Features - SRM Windows File System Agent

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INTRODUCTION

The SRM Windows File System Agent gathers statistics on the disk and file system assets attached to the local computer.

Data collected by the SRM Windows File System Agent is summarized by many types of reports that may be further customized with user-selected filters and charts in the Report Manager.

WHAT IS SUPPORTED

The SRM Windows File System Agent for Windows File System supports the following file system types:

- FAT
- FAT16
- FAT32
- NTFS

SUPPORTED JOB TYPES FOR DATA COLLECTION

This agent supports two **job types** for data collection:

- Discovery
- Discovery and Analysis

DISCOVERY JOB

This job collects basic information about disks, partitions, file systems, and shares that are present, their current sizes, and available free space. Collections using the Discovery level jobs require minimal processing on the File System server and may be run throughout the day. But a Discovery level job would not provide meaningful data in some of the extensive reports.

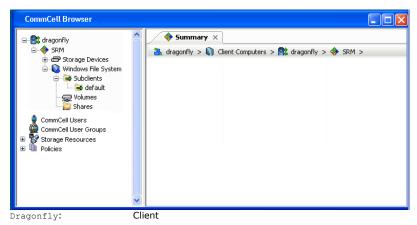
DISCOVERY AND ANALYSIS JOB

This job collects detailed file-level statistics, including information about file sizes, types, owners, and access and modification times. Collections using the Analysis level jobs should be run during off-peak hours because they require processing that is CPU- and disk-intensive on the File System server.

See Reports - SRM Windows File System Agent to see which reports require Analysis level data collection.

TREE LEVEL IN SRM WINDOWS FILE SYSTEM AGENT

When the SRM Windows File System Agent is installed, the following levels are automatically created in the CommCell Browser.



Windows File System: Agent

default: Subclients

Storage Devices: Storage Devices

Volumes: This level displays volume information for the SRM Windows File System Agent's client computer. Logical volumes associated with

the client computer are populated under this level after completion of the first Data Collection operation. For more information, see

SRM Windows File System Agent Summaries.

Shares: This level displays shares related information for the SRM Windows File System Agent's client computer. CIFS Shares associated

with the client computer are populated under this level after completion of the first Data Collection operation. For more

information, see SRM Windows File System Agent Summaries.

LICENSE REQUIREMENT

To perform a data collection operation using this Agent, you need a SRM Windows File System Agent license, available in the SRM server. This license is consumed when you install the Agent. See License Administration for more details on license requirements.

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System Requirements - SRM Windows File System Agent

System Requirements Supported Features

The following requirements are for the SRM Windows File System Agent for Microsoft Windows File System.

OPERATING SYSTEM

WINDOWS 7

Microsoft Windows 7 32-bit and x64 Editions

WINDOWS SERVER 2008

Microsoft Windows Server 2008 32-bit and x64 Editions

WINDOWS VISTA

Microsoft Windows Vista 32-bit and x64 Editions

WINDOWS SERVER 2003

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

Microsoft Windows XP Professional 32-bit and x64 Editions with a minimum of Service Pack 3

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

105 MB minimum of hard disk space for software/ 148 MB recommended

30 MB of additional hard disk space for log file growth

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

MEMORY

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

PROCESSOR

All Windows-compatible processors supported

PERIPHERALS

DVD-ROM drive

Network Interface Card

MISCELLANEOUS

NETWORK

TCP/IP Services configured on the computer.

These requirements are in addition to the disk requirements set for the operating system.

.NET FRAMEWORK

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

MICROSOFT VISUAL C++

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

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

Install the SRM Windows File System Agent

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Client Group Selection
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Setup Complete

Post-Install Considerations

INSTALL REQUIREMENTS

The following procedure describes the steps involved in installing the SRM Windows File System Agent software on both clustered and non-clustered environment.

The SRM Windows File System Agent is installed on the computer from which the Agent collects data for reporting purposes. (This computer is referred to as the *Client* computer in this install procedure.)

Verify that the computer in which you wish to install the software satisfies the minimum requirements specified in System Requirements - SRM Windows File System Agent.

Review the following Install Requirements before installing the software:

GENERAL

- Agents should be installed only after the CommServe and SRM Server has been installed in the CommCell. Also, keep in mind that the CommServe and SRM Server must be installed and running (on the same computer), before you can install the Agent.
- Close all applications and disable any programs that run automatically, including anti-virus, screen savers and operating system utilities. Some of the programs, including many anti-virus programs, may be running as a service. Stop and disable such services before you begin. You can re-enable them after the installation.
- Ensure there is an available license on the CommServe for the Agent.
- Verify that you have the software installation disc that is appropriate to the destination computer's operating system.

Make sure that you have the latest software installation disc before you start to install the software. If you are not sure, contact your software provider.

CLUSTER SPECIFIC

- In the clustered environment, the SRM Windows File System Agent can be installed from the active node in the cluster group using the following procedure. The software can also be automatically installed on all available passive nodes when the software is installed in the cluster group, or you can choose to install any passive node(s) separately.
- Check the following on the cluster computer in which you wish to install the software:
 - O Cluster software is installed and running.
 - $\circ\;$ Active and passive nodes are available.
 - O Disk array devices configured with access to the shared array.
 - o Public Network Interface Card is bound first, before the private Network Interface Card. (Does not apply to NetWare Cluster.)

BEFORE YOU BEGIN

- · Log on to the client as local Administrator or as a member of the Administrators group on that computer.
- On a clustered computer, ensure that you are logged on to the active node as the Domain User with administrative privileges to all nodes on the cluster.

INSTALL PROCEDURE

GETTING STARTED

Place the Software Installation Disc for the Windows platform into the disc drive.

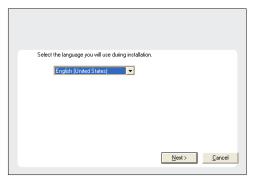
After a few seconds, the installation program is launched.

If the installation program does not launch automatically:

- Click the **Start** button on the Windows task bar, and then click **Run**.
- Browse to the installation disc drive, select **Setup.exe**, click **Open**, then click **OK**.

NOTES

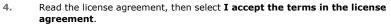
- If you are installing on Windows Server Core editions, mount to Software Installation Disc through command line, go to the **AMD64** folder and run **Setup.exe**.
- Choose the language you want to use during installation. Click the down arrow and select the desired language from the drop-down list, and click **Next** to continue.



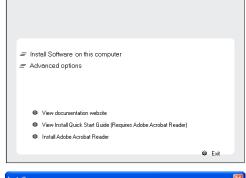
3. Select the option to install software on this computer.

NOTES

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



Click **Next** to continue.



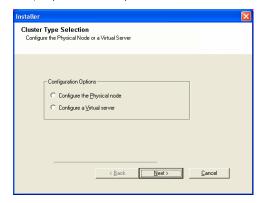


CLUSTER SELECTION

If you are installing in clustered environment, follow the steps below. For non-clustered environment, skip to Select Components for Installation.

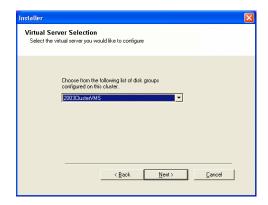
5. Select Configure a Virtual Server.

Click Next to continue.



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

Click Next to continue.



SELECT COMPONENTS FOR INSTALLATION

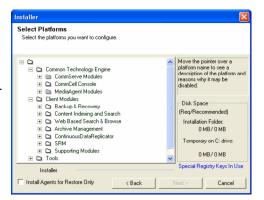
7. Select the component(s) to install.

NOTES

- Your screen may look different from the example shown.
- Components that either have already been installed, or which cannot be installed, will be dimmed. Hover over the component for additional details.
- If you wish to install the agent software for restore only, select Install Agents for Restore Only checkbox. See Installing Restore Only Agents for more information.
- The Special Registry Keys In Use field will be highlighted when GalaxyInstallerFlags registry key is enabled. Move the mouse pointer over this field to see a list of registry keys that have been created in this computer.

Click Next to continue.

To install the SRM Windows File System Agent, expand the SRM folder and then select SRM Windows File System Agent.

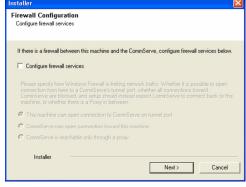


CONFIGURATION OF OTHER INSTALLATION OPTIONS

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

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

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



 Enter the fully qualified domain name of the CommServe Host Name. This should be TCP/IP network name. e.g., computer.company.com.

NOTES

- The CommServe client name is the name of the computer. This field is automatically populated.
- Do not use space and the following characters when specifying a new name for the CommServe Host Name:

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

- If a computer has already been installed, this screen will not be displayed; instead the installer will use the same Server Name as previously specified.
- If you do not specify the CommServe Host Name, a window will be prompted to continue in decouple mode. Click Yes to continue to Decoupled Install. Click No to specify a CommServe Name and continue with the installation.

Click **Next** to continue.

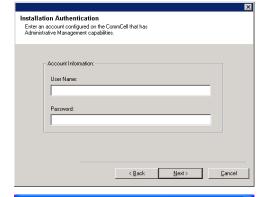
10. Enter the username and password associated with an external domain user account or a CommCell user account to authorize the installation of this agent.



NOTES

 This window will be displayed when the Require Authentication for Agent Installation option is selected in the CommCell Properties. For more information, see Authentication for Agent Installs.

Click Next to continue.



- **11.** Enter the following:
 - The local (NetBIOS) name of the client computer.
 - The TCP/IP IP host name of the NIC that the client computer must use to communicate with the CommServe Server.

NOTES

- Do not use spaces when specifying a new name for the Client.
- The default network interface name of the client computer is displayed if the computer has only one network interface. If the computer has multiple network interfaces, enter the interface name that is preferred for communication with the CommServe Server.
- If a component has already been installed, this screen will not be displayed; instead, the install program will use the same name as previously specified.

Click Next to continue.

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

NOTES:

- If Windows Firewall is enabled on the computer, this option is selected by default and must be enabled to proceed with the installation.
- If Windows Firewall is disabled on the computer, you can select this option to add
 the programs and services to enabled CommCell operations across the firewall, if
 the firewall is enabled at a later time.

You can either select this option during install or add the programs and services after installation. For adding the programs and services after installation, see Configure Windows Firewall to Allow CommCell Communication.

Click **Next** to continue.

13. Specify the location where you want to install the software.

NOTES

- Do not install the software to a mapped network drive.
- Do not use the following characters when specifying the destination path:
 /:*?"<>|#

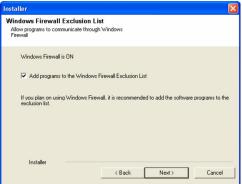
It is recommended that you use alphanumeric characters only.

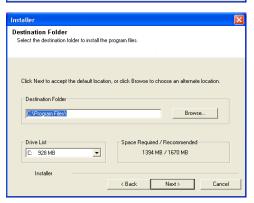
- If you intend to install other components on this computer, the selected installation directory will be automatically used for that software as well.
- If a component is already installed in this computer, this screen may not be displayed. The software will be automatically installed in the same location that was previously specified.

Click **Browse** to change directories.

Click Next to continue.







CLIENT GROUP SELECTION

14. Select a Client Group from the list.

Click Next to continue.

NOTES

 This screen will be displayed if Client Groups are configured in the CommCell Console. For more information, see Client Computer Groups.



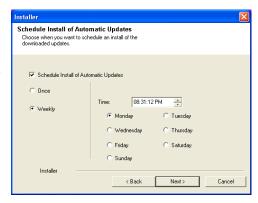
SCHEDULE AUTOMATIC UPDATE

 $\begin{tabular}{ll} \textbf{15.} & \textbf{If necessary, select this option to schedule an automatic installation of software updates.} \end{tabular}$

NOTES

- Schedule Install of Automatic Updates allows automatic installation of the necessary software updates on the computer on a single or weekly basis. If you do not select this option, you can schedule these updates later from the CommCell Console.
- To avoid conflict, do not schedule the automatic installation of software updates to occur at the same time as the automatic FTP downloading of software updates.
- If a component has already been installed, this screen will not be displayed; instead, the installer will use the same option as previously specified.

Click Next to continue.



VERIFY SUMMARY OF INSTALL OPTIONS

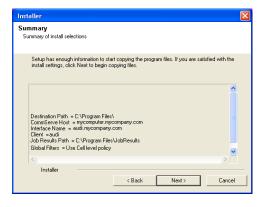
16. Verify the summary of selected options.

NOTES

 The Summary on your screen should reflect the components you selected for install, and may look different from the example shown.

Click **Next** to continue or **Back** to change any of the options.

The install program now starts copying the software to the computer. This step may take several minutes to complete.



INSTALL REMAINING CLUSTER NODES

If you are installing in clustered environment, follow the steps below to install on remaining nodes of the cluster. For non-clustered environment, skip to Setup Complete.

17. To install/upgrade the software on the remaining nodes of the cluster, click Yes.
To complete the install for this node only, click No.

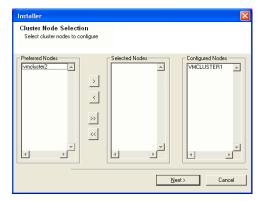


18. Select cluster nodes from the **Preferred Nodes** list and click the arrow button to move them to the **Selected Nodes** list.

NOTES

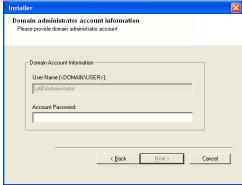
 The list of Preferred Nodes displays all the nodes found in the cluster; from this list you should only select cluster nodes configured to host this cluster group server. Do not select nodes that already have multiple instances installed. For more information, see Multi Instancing.

When you have completed your selections, click **Next** to continue.



19. Type the User Name and Password for the Domain Administrator account, so that the installer can perform the remote install/upgrade of the cluster nodes you selected in the previous step.

Click Next to continue.



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

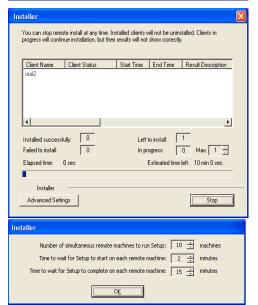
Click **Stop** to prevent installation to any nodes after the current ones complete.

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

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

NOTES

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

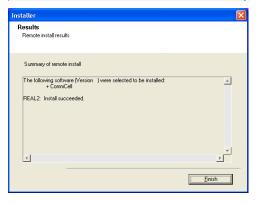


21. Read the summary for remote installation to verify that all selected nodes were installed successfully.

NOTES

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

Click Next to continue.



SETUP COMPLETE

22. Click **Next** to continue.

NOTES

• Schedules help ensure that the data protection operations for the Agent are automatically performed on a regular basis without user intervention. For more information, see Scheduling.

23. Setup displays the successfully installed components.

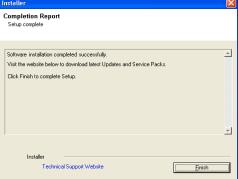
NOTES

- The Setup Complete message displayed on your screen will reflect the components you installed, and may look different from the example shown.
- If you install an Agent with the CommCell Console open, you need to refresh the CommCell Console (F5) to see the new Agents.
- If **Reboot Now** button is displayed make sure to reboot the computer before performing any other operations from the computer.

Click Finish to close the install program.

The installation is now complete.





POST-INSTALL CONSIDERATIONS

GENERAL

Install post-release updates or Service Packs that may have been released after the release of the software. When you are installing a Service Pack, ensure that it is the same version as the one installed in the CommServe Server. Alternatively, you can enable Automatic Updates for quick and easy installation of updates in the CommCell component.

SRM Data Collection

Topics | How To | Troubleshoot | Related Topics

Overview

Scheduling Data Collection jobs

Considerations

Best Practices

- Solaris
- NAS
- Enabling Reverse Lookup
- SharePoint
- Oracle

OVERVIEW

After installing the SRM Server, the SRM Agent software must be installed on your selected client computers before you can collect data from them. When data collection is performed, this information populates the SQL database on the SRM Server's repository with current statistics, for the purpose of generating summaries and reports.

When you configure data collection for a client, from the SRM node you have the options of choosing which Agent(s) to use (if more than one is available on the client), the type of data collection to be performed (determined by selecting either an Analysis or Discovery Job Type), a Schedule Policy, and a start date. You can exclude volumes and directories from the data collection process for Subclients filters. You can also balance the collection load across different subclients, each with a different schedule policy.

Data collection jobs run automatically according to the parameters you have selected, and will appear in the Job Controller as a scheduled job. The system can also be configured to generate advisories, a brief text message describing an actual or potential problem and the suggested corrective action.

Reports and SRM Summaries viewed through the console are generated from the data collected and stored on the SRM Server. Schedule your first reports to run after your first data collection jobs have completed. Note that data collection and Report Generation jobs are scheduled independently, at different times and intervals. Thus, you can, for example, collect data nightly, hourly, or on-demand, but generate reports only once per week if desired.

SCHEDULING DATA COLLECTION JOBS

Data Collection jobs can be scheduled to regularly collect data at specified intervals. Data Collection jobs can be scheduled from the SRM agent level in the CommCell Browser. In addition, Analysis Data Collection jobs can be scheduled for the individual subclients at the subclient level. When the Data Collection job is scheduled the job will be displayed in the Job Controller. After the successful completion of the Data Collection job, the client information is gathered at the SRM Server and the job status is shown as completed in the Job Controller. For more information on scheduling, see Scheduling. For step-by-step instructions on scheduling a Data Collection job see Run/Schedule Data Collection.

CONSIDERATIONS

- Data Collection is not performed for mounted network drives, volumes, or directories. If you want to collect data for network file systems, install the
 appropriate SRM Agent on the local computer for those file systems.
- SRM Exchange Agent based Analysis Data Collection job will report storage groups only if the storage groups are mounted.
- For NAS Data Collection, all CIFS and NFS content will be included as content in the default subclient, unless some or all of it is specifically listed as content in a user-defined subclient.
- For NAS Data Collection, if subclient SubB is child of subclient SubA meaning that SubB's paths are contained in paths of SubA, then when collecting SubA none of the contained paths of SubB will be collected. Instead they will be collected by Data Collection of SubB.
- For NAS, data collection jobs are not supported for vfilers. If you enable data collection on a vfiler, then the data is not collected.
- For UNIX file systems, all mount points (comprised of a logical volume or partition) will be included as content in the default subclient, unless they are specifically listed as content in a user-defined subclient.

 Consider this example:
 - O You have created a subclient named sub1.
 - O You have defined a directory named /mount_points as contents for sub1.
 - O Within $/mount_points$ there are three mount points, mnt1, mnt2, and mnt3.

- O Data will not be collected on those three mount points as part of sub1; instead, they are part of the content of the default subclient.
- O To collect data on those mount points as part of sub1, you must specify each mount point, /mount_points/mnt1, /mount_points/mnt2, and /mount_points/mnt3, as content for sub1.
- If you would like to configure the SRM Exchange Agent for cross-domain mailbox access for data collection purposes, this can be accomplished by creating
 the AdServerList key in the registry.
- After adding, editing or removing a subclient, you must run an Analysis data collection job on all subclients associated with an agent for reports to reflect the changes.
- For the SRM Agent for SharePoint only ensure that all necessary SharePoint services are running and that the configuration and content databases are
 online; otherwise, installation may appear successful, but a subsequent Data Collection will fail.
- For SRM Windows File System Agent, Summary pages may show different file count than the actual count as the Agent will skip junction points.
- Using the integrated File System Agent, if DDR or Snap Protect is selected as the backup method, SRM Data Collection will be skipped.
- For SRM Exchange Agents running with Exchange 2010, public folder object data is not collected when a Discovery and Analysis type data collection job is run.

BEST PRACTICES

SOLARIS

Ensure that the NFS client specifies the soft option when mounting NFS shares, or else data collection for NFS data will hang whenever the NFS server is down or not accessible. Also, increase the value for the retrans and timeo options; this will compensate for the soft option limiting the number of retries that the client can attempt to access the NFS server.

NAS

Configure NAS filer (including NetApp vFiler, EMC Celerra CIFS Servers and Data Movers) with DNS server in a way that reverse DNS lookup (from NAS filer to SRM NAS proxy) is resolved. If that is not the case then CIFS connection or NFS mount from SRM NAS proxy to NAS filer will fail.

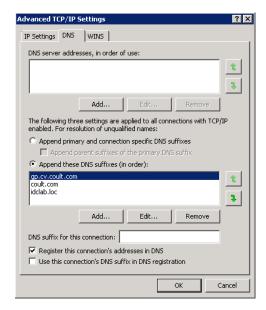
ENABLING REVERSE LOOKUP

Use the following steps to enable Reverse DNS lookup on a client computer:

- Logon to the computer as an Administrator.
 - Click Start, click Control Panel and then select Network and Internet.
 - Click Network and Sharing Center.
 - Under Tasks, Select Manage network connections.
 - Right-click the Local Area Connection icon, and then click Properties.
 - On the Local Area Connection Properties dialog box, select Internet Protocol Version4 (TCP/IPv4), and then click Properties.
 - If you have a DHCP Server in your network environment, then select Obtain DNS server address automatically. Else, select Use the following DNS server addresses and follow the below steps:
 - $\circ\;$ In the $Preferred\;DNS\;server\;$ box, type the IP Address of the DNS server.
 - In the Alternate DNS server box, type the IP Address of the alternate DNS server.

| Obtain an IP address aut | omatically |
|---|------------|
| C Use the following IP addr | ess: |
| IP address: | |
| Subnet mask: | |
| Default gateway: | |
| Obtain DNS server addre Use the following DNS server: Alternate DNS server: | · · |

- Click Advanced.
 - On the **Advanced TCP/IP Settings** dialog box, click the **DNS** tab.
 - Click Append these DNS suffixes (in order).
 - Click Add, in the Domain suffix box, type the Domain suffix, and then click Add.
 Repeat this step to add all the DNS suffixes in order.
 - Click OK, and then click OK.
 - Click **OK**.



In case the DNS is not configured or not supported, then the client computer will not be able to perform IP/Name resolution and will not be able to communicate with the remote computers by using the host names. You can overcome this temporarily by adding the IP addresses and the fully qualified domain names in the host file of the client computer. It is not recommended to add Hosts file entries as these create communications control points that may impact other server operations and are difficult to maintain and manage. These should be used only as temporary solutions until the larger network or DNS issues can be resolved. You can use the following steps to add entries to the host file of the client computer with Windows operating system:

- 1. Logon to the computer as an Administrator.
- 2. Click Start, and then click Run.
- 3. In the Open box, type drivers, and then click OK.
- 4. Double-click **etc** folder, open **hosts** file with Notepad, and then type the IP address, the fully qualified domain name and the host name of the remote computer. You can add additional entries on separate lines. Save the hosts file after adding the entries.

Example:

```
172.32.xxx.xxx dbwin1.idclab.loc dbwin1
```

Similarly, to enable reverse lookup on a remote computer, repeat step 1 through step 3 for adding IP address of the client computer in the hosts file of the remote computer.

For more information, see: http://technet.microsoft.com/en-us/library/cc780585(WS.10).aspx

For a Unix computer, the entries should be added in the host file located under etc folder.

SHAREPOINT

"Usage Analysis" must be enabled in SharePoint for SRM to collect data about hits, for those reports that include this information. Refer to Microsoft SharePoint documentation for information about enabling "Usage Analysis".

ORACLE

Consider the following configuration items before running data collection from the Oracle Agent:

- Verify that Oracle databases are in OPEN status before running a data collection job.
- Verify that the Oracle databases are running properly, and that there are no database-related memory issues.
- Verify that the shared_pool_size parameter in the init<SID>.ora file is set to the maximum valid value so that SQL queries can run successfully for data collection.
- Data collection by the appropriate file system SRM Agent must be scheduled to occur before data collection by the SRM Oracle Agent.

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SRM Data Collection - How To

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Run/Schedule a Data Collection Job for an SRM Instance, Agent or Subclient

Schedule Agentless SRM policies

RUN/SCHEDULE A DATA COLLECTION JOB FOR AN SRM INSTANCE, AGENT OR SUBCLIENT

Required Capability: See Capabilities and Permitted Actions

- To run/schedule a Data Collection job for an SRM instance, agent or subclient:
- 1. From the CommCell Browser, right-click the SRM instance, agent or subclient, and then click Data Collection from the short-cut menu.
- 2. From the Schedule Data Collection Job dialog box, select the agent for which you want to run the Data Collection job from the **Agent** list. (This option is not applicable at the SRM agent and subclient levels.)
- 3. Choose the Job Type. (This option is not applicable at the SRM subclient level.)
 - o If you select **Discovery**, basic information on file system assets is collected and minimal processing on the server is required.
 - o If you select Discovery and Analysis, detailed statistics is collected and these jobs require more processing throughput on the server.
 - o If you select **Discovery and Analysis**, and if the agent has more than one subclient, click the name of the subclient you want from the **Subclient** list. (This option is not applicable at the SRM subclient level.)
- 4. Choose Schedule or Immediate from the Job Initiation area.
- 5. Configure any other options as appropriate.
- 6. Click OK.

If you have selected the Immediate option, you can track the progress of the job from the Job Controller window.

For more information on Scheduling, see Scheduling.

SCHEDULE AGENTLESS SRM POLICIES

Required Capability: See Capabilities and Permitted Actions

- To schedule an exiting SRM Agentless Policy:
- 1. From the CommCell Browser, expand Policies and select Agentless SRM Policies.
- 2. In the main window right-click the Policy that needs to be scheduled and click **Create Schedule**.
- 3. In the Job Initiation dialog box, choose Immediate or Schedule.



If you have selected the **Run Immediately** option, you can track the progress of the job from the **Job Controller** window.

- 4. Click **Configure** and select the required scheduling options.
- 5. Click OK.

For more information on Scheduling, see Scheduling.

SRM Windows File System Agent Summaries

Overview

Real-time Monitoring

Software Instances/Process Information/Services

File System Usage

Distribution

Volumes

Shares

Storage Devices

OVERVIEW

SRM Windows File System Agent Summaries provide a concise view of the status of SRM Windows File System entities in the CommCell Console. The status information includes the resource, memory, and CPU usage, as well as other resource-related information. Summary information is provided as images in the form of bar graphs and pie charts to provide a succinct snapshot of the statistical information. While viewing summary, data rows in tables can be sorted by any one of the columns listed in that summary.

When you select a SRM Windows File System entity from the CommCell Console, its summary information appears in the main window. Each section can be expanded or collapsed as desired.

REAL-TIME MONITORING

Critical information that rapidly changes is automatically collected and updated every 15 minutes by the Bull Calypso Communications Service.

All information of a summary, such as CPU Utilization, Memory Utilization, etc. is collected and updated by this Service.

If necessary, you can modify the number of minutes between collections using the nREFRESH_INTERVAL_MINUTES registry key, however it is not recommended as it alters the rate of data collection, which may impact performance.

The following section describes the available summary types of SRM Windows File System Agent:

SOFTWARE INSTANCES/PROCESS INFORMATION/SERVICES

Summary information at the client level shows statistical data for the following:

• Software Instances

The summary information for software instances displays details like Package, version and vendor name of all instances of the installed software.

• Process Information

The summary information for processes displays details like Image Name, PID, Session ID, CPU Time, CPU Usage, Memory Usage, User Name, etc for each process that runs on the client.

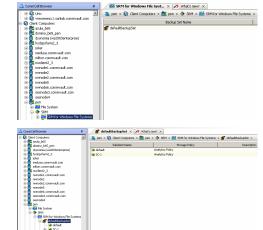
Services

The summary information for services displays details like Name, State, Startup Type, and Log on information for each service that exists on the client.

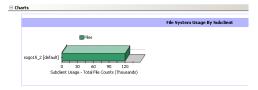
FILE SYSTEM USAGE

Summary at the defaultBackupSet level or the subclient level display charts and tables for **File System Usage by Subclient.** This tables displays details like Name, Average Tree Depth, Maximum File Size, Sparse File Count, Compressed Files, etc for the defaultBackupSet.

 From the CommCell Console, select the Client Computer with SRM Windows File System Agent for which you want to view summaries. Expand SRM and select SRM Agent for Windows File System, then select defaultBackupSet/Subclient.



 The associated defaultBackupSet or Subclient Summary will appear in the main window.



DISTRIBUTION

At the user defined or default Subclient level **Properties** showing physical information including name, state (enabled or disabled) last modification time and last analysis times, etc. are displayed along with Charts. The SRM Windows File System Agent at this level displays charts for **File Distribution by Size**, **File Distribution by Type**, **File Distribution by Access Time** and **File Distribution by Modification Time**.

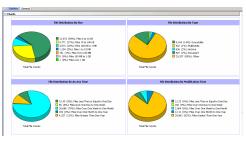
 From the CommCell Console, select the Client Computer with SRM Windows File System Agent for which you want to view summaries.



2. Expand SRM and select SRM Agent for Windows File System, then select Subclients



3. The associated **Subclient Summary** will appear in the main window.



VOLUMES

Summary information at the Volumes level include charts for File Count and File System Capacity.

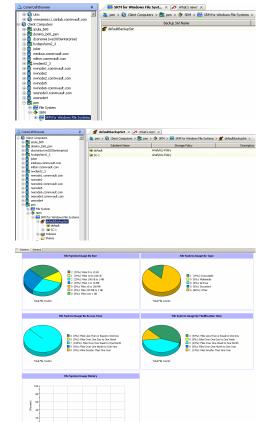
Each volume in turn displays charts for File System Usage by Size, File System Usage by Type, File System Usage by Access Time, File System Usage by Modification Time and File System Usage History. Advisories with severity level, the time stamp, and a brief description are also displayed along

with charts at this level.

 From the CommCell Console, select the Client Computer with SRM Windows File System Agent for which you want to view summaries.

Expand SRM and select SRM Agent for Windows File System, then select Volume.

3. The associated **Volume Summary** will appear in the main window.



SHARES

Summary information include tables displaying Table Name, Path Name, Used Space and Protocol for the selected share.

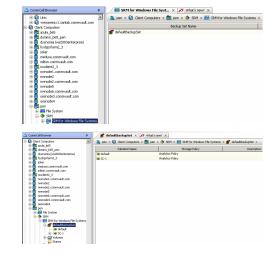
STORAGE DEVICES

Summary information at the Storage Devices level include charts for **Allocated Vs Unallocated space per disk.** Each Physical Drive in turn displays charts for **Partition Capacity.** Physical properties like Name, Interface, Manufacturer, Block, Count, etc. are also displayed at this level.

 From the CommCell Console, select the Client Computer with SRM Windows File System Agent for which you want to view summaries.

ou want to view summaries.

2. Expand SRM and select Storage Devices.



3. The associated **Storage Devices Summary** will appear in the main window.



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SRM Windows File System Reports

Topics | How To | Example | SRM Archiver Integration | Related Topics

SRM reports provide a sleek, versatile, and easy-to-use reporting framework that enables you to easily and effectively choose, view, and analyze vital data. Customized reporting is available through the selection of filter criteria (e.g., individual columns, specific clients, specific client computer groups, etc.) and filters as described in SRM Reports.

From the CommCell Console, the SRM Report Manager provides these types of reports:

- Computer Inventory
- Cost Analysis
- Applications

Initial templates are provided for each type (e.g., Cost History by Application, Capacity by File System, etc.) where columns have been preselected. The only requirement before generating and displaying the report is to specify one or more client computers. For most reports, a data collection job must also have been run prior to generating the report.

You must use a Windows MediaAgent to collect file level analytics. You cannot use a Unix MediaAgent to collect file level analytics.

Reports can be customized by adding or removing columns in the initial templates or specifying additional Filter Criteria.

This following table lists:

- The category/columns that can be selected.
- A description of the category.
- For each type of data collection job, if data is collected for the column, it is marked with a 🗸 Running an Analysis Job may be required to produce complete and accurate data. An Analysis Job also includes the data collected by a Discovery Job.
- Agentless SRM reports always require Discovery Job during data collection.

For step-by-step instructions on generating reports, see Display, Run, or Schedule a Report Manager Report for step-by-step instructions.

| Category/Column | Description | SRM Windows File System A | | em Agent |
|-----------------------------|--|---------------------------|----------------------------------|---------------|
| | | Discovery Job | Discovery and Analysis Job | Agentless SRM |
| Client Properties | Displays aspects of the client computer on which the SRM Windows File System Agent is installed. | | | |
| Available Memory | | ✓ | | ✓ |
| Available Memory Percentage | | ✓ | | ✓ |
| CPU Utilization | | ✓ | | ✓ |
| Free Disk Percentage | | ✓ | | ✓ |
| Free Disk Space | | ✓ | | ✓ |
| Hostname | | ✓ | | ✓ |
| Memory | | ✓ | | ✓ |
| Operating System | | ~ | | ✓ |
| OS Vendor | | ~ | | ✓ |
| OS Version | | ~ | | ✓ |
| Processors | | ✓ | | ✓ |
| Service Pack | | ✓ | | ✓ |
| SP Version | | ✓ | | ✓ |
| Time Zone | | ✓ | | ✓ |
| Total Disk Space | | ✓ | | ✓ |
| Used Disk Percentage | | ✓ | | ✓ |
| Used Disk Space | | ✓ | | ✓ |

| | ✓ | | ✓ |
|--|---|---|--|
| | ✓ | | ✓ |
| Displays the disk space saved and the cost saved by using an Archiver Agent. | | | |
| | | ✓ | |
| | | ✓ | |
| | | ✓ | |
| | | ✓ | |
| | | ~ | |
| | | ✓ | |
| | | ~ | |
| Displays aspects of physical disks (e.g., capacity, partitions, space, etc.). | | | |
| | ✓ | ~ | ✓ |
| | ✓ | ~ | ✓ |
| | ✓ | ✓ | ✓ |
| | > | ✓ | ✓ |
| | ✓ | ✓ | |
| | ✓ | ✓ | ✓ |
| | ✓ | ✓ | ✓ |
| | ✓ | ✓ | ✓ |
| | ~ | ✓ | |
| | ✓ | ✓ | |
| | ✓ | ✓ | |
| | ✓ | ✓ | ✓ |
| Displays how physical disks have been used for a given time period. Useful for trending purposes and to identify disks that are likely to fail soon. | | | |
| | > | ~ | ✓ |
| | ✓ | ~ | |
| | ✓ | ~ | |
| | √ | ✓ | |
| Displays aspects of each file per extension that is used and the number of files that include each file extension. | | | |
| | ✓ | ✓ | |
| | | | |
| | ✓ | ✓ | |
| | ✓ ✓ | · · | |
| | | | |
| | ✓ | ✓ | |
| Displays deeper analysis of files. Selecting Analysis Job is required when running data collection job. | ✓ ✓ | · · | |
| Analysis Job is required when running data | ✓ ✓ | · · | |
| Analysis Job is required when running data | ✓ ✓ | · · | |
| Analysis Job is required when running data | ✓ ✓ | · · | |
| Analysis Job is required when running data | ✓ ✓ | · · | |
| | Displays the disk space saved and the cost saved by using an Archiver Agent. Displays aspects of physical disks (e.g., capacity, partitions, space, etc.). Displays how physical disks have been used for a given time period. Useful for trending purposes and to identify disks that are likely to fail soon. Displays aspects of each file per extension that is used and the number of files that include each file extension. | Displays the disk space saved and the cost saved by using an Archiver Agent. Displays aspects of physical disks (e.g., capacity, partitions, space, etc.). V V V Displays how physical disks have been used for a given time period. Useful for trending purposes and to identify disks that are likely to fail soon. V Displays aspects of each file per extension that is used and the number of files that include each file extension. | Displays the disk space saved and the cost saved by using an Archiver Agent. |

| Directory Size | | | | |
|---|--|----------|------------|----------|
| Group Name | | | | |
| Sub-directory Count | | | | |
| Total Directories | | | | |
| Total Files | | | | |
| User Name | | | | |
| Volume | | | | |
| File Level Analytic Files | Displays deeper analysis of files. Selecting Analysis Job is required when running data collection job. | | - I | |
| Access Time | | | | |
| Computer | | | | |
| Creation Time | | | | |
| Directory Path | | | | |
| Extension Name | | | | |
| File Name | | | | |
| Is Stub File | | | | |
| Modification Time | | | † | |
| Size | | | † | |
| Stub File Space Saved | | | | |
| User Group Name | | | | |
| User Group Name | | | | |
| Volume | | | | |
| File Shares | Displays aspects of files that are shared in the network. | | | |
| Allocated Space | the network. | ✓ | ✓ | ✓ |
| Billable Entity | | ✓ | ✓ | ✓ |
| | | · · | · · | · · |
| Free Space | | · · | · · | • |
| Owner | | ▼ | · · | ✓ |
| Path Name | | ∨ | · · | · · |
| Protocol | | - | | _ |
| Share Name | | ~ | ✓ | V |
| Used Space | | ✓ | ✓ | ✓ |
| File System File Distribution by Access Time | Displays file statistics and average size of files, total file size, and type by access time. | | _ | |
| Average File Size | | | ✓ | |
| Files | | | ✓ | |
| Total File Size | | | ✓ | |
| Туре | | | ✓ | |
| File System File Distribution by Modification Time | Displays file statistics and average size of files, total file size, and type by modification time. | | | |
| Average File Size | | | ✓ | |
| Files | | | ✓ | |
| Total File Size | | | ✓ | |
| Туре | | | ✓ | |
| File System File Distribution by Size | Displays file statistics and average size of files, total file size, and type by size. | | | ı |
| | , | | ✓ | |

| Average File Size | 1 | | | |
|---------------------------------------|---|----------|----------|---|
| Files | | | ✓ | |
| Total File Size | | | ✓ | |
| Туре | | | ✓ | |
| File System File Distribution by Type | Displays file statistics and average size of files, total file size, and type by type. | | | |
| Average File Size | | | ✓ | |
| Files | | | ✓ | |
| Total File Size | | | ✓ | |
| Туре | | | ✓ | |
| File System Usage | Displays file statistics and how the files are stored and organized in the file system. | | | |
| Average File Size | | | ✓ | |
| Average Files per Directory | | | ✓ | |
| Average Tree Depth | | | ✓ | |
| Compressed Files | | | ✓ | |
| Encrypted Files | | | ✓ | |
| Max File Size | | | ✓ | |
| Maximum Tree Depth | | | ✓ | |
| Migrated Space Saved | | | ✓ | |
| Sparse File Count | | | ✓ | |
| Total Directories | | | ✓ | |
| Total Files | | | ✓ | |
| File System Usage History | Displays overall file system statistics. Useful for trending purposes. | | | |
| As Of | | ✓ | ✓ | ✓ |
| Percent Used | | ✓ | ✓ | ✓ |
| Used Space | | ✓ | ✓ | ✓ |
| Installed Software | Summarizes software installed on Windows File System clients in the SRM cell. Useful for troubleshooting installation or licensing problems. | | | |
| Computer | | ✓ | ✓ | ✓ |
| Package | | ✓ | ✓ | ✓ |
| Vendor | | ✓ | ✓ | ✓ |
| Version | | ✓ | ✓ | ✓ |
| Largest Files | Displays properties of largest files (e.g., name, owner, size). | | | |
| Largest File Accessed | | ✓ | ✓ | |
| Largest File Created | | ✓ | ✓ | |
| Largest File Group | | ✓ | ✓ | |
| Largest File Modified | | ✓ | ✓ | |
| Largest File Owner | | ✓ | ✓ | |
| Largest File Size | | ✓ | ✓ | |
| Largest File Full Path | | ✓ | ✓ | |
| Least Recently Used Files | Displays properties of least recently used files (e.g., name, owner, size). | | | |
| Least Recently Used File Accessed | | ✓ | ✓ | |
| Least Recently Used File Created | | ✓ | ✓ | |

| Least Recently Used File Group | 1 | ✓ | ✓ | |
|------------------------------------|--|----------|----------|----------|
| Least Recently Used File Modified | | ✓ | ~ | |
| Least Recently Used File Owner | | ✓ | ✓ | |
| Least Recently Used File Size | | | ✓ | |
| Least Recently Used File Full Path | | | ✓ | |
| Microsoft Exchange PST File | Displays aspects of PST (personal storage) | | | |
| | files created by Microsoft Outlook. | | ✓ | |
| Accessed | | | · · | |
| Created | | | | |
| Full Path | | | ✓ ✓ | |
| Group | | | | |
| Modified | | | V | |
| Owner | | | V | |
| Size | | | ✓ | |
| Oldest Files | Displays properties of oldest files (e.g., name, owner, size). | | | |
| Oldest File Accessed | | ✓ | ✓ | |
| Oldest File Created | | ✓ | ✓ | |
| Oldest File Group | | ✓ | ~ | |
| Oldest File Modified | | ✓ | ✓ | |
| Oldest File Owner | | ✓ | ~ | |
| Oldest File Size | | ✓ | ~ | |
| Oldest File Path | | ✓ | ✓ | |
| Partition Details | Summarizes aspects of each partition of the file system. | | | |
| Blocks | | ✓ | ✓ | ✓ |
| Capacity | | ✓ | ✓ | ✓ |
| Туре | | ✓ | ✓ | ✓ |
| Process Information | Displays aspects of the client computer on which the SRM Windows File System Agent is installed. | | | |
| Base Priority | | ✓ | | ✓ |
| Collection Time | | ✓ | | |
| CPU Time | | ✓ | | ✓ |
| CPU Usage | | ✓ | | |
| GDI Objects | | ✓ | | |
| Handles | | ✓ | | ✓ |
| Image Name | | ✓ | | ✓ |
| IO Other | | ✓ | | ✓ |
| IO Other Bytes | | | | |
| IO Read Bytes | | <u> </u> | | <u> </u> |
| | | · · | | · · |
| IO Reads IO Write Bytes | | | | · · |
| | | · · | | |
| | | -/ | | |
| IO Writes | | √ | | √ |
| IO Writes Memory Usage | | ✓ | | ✓ ✓ |
| IO Writes | | | | |

| Page Faults | I | I | | |
|------------------------|---|----------|----------|----------|
| Page Faults Delta | | ✓ | | |
| Paged Pool | | ✓ | | |
| Peak memory Usage | | ✓ | | ✓ |
| PID | | ✓ | | ✓ |
| Session ID | | ✓ | | |
| Threads | | ✓ | | ✓ |
| User Name | | ✓ | | ✓ |
| User Objects | | ✓ | | |
| Virtual Memory Size | | ✓ | | |
| Prohibited Files | Displays aspects of files that are not allowed (or forbidden) in the Windows file system. | | | |
| Accessed | | | ✓ | |
| Created | | | ✓ | |
| Full Path | | | ✓ | |
| Group | | | ✓ | |
| Modified | | | ✓ | |
| Owner | | | ✓ | |
| Size | | | ✓ | |
| Resource Usage History | Displays how computer resources (e.g., disk, memory, CPU, etc.) have been used for a given time period. Useful for trending purposes and to identify computer resources that are likely to fail soon. | | | |
| As Of | | ✓ | | ✓ |
| CPU Utilization | | ✓ | | ✓ |
| Disk Free | | ✓ | | ✓ |
| Disk Percent Free | | ✓ | | ✓ |
| Disk Percent Used | | ✓ | | ✓ |
| Disk Total | | ✓ | | ✓ |
| Disk Used | | ✓ | | ✓ |
| Memory Free | | ✓ | | ✓ |
| Memory Percent Free | | ✓ | | ✓ |
| Memory Percent Used | | √ | | ✓ |
| Memory Total | | ✓ | | ✓ |
| Memory Used | | ✓ | | ✓ |
| Services | Displays service names running on the client computer and their current state. | | | T |
| Collection Time | | √ | | V |
| CPU Time | | ✓ | | V |
| Executable Path | | V | | V |
| Log On | | ✓ | | V |
| Name | | √ | | V |
| PID | | √ | | V |
| Startup Type | | · · | | ✓ |
| Software Activity | Displays activity such as when software packages was installed or removed and details of the software package. | ~ | 1 | ~ |

| Date | 1 | ✓ | ✓ | ✓ |
|---|---|----------|----------|----------|
| Package Name | | ✓ | ✓ | ✓ |
| Туре | | ✓ | ✓ | ✓ |
| Vendor Name | | ✓ | ✓ | ✓ |
| Version | | ✓ | ✓ | ✓ |
| Software Instances | Displays aspects of software instances (e.g, name, vendor, version). | | | |
| Instances | | ✓ | ✓ | ✓ |
| Name | | ✓ | ✓ | ✓ |
| Vendor | | ✓ | ✓ | ✓ |
| Version | | ✓ | | ✓ |
| Subclient File Distribution by Access Time | Displays file statistics and average size of files per subclient, such as total file size, and type by access time. | | | |
| Average File Size | | | ~ | |
| Files | | | ✓ | |
| Total File Size | | | ✓ | |
| Туре | | | ✓ | |
| Subclient File Distribution by Modification Time | Displays file statistics and average size of files per subclient, such as total file size, and type by modification time. | | | |
| Average File Size | | | ✓ | |
| Files | | | ~ | |
| Total File Size | | | ✓ | |
| Туре | | | ✓ | |
| Subclient File Distribution by Size | Displays file statistics and average size of files per subclient, such as total file size, and type by size. | | | |
| Average File Size | | | ✓ | |
| Files | | | ✓ | |
| Total File Size | | | ✓ | |
| Туре | | | ✓ | |
| Subclient File Distribution by Type | Displays file statistics and average size of files per subclient, such as total file size, and type by type. | | | |
| Average File Size | | | ✓ | |
| Files | | | ✓ | |
| Total File Size | | | ✓ | |
| Туре | | | ✓ | |
| Subclient Usage | Displays Calypso subclient (the logical entity that uniquely defines a unit of data on a client computer) information. | | | |
| Average File Size | | | ✓ | |
| Average Files per Directory | | | ✓ | |
| Average Tree Depth | | | ✓ | |
| Compressed Files | | | ✓ | |
| Encrypted Files | | | ✓ | |
| Maximum File Size | | | ✓ | |
| Maximum Tree Depth | | | ✓ | |
| Migrated Space Saved | | | ✓ | |
| | | | | |

| Sparse File Count | 1 | | ✓ | |
|---------------------------------|---|----------|----------|---|
| Total Directories | | | ✓ | |
| Total Files | | | ✓ | |
| Total File System Usage by User | Displays file information by individual user. Useful to identify the major consumers of storage for capacity management and planning purposes. | | | |
| Average File Size | | | ✓ | |
| Files | | | ✓ | |
| Max File Size | | | ✓ | |
| Name | | | ✓ | |
| Total File Size | | | ✓ | |
| User Group Quotas | Displays disk space violations per user to help enforce corporate storage usage policies. | | 1 | |
| Disk Space Hard Limit | | ✓ | ✓ | ✓ |
| Disk Space Soft Limit | | ✓ | ✓ | ✓ |
| User Group Name | | ✓ | ✓ | ✓ |
| Violation - Used Space | | ✓ | ✓ | ✓ |
| User Quotas | Displays quota violations per user to help enforce corporate storage usage policies. FSRM columns report Windows 2008 R2 File System Resource Manager (FSRM) information. | | | |
| Disk Space Hard Limit | | ✓ | ~ | ✓ |
| Disk SpaceSoft Limit | | ✓ | ✓ | ✓ |
| FSRM Quota Enabled | | ✓ | ✓ | ✓ |
| FSRM Quota Path | | ✓ | ✓ | ✓ |
| FSRM Quota Type | | ✓ | ✓ | ✓ |
| FSRM Space Limit | | ✓ | ✓ | ✓ |
| FSRM Template | | ✓ | ✓ | ✓ |
| User Name | | ✓ | ✓ | ✓ |
| Violation - Used Space | | ✓ | ✓ | ✓ |
| Violation FSRM Used Disk Space | | ✓ | ✓ | ✓ |
| User Usage | Displays a summary of files used and their size (average, maximum, total) per user name. | | | |
| Average File Size | | | ✓ | |
| Files | | | ✓ | |
| Maximum File Size | | | ✓ | |
| Total File Size | | | ✓ | |
| User Name | | | ✓ | |
| Volume Details | Displays aspects of each volume (a single accessible storage area with a single file system) to help identify heavy disk consumers for capacity management and planning purposes. | | | |
| Free Space | | ✓ | ✓ | ✓ |
| Percent Free | | ✓ | ✓ | ✓ |
| Percent Used | | ✓ | ✓ | ✓ |
| Total Space | | ✓ | ✓ | ✓ |
| Туре | | ✓ | ✓ | ✓ |
| Used Space | | ✓ | ✓ | ✓ |

| Windows Entities | Displays overall aspects per each computer selected (e.g., computer name, host group, etc.). | | | |
|-----------------------|--|----------|----------|----------|
| Client Computer Group | | ✓ | ✓ | ✓ |
| Collection Status | | ✓ | ✓ | ~ |
| Collection Time | | ✓ | ✓ | ✓ |
| Computer | | ✓ | ✓ | ✓ |
| Disk | | ✓ | ✓ | √ |
| Partition | | ✓ | ✓ | ✓ |
| Subclient | | | ✓ | |
| Volume | | ~ | ✓ | ~ |

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SRM Windows File System Reports - How To

Topics | How To | Example | SRM Archiver Integration | Related Topics

Display, Run, or Schedule a Report Manager Report

File Categories for Reports

Time Categories for Reports

Top 'N' Category Counts for Reports

Configure IIS for Windows Server 2008

Save a Report Template

RUN, SCHEDULE, OR SAVE A SRM REPORT MANAGER REPORT

Before You Begin

Required Capability: Capabilities and Permitted Actions

- To generate, save, or schedule an SRM Report Manager Report:
- 1. In the CommCell Browser, expand Reports and then SRM Report Manager, click a report type.
- 2. Select one or more **Client Computers** or **Client Computer Groups** from the **Client Selection** tab. This is a required step.
- 3. Click the Column Selection tab, select a Category and then one or more Available category/columns and click on Add.

To remove a previously selected category, click on the selected filter from **Selected** column and click **Remove**.

Remove All will remove all previously selected categories for the reports.

- 4. Click the Report Options tab and configure these settings in the report:
 - $\circ\;$ From the General tab set Select Time Range and Include Trending options.

These two options apply to history charts.

For all reports, the **Maximum number of Bar Points Per Chart** may be increased or decreased from the default value of 10 and **Draw All Bar Points or Lines** option may be selected. The default of 100 rows to output may be increased or decreased by specifying a number in **Limit number of rows to output**. The default of 5000 rows per page may be increased or decreased by specifying the desired number in **Limit number of rows per page**

- o Click the **Advanced Options** tab and set the **Data Size Unit** for the Table and/or Chart (GB, MB, etc.). Also, the **Output Locale** may be changed from the default that is English. The ordering of the report may be changed by moving columns in **Set Sorting Order of Rows to Return**.
- 5. Optionally, click the **Get SQL Query** tab to generate the query for the filter criteria specified. This will display the SQL query that will be used to get the data and generate the report. The query that is displayed is Read-only and can be used in a third-party SQL application, such as SQL Server Management Studio.
- 6. Choose one of these options to generate the report:

- o Click Run to generate the report immediately and view the results in the CommCell Console.
- o Click **Schedule** to generate and schedule the report on a daily, weekly, monthly, yearly, or even one time basis. Specify the report language (see Languages Support for the list of languages supported in Reports), format (HTML, EXCEL, PDF), and location. Optionally, notifications can be configured so the report can be emailed, sent to an SNMP trap, or RSS feed.
 - When scheduling, patterns can also be applied to the report so it runs on a specific time, repeated every so many days, or run for a particular number of times. Some reports allow enabling Forecasting by specifying default trending interval and number of data points on which the trending interval is based. For more information on trending, see Forecasting.
- o Click **Save As...** to save the report filter criteria, schedule information, notifications to a template so it can be used to generate a report at a later date. All report templates are saved under **My Reports**.

FILE TYPE CATEGORIES FOR REPORTS

Required Capability: Capabilities and Permitted Actions

- To configure file type categories for reports:
- 1. In the CommCell Browser expand Reports and right-click SRM Report Manager and select File Type Categories.
- 2. In the Configure File Categories dialog box:
 - o Select the agent for which you want to configure File Categories.
 - o Select a File Category to add, delete, or edit associated extensions.
 - To add an extension, type the new extension, and click **Add** to save it.
 - To delete an extension, select it from the list, and click **Delete**.
 - To edit an extension, select it from the list, make the changes, then click **Edit** to save your changes.
 - o Optionally, click **Reset** to return all categories to their default configuration (see Default File Categories).
- 3. Click **OK** to save your changes and close the Configure File Categories dialog box. You can also click **Apply** to save any changes to the current Agent configuration, and then repeat this procedure from step 2 to configure File Categories for other agents.

TIME CATEGORIES FOR REPORTS

Required Capability: Capabilities and Permitted Actions

- To configure Time Categories for reports:
- 1. In the CommCell Browser expand Reports and right-click SRM Report Manager and select Time Categories.
- 2. In the Configure Time Categories dialog box, select an Agent for which you want to modify Time Categories.
- 3. For each Interval:
 - $\circ\;$ Specify a Name for each custom Time Category.
 - $\circ\;$ Select the minimum number of days in the time range, or select None.
 - o Select the maximum number of days in the time range, or select **Unlimited**.
- 4. Click **OK** to save your changes and close the Configure Time Categories dialog box, or click **Apply** to save your changes for the currently selected Agent, and repeat this procedure from Step 2 to configure Time Categories for other Agents.

TOP 'N' CATEGORY COUNTS FOR REPORTS

Required Capability: Capabilities and Permitted Actions

- To configure category counts for Top 'N' reports:
- 1. In the CommCell Browser expand Reports and right-click SRM Report Manager and select Top 'N' Categories.
- 2. In the Configure Top 'N' Category Counts dialog box, change the count for each Agent for which you want to modify the Category Count in reports.
- 3. Click \mathbf{OK} to save your changes and close the Configure Top 'N' Category Counts dialog box.

CONFIGURE IIS FOR WINDOWS SERVER 2008

Required Capability: Capabilities and Permitted Actions

To configure IIS and enable appropriate roles for Windows Server 2008:

- 1. Click Start, and then click Server Manager.
- 2. In Server Manager, right click Roles, and then click Add roles. The Add Roles Wizard window is displayed.
- 3. In the Add Roles Wizard, click Server Roles.
- 4. Select the Web Server (IIS) check box from Server Roles, and click Next to continue.

When the **Web Server (IIS)** check box is selected, the **File Server** check box is automatically selected due to role dependency.

- 5. On the Role Services page, expand Common HTTP Features, and select the following check boxes:
 - o Static Content
 - o Default Document
 - o Directory Browsing
 - o HTTP Errors
 - o HTTP Redirection
- 6. Expand Application Development, and select the ASP.NET, ASP, and CGI check boxes.

If you are prompted to add required role services, click **OK**.

- 7. Expand Security, and select the Basic Authentication and Windows Authentication check boxes.
- 8. Expand Management Tools, expand IIS 6 Management Capability, and select the following check boxes:
 - o IIS Metabase Compatibility
 - o IIS 6 WMI Compatibility
 - o IIS 6 Scripting Tools
 - o IIS 6 Management Console
- 9. Click **Next**, and then click **Install**.

SAVE A REPORT TEMPLATE

Required Capability: Capabilities and Permitted Actions

- To save a report template:
- 1. In the CommCell Browser, expand Reports and then select SRM Report Manager and select a report type.

The specified Report Window will appear.

- 2. At the top of the window, click Save As...
- 3. In the Save Template dialog box, enter the name of the report and click \mathbf{OK} to exit the screen.

The report template name displays in the **My Reports** node of the CommCell Browser.

File Level Analytics

Overview Getting Started Advanced FAQ

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OVERVIEW

File Level Analytics provides granular file level details of files in the backup. The granular details include information like file size, file access time, file modified time, etc. Using File Level Analytics, you can retrieve the following:

- List of files based on their sizes, names and patterns.
- List files based on the owner of the files.
- List files based on the group associated with files.
- List of all the files that are backed up by a specific job or the latest cycle of a subclient.
- List of files based on their modified times.
- List of files based on their access times.

SRM option on the Agent level has to be enabled for this data to be collected, see Enable SRM for all backups.

Admin Job History

Topics | How To | Related Topics

The Admin Job History Filter dialog box allows you to view detailed, historical information about the following administration job types:

- All
- Data Aging
- Export Media
- Auxiliary Copy
- Inventory
- Disaster Recovery Backup
- Data Verification
- Offline Content Indexing
- Erase Media
- Erase Backup/Archived Data
- Drive Validation
- Drive Cleaning
- Stamp Media
- Install Updates
- Download Updates
- Disk Library Maintenance
- SRM Reports
- Information Management

Once chosen, your filter options are then displayed in the Admin Job History window. From this window you can view more detailed information such as the:

- Details of the administration job.
- Events of the administration job.
- Log files of the administration job.

For information on Job Details displayed in the Job History, see Viewing Job Information.

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Admin Job History - How To

Topics | How To | Related Topics

View Admin Job History

View Job History Details

View the Events of a Job History

Viewing the Log Files of a Job History

Resubmit an Admin Job

VIEW ADMIN JOB HISTORY

Required Capability: See Capabilities and Permitted Actions

To view admin job history:

- 1. From the CommCell Browser, right-click the CommServe, click View, and then click Admin Job History.
- 2. From the Admin Job History Filter dialog box, select the filter options that you want to apply and click **OK**.
- 3. The Admin Job History dialog box displays with the specified filter options.
- 4. Click Close.

VIEW JOB HISTORY DETAILS

Required Capability: See Capabilities and Permitted Actions

- To view the details of a job history:
- 1. From the CommCell Browser, right-click the entity (e.g., subclient, client computer, etc.) whose job history you want to view, click **View**, and then click iob history.
- 2. From the Job History Filter dialog box, select the filter options that you want to apply and click **OK**.
- 3. From the Data Management Job History window, right-click the job whose job details you want to view, and then click View Job Details.
- 4. The Job Details dialog box appears, displaying detailed job history in General, Details, Phase Details and Attempts tabs for the selected job.
- 5. Click OK.



If viewing the details of a job with a pending or failed status, the **Reason for Job Delay** field will contain an Error Code, which, if clicked, will launch the customer support website displaying troubleshooting article(s) related to the specific issue.

VIEW THE EVENTS OF A JOB HISTORY

Required Capability: See Capabilities and Permitted Actions

- To view the events associated with a job:
- From the CommCell Browser, right-click the entity (e.g., subclient, client computer, etc.) whose job history you want to view, click View, and then click Job History.
- 2. From the Job History Filter dialog box, select the filter options that you want to apply and click OK.
- 3. From the Data Management Job History window, right-click the job whose job details you want to view, and then click View Events.
- 4. The All Found Events window gets displayed. If no events where found for the back up, a message is displayed to that effect.
- 5. Click Close.

VIEW THE LOG FILES OF A JOB HISTORY

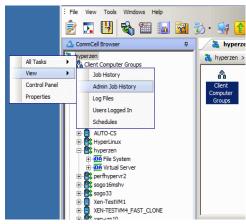
Required Capability: See Capabilities and Permitted Actions

- To view the log files of a Job History:
- 1. From the CommCell Browser, right-click the entity whose job history you want to view, and then click to view a job history.
- 2. From the job history filter window select the filter options, if any, that you want to apply, and then click **OK**.
- 3. From the job history window, right-click the job whose log files you want to view, and then click View Logs.
- 4. The contents of the log file related to the selected job history are displayed in the \mathbf{Log} File for \mathbf{Job} n window.

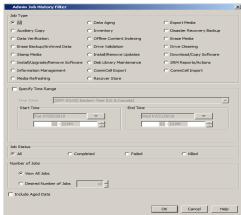
RESUBMIT AN ADMIN JOB

Required Capability: See Capabilities and Permitted Actions

- To resubmit an admin job:
- From the CommCell Browser, right-click the CommServe, click View, and then click Admin Job History.



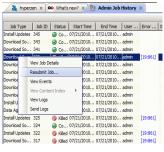
2. From the Admin Job History Filter dialog box, select the filter options that you want to apply and click \mathbf{OK} .



3. The Admin Job History window displays with the specified filter options.



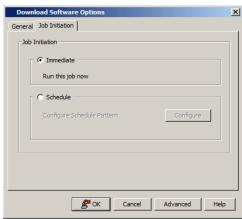
4. Right-click on any job (e.g., Download Software), and select **Resubmit**.



5. Select the job options appropriate for the job you want to restart.



 If you need to run the backup operation immediately, select Immediate from the Job Initiation tab. Go to step 11.



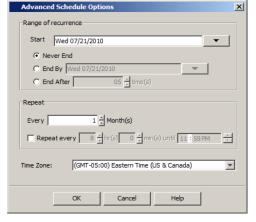
- If you need to schedule the restore operation, select Schedule from the Job Initiation tab and click Configure.
- From the Schedule Details dialog box that appears, select the appropriate scheduling options.

Click **Options** to view the Advanced Schedule Options dialog box.



- **9.** From the **Advanced Schedule Options** dialog box:
 - Range of recurrence: Specify the date on which you want this schedule to take effect.
 - **Repeat**: Select the value for which you want to run the job repeatedly on the day in which the job is scheduled to run.
 - Time Zone: Select a specific time zone from which the job schedule time will be based.

Click **OK** to close the **Advanced Schedule Options** dialog box.



- 10. Click **OK** to close the **Schedule Details** window.
- $\textbf{11.} \qquad \text{Click } \textbf{OK} \text{ to close the job restart window.}$

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SRM Data Collection Job History

Topics | How To | Related Topics

The **Data Collection History Filter** dialog box allows you view detailed, historical information about data collection jobs for the selected SRM entity. Data collection jobs run automatically according to the parameters you have selected, and appear in the Job Controller as a scheduled job. After the successful completion of the Data Collection job, the client information is gathered at the SRM Server and the job status is shown as completed in the Job Controller.

For information on Job Details displayed in the Job History, see Viewing Job Information.

Once chosen, your filter options are then displayed in the Data Collection Job History Window of the SRM entity. From this window you can view more detailed information such as:

- · Viewing the Events of a Job History
- Viewing the Log Files of a Job History

SRM Data Collection Job History - How To

Topics | How To | Related Topics

View Job History Details

View the Events of a Job History

View the Log Files of a Job History

VIEW JOB HISTORY DETAILS

Required Capability: See Capabilities and Permitted Actions

- To view the details of a job history:
- 1. From the CommCell Browser, right-click the entity (e.g., subclient, client computer, etc.) whose job history you want to view, click **View**, and then click job history.
- 2. From the Job History Filter dialog box, select the filter options that you want to apply and click **OK**.
- 3. From the Data Management Job History window, right-click the job whose job details you want to view, and then click View Job Details.
- 4. The Job Details dialog box appears, displaying detailed job history in General, Details, Phase Details and Attempts tabs for the selected job.
- 5. Click OK.



If viewing the details of a job with a pending or failed status, the **Reason for Job Delay** field will contain an Error Code, which, if clicked, will launch the customer support website displaying troubleshooting article(s) related to the specific issue.

VIEW THE EVENTS OF A JOB HISTORY

Required Capability: See Capabilities and Permitted Actions

- To view the events associated with a job:
- 1. From the CommCell Browser, right-click the entity (e.g., subclient, client computer, etc.) whose job history you want to view, click **View**, and then click **Job History**.
- 2. From the Job History Filter dialog box, select the filter options that you want to apply and click **OK**.
- 3. From the Data Management Job History window, right-click the job whose job details you want to view, and then click View Events.
- 4. The All Found Events window gets displayed. If no events where found for the back up, a message is displayed to that effect.
- 5. Click Close.

VIEW THE LOG FILES OF A JOB HISTORY

Required Capability: See Capabilities and Permitted Actions

To view the log files of a Job History:

- 1. From the CommCell Browser, right-click the entity whose job history you want to view, and then click to view a job history.
- 2. From the job history filter window select the filter options, if any, that you want to apply, and then click **OK**.
- 3. From the job history window, right-click the job whose log files you want to view, and then click **View Logs**.
- 4. The contents of the log file related to the selected job history are displayed in the Log File for Job n window.

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