

CA IT Process Automation Manager™

CA Cohesion® Connector Guide

r1



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Contents

Chapter 1: Overview	9
Intended Audiences	9
Terminology	10
Chapter 2: Installing and Configuring the CA Cohesion Connector	11
Installation	11
Default Module Properties Settings	12
Chapter 3: Using the CA Cohesion Module	15
Common Input Parameters	16
Add CI Operator	16
Operator Input Parameters	16
Operator Outputs	18
Operator Ports	21
Delete CIs Operator	22
Operator Input Parameters	22
Operator Outputs	23
Operator Ports	24
Get CI Operator	25
Operator Input Parameters	25
Operator Outputs	27
Operator Ports	30
Update CI Operator	31
Operator Input Parameters	31
Operator Outputs	33
Operator Ports	34
Run Change Detection Operator	34
Operator Input Parameters	35
Operator Outputs	39
Operator Ports	40
Run Discovery Profile Operator	41
Operator Input Parameters	41
Operator Outputs	42
Operator Ports	43
Run Management Profile Operator	44
Operator Input Parameters	45

Operator Outputs	46
Operator Ports	47
Run Network Discovery Profile Operator	48
Operator Input Parameters	49
Operator Outputs	50
Operator Ports	51
Run Compare Operator	51
Operator Input Parameters	52
Operator Outputs	56
Operator Ports	57
Run Compliance Operator	58
Operator Input Parameters	58
Operator Outputs	60
Operator Ports	61
Run Snapshot Operator	62
Operator Input Parameters	62
Operator Outputs	64
Operator Ports	66
Get Version Operator	66
Operator Input Parameters	67
Operator Outputs	67
Operator Ports	68
Get Server By Name Operator	68
Operator Input Parameters	69
Operator Outputs	70
Operator Ports	71
Get Service By Name	72
Operator Input Parameters	72
Operator Outputs	73
Operator Ports	75
Get Service Host Tier Operator	76
Operator Input Parameters	76
Operator Outputs	77
Operator Ports	78
Get Snapshot Operator	78
Operator Input Parameters	78
Operator Outputs	79
Operator Ports	80
Add Servers to Service Operator	81
Operator Input Parameters	81
Operator Outputs	82
Operator Ports	83

Run Script Operator	84
Operator Input Parameters	84
Operator Outputs	85
Operator Ports	86
Set Managed Status Operator	86
Operator Input Parameters	86
Operator Outputs	87
Operator Ports	88
Base Cohesion Interface Operator	89
Operator Input Parameters	89
Operator Outputs	91
Operator Ports	92

Chapter 4: Troubleshooting **93**

A CA Cohesion Operator Fails During Execution of a Process	93
Diagnosing Issues	95

Appendix A: Examples **99**

Sample Method to Create Value Maps in the CA IT PAM Client for the Add CI Operator	99
CA Cohesion CI Samples	105
Service CI	106
Server CI (Without its Components)	110
Server CI (With its Components)	115
Component CI	126
ServerGroup CI	127
Network CI	137
User CI	138
Blueprint CI	139
Sample ValueMap for the Update CI Operator	139

Index **141**

Chapter 1: Overview

The CA Cohesion[®] Connector is a module that allows the integration of CA Cohesion with CA IT Process Automation Manager[™] (CA IT PAM) for automating CA Cohesion operations.

Note: The CA Cohesion[®] Connector supports CA Cohesion r5.0.

This section contains the following topics:

[Intended Audiences](#) (see page 9)

[Terminology](#) (see page 10)

Intended Audiences

The *CA Cohesion Connector Guide* is intended for these primary audiences:

- Administrators who install or maintain the CA Cohesion Module or a CA IT Process Automation Manager (CA IT PAM) instance
- Administrators, Developers, and Designers of CA IT PAM Processes who want their Processes to interact with CA Cohesion

If you are a CA IT PAM Administrator or a CA Cohesion Administrator, this guide assumes that you have read and understand the content described in both the *CA IT Process Automation Manager Administration Guide* and the *CA Cohesion Product Guide* and are familiar with the CA Cohesion web services.

If you are a CA IT PAM Process Developer, Designer, or Administrator, this guide assumes that you have read and understand these concepts and associated procedures:

- How to create and run CA IT PAM Processes (as described in the *CA IT Process Automation Manager User Guide*)
- How to create Process and Named Datasets (as described in the *CA IT Process Automation Manager User Guide*)

Terminology

Connector

A module that interfaces with software external to CA IT PAM.

Module

A set of functionally related Operators that share a common configuration.

Operator

A software element that implements an action and is one of the building blocks of a CA IT PAM Process.

ECMAScript

A scripting language, standardized by ECMA International in the ECMA-262 specification and ISO/IEC 16262. The language is widely used on the web, especially in the form of its three best-known dialects, JavaScript, ActionScript, and JScript.

Chapter 2: Installing and Configuring the CA Cohesion Connector

This section contains the following topics:

[Installation](#) (see page 11)

[Default Module Properties Settings](#) (see page 12)

Installation

The CA Cohesion Module has a standalone installer. There are two versions of the installer provided:

- `IT_PAM_connector_installer_CA_Cohesion_1_0.exe` for installing on a Primary Domain Orchestrator running on Windows
- `IT_PAM_connector_installer_CA_Cohesion_1_0.sh` for installing on a Primary Domain Orchestrator running on Linux and UNIX

Before installing the CA Cohesion Connector software, you must first shut down the Primary Domain Orchestrator.

- In a cluster configuration, the first Orchestrator installed is the Primary Orchestrator, and this can be confirmed by seeing that `oasis.server.isPrimary=true` is set in the `OasisConfig.properties` file found in `<itpam_root_directory>\server\c2o\.config`, where `<itpam_root_directory>` is the directory where CA IT PAM was installed.
- In a non-clustered configuration, the sole Domain Orchestrator is the Primary Domain Orchestrator.

To install the connector

1. Log on to the machine and account used to install the CA IT PAM Primary Domain Orchestrator.
2. Run the appropriate version of the CA Cohesion r1.0 installer for your operating system.

For Windows systems, run
`IT_PAM_connector_installer_CA_Cohesion_1_0.exe`.

For Linux and UNIX systems, run the installer as follows to ensure that it is run under the Bourne shell, and to avoid the need to use `chmod` to set this file as an executable.

```
sh IT_PAM_connector_installer_CA_Cohesion_1_0.sh
```

3. When the Welcome screen displays, click Next to proceed or click Cancel to exit the installation.

The Licensing terms for this Connector display.

4. If you choose to accept the licensing terms, select "I accept the agreement", and click Next to proceed; otherwise click Cancel to terminate the installation.

5. Specify the directory where the CA IT PAM Primary Domain Orchestrator was installed (if it differs from the default value) by entering the complete path to the directory, or by clicking Browse and locating the directory.

6. Click Next.

The installer will verify that the Primary Domain Orchestrator is down, and a dialog displays where you select the components to install. (You will only have the choice of this Connector.)

7. Click the check box to select this Connector, and click Next to continue.

The installer will deploy the components of the new module to the Primary Domain Orchestrator (this may take a few minutes).

8. Click Finish to complete the installation.

9. Restart the Primary Domain Orchestrator.

The installation.log file is located here: *<itpam_root_directory>\server\c2o* where *<itpam_root_directory>* is the folder specified in Step 5.

The newly installed module will not be available immediately on any secondary Orchestrators, but all components will be mirrored within the time specified by the mirroring interval for the secondary Orchestrator.

10. After all components have been mirrored, you must stop and restart each Orchestrator and Agent to make the new module available for use.

Important! If you installed the Connector software in an existing CA IT PAM r2.1 environment, you must use the Configuration Browser to enable the newly installed module in each Environment, on each Orchestrator, and on each Agent where the new module and its Operators will be used.

Default Module Properties Settings

After you install the CA Cohesion Module, you can set the following default properties in the CA IT PAM Configuration Browser.

Maximum result length (bytes)

Specifies the maximum number of bytes CA IT PAM can read from a SOAP response to a call made to CA Cohesion.

Session ID TimeOut (sec)

Specifies the length of time to keep a CA Cohesion Session ID in the CA IT PAM cache from the time it is created. This value should be less than or equal to the CA Cohesion Session Timeout set in the CA Cohesion server. The CA Cohesion Module caches the session IDs internally on the Touchpoint that runs this module.

Get Session ID

The module uses an Operator's login credentials (web service URL, username, and password) to retrieve a new session ID from the CA Cohesion server, then uses it to make the Operator's SOAP call to the CA Cohesion web service. This session ID, along with the associated login credentials, are stored in memory on the Touchpoint that runs the module, and all subsequent calls from the same Touchpoint to the same CA Cohesion web service URL, using the same username and password, use the stored session ID. This caching mechanism helps the CA Cohesion Module minimize the number of session IDs created on the CA Cohesion server.

The CA Cohesion session IDs time out after a period of time specified on the CA Cohesion server. All Operators implemented in the CA Cohesion Module use an internal mechanism to verify if a cached session ID has timed out, in which case a new session ID is implicitly retrieved from the CA Cohesion server and used in the Operator's SOAP call. The new session ID also replaces the expired session ID in the Touchpoint's internal mapping of login credentials (web service URL, username, password) and session IDs.

The Session ID TimeOut field helps the CA Cohesion Module eliminate Session IDs from the cache before they expire on the CA Cohesion server, minimizing the number of SOAP calls made with an expired session ID.

CA Cohesion Session Timeout

The CA Cohesion session timeout is defined by the "com.cendura.session.timeout.sec" property in the cendura.properties file located in the CA Cohesion instance that you are connecting to. When a session times out, the CA Cohesion Module retrieves a new session ID from the CA Cohesion instance to which you are connecting.

Note: If you enter 0 in this field, CA IT PAM uses the default value of 21600 seconds.

Default WebService URL

Specifies the default URL of the CA Cohesion instance's web service.

Default User Name

Specifies the default user account to access the CA Cohesion instance's web service. This user must be authorized to access and run CA Cohesion web service functions.

Default Password

Specifies the default password to access the CA Cohesion instance's web service.

To specify default module properties

1. In the CA IT PAM Client, select File, Open Configuration Browser (if it is not already open).
2. On the left side of the window, right-click the desired component, and select Lock:
 - Domain (Browser palette)
 - Environment (Browser palette)
 - Orchestrator (Orchestrators palette)
 - Agent (Agents palette)
3. Click the Modules tab in the right pane of the window.
4. Double-click the CA Cohesion Module to display the Properties tab for this module.
5. Specify the appropriate default settings for this module.
6. Click Apply.
7. Click the Save toolbar button.
8. Right-click the component you locked in Step 2, and select Unlock to unlock the component.

The CA Cohesion Operators will use the default properties unless you specify Operator-specific properties for each Operator.

Chapter 3: Using the CA Cohesion Module

This section contains the following topics:

- [Common Input Parameters](#) (see page 16)
- [Add CI Operator](#) (see page 16)
- [Delete CIs Operator](#) (see page 22)
- [Get CI Operator](#) (see page 25)
- [Update CI Operator](#) (see page 31)
- [Run Change Detection Operator](#) (see page 34)
- [Run Discovery Profile Operator](#) (see page 41)
- [Run Management Profile Operator](#) (see page 44)
- [Run Network Discovery Profile Operator](#) (see page 48)
- [Run Compare Operator](#) (see page 51)
- [Run Compliance Operator](#) (see page 58)
- [Run Snapshot Operator](#) (see page 62)
- [Get Version Operator](#) (see page 66)
- [Get Server By Name Operator](#) (see page 68)
- [Get Service By Name](#) (see page 72)
- [Get Service Host Tier Operator](#) (see page 76)
- [Get Snapshot Operator](#) (see page 78)
- [Add Servers to Service Operator](#) (see page 81)
- [Run Script Operator](#) (see page 84)
- [Set Managed Status Operator](#) (see page 86)
- [Base Cohesion Interface Operator](#) (see page 89)

Common Input Parameters

Most of the module Operators require a server or service ID as an input. This ID can either be retrieved directly from the CA Cohesion UI, or the user can use the Get Server by Name and Get Service by Name Operators that return all server/service attributes including the ID. The ID can then be stored in a CA IT PAM dataset variable and used across Processes. The GetCI Operator can also provide the ID of other CI types like ServerGroup or Network (you cannot retrieve their IDs from the CA Cohesion UI).

Note: The CA Cohesion Module performs all operations via SOAP calls to the CA Cohesion web service.

Some Operators may produce result dataset variable names longer than 32 characters. The 32-character limit is because some scripting languages limit a variable length to 32 characters. In CA IT PAM, you can reference variable names longer than 32 characters using the following:

Process["variable_name_longer_than_32_chars"] instead of
Process.variable_name_longer_than_32_chars.

Add CI Operator

The Add CI Operator adds a Configuration Item (CI) to a specific CA Cohesion instance.



Operator Input Parameters

CA Cohesion Add CI Parameters

CA Cohesion Add CI Parameters describe the CI of the CA Cohesion instance.

Use ValueMap

Specifies that the CI information is read from a ValueMap instead of an XML file (XML file use is disabled).

ValueMap Name

Specifies the ValueMap name that describes the CI. The names of the fields in the ValueMap must correspond to valid properties and attributes of a CI in CA Cohesion.

See [Examples](#) (see page 99) for a sample of valid CI ValueMaps.

XML file name

Specifies the XML file location that contains the CI information. See Examples for samples of valid CI XML representations and lists of the required attributes for each supported CI type.

Note: While using a UNC path verify that the Agent or the Orchestrator running the Operator has the right permissions to read this file. If it does not, a 'Missing input file' error will be returned.

The CI to be added should have the following fields:

ID

This field should be set to -1.

Type

Specifies the type of CI you want to add. The following CI types are valid for this Operator:

- Server
- Service
- ServerGroup
- Network

Note: A CI of type Component cannot be added using the Add CI Operator. The CA Cohesion application must discover the components.

name

Specifies the CI name.

snapshot (true or false)

Specifies whether the CI represents a snapshot. The CI can represent an object or a snapshot of an object.

Note: The CI also contains additional attributes specific to the CI type. See [Examples](#) (see page 99) for a valid XML representation of a CI that contains all CI attributes.

Connection Parameters

CA Cohesion Connection Parameters settings override the module-level properties.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name.

Password

Specifies the user password.

Operator Outputs

For a CI of type "Server", this Operator will return the same output as the Get Server By Name Operator. Unlike "Get Server By Name", "AddCI" does not return the server components (this is dictated by the CA Cohesion web service).

For a CI of type "Service", this Operator will return the same output as the Get Service By Name Operator.

For a CI of type "ServerGroup", this Operator will parse the SOAP response and return the following values:

serverGroupId

Specifies the server group ID.

serverGroupType

Specifies the server group type.

serverGroupName

Specifies the server group name.

serverGroupDescription

Specifies the server group description.

serverGroupSnapshot

Specifies whether true or false.

serverGroupServers

An array of value maps, where each value map contains the attributes retrieved for each server within the server group. Each value map will contain the following:

serverID

Specifies the Server ID.

serverType

Specifies the Server type.

serverName

Specifies the Server name.

serverSnapshot

Specifies whether true or false.

serverAttr_variableName

Specifies all the server attributes that are retrieved from CA Cohesion and are returned to the user in the form of variables that start with *serverAttr_*. See Examples for a valid XML representation of a CI that contains all the CI attributes.

Note:The AddCI Operator does not return the components of the servers in the ServerGroup.

For a CI of type "Network", this Operator will parse the SOAP response and return the following values:

networkId

Specifies the network ID.

networkType

Specifies the network type.

networkName

Specifies the network name.

networkDescription

Specifies the network description.

networkSnapshot

Specifies whether true or false.

networkAttr_variableName:

Specifies all the network attributes that are retrieved from CA Cohesion and are returned to the user in the form of variables that start with *networkAttr_*. See Examples for a valid XML representation of a CI that contains all the CI attributes.

AddCIOutput

For CI types other than Server, Service, ServerGroup, and Network, CA IT PAM extracts the AddCI operation result tag <addCIReturn> and returns the value in the AddCIOutput variable. This variable is not created in a Server, Service, ServerGroup, or Network CI type, because CA IT PAM parses the entire SOAP response associated with these types and returns the resulting output variables.

Note: If CA IT PAM receives a SOAP response from the CA Cohesion web service with a null or empty <addCIReturn> tag, the Operator fails, and none of the output variables listed above are created as they are retrieved directly from the SOAP response received from the CA Cohesion web service.

CohesionSessionID

Specifies the session ID used to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

SoapResponseBody

A well-formatted XML string representing the SOAP response.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (this value is set at the CA Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the CI is registered successfully.
- -1 indicates that the Operator failed.

Reason

- Completed—Indicates the Operator completed successfully.
- An error message—Indicates that the Operator failed.
- Service Operation succeeded. Fault returned—Indicates that the Operator’s SOAP response body contained a fault message. The fault message will be listed in the Fault Message output field.

FaultMessage

Appears when the Operator’s SOAP response body contains a fault. The fault message will be listed in this field. This field is created only when the Operator SOAP response body contains a fault.

Operator Ports

Success

Indicates that the Operator executed successfully.

Note: If adding a ServerGroup without and servers in it, the group will be created and the ID returned, however, you will not be able to query on this ID until a server has been added to this group.

Failure

A failure occurred while running the Operator. Possible reasons of failure include:

- The user passed a bad CA Cohesion web service URL, username, password combination
- The CI information contains a CI ID that is not set to -1.
- The user specified the CI to be added using an XML file that cannot be found on the given location. The reason contains the message: "Missing input XML file"
- The AddCI returned a CI ID of -1.

When a CI is successfully added, the ID returned by AddCI will contain the CA Cohesion internal ID of the CI; however, if the CI was not successfully added, the ID returned by AddCI will contain -1. For example:

- Adding a Server CI with the same IP as an existing Server in Cohesion will cause the CA Cohesion web service to return an ID of -1.
- Missing a required attribute in the added CI's ValueMap or XML file. Refer to [Examples](#) (see page 99) for the required attributes for each supported CI.
- Adding a Service CI but specifying an invalid Server ID in the servers field of the added Service.

Note: For some CI types (Network and Server), the ID returned will be -1 if the CI exists already in the CA Cohesion instance.

For other CI types (ServerGroup and Service), the CA Cohesion web service will not return ID -1 if the CI exists already in the CA Cohesion instance; instead, the CI will be returned.

You should use the "GetCI" operator to figure out if a CI exists before adding it.

Custom Ports

Indicates a custom exit condition.

The CA IT PAM Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA Process Automation Manager User Guide*.

Delete CIs Operator

The Delete CIs Operator deletes one or more CIs from the CA Cohesion instance.



Operator Input Parameters

CA Cohesion Delete CIs Parameters

CA Cohesion Delete CIs Parameters specify the CIs to delete from the CA Cohesion instance.

CI Type

Specifies the CI types to delete. This value is either server or service.

Note: You can specify the other CI types (supported by CA Cohesion) in this field, for example, ServerGroup, Network.

Snapshots?

Specifies whether the CI represents a snapshot.

Use the specified array field for the list of CI IDs?

Verifies that the list of CI IDs is entered as an array variable in the CI IDs Array field.

CI IDs Array

Specifies an indexed string (array) variable that contains the IDs of the CIs to delete.

CI IDs

Specifies a list of CI IDs to delete.

Connection Parameters

CA Cohesion Connection Parameters settings override the module-level properties settings.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name.

Password

Specifies the user password.

Some of the CA Cohesion Module Operators require a server or service ID as input. The ID can be retrieved directly from the CA Cohesion UI; alternatively, you can use the Get Server by Name and Get Service by Name Operators, which return all the server or service attributes including the ID. The ID can then be stored in a CA IT PAM dataset variable and used across Processes. The GetCI operator can also provide the ID of other CI types like ServerGroup or Network. You cannot retrieve their IDs from the CA Cohesion UI.

Operator Outputs

The output variables are named after the CI IDs entered in the CI IDs Array or the CI IDs fields. Each CI ID variable contains one of the following values:

- The value of the CI ID indicates that the CI was deleted successfully or was not found in the CA Cohesion instance.
- -1 indicates the following cases:
 - The CI was not deleted because of a dependency on other CIs. For example, a CI of type Server cannot be deleted if it is part of another CI of type Service.
 - An invalid CI Type is provided which CA Cohesion does not support. In this case, all the CI IDs returns -1.

Note: If CA IT PAM receives a SOAP response from the CA Cohesion web service with a null or empty <deleteCIsReturn> tag, the Operator fails and none of the output variables listed above will be created as these variables (including the variable names) are retrieved directly from the SOAP response received from the CA Cohesion web service.

CohesionSessionID

Specifies the session ID used to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

SoapResponseBody

A well-formatted XML string representing the SOAP response.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the CA Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the CI is deleted successfully.
- -1 indicates that the Operator failed.

Reason

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned—Indicates that the Operator SOAP response body contained a fault message. The fault message is listed in the Fault Message output field.
- An error message—Indicates that the Operator failed.

FaultMessage

Specifies a fault message only when the Operator SOAP response body. This field is created only when the Operator SOAP response body contains a fault.

Operator Ports

Success

The Operator completed successfully and the CA Cohesion web service did not return -1 for any of the CI IDs entered in the Operator.

Failure

A failure occurred while running the Operator. The possible reasons for failure are:

- Invalid CA Cohesion web service URL, username, and password combination
- The CA Cohesion web service returned -1 for one or many of the CI IDs entered in the Operator.
- The CA Cohesion web service returned a null value.

Custom Ports

Indicates a custom exit condition.

The CA IT PAM Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Get CI Operator

The Get CI Operator retrieves information about a CA Cohesion CI.



Operator Input Parameters

CA Cohesion Get CI Parameters

CA Cohesion Get CI Parameters identify the CI to retrieve information about.

CI Type

Specifies the CI type to retrieve its attributes. The values are as follows:

- Server
- Service
- ServiceGroup
- Network

The user can also specify other supported CI types: *User* and *Blueprint*. These CI types are not shown in the drop-down list, but the user can enter them in this field.

Note: Unlike, Server, Service, ServiceGroup, and Network CIs, the Get CI Operator returns all CIs of type User and Blueprint that exist in the CA Cohesion instance; this behavior is dictated by the CA Cohesion web service.

The CA Cohesion login account through which the SOAP call is made should also have the required permissions to be able to retrieve all CIs of type User or Blueprint. For more information about the default permissions assigned to each role in CA Cohesion, see the *CA Cohesion Implementation Guide*.

Note: The CI Type: Component is not supported by this operation.

CI ID

Specifies the CI ID to retrieve its attributes.

CI Name

Specifies the CI name for which you want to retrieve the attributes.

Note: The following behavior, dictated by the CA Cohesion web service:

For a CI of type Server

- The user can provide either the ID or the Name to retrieve the CI, leaving the other field empty.
- The user can provide both; however, if the ID and the Name do not match the same Server CI, the CA Cohesion web service will use the CI ID to retrieve the Server CI.

For a CI of type Service

- The user must provide the ID of the Service CI to be retrieved.
- Providing the Name alone will cause the Operator to fail as the CA Cohesion web service returns a null response in this case.
- The user can provide both; however, if the ID and the Name do not match the same Service CI, the CA Cohesion web service will use the CI ID to retrieve the Service CI.

For a CI of type ServerGroup

- The user can provide either the ID or the Name to retrieve the CI, leaving the other field empty.
- The user can provide both; however, if the ID and the Name do not match the same ServerGroup CI, the CA Cohesion web service will use the CI Name to retrieve the ServerGroup CI.

For a CI of type Network

- The user can provide either the ID or the Name to retrieve the CI, leaving the other field empty.
- The user can provide both; however, if the ID and the Name do not match the same Network CI, the CA Cohesion web service will use the CI Name to retrieve the Network CI.

For all CIs of type User

- The user should leave the CI Name and CI ID fields empty. Any specified CI Name or ID will be ignored by the CA Cohesion web service as it always returns all User CIs.

For all CIs of type Blueprint

- The user should leave the CI Name and CI ID fields empty. Any specified CI Name or ID will be ignored by the CA Cohesion web service as it always returns all Blueprint CIs.

Connection Parameters

CA Cohesion Connection Parameters settings override the module-level properties settings.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name.

Password

Specifies the user password.

Note: Some of the CA Cohesion Module Operators require a server or service ID as input. The ID can be retrieved directly from the CA Cohesion UI; alternatively, you can use the Get Server by Name and Get Service by Name Operators, which return all the server or service attributes including the ID. The ID can then be stored in a CA IT PAM dataset variable and used across Processes.

Operator Outputs

For a CI of type "Server", this Operator will return the same output as the Get Server By Name Operator. Unlike "Get Server By Name", "GetCI" does not return the server components (this is dictated by the CA Cohesion web service).

For a CI of type "Service", this Operator will return the same output as the Get Service By Name Operator.

For a CI of type "ServerGroup", this Operator will parse the SOAP response and return the following values:

serverGroupId

Specifies the server group ID.

serverGroupType

Specifies the server group type.

serverGroupName

Specifies the server group name.

serverGroupDescription

Specifies the server group description.

serverGroupSnapshot

Specifies whether true or false.

serverGroupServers

An array of value maps, where each value map contains the attributes retrieved for each server within the server group. Each value map will contain the following:

serverID

Specifies the Server ID.

serverType

Specifies the Server type.

serverName

Specifies the Server name.

serverSnapshot

Specifies whether true or false.

serverAttr_variableName

Specifies all the server attributes that are retrieved from CA Cohesion and are returned to the user in the form of variables that start with *serverAttr_*. See [Examples](#) (see page 99) for a valid XML representation of a CI that contains all the CI attributes.

Note: The GetCI Operator does not return the components of the servers in the ServerGroup.

For a CI of type "Network", this Operator will parse the SOAP response and return the following values:

networkId

Specifies the network ID.

networkType

Specifies the network type.

networkName

Specifies the network name.

networkDescription

Specifies the network description.

networkSnapshot

Specifies whether true or false.

networkAttr_variableName:

Specifies all the network attributes that are retrieved from CA Cohesion and are returned to the user in the form of variables that start with *networkAttr_*. See Examples for a valid XML representation of a CI that contains all the CI attributes.

GetCIOOutput

For CI types (supported by CA Cohesion) that are not "Server", "Service", "ServerGroup", or "Network", CA IT PAM will only extract the GetCI's operation result tag <getCIsReturn> and return its value in the GetCIOOutput variable. The GetCIOOutput variable is not created in a CI of type "Server", "Service", or "ServerGroup" as CA IT PAM parses the entire SOAP response associated with these types and returns the resulting output variables.

Note: If CA IT PAM receives a SOAP response, from the CA Cohesion web service, with a null or empty <getCIsReturn> tag, the Operator fails, and none of the output variables listed above will be created as these variables (including the variable names) are retrieved directly from the SOAP response received from the CA Cohesion web service.

CohesionSessionID

Specifies the session ID used to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

SoapResponseBody

A well-formatted XML string representing the SOAP response.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the CA Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1—Indicates that the Operator successfully completed retrieving the information about a CI.
- -1—Indicates that the Operator failed.

Reason

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned—Indicates the Operator SOAP response body contained a fault message. The fault message is listed in the Fault Message output field.
- An error message—Indicates that the Operator failed.

FaultMessage

Specifies a fault message, only when the Operator SOAP response body contains a fault. This field is created only when the Operator SOAP response body contains a fault.

Operator Ports

Success

Indicates that the Operator executed successfully.

Failure

The Operator will fail if the user passed a bad CA Cohesion web service URL, username, password combination.

- The Operator will fail if the CA Cohesion web service returns null for any of the following reasons:
 - The user chooses to get a CI of type: Server using the CI ID alone, but the ID passed to the Operator does not exist in the CA Cohesion instance you are connecting to.
 - The user chooses to get a Service CI, but does not pass the CI ID.
 - The user chooses to get a CI of type: Server, Service, ServerGroup, or Network using the CI Name alone, but the CI Name passed does not exist in the CA Cohesion instance.
 - The user chooses to get a CI of type: Server, ServerGroup, or Network using the CI ID and the CI Name, but the CI ID and CI Name passed do not exist in the CA Cohesion instance.
 - The user chooses to get all CIs of type: Blueprint or User, but the CA Cohesion login account (specified in the Connection Parameters' User name and Password) does not have the required permissions to retrieve all CIs of type User or Blueprint. See "Understanding CA Cohesion ACM Roles" in the *CA Cohesion ACM Implementation Guide* for details about the default permissions assigned to each role in Cohesion.
 - The user specifies a CI type that is not supported by the CA Cohesion web service operation, such as Component.
 - The value of the CI Type field passed as input to the Operator is not "Server", "Service" or any other valid CA Cohesion CI type.
 - The CI Type passed as input to the Operator does not match the type of the CI in the CA Cohesion instance. For example, specifying the CI Type to be "Server" for a CI of type Service, and vice versa.
 - The CA Cohesion web service may return null for other reasons; check the CA Cohesion instance.

- The Operator will fail if the CA Cohesion web service returns an empty list for any of the following reasons:
 - The user chooses to get a CI of type: Service using a CI ID alone, but the ID passed to the Operator does not exist in the CA Cohesion instance you are connecting to.
 - The user chooses to get a CI of type: Service using the CI ID and the CI Name, but the CI ID and CI Name passed do not exist in the CA Cohesion instance.
- The Operator will fail if the CA Cohesion web service returns an ID of -1 for any of the following reasons:
 - The user chooses to get a CI of type: ServerGroup or Network using a CI ID alone, but the ID passed to the Operator does not exist in the CA Cohesion instance you are connecting to.

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Update CI Operator

The Update CI Operator updates an existing CI in the CA Cohesion instance.



Operator Input Parameters

CA Cohesion Update CI Parameters

CA Cohesion Update CI Parameters describe the CI to update the CA Cohesion instance.

Use ValueMap

Specifies that the CI information is read from a ValueMap instead of an XML file and the XML file use is disabled.

ValueMap Name

Specifies the ValueMap name that describes the CI. The names of the fields in the ValueMap must correspond to valid properties and attribute of a CI in CA Cohesion. See the [Examples](#) (see page 139) for a sample of valid CI ValueMaps.

XML File Name

Specifies the XML file location that contains the CI information. The CI must have the following mandatory fields in addition to the attributes specific to the CI type:

ID

Specifies the internal identifier of the CI in CA Cohesion instance.

type

Specifies the CI type you want to update. Due to CA Cohesion server limitations, only the ServerGroup CI type is valid for this Operator.

name

Specifies the CI name.

snapshot (true or false)

Specifies whether the CI represents a snapshot.

Note: The CI also contains additional attributes specific to the CI type. See [Examples](#) (see page 99) for a valid XML representation of a CI that contains all the CI attributes.

Connection Parameters

CA Cohesion Connection Parameters override the module-level properties.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name.

Password

Specifies the user password.

Note: The GetCI Operator can also provide the ID of a ServerGroup CI. You cannot retrieve its ID from the CA Cohesion UI.

Operator Outputs

CohesionSessionID

Specifies the session ID used to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

SoapResponseBody

Specifies a well-formatted XML string representing the SOAP response.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the CA Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the Operator successfully updated the information about a CI.
- -1 indicates that the Operator failed.

Reason

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned—Indicates that the Operator's SOAP response body contains a fault message. The fault message is listed in the FaultMessage output field.
- An error message—Indicates that the Operator failed.

FaultMessage

Specifies the Operator's SOAP response body that contains a fault. The fault message is listed in this field. This field is created only when the Operator SOAP response body contains a fault.

Operator Ports

Success

Indicates the Operator finished successfully.

- The Operator succeeds even if you pass a nonexistent CI ID. In fact, the CA Cohesion web service does not check to see if the ID of the updated CI exists. You can use the "GetCI" Operator to verify that a CI exists before updating it through the Update CI Operator.
- The Operator will succeed even if you pass invalid attributes in the CI's input ValueMap or XML file. The CA Cohesion web service ignores invalid attributes.

Failure

Indicates a failure that occurred while running the Operator. The possible reasons of failure are:

- A bad CA Cohesion web service URL, username, and password combination.
- Invalid CI ID (for example, an ID with characters in it).
- CI ID not specified.

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Run Change Detection Operator

This Run Change Detection Operator detects server and service changes across time. The Operator uses snapshots of server data to provide a detailed account of all detected component, configuration changes and file system changes, including file ownership, file permission, and file modification times.



Operator Input Parameters

CA Cohesion Run Change Detection Parameters

CA Cohesion Run Change Detection Parameters describe the CI to detect server and service changes.

Type

Specifies the CI type to run the Operator. The value can be either Service or Server.

Use the specified array field for the list of IDs?

Ensures that the list of IDs as an array variable is entered in the IDs Array field.

IDs Array

For type=Server:

Specifies an indexed string (array) variable containing one or many IDs of the servers that define the source of the change detection Operator. The servers must be valid servers in the CA Cohesion instance that you are connecting to.

For type=Service:

Specifies an indexed string (array) variable containing one ID of the service that defines the source of the change detection Operator. If you specify an additional Service IDs, the Operator uses the first ID in the array and ignores the rest. The service must be a valid service in the CA Cohesion instance that you are connecting to.

IDs

For type=Server:

Enter a list of one or many IDs of the servers that define the source of the change detection Operator. The servers must be valid servers in the CA Cohesion instance that you are connecting to.

For type=Service:

Enter one ID of the service that defines the source of the change detection Operator. If you specify additional Service IDs, the Operator uses the first ID in the list and ignores the rest. The service must be a valid service in the CA Cohesion instance that you are connecting to.

This field is enabled when Use the specified array field for the list of IDs field is unchecked.

Differences Between

Use this drop-down control to establish the source and the target data to compare during the detect changes Operator.

Run Change Detection provides options for finding differences between:

- Most recent snapshot and current data
Detect differences between the most recent snapshot and current data.
- Baseline and current data
The Baseline snapshots is the reference snapshot used for Change Detection. This option is not available for the Run Component-based Change Detection.
- Two most recent snapshots
Detect differences between two of the most recent snapshots.
- Selected snapshots
Detect differences between two snapshots. They can be specified using the Source and Target Snapshots parameters.

Source Snapshot

Determines the source snapshot to use in the Change Detection Operator. If you select the "Selected snapshots" option, then the Source Snapshot parameter is enabled. The field contains the following options:

- If multiple sources are entered in IDs select:
 - Use current data
 - Baseline snapshot
 - Most recent snapshot on specified date
- If only one source is entered in IDs select:
 - Use current data
 - Most recent snapshot on specified date

Source Snapshot Date

Specifies the most recent snapshot date to compare. This parameter is enabled only if "Selected snapshots" is selected in the Difference Between field and "Most recent snapshot on specified date" is selected in the Source Snapshot field.

Target Snapshot

Determines the snapshot from which changes or differences are detected and reported when compared to the source snapshot. This parameter is enabled if "Selected snapshots" option is selected in the Difference Between field. The Target Snapshot field contains the following options:

- If multiple sources are entered in "IDs" select:
 - Use current data
 - Baseline snapshot
 - Most recent snapshot on specified date
- If only one source is entered in "IDs" select:
 - Use current data
 - Most recent snapshot on specified date

Target Snapshot Date

Specifies the target snapshot date to compare with. This parameter is enabled only if "Selected snapshots" is selected in the Difference Between fields and "Most recent snapshot on specified date" is in the Target Snapshot field.

Include Options

Specifies the factors included in change detection report.

- All Differences
Specifies whether all the differences are reported in change detection. The SOAP response returned for this type of comparison is large, and the operation may take a longer time to complete.
- Component Inventory Differences Only
Specifies whether only the component change is reported

- **File Differences Only**
Specifies whether only file system change is reported. The file system changes which are detected include the files ownership, files permissions, files modification times changes.
- **Parameter Differences Only**
Specifies whether the parameter change is reported.
- **Users and Groups Differences Only**
Specifies whether only users and group change are reported.
- **Patch Differences Only**
Specifies whether only patches differences changes are reported. This feature is only supported on Windows, Solaris, and HP-UX operating systems.

Connection Parameters

CA Cohesion Connection Parameters settings override the module-level properties settings.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name.

Password

Specifies the user password.

Note: Some of the CA Cohesion Module Operators require a server or service ID as input. The ID can be retrieved directly from the CA Cohesion UI; alternatively, you can use the Get Server by Name and Get Service by Name Operators, which return all the server or service attributes including the ID. The ID can then be stored in a CA IT PAM dataset variable and used across Processes.

Filters

Filters let you filter the results that the Run Change Detection Operator returns:

Folders

Ensures that the organizational folders are included in the Run Change Detection operation. Select the organizational folders to include in the Run Change Detection operation.

Categories

Select the element categories to include in the Run Change Detection. Categories are assigned in the Component Blueprint and are the organizational groupings to which an element belongs.

Weights

Select the weights to include in the Run Change Detection. Only elements with the selected weights are considered. Weights are assigned in the Component Blueprint, representing the relative importance of an element. Elements for which no weight is assigned are considered Medium.

Note: By default, Rule Change Detection results include Folders, Categories, and Weights.

Operator Outputs**RunChangeDetectionOutput**

CA IT PAM only extracts the RunChangeDetection's operation result tag <runChangeDetectionOperationReturn> and returns its value in the RunChangeDetectionOutput variable.

CohesionSessionID

Specifies the session ID used to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

SoapResponseBody

Specifies a formatted XML string that represents the SOAP response.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the CA Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the CIs are registered successfully.
- -1 indicates that the Operator failed.

Reason

Specifies the following:

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned—Indicates that the Operator's SOAP response body contained a fault message. The fault message is listed in the FaultMessage output field.
- The CA Cohesion web service returned an ERROR—Indicates that the Operator's SOAP response body contained an error tag: <error>. The error message is listed in the Error output field.
- An error message—Indicates that the Operator failed.

FaultMessage

Appears when the Operator's SOAP response body contains a fault. The fault message is listed in this field. This field is created only when the Operator SOAP response body contains a fault.

Error

Appears only when the Operator's SOAP response body contains an error message. The error message is listed in this field. This field is created only when the Operator SOAP response body contains an error tag.

Operator Ports

Success

- Indicates that the Operator executed successfully.
- The CA Cohesion web service did not return a null or <error>.
- In the Run Change Detection Operator CI type service, if you select 'Selected snapshots' option and provide an invalid service ID or snapshot date, there is no error thrown in the XML. The result for this instance is shown as completed. This is known issue with the product.

Failure

A failure occurred while running the Operator. The possible reasons of failure include:

- A bad CA Cohesion web service URL, username, and password combination
- An invalid CI type.

- The CA Cohesion web service returned an <error> tag in the SOAP response for one of the following reasons (CA IT PAM parses the error tag and put its value in the Error output variable):
 - Single server or service ID and that ID does not exist in the CA Cohesion instance.
 - The CI Type passed to the Operator does not match the CI whose ID is passed to the Operator.
 - The source or target is invalid for the server or service CI. For example, specifying a Source or Target Snapshot Date (for a Server CI) when the CI does not have a snapshot.
 - The CA Cohesion web service may return an <error> tag in other case (refer to the CA Cohesion documentation for more information).

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Run Discovery Profile Operator

The Run Discovery Profile Operator runs a Server or Service Discovery Profile manually (instead of waiting for the scheduled time specified in the profile). A Discovery Profile automates component discovery for a server or service.



Operator Input Parameters

CA Cohesion Run Discovery Profile Parameters

CA Cohesion Run Discovery Profile Parameters describe the CI to run a Server or Service Discovery Profile on it.

Type

Specifies the CI type to run the discovery profile. The value can be either Server or Service.

ID

Specifies the identifier that the CA Cohesion uses to identify the CI.

Synchronous Run Type

Select true to run the Operator in Synchronous mode, or false (empty string, or any other value) to run the Operator in Asynchronous mode.

In Asynchronous mode, the Operator's SOAP call does not wait for the SOAP operation to complete before returning the SOAP response. The feature lets you avoid waiting for a long operation to finish before returning. In this case, the CA Cohesion web service returns a SOAP response to the CA Cohesion Module as soon as the SOAP call starts regardless of whether the SOAP call operation succeeds or fails.

In Synchronous mode, the Operator's SOAP call waits for the SOAP operation to complete before returning to the user. In this case, the CA Cohesion web service does not return the SOAP response to the CA Cohesion Module until the SOAP operation finishes and the SOAP response informs whether the SOAP operation succeeded or failed.

Connection parameters

CA Cohesion Connection Parameters settings override the module-level properties settings.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name.

Password

Specifies the user password.

Note: Some of the CA Cohesion Module Operators require a server or service ID as input. The ID can be retrieved directly from the CA Cohesion UI; alternatively, you can use the Get Server by Name and Get Service by Name Operators, which return all the server or service attributes including the ID. The ID can then be stored in a CA IT PAM dataset variable and used across Processes.

Operator Outputs

CohesionSessionID

Specifies the session ID used to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

SoapResponseBody

Specifies a formatted XML string representing the SOAP response.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the CA Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the discovery operation is executed successfully. For an asynchronous call, the operation is initiated successfully.
- -1 indicates that the Operator failed.

Reason

Specifies the following reasons:

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned—Indicates that the Operator's SOAP response body contained a fault message. The fault message is listed in the Fault Message output field.
- An error message—Indicates that the Operator failed.

Fault Message

Appears when the Operator's SOAP response body contains a fault. The fault message is listed in this field. This field is created only when the Operator SOAP response body contains a fault.

Operator Ports

Success

Indicates that the Operator executed successfully.

Failure

Indicates a failure that occurred while running the Operator. The possible reasons include:

- A bad CA Cohesion web service URL, username, and password combination.

- An invalid server or service ID is specified (for example, an ID with characters in it).
- The server ID does not exist in the CA Cohesion instance that you are connecting to.

Note: The CA Cohesion web service's "Run Discovery Profile" operation does not detect nonexistent server IDs. However, CA IT PAM issues an initial SOAP call "GetCIs" to the CA Cohesion web service to detect if the server ID exists. If the server ID does not exist, CA IT PAM returns the "The server ID provided does not exist in the CA Cohesion instance." in the Reason field.

- The service ID does not exist in the CA Cohesion instance that you are connecting to.

Note: The CA Cohesion web service's "Run Discovery Profile" operation detects nonexistent service IDs, unlike nonexistent server IDs. For nonexistent server IDs, the CA Cohesion web service returns a SOAP response with FALSE value.

- The server ID corresponds to a server in CA Cohesion whose state is not set to Managed.

Note: The CA Cohesion web service's "Run Discovery Profile" does not check for the state of the server (unlike the CA Cohesion UI). However, CA IT PAM issues an initial SOAP call "GetCIs" to the CA Cohesion web service to detect if the state of the server is set to Managed. If the state of the server is not set to Managed, CA IT PAM returns "This Cohesion operation is applicable to a Managed Server only. The server ID provided in this Operator refers to a server whose status is not set to "Managed" in CA Cohesion." in the Reason field.

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Run Management Profile Operator

The Run Management Profile Operator runs a Server or Service Management Profile manually (instead of waiting for the scheduled time specified in the profile).



A Server or Service Management Profile provides the operational rules for software component management on managed servers. The Operator specifies the following:

- The software components or categories of software components that are managed
- The CA Cohesion ACM management operations (Refresh, Snapshot creation and removal, Change Detection, Compare, and Rule Compliance) that are run automatically
- The frequency and timing of Management Profile operations
- The Management Profile notifications (if any) that are sent and to whom they are sent

Operator Input Parameters

CA Cohesion Run Management Profile Parameters

CA Cohesion Run Management Profile Parameters describe the CI to run a Server or Service Management Profile manually.

Type

Specifies the CI type to run the management profile. The value can be either server or service. If you select Service, the Asynchronous Run Type field is disabled with the *True* value.

Note: For the CI Type Service, the CA Cohesion web service does not support the Synchronous mode for Run Management Profile operation.

ID

Specifies the identifier that the CA Cohesion uses to identify the CI.

Asynchronous Run Type

Select true to run the Operator in Asynchronous mode, or false (empty string, or any other value) to run the Operator in Synchronous mode.

Note: For CI Type Service, the CA Cohesion web service does not support Synchronous mode for the Run Management Profile operation.

In Asynchronous mode, the Operator's SOAP call does not wait for the SOAP operation to complete before returning the SOAP response. The feature lets you avoid waiting for a long operation to finish before returning. In this case, the CA Cohesion web service returns a SOAP response to the CA Cohesion Module as soon as the SOAP call operation starts regardless of whether the SOAP call operation succeeds or fails.

In Synchronous mode, the Operator's SOAP call waits for the SOAP operation to complete before returning to the user. In this case, the CA Cohesion web service does not return the SOAP response to the CA Cohesion Module until the SOAP operation finishes, the SOAP response informs whether the SOAP operation succeeded or failed.

Connection Parameters

CA Cohesion Connection Parameters settings override the module-level properties settings.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name.

Password

Specifies the user password.

Note: Some of the CA Cohesion Module Operators require a server or service ID as input. The ID can be retrieved directly from the CA Cohesion UI; alternatively, you can use the Get Server by Name and Get Service by Name Operators, which return all the server or service attributes including the ID. The ID can then be stored in a CA IT PAM dataset variable and used across Processes.

Operator Outputs

Note: Sometimes the CA Cohesion web service does not return a SOAP response after it finishes executing a Management Profile in Synchronous mode for a Server CI. In such cases, abort the Operator when the CA IT PAM "Run Management Profile" Operator hangs as it waits for a SOAP response that never comes. The support case for this CA Cohesion issue is as follows:

Case Number & Title: 19313826: RUNMANAGEMENTPROFILESYNC HANGS

CohesionSessionID

Specifies the session ID used to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

SoapResponseBody

Specifies a formatted XML string representing the SOAP response.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the CA Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the task of running the management profile is executed successfully. For an Asynchronous call, the operation is initiated successfully.
- -1 indicates that the Operator failed.

Reason

Specifies the following reasons:

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned: If the Operator's SOAP response body contained a fault message. The fault message is listed in the Fault Message output field
- An error message—Indicates that the Operator failed.

FaultMessage

This output field appears only when the Operator's SOAP response body contains a fault. The fault message is listed in this field.

Operator Ports

Success

Indicates that the Operator executed successfully.

Failure

A failure occurred while running the Operator. The possible reasons include:

- A bad CA Cohesion web service URL, username, and password combination.
- An invalid server or service ID is specified (for example, an ID with characters in it).
- The server ID does not exist in the CA Cohesion instance that you are connecting to.

Note: The CA Cohesion web service's "Run Management Profile" operation does not detect nonexistent server IDs. However, CA IT PAM issues an initial SOAP call "GetCIs" to the CA Cohesion web service to detect if the server ID exists. If the server ID does not exist, CA IT PAM returns the "The server ID provided does not exist in the CA Cohesion instance." in the Reason field.

- The service ID does not exist in the CA Cohesion instance that you are connecting to.

Note: The CA Cohesion web service's "Run Management Profile" operation detects nonexistent service IDs, unlike nonexistent Server IDs. For nonexistent service IDs, the CA Cohesion web service returns a SOAP response with a False value.

- The server ID corresponds to a server in CA Cohesion whose state is not set to Managed.

Note: The CA Cohesion web service's "Run Management Profile" does not check the server state (unlike the CA Cohesion UI). However, CA IT PAM issues an initial SOAP call "GetCIs" to the CA Cohesion web service to detect if the state of the server is set to Managed. If the state of the server is not set to Managed, CA IT PAM returns " This CA Cohesion operation is applicable to a Managed Server only. The server ID provided in this Operator refers to a server whose status is not set to "Managed" in CA Cohesion." in the Reason field.

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Run Network Discovery Profile Operator

The Run Network Discovery Profile Operator runs a discovery profile on a specified network manually (that is, instead of waiting for the scheduled time specified in the profile).



Operator Input Parameters

CA Cohesion Run Network Discovery Profile Parameters

CA Cohesion Run Network Discovery Profile Parameters describe the CI to run a discovery profile manually on a specified network.

Network Name

Specifies the network name of the Network CI as mentioned in the CA Cohesion UI. The Operator runs the default profile associated to this network.

Note: The Network name is not the IP of the network, but the name of the CA Cohesion CI of type Network as specified in the CA Cohesion user interface under Networks.

Synchronous Run Type

Select true to run the Operator in Synchronous mode, or false (empty string, or any other value) to run the Operator in Asynchronous mode.

In Asynchronous mode, the Operator's SOAP call does not wait for the SOAP operation to complete before returning the SOAP response. This feature helps you avoid waiting for a long operation to finish before returning. In this case, the CA Cohesion web service returns a SOAP response to the CA Cohesion Module as soon as the SOAP call operation starts, regardless of whether the SOAP call operation succeeds or fails.

In Synchronous mode, the Operator's SOAP call waits for the SOAP operation to complete before returning to the user. In this case, the CA Cohesion web service does not return the SOAP response to the CA Cohesion Module until the SOAP operation finishes, the SOAP response then informs whether the SOAP operation succeeded or failed.

Connection Parameters

CA Cohesion Connection Parameters override the module-level properties.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name.

Password

Specifies the user password.

Operator Outputs

CohesionSessionID

Specifies the session ID used to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

SoapResponseBody

Specifies an XML string that represents the SOAP response body.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the CA Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the discovery operation is executed successfully. For an asynchronous call, the operation is initiated successfully.
- -1 indicates that the Operator failed.

Reason

Specifies the following reasons:

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned—Indicates that the Operator's SOAP response body contained a fault message. The fault message is listed in the FaultMessage output field.
- An error message—Indicates that the Operator failed.

FaultMessage

Appears when the Operator's SOAP response body contains a fault. The fault message is listed in this field. This field is created only when the Operator SOAP response body contains a fault.

Operator Ports

Success

Indicates that the Operator executed successfully.

Failure

Indicates that a failure occurred while running the Operator. The possible reasons include:

- A bad CA Cohesion web service URL, username, and password combination.
- The network name passed to the Operator does not exist in the CA Cohesion instance that you are connecting to (Applies to Synchronous and Asynchronous mode).

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Run Compare Operator

The Run Compare Operator compares servers or services within the CA Cohesion instance to which you are connecting.



This Operator allows the following types of comparisons:

- One source server compared to one target server
 - One source server snapshot compared to One target server
 - One source server compared to One target server snapshot
 - One source server snapshot compared to One target server snapshot
- One source service compared to One target service
 - One source service snapshot compared to One target service
 - One source service compared to One target service snapshot
 - One source service snapshot compared to One target service snapshot

- One source server compared to multiple target servers
One source server snapshot compared to multiple target servers
Note: The CA Cohesion web service does not allow multiple target server snapshots comparison *unless* you provide the date the snapshots were taken.
- One source server (or snapshot) compared to multiple target server snapshots where the target snapshots were created on a specific date provided by the user. Here you provide the date when the snapshots were taken.
Note: The CA Cohesion web service does not allow One Service compared to multiple target Services comparisons.

Operator Input Parameters

CA Cohesion Run Compare Parameters

CA Cohesion Run Compare Parameters describe the CI to compare servers or services within the CA Cohesion instance.

Type

Select Type to run the comparison between servers or services.

Source ID

Specifies the compared source server or service ID to compare.

Source Snapshot ID

Define the snapshot ID of the source server/service to compare. You can also select Use current data to compare the current source server/service.

Use the specified array field for the list of target IDs?

Ensures that the target IDs array is used for this request.

Target IDs Array

Defines the array of the comparison's target server or service IDs.

Note: CA Cohesion does not allow for multiple target services comparison, so in case you compare the services, the Operator will only pick the first element in the array. This field is enabled only when the Use the specified array field for the list of target IDs? is checked.

Target IDs

The list of the comparison's target server or service IDs.

Note: CA Cohesion does not allow for multiple target services comparison, so in case you compare the services, the Operator will only pick the first element in the list. This field is enabled only when the Use the specified array field for the list of target IDs? is unchecked.

Target Snapshots Options

Select one of the options for a single comparison target or multiple comparison targets:

Single and Multiple Targets – Use current data:

Select this option to compare the servers or service (not the associated target snapshots). This option is applicable to single target server/service or a multiple target server comparison only.

Note: When you select this option, the following fields are disabled:

- Single Target Snapshot ID
- Use Calculated Snapshot Date?
- Target Snapshot Date
- Calculated Target Snapshot Date.

Single Target – Snapshot Id

Select this option to specify the target server or service snapshot ID to use in the comparison. This option is applicable when you perform a single target server/service comparison only.

Note: When you select this option, the Single Target Snapshot ID is enabled and the following fields are disabled:

- Use Calculated Snapshot Date?
- Target Snapshot Date
- Calculated Target Snapshot Date

Multiple Targets – Most recent snapshots on specified date

Select this option to specify the target snapshot date to use in comparison. This option is applicable when you perform a multiple target server comparison only.

Note: When you select this option, the Single Target Snapshot ID is disabled and the following fields are enabled:

- Calculated Snapshot Date?
- Target Snapshot Date
- Calculated Target Snapshot Date

Single Target Snapshot ID

Specifies the target server or service snapshot ID to compare. This ID is applicable only when you select the Single Target - Snapshot Id in the Target Snapshots Options field.

Use Calculated Snapshot Date?

Ensures that the Calculated Target Snapshot Date is used for this request.

Target Snapshot Date

Use the date picker to select the target snapshot date. The Operator runs the comparison against the snapshots created on the entered date and associated with the target server IDs entered in the Target IDs Array or Target IDs field.

This date is applicable only when you select "Multiple Targets - Most recent snapshots on specified date" in the Target Snapshots Options field and clear the Use Calculated Snapshot Date? field.

Calculated Target Snapshot Date

Specifies dataset variable of type date that you create in a dataset and set its value to the target snapshot date. The Operator runs the comparison against the snapshots created on the entered date and associated with the target server IDs entered in the Target IDs Array or Target IDs field. The date is applicable only when you select "Multiple Targets - Most recent snapshots on specified date" in the Target Snapshots Options field and check the Use Calculated Snapshot Date? field.

Include Options

All Differences

Specifies whether all the differences are reported in the comparison.

Note: The SOAP response returned for this type of comparison is large, and the operation may take a longer time to complete.

Component Inventory Differences Only

Ensures that only the component inventory differences are reported in the comparison.

Patch Differences Only

Ensures that only the patch differences are reported in the comparison.

Connection Parameters

CA Cohesion Connection Parameters settings override the module-level properties settings.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name.

Password

Specifies the user password.

Note: Some of the CA Cohesion Module Operators require a server or service ID as input. The ID can be retrieved directly from the CA Cohesion UI; alternatively, you can use the Get Server by Name and Get Service by Name Operators, which return all the server or service attributes including the ID. The ID can then be stored in a CA IT PAM dataset variable and used across Processes.

Filters

Filters let you filter the results that the Run Compare Operator returns.

Folders

Define the organizational folders to include in the comparison.

Categories

Select the element categories to include in the comparison. Categories are assigned in the Component Blueprint and are the organizational groupings to which an element belongs.

Weights

Select the weights to include in the comparison. Only elements with the selected weights are then considered. Weights are assigned in the Component Blueprint, representing the relative importance of an element. Unweighted elements (no weight assigned) are considered Medium.

Operator Outputs

RunCompareOutput

CA IT PAM only extracts the RunCompare's operation result tag <runCompareOperationReturn> and returns its value in the RunCompareOutput variable.

CohesionSessionID

Specifies the session ID to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned could be a cached session ID or a newly created session ID.

SoapResponseBody

Specifies an XML string that represents the SOAP response body.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the CA Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the Operator compared the servers or services within the CA Cohesion instance successfully completed.
- -1 indicates that the Operator failed.

Reason

Returns the following:

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned—Indicates that the Operator SOAP response body contained a fault message. The fault message is listed in the "Fault Message output" field.
- The CA Cohesion web service returned an ERROR—if the Operator SOAP response body contained an <error> tag. The error message is listed in the Error output field.
- An error message—Indicates that the Operator failed.

FaultMessage

Specifies a fault message, only when the Operator SOAP response body contains a fault. This field is created only when the Operator SOAP Response body contains a fault.

Error

Specifies error messages. The field appears only when the Operator SOAP response body contains an <error> tag.

Operator Ports

Success

- The Operator finished successfully.
- The Operator succeeds when you wrongly select a target date in the Multiple Targets—Most recent snapshots on specified date while doing a single target server comparison. In this case, the CA Cohesion web service ignores the target date and uses the target server for the comparison.
- The Operator succeeds when you wrongly select a target date in the Multiple Targets—Most recent snapshots on specified date while doing a single target service comparison. In this case, the CA Cohesion web service ignores the target date and the target server and uses only the source service for the comparison.
- The Operator succeeds if you provide a server or service ID or snapshot ID that does not exist in the CA Cohesion instance you are connecting to. In fact, the CA Cohesion web service does not check to see if the ID exists. Use the "GetCI", "GetServerByName", "GetServiceByName", and "GetSnapshot" Operators to verify that the ID exists in the CA Cohesion instance.

Failure

- A bad CA Cohesion web service URL, username, and password combination.
- The Operator fails with the following message (returned by the CA Cohesion web service in the <error> tag): "Cannot define multiple targets for server" compare when the user enters multiple Target IDs but chooses Single Target – Snapshot ID in the Target Snapshots Options field.
- The Operator fails if the CA Cohesion web service returns an <error> tag.

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Run Compliance Operator

The Run Compliance Operator verifies that a defined scope complies with a set of rules and reports any violations as ComplianceFailure objects.



The scope of a compliance Operator can be defined at the service, server, and component levels, and filtering is done by rule category and severity.

The following CA Cohesion web service limitations restrict the functionality of this Operator:

- Compliance operations can be run on a single server at a time; multiple servers *cannot* be selected. As a result, this Operator can receive only one server identifier.
- Compliance operations can be executed only on current data, snapshots *cannot* be specified. AS a result, this Operator does not allow you to run a compliance operation on server snapshots.

Operator Input Parameters

CA Cohesion Run Compliance Parameters

CA Cohesion Run Compliance Parameters describe the CI to verify if a defined scope complies to a set of rules and reports the violations.

Type

Specifies the CI type to run the compliance operation against it. The value can be either Server or Service.

ID

Specifies the identifier to identify the CI.

Rule Category

Specifies the set of rules against which the compliance operation is run. The rules are as follows:

- Default Values

Verifies the current server or snapshot values against specified default values.

When default values are specified in a Component Blueprint, CA Cohesion creates rules that check if the actual value deviates from the default value. Default rule deviations show as Information messages in the results.

- **Component Blueprint Rules**
Verifies current server or snapshot values against constraint rules defined in Component Blueprints. Includes both user-defined rules and built-in rules, such as data type checking.
- **Instance and Blueprint Rules**
Verifies current server or snapshot values against constraint rules defined in the server and Component Blueprints.

Rule Severity

Specifies the lowest severity level of messages you want the compliance operation to report.

- **Information**
Retrieves the Information, Warning, Error, and Critical messages.
- **Warning**
Retrieves Warning, Error, and Critical messages.
- **Error**
Retrieves Error and Critical messages.
- **Critical**
Retrieves only Critical messages.

Connection Parameters

CA Cohesion Connection Parameters settings override the module-level properties settings.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name.

Password

Specifies the user password.

Note: Some of the CA Cohesion Module Operators require a server or service ID as input. The ID can be retrieved directly from the CA Cohesion UI; alternatively, you can use the Get Server by Name and Get Service by Name Operators, which return all the server or service attributes including the ID. The ID can then be stored in a CA IT PAM dataset variable and used across Processes.

Filter

Filters let you filter the results that the Run Change Detection Operator returns.

Folders

Defines the organizational folders to include in the Run Compliance operation. The violations are reported only for the selected folders

Categories

Defines the element categories to include in the Run Compliance operation. Categories are assigned in the Component Blueprint and are the organizational groupings to which an element belongs.

Weights

Defines the weights to include in the Run Compliance operation. Only elements with the selected weights are considered. Weights are assigned in the Component Blueprint, representing the relative importance of an element. The elements for which no weight assigned are considered Medium.

Note: By default, Rule Compliance results include all Folders, Categories, and Weights.

Operator Outputs

RunComplianceOutput

CA IT PAM only extracts the RunCompliance's operation result tag <runComplianceOperationReturn> and returns its value in the RunComplianceOutput variable.

CohesionSessionID

Specifies the session ID used to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

SoapResponseBody

Specifies a formatted XML string that represents the SOAP response.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the CA Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the verification is executed successfully. For an asynchronous call, the operation is initiated successfully.
- -1 indicates that the Operator failed.

Reason

Specifies the following:

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned—Indicates that the Operator's SOAP response body contained a fault message. The fault message is listed in the FaultMessage output field.
- The CA Cohesion web service returned an ERROR—Indicates that the Operator's SOAP response body contained an error tag: <error>. The error message is listed in the Error output field.
- An error message—Indicates that the Operator failed.

FaultMessage

Appears when the Operator's SOAP response body contains a fault. The fault message is listed in this field. The field is created only when the Operator SOAP response body contains a fault.

Error

Appears when the Operator's SOAP response body contains an error message. The error message is listed in this field.

Operator Ports

Success

Indicates that the Operator executed successfully.

Failure

A failure occurred while running the Operator. The possible reasons include:

- A bad CA Cohesion web service URL, username, and password combination.

- You specified a server or service ID that does not exist in the CA Cohesion instance:
 - For a nonexistent Server ID, the CA Cohesion web service would usually return an <error> tag in the SOAP response. CA IT PAM parses the error tag and put its value in the Error output variable.
 - For a nonexistent Service ID, the CA Cohesion web service would usually return a <fault> tag in the SOAP response, CA IT PAM parses the fault tag and put its value in the FaultMessage output variable.
- The CI Type passed to the Operator does not match the CI ID. The CA Cohesion web service would return either <error> or <fault>.

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Run Snapshot Operator

The Run Snapshot Operator creates a server or a service snapshot.



Operator Input Parameters

CA Cohesion Run Snapshot Parameters

CA Cohesion Run Snapshot Parameters describe the CI to create a server or a service snapshot.

Type

Specifies the snapshot type. The value is either a server or service.

ID

Specifies the ID used internally by CA Cohesion to identify the server or service.

Snapshot Name

Specifies the name of the snapshot you want to create.

Asynchronous Run Type

Select true to run the Operator in Asynchronous mode, or false (empty string, or any other value) to run the Operator in Synchronous mode.

In the Asynchronous mode, the Operator's SOAP call does not wait for the SOAP operation to complete before returning the SOAP response. The feature lets you avoid waiting for a long operation to finish before returning. In this case, the CA Cohesion web service returns a SOAP response to the CA Cohesion Module as soon as the SOAP call starts, regardless of whether the SOAP call operation succeeds or fails.

In the Synchronous mode, the Operator's SOAP call waits for the SOAP operation to complete before returning to the user. In this case, the CA Cohesion web service does not return the SOAP response to the CA Cohesion Module until the SOAP operation finishes. The SOAP response informs whether the SOAP operation succeeded or failed.

Connection Parameters

CA Cohesion Connection Parameters settings override the module-level properties settings.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name.

Password

Specifies the user password.

Note: Some of the CA Cohesion Module Operators require a server or service ID as input. The ID can be retrieved directly from the CA Cohesion UI; alternatively, you can use the Get Server by Name and Get Service by Name Operators, which return all the server or service attributes including the ID. The ID can then be stored in a CA IT PAM dataset variable and used across Processes.

Operator Outputs

SnapshotID

Specifies the ID of the snapshot that was created by running this Operator.

Note:

- When running the Operator in Asynchronous mode, the CA Cohesion web service will always return a snapshot ID of -1, as the web service returns the SOAP response to CA IT PAM as soon as it starts the operation, so there is no way to confirm whether the snapshot was created in this case.

CA IT PAM will succeed the Operator in this case, although the web service returned a Snapshot ID of -1.

- When running the Operator in Synchronous mode, the CA Cohesion web service will return the following Snapshot ID:
 - -1— indicates that the Snapshot was not created (refer to Operator ports, failure section for potential causes of failure). CA IT PAM will fail the Operator in this case with the following Reason message: "The CA Cohesion WebService returned a Snapshot ID of -1 when running in Synchronous mode."
 - A valid ID number— the CA Cohesion web service is supposed to return the ID of the snapshot that was created in this case; however, tests have shown that this Snapshot ID may not be trusted, as the CA Cohesion web service could return a snapshot ID that seems valid, but the snapshot was actually never created in CA Cohesion. To remedy this issue, CA IT PAM performs an internal sanity check (a Second SOAP call to Cohesion before returning the Operator's results to the user) whenever it receives a Snapshot ID using the "Get Snapshot" web service call:
 - If the "Get Snapshot" call reveals that the snapshot ID returned by the "Run Snapshot" exists in CA Cohesion, CA IT PAM succeeds the operator.
 - If the "Get Snapshot" call reveals that the snapshot ID returned by the "Run Snapshot" does not exist in CA Cohesion, CA IT PAM fails the Operator with the following message: "The Snapshot ID: xxxxxxxx returned by the "Run Snapshot" SOAP call does not exist in the CA Cohesion instance." See Operator ports, failure section for potential causes of failure.

CohesionSessionID

Specifies the session ID used to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

SoapResponseBody

Specifies an XML string that represents the SOAP response body.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the CA Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the server or a service snapshot creation is executed successfully.
- -1 indicates that the Operator failed.

Reason

Specifies the following reasons:

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned—Indicates that the Operator's SOAP response body contained a fault message. The fault message is listed in the FaultMessage output field.
- An error message—Indicates that the Operator failed.

FaultMessage

Appears when the Operator's SOAP response body contains a fault. The fault message will be listed in this field. This field is created only when the Operator SOAP response body contains a fault.

Operator Ports

Success

- Indicates that the Operator executed successfully.
- The Operator ran in Asynchronous mode with valid CA Cohesion URL and login credentials.

Failure

A failure occurred while running the Operator. The possible reasons include:

- A bad CA Cohesion web service URL, username, and password combination
- An invalid server or service ID has been specified (for example, an ID with characters in it).
- When running the operator in Synchronous mode:
 - The Server/Service ID passed to the Operator does not exist in the CA Cohesion instance that you are connecting to.
 - The Server/Service ID passed to the Operator does not represent a Server/Service CI.
 - The CI Type passed to the Operator does not match the CI whose ID is passed to the operator.
 - The ID passed to the Operator refers to a Server/Service CI with no discovered components.

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Get Version Operator

The Get Version Operator retrieves the version of the CA Cohesion instance using web services.



Operator Input Parameters

CA Cohesion Get Version Parameters

This Operator uses only the CA Cohesion web service URL. It does not require a username and password, thus it does not use or create a session ID on the CA Cohesion instance.

Connection Parameters

CA Cohesion Connection Parameters override the module-level properties.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name. (Not required for this Operator.)

Password

Specifies the user password. (Not required for this Operator.)

Operator Outputs

Version

Specifies the version of the CA Cohesion instance.

SoapResponseBody

Specifies an XML string that represents the SOAP response body.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the CA Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the task of retrieving the CA Cohesion instance version is executed successfully.
- -1 indicates that the Operator failed.

Reason

Specifies the following reasons:

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned—Indicates that the Operator SOAP response body contained a fault message. The fault message is listed in the FaultMessage output field.
- An error message—Indicates that the Operator failed.

FaultMessage

Specifies a fault message, only when the Operator SOAP response body contains a fault. This field is created only when the Operator SOAP response body contains a fault.

Operator Ports

Success

Indicates that the Operator executed successfully.

Failure

The Operator fails in the following conditions:

- If you pass a bad CA Cohesion web service URL.

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Get Server By Name Operator

The Get Server By Name Operator retrieves the attributes of a server in a CA Cohesion instance using the web service. The Operator can also retrieve the server components.



Operator Input Parameters

CA Cohesion Get Server by Name Parameters

CA Cohesion Get Server by Name Parameters describe the CI to retrieve the attributes of a server in the CA Cohesion instance.

Server Name

Specifies the server name to retrieve its attributes. This server must be a valid server (managed or rejected) in the CA Cohesion instance.

Retrieve Server Components?

Specifies True or false value. Set this field to the following:

- True retrieves all the components of the server
- False, empty string or any other value will prompt the Operator not to retrieve the server components

Note: Retrieving the server components causes this Operator to run for a much longer time. Because the Operator parses hundreds of components within the server, before displaying them to the user as variables within the Operator dataset.

Connection Parameters

The CA Cohesion Connection Parameters override the module-level properties.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name.

Password

Specifies the user password.

Operator Outputs

serverID

Specifies the server ID.

serverType

Specifies the server type.

serverName

Specifies the server name.

serverSnapshot

Specifies true or false.

serverAttr_variableName:

All the server attributes that are retrieved from CA Cohesion are returned to the user in the form of variables that start with *serverAttr_*.

serverComponents

Specifies an array of ValueMaps, where each ValueMap contains the attributes retrieved for each component in the server. Each ValueMap contains the following variables:

- *componentID* indicates the component ID.
- *componentType* indicates the component type.
- *componentName* indicates the component name.
- *componentSnapshot* indicates true or false.
- *componentAttr_variableName* indicates that all the component attributes that are retrieved from CA Cohesion are returned in the form of variables prefixed by *componentAttr_*.

Note: This variable is created after you select the Retrieve Server Components field. See Examples for a sample of the XML response retrieved for a server in CA Cohesion.

If CA IT PAM receives a SOAP response from the CA Cohesion web service with a null or empty `<Server>` tag, the Operator fails, and none of the output variables listed above will be created as these variables (including the variable names) are retrieved directly from the SOAP response received from the CA Cohesion web service.

CohesionSessionID

Specifies the session ID used to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

SoapResponseBody

Specifies an XML string that represents the SOAP response body.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the task of retrieving the attributes of a server in the CA Cohesion instance is executed successfully.
- -1 indicates that the Operator failed.

Reason

Specifies the following reasons:

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned—Indicates that the Operator SOAP response body contained a fault message. The fault message is listed in the FaultMessage output field.
- An error message—Indicates that the Operator failed.

FaultMessage

Specifies a fault message, only when the Operator SOAP response body contains a fault. This field is created only when the Operator SOAP response body contains a fault.

Operator Ports

Success

Indicates that the Operator executed successfully.

Failure

- The Operator fails if you pass a bad Cohesion URL, username, and password combination.
- The Operator fails if the CA Cohesion web service returned null for any of the following reasons:
 - The server passed as input to the operator is not a valid server (managed or rejected) in the CA Cohesion instance that you are connecting to.

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Get Service By Name

The Get Service By Name Operator retrieves the attributes of a service created in a CA Cohesion instance using the web service. The Operator can also retrieve the service's server components.



Operator Input Parameters

CA Cohesion Get Service by Name Parameters

CA Cohesion Get Service by Name Parameters describe the CI to retrieve the attributes of a service.

Service Name

The name of the service whose attributes you would like to retrieve. The service must already be created in the CA Cohesion instance.

Blueprint Name

Specifies the blueprint name associated with the service.

Retrieve Service Components?

Specifies True or false value. Set this field to the following:

- True to retrieve the service's server components that belong to this service, with the service's attributes.
- False, empty string, or any other value prompts the Operator not to retrieve the Components.

Note: Retrieving the service's server components may cause this Operator to run for a much longer time. Because the Operator parses the hundreds of server components within the service XML before displaying them to the user as variables within the Operator dataset.

Connection Parameters

The CA Cohesion Connection Parameters override the module-level properties.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name.

Password

Specifies the user password.

Operator Outputs

serviceID

Specifies the service ID.

serviceType_

Specifies the service type.

serviceName

Specifies the service name.

serviceSnapshot

Specifies true or false.

serviceAttr_variableName

Indicates that all the service attributes that are retrieved from CA Cohesion and are returned in the form of variables that start with *serviceAttr_*.

serviceServers

Specifies an array of ValueMaps, where each ValueMap contains the attributes retrieved for each server in the service. Each ValueMap contains the following variables:

- *serverID* indicates the server ID.
- *serverType* indicates the server type.
- *serverName* indicates the server name.
- *serverSnapshot* indicates true or false.
- *serverAttr_variableName* indicates that all the server attributes retrieved from CA Cohesion are in the form of variables prefixed by *serverAttr_*.

serverComponents

Specifies an array of ValueMaps, where each ValueMap contains the attributes retrieved for each component in the server. Only the server components that belong to the service are retrieved. Each ValueMap contains the following variables:

- componentID indicates the component ID.
- componentType indicates the component type.
- componentName indicates the component name.
- componentSnapshot indicates true or false.
- componentAttr_variableName indicates that all the component attributes retrieved from CA Cohesion are returned in the form of variables prefixed by componentAttr_.

Note: This variable is created after you select the Retrieve Server Components? field. See [Examples](#) (see page 99) for a sample of the XML response retrieved for a server.

If CA IT PAM receives a SOAP response, from the CA Cohesion web service with a null or empty <Service> tag, the Operator fails, and none of the output variables listed before are created as these variables (including the variable names) are retrieved directly from the SOAP response received from the CA Cohesion web service.

CohesionSessionID

Specifies the session ID used to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

SoapResponseBody

Specifies an XML string that represents the SOAP response body.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the CA Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the task of retrieving the attributes of a service in the CA Cohesion instance is executed successfully.
- -1 indicates that the Operator failed.

Reason

Specifies the following:

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned—Indicates that the Operator SOAP response body contained a fault message. The fault message is listed in the FaultMessage output field.
- An error message—Indicates that the Operator failed.

FaultMessage

Specifies a fault message, only when the Operator SOAP response body contains a fault. This field is created only when the Operator SOAP response body contains a fault.

Operator Ports

Success

Indicates that the Operator executed successfully.

Failure

The possible reasons for the failure include:

- If you pass a bad CA Cohesion URL, username, and password combination.
- If the CA Cohesion web service returns null for any of the following reasons:
 - The service passed as input to the Operator is not a valid service in the CA Cohesion instance that you are connecting to.
 - The blueprint passed as input to the Operator is not a valid service blueprint in the CA Cohesion instance that you are connecting to.
 - The blueprint passed as input to the Operator is a valid service blueprint, but it is not associated with the service that you are trying to retrieve.
 - The CA Cohesion SOAP call returns null (failure) if there are no servers in the service you are trying to retrieve.

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Get Service Host Tier Operator

The Get Service Host Tier Operator retrieves the tier assignment of a server. A tier assignment identifies where a server of type Client, Front End, Web, Database, and so on, is located relative to other servers in the graphical views of services.



Operator Input Parameters

CA Cohesion Get Service by Host Tier Parameters

Service ID

Specifies the service ID. This service must already be defined in the CA Cohesion instance; otherwise, the CA Cohesion web service returns a null output.

Server ID

Specifies the ID of the server whose host tier you would like to retrieve. The server must be part of the service specified in the Service ID field; otherwise, the CA Cohesion web service returns the default host tier "Application".

Connection Parameters

CA Cohesion Connection Parameters settings override the module-level properties settings.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name.

Password

Specifies the user password.

Note: Some of the CA Cohesion Module Operators require a server or service ID as input. The ID can be retrieved directly from the CA Cohesion UI; alternatively, you can use the Get Server by Name and Get Service by Name Operators, which return all the server or service attributes including the ID. The ID can then be stored in a CA IT PAM dataset variable and used across Processes.

Operator Outputs

GetServiceHostTierOutput

Specifies the host tier assignment of the server.

CohesionSessionID

Specifies the session ID used to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

SoapResponseBody

Specifies an XML string that represents the SOAP response body.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the task of retrieving the tier assignment of a server in CA Cohesion instance version is executed successfully.
- -1 indicates that the Operator failed.

Reason

Specifies the following reasons:

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned—Indicates that the Operator SOAP response body contained a fault message. The fault message is listed in the FaultMessage output field.
- An error message—Indicates that the Operator failed.

FaultMessage

Specifies a fault message, only when the Operator SOAP response body contains a fault. This field is created only when the Operator SOAP response body contains a fault.

Operator Ports

Success

Indicates that the Operator executed successfully.

- If the server ID passed as input to the Operator is not a valid server in the CA Cohesion instance, or does not belong to the service, then the CA Cohesion web service will return the default host tier of a service: "Application".

Failure

The possible reasons for the failure include:

- If you pass a bad CA Cohesion web service URL, username, and password combination.
- If the CA Cohesion web service returns null for any of the following reasons:
 - If the service ID passed as input to the operation is not a valid service in CA Cohesion, the CA Cohesion web service returns a null output, in which case, the GetServiceHostTierOutput is not created and the Operator fails.

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Get Snapshot Operator

The Get Snapshot Operator retrieves information about a certain snapshot.



Operator Input Parameters

Type

Specifies the snapshot type, either Server or Service.

Snapshot ID

Specifies the snapshot identifier used internally by CA Cohesion instance to identify a snapshot.

Operator Outputs

Notes:

- For a CI of type "Server", this Operator returns the same output as the Get Server By Name Operator, with the addition of serverSnapshotName and serverSnapshotDate output variables.
- For a CI of type "Service", this Operator returns the same output as the Get Service By Name Operator, with the addition of serviceSnapshotName and serviceSnapshotDate output variables.

GetSnapshotOutput

For CI types (supported by CA Cohesion) that are not "Server" or "Service", CA IT PAM extracts only the GetSnapshot operation result tag <getSnapshotReturn> and returns its value in the GetSnapshotOutput variable.

Note: The variable is not created in a CI of type "Server" or "Service" as CA IT PAM parses the entire SOAP response associated with these CI types and returns the resulting output variables.

If CA IT PAM receives a SOAP response, from the CA Cohesion web service, with a null or empty <getSnapshotReturn> tag, the Operator fails, and none of the output variables previously listed as variables (including the variable names) are retrieved directly from the SOAP response received from the CA Cohesion web service.

CohesionSessionID

Specifies the session ID used to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

SoapResponseBody

Specifies a formatted XML string representing the SOAP response.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the CA Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the task of retrieving the information about a certain snapshot in CA Cohesion executed successfully.
- -1 indicates that the Operator failed.

Reason

Specifies the following reasons:

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned—Indicates that the Operator’s SOAP response body contained a fault message. The fault message is listed in the FaultMessage output field.
- An error message—Indicates that the Operator failed.

FaultMessage

Appears when the Operator’s SOAP response body contains a fault. The fault message is listed in this field.

Operator Ports

Success

Indicates that the Operator executed successfully.

Failure

Defines a failure that occurred while running the Operator. The possible reasons of failure include:

- A bad CA Cohesion web service URL, username, and password combination
- An invalid snapshot ID (for instance an ID with characters in it).
- A Snapshot ID that does not exist in the CA Cohesion instance. In this case, the CA Cohesion web service (and CA IT PAM) returns the following:
 - serverID/serviceID = -1
 - serverType/serviceType_ = Server or Service
 - serverSnapshot/serviceSnapshot = false

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Add Servers to Service Operator

The Add Servers to Service Operator adds a list of servers to a service in the CA Cohesion instance using the web service.



Tests show that the CA Cohesion web service call `AddServersToService` may not return the right result at the end of the operation. In fact, it could return "false" (which typically refers to an error) even when all server IDs listed in the Operator are added to the service. To remedy this issue, CA IT PAM issues a second internal SOAP call "GetCI" on the service ID, as part of the "Add Servers to Service" Operator to cross check the list of servers you provide in the Operator against the list of servers that are part of the service at the end of the CA Cohesion web service's `AddServersToService` call.

If CA IT PAM detects that all the Operator's server IDs are part of the service, it succeeds the Operator, but if it detects that any of the Operator's server IDs are not part of the service, it fails the Operator. CA IT PAM also fails the Operator if the service ID cannot be found in the CA Cohesion instance.

The SOAP response that CA IT PAM receives from the CA Cohesion web service's `AddServersToService` Operator can be seen in the `SoapResponseBody` result dataset; however, CA IT PAM does not rely on the "true/false" returned in this response to fail or succeed the Operator.

Operator Input Parameters

Service ID

Specifies the service ID to add the servers. This service must be created in the CA Cohesion instance.

Use the specified array field for the list of Server IDs?

Ensures that the list of Server IDs as an array variable in the Server IDs Array field is entered.

Server IDs Array

Specifies an indexed string (array) variable that contains the servers IDs to add to the service. The servers must be valid servers in the CA Cohesion instance. This field is enabled when you select the Use the specified array field for the list of Server IDs? field.

Server IDs

Specifies a list of servers ID to add to the service. The servers must be valid servers in the CA Cohesion. This field is enabled when you clear the Use the specified array field for the list of Server IDs? field.

Connection Parameters

CA Cohesion Connection Parameters settings override the module-level properties settings.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name.

Password

Specifies the user password.

Note: Some of the CA Cohesion Module Operators require a server or service ID as input. The ID can be retrieved directly from the CA Cohesion UI; alternatively, you can use the Get Server by Name and Get Service by Name Operators, which return all the server or service attributes including the ID. The ID can then be stored in a CA IT PAM dataset variable and used across Processes.

Operator Outputs

CohesionSessionID

Specifies the session ID used to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

SoapResponseBody

Specifies an XML string that represents the SOAP response body.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the CA Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the task of adding a list of servers to a service in the CA Cohesion instance executed successfully.
- -1 indicates that the Operator failed.

Reason

Specifies the following reasons:

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned— if the Operator’s SOAP response body contained a fault message. The fault message is listed in the FaultMessage output field.
- An error message—Indicates that the Operator failed.

FaultMessage:

Specifies a fault message. The output field appears only when the Operator’s SOAP response body contains a fault.

Operator Ports

Success

The Operator finished successfully.

Note: If the servers are already part of the service, the web service still returns a success.

Failure

- The Operator fails with the following reason “The CA Cohesion web service failed to add the following Servers: *XXXXXX*, *YYYYYYY*, etc.”:
 - An invalid server ID passed as input to the Operator in the CA Cohesion instance.
 - Any of the Server IDs passed to the Operator is not added to the Service. Refer the CA Cohesion documentation for reasons why a Server in CA Cohesion cannot be added to a Service.
- The Operator fails with the following Reason “Unable to locate the Service ID: *XXXXXXXXX* in the Cohesion instance.”:
 - The service passed as input to the Operator is not a valid service in the CA Cohesion instance.
- The Operator fails if you pass a bad CA Cohesion URL, username, and password combination.
- The Operator fails if the CA IT PAM variable entered in the Server IDs Array field is not of type indexed string (array).

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Run Script Operator

The Run Script Operator runs a CA Cohesion SDK script on the CA Cohesion instance using the web service.



The CA Cohesion SDK scripting feature provides access to objects in the `com.cendura.sdk` packages from an interpreted scripting environment. Scripts are written in the ECMAScript (JavaScript) language, providing direct access to the classes in `com.cendura.sdk` package, according to the standard binding of Java to the ECMAScript environment. For example:

```
var svr=Server.getServer("myserver.ca.com");  
svr.getIPAddress();
```

The `com.cendura.sdk.scripting.enabled` property controls the access to SDK in the `cendura.properties` file of the CA Cohesion instance and is enabled by default. To disable SDK scripting, set the value of this property to `false`, which returns a null output to any `runScript` SOAP call.

Operator Input Parameters

SDK Script

Specifies the CA Cohesion SDK script to run on the CA Cohesion instance.

Connection Parameters

The CA Cohesion Connection Parameters override the module-level properties.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name.

Password

Specifies the user password.

Operator Outputs

ScriptOutput

Specifies the output of the script.

CohesionSessionID

Specifies the session ID used to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

SoapResponseBody

Specifies an XML string that represents the SOAP response body.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the CA Cohesion Module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the task of running a CA Cohesion SDK script on the CA Cohesion instance executed successfully.
- -1 indicates that the Operator failed.

Reason

Specifies the following reasons:

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned—Indicates that the Operator SOAP response body contained a fault message. The fault message is listed in the FaultMessage output field.
- An error message—Indicates that the Operator failed.

FaultMessage

Specifies a fault message, only when the Operator SOAP response body contains a fault. This field is created only when the Operator SOAP response body contains a fault.

Operator Ports

Success

Indicates that the Operator executed successfully.

Failure

- The Operator fails if you pass a bad CA Cohesion web service URL, username, and password combination.
- The Operator fails if the CA Cohesion web service returns null for any of the following reasons:
 - If the script that you pass to the Operator contained an error, then the CA Cohesion web service returns a null output; the ScriptOutput is not created, and the Operator fails.
 - If the SDK scripting is disabled, then the CA Cohesion web service returns a null output; the ScriptOutput is not created and the Operator fails.

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Set Managed Status Operator

The Set Managed Status Operator sets the status of a list of servers in the CA Cohesion instance to either "Managed" or "Rejected".



Operator Input Parameters

Manage Servers?

Specifies True or False. Set the value to the following:

- True sets the servers to "Managed" in the CA Cohesion instance.
- False sets the servers to "Rejected" in the CA Cohesion instance.

Note: An empty string or any other value (other than true or false) sets the default value (False) of the Managed Servers.

Use the specified array field for the list of Server IDs?

Ensures that the list of Server IDs as an array variable in the Server IDs Array field is entered.

Server IDs Array

Specifies an indexed string (array) variable that contains the servers IDs to add to the service. The servers must be valid servers in the CA Cohesion instance. This field is enabled when you select the Use the specified array field for the list of Server IDs? field.

Server IDs

Specifies a list of servers ID to add to the service. The servers must be valid servers in CA Cohesion. This field is enabled when you clear the Use the specified array field for the list of Server IDs? field.

Connection Parameters

CA Cohesion Connection Parameters settings override the module-level properties settings.

Webservice URL

Specifies the URL of the CA Cohesion instance's web service.

User name

Specifies the user name.

Password

Specifies the user password.

Note: Some of the CA Cohesion Module Operators require a server or service ID as input. The ID can be retrieved directly from the CA Cohesion UI; alternatively, you can use the Get Server by Name and Get Service by Name Operators, which return all the server or service attributes including the ID. The ID can then be stored in a CA IT PAM dataset variable and used across Processes.

Operator Outputs

CohesionSessionID

Specifies the session ID used to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

SoapResponseBody

Specifies an XML string that represents the SOAP response body.

SoapResponseBodyLength

Specifies the SOAP response body length when the value exceeds the maximum length (the value is set at the CA Cohesion module level). The SoapResponseBody shows the response truncated to this value.

Result

Specifies 1 or -1.

- 1 indicates that the task of setting the servers status in the CA Cohesion instance executed successfully.
- -1 indicates that the Operator failed.

Reason

Specifies the following reasons:

- Completed—Indicates that the Operator completed successfully.
- Service Operation succeeded. Fault returned—Indicates that the Operator SOAP response body contained a fault message. The fault message is listed in the FaultMessage output field.
- An error message—Indicates that the Operator failed.

FaultMessage

Specifies a fault message, only when the Operator SOAP response body contains a fault. This field is created only when the Operator SOAP response body contains a fault.

Operator Ports

Success

- The Operator finished successfully.
- The Operator succeeds if you set "managed" servers to be managed or set "rejected" servers to be rejected.
- The Operator succeeds even if you enter a server ID that does not exist in the CA Cohesion. You can use the "Get Server by Name" or "Get CI" Operator to validate a server ID before using it in the "Set Managed Status" Operator.

Failure

The Operator fails if you pass a bad CA Cohesion URL, username, and password combination.

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA IT Process Automation Manager User Guide*.

Base Cohesion Interface Operator

The Base Cohesion Interface Operator is a SOAP-based Operator that lets you access any Operator of the CA Cohesion web service. The Operator is the common (base) Operator used to access all CA Cohesion web service functions.



Operator Input Parameters

WSDL Wizard

Allows the user to select SOAP methods by providing the web service WSDL URL.

Webservice URL

Specifies the URL of the CA Cohesion web service. The web service URL value overrides the value specified in the Default Webservice URL field of the CA Cohesion Module properties.

Note: The Webservice URL field or the equivalent module-level field is required even if you specify the web service URL in the input request data.

Cohesion Method

Specifies the name of the CA Cohesion web service method to invoke.

User name

Specifies a valid CA Cohesion user authorized to access CA Cohesion web service functions. The user name value entered overrides the value specified in the Default Webservice URL field of the CA Cohesion Module Properties.

Note: User name field or the equivalent module-level field is required even if you specify the User name in the input request data.

Password

Specifies the user password to access the CA Cohesion web service. The password value overrides the value specified in the Default Webservice Password field of the CA Cohesion Module properties.

Note: The Password field or the equivalent module-level field is required even if you specify the password in the input request data.

Input Source

Specifies the source for the web service input request data. The options are:

- Inline Text
- Preformatted SOAP File
- Expression

Inline Text

Ensures that the input request for an Inline Text source is added. This field is enabled when you select the Inline Text in the Input Source field.

Preformatted Filename

Specifies the path to the file on the Touchpoint host for input source of a preformatted CA Cohesion request file. This field is enabled when you select the Preformatted SOAP File in the Input Source field.

Expression

Specifies the expression for input source of Expression. This field is enabled when you select Expression in the Input Source field.

Note: The input request must be a valid CA Cohesion web service SOAP request. The input request must contain the <credential> tag but the value of this tag is irrelevant as CA IT PAM uses the provided (Operator or module) web service URL, User name, and Password to get a valid CA Cohesion Session ID and assigns it to the <credential> tag before making the SOAP call to the CA Cohesion web service. CA IT PAM either uses a cached Session ID or retrieves a new Session ID from the CA Cohesion server.

Save Request File

Specifies a file to save the outbound web service request (for debugging purposes).

Dynamic Parameters

Parameter style

Specifies the method to update values in the web service request. The options are as follows:

- Macro Expansion
- XPath Assignments

Parameters list

Specifies the dynamic parameters and associated values that the CA Cohesion web service request requires.

Call Results

Save Response File

Specifies the fully qualified path to save the web server response file that the remote web service returned.

Extract SOAP response body first-level elements to individual Dataset

Specifies the extraction of SOAP first-level elements to individual Dataset variables.

Extract SOAP response body to Dataset variable

Specifies the extraction of the SOAP response body in a Dataset Variable local to the Operator.

Additional extracted data

Specifies a list of XPath expressions to extract data from the body of the SOAP response.

Operator Outputs

CohesionSessionID

Specifies the session ID to connect to the CA Cohesion web service. The CA IT PAM Touchpoint running the CA Cohesion Module caches session IDs for subsequent usage. The session ID returned in this case could be a cached session ID or a newly created session ID.

Note: Additional output variables are created depending on the options selected for the Call Results input.

Result

Specifies 1 or -1.

- 1 indicates that the task of calling any Operator of the CA Cohesion web service executed successfully.
- -1 indicates that the Operator failed.

Reason

Specifies the following reasons:

- Completed indicates that the Operator completed successfully.
- An error message indicates that the Operator failed.

Operator Ports

Success

Indicates that the Operator executed successfully.

Failure

- You specified a bad CA Cohesion URL, username, and password combination.
- If the web service SOAP operation fails, check the Reason field for any error messages retrieved from the SOAP response.

Custom Ports

Indicates a custom exit condition.

The Process Designer can define a Boolean expression to define a custom exit link based on the Operator results and the value of variables accessible to Operators in the Process. For more information about creating a custom exit condition, see the *CA Process Automation Manager User Guide*.

Chapter 4: Troubleshooting

This chapter provides troubleshooting symptoms and solutions for the CA Cohesion Module.

This section contains the following topics:

[A CA Cohesion Operator Fails During Execution of a Process](#) (see page 93)
[Diagnosing Issues](#) (see page 95)

A CA Cohesion Operator Fails During Execution of a Process

Valid On Windows and UNIX

Symptom:

A CA Cohesion Operator fails during execution of a Process.

Solution: 1

On Windows, verify that the CA IT PAM Server service is running:

1. Open the Start menu, and click Programs, Administrative Tools, Services.
2. Locate the CA IT PAM Server service in the list to see if it is running.

If the CA IT PAM Server service is stopped, restart it.

If you have recently rebooted your machine and have not configured the CA IT PAM Server service to start when the system starts, start the service manually.

On UNIX, locate the CA IT PAM Installation area, look at the file `c2osvr.pid`, and use `ps` to see if that Process is running.

Solution: 2

Verify that the CA IT PAM user has enough privileges to access Automation Objects and run Processes. For more information, see the *CA IT Process Automation Manager Installation and Configuration Guide*.

Solution: 3

Verify that CA IT PAM is installed properly and that you have the appropriate access rights.

1. Verify that you have privileges to run the CA IT PAM Orchestrator and Agents.

For more information about installation and configuration, see the *CA IT Process Automation Manager Installation and Configuration Guide*.

2. Verify that the CA IT PAM database system is running properly:
 - a. When the CA IT PAM database is installed on a Microsoft SQL Server database system, open a command prompt window and run the sqlcmd command using the following parameters:

```
sqlcmd -S <machine name> -U <itpamuser> -P <itpampwd> -d itpam  
where <itpamuser> and <itpampwd> are the CA IT PAM database user  
and password.
```

- b. After connecting successfully to the CA IT PAM database, run a SQL Server command, for example:

```
Select * from SOAPClientCall  
go
```
 - c. If you are able to connect to the CA IT PAM database, and the previous statements execute successfully, then the database system is running properly; otherwise, check the database login user name and password and retry. If the database login user name and password are correct, then there may be another problem with the database system.

3. Decrease the logging level for Orchestrators and Agents to WARNING or INFO to get more information about the error.
4. Debug the Orchestrator issues using c2o.log and boot.log at <server_install_path>\server/c2o\log location.
 - boot.log contains all messages logged by core components (for example, JBoss) before CA IT PAM starts execution.
 - c2o.log contains all messages logged by all components after CA IT PAM starts execution.

Use the main log file (c2o.log) that contains messages from all the components to debug Agent issues. The c2o.log is at <agent_install_path>\log location. To get more information, do the following:

- Decrease the default logging level for Agent in log4j.xml.
This file is at <agent_install_path>\
.c2orepository\.c2oagentresources\properties location.

FILE and CONSOLE are the logging categories and are set by default to level ERROR. For more information for a category, do the following:

- Change the "threshold" parameter for the required category and decrease the level from ERROR to WARN or INFO.
- Change the "root" category to include the required categories and set the log level to the lowest level specified in any category.
- Decrease the default logging level for Orchestrator in log4j.xml. This XML file is at `<orchestrator_install_path>\server\c2o\conf` location.

Similarly, you can change the Agent logging server, C2OFILE, and CONSOLE logging categories to obtain more log information.

Solution: 4

Validate the Operator parameters. The parameters could be set up incorrectly causing the failure of the Operator.

- Check Operator parameters for correct host/username/password.
- Check the "Execution Settings".
- A valid Touchpoint must be specified in the Target section. If it is specified as an expression, verify that the expression evaluates to a valid Touchpoint.
- Validate the Operator's custom parameters.
- For the Run Command, verify that the path name of the program to run is correct.

Diagnosing Issues

The CA Cohesion Module uses log4j to capture log messages.

If there are issues, set the CA Cohesion Module log4j level to DEBUG in the log4j.xml file located at the following path:

`ITPAM_Installation_path\Domain\server\c2o\conf\log4j.xml`.

1. Set "DEBUG" level in the following section of log4j.xml:

```
<!-- A size based file rolling appender for C2O and JXTA Logs-->
<appender name="C2OFILE"
class="org.jboss.logging.appender.RollingFileAppender">
<errorHandler class="org.jboss.logging.util.OnlyOnceErrorHandler"/>
  <param name="File" value="\${jboss.server.home.dir}/log/c2o.log"/>
  <param name="Threshold" value="DEBUG"/>
  <param name="Append" value="true"/>
  <param name="MaxFileSize" value="50000KB"/>
  <param name="MaxBackupIndex" value="3"/>
  <layout class="org.apache.log4j.PatternLayout">
    <param name="ConversionPattern" value="%d %-5p [%c] [%15.15t]
%m%n"/>
  </layout>
</appender>
```

2. Add the following section in log4j.xml:

```
<category
name="com.optinuity.c2o.service.serviceoperation.cohesionserviceoperati
on.CohesionWrapper">
  <priority value="DEBUG" />
</category>
```

The CA Cohesion Module log messages are captured in the c2o.log file located here: *ITPAM_Installation_path*\Domain\server\c2o\log\c2o.log.

The log messages captured at the INFO (or DEBUG) level are detailed and help in defining the root cause of issues. The CohesionWrapper log message also shows:

Send Request

Contains the SOAP request that CA IT PAM sends to the CA Cohesion web service.

Received Response

Contains the SOAP response that CA IT PAM received from the web service.

You can then issue the same SOAP Request through SoapUI and verify if the CA Cohesion service returns the same SOAP response. Other ways to verify that there is an issue:

- The CA Cohesion Module is also designed to capture any exception or error encountered during an operation and display it to the user in the reason field of the CA Cohesion Operator.

- Consult the CA Cohesion ACM log files for error messages to get more information about the failure. Three different logging systems are available:

CA Cohesion Server Log File

The CA Cohesion Server log file (cohesionServer.log) is located in the base installation directory. If the recommended default location was used to install CA Cohesion ACM, the server log file is located here:

Windows: \Program Files\CA\Cohesion\Server

UNIX: /opt/CA/Cohesion/Server

The log4j.properties file controls the name of the CA Cohesion Server configuration file, its maximum size, and the type of messages logged (ERROR, WARNING, and/or INFO). For more information, see your CA Cohesion ACM documentation.

CA Cohesion Agent Log File

The CA Cohesion Agent log file (agent.log) is located in the base installation directory. If the recommended default location was used to install the CA Cohesion Agent, the agent.log file is located here:

Windows: \Program Files\CA\Cohesion\Agent

UNIX: /opt/CA/Cohesion/Agent

The agent.conf file controls the name of the CA Cohesion Agent log file and the amount and level of agent error and message information that is logged.

Console Log File

If the CA Cohesion Server has been installed as a service on a Windows server, the information that would typically go the console but, instead, goes to the output.txt file. If the recommended default location was used to install the CA Cohesion Server, the output.txt file is located here:
\Program Files\CA\Cohesion\Server.

Appendix A: Examples

This section contains the following topics:

[Sample Method to Create Value Maps in the CA IT PAM Client for the Add CI Operator](#) (see page 99)

[CA Cohesion CI Samples](#) (see page 105)

[Sample ValueMap for the Update CI Operator](#) (see page 139)

Sample Method to Create Value Maps in the CA IT PAM Client for the Add CI Operator

CI information for the Add CI Operator can be described using a ValueMap.

To create a ValueMap in the CA IT PAM Client

1. Add a new variable to the Dataset and select ValueMap as type.
2. Add the appropriate fields to the ValueMap for each type of the CI ValueMap.

To add a field to the ValueMap, right-click Parameters and select Add Parameter.

For each type of CI, you can pass the following types of ValueMaps to the Add CI Operator.

Server CI ValueMap

The Server CI ValueMap should contain the following fields (Required ValueMap Entries):

(Required) id

It must have the value -1.

(Required) type

Specifies a string representing the CI type with the value as Server.

(Required) name

Specifies a string representing the name of the server. If the name is not specified, the CI will be created with a null name.

(Optional) description

Specifies a string representing the description of the server.

(Optional) snapshot

Specifies a string that specifies whether the CI is a snapshot.

- True indicates that the CI is a snapshot.
- False indicates that the CI is not a snapshot.

(Required) attributes

Specifies an array of ValueMaps containing the keys:

Name

Specifies the attribute name.

Value

Specifies the attribute value.

Each attribute name must be a valid server attribute name. You can find all the valid server attributes names in the Server CI's XML representation in [CA Cohesion CI Samples](#) (see page 105), for example:

```
<attributes>
<entry>
  <string>cc_agent_alive</string>
  <string>No</string>
</entry>
...
```

Here, the attribute name is cc_agent_alive and the attribute value is No. The Server attribute: ip_address is required when you add a Server CI.

The following illustration is an example of a ValueMap Server CI that contains the server ID, type, name, and snapshot with seven attributes (each attribute is a ValueMap with a name and value):



Service CI ValueMap

The Service CI ValueMap should contain the following fields (Required ValueMap Entries):

(Required) id

It must have the value -1.

(Required) type

Specifies a string representing the CI type with the value as Service.

(Required) name

Specifies a string representing the name of the service.

(Optional) description

Specifies a string representing the description of the service. If the name is not specified, the CI will be created with a null name.

(Optional) snapshot

Specifies a string that specifies whether the CI is a snapshot.

- True indicates that the CI is a snapshot.
- False indicates that the CI is not a snapshot.

(Required) attributes

Specifies an array of ValueMaps containing the keys:

Name

Specifies the attribute name.

Value

Specifies the attribute value.

The attribute names could be only: "Service Blueprint version" or "Service Blueprint Name".

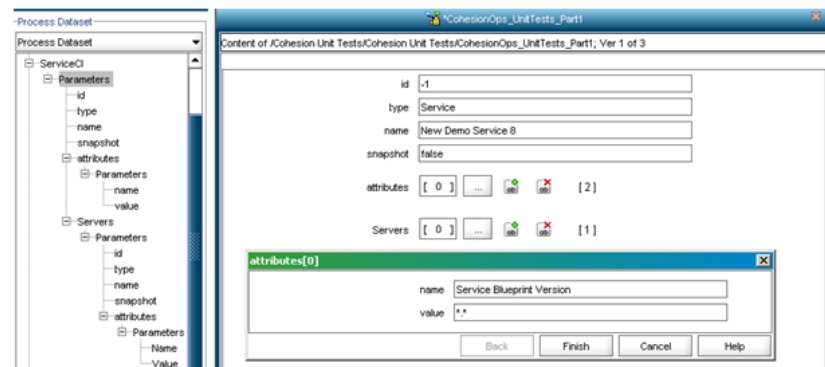
Note: Both of the attributes are required when creating a CI of type Service.

(Required) Servers

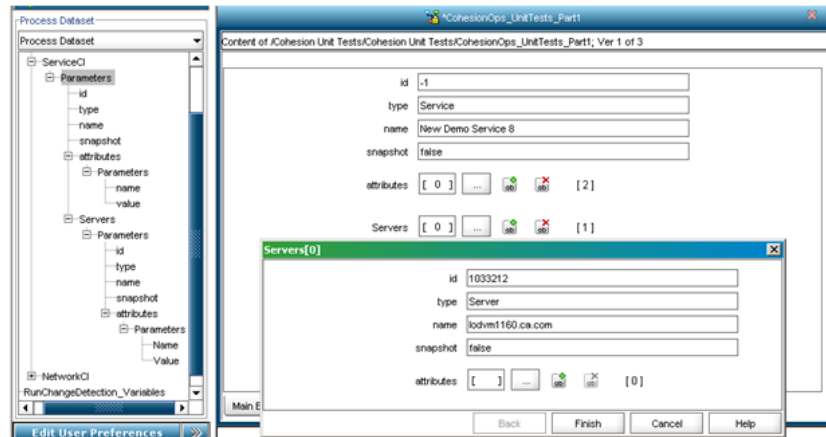
Specifies an array of ValueMaps describing the Server CIs in the service. A Server CI in the servers value map must contain a valid ID representing a Server in the CA Cohesion instance.

Each Server CI in the servers field is a ValueMap. A Server CI in the Servers ValueMap must contain a valid ID representing a server in the CA Cohesion instance.

The following illustrations are an example of a ValueMap Service CI that contains the service ID, type, name, and snapshot with the two service attributes (each attribute is a ValueMap with a name and value), and one server (each server is a ValueMap with ID, type, name, snapshot, and attributes):



Equation 1: ValueMap Service CI Servers



Network CI ValueMap

The Network CI ValueMap should contain the following fields:

(Required) id

It must have the value -1.

(Required) type

Specifies a string representing the CI type with the value as Network.

(Required) name

Specifies a string representing the name of the network. If the name is not specified, the CI is created with a null name.

(Optional) description

Specifies a string representing the description of the network CI.

(Optional) snapshot

Specifies a string with "false" value.

(Optional) attributes

Specifies an array of ValueMaps containing the keys:

Name

Specifies the attribute name.

Value

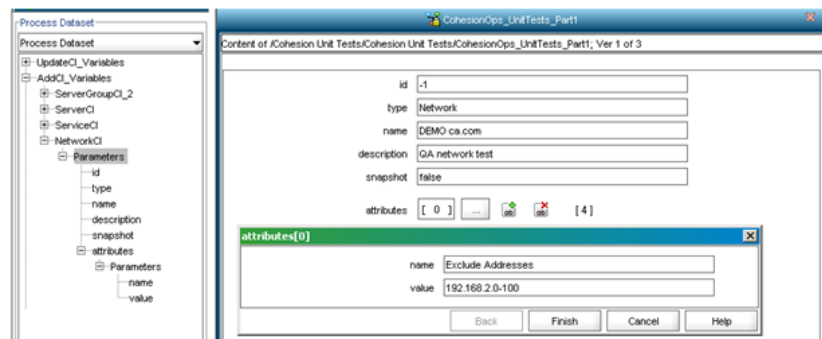
Specifies the attribute value.

Each attribute name has to be a valid Network CI attribute name. You can find all the valid Network attribute names in the Network CI's XML representation in [CA Cohesion CI Samples](#) (see page 105), for example:

```
<attributes>
  <entry>
    <string>Exclude Addresses</string>
    <string>192.168.2.0-100</string>
  </entry>
...
```

Here, the attribute name is Exclude Addresses and the attribute value is 192.168.2.0-100.

The following illustration is an example of a ValueMap named NetworkCI that contains the network ID, type, name, description, and snapshot with four attributes (each attribute is a ValueMap with a name and value):



ServerGroup CI ValueMap

The Network CI ValueMap should contain the following fields:

(Required) id

It must have the value -1.

(Required) type

Specifies a string representing the CI type with the value as ServerGroup.

(Required) name

Specifies a string representing the name of the server group. If the name is not specified, the CI is created with a null name.

(Optional) description

Specifies a string representing the description of the server group.

(Optional) snapshot

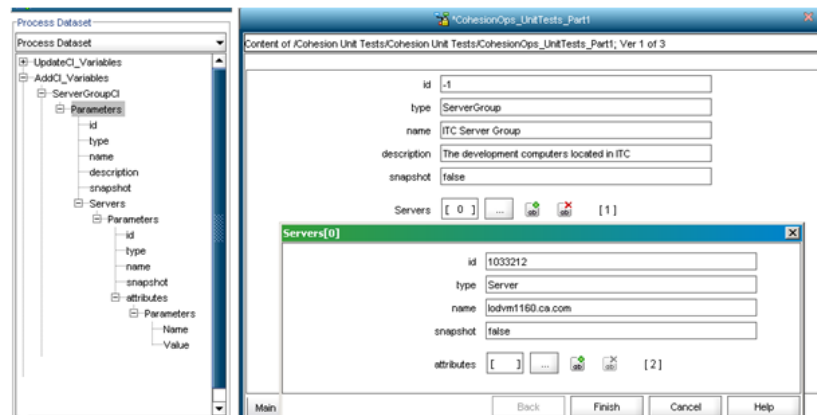
Specifies a string with "false" value.

(Optional) servers

Specifies an array of ValueMaps describing the Server CIs in the servergroup. A Server CI in the servers value map must contain a valid ID representing a Server in the CA Cohesion instance.

Note: Specifying an invalid server ID (that does not exist (in the CA Cohesion instance) in the servers field of the ServerGroup CI ValueMap will not prevent the ServerGroup from being created; however, the nonexistent server ID will not be included in the server group.

The following illustration shows a ValueMap ServerGroupCI that contains the servergroup ID, type, name, description, and snapshot along with one server (each server is a ValueMap with ID, type, name, snapshot, and attributes):



CA Cohesion CI Samples

The CIs in this section are described using the XML representation recognized by the CA Cohesion web service.

Service CI

Sample XML file format for the Service CI:

```
<Service>
  <servers>
    <Server>
      <id>1014620</id>
      <type>Server</type>
      <name>sanna06-xp</name>
      <snapshot>>false</snapshot>
      <attributes>
        <entry>
          <string>virtual</string>

          <string>0</string>
        </entry>
        <entry>
          <string>cc_agent_alive</string>
          <string>No</string>
        </entry>
        <entry>
          <string>agentMode</string>
          <string>service</string>
        </entry>
        <entry>
          <string>device_type</string>
          <string>Server</string>
        </entry>
        <entry>
          <string>cc_agent_port</string>
          <string>0</string>
        </entry>
        <entry>
          <string>cc_agent_instdir</string>
          <string>C:\Program Files\CA\ACM\Agent</string>
        </entry>
        <entry>
          <string>service_type</string>
          <string>0</string>
        </entry>
        <entry>
          <string>cc_agent_pinging</string>
          <string>No</string>
        </entry>
        <entry>
          <string>Business Process</string>
          <null/>
        </entry>
        <entry>
```

```
    <string>os_family</string>
    <string>WIN32</string>
</entry>
<entry>
    <string>service_port</string>
    <string>8063</string>
</entry>
<entry>
    <string>os_type</string>
    <string>Windows XP-WIN32</string>
</entry>
<entry>
    <string>cc_agent_logging</string>
    <string>No</string>
</entry>
<entry>
    <string>host_state</string>
    <string>Active</string>
</entry>
<entry>
    <string>tunnel_port</string>
    <string>0</string>
</entry>
<entry>
    <string>platform_id</string>
    <string>1001627</string>
</entry>
<entry>
    <string>platform_name</string>
    <string>Windows XP (WIN32) 5.1 Service Pack 2 (Build 2600) Intel
x86</string>
</entry>
<entry>
    <string>cc_agent_contactindx</string>
    <string>0</string>
</entry>
<entry>
    <string>creation_time</string>
    <string>10/30/2009 16:53:40 IST</string>
</entry>
<entry>
    <string>domain_name</string>
    <string>local</string>
</entry>
<entry>
    <string>cc_agent_yn</string>
    <string>Yes</string>
</entry>
<entry>
```

```
<string>processor</string>
<string>Intel~x86~</string>
</entry>
<entry>
  <string>host_status</string>
  <string>Managed</string>
</entry>
<entry>
  <string>created_by</string>
  <string>1000815</string>
</entry>
<entry>
  <string>ipv6_address</string>
  <string></string>
</entry>
<entry>
  <string>IT Owner</string>
  <null/>
</entry>
<entry>
  <string>Location</string>
  <null/>
</entry>
<entry>
  <string>Business Owner</string>
  <null/>
</entry>
<entry>
  <string>ipv4_address</string>
  <string>155.35.33.170</string>
</entry>
<entry>
  <string>cc_agent_version</string>
  <string>12.0 Build(Release) of 07:24:00 Oct 9 2009</string>
</entry>
<entry>
  <string>os_version</string>
  <string>5.1 Service Pack 2 (Build 2600)</string>
</entry>
<entry>
  <string>mac_address</string>
  <string>00:23:AE:94:BA:67</string>
</entry>
<entry>
  <string>proxyMode</string>
  <string>none</string>
</entry>
<entry>
  <string>ip_address</string>
```

```
        <string>155.35.33.170</string>
    </entry>
    <entry>
        <string>os_name</string>
        <string>Windows XP</string>
    </entry>
    <entry>
        <string>cc_agent_contact</string>
        <string>10/30/2009 17:02:16 IST</string>
    </entry>
</attributes>
</Server>
</servers>
<id>1001225</id>
<type>Service</type>
<name>nagesh</name>
<snapshot>>false</snapshot>
<attributes>
    <entry>
        <string>Service Blueprint Version</string>
        <string>*.*</string>
    </entry>
    <entry>
        <string>Service Blueprint Name</string>
        <string>CA Cohesion</string>
    </entry>
</attributes>
</Service>
```

Server CI (Without its Components)

Sample XML file format for the Server CI without its components:

```
<Server>
  <id>3280303</id>
  <type>Server</type>
  <name>lodoption1</name>
  <snapshot>>false</snapshot>
  <attributes>
    <entry>
      <string>cc_agent_alive</string>
      <string>No</string>
    </entry>
    <entry>
      <string>Model</string>
      <string>VMware Virtual Platform</string>
    </entry>
    <entry>
      <string>agentMode</string>
      <string>service</string>
    </entry>
    <entry>
      <string>NICs</string>
      <string>[NetworkAdaptor-0: IP Address=10.130.122.33; Physical
Address=00:50:56:B0:02:AB; Subnet Mask=255.255.254.0]</string>
    </entry>
    <entry>
      <string>cc_agent_instmdir</string>
      <string>C:\Program Files\CA\Cohesion\Agent</string>
    </entry>
    <entry>
      <string>service_type</string>
      <string>0</string>
    </entry>
    <entry>
      <string>Architecture</string>
      <string>Intel(R) Pentium(R) III processor</string>
    </entry>
    <entry>
      <string>OS Patch Level</string>
      <string>2</string>
    </entry>
    <entry>
      <string>os_type</string>
      <string>Windows 2003 R2-WIN32</string>
    </entry>
    <entry>
      <string>host_state</string>
      <string>Active</string>
  </attributes>
</Server>
```

```
</entry>
<entry>
  <string>cc_agent_logging</string>
  <string>Yes</string>
</entry>
<entry>
  <string>Number of NICs</string>
  <string>1</string>
</entry>
<entry>
  <string>platform_id</string>
  <string>1021873</string>
</entry>
<entry>
  <string>tunnel_port</string>
  <string>0</string>
</entry>
<entry>
  <string>platform_name</string>
  <string>Windows 2003 R2 (WIN32) 5.2 Service Pack 2 (Build 3790) Intel
x86</string>
</entry>
<entry>
  <string>domain_name</string>
  <string>local</string>
</entry>
<entry>
  <string>processor</string>
  <string>Intel~x86~</string>
</entry>
<entry>
  <string>created_by</string>
  <string>1000218</string>
</entry>
<entry>
  <string>host_status</string>
  <string>Managed</string>
</entry>
<entry>
  <string>Number of Hard Disks</string>
  <string>1</string>
</entry>
<entry>
  <string>HDs</string>
  <string>[DISK-0: Description=VMware Virtual disk SCSI Disk Device SCSI Fixed
hard disk media; Size=107389]</string>
</entry>
<entry>
  <string>IT Owner</string>
```

```
<null/>
</entry>
<entry>
  <string>Virtual Memory</string>
  <string>4299</string>
</entry>
<entry>
  <string>Business Owner</string>
  <null/>
</entry>
<entry>
  <string>Netmask</string>
  <string>255.255.254.0</string>
</entry>
<entry>
  <string>ipv4_address</string>
  <string>10.130.122.33</string>
</entry>
<entry>
  <string>ip_address</string>
  <string>10.130.122.33</string>
</entry>
<entry>
  <string>CD-DVD Drive Model</string>
  <string>NECVMMWar VMware IDE CDR10</string>
</entry>
<entry>
  <string>os_name</string>
  <string>Windows 2003 R2</string>
</entry>
<entry>
  <string>cc_agent_instdate</string>
  <string>08/10/2009 16:12:00 EDT</string>
</entry>
<entry>
  <string>virtual</string>
  <string>1</string>
</entry>
<entry>
  <string>Logical Drives</string>
  <string>[C:: Free Space=80325; Size=102406]</string>
</entry>
<entry>
  <string>BIOS-Firmware Version</string>
  <string>6.00</string>
</entry>
<entry>
  <string>GUID</string>
  <string>58E94D56-5486-DDE8-8CDB-618D89CB03EF</string>
```



```
</entry>
<entry>
  <string>device_type</string>
  <string>Server</string>
</entry>
<entry>
  <string>cc_agent_port</string>
  <string>8063</string>
</entry>
<entry>
  <string>cc_agent_pinging</string>
  <string>Yes</string>
</entry>
<entry>
  <string>Business Process</string>
  <null/>
</entry>
<entry>
  <string>os_family</string>
  <string>WIN32</string>
</entry>
<entry>
  <string>service_port</string>
  <string>8063</string>
</entry>
<entry>
  <string>Manufacturer</string>
  <string>VMware, Inc.</string>
</entry>
<entry>
  <string>cc_agent_contactindx</string>
  <string>0</string>
</entry>
<entry>
  <string>creation_time</string>
  <string>08/10/2009 16:11:08 EDT</string>
</entry>
<entry>
  <string>NIC Details</string>
  <string>[NetworkAdaptor-0: Broadcast Address=10.130.123.255;
DNS=141.202.1.108, 130.200.10.108, 141.202.27.108; Description=VMware Accelerated
AMD PCNet Adapter #2; Gateway=10.130.122.1; IP Address=10.130.122.33; Physical
Address=00:50:56:B0:02:AB; Primary Wins=141.202.109.5; Secondary
Wins=141.202.109.24; Speed=1000; Subnet Mask=255.255.254.0]</string>
</entry>
<entry>
  <string>cc_agent_yn</string>
  <string>Yes</string>
</entry>
```

```
<entry>
  <string>Total Local Storage Capacity</string>
  <string>107389</string>
</entry>
<entry>
  <string>Physical Memory</string>
  <string>2048</string>
</entry>
<entry>
  <string>CPU Speed</string>
  <string>2327</string>
</entry>
<entry>
  <string>Location</string>
  <null/>
</entry>
<entry>
  <string>cc_agent_version</string>
  <string>5.0 Build(Release) of 10:47:20 Jul 11 2008</string>
</entry>
<entry>
  <string>os_version</string>
  <string>5.2 Service Pack 2 (Build 3790)</string>
</entry>
<entry>
  <string>CPU Quantity</string>
  <string>1</string>
</entry>
<entry>
  <string>mac_address</string>
  <string>00:50:56:B0:02:AB</string>
</entry>
<entry>
  <string>proxyMode</string>
  <string>none</string>
</entry>
<entry>
  <string>cc_agent_contact</string>
  <string>05/05/2010 19:04:27 EDT</string>
</entry>
</attributes>
</Server>
```

Server CI (With its Components)

Sample XML file format for the Server CI with its components:

```

<Server>
  <components>
    <Component>
      <id>3280353</id>
      <type>Component</type>
      <name>Log4J</name>
      <snapshot>>false</snapshot>
      <attributes>
        <entry>
          <string>mod_version</string>
          <string></string>
        </entry>
        <entry>
          <string>host_id</string>
          <string>3280303</string>
        </entry>
        <entry>
          <string>mod_category</string>
          <string>Utilities</string>
        </entry>
        <entry>
          <string>mod_instance_of</string>
          <string>9000</string>
        </entry>
        <entry>
          <string>creation_time</string>
          <string>12/17/2009 15:58:19 EST</string>
        </entry>
        <entry>
          <string>mod_qualifier</string>
          <string>C:\Program Files\CA\Cohesion\Server\server</string>
        </entry>
        <entry>
          <string>host_name</string>
          <string>lodoption1</string>
        </entry>
        <entry>
          <string>mod_mgmt_type</string>
          <string>Managed</string>
        </entry>
      </attributes>
    </Component>
    <Component>
      <id>3280359</id>
      <type>Component</type>
      <name>Cohesion Server</name>

```

```
<snapshot>>false</snapshot>
<attributes>
  <entry>
    <string>mod_version</string>
    <string>5.0</string>
  </entry>
  <entry>
    <string>host_id</string>
    <string>3280303</string>
  </entry>
  <entry>
    <string>mod_category</string>
    <string>Cohesion Components</string>
  </entry>
  <entry>
    <string>mod_instance_of</string>
    <string>10000</string>
  </entry>
  <entry>
    <string>creation_time</string>
    <string>12/17/2009 15:58:19 EST</string>
  </entry>
  <entry>
    <string>mod_qualifier</string>
    <string>C:\Program Files\CA\Cohesion\Server</string>
  </entry>
  <entry>
    <string>host_name</string>
    <string>lodoption1</string>
  </entry>
  <entry>
    <string>mod_mgmt_type</string>
    <string>Managed</string>
  </entry>
</attributes>
</Component>
<Component>
  <id>3280458</id>
  <type>Component</type>
  <name>Microsoft SQL Server 2005</name>
  <snapshot>>false</snapshot>
  <attributes>
    <entry>
      <string>mod_version</string>
      <string>9.1.2047 00</string>
    </entry>
    <entry>
      <string>host_id</string>
      <string>3280303</string>
    </entry>
  </attributes>
</Component>
```

```

</entry>
<entry>
  <string>mod_category</string>
  <string>Relational Databases</string>
</entry>
<entry>
  <string>mod_instance_of</string>
  <string>4300</string>
</entry>
<entry>
  <string>creation_time</string>
  <string>12/17/2009 15:56:43 EST</string>
</entry>
<entry>
  <string>mod_qualifier</string>
  <string>C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL</string>
</entry>
<entry>
  <string>host_name</string>
  <string>lodoption1</string>
</entry>
<entry>
  <string>mod_mgmt_type</string>
  <string>Managed</string>
</entry>
</attributes>
</Component>
<Component>
  <id>3280646</id>
  <type>Component</type>
  <name>Microsoft SQL Server - Datafiles</name>
  <snapshot>>false</snapshot>
  <attributes>
    <entry>
      <string>mod_version</string>
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      <string>3280303</string>
    </entry>
    <entry>
      <string>mod_category</string>
      <string>Relational Databases</string>
    </entry>
    <entry>
      <string>mod_instance_of</string>
      <string>4100</string>

```

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Server\MSSQL.1\MSSQL</string>
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        </entry>
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            <string>Cohesion Components</string>
        </entry>
        <entry>
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            <string>12200</string>
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```

```
</entry>
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  <string>lodoption1</string>
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  <string>Managed</string>
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  <id>3280754</id>
  <type>Component</type>
  <name>JDK (Windows)</name>
  <snapshot>>false</snapshot>
  <attributes>
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      <string>1.6.0_05</string>
    </entry>
    <entry>
      <string>host_id</string>
      <string>3280303</string>
    </entry>
    <entry>
      <string>mod_category</string>
      <string>Application Platforms</string>
    </entry>
    <entry>
      <string>mod_instance_of</string>
      <string>16700</string>
    </entry>
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      <string>12/17/2009 15:58:19 EST</string>
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    <entry>
      <string>mod_qualifier</string>
      <string>C:\Program Files\CA\Cohesion\Server\jsdk</string>
    </entry>
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      <string>lodoption1</string>
    </entry>
    <entry>
      <string>mod_mgmt_type</string>
      <string>Managed</string>
    </entry>
  </attributes>
</Component>
</Component>
```

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  <Component>
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    <type>Component</type>
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    <snapshot>>false</snapshot>
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        <string>1.3.1_02</string>
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      <entry>
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        <string>3280303</string>
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        <string>mod_category</string>
        <string>Application Platforms</string>
      </entry>
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        <string>mod_instance_of</string>
        <string>54000</string>
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        <string>lodoption1</string>
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        <string>mod_mgmt_type</string>
        <string>Managed</string>
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<type>Server</type>
<name>lodoption1</name>
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<attributes>
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```



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  <string>Model</string>
  <string>VMware Virtual Platform</string>
</entry>
<entry>
  <string>agentMode</string>
  <string>service</string>
</entry>
<entry>
  <string>NICs</string>
  <string>[NetworkAdaptor-0: IP Address=10.130.122.33; Physical
Address=00:50:56:B0:02:AB; Subnet Mask=255.255.254.0]</string>
</entry>
<entry>
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  <string>C:\Program Files\CA\Cohesion\Agent</string>
</entry>
<entry>
  <string>service_type</string>
  <string>0</string>
</entry>
<entry>
  <string>Architecture</string>
  <string>Intel(R) Pentium(R) III processor</string>
</entry>
<entry>
  <string>OS Patch Level</string>
  <string>2</string>
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<entry>
  <string>os_type</string>
  <string>Windows 2003 R2-WIN32</string>
</entry>
<entry>
  <string>host_state</string>
  <string>Active</string>
</entry>
<entry>
  <string>cc_agent_logging</string>
  <string>Yes</string>
</entry>
<entry>
  <string>Number of NICs</string>
  <string>1</string>
</entry>
<entry>
```

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  <entry>
    <string>tunnel_port</string>
    <string>0</string>
  </entry>
  <entry>
    <string>platform_name</string>
    <string>Windows 2003 R2 (WIN32) 5.2 Service Pack 2 (Build 3790) Intel
x86</string>
  </entry>
  <entry>
    <string>domain_name</string>
    <string>local</string>
  </entry>
  <entry>
    <string>processor</string>
    <string>Intel~x86~</string>
  </entry>
  <entry>
    <string>created_by</string>
    <string>1000218</string>
  </entry>
  <entry>
    <string>host_status</string>
    <string>Managed</string>
  </entry>
  <entry>
    <string>Number of Hard Disks</string>
    <string>1</string>
  </entry>
  <entry>
    <string>HDs</string>
    <string>[DISK-0: Description=VMware Virtual disk SCSI Disk Device SCSI
Fixed hard disk media; Size=107389]</string>
  </entry>
  <entry>
    <string>IT Owner</string>
    <null/>
  </entry>
  <entry>
    <string>Virtual Memory</string>
    <string>4299</string>
  </entry>
  <entry>
    <string>Business Owner</string>
    <null/>
  </entry>
```

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<entry>
  <string>Netmask</string>
  <string>255.255.254.0</string>
</entry>
<entry>
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  <string>10.130.122.33</string>
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<entry>
  <string>ip_address</string>
  <string>10.130.122.33</string>
</entry>
<entry>
  <string>CD-DVD Drive Model</string>
  <string>NECVMMwar VMware IDE CDR10</string>
</entry>
<entry>
  <string>os_name</string>
  <string>Windows 2003 R2</string>
</entry>
<entry>
  <string>cc_agent_instdate</string>
  <string>08/10/2009 16:12:00 EDT</string>
</entry>
<entry>
  <string>virtual</string>
  <string>1</string>
</entry>
<entry>
  <string>Logical Drives</string>
  <string>[C:: Free Space=80325; Size=102406]</string>
</entry>
<entry>
  <string>BIOS-Firmware Version</string>
  <string>6.00</string>
</entry>
<entry>
  <string>GUID</string>
  <string>58E94D56-5486-DDE8-8CDB-618D89CB03EF</string>
</entry>
<entry>
  <string>device_type</string>
  <string>Server</string>
</entry>
<entry>
  <string>cc_agent_port</string>
  <string>8063</string>
</entry>
<entry>
```

```
<string>cc_agent_pinging</string>
<string>Yes</string>
</entry>
<entry>
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  <null/>
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<entry>
  <string>os_family</string>
  <string>WIN32</string>
</entry>
<entry>
  <string>service_port</string>
  <string>8063</string>
</entry>
<entry>
  <string>Manufacturer</string>
  <string>VMware, Inc.</string>
</entry>
<entry>
  <string>cc_agent_contactindx</string>
  <string>0</string>
</entry>
<entry>
  <string>creation_time</string>
  <string>08/10/2009 16:11:08 EDT</string>
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<entry>
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DNS=141.202.1.108, 130.200.10.108, 141.202.27.108; Description=VMware Accelerated
AMD PCNet Adapter #2; Gateway=10.130.122.1; IP Address=10.130.122.33; Physical
Address=00:50:56:B0:02:AB; Primary Wins=141.202.109.5; Secondary
Wins=141.202.109.24; Speed=1000; Subnet Mask=255.255.254.0]</string>
</entry>
<entry>
  <string>cc_agent_yn</string>
  <string>Yes</string>
</entry>
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  <string>107389</string>
</entry>
<entry>
  <string>Physical Memory</string>
  <string>2048</string>
</entry>
<entry>
  <string>CPU Speed</string>
```

```
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    <null/>
  </entry>
  <entry>
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    <string>5.0 Build(Release) of 10:47:20 Jul 11 2008</string>
  </entry>
  <entry>
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    <string>5.2 Service Pack 2 (Build 3790)</string>
  </entry>
  <entry>
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    <string>1</string>
  </entry>
  <entry>
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  </entry>
  <entry>
    <string>proxyMode</string>
    <string>none</string>
  </entry>
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    <string>cc_agent_contact</string>
    <string>12/29/2009 12:07:57 EST</string>
  </entry>
</attributes>
</Server>
```

Component CI

Sample XML format for the Component CI:

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<Component>
  <id>1018974</id>
  <type>Component</type>
  <name>Cohesion Agent (Windows)</name>
  <snapshot>>false</snapshot>
  <attributes>
    <entry>
      <string>mod_version</string>
      <string></string>
    </entry>
    <entry>
      <string>host_id</string>
      <string>1014620</string>
    </entry>
    <entry>
      <string>mod_category</string>
      <string>Cohesion Components</string>
    </entry>
    <entry>
      <string>mod_instance_of</string>
      <string>12200</string>
    </entry>
    <entry>
      <string>mod_qualifier</string>
      <string>C:\Program Files\CA\Cohesion\Agent</string>
    </entry>
    <entry>
      <string>creation_time</string>
      <string>11/19/2009 12:18:08 IST</string>
    </entry>
    <entry>
      <string>host_name</string>
      <string>sanna06-xp</string>
    </entry>
    <entry>
      <string>mod_mgmt_type</string>
      <string>Inventoried</string>
    </entry>
  </attributes>
</Component>
```

ServerGroup CI

Sample XML format for the ServerGroup CI:

```
<ServerGroup>
  <servers>
    <Server>
      <id>1033212</id>
      <type>Server</type>
      <name>lodvm1160.ca.com</name>
      <snapshot>>false</snapshot>
      <attributes>
        <entry>
          <string>cc_agent_alive</string>
          <string>No</string>
        </entry>
        <entry>
          <string>Model</string>
          <string>VMware Virtual Platform</string>
        </entry>
        <entry>
          <string>agentMode</string>
          <string>service</string>
        </entry>
        <entry>
          <string>NICs</string>
          <string>[NetworkAdaptor-0: IP Address=10.130.127.55; Physical
Address=00:50:56:B0:44:58; Subnet Mask=255.255.254.0]</string>
        </entry>
        <entry>
          <string>cc_agent_instdir</string>
          <string>C:\Program Files\CA\Cohesion\Agent</string>
        </entry>
        <entry>
          <string>service_type</string>
          <string>0</string>
        </entry>
        <entry>
          <string>Architecture</string>
          <string>Intel(R) Pentium(R) III processor</string>
        </entry>
        <entry>
          <string>OS Patch Level</string>
          <string>2</string>
        </entry>
        <entry>
          <string>os_type</string>
          <string>Windows 2003 R2-WIN32</string>
        </entry>
      </attributes>
    </Server>
  </servers>
</ServerGroup>
```

```

        <string>host_state</string>
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    </entry>
    <entry>
        <string>cc_agent_logging</string>
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    </entry>
    <entry>
        <string>Number of NICs</string>
        <string>1</string>
    </entry>
    <entry>
        <string>platform_id</string>
        <string>1021873</string>
    </entry>
    <entry>
        <string>tunnel_port</string>
        <string>0</string>
    </entry>
    <entry>
        <string>platform_name</string>
        <string>Windows 2003 R2 (WIN32) 5.2 Service Pack 2 (Build 3790) Intel
x86</string>
    </entry>
    <entry>
        <string>domain_name</string>
        <string>local</string>
    </entry>
    <entry>
        <string>processor</string>
        <string>Intel~x86~</string>
    </entry>
    <entry>
        <string>created_by</string>
        <string>1000218</string>
    </entry>
    <entry>
        <string>host_status</string>
        <string>Managed</string>
    </entry>
    <entry>
        <string>Number of Hard Disks</string>
        <string>1</string>
    </entry>
    <entry>
        <string>HDs</string>
        <string>[DISK-0: Description=VMware Virtual disk SCSI Disk Device SCSI
Fixed hard disk media; Size=21467]</string>
    </entry>

```



```
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  <string>Netmask</string>
  <string>255.255.254.0</string>
</entry>
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  <string>10.130.127.55</string>
</entry>
<entry>
  <string>ip_address</string>
  <string>10.130.127.55</string>
</entry>
<entry>
  <string>CD-DVD Drive Model</string>
  <string>NECVMMwar VMware IDE CDR10</string>
</entry>
<entry>
  <string>os_name</string>
  <string>Windows 2003 R2</string>
</entry>
<entry>
  <string>cc_agent_instdate</string>
  <string>03/31/2009 18:49:52 EDT</string>
</entry>
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  <string>0</string>
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<entry>
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  <string>[C:: Free Space=6049; Size=20465]</string>
</entry>
<entry>
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  <string>6.00</string>
</entry>
<entry>
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  <string>3D703050-3CFD-7F30-B983-ABAB2E23D1AF</string>
</entry>
<entry>
  <string>device_type</string>
  <string>Server</string>
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<entry>
```

```

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        <string>0</string>
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        <string>Yes</string>
    </entry>
    <entry>
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        <string>WIN32</string>
    </entry>
    <entry>
        <string>service_port</string>
        <string>8063</string>
    </entry>
    <entry>
        <string>Manufacturer</string>
        <string>VMware, Inc.</string>
    </entry>
    <entry>
        <string>cc_agent_contactindx</string>
        <string>0</string>
    </entry>
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        <string>03/31/2009 18:34:06 EDT</string>
    </entry>
    <entry>
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DNS=141.202.1.108, 130.200.10.108, 141.202.27.108; Description=VMware Accelerated
AMD PCNet Adapter #2; Gateway=10.130.126.1; IP Address=10.130.127.55; Physical
Address=00:50:56:B0:44:58; Primary Wins=141.202.109.5; Secondary
Wins=141.202.109.24; Speed=1000; Subnet Mask=255.255.254.0]</string>
    </entry>
    <entry>
        <string>cc_agent_yn</string>
        <string>Yes</string>
    </entry>
    <entry>
        <string>Total Local Storage Capacity</string>
        <string>21467</string>
    </entry>
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        <string></string>
    </entry>
    <entry>
        <string>Physical Memory</string>

```

```
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    <string>CPU Speed</string>
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  <entry>
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  </entry>
  <entry>
    <string>os_version</string>
    <string>5.2 Service Pack 2 (Build 3790)</string>
  </entry>
  <entry>
    <string>CPU Quantity</string>
    <string>1</string>
  </entry>
  <entry>
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  </entry>
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    <string>05/04/2010 18:19:05 EDT</string>
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  <type>Server</type>
  <name>lodoption1</name>
  <snapshot>>false</snapshot>
  <attributes>
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      <string>cc_agent_alive</string>
      <string>No</string>
    </entry>
    <entry>
      <string>Model</string>
      <string>VMware Virtual Platform</string>
    </entry>
    <entry>
      <string>agentMode</string>
      <string>service</string>
    </entry>
  </attributes>
</Server>
```

```
</entry>
<entry>
  <string>NICs</string>
  <string>[NetworkAdaptor-0: IP Address=10.130.122.33; Physical
Address=00:50:56:B0:02:AB; Subnet Mask=255.255.254.0]</string>
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  <string>C:\Program Files\CA\Cohesion\Agent</string>
</entry>
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  <string>service_type</string>
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  <string>Architecture</string>
  <string>Intel(R) Pentium(R) III processor</string>
</entry>
<entry>
  <string>OS Patch Level</string>
  <string>2</string>
</entry>
<entry>
  <string>os_type</string>
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</entry>
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  <string>1</string>
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  <string>1021873</string>
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<entry>
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  <string>0</string>
</entry>
<entry>
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```

```
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x86</string>
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  <string>local</string>
</entry>
<entry>
  <string>processor</string>
  <string>Intel~x86~</string>
</entry>
<entry>
  <string>created_by</string>
  <string>1000218</string>
</entry>
<entry>
  <string>host_status</string>
  <string>Managed</string>
</entry>
<entry>
  <string>Number of Hard Disks</string>
  <string>1</string>
</entry>
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  <string>HDS</string>
  <string>[DISK-0: Description=VMware Virtual disk SCSI Disk Device SCSI
Fixed hard disk media; Size=107389]</string>
</entry>
<entry>
  <string>IT Owner</string>
  <null/>
</entry>
<entry>
  <string>Virtual Memory</string>
  <string>4299</string>
</entry>
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  <string>Business Owner</string>
  <null/>
</entry>
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</entry>
<entry>
```

```
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  <string>10.130.122.33</string>
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<entry>
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  <string>NECVMMwar VMware IDE CDR10</string>
</entry>
<entry>
  <string>os_name</string>
  <string>Windows 2003 R2</string>
</entry>
<entry>
  <string>cc_agent_instdate</string>
  <string>08/10/2009 16:12:00 EDT</string>
</entry>
<entry>
  <string>virtual</string>
  <string>1</string>
</entry>
<entry>
  <string>Logical Drives</string>
  <string>[C:: Free Space=80325; Size=102406]</string>
</entry>
<entry>
  <string>BIOS-Firmware Version</string>
  <string>6.00</string>
</entry>
<entry>
  <string>GUID</string>
  <string>58E94D56-5486-DDE8-8CDB-618D89CB03EF</string>
</entry>
<entry>
  <string>device_type</string>
  <string>Server</string>
</entry>
<entry>
  <string>cc_agent_port</string>
  <string>8063</string>
</entry>
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  <string>cc_agent_pinging</string>
  <string>Yes</string>
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<entry>
  <string>Business Process</string>
  <null/>
</entry>
<entry>
  <string>os_family</string>
```

```
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<entry>
  <string>service_port</string>
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</entry>
<entry>
  <string>Manufacturer</string>
  <string>VMware, Inc.</string>
</entry>
<entry>
  <string>cc_agent_contactindx</string>
  <string>0</string>
</entry>
<entry>
  <string>creation_time</string>
  <string>08/10/2009 16:11:08 EDT</string>
</entry>
<entry>
  <string>NIC Details</string>
  <string>[NetworkAdaptor-0: Broadcast Address=10.130.123.255;
DNS=141.202.1.108, 130.200.10.108, 141.202.27.108; Description=VMware Accelerated
AMD PCNet Adapter #2; Gateway=10.130.122.1; IP Address=10.130.122.33; Physical
Address=00:50:56:B0:02:AB; Primary Wins=141.202.109.5; Secondary
Wins=141.202.109.24; Speed=1000; Subnet Mask=255.255.254.0]</string>
</entry>
<entry>
  <string>cc_agent_yn</string>
  <string>Yes</string>
</entry>
<entry>
  <string>Total Local Storage Capacity</string>
  <string>107389</string>
</entry>
<entry>
  <string>Physical Memory</string>
  <string>2048</string>
</entry>
<entry>
  <string>CPU Speed</string>
  <string>2327</string>
</entry>
<entry>
  <string>Location</string>
  <null/>
</entry>
<entry>
  <string>cc_agent_version</string>
  <string>5.0 Build(Release) of 10:47:20 Jul 11 2008</string>
```

```
</entry>
<entry>
  <string>os_version</string>
  <string>5.2 Service Pack 2 (Build 3790)</string>
</entry>
<entry>
  <string>CPU Quantity</string>
  <string>1</string>
</entry>
<entry>
  <string>mac_address</string>
  <string>00:50:56:B0:02:AB</string>
</entry>
<entry>
  <string>proxyMode</string>
  <string>none</string>
</entry>
<entry>
  <string>cc_agent_contact</string>
  <string>05/05/2010 19:04:27 EDT</string>
</entry>
</attributes>
</Server>
</servers>
<id>7655493</id>
<type>ServerGroup</type>
<name>demo server group</name>
<description></description>
<snapshot>>false</snapshot>
</ServerGroup>
```


Network CI

Sample XML file format for the Network CI:

```
<Network>
  <id>1000211</id>
  <type>Network</type>
  <name>Network Local to Cohesion</name>
  <description>Default Network for Cohesion</description>
  <snapshot>>false</snapshot>
  <attributes>
    <entry>
      <string>Exclude Addresses</string>
      <string></string>
    </entry>
    <entry>
      <string>CIDR Mask</string>
      <string>-1</string>
    </entry>
    <entry>
      <string>IP Address</string>
      <string>10.130.122.0</string>
    </entry>
    <entry>
      <string>Subnet Mask</string>
      <string>255.255.255.0</string>
    </entry>
  </attributes>
</Network>
```

User CI

Sample XML file format for the User CI Operator:

```
<User>
  <firstname>Michael</firstname>
  <middlename></middlename>
  <lastname>Scott</lastname>
  <userid>mscott03</userid>
  <password>00w0Fnjw0umos0IxpFjsdBapWro=</password>
  <email>cohesion_user@ca.com</email>
  <status>2</status>
  <roles>
    <string>Super User</string>
  </roles>
  <id>1000231</id>
  <type>User</type>
  <name> mscott03</name>
  <snapshot>>false</snapshot>
  <date>04/15/2010 18:28:05 EDT</date>
</User>
```

Blueprint CI

Sample XML file format for the Blueprint CI:

```
<Blueprint>
  <id>72500</id>
  <type>Blueprint</type>
  <name>Solaris</name>
  <description>Solaris Operating System</description>
  <snapshot>>false</snapshot>
  <attributes>
    <entry>
      <string>platform</string>
      <string>Solaris</string>
    </entry>
    <entry>
      <string>mod_version</string>
      <string>[25].*</string>
    </entry>
    <entry>
      <string>mod_category</string>
      <string>Operating Systems</string>
    </entry>
    <entry>
      <string>family</string>
      <string>*</string>
    </entry>
    <entry>
      <string>discovery</string>
      <string>1</string>
    </entry>
    <entry>
      <string>release_version</string>
      <string>2.0.0</string>
    </entry>
  </attributes>
</Blueprint>
```

Sample ValueMap for the Update CI Operator

The CI ValueMap for the Update CI Operator is similar to the CI ValueMap defined for the Add CI Operator. The only difference is that the ValueMap for the Update CI Operator must contain a field named "id" representing the CI identifier in the CA Cohesion instance, while in Add CI, the "id" field must be set to "-1".

Index

A

- Add CI Operator
 - CA Cohesion Add CI Parameters • 16
 - Operator Outputs • 18
 - Operator Ports • 21
 - Run Discovery Profile Operator
- CA Cohesion Run Discovery Profile Parameters • 41
- Operator Outputs • 42
- Operator Ports • 43
- Add CIs Operator
 - Operator Ports • 21
- Add Servers to Service Operator
 - Operator Input Parameters • 81
 - Operator Outputs • 82
 - Operator Ports • 83

B

- Base Cohesion Interface Operator
 - Call Results • 91
- Operator Ports • 92
 - Dynamic Parameters • 91
 - Operator Input Parameters • 89
 - Operator Outputs • 91

C

- CA Cohesion Connection Parameters • 27
- CA Cohesion Module
 - Add Servers to Service Operator • 81
 - Base Cohesion Interface Operator • 89
 - CA Get Server By Name Operator • 68
 - CI Operator • 16, 22, 25, 31
 - Get Service By Name Operator • 72
 - Get Service Host Tier Operator • 76
 - Get Version Operator • 66
 - Run Change Detection Operator • 34
 - Run Compare Operator • 51
 - Run Compliance Operator • 58
 - Run Discovery Profile Operator • 41
 - Run Management Profile Operator • 44
 - Run Network Discovery Profile Operator • 48
 - Run Script Operator • 84
 - Run Snapshot Operator • 62
 - Set Managed Status Operator • 86

D

- Delete CIs Operator
 - CA Cohesion Delete CIs Parameters • 22
 - Operator Outputs • 23
 - Operator Ports • 24

E

- Examples
 - Sample Method to Create ValueMaps • 99
 - Sample ValueMap for the Update CI Operator • 139

G

- Get CI Operator
 - CA Cohesion Get CI Parameters • 25
 - Operator Outputs • 27
 - Operator Ports • 30
- Get Server By Name Operator
 - CA Cohesion Get Server by Name Parameters • 69
 - Operator Outputs • 70
 - Operator Ports • 71
- Get Service By Name Operator
 - CA Cohesion Get Service by Name Parameters • 72
 - Operator Ports • 75
- Get Service Host Tier Operator
 - CA Cohesion Get Service by Host Tier • 76
 - Operator Ports • 78
 - Operator Outputs • 77
- Get Version Operator
 - CA Cohesion Get Version Parameters • 67
 - Operator Outputs • 67
 - Operator Ports • 68

O

- Overview
 - CA Cohesion Connector • 9
 - Intended Audiences • 9
 - Terminology • 10

R

- Run Change Detection Operator

-
- CA Cohesion Run Change Detection
 - Parameters • 35
 - Filters • 38
 - Operator Outputs • 39
 - Operator Ports • 40
 - Run Compare Operator
 - CA Cohesion Run Compare Parameters • 52
 - Filters • 55
 - Operator Outputs • 56
 - Operator Ports • 57
 - Run Compliance Operator
 - CA Cohesion Run Compliance Parameters • 58
 - Filter • 60
 - Operator Outputs • 60
 - Operator Ports • 61
 - Run Management Profile Operator
 - CA Cohesion Run Management Profile Parameters • 45
 - Operator Outputs • 46
 - Operator Ports • 47
 - Run Network Discovery Profile Operator
 - CA Cohesion Run Network Discovery Profile Parameters • 49
 - Operator Outputs • 50
 - Operator Ports • 47
 - Run Script Operator
 - Input Parameters • 84
 - Operator Outputs • 85
 - Operator Ports • 86
 - Run Snapshot Operator
 - CA Cohesion Run Snapshot Parameters • 62
 - Operator Outputs • 64
 - Operator Ports • 66
 - CA Cohesion Update CI Parameters • 31
 - Operator Outputs • 33
 - Operator Ports • 34

S

- Set Managed Status Operator
 - Operator Input Parameters • 86
 - Operator Outputs • 87
 - Operator Ports • 88

T

- Troubleshooting
 - Diagnosing Issues • 95
 - z/OS Operators Fail During Execution of a Process • 93

U

- Update CI Operator