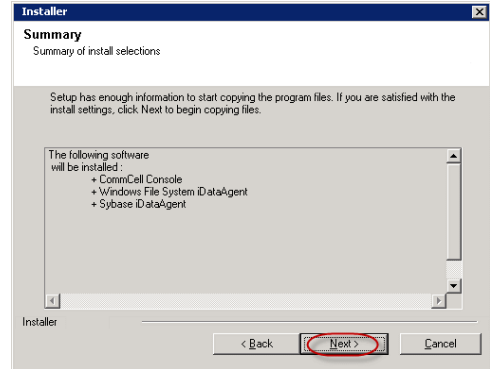
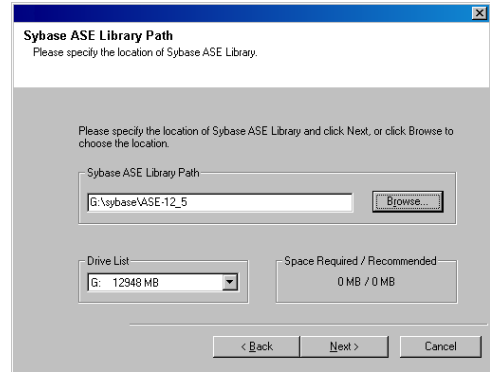
20. Click **Reboot Now** to reboot the computer.

 If you already have a storage policy selected in step 16, proceed to the **Configuration** section.

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

21. To create a storage policy, you must have configured a library in the CommCell.
- If you do not already have a library configured, go to Disk Library Creation.
 - If you have a library configured, go to Storage Policy Creation.

DISK LIBRARY CREATION:



1. From the CommCell Console, click the **Backup Target** button on **EZ Operations Wizard**.
2. Click **Disc Library (For backup to disc)** and click **Next**.
3. Click **Use Local Disk**.

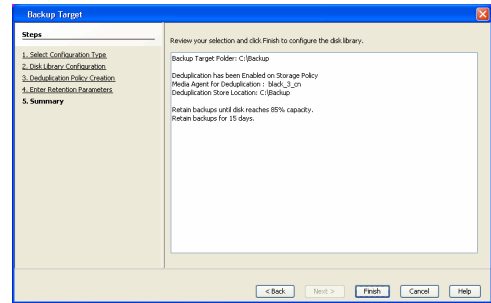
Type the name of the folder in which the disc library must be located in the **Enter backup destination folder** box or click the **Browse** button to select the folder.

Click **Next**.

If you click the **Use Network Share** option, you will be prompted for the credentials (user name and password) to access the share.

4. Click **Next**.
5. Click **Finish**.

This will create a library and Storage Policy. Click the **Next** button available at the bottom of the page to continue.



STORAGE POLICY CREATION:

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:

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

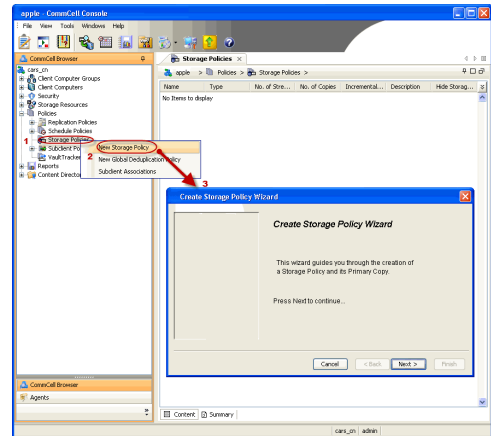
Ensure that you select a library attached to a MediaAgent operating in the current release.

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

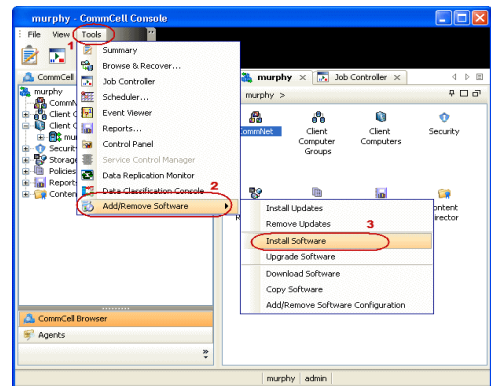
- o Review the details and click **Finish** to create the Storage Policy.

This will create a storage policy. Click the **Next** button available at the bottom of the page to continue.



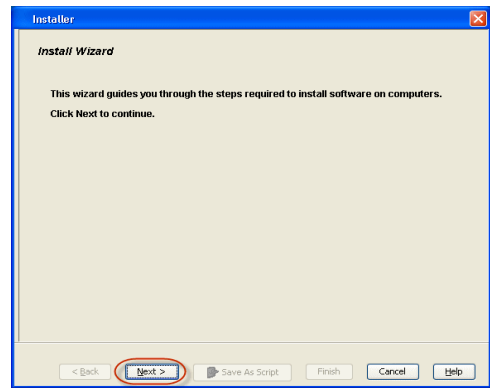
METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

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

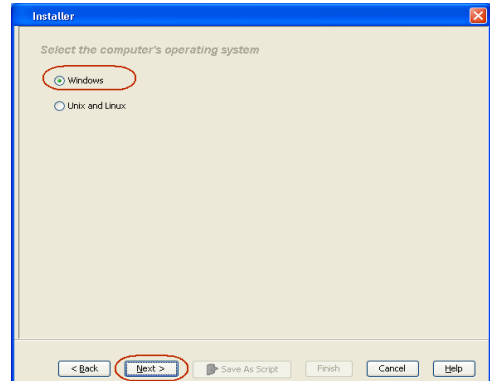


2. Click **Next**.

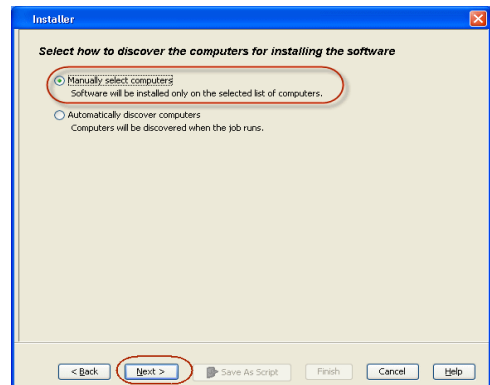
3. Select **Windows**.
Click **Next**.



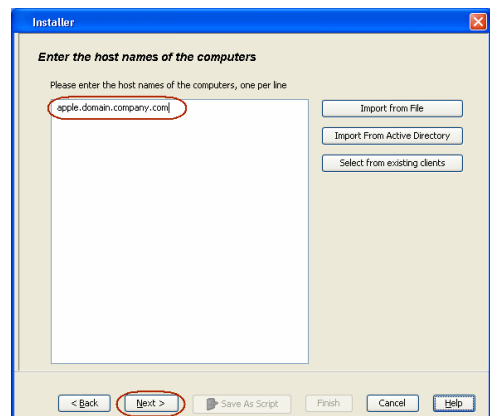
4. Select **Manually Select Computers**.
Click **Next**.



5. Enter the fully qualified domain name of the computer on which SQL Server resides.
For example: apple.domain.company.com
Click **Next**.



6. Click **Next**.



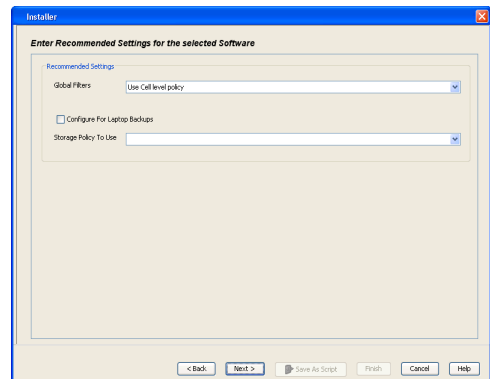
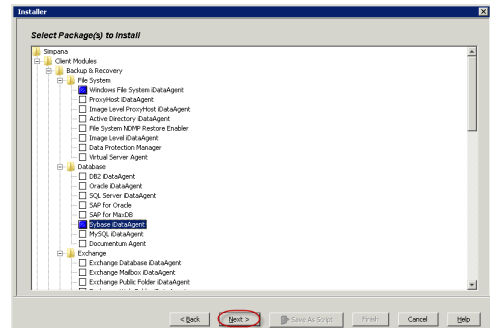
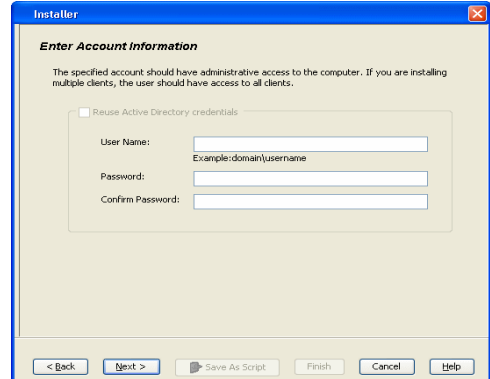
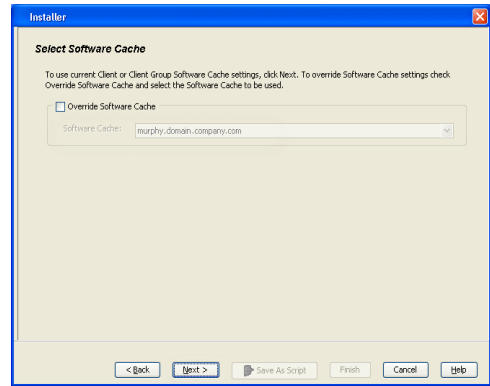
- 7. Specify **User Name** and **Password** that must be used to access the client computer. Click **Next**.

The user must be an Administrator or a member of the Administrator group on that computer.

- 8. Select **Sybase iDataAgent**. Click **Next**.

- 9. From **Storage Policy to use** list, click storage policy. Click **Next**.

- 10. In the **Sybase ASELibrary Path** box, type the path to the Sybase ASE Library. The Sybase ASE(Adaptive Server Enterprise) server library is generally located under the Sybase ASE server install directory. Click **Next**.



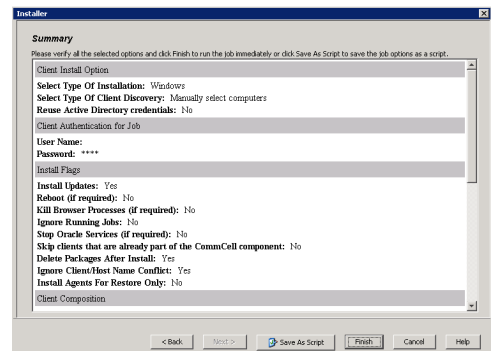
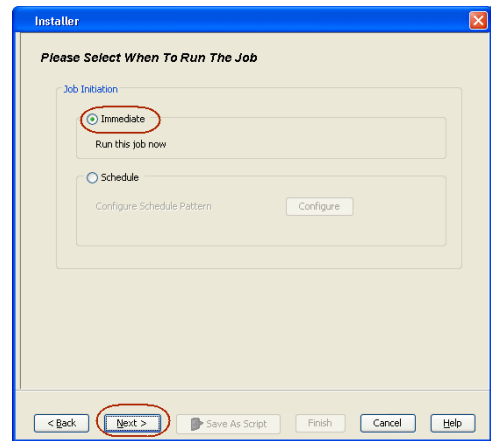
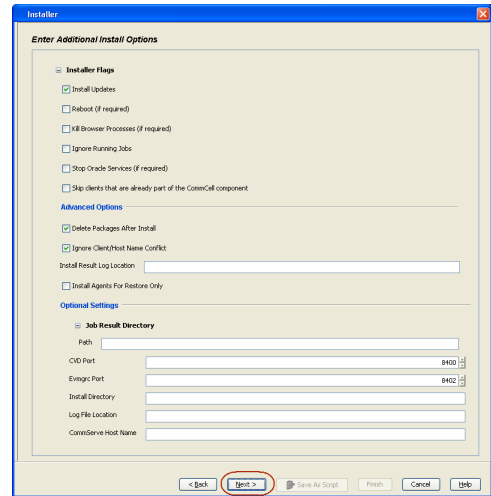
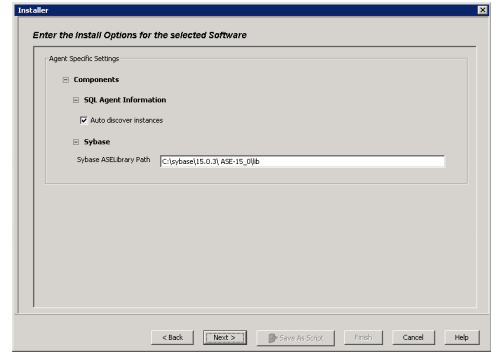
11. Click **Reboot (if required)** and then click **Next**.

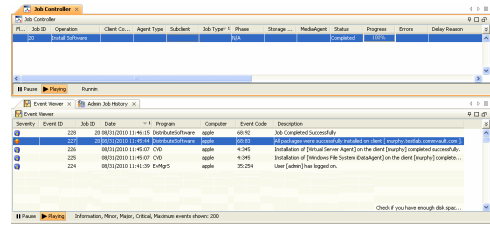
When **Reboot (if required)** is selected, the install program will automatically reboot the client computer and resume the installation.

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

13. Click **Finish**.

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





ADDITIONAL INSTALLATION METHODS

Custom Package

Create a compact software package for quick deployment to multiple clients

Remote Install

Deploy the software from CommCell Console on multiple clients.

Silent Install

Deploy the software silently on multiple clients.

Getting Started Deployment on a UNIX Computer - Sybase iDataAgent

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SKIP THIS PAGE IF YOU ARE NOT INSTALLING THIS AGENT ON A UNIX COMPUTER.

Click **Next** ▶ to continue with the deployment.

WHERE TO INSTALL

Install the software on a UNIX computer on which the Sybase server resides, and satisfies the minimum requirements specified in the System Requirements.

For Solaris, software can be installed on one of the following:

- Unix computer hosting the global zone on which Sybase server resides, and satisfies the minimum requirements specified in the System Requirements.
- Unix computer in a non global zone on which Sybase server resides, and satisfies the minimum requirements specified in the system requirements.

INSTALLATION

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

METHOD 1: INTERACTIVE INSTALL

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

METHOD 2: INSTALL SOFTWARE FROM COMMCCELL CONSOLE

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

BEFORE YOU BEGIN

Download Software Packages

Download the latest software package to perform the install.

Verify System Requirements

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

METHOD 1: INTERACTIVE INSTALL

1. Logon to the client computer as **root** or as a sudo user.

If you are installing the software using a sudo user account, make sure that sudo user account is configured on this computer. For more information, see FAQ - Install.

- 2.

Use the following options depending upon on your environment:

- On Global Zone or Unix machine, run the following command to mount the cd:

```
mount -t iso9660,udf /dev/cdrom /mnt/cdrom
```

Run the following command from the Software Installation Package or mount point:

```
./cvpkgadd
```

- On a Non-Global Zone, run the following commands to mount the cd:

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

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

Connect to Non-Global Zone terminal

Run the following command from the Software Installation Package or mount point:

```
./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

6. Press **Enter**.

3) Exit this menu

Your choice: [1]

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 names 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]

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]

8. Press **Enter**.

9. Type the number associated with the **Sybase iDataAgent** 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]

[] 3) Sybase iDataAgent [1202] [CVGxSybIDA]

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

Enter number(s)/one of "a,n,r,q,d,>,<," here:3

10. 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]

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

[X] 3) Sybase iDataAgent [1202] [CVGxSybIDA]

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

Enter number(s)/one of "a,n,r,q,d,>,<," here:3

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**.

- Select **Download from the software provider website** to download the latest software scripts. Make sure you have internet access.
- Select **Use the one in the installation media** to install the software scripts from the package or share from which the installation is currently being 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

20. Press **Enter** if you do not want the changes to be updated automatically.

- If you want the changes to be made automatically, type **Yes** and then press **Enter**.
- You will come across this prompt when you install the software on the earlier versions of Solaris.

21. Press **Enter**.

22. Press **Enter**.

You will see this prompt if you have accepted the default **no** and pressed **Enter** in step 20.

23. 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**.

24. If you do not wish to configure the firewall services, press **Enter**.

If this computer is separated from the CommServe by firewall(s), type **Yes** and then press **Enter**.

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

25. Type the fully qualified CommServe host name and press **Enter**.

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

26. Press **Enter**.

27. Type the number associated with the Client Group and press **Enter**.

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

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

and shared memory segments configured in /etc/system.

Number of streams [10]

We now need to modify the /etc/system configuration file on this computer. It is done to make sure that there will be enough shared memory and semaphores available for Calypso programs. Please review the changes below and answer "yes" if you want us to apply them to the /etc/system file. Otherwise, the installation will proceed, the changes will be saved to some other file, and you will have to apply them manually.

```
set shmsys:shminfo_shmmni=8570 (was 7930)
set shmsys:shminfo_shmseg=8420 (was 7780)
set semsys:seminfo_semmns=10320 (was 9680)
set semsys:seminfo_semmni=8570 (was 7930)
set semsys:seminfo_semmsl=8570 (was 7930)
```

Do you want us to apply these changes now? [no]

Changes saved into /etc/system.gal.1744

Press <ENTER> to continue.

Although a 'no' answer can be selected to this question during install, the user should make sure the min requirements (below) for shared memory are met, otherwise the backups may fail (the message in logs is 'could not start the pipeline').

```
set shmsys:shminfo_shmmax=4199304
set shmsys:shminfo_shmmin=1
set semsys:shminfo_shmmni=640
set semsys:shminfo_shmseg=640
set semsys:seminfo_semmns=640
set semsys:seminfo_semmni=640
set semsys:seminfo_semmsl=640
set maxusers=256
```

Press <ENTER> to continue.

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 : [8400]

Port Number for EvMgrC: [8402]

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

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: mycommserve.company.com

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]

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

[] 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: 1

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

Type **d** for done with the selection, and press **Enter** to continue.

29. Enter the number associated with the storage policy you want use and press **Enter**.

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 37.

30. Type the Sybase user ID and press **Enter**
 31. Type the name of the user group for Sybase and press **Enter**.
 32. Type the name of the Sybase Adaptive server and press **Enter**.
 33. Type the name of the Sybase home directory and press **Enter**.
 34. Type the name of the Sybase ASE directory and press **Enter**.

The Sybase ASE (Adaptive Server Enterprise) server library is generally located under the Sybase ASE server install/home directory.

35. Type the name of the Sybase OCS variable and press **Enter**.

You can view the location of this variable in sybase.env file residing in home directory.

Listing the values that you entered.

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

The installation is now complete.

```
to add this client client.company.com to.
[X ] 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: d
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]
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
and assign it to all subclients..
Adjusting modes and permissions of files
Successfully installed Calypso
Please enter SYBASE user ID [sybase]:
Please enter user group for sybase [sybase]:
Please enter SYBASE home
directory: /test2/sybase/sybase12.5_64
Please enter the SYBASE SERVER Name: cross_mc
Please enter the SYBASE_ASE directory: ASE-12_5
Please enter the SYBASE_OCS variable: OCS-12_5
```

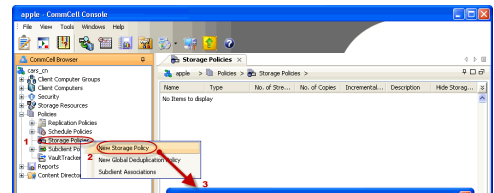
```
Values input are:
SYBASE_USER=sybase
SYBASE_GRP =sybase
CXDIR =/opt/Calypso/Base
SYBASE_SERVER =cross_mc
SYBASE =/test2/sybase/sybase12.5_64
SYBASE_ASE =/test2/sybase/sybase12.5_64/ASE-12_5
SYBASE_OCS =/test2/sybase/sybase12.5_64/OCS-12_5
SYBLIBPATH =/test2/sybase/sybase12.5_64/ASE-12_5/lib
Certain 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
angel.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 angel.company.com
2) Install Calypso on a virtual machine
3) Exit
Your choice: [1] 3
```



If you already have a storage policy selected in step 29, proceed to the **Configuration** section.

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

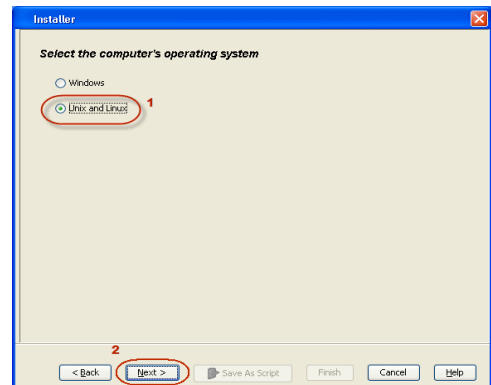
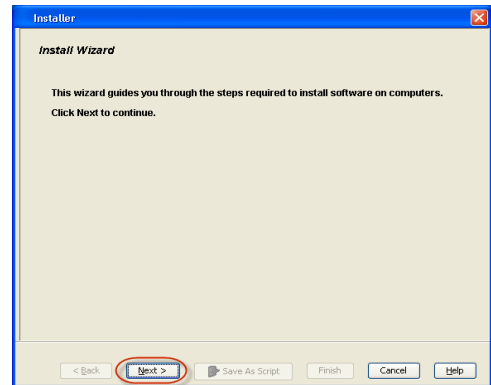
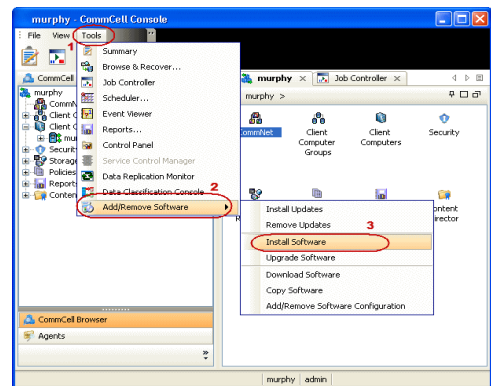
- 37.
1. From the CommCell Browser, navigate to **Policies**.
 2. Right-click the **Storage Policies** and then click **New Storage Policy**.
 3. Follow the prompts displayed in the Storage Policy Wizard. The required options are mentioned below:
 - o Select the Storage Policy type as **Data Protection and Archiving** and click **Next**.



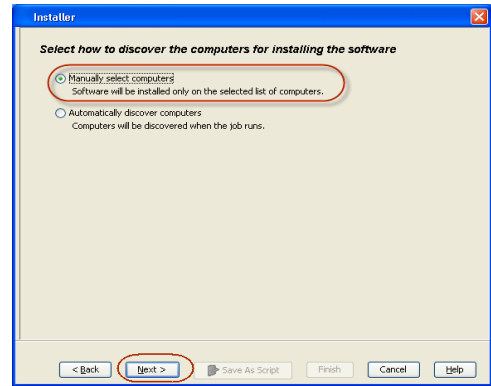
- Enter the name in the **Storage Policy Name** box and click **Next**.
- From the **Library** list, click the name of a disk library to which the primary copy should be associated and then click **Next**.
Ensure that you select a library attached to a MediaAgent operating in the current release.
- From 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

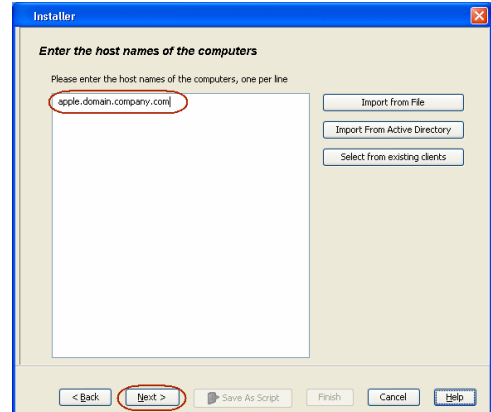
1. From the CommCell Browser, select **Tools | Add/Remove Software | Install Software**.
2. Click **Next**.
3. Select **Unix** and **Linux**.
Click **Next**.
4. Select **Manually Select Computers**.
Click **Next**.



5. Enter the fully qualified domain name of the computer on which SQL Server resides.
For example: apple.domain.company.com
Click **Next**.

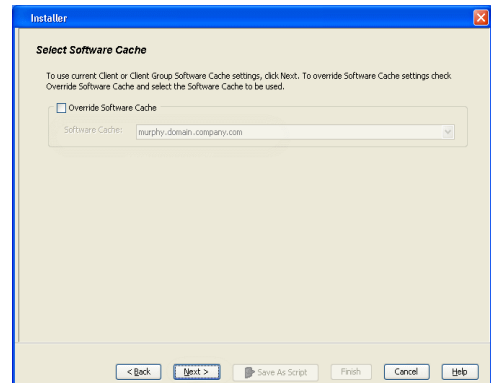


6. Click **Next**.

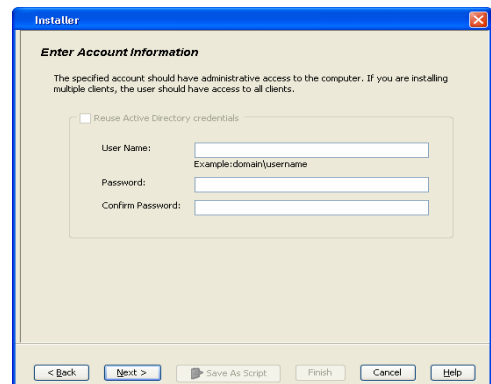


7. Specify **User Name** and **Password** that must be used to access the client computer.
Click **Next**.

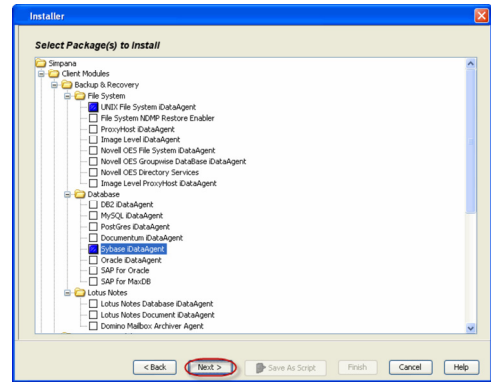
The user must be an Administrator or a member of the Administrator group on that computer.



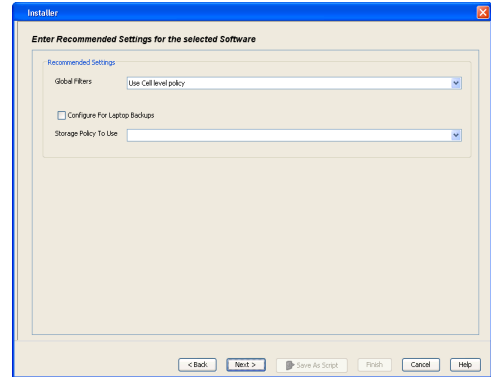
8. Select **Sybase iDataAgent**.
Click **Next**.



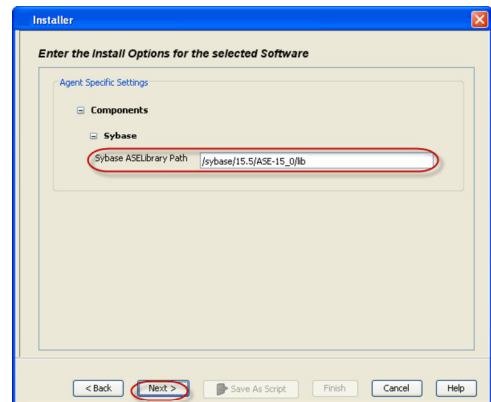
9. From **Storage Policy to use** list, click storage policy.
Click **Next**.



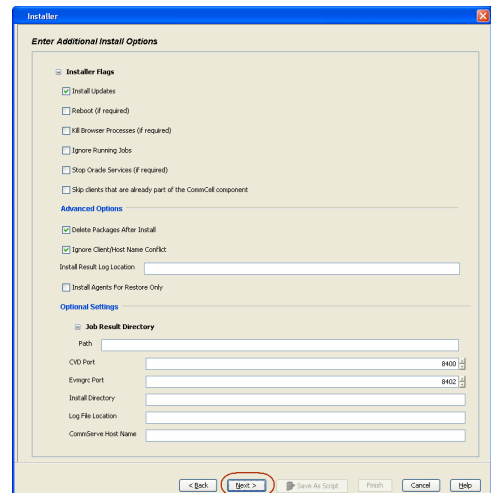
10. In the **Sybase ASELibrary Path** box, type the path to the Sybase ASE Library.
The Sybase ASE (Adaptive Server Enterprise) server library is generally located under the Sybase ASE server install directory.
Click **Next**.



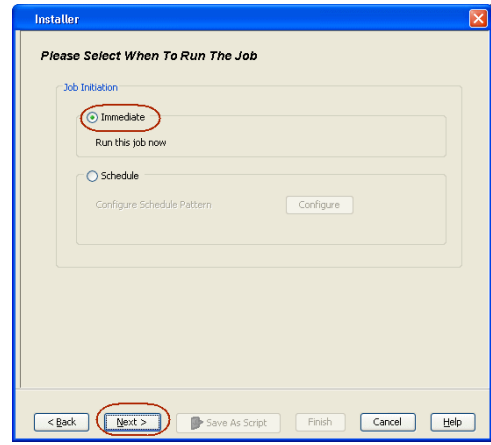
11. Click **Reboot (if required)** and then click **Next**.
When **Reboot (if required)** is selected, the install program will automatically reboot the client computer and resume the installation.



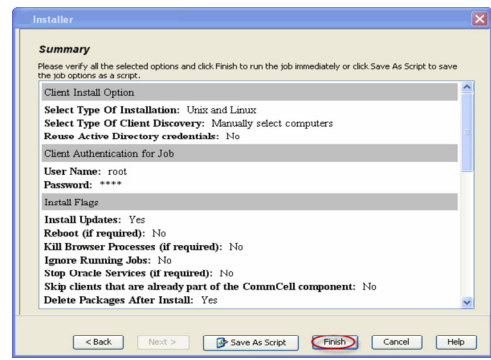
12. Click **Immediate**.
Click **Next**.



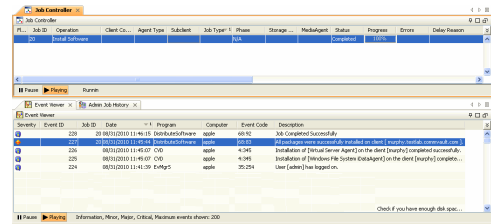
13. Click **Finish**.



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



15. Once the Sybase *iDataAgent* is installed from CommCell Console, run this command from `<calypso >/iDataAgent` on the client computer.



`Syb_install.sh`

For example:

```
root@clientlinux#./Syb_install.sh
```



ADDITIONAL INSTALLATION METHODS

Custom Package

Create a compact software package for quick deployment to multiple clients

Remote Install

Deploy the software from CommCell Console on multiple clients.

Silent Install

Deploy the software silently on multiple clients.

Getting Started Deployment on a UNIX Cluster - Sybase iDataAgent

◀ Previous Next ▶

SKIP THIS PAGE IF YOU ARE NOT INSTALLING THIS AGENT ON A UNIX CLUSTER.

Click **Next** ▶ to begin Configuration.

WHERE TO INSTALL

Install the software on a client computer that you want to protect and is part of a Cluster which satisfies the minimum requirements specified in the System Requirements.

BEFORE YOU BEGIN

Download Software Packages

Download the latest software package to perform the install.

Verify System Requirements

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

INSTALLING THE SYBASE IDATAAGENT IN UNIX CLUSTERED ENVIRONMENT

1. Logon to the active node as **root**.
2. If you are installing the software from CD, run the following command to mount the CD:

```
mount -t iso9660,udf /dev/cdrom /mnt/cdrom
```

 Run the following command from the Software Installation Package or mount point:

```
./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**.

6.
 - If your computer is 32-bit, or if you want to install 32-bit binaries on 64-bit computer, press **Enter**.
 - If your computer is 64-bit, and want to install 64-bit binaries, type **2**, and then press **Enter**.
 - This prompt is displayed only when you are installing on AIX, HP-UX, or Solaris computers.
 - You can determine this by verifying whether all the components that you wish to install in this computer are supported in 64-bit in System Requirements
 - Note that when the first component is installed using 64-bit binaries, you cannot subsequently install another component using 32-bit. (Or vice-versa.)
7. Type **2**, and press **Enter** to install on a computer which is part of a Cluster.

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]

32 or 64?

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 platforms(32 bit)
- 2) FS and MS only(64 bit)

Your choice: [1]

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

8. Type the name of the computer that you want to configure or its corresponding IP address and press **Enter**.

```
2) Install on a virtual machine
```

```
3) Exit
```

```
Your choice: [2]
```

```
Please enter the hostname or IP address of the virtual machine being installed. It can be either short or long; the only requirement is that it must be resolvable by the name services configured on this machine
```

```
WARNING: You should follow this path ONLY if this host participates in a cluster and you really want to install Calypso on the virtual machine. This is NOT how most people will use Calypso.
```

```
If you got into this screen by mistake, hit ^C and restart cvpkgadd.
```

```
Virtual Machine Host Name:devm.mycompany.com
```

```
Virtual Machine Client Name
```

```
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.
```

```
Virtual Machine Client Name: [devm]
```

9. Press **Enter**.

10. Specify the network interface that you want to associate with the physical machine and press **Enter**.

This prompt appears only when the Unix File System iDataAgent is not installed on the physical node.

```
Even though it is a virtual machine that you are installing now, we still have to ask you to provide hostname and client name for the physical node.
```

```
Network interfaces with the following IPs are available on your system. Please select the one that you want to be associated with Calypso physical machine. The interface should be static, and should not get disabled in case of cluster failover.
```

```
1) mackrel71
```

```
2) mackrel
```

```
3) mackrell
```

```
Interface number: [1] 2
```

11. Verify the name of the physical interface and make any required changes. Then press **Enter**.

```
Please verify the physical interface name below. Make it as complete (with fully qualified domain name) as possible.
```

```
Physical Hostname: [mackrel]
```

12. Enter a node name for the physical machine and press **Enter**.

```
Even though you are installing Calypso on a virtual machine, we still need to ask you to provide a node name for the physical 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 Node Name: [mackrel]
```

13. Type the number associated with the **Sybase iDataAgent** and press **Enter**.

```
Install Calypso on physical machine mackrell
```

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

```
[ ] 1) MediaAgent [1301] [CVGxMA]
```

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

```
[ ] 3) Sybase iDataAgent [1202] [CVGxSybIDA]
```

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

```
Enter number(s)/one of "a,n,r,q,d,>,<,>?" here:3
```

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

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

```
Install Calypso on physical machine mackrell
```

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

```
[ ] 1) MediaAgent [1301] [CVGxMA]
```

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

```
[X] 3) Sybase iDataAgent [1202] [CVGxSybIDA]
```

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

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

15. Press **Enter**.

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

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

- Select **Download from the software provider website** to download the latest software scripts. Make sure you have internet access.

```
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
```

- Select **Use the one in the installation media** to install the software scripts from the package or share from which the installation is currently being 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.

Enter a node name for the physical machine and press **Enter**.

17. Press **Enter**.

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

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]

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]

18. Press **Enter** to accept the default path.

- If you want to specify a different path, type the path and then press **Enter**.
- If you want to install the software binaries to an NFS shared drive, specify the directory on which you have mounted the NFS file system and then press **Enter**.

In order to make sure that the client computer has read/write access to NFS shared drive, review the steps described in Installing Software Binaries to an NFS Shared Drive.

Do not use the following characters when specifying the path:

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

19. Press **Enter** to accept the default location.

- 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]

20. Type **Yes** and press **Enter**.

If you do not want to assign a group to software, type **no**, press **Enter** and proceed to step 22.

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]

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".

21. Type the **Group name** and then press **Enter**.

22. Type **d** for done with the selection and press **Enter**.

This screen is displayed if you do not assign any group to software and type **no** in step 20.

Access Permissions for Other Users

Installer will assign full access rights to root user and its belonging group

for all installed Calypso 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 Calypso agents involving third party software protection.

23. This prompt is relevant only when you install on Solaris. Press **Enter** to accept the default value for **Number of Streams**.

You can type the **Number of Streams** that you plan to run at the same time and then press **Enter**.

24. Press **Enter** if you do not want the changes to be updated automatically.
- If you want the changes to be made automatically, type **Yes** and then press **Enter**.
 - You will come across this prompt when you install the software on the earlier versions of Solaris.

25. Press **Enter**.

26. Press **Enter**.
You will see this prompt if you have accepted the default **no** and pressed **Enter** in step 24.

27. 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**.

28. If you do not wish to configure the firewall services, press **Enter**.

If this computer is separated from the CommServe by firewall(s), type **Yes** and then press **Enter**.

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

29. Type the fully qualified CommServe host name and press **Enter**.
Ensure that the CommServe is accessible before typing the name; otherwise the installation will fail.

30. Press **Enter**.

```
[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: d

Number of Streams

IMPORTANT : Please read install document "Configure Kernel
Parameters - Unix/Macintosh" from "Books Online" before
you start configuring kernel parameters. Please enter the
total number of streams that you plan to run at the same
time. We need to make sure that you have enough semaphores
and shared memory segments configured in /etc/system.

Number of streams [10]

We now need to modify the /etc/system configuration file
on this computer. It is done to make sure that there will
be enough shared memory and semaphores available for
Calypso programs. Please review the changes below and
answer "yes" if you want us to apply them to
the /etc/system file. Otherwise, the installation will
proceed, the changes will be saved to some other file, and
you will have to apply them manually.

set shmsys:shminfo_shmmni=8570 (was 7930)
set shmsys:shminfo_shmseg=8420 (was 7780)
set semsys:seminfo_semmns=10320 (was 9680)
set semsys:seminfo_semmni=8570 (was 7930)
set semsys:seminfo_semm1=8570 (was 7930)
Do you want us to apply these changes now? [no]

Changes saved into /etc/system.gal.1744

Press <ENTER> to continue.

Although a 'no' answer can be selected to this question
during install, the user should make sure the min
requirements (below) for shared memory are met, otherwise
the backups may fail (the message in logs is 'could not
start the pipeline').

set shmsys:shminfo_shmmax=4199304
set shmsys:shminfo_shmmin=1
set semsys:shminfo_shmmni=640
set semsys:shminfo_shmseg=640
set semsys:seminfo_semmns=640
set semsys:seminfo_semmni=640
set semsys:seminfo_semm1=640
set maxusers=256
Press <ENTER> to continue.

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 : [8400]
Port Number for EvMgrC: [8402]

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

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: mycommserve.company.com

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
```

31. Type the number associated with the **Unix File System iDataAgent** and press **Enter**.

32. A confirmation screen will mark your choice with an "X". Type **d** for **Done**, and press **Enter**.

33. Enter the number associated with the storage policy you want use and press **Enter**.

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 41.

34. Type the Sybase user ID and press **Enter**

35. Type the name of the user group for Sybase and press **Enter**

36. Type the name of the Sybase Adaptive server and press **Enter**.

37. Type the name of the Sybase home directory and press **Enter**.

38. Type the name of the Sybase ASE directory and press **Enter**.

The Sybase ASE (Adaptive Server Enterprise) server library is generally located under the Sybase ASE server install directory.

39. Type the name of the Sybase OCS variable and press **Enter**.

Listing the values that you entered.

40. Type **4** to the **Exit** option and press **Enter**.

The installation is now complete.

```

default subclient? [1]

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

[ ] 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: 1

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

[X ] 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: d

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]

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
and assign it to all subclients..

Adjusting modes and permissions of files
Successfully installed Calypso

Please enter SYBASE user ID [sybase]:

Please enter user group for sybase [sybase]:

Please enter SYBASE home
directory: /test2/sybase/sybase12.5_64

Please enter the SYBASE SERVER Name: cross_mc

Please enter the SYBASE_ASE directory: ASE-12_5

Please enter the SYBASE_OCS variable: OCS-12_5

Values input are:

SYBASE_USER=sybase
SYBASE_GRP =sybase
CXDIR =/opt/Calypso/Base
SYBASE_SERVER =cross_mc
SYBASE =/test2/sybase/sybase12.5_64
SYBASE_ASE =/test2/sybase/sybase12.5_64/ASE-12_5
SYBASE_OCS =/test2/sybase/sybase12.5_64/OCS-12_5
SYBLIBPATH =/test2/sybase/sybase12.5_64/ASE-12_5/lib

Calypso is currently configured on virtual machine
devmc.company.com.

Now you have an option of installing Calypso on physical
machine, another virtual machine or you can add a new
package to devmc.company.com.

1) Add a new package to hpuxmcl1.company.com
2) Install Calypso on the physical machine
3) Install Calypso on another virtual machine
4) Exit

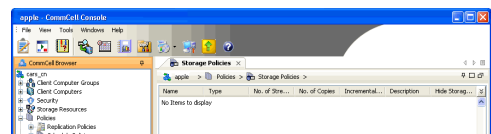
Your choice: [4]
    
```



If you already have a storage policy selected in step 33, proceed to the **Configuration** section.

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

41.
 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:

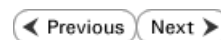
- Select the Storage Policy type as **Data Protection and Archiving** and click **Next**.
- Enter the name in the **Storage Policy Name** box and click **Next**.
- From the **Library** list, click the name of a disk library to which the primary copy should be associated and then click **Next**.

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.

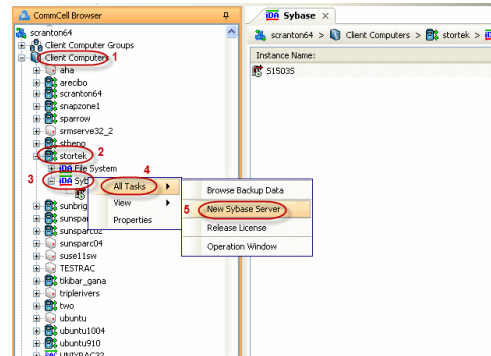


Getting Started Configuration - Sybase iDataAgent

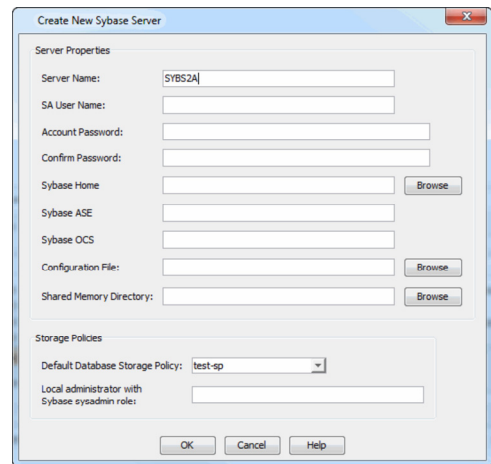


Once the Sybase iDataAgent is installed, configure the Sybase Server and subclient as follows:

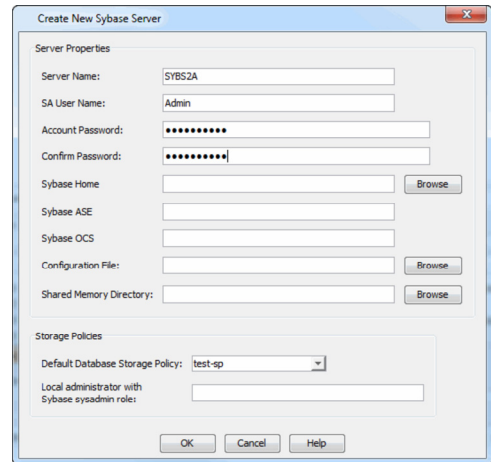
- From the CommCell Browser, navigate to **Client Computers | <Client>**.
 - Right-click **Sybase**, point to **All Tasks**, and then click **New Sybase Server**.



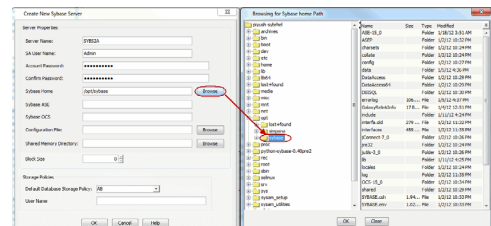
- In the **Server Name** box, type the Sybase server name.



- In the **SA User Name** box, type the Sybase administrator user name.
 - In the **Account Password** box, type the account password for the Sybase administrator user account.
 - In the **Confirm Password** box, re-type the password.

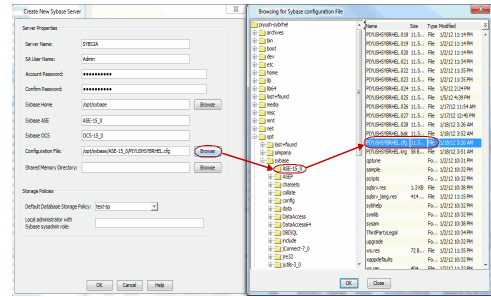


- In the **Sybase Home** box, type the path to the Sybase application. Alternatively, click **Browse** to select the location.

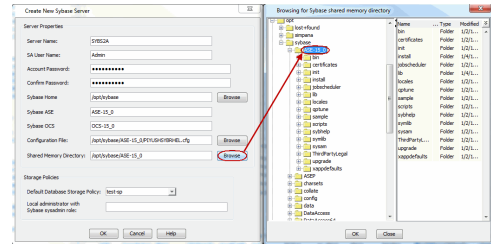


- In the **Sybase ASE** box, type the directory name where you installed Adaptive Server Enterprise (ASE) environment variable.

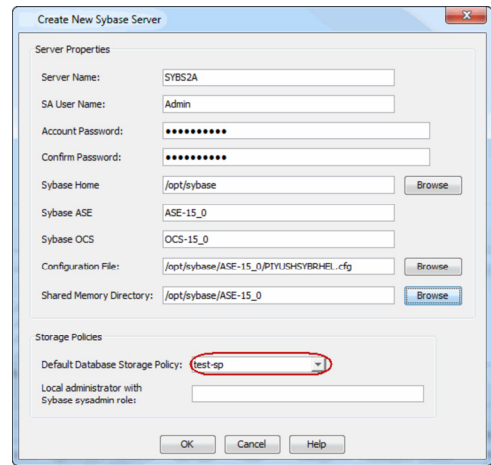
- In the **Configuration File** box, type the path to the configuration file. Alternatively, click **Browse** to select the location.



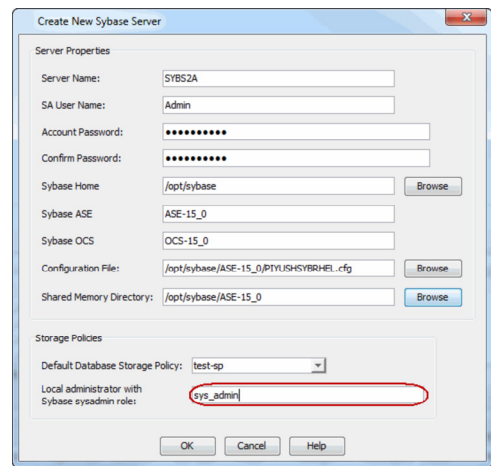
- In the **Shared Memory Directory** box, type the location of the directory where you specify the shared memory file name. When you start an Adaptive Server, it creates a shared memory file that resides in the home directory. for example: /opt/sybase/ASE-15_0. Alternatively, click **Browse** to select the location.



- In the **Default Database Storage Policy** box, select the storage policy name.



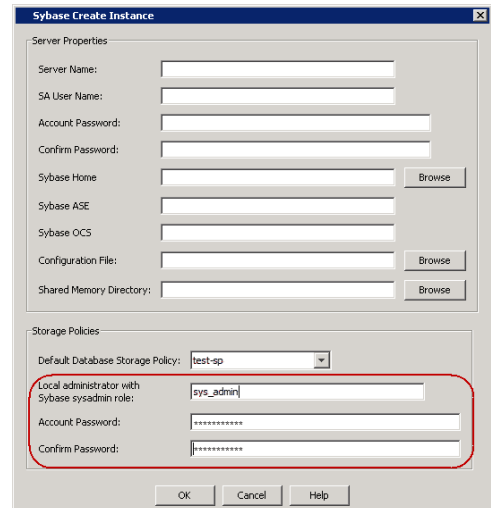
- For Unix:
 - In the **Local administrator with Sybase sysadmin role** box, type the user name of the local system administrator with Sybase sysadmin role privileges.
 - Click **OK**.



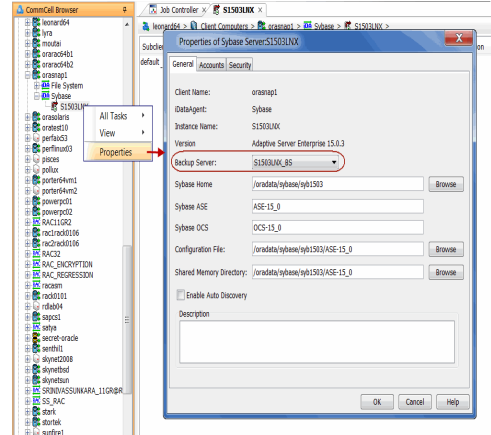
For Windows:

- In the **Local administrator with Sybase sysadmin role** box, type the user name of the local system administrator with Sybase sysadmin role privileges.
- In the **Account Password** box, type the password for the user account.
- In the **Confirm Password** box, re-type the password.
- Click **OK**.

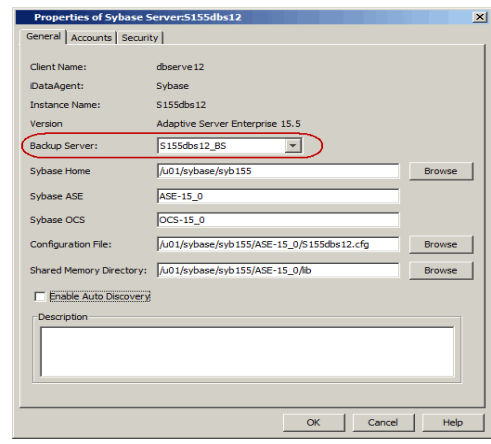
11.
 - From the CommCell Browser, navigate to **Client Computers** | **<Client>** | **Sybase iDataAgent**.
 - Right-click the **<Instance>**, and then click **Properties**.



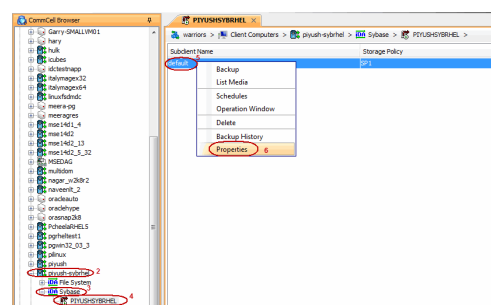
12.
 - Select the **Backup Server** from the list.
 - Click **OK**.



13.
 - From the CommCell Browser, navigate to **Client Computers** | **<Client>** | **Sybase** | **<Instance>**.
 - Right-click the **default Subclient**, and then click **Properties**.

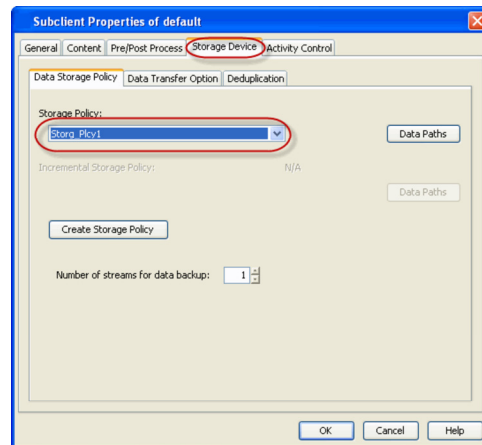


14.
 - Click the **Storage Device** tab.



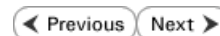
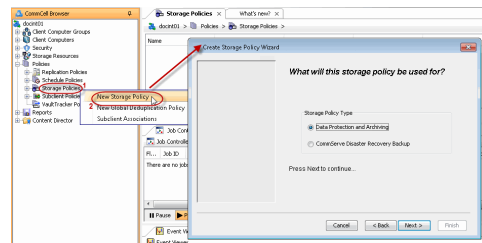
- In the **Storage Policy** box, select the storage policy.
- Click **OK**.

Click **Next** ► to continue. If you do not have Storage Policy created, follow the step given below to create a storage policy.



15.

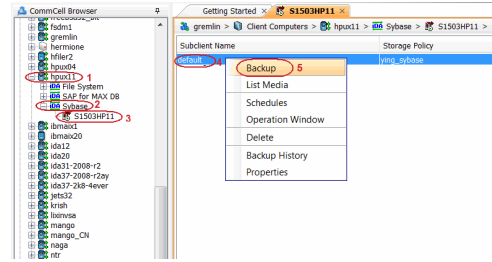
- Click **Create Storage Policy**.
- Follow the prompts displayed in the Storage Policy Wizard. The required options are mentioned below:
 - Select the Storage Policy type as **Data Protection and Archiving** and click **Next**.
 - Enter the name in the **Storage Policy Name** box and click **Next**.
 - 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** to select the folder and then click **Next**.
 - Review the details and click **Finish** to create the Storage Policy.



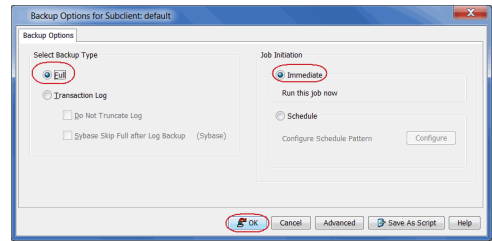
Getting Started Backup - Sybase iDataAgent

WHAT GETS BACKED UP	WHAT DOES NOT GET BACKED UP
Sybase system databases Sybase user databases Transaction logs All the File Systems that are supported by your Operating system The raw devices supported by your Operating system	Sybase application files Operating system data Use the File System iDataAgent to back up the above mentioned components.

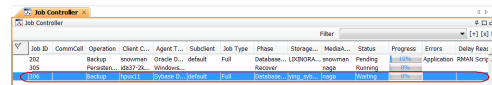
- From the CommCell Browser, navigate to **Client Computers** | **<Client>** | **Sybase** | **<Instance>**.
 - Right-click the default subclient and click **Backup**.



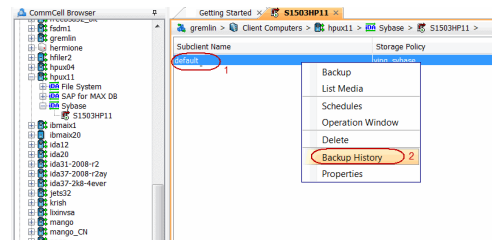
- Click **Full** as backup type and then click **Immediate**.
 - Click **OK**.



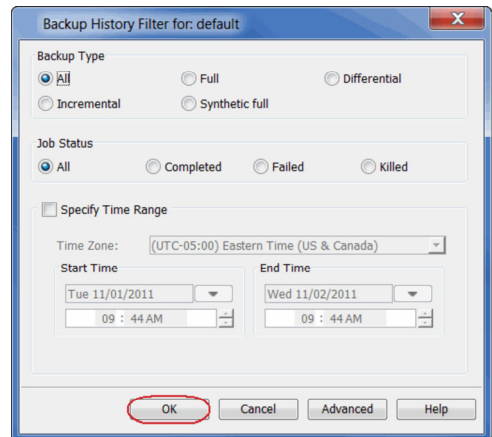
- You can track the progress of the job from the **Job Controller** window of the CommCell console.



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

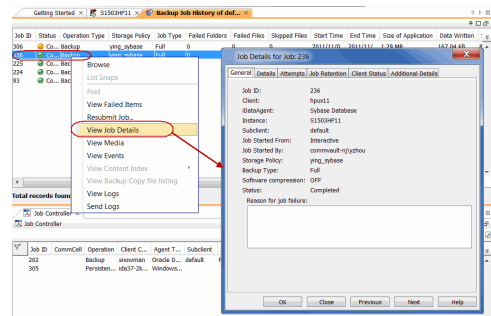


- Click **OK**.



- Right-click the job to:
 - Browse the database that was backed up.

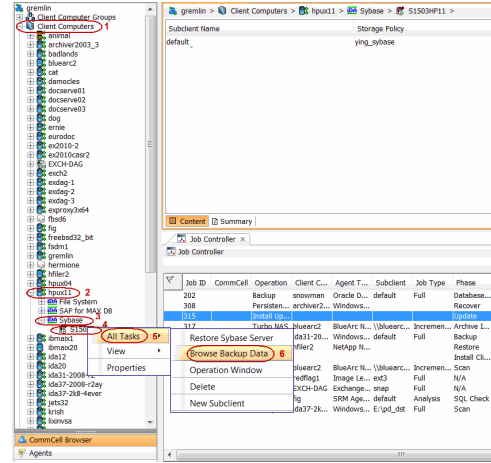
- View Failed Items.
- Resubmit the job.
- View job details.
- View media associated with the job.
- View events associated with the job.
- View or send the log file that is associated with the job.



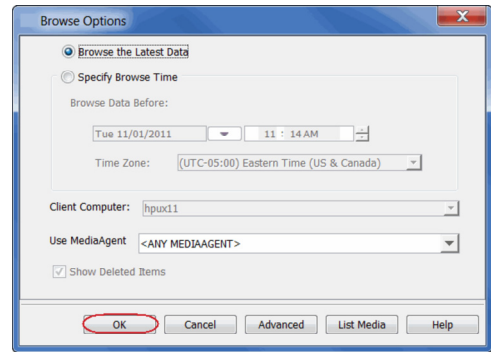
Getting Started Restore - Sybase iDataAgent

As restoring your backup data is very crucial, it is recommended that you perform a restore operation immediately after your first full backup to understand the process. The following section explain the steps for restoring a database.

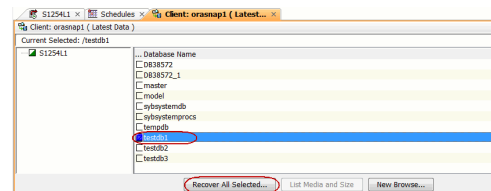
- From the CommCell Browser, navigate to **Client Computers** | **<Client>** | **Sybase**.
 - Right-click the **<Instance>**, point to **All Tasks**, and then click **Browse Backup Data**.



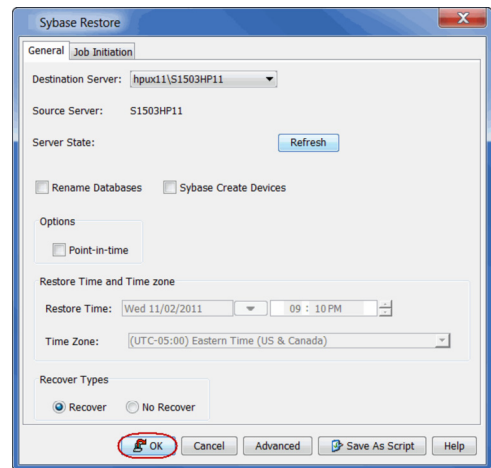
- Click **OK**.



- In the right pane of the Browse window, click the **<Instance>** and select a database.
 - Click **Recover All Selected**.



- Click **OK**.



- You can monitor the progress of the restore job in the **Job Controller**.

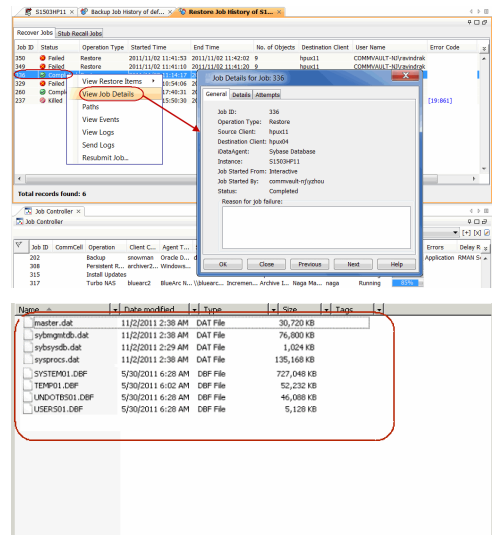
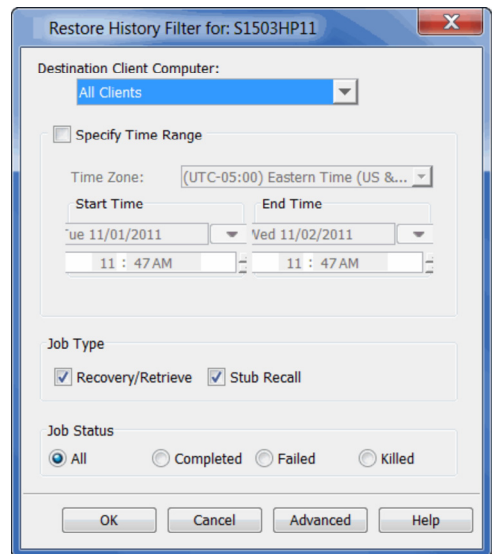
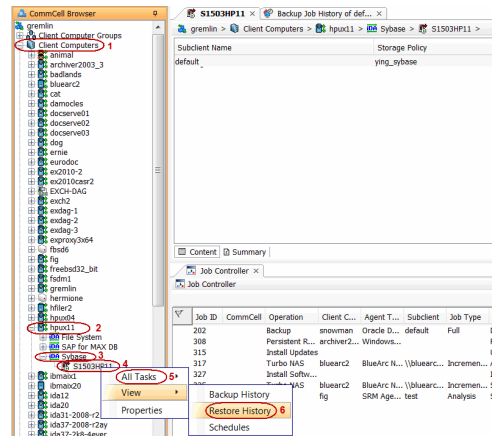
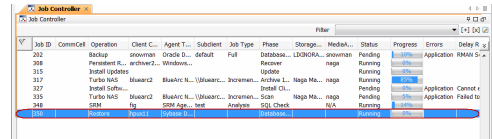
6. Once the restore job has completed, right-click the agent or <instance>, point to **View** and click **Restore History**.

7. Click **OK**.

8. 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 and send Log files of the restore job
- View Paths
- Resubmit the restore job

9. Once the database is restored, verify that the restored database is available in the original location.



CONGRATULATIONS - YOU HAVE SUCCESSFULLY COMPLETED YOUR FIRST BACKUP AND RESTORE.

If you want to further explore this Agent's features read the **Advanced** sections of this documentation.

