

Cluster Server Agent for Informatica PowerCenter Service Manager Installation and Configuration Guide

AIX, HP-UX, Linux, Solaris

5.0

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Introducing the agent for Informatica PowerCenter Service Manager

This chapter includes the following topics:

- [About the Cluster Server agent for Informatica PowerCenter Service Manager](#)
- [Supported software](#)
- [Features of the agent](#)
- [How the agent makes Informatica PowerCenter Service Manager highly available](#)
- [Informatica PowerCenter Service Manager agent functions](#)
- [Setting up Informatica PowerCenter Service Manager in a VCS cluster](#)

About the Cluster Server agent for Informatica PowerCenter Service Manager

Cluster Server (VCS) agents monitor specific resources within an enterprise application. They determine the status of resources and start or stop them according to external events.

The Cluster Server agent for Informatica PowerCenter Service Manager provides high availability for all PowerCenter Service Manager servers in a cluster.

See the Agent Pack Release Notes for the latest updates or software issues for this agent.

Supported software

For information on the software versions that the Cluster Server agent for Informatica PowerCenter Service Manager supports, see the Symantec Operations Readiness Tools (SORT) site: <https://sort.symantec.com/agents>.

Features of the agent

The following are the features of the Cluster Server agent for Informatica PowerCenter Service Manager:

- Support for validation of attributes that are based on the agent functions
The agent can validate attributes in each agent function before the actual data processing starts.
- Support for First Failure Data Capture (FFDC)
In case of a fault, the agent generates a huge volume of the debug logs that enable troubleshooting of the fault.
- Support for Fast First Level Monitor (FFLM)
The agent maintains PID files based on search patterns to expedite the monitoring process.
- Support for external user-supplied monitor utilities
The agent enables user-specified monitor utilities to be plugged in, in addition to the built-in monitoring logic. This enables administrators to completely customize the monitoring of the application.
- Delayed agent function
The agent manages the first monitor after online for slow initializing applications.

How the agent makes Informatica PowerCenter Service Manager highly available

The agent provides the following levels of application monitoring:

- Primary or Basic monitoring
This mode has Process check and Health check monitoring options. With the default Process check option, the agent verifies that the PowerCenterSvcMgr instance processes are present in the process table. Process check cannot detect whether processes are in the hung or stopped states.
- Secondary or Detail monitoring
In this mode, the agent runs a utility to verify the status of the PowerCenterSvcMgr instance. The agent detects application failure if the

monitoring routine reports an improper function of the PowerCenterSvcMgr instance processes. When this application failure occurs, the PowerCenterSvcMgr instance service group fails over to another node in the cluster.

Thus, the agent ensures high availability for PowerCenterSvcMgr instances.

High availability for Informatica PowerCenter Service Manager instances running in Solaris zones

Solaris provides a means of virtualizing operating system services, allowing one or more processes to run in isolation from other activity on the system. Such a 'sandbox' is called a 'non-global zone'. Each zone can provide a rich and customized set of services. The processes that run in a 'global zone' have the same set of privileges that are available on a Solaris system today.

VCS provides high availability to applications running in non-global zones by extending the failover capability to zones. VCS is installed in a global zone, and all the agents and the engine components run in the global zone. For applications running within non-global zones, agents run script entry points inside the zones. If a zone configured under VCS control faults, VCS fails over the entire service group containing the zone.

For more details, refer to the *Cluster Server Administrator's Guide*.

The Cluster Server agent for Informatica PowerCenter Service Manager is zone-aware and can monitor PowerCenterSvcMgr instances running in non-global zones.

Informatica PowerCenter Service Manager agent functions

The agent consists of resource type declarations and agent executables. The agent executables implement the online, offline, monitor and clean operations.

Online

The online operation performs the following tasks:

- Verifies that the required attributes are set correctly.
- Verifies whether the PowerCenter Service Manager Server instance is not ready online. If the instance is online, the online operation exits immediately.
- Kills the PowerCenter Service Manager processes that remain online using the login associated with the specific resource.

- Executes the following command, in context of InfaUser to start the PowerCenter Service Manager instance:

```
$ InfaHome/Server/tomcat/bin/infaservice.sh startup
```

- Verifies whether the PowerCenter Service Manager Server is completely functional.
- Returns the control to HAD.

Offline

The offline operation performs the following tasks:

- Verifies that the required attributes are set correctly.
- Verifies whether the PowerCenter Service Manager Server instance is not offline. If found, the operation kills any existing processes that belong to this instance of PowerCenter Service Manager being clustered, and exits.
- Executes the following command, in context of InfaUser to stop the PowerCenter Service Manager Server instance.

```
$ InfaHome/Server/tomcat/bin/infaservice.sh shutdown
```

- Kills any existing processes that belong to this instance of PowerCenter Service Manager Server after the offline script is executed.
- Returns the control to HAD.

Monitor

The monitor operation performs the states of the PowerCenter Service Manager Servers on all nodes within the cluster.

The operation performs the following tasks:

- Conducts a first level check to determine that the PowerCenter Service Manager Server processes that the user specified in the PowerCenterSvcMgr agent attribute, are running on the system in the cluster. If the first level check does not find these processes running on the node, the check exits immediately, and reports the instance as offline.
- Conducts a second level check if the SecondLevelMonitor attribute is set to a value greater than 0.
- Uses a connect (3c) method to check for the PowerCenter Service Manager Server to listen to the port defined by the Port attribute. The host name needed to perform this check is derived from the InfaHome agent attribute.
- Depending upon the MonitorProgram attribute, the monitor operation performs a customized check using a user-supplied monitoring utility.

See [“Executing a customized monitoring program”](#) on page 33.

Clean

The clean operation performs the following tasks in the event of a failure or an unsuccessful attempt to bring a PowerCenter Service Manager Server instance online or take it offline:

- Attempts to gracefully shut down the PowerCenter Service Manager Server instance, using the following command in context of InfaUser.
`$ InfaHome/Server/tomcat/bin/infaservice.sh shutdown`
- Kills the remaining processes pertaining to this PowerCenter Service Manager Server if the instance does not shut down normally.
- Returns the control to HAD.

Note: By default the agent attempts to restart a faulted resource 1000 times before the resource is marked as faulted.

See [“Changing the default restart behaviour”](#) on page 30.

Setting up Informatica PowerCenter Service Manager in a VCS cluster

Follow the steps below to set up Informatica PowerCenter Service Manager in a cluster:

- Set up a VCS cluster.
 For more information on installing and configuring Cluster Server, refer to the Cluster Server installation and configuration guides.
- Install and configure Informatica PowerCenter Service Manager for High Availability.
 See [“About configuring the Cluster Server agent for Informatica PowerCenter Service Manager”](#) on page 27.
- Install the Cluster Server agent for Informatica PowerCenter Service Manager.
 See [“Installing the agent in a VCS environment”](#) on page 21.
- Configure the service groups for Informatica PowerCenter Service Manager.
 See [“About configuring service groups for Informatica PowerCenter Service Manager”](#) on page 35.
- Enable the Tomcat “headless” process for Informatica PowerCenter 8.1.1.

Installing and configuring Informatica PowerCenter Service Manager for high availability

This chapter includes the following topics:

- [About PowerCenter](#)
- [Basic resources to cluster a PowerCenter Service Manager Server](#)
- [Virtualizing PowerCenter Service Manager](#)

About PowerCenter

Informatica PowerCenter, is a single and unified enterprise data intergration platform, that enables you to access and intergrate data from a business system.

Key features of Informatica PowerCenter include the following:

- Data migration
- Data synchronization
- Enterprise data warehousing
- Master data management
- Cross-enterprise data integration
- Data governance

- Service-oriented architectures
- Integration competency centers
- Universal data access
- Mission-critical and Enterprise-wide data integration

PowerCenter is available in the following editions:

- PowerCenter Standard Edition
- PowerCenter Real Time Edition
- PowerCenter Advance Edition

Basic resources to cluster a PowerCenter Service Manager Server

A cluster setup for PowerCenter Service Manager, is split into the following three service groups:

- Cluster Filesystem (CFS)
- Cluster Volume Manager (CVM)
- PowerCenter Service Manager

The PowerCenter Service Manager resources depend on the resources of CFS and CVM service groups, for the prerequisite disk groups, volumes and mount points.

The recommended resources and its setup for each of the above service groups are described in the following subsections.

For information on the service group dependencies,

See [“Sample service group configurations”](#) on page 53.

Service Group for CFS

The CFS service group has the following resources:

- CVM Volume Diskgroup
The CVM disk groups provide an active/active clustered set of volumes that are used to create the CFS, that is mounted in parallel on all configured nodes.
Use the CVMVolDg resource type to create this resource.
- CFS Mount

This resource is used to provide the CFS active/active shared file system to PowerCenter infa_shared objects from \$PMROOTDir directory. Such directories include Cache, Storage, SrcFiles, TgtFiles etc.

You can also use this resource to place the Informatica PowerCenter binaries on the shared CFS.

Use the CFSMount resource type to create this resource.

Service Group for CVM

The CVM service group has the following resources.

- **CFSfsckd**
The CFSfsckd resource is used to start the cluster file system check (using the `fsck` command), daemon, and vxfsckd that runs for a cluster mount to succeed. Use the CFSfsckd resource type to create this resource.
- **CVMCluster**
The CVMCluster resource controls the overall operation of CVM. The agents of CVMCluster bring up the CVM cluster. Use the CVMCluster resource type to create this resource.
- **CVMVxconfigd**
The vxconfigd daemon maintains disk and disk group configurations, communicates configuration changes to the kernel, and modifies configuration information stored on the disks. CVMVxconfigd is required in the Cluster Volume Manager service group to start and monitor the vxconfigd daemon. Use the CVMVxconfigd resource type to create this resource.

Service Group for PowerCenter Service Manager

The PowerCenter Service Manager service group contains the Informatica PowerCenter Service Manager resource. This resource starts, stops and monitors the Informatica PowerCenter Service Manager instance. Once the Service Manager is either stopped or started, this resource manages all the subordinate Informatica PowerCenter processes and services within its service framework.

Use the PowerCenterSvcMgr resource type to create this resource.

Virtualizing PowerCenter Service Manager

To ensure that your Service Manager Server can function properly on any node of the cluster, you need to virtualize all the parameters that could be dependent on a particular node.

Review the following basic notes for virtualization:

Host names	When installing and configuring the Service Manager Server, ensure that you enter the virtual host name associated with the IP address used to configure the IP resource. This ensures that if the application needs to be migrated, you are not tied down by the physical IP address given to the Service Manager Server.
Path names	Ensure that your application gets installed on a shared disk so that it is not constrained by anything that is local to the node. If this is not possible every time, make sure that the local data is available on each configured node.

Installing, upgrading, and removing the agent for Informatica PowerCenter Service Manager

This chapter includes the following topics:

- [Before you install the Cluster Server agent for Informatica PowerCenter Service Manager](#)
- [About the ACC library](#)
- [Installing the ACC library](#)
- [Installing the agent in a VCS environment](#)
- [Uninstalling the agent in a VCS environment](#)
- [Removing the ACC library](#)
- [Upgrading the agent in a VCS environment](#)

Before you install the Cluster Server agent for Informatica PowerCenter Service Manager

You must install the Cluster Server agent for Informatica PowerCenter Service Manager on all the systems that will host PowerCenter Service Manager service groups.

Before you install the agent for Informatica PowerCenter Service Manager, ensure that the following prerequisites are met.

- Install and configure Cluster Server.
For more information on installing and configuring Cluster Server, refer to the Cluster Server installation and configuration guides.
- Remove any previous version of this agent.
To remove the agent,
See [“Uninstalling the agent in a VCS environment”](#) on page 22.
- Install the latest version of ACC Library.
To install or update the ACC Library package, locate the library and related documentation in the Agent Pack tarball,
See [“Installing the ACC library”](#) on page 20.

Prerequisites for installing the agent to support Solaris zones

Ensure that you meet the following prerequisites to install the agent for Informatica PowerCenter Service Manager:

- Install PowerCenter Service Manager to support Solaris zones. For details refer to Informatica user documentation.
- Install and configure the VCS environment to support Solaris zones. Refer to the VCS user documentation for details.
- Install the required version of ACC Library.
- Remove any previous version of this agent.

About the ACC library

The operations of a Cluster Server agent depend on a set of Perl modules known as the ACC library. The library must be installed on each system in the cluster that runs the agent. The ACC library contains common, reusable functions that perform tasks, such as process identification, logging, and system calls.

Instructions to install or remove the ACC library on a single system in the cluster are given in the following sections. The instructions assume that the ACCLib tar file has already been extracted.

Note: The LogDbg attribute should be used to enable debug logs for the ACCLib-based agents when the ACCLib version is 6.2.0.0 or later and VCS version is 6.2 or later.

Installing the ACC library

Install the ACC library on each system in the cluster that runs an agent that depends on the ACC library.

To install the ACC library

- 1 Log in as a superuser.
- 2 Download ACC Library.

You can download either the complete Agent Pack tar file or the individual ACCLib tar file from the Symantec Operations Readiness Tools (SORT) site (<https://sort.symantec.com/agents>).

- 3 If you downloaded the complete Agent Pack tar file, navigate to the directory containing the package for the platform running in your environment.

AIX	<code>cd1/aix/vcs/application/acc_library/version_library/pkg</code>
HP-UX	<code>cd1/hpux/generic/vcs/application/acc_library/version_library/pkg</code>
Linux	<code>cd1/linux/generic/vcs/application/acc_library/version_library/rpms</code>
Solaris	<code>cd1/solaris/dist_arch/vcs/application/acc_library/version_library/pkg</code>

where `dist_arch` is `sol_sparc`.

- 4 If you downloaded the individual ACCLib tar file, navigate to the `pkg` directory (for AIX and Solaris), or `rpms` directory (for Linux).
- 5 Install the package. Enter **Yes**, if asked to confirm overwriting of files in the existing package.

AIX	<code># installp -ac -d VRTSacclib.bff VRTSacclib</code>
HP-UX	<code># swinstall -s 'pwd' VRTSacclib</code>
Linux	<code># rpm -i \ VRTSacclib-VersionNumber-GA_GENERIC.noarch.rpm</code>
Solaris	<code># pkgadd -d VRTSacclib.pkg</code>

Note: The `LogDbg` attribute should be used to enable debug logs for the ACCLib-based agents when the ACCLib version is 6.2.0.0 or later and VCS version is 6.2 or later.

Installing the agent in a VCS environment

Install the agent for Informatica PowerCenter Service Manager on each node in the cluster.

To install the agent in a VCS environment

- 1 Download the agent from the Symantec Operations Readiness Tools (SORT) site: <https://sort.symantec.com/agents>.

You can download either the complete Agent Pack tar file or an individual agent tar file.

- 2 Uncompress the file to a temporary location, say /tmp.
- 3 If you downloaded the complete Agent Pack tar file, navigate to the directory containing the package for the platform running in your environment.

AIX	<code>cd1/aix/vcs/application/powercentersvcmgr_agent/ vcs_version/version_agent/pkg</code>
HP-UX	<code>cd1/hpux/generic/vcs/application/powercentersvcmgr_agent/ vcs_version/version_agent/pkg</code>
Linux	<code>cd1/linux/generic/vcs/application/powercentersvcmgr_agent/ vcs_version/version_agent/rpms</code>
Solaris	<code>cd1/solaris/dist_arch/vcs/application/powercentersvcmgr_agent/ vcs_version/version_agent/pkg</code> where, <i>dist_arch</i> is sol_sparc.

If you downloaded the individual agent tar file, navigate to the pkg directory (for AIX and Solaris), or rpms directory (for Linux).

- 4 Log in as a superuser.

5 Install the package.

```
AIX          # installp -ac -d  
              VRTSpccsvcmgr.rte.bff VRTSpccsvcmgr.rte  
  
HP-UX        # swinstall -s `pwd` VRTSpccsvcmgr  
  
Linux        # rpm -ihv \  
              VRTSpccsvcmgr-AgentVersion-GA_GENERIC.noarch.rpm  
  
Solaris      # pkgadd -d . VRTSpccsvcmgr
```

6 After installing the agent package, you must import the agent type configuration file.

Installing the agent in a Solaris 10 brand zone

To install the Informatica PowerCenter Service Manager agent in a Solaris 10 brand zone:

- Ensure that the ACC library package, VRTSaccplib, is installed in the non-global zone.

To install VRTSaccplib in the non-global zone, run the following command from the global zone:

```
# pkgadd -R /zones/zone1/root -d VRTSaccplib.pkg
```

- To install the agent package in the non-global zone, run the following command from the global zone:

```
# pkgadd -R zone-root/root -d . VRTSpccsvcmgr
```

For example: # pkgadd -R /zones/zone1/root -d . VRTSpccsvcmgr

Uninstalling the agent in a VCS environment

You must uninstall the agent for Informatica PowerCenter Service Manager from a cluster while the cluster is active.

To uninstall the agent in a VCS environment

- 1 Log in as a superuser.
- 2 Set the cluster configuration mode to read/write by running the following command from any node in the cluster:

```
# haconf -makerw
```

- 3 Remove all PowerCenter Service Manager resources from the cluster. Run the following command to verify that all resources have been removed:

```
# hares -list Type=PowerCenterSvcMgr
```

- 4 Remove the agent type from the cluster configuration by running the following command from any node in the cluster:

```
# hatype -delete PowerCenterSvcMgr
```

Removing the agent's type file from the cluster removes the include statement for the agent from the `main.cf` file, but the agent's type file is not removed from the cluster configuration directory. You can remove the agent's type file later from the cluster configuration directory.

- 5 Save these changes. Then set the cluster configuration mode to read-only by running the following command from any node in the cluster:

```
# haconf -dump -makero
```

- 6 Use the platform's native software management program to remove the agent for Informatica PowerCenter Service Manager from each node in the cluster.

Run the following command to uninstall the agent:

AIX	<code># installp -u VRTSpcsvcmgr.rte</code>
HP-UX	<code># swremove VRTSpcsvcmgr</code>
Linux	<code># rpm -e VRTSpcsvcmgr</code>
Solaris	<code># pkgrm VRTSpcsvcmgr</code>

Removing the ACC library

Perform the following steps to remove the ACC library.

To remove the ACC library

- 1 Ensure that all agents that use ACC library are removed.
- 2 Run the following command to remove the ACC library package.

AIX	# installp -u VRTSacclib
HP-UX	# swremove VRTSacclib
Linux	# rpm -e VRTSacclib
Solaris	# pkgrm VRTSacclib

Upgrading the agent in a VCS environment

Perform the following steps to upgrade the agent with minimal disruption, in a VCS environment.

To upgrade the agent in a VCS environment

- 1 Persistently freeze the service groups that host the application.

```
# hagrps -freeze GroupName -persistent
```

- 2 Stop the cluster services forcibly.

```
# hastop -all -force
```

- 3 Ensure that the agent operations are stopped on all the nodes.

```
# ps -ef | grep PowerCenterSvcMgr
```

- 4 Uninstall the agent package from all the nodes. Use the platform's native software management program to remove the agent for Informatica PowerCenter Service Manager from each node in the cluster.

Run the following command to uninstall the agent:

AIX	# installp -u VRTSpcsvcmgr.rte
HP-UX	# swremove VRTSpcsvcmgr
Linux	# rpm -e VRTSpcsvcmgr
Solaris	For Solaris 10: # pkgrm VRTSpcsvcmgr

- 5 Install the new agent on all the nodes.

See [“Installing the agent in a VCS environment”](#) on page 21.

- 6 Copy the new `PowerCenterSvcMgrTypes.cf` file from the agent's conf directory, to the VCS conf directory `/etc/VRTSvcs/conf/config`.

VCS 4.x	■ AIX	<code>/etc/VRTSvcs/conf/sample_PowerCenterSvcMgr/</code>
	■ HP-UX	<code>PowerCenterSvcMgrTypes.cf</code>
	■ Linux	
	■ Solaris	
VCS 5.x or later	■ AIX	<code>/etc/VRTSagents/ha/conf/PowerCenterSvcMgr/</code>
	■ HP-UX	<code>PowerCenterSvcMgrTypes.cf</code>
	■ Linux	
VCS 5.0	■ Solaris SPARC	<code>/etc/VRTSagents/ha/conf/PowerCenterSvcMgr/PowerCenterSvcMgrTypes50.cf</code>
VCS 5.1 or later	■ Solaris SPARC	<code>/etc/VRTSagents/ha/conf/PowerCenterSvcMgr/PowerCenterSvcMgrTypes51.cf</code>

Note: If you are using Solaris SPARC, copy the `PowerCenterSvcMgrTypes50.cf` file for VCS 5.0 (and its intermediate Maintenance Packs) and `PowerCenterSvcMgrTypes51.cf` file for VCS 5.1 or later.

- 7 Check for the changes in the resource values required, if any, due to the new agent types file.

Note: To note the list of changed attributes, compare the new type definition file with the old type definition file.

- 8 Start the cluster services.

```
# hstart
```

- 9** Start the agent on all nodes, if not started.

```
# haagent -start PowerCenterSvcMgr -sys SystemName
```

- 10** Unfreeze the service groups once all the resources come to an online steady state.

```
# hagrps -unfreeze GroupName -persistent
```

Configuring the agent for Informatica PowerCenter Service Manager

This chapter includes the following topics:

- [About configuring the Cluster Server agent for Informatica PowerCenter Service Manager](#)
- [Importing the agent types files in a VCS environment](#)
- [Changing the default restart behaviour](#)
- [Informatica PowerCenter Service Manager agent attributes](#)
- [Executing a customized monitoring program](#)

About configuring the Cluster Server agent for Informatica PowerCenter Service Manager

After installing the Cluster Server agent for Informatica PowerCenter Service Manager, you must import the agent type configuration file. After importing this file, review the attributes table that describes the resource type and its attributes, and then create and configure PowerCenter Service Manager resources.

To view the sample agent type definition and service groups configuration:

See [“About sample configurations for the agents for Informatica PowerCenter Service Manager”](#) on page 43.

Importing the agent types files in a VCS environment

To use the agent for Informatica PowerCenter Service Manager, you must import the agent types file into the cluster.

You can import the agent types file using the VCS graphical user interface or using the command line interface.

To import the agent types file using the VCS graphical user interface

- 1 Start the Cluster Manager (Java Console) and connect to the cluster on which the agent is installed.
- 2 Click **File > Import Types**.
- 3 In the **Import Types** dialog box, select the following file:

VCS 4.x	■ AIX	/etc/VRTSvcs/conf/sample_PowerCenterSvcMgr/
	■ HP-UX	PowerCenterSvcMgrTypes.cf
	■ Linux	
	■ Solaris	
VCS 5.x or later	■ AIX	/etc/VRTSagents/ha/conf/PowerCenterSvcMgr/
	■ HP-UX	PowerCenterSvcMgrTypes.cf
	■ Linux	
VCS 5.0	Solaris SPARC	/etc/VRTSagents/ha/conf/PowerCenterSvcMgr/
		PowerCenterSvcMgrTypes50.cf
VCS 5.1 or later	Solaris SPARC	/etc/VRTSagents/ha/conf/PowerCenterSvcMgr/
		PowerCenterSvcMgrTypes51.cf

- 4 Click **Import**.
- 5 Save the VCS configuration.

The PowerCenter Service Manager agent type is now imported to the VCS engine.

You can now create PowerCenter Service Manager resources. For additional information about using the VCS GUI, refer to the *Cluster Server Administrator's Guide*.

To import the agent types file using the command line interface (CLI):

- 1** Log on to any one of the systems in the cluster as the superuser.
- 2** Create a temporary directory.

```
# mkdir ./temp
```

```
# cd ./temp
```

- 3** Copy the sample file `Types.cf`.

VCS 4.x	■ AIX	/etc/VRTSvcs/conf/sample_PowerCenterSvcMgr/
	■ HP-UX	PowerCenterSvcMgrTypes.cf
	■ Linux	
	■ Solaris	

VCS 5.x or later	■ AIX	/etc/VRTSagents/ha/conf/PowerCenterSvcMgr/
	■ HP-UX	PowerCenterSvcMgrTypes.cf
	■ Linux	

VCS 5.0	■ Solaris SPARC	/etc/VRTSagents/ha/conf/PowerCenterSvcMgr/
		PowerCenterSvcMgrTypes50.cf

VCS 5.1 or later	■ Solaris SPARC	/etc/VRTSagents/ha/conf/PowerCenterSvcMgr/
		PowerCenterSvcMgrTypes51.cf

The following example assumes VCS 5.0 is installed on AIX:

```
# cp \
/etc/VRTSagents/ha/conf/PowerCenterSvcMgr/PowerCenterSvcMgrTypes.cf .
```

4 Create a dummy `main.cf` file.

```
# echo 'include "PowerCenterSvcMgrTypes.cf"' > main.cf
```

5 Create the `PowerCenterSvcMgr` resource type as follows:

```
# hacf -verify .  
  
# haconf -makerw  
  
# sh main.cmd  
  
# haconf -dump
```

The PowerCenter Service Manager agent type is now imported to the VCS engine.

You can now create PowerCenter Service Manager resources. For additional information about using the VCS CLI, refer to the *Cluster Server Administrator's Guide*.

Changing the default restart behaviour

The agent by default attempts to restart a faulted PowerCenter Service Manager resource 1000 times before it faults.

To change this default behaviour, execute the following commands:

```
# haconf -makerw  
# hatype -modify PowerCenterSvcMgr RestartLimit RestartLimit  
# haconf -dump
```

where, *RestartLimit* represents the value for the number of times VCS must restart the faulted PowerCenter Service Manager resource, before executing the clean function.

Informatica PowerCenter Service Manager agent attributes

Refer to the required and optional attributes while configuring the agent for Informatica PowerCenter Service Manager.

[Table 4-1](#) lists the required attributes for the Informatica PowerCenter Service Manager agent.

Table 4-1 Required attributes

Required attributes	Description
ResLogLevel	<p>Specifies the logging detail performed by the agent for the resource.</p> <p>The valid values are as follows:</p> <ul style="list-style-type: none"> ■ ERROR: Only logs error messages. ■ WARN: Logs above plus warning messages. ■ INFO: Logs above plus informational messages. ■ TRACE: Logs above plus trace messages. TRACE is very verbose and should only be used during initial configuration or for troubleshooting and diagnostic operations. <p>Default: INFO</p> <p>Example: INFO</p>
InfaUser	<p>Specifies the account name under which the agent executes programs to manage the Service Manager.</p> <p>Default: ""</p> <p>Example: infaPC</p>
EnvFile	<p>Specifies the full path to the file that the agent sources use to set the environment before executing any Service Manager programs. This attribute should be set as a local attribute and should point to a unique environment file on each configured node.</p> <p>Symantec recommends to create this file preferably in the InfaHome directory.</p> <p>The supported shell environments are: Bourne, Korn, and C shell.</p> <p>Default: ""</p> <p>Example,</p> <p>On nodeA: /u01/app/infa_bin/PowerCenter/nodeA/envfile</p> <p>On nodeB: /u01/app/infa_bin/PowerCenter/nodeB/envfile</p>
Port	<p>Represents the port number dedicated for the PowerCenter Administration Console. The monitor agent function uses this value to determine if the console responds to HTTP requests.</p> <p>This is a required attribute only if SecondLevelMonitor is enabled.</p> <p>Default: 6001</p> <p>Example: 6001</p>

Table 4-1 Required attributes (*continued*)

Required attributes	Description
InfaHome	<p>Represents the Service Manager installation directory.</p> <p>Default: ""</p> <p>Examples:</p> <p>On nodeA: /u01/app/infa_bin/PowerCenter/nodeA</p> <p>On nodeB: /u01/app/infa_bin/PowerCenter/nodeB</p>
HostName	<p>Specifies the IPv4 address or host name of the virtual host which is configured for the Informatica PowerCenter instance. This attribute should be set as a local attribute on each configured node.</p> <p>Default: ""</p> <p>Examples:</p> <p>On nodeA: pwrsvcmgr-01</p> <p>On nodeB: pwrsvcmgr-02</p> <p>Where, pwrsvcmgr-01 and pwrsvcmgr-02 are the virtual hosts configured for hosting the PowerCenter Service Manager resources on nodeA and nodeB respectively.</p>

[Table 4-2](#) lists the optional attributes for the PowerCenterSvcMgr agent.

Table 4-2 Optional attributes

Optional attributes	Description
MonitorProgram	<p>Absolute path name of an external, user-supplied monitor executable. If specified, the monitor function executes this file to perform an additional state check of the server. There are no restrictions for what actions the external monitor program performs to determine the state of the server.</p> <p>For information about setting this attribute:</p> <p>See "Executing a customized monitoring program" on page 33.</p> <p>Default: ""</p> <p>Example 1: /u01/app/infa_bin/PowerCenter/nodeA/bin/monitor.sh</p> <p>Example 2: /u01/app/infa_bin/PowerCenter/nodeB/bin/monitor.pl <i>arg1 arg2</i></p>

Table 4-2 Optional attributes (*continued*)

Optional attributes	Description
SecondLevelMonitor	<p>Used to enable second-level monitoring. Second-level monitoring is a deeper, more thorough state check of the Service Manager. The numeric value specifies how often the monitoring routines must run. 0 means never run the second-level monitoring routines, 1 means run routines every monitor interval, 2 means run routines every second monitor interval. This interpretation may be extended to other values.</p> <p>Note: Exercise caution while setting SecondLevelMonitor to large numbers. For example, if the MonitorInterval is set to 60 seconds and the SecondLevelMonitor is set to 100, then the second level check is executed every 100 minutes, which may not be as often as intended. For maximum flexibility, no upper limit is defined for SecondLevelMonitor.</p> <p>Default: 0</p> <p>Example: 1</p>

Executing a customized monitoring program

You can configure the monitor function to execute a custom monitor utility to perform a user-defined Service Manager Server state check. The utility is executed in the context of the UNIX user that is defined in the InfaUser attribute. The environment is set by sourcing the file specified in the EnvFile attribute.

The monitor function executes the utility specified in the MonitorProgram attribute if the following conditions are satisfied:

- The MonitorProgram attribute value is set to a valid executable utility.
- The first-level process check indicates that the PowerCenter Service Manager instance is online.
- The SecondLevelMonitor attribute is set to 1 and the second-level check returns the server state as "online" or the SecondLevelMonitor attribute is set to a value greater than 1, but the second-level check is deferred for this monitoring cycle.

The monitor function interprets the program exit code as follows:

110 or 0 Service Manager Server instance is online

100 or 1 Service Manager Server instance is offline

Any other Service Manager Server instance is unknown
value

To ensure that the custom monitor utility is always available to the agent, Symantec recommends storing the file in the directory where the Service Manager Server is installed.

Configuring the service groups for Informatica PowerCenter Service Manager using the CLI

This chapter includes the following topics:

- [About configuring service groups for Informatica PowerCenter Service Manager](#)
- [Before configuring the service groups for Informatica PowerCenter Service Manager](#)
- [Configuring PowerCenter Service Manager resources for Solaris zones support](#)
- [Instructing JRE to start running within a “headless” environment](#)

About configuring service groups for Informatica PowerCenter Service Manager

Configuring the Informatica PowerCenter Service Manager service group involves creating the PowerCenter Service Manager service group, its resources, and defining attribute values for the configured resources. You must have administrator privileges to create and configure a service group.

You can configure the service groups using one of the following:

- The Cluster Manager (Java console)
- Veritas Infoscale Operations Manager

- The command line

Before configuring the service groups for Informatica PowerCenter Service Manager

Before you configure the PowerCenter Service Manager service group, you must:

- Verify that Cluster Server is installed and configured on all nodes in the cluster where you will configure the service group.

For more information on installing and configuring Cluster Server, refer to the Cluster Server installation and configuration guides.

- Verify that the Cluster Server agent for Informatica PowerCenter Service Manager is installed on all nodes in the cluster.

See [“Installing the agent in a VCS environment”](#) on page 21.

Configuring PowerCenter Service Manager resources for Solaris zones support

To enable the agent for Informatica PowerCenter Service Manager to support Solaris zones, ensure that you perform the following configuration steps:

- Install PowerCenter Service Manager on dedicated Solaris zones.
- Preferably, follow the Symantec recommendation of installing zones on a shared disk for convenient configuration, failover, and maintenance.
- Make sure that the name of the Solaris zone is the same as the virtual host name that you use to install and configure the PowerCenter Service Manager.
- In a VCS environment, ensure that you have set the value of ContainerName attribute to the name of the Solaris zone.

By default, the agent function executes in the Global zone.

Instructing JRE to start running within a “headless” environment

For PowerCenter 8.1.1, the startup script `“infaservice.sh”` by default, does not start the underlying Tomcat server with the “headless” option. It is this process that the agent searches in order to flag the application as ONLINE.

If the “headless” option is not used then rendering of charts do not work on the PowerCenter Administration Console. This is because the Java process is not able

to render the charts, as it lacks the GUI/X-Window capability for doing this. This, however, has no bearing on the repository or integration service operation.

To instruct the JRE to start the Tomcat “headless” process, add the following lines to the environment file being registered with the EnvFile agent attribute:

```
INFA_JAVA_OPTS="-Xmx512m -Djava.awt.headless=true"  
  
export INFA_JAVA_OPTS
```

This example assumes an environment file for the Bourne-shell. Bounce the entire PC domain after making this change.

Troubleshooting the agent for Informatica PowerCenter Service Manager

This chapter includes the following topics:

- [Using the correct software and operating system versions](#)
- [Meeting prerequisites](#)
- [Configuring PowerCenter Service Manager resources](#)
- [Verifying virtualization](#)
- [Starting the PowerCenter Service Manager instance outside a cluster](#)
- [Reviewing error log files](#)

Using the correct software and operating system versions

Ensure that you use correct software and operating system versions.

For information on the software versions that the agent for Informatica PowerCenter Service Manager supports, see the Symantec Operations Readiness Tools (SORT) site: <https://sort.symantec.com/agents>.

Meeting prerequisites

Before installing the agent for Informatica PowerCenter Service Manager, ensure that the following prerequisites are met.

For example, you must install the ACC library on VCS before installing the agent for Informatica PowerCenter Service Manager.

See [“Before you install the Cluster Server agent for Informatica PowerCenter Service Manager”](#) on page 18.

Configuring PowerCenter Service Manager resources

Before using PowerCenter Service Manager resources, ensure that you configure the resources properly. For a list of attributes used to configure all PowerCenter Service Manager resources, refer to the agent attributes.

Verifying virtualization

Verify that your application does not use anything that ties it down to a particular node of the cluster.

See [“Virtualizing PowerCenter Service Manager”](#) on page 16.

Starting the PowerCenter Service Manager instance outside a cluster

If you face problems while working with a resource, you must disable the resource within the cluster framework. A disabled resource is not under the control of the cluster framework, and so you can test the PowerCenter Service Manager instance independent of the cluster framework. Refer to the cluster documentation for information about disabling a resource.

You can then restart the PowerCenter Service Manager instance outside the cluster framework.

Note: Use the same parameters that the resource attributes define within the cluster framework while restarting the resource outside the cluster framework.

Execute the following commands to start, stop or monitor the Service Manager Server outside the cluster framework.

To start	<code>\$ InfaHome/server/tomcat/bin/infaservice.sh startup</code>
To stop	<code>\$ InfaHome/server/tomcat/bin/infaservice.sh shutdown</code>
To monitor	<p>Verify whether the PowerCenter Service Manager processes are running as InfaUser by executing the following command.</p> <pre>\$ telnet HostName Port</pre> <p>Note: The agent uses the connect (3c) method to check whether Administration Console of the PowerCenter Service Manager is listening to the port defined by the <i>Port</i> agent attribute on the host defined by the <i>HostName</i> agent attribute.</p>

Reviewing error log files

If you face problems while using PowerCenter Service Manager or the agent for Informatica PowerCenter Service Manager, use the log files described in this section to investigate the problems.

If you face problems while using PowerCenter Service Manager or the agent for Informatica PowerCenter Service Manager, refer to your product documentation to locate the log files, to investigate the problems.

The common reasons for issues are as follows:

Insufficient privileges	Files that need to be created, written to, would be created as InfaUser. Check if necessary privileges have been set.
Incorrect port, environment or parameter settings	<p>Verify that ports have been properly configured and declared. Typically, ports from 1 through 1024 are reserved for the superuser.</p> <p>Ensure that parameters to the agent are correctly defined.</p>
Expired licenses	<p>Check the application log files for any error messages related to expired licenses.</p> <p>Ensure that the license keys/files have been placed at the appropriate location, as needed by the application.</p>
Broken symlinks, missing files, and libraries	<p>Verify your installation.</p> <p>Make sure that nothing is broken, and all dependencies for the executables are met.</p>

Insufficient disk space or system parameters

Ensure that the file-system has sufficient space for creation of temporary files that the application might need.

Verify that the kernel has been tuned for sufficient IPC resources, file descriptors and meets the hardware requirement. Consult your product documentation for these details.

Consult your application expert if needed.

Reviewing cluster log files

In case of problems while using the agent for Informatica PowerCenter Service Manager, you can access the engine log file for more information about a particular resource. The engine log file is located at `/var/VRTSvcS/log/engine_A.log`.

Using trace level logging

The `ResLogLevel` attribute controls the level of logging that is written in a cluster log file for each PowerCenter Service Manager resource. You can set this attribute to `TRACE`, which enables very detailed and verbose logging.

If you set `ResLogLevel` to `TRACE`, a very high volume of messages are produced. Symantec recommends that you localize the `ResLogLevel` attribute for a particular resource.

Note: Starting with version 5.1.1.0 of the ACC library, the `TRACE` level logs for any ACCLib based agent are generated locally at the location `/var/VRTSvcS/log/Agent_A.log`.

The `LogDbg` attribute should be used to enable the debug logs for the ACCLib-based agents when the ACCLIB version is 6.2.0.0 or later and the VCS version is 6.2 or later.

To localize `ResLogLevel` attribute for a resource

- 1 Identify the resource for which you want to enable detailed logging.
- 2 Localize the `ResLogLevel` attribute for the identified resource:

```
# hares -local Resource_Name ResLogLevel
```

- 3 Set the `ResLogLevel` attribute to `TRACE` for the identified resource:

```
# hares -modify Resource_Name ResLogLevel TRACE -sys SysA
```

- 4 Test the identified resource. The function reproduces the problem that you are attempting to diagnose.

- 5 Set the ResLogLevel attribute back to INFO for the identified resource:

```
# hares -modify Resource_Name ResLogLevel INFO -sys SysA
```

- 6 Save the configuration changes.

```
# haconf -dump
```

- 7 Review the contents of the log file.

You can also contact Symantec support for more help.

To enable debug logs for all resources of type PowerCenterSvcMgr

- ◆ Enable the debug log.

```
# hatype -modify PowerCenterSvcMgr LogDbg DBG_5
```

To override the LogDbg attribute at resource level

- ◆ Override the LogDbg attribute at the resource level and enable the debug logs for the specific resource.

```
# hares -override PowerCenterSvcMgr LogDbg
# hares -modify PowerCenterSvcMgr LogDbg DBG_5
```

Sample Configurations

This appendix includes the following topics:

- [About sample configurations for the agents for Informatica PowerCenter Service Manager](#)
- [Sample agent type definition](#)
- [Sample agent type definition under Solaris zones](#)
- [Sample configuration](#)
- [Sample configuration under Solaris zones](#)
- [Sample service group configurations](#)
- [Sample service group configuration under Solaris zone](#)

About sample configurations for the agents for Informatica PowerCenter Service Manager

The sample configuration graphically depicts the resource types, resources, and resource dependencies within the service group. Review these dependencies carefully before configuring the agents for Informatica PowerCenter Service Manager. For more information about these resource types, refer to the *Cluster Server Bundled Agents Reference Guide*.

Sample agent type definition

The sample agent type definition for Informatica PowerCenter Service Manager are as follows:

For VCS 4.x

```

type PowerCenterSvcMgr (
    static int RestartLimit = 1000
    static str ArgList[] = { ResLogLevel, State, IState,
        InfaUser, EnvFile, HostName, Port, InfaHome,
        SecondLevelMonitor, MonitorProgram }
    str ResLogLevel = INFO
    str InfaUser
    str EnvFile
    str HostName
    int Port = 6001
    str InfaHome
    int SecondLevelMonitor = 0
    str MonitorProgram
)

```

For VCS 5.0

```

type PowerCenterSvcMgr (
    static int RestartLimit = 1000
    static str AgentFile = "/opt/VRTSvcs/bin/Script50Agent"
    static str AgentDirectory = "/opt/VRTSagents/ha/bin/
        PowerCenterSvcMgr"
    static str ArgList[] = { ResLogLevel, State, IState,
        InfaUser, EnvFile, HostName, Port, InfaHome,
        SecondLevelMonitor, MonitorProgram }
    str ResLogLevel = INFO
    str InfaUser
    str EnvFile
    str HostName
    int Port = 6001
    str InfaHome
    int SecondLevelMonitor = 0
    str MonitorProgram
)

```

Sample agent type definition under Solaris zones

```

type PowerCenterSvcMgr (
    static str ContainerType = Zone
    static str AgentDirectory = "/opt/VRTSagents/ha/bin/
        PowerCenterSvcMgr"
    static str AgentFile = "/opt/VRTSvcs/bin/Script50Agent"
    static int RestartLimit = 1000
)

```

```

static il8nstr ArgList[] = { ResLogLevel, State, IState,
InfaUser, EnvFile, HostName, Port, InfaHome,
SecondLevelMonitor, MonitorProgram }
str ResLogLevel = INFO
str InfaUser
str EnvFile
str HostName
int Port = 6001
str InfaHome
int SecondLevelMonitor
str MonitorProgram
str ContainerName
)

```

Sample configuration

The sample agent type definition for Informatica PowerCenter Service Manager is as follows:

```

include "types.cf"
include "CFSTypes.cf"
include "CVMTypes.cf"
include "PowerCenterSvcMgr.cf"

cluster PowerCenter (
  UserNames = { admin = eHIaHChEIdIIgQIcHF }
  ClusterAddress = "10.182.4.208"
  Administrators = { admin }
  UseFence = SCSI3
  HacliUserLevel = COMMANDROOT
)

system nodeA(
)

system nodeB (
)

group ClusterService (
  SystemList = { nodeA= 0, nodeB = 1 }
  UserStrGlobal = "LocalCluster@https://10.182.4.208:8443;"
  AutoStartList = { nodeA, nodeB }
  OnlineRetryLimit = 3
)

```

```
OnlineRetryInterval = 120
)

IP webip (
    Device = eth0
    Address = "10.182.4.208"
    NetMask = "255.255.224.0"
)

NIC csgnic (
    Device = eth0
)

VRTSWebApp VCSweb (
    Critical = 0
    AppName = vcs
    InstallDir = "/opt/VRTSweb/VERITAS"
    TimeForOnline = 5
    RestartLimit = 3
)

VCSweb requires webip
webip requires csgnic


// resource dependency tree
//
// group ClusterService
// {
//   VRTSWebApp VCSweb
//   {
//     IP webip
//     {
//       NIC csgnic
//     }
//   }
// }

group Informatica_cfs (
    SystemList = { nodeA= 0, nodeB = 1 }
    AutoFailOver = 0
    Parallel = 1
```

```
AutoStartList = { nodeA, nodeB }
)

CFSMount infabin_mnt (
    MountPoint = "/u01/app/infa_bin"
    BlockDevice = "/dev/vx/dsk/infa_bindg/infa_binvol"
    MountOpt = largefiles
)

CFSMount infashared_mnt (
    MountPoint = "/u01/app/infa_shared"
    BlockDevice = "/dev/vx/dsk/infa_shareddg/infa_sharedvol"
    MountOpt = largefiles
)

CVMVolDg infabin_voldg (
    CVMDiskGroup = infa_bindg
    CVMActivation = sw
)

CVMVolDg infashared_voldg (
    CVMDiskGroup = infa_shareddg
    CVMActivation = sw
)

requires group cvm online local firm
infabin_mnt requires infabin_voldg
infashared_mnt requires infashared_voldg

// resource dependency tree
//
// group Informatica_cfs
// {
//   CFSMount infabin_mnt
//   {
//     CVMVolDg infabin_voldg
//   }
//   CFSMount infashared_mnt
//   {
//     CVMVolDg infashared_voldg
//   }
// }
```

```
group PowerCenterServiceManager (
    SystemList = { nodeB = 0, nodeA= 1 }
    AutoFailOver = 0
    Parallel = 1
    AutoStartList = { nodeB, nodeA}
)

PowerCenterSvcMgr Informatica (
    InfaUser = infaPC
    EnvFile @nodeB = "/u01/app/infa_bin/PowerCenter/nodeB/envfile"
    EnvFile @nodeA= "/u01/app/infa_bin/PowerCenter/nodeA/envfile"
    InfaHome @nodeB = "/u01/app/infa_bin/PowerCenter/nodeB"
    InfaHome @nodeA= "/u01/app/infa_bin/PowerCenter/nodeA"
)

requires group Informatica_cfs online local firm

// resource dependency tree
//
// group PowerCenterServiceManager
// {
//   PowerCenterSvcMgr Informatica
// }

group cvm (
    SystemList = { nodeA= 0, nodeB = 1 }
    AutoFailOver = 0
    Parallel = 1
    AutoStartList = { nodeA, nodeB }
)

CFSfsckd vxfsckd (
)

CVMCluster cvm_clus (
    CVMClustName = PowerCenter
    CVMNodeId = { nodeA= 0, nodeB = 1 }
    CVMTransport = gab
    CVMTimeout = 200
)
```



```

)

CVMVxconfigd cvm_vxconfigd (
    CVMVxconfigdArgs = { syslog }
)

cvm_clus requires cvm_vxconfigd
vxfscsd requires cvm_clus

// resource dependency tree
//
// group cvm
// {
//     CFSfscsd vxfscsd
//     {
//         CVMCluster cvm_clus
//         {
//             CVMVxconfigd cvm_vxconfigd
//         }
//     }
// }
// }

```

Sample configuration under Solaris zones

This section provides a sample configuration under Solaris zone support for the agent for Informatica PowerCenter Service Manager.

```

include "types.cf"
include "CFSTypes.cf"
include "CVMTTypes.cf"
include "PowerCenterSvcMgrTypes50.cf"

cluster tpm-cluster-kr (
    UserNames = { admin = dqrJqlQnrMrrPzrLqo,
        z_inf_zone_tpm-lab-33 = ImnFmhMjnInnLvnHmk,
        z_inf_zone_tpm-lab-34 = cmnFmhMjnInnLvnHmk }
    ClusterAddress = "127.0.0.1"
    Administrators = { admin }
)

```

```
system tpm-lab-33 (
)

system tpm-lab-34 (
)

group cfs_inf_cfsmount1 (
  SystemList = { tpm-lab-34 = 0, tpm-lab-33 = 1 }
  AutoFailOver = 0
  Parallel = 1
  AutoStartList = { tpm-lab-33, tpm-lab-34 }
)

CFSMount cfsmount1 (
  Critical = 0
  MountPoint = "/mnt1"
  BlockDevice = "/dev/vx/dsk/shareddgl/testvol"
  MountOpt @tpm-lab-34 = "cluster"
  MountOpt @tpm-lab-33 = "cluster"
  NodeList = { tpm-lab-33, tpm-lab-34 }
)

CVMVolDg cvmvoldg1 (
  Critical = 0
  CVMDiskGroup = shareddgl
  CVMActivation @tpm-lab-34 = sw
  CVMActivation @tpm-lab-33 = sw
)

requires group cvm online local firm
cfsmount1 requires cvmvoldg1

// resource dependency tree
//
// group cfs_inf_cfsmount1
// {
//   CFSMount cfsmount1
//     {
//       CVMVolDg cvmvoldg1
//     }
// }
```

```
group cvm (
  SystemList = { tpm-lab-34 = 0, tpm-lab-33 = 1 }
  AutoFailOver = 0
  Parallel = 1
  AutoStartList = { tpm-lab-33, tpm-lab-34 }
)

CFSfsckd vxfsckd (
  ActivationMode @tpm-lab-34 = { sharedddl = sw }
  ActivationMode @tpm-lab-33 = { sharedddl = sw }
)

CVMCluster cvm_clus (
  CVMClustName = tpmclust
  CVMNodeId = { tpm-lab-33 = 0, tpm-lab-34 = 1 }
  CVMTransport = gab
  CVMTimeout = 200
)

CVMVxconfigd cvm_vxconfigd (
  Critical = 0
  CVMVxconfigdArgs = { syslog }
)

vxfsckd requires cvm_clus
cvm_clus requires cvm_vxconfigd

// resource dependency tree
//
// group cvm
// {
//   CFSfsckd vxfsckd
//   {
//     CVMCluster cvm_clus
//     {
//       CVMVxconfigd cvm_vxconfigd
//     }
//   }
// }
```

```
group powercentersvcmgr_zone (
  SystemList = { tpm-lab-33 = 0, tpm-lab-34 = 1 }
  Parallel = 1
  AutoStartList = { tpm-lab-33, tpm-lab-34 }
)

NIC powercentersvcmgr_nic (
  Device = bge0
)

PowerCenterSvcMgr powercenterssvcmgr_res (
  InfaUser = infa
  EnvFile = "/home2/infa/.profile"
  HostName @tpm-lab-33 = inf1
  HostName @tpm-lab-34 = inf2
  InfaHome @tpm-lab-33 = "/u01/app/infa_bin/PowerCenter8.6.1/inf1"
  InfaHome @tpm-lab-34 = "/u01/app/infa_bin/PowerCenter8.6.1/inf2"
  SecondLevelMonitor = 1
  ContainerName @tpm-lab-33 = inf1
  ContainerName @tpm-lab-34 = inf2
)

Zone powercentersvcmgr_zone (
  ZoneName @tpm-lab-33 = inf1
  ZoneName @tpm-lab-34 = inf2
)

requires group cfs_inf_cfsmount1 online local firm
powercenterssvcmgr_res requires powercentersvcmgr_zone
powercentersvcmgr_zone requires powercentersvcmgr_nic

// resource dependency tree
//
// group powercentersvcmgr_zone
// {
//   PowerCenterSvcMgr powercenterssvcmgr_res
//   {
//     Zone powercentersvcmgr_zone
//     {
//       NIC powercentersvcmgr_nic
//     }
//   }
// }
```

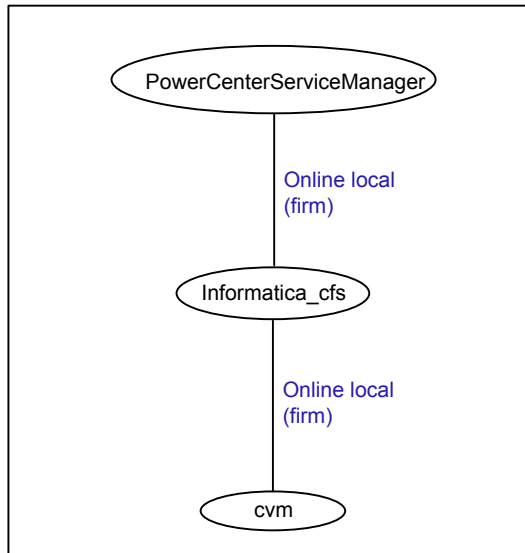
```
// }
```

Sample service group configurations

This section includes the sample service group configurations in a VCS environment.

[Figure A-1](#) shows the service group dependency between CVM, CFS and PowerCenter service groups.

Figure A-1 Group dependency of service groups for CVM, CFS and PowerCenter Service Manager



[Figure A-2](#) shows a service group for Cluster File System.

Figure A-2 Sample service group for Cluster File System

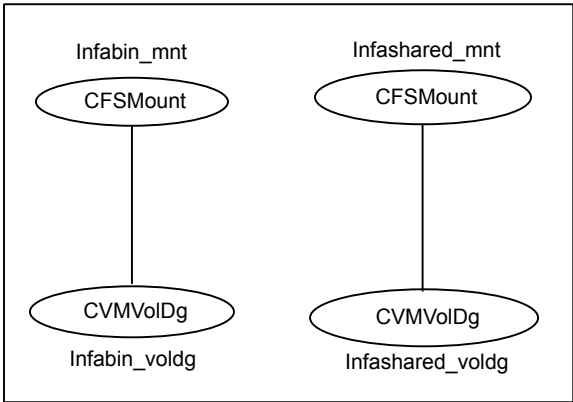


Figure A-3 shows a service group for Cluster Volume Manager.

Figure A-3 Sample service group for Cluster Volume Manager

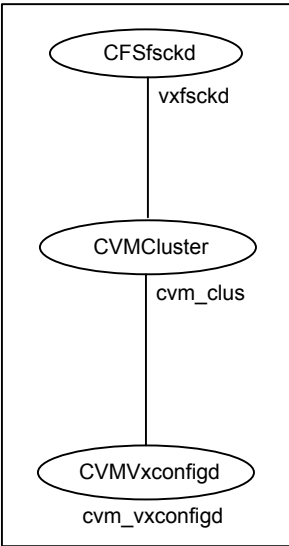
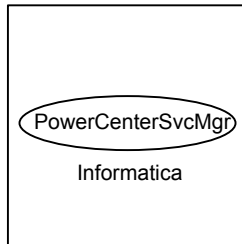


Figure A-4 shows the resource view of PowerCenter Service Manager on all systems.

Figure A-4 Resource view of PowerCenter Service Manager on all systems

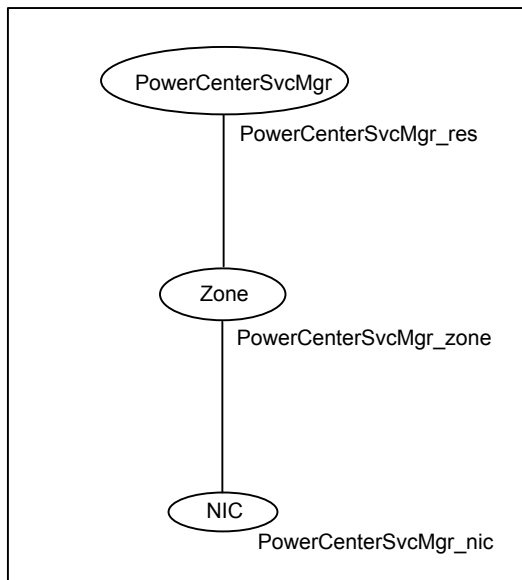


Sample service group configuration under Solaris zone

This section includes the sample service group configurations under Solaris zone.

[Figure A-5](#) shows a service group for a PowerCenter Service Manager instance, if the virtual IP used by the application is identical to the zone name.

Figure A-5 Service group for a PowerCenter Service Manager instance, if the virtual IP used by the application is identical to the zone name.



[Figure A-6](#) shows the sample service group for Cluster Volume Manager

Figure A-6 Sample service group for Cluster Volume Manager

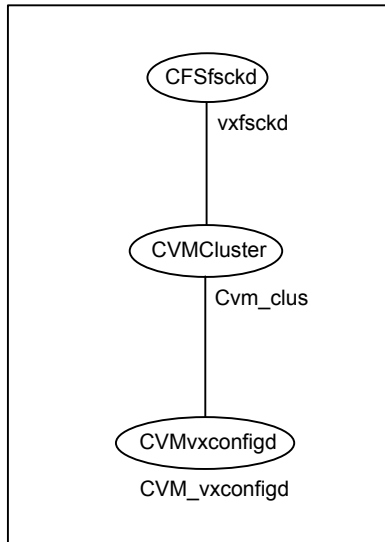


Figure A-7 shows the sample service group for Cluster File System

Figure A-7 Sample service group for Cluster File System

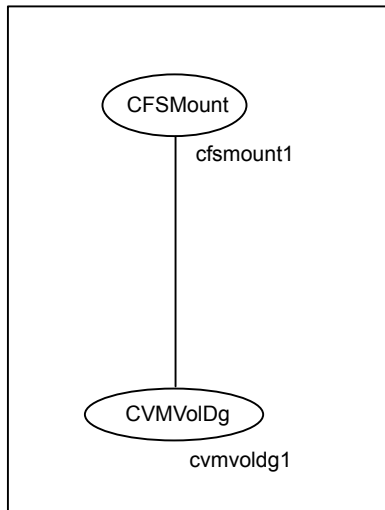
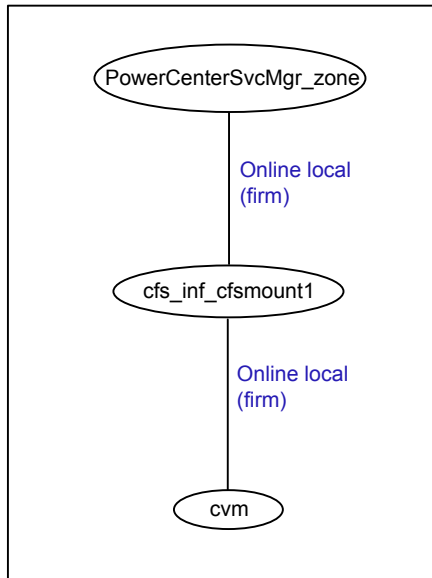


Figure A-8 shows the Group dependency of service groups for CVM, CFS and PowerCenter Service Manager under Solaris zones

Figure A-8 Group dependency of service groups for CVM, CFS and PowerCenter Service Manager under Solaris zones



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