

Quick Start - Unix File Archiver Agent

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INTRODUCTION

File Archiver for Unix Agent is installed as a stand alone archiving agent, and is not dependent on the Unix File System iDataAgent.

The Archived data allows preservation, transparent retrieval, and discovery of information held within file system environment. It reduces the size of data on the primary storage and decreases the duration of backup operations by the corresponding iDataAgent. Migrating data from file systems to secondary, tiered-storage maximizes storage utilization across the enterprise.

The File Archiver for Unix can optionally create stubs that contain information about the archived data to facilitate end-users with non-browse recovery operations from third-party applications. Migrated data can also be recovered from the CommCell Console using the browse recovery operation whether the stubbing feature is enabled or disabled. Additionally, it employs centralized, policy-based storage to reduce costs and simplify management.

KEY FEATURES

The Unix File Archiver involves the following key features:

RECALL THROTTLING

You can configure the stub recovery parameters, such that, you can set the Maximum Number of Stubs in a Recall Job, Time between recalls and Time to wait after maximum successive recalls limit is reached.

POINT IN TIME RESTORE

You can restore the system state of a client, backed up on a specific date and time.

STUB PRUNING

In the archive phase, File Archiver for Unix will archive files meeting the pre-set archive criteria and, if applicable, put them into a list for the stubbing phase and prune the expired stubs. This helps in secondary storage space reclamation.

TERMINOLOGY

The Unix File Archiver documentation uses the following terminology:

MIGRATION ARCHIVING	Migration archiving is a process of periodically moving unused or infrequently used Unix File System data on a host computer to secondary storage, thereby reducing the size of data on the primary storage.
STUBBING	The stubbing phase starts after the archive phase succeeds. Stubs are placeholders of the original data after it has been migrated to the secondary storage. Stubs replace the archived files in the location selected by the user during the archive. However, stubs will only be created if the subclient properties were configured to create them during archive.
DATA RECOVERY	The archived and migrated data can be recovered in any of the following three methods: <ul style="list-style-type: none"> • Recovery of archived files per file paths provided using the CommCell Console. • Browse and Recovery of archived files using the CommCell Console. • Recall of archived files from stubs using third-party applications like: Unix Terminal or Console window.
STUB RECOVERY	If the subclient is configured to create stubs, you can perform a recall operation from a Unix workstation for recovering the stubs. A recall is any action that causes an open and read to be executed on the stub, which automatically initiates a recovery operation.

System Requirements - File Archiver for Unix Agent

System Requirements | Supported Features | Supported File Systems

The following requirements are for the File Archiver for Unix Agent and Add-On Archiver Agent:

OPERATING SYSTEM		PROCESSOR
AIX	AIX 7.1	Power PC (Includes IBM System p)
	AIX 6.1 64-bit	Power PC (Includes IBM System p)
	AIX 5.3 32-bit and 64-bit with technology level 7 (or higher) and runtime library xC.rte 8.0.0.0 or higher	Power PC (Includes IBM System p)
	Note that all AIX platforms support Logical Partitions (LPAR).	
HP-UX	HP-UX 11.31 64-bit	Itanium
	HP-UX 11.31 64-bit	PA-RISC
	HP-UX 11.23 64-bit	PA-RISC
	HP-UX 11.23 64-bit	Itanium
LINUX	CENTOS	
	CentOS 5.4 with kernel 2.6.18-164	Intel Pentium or compatible minimum required
	CentOS 5.3 with kernel 2.6.18-128	Intel Pentium or compatible minimum required
	DEBIAN	
	Debian 5.x with kernel 2.6.26-2	Intel Pentium or compatible minimum required
	Debian 5.x with kernel 2.6.26.19-2	x64
	OES LINUX	
	Novell OES2 Linux up to SP2 (SLES 10 SP2) 64-bit	x64
	In order to perform a stub recall from Linux OES NSS volumes, Linux OES File System iDataAgent must be installed.	
	Novell OES2 Linux up to SP2 (SLES 10 SP2) 32-bit	Intel Pentium or compatible minimum required
	RED HAT ENTERPRISE LINUX	
	Red Hat Enterprise Linux AS 4.9 with kernel 2.6.9-100 (Update 9)	Intel Pentium or compatible minimum required
Red Hat Enterprise Linux AS 4.9 with kernel 2.6.9-100 (Update 9)	x64	
Red Hat Enterprise Linux AS 4.0 with kernel 2.6.9-89 (Update 8)	x64	
Red Hat Enterprise Linux AS 4.0 with kernel 2.6.9-89 (Update 8)	Intel Pentium or compatible minimum required	
Red Hat Enterprise Linux AS 4.0 with kernel 2.6.9-78 (Update 7)	Intel Pentium or compatible minimum required	
Red Hat Enterprise Linux AS 4.0 with kernel 2.6.9-78 (Update 7)	x64	
Red Hat Enterprise Linux AS 4.0 with kernel 2.6.9-67 (Update 6)	x64	
Red Hat Enterprise Linux AS 4.0 with kernel 2.6.9-67 (Update 6)	Intel Pentium or compatible minimum required	
Red Hat Enterprise Linux AS 4.0 with kernel 2.6.9-55 (Update 5)	Intel Pentium or compatible minimum required	
Red Hat Enterprise Linux AS 4.0 with kernel 2.6.9-55 (Update 5)	x64	
Red Hat Enterprise Linux AS 4.0 with kernel 2.6.9-42 (Update 4)	x64	
Red Hat Enterprise Linux AS 4.0 with kernel 2.6.9-42 (Update 4)	Intel Pentium or compatible minimum required	
Red Hat Enterprise Linux AS 4.0 with kernel 2.6.9-34 (Update 3)	Intel Pentium or compatible minimum required	
Red Hat Enterprise Linux AS 4.0 with kernel 2.6.9-34 (Update 3)	x64	
Red Hat Enterprise Linux 6 Advanced Platform with kernel 2.6.32-71	Intel Pentium or compatible minimum required	

Red Hat Enterprise Linux 6 Advanced Platform with kernel 2.6.32-71	x64
Red Hat Enterprise Linux 6 Advanced Platform with kernel 2.6.32-131 (Update 1)	x64
Red Hat Enterprise Linux 5 Advanced Platform with kernel 2.6.18-92 (Update 2)	Intel Pentium or compatible minimum required
Red Hat Enterprise Linux 5 Advanced Platform with kernel 2.6.18-92 (Update 2)	x64
Red Hat Enterprise Linux 5 Advanced Platform with kernel 2.6.18-8	Intel Pentium or compatible minimum required
Red Hat Enterprise Linux 5 Advanced Platform with kernel 2.6.18-8	x64
Red Hat Enterprise Linux 5 Advanced Platform with kernel 2.6.18-53 (Update 1)	x64
Red Hat Enterprise Linux 5 Advanced Platform with kernel 2.6.18-53 (Update 1)	Intel Pentium or compatible minimum required
Red Hat Enterprise Linux 5 Advanced Platform with kernel 2.6.18-238 (Update 6)	Intel Pentium or compatible minimum required
Red Hat Enterprise Linux 5 Advanced Platform with kernel 2.6.18-238 (Update 6)	x64
Red Hat Enterprise Linux 5 Advanced Platform with kernel 2.6.18-194 (Update 5)	Intel Pentium or compatible minimum required
Red Hat Enterprise Linux 5 Advanced Platform with kernel 2.6.18-194 (Update 5)	x64
Red Hat Enterprise Linux 5 Advanced Platform with kernel 2.6.18-164 (Update 4)	Intel Pentium or compatible minimum required
Red Hat Enterprise Linux 5 Advanced Platform with kernel 2.6.18-164 (Update 4)	x64
Red Hat Enterprise Linux 5 Advanced Platform with kernel 2.6.18-128 (Update 3)	x64
Red Hat Enterprise Linux 5 Advanced Platform with kernel 2.6.18-128 (Update 3)	Intel Pentium or compatible minimum required
SUSE LINUX (SLES)	
SuSE Linux 11 Enterprise Server with kernel 2.6.32.12-0.7 (Update 1)	Intel Pentium or compatible processors
SuSE Linux 11 Enterprise Server with kernel 2.6.32.12-0.7 (Update 1)	x64
SuSE Linux 11 Enterprise Server with kernel 2.6.27.19-5	x64
SuSE Linux 11 Enterprise Server with kernel 2.6.27.19-5	Intel Pentium or compatible processors
SuSE Linux 10 Enterprise Server with kernel 2.6.16.60-0.54.5 (Update 3)	Intel Pentium or compatible processors
SuSE Linux 10 Enterprise Server with kernel 2.6.16.60-0.54 (Update 3)	Intel Pentium or compatible processors
SuSE Linux 10 Enterprise Server with kernel 2.6.16.60-0.34 (Update 2)	Intel Pentium or compatible processors
SuSE Linux 10 Enterprise Server with kernel 2.6.16.60-0.21 (Update 2)	Intel Pentium or compatible processors
SuSE Linux 10 Enterprise Server with kernel 2.6.16.60-0.21 (Update 2)	x64
SuSE Linux 10 Enterprise Server with kernel 2.6.16.46-0.12 (Update 1)	Intel Pentium or compatible processors
SOLARIS	
Solaris 9 64-bit with Service Packs 111711-02 and 111712-02	Ultra2 or higher recommended
Solaris 9 4/04 64-bit	Ultra2 or higher recommended
Solaris 10.x with a minimum of SunOS (Sparc) Patch 119963-14	Ultra2 or higher recommended
Solaris 10.x (6/06 and higher) 64 bit	Ultra2 or higher recommended

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

- 250 MB minimum of hard disk space for software
- 50 MB of additional hard disk space for log file growth
- 719 MB of temp space required for install (where the temp folder resides)
- 3.5 KB per file of cache partition

MEMORY

256 MB RAM or higher recommended total system memory

SOLARIS ZONES/CONTAINERS SUPPORT

The File Archiver Agent should be installed on the global zone, and cannot be installed on a non-global zone.

The global instance of the File Archiver Agent can be used to archive data on a non-global zone.

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

NETWORK

TCP/IP Services configured on the computer.

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

LUSTRE FILE SYSTEM

Lustre File System version 2.0.0.1 is supported on Red Hat Enterprise Linux 5.x computers with kernel 2.6.18-164.

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
<code><directory>/<file_name>.te</code> where: <code><directory></code> is <code>/usr/share/selinux/devel</code> <code><file_name></code> 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: <code>backup_IDA.te</code>	The content of the file should be as follows: <code>policy_module(<name>,<version>)</code> <code>#####</code> where: <code><name></code> is the name of the policy module. You can give any unique name to the policy module, such as a process or application name. <code><version></code> 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. <code>policy_module(backup_IDA,1.0.0)</code>
<code><directory>/<file_name>.fc</code> where: <code><directory></code> is <code>/usr/share/selinux/devel</code> <code><file_name></code> is the name of the Unix file, created to save the policy module statement. It is a good idea to use the same	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 <code>/var/log/messages</code> . Also, if required, add it to the following list of files. <code>/opt/<software installation directory>/Base/libCTreeWrapper.so -- gen_context (system_u:object_r:texrel_shlib_t,s0)</code> <code>/opt/<software installation directory>/Base/libCVMAGuiImplgso -- gen_context</code>

<p>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>	<pre>(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.

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 - File Archiver Deployment



WHERE TO INSTALL

The Unix File Archiver Agent is used to archive Unix machine data.

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.

The global instance of the File Archiver Agent can be used to archive and restore/recall data on a non-global zone.

Follow the steps given below to install the Unix File Archiver Agent.

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 COMMCCELL CONSOLE

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

METHOD 1: INTERACTIVE INSTALL

- Run the following command from the Software Installation Disc:
./cvpkgadd
- The product banner and other information is displayed.
Press **Enter**.
- Read the license agreement. Type **y** and press **Enter**.
- Press **Enter**.
- Press **Enter**.
- 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.

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.

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]

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]

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

7. Press **Enter**.

8. Type the appropriate number to install **File Archiver for UNIX Agent**.

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

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

9. Press **Enter**.

10. 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.

11. Press **Enter**.

12. 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:

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

13. 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.

14. Type **no**.

If entering **Yes**, go to Step 16.

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]

Install Calypso on physical machine angel

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:2

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

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

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]

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]

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-writable 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.

15. Type **d** for done.

```

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

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:

```

16. If you indicated **Yes** in Step 14., 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: skyl

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
"skyl".

Press <ENTER> to continue ...

```

17. 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 : [8400]
Port Number for EvMgrC: [8402]

```

18. 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.

```

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

```

19. 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.

```

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

```

20. 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]

```

21. Type the appropriate number to select the **Client Group** and press **Enter**.

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

```

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


```

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

If you do not have Storage Policy created, this message will be displayed.
You may not be prompted for user input.

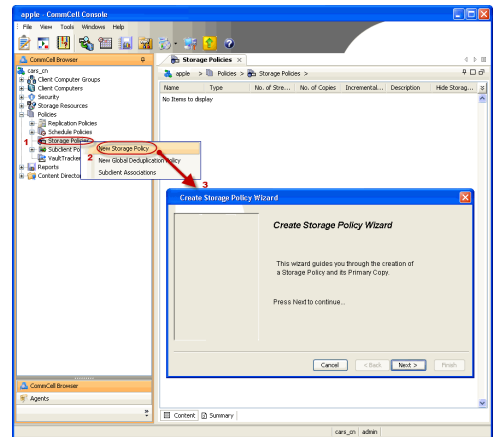
You can create the Storage Policy later in step 24.

23. Type **3** to the **Exit** option and press **Enter**.
The installation is now complete.

 If you already have a storage policy selected in step 22, 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.

- 24.
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.

```
[ ] 2) DR
[ a=all n=none r=reverse q=quit d=done >=next <=previous ?
=help]s
Enter number(s)/one of "a,n,r,q,d,>,<,>" here: 2
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
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: [3]
```



METHOD 2: INSTALL SOFTWARE FROM COMMCELL CONSOLE

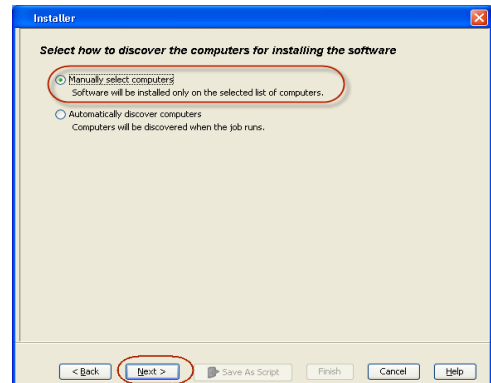
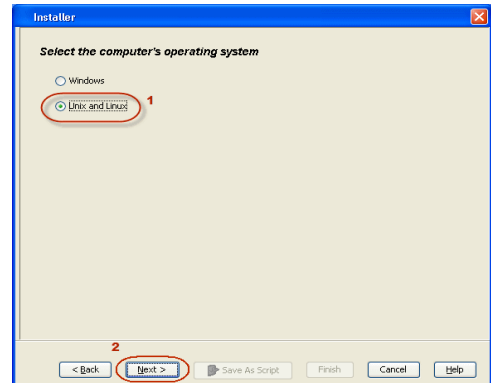
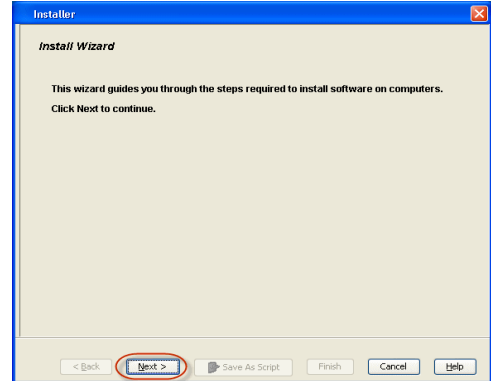
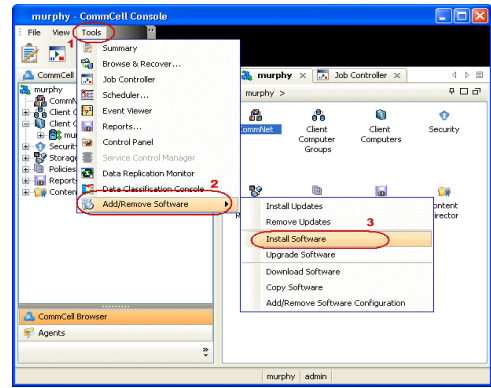
1. From the CommCell Browser, select **Tools | Add/Remove Software | Install Software**.

2. Click **Next**.

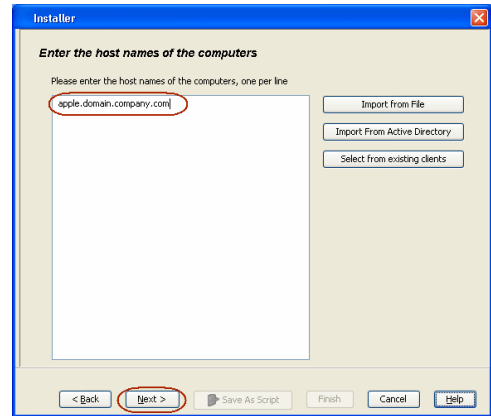
3. Select **Unix and Linux**.
Click **Next**.

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

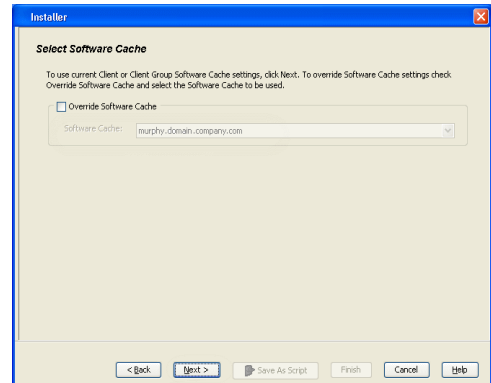
5. Enter the fully qualified domain name of the computer in which you wish to install.
For example: apple.domain.company.com
The **File Archiver for UNIX Agent** will be installed on this client computer.
Click **Next**.



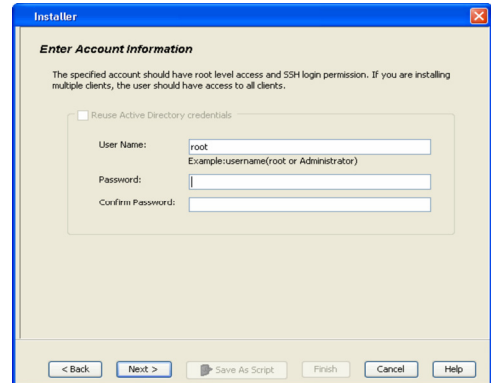
6. Click **Next**.



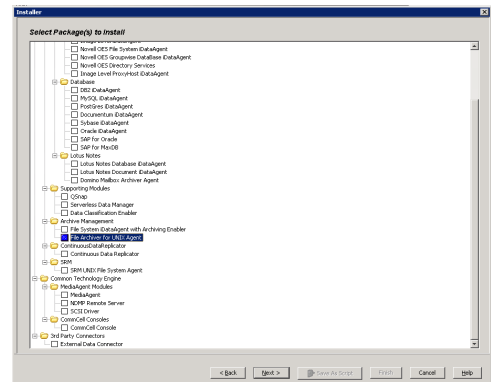
7. Specify **UserName** and **Password** of client computer.
Click **Next**.



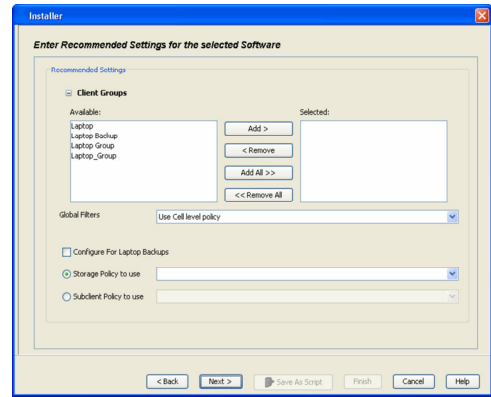
8. Select **File Archiver for UNIX Agent**.
Click **Next**.



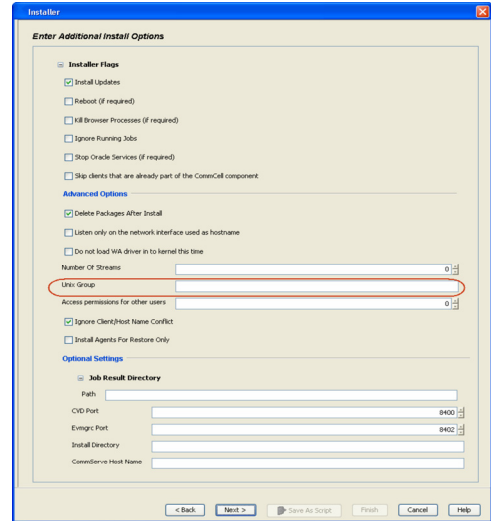
- 9.
 - Select **Client Group** from **Available** and click **Add**.
Do not add more than one Client Group.
 - Select a **Storage Policy** from the drop-down list. Click **Next**.



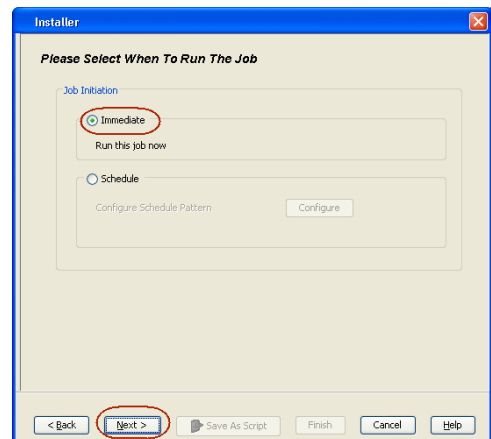
10. Click **Next**.



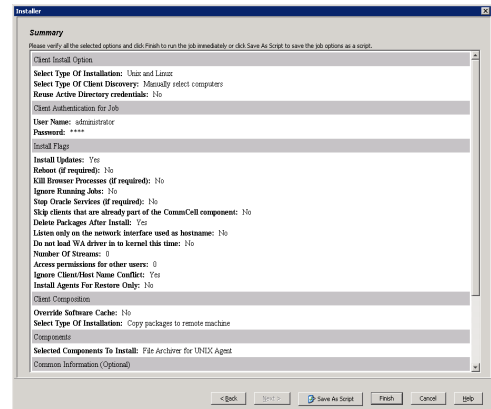
11. Select **Immediate**.
Click **Next**.



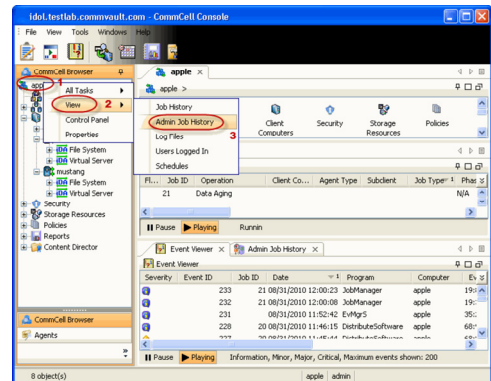
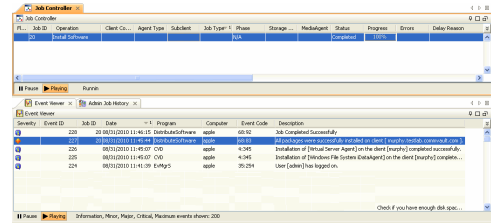
12. Click **Finish**.



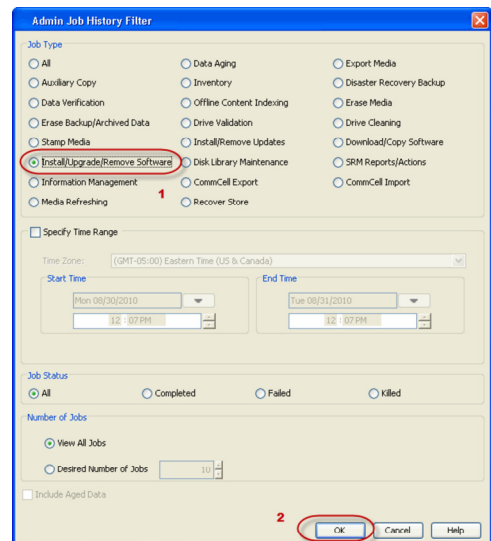
13. You can track the progress of the job from the **Job Controller** or **Event Viewer** window.



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

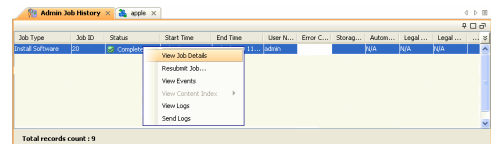


15. Select **Install/Upgrade/Remove Software**.
Click **OK**.



16. 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



Getting Started - File Archiver Archive

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PERFORM AN ARCHIVE

After configuring a subclient and a storage policy, you are ready to perform your first archive.

WHAT GETS ARCHIVED

The Unix File Archiver archives the following:

OPERATING SYSTEM	ARCHIVED FILE SYSTEMS
AIX	Journal File System 2 (JFS2) IBM General Parallel File System (GPFS) VERITAS File System (VxFS) VERITAS Cluster File System (VxCFS)
HP-UX	VERITAS File System (VxFS)
Linux	'X' File System (XFS) B-tree File System (Btrfs) Extended 3 File System (ext3) Extended 4 File System (ext4) IBM General Parallel File System (GPFS) X9000 IBRIX File System (IBRIXFS) 6.x PolyServe Matrix Server VERITAS File System (VxFS) VERITAS Cluster File System (VxCFS) Lustre File System (Clustered File System)
Red Hat Linux 6.x	GFS2 (Clustered File System) The default Extended 2 File System (ext2) gets archived when it is compiled as a module.
Novell OES2 Linux	NSS file system
Solaris	Unix File System (UFS) VERITAS File System (VxFS) Zettabyte File System (ZFS on Solaris 10 6/06)

WHAT DOES NOT GET ARCHIVED

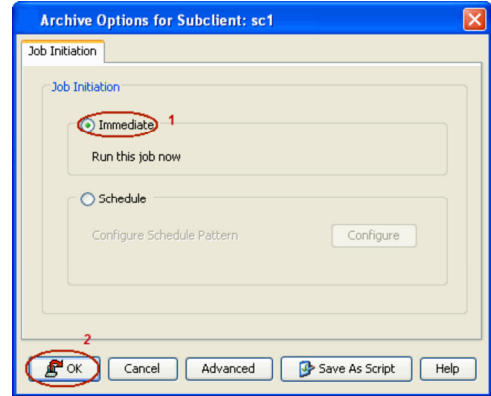
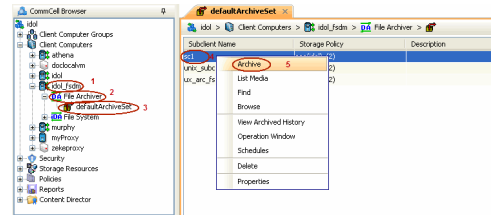
The following file types/objects are automatically filtered out of archive operations by the system, and will not be archived.

- Sparse files (Example: File Archiver stub files)
- Install directory
- Job Results directory
- Log files directory
- /usr system directory
- /kernel system directory
- /etc system directory
- /tmp directory
- Extended attributes in the OES Linux data
- Stubs originating from the OES Linux Operating System in a Netware Operating System

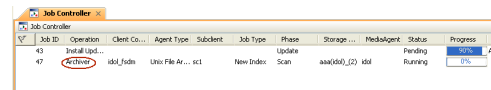
The following section provides step-by-step instructions for performing your first archive:

1.
 - From the CommCell Console, navigate to **Client Computer | File Archiver | defaultArchiveSet**.
 - Right-click the **Subclient** and click **Archive**.

2.
 - Select **Immediate** to run the job immediately.
 - Click **OK**.



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



4. Once the archiving process is completed, files that meet the stubbing rules are stubbed.
 - **Stubs** are placeholders of the original data after it has been migrated to the secondary storage.
 - Stubs replace the archived files in the location selected by the user during the archive.
 - After stubbing, the size of the files on the disk reduces to a single block.

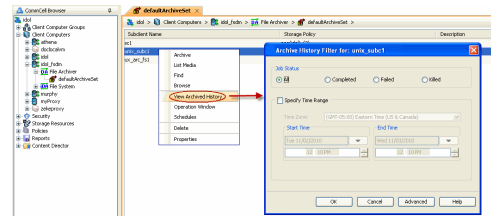
Files before stubbing

```
bose:/ext3 # df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/mapper/system-root 9.5G  5.8G  3.8G  61% /
udev           126M  112K  126M   1% /dev
/dev/sda1      69M   8.9M   56M  14% /boot
/dev/mapper/savigrp-fsadm 2.0G   92M   2.0G   5% /fsadm
/dev/mapper/savigrp-ext3 485M  485M   0 100% /ext3
/dev/mapper/savigrp-cdrccache 4.0G  567M   3.2G  15% /cdrccache
/dev/mapper/savigrp-cdrccache 4.0G  567M   3.2G  15% /cdrdest
mesons:/vol/vol3/cvbuild 922G  767G  156G  84% /cvbuild
mesons:/vol/Qupdates_readonly/Qupdates-readonly 1.4T  931G  503G  65% /updates
oemdepot.commvault.com:/CV90SP1 3.4G  3.4G   0 100% /90
oemdepot.commvault.com:/90SP1 250G  151G  100G  61% /90SP1
bose:/ext3 #
```

Files after stubbing

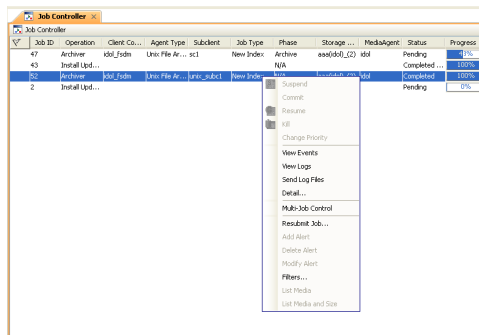
```
bose:/opt/simpna/Updates # d2 -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/mapper/system-root 9.5G  3.0G  6.5G  32% /
udev           126M  112K  126M   1% /dev
/dev/sda1      69M   8.9M   56M  14% /boot
/dev/mapper/savigrp-fsadm 2.0G   92M   2.0G   5% /fsadm
/dev/mapper/savigrp-ext3 485M  485M   0 100% /ext3
/dev/mapper/savigrp-cdrccache 4.0G  567M   3.2G  15% /cdrccache
/dev/mapper/savigrp-cdrccache 4.0G  567M   3.2G  15% /cdrdest
mesons:/vol/vol3/cvbuild 922G  767G  156G  84% /cvbuild
mesons:/vol/Qupdates_readonly/Qupdates-readonly 1.4T  931G  503G  65% /updates
oemdepot.commvault.com:/CV90SP1 3.4G  3.4G   0 100% /90
oemdepot.commvault.com:/90SP1 250G  151G  100G  61% /90SP1
bose:/opt/simpna/Updates #
```

5. Once job is complete, view the details of job from the **Archived History**.
 - Right-click the subclient and select **View Archived History**.
 - Click **OK**.



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

- Details of the job
- Events of the job
- Log files of the job
- Media associated with the job



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