

# CA Automation Suite for Clouds Base Configuration

## Service Provider Guide

Release 01.7



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## CA Technologies Product References

This documentation set references the following CA Technologies products and components:

- CA Service Catalog
- CA Process Automation
- CA Embedded Entitlements Manager (CA EEM)
- CA Server Automation
- CA Business Intelligence
- CA IT Client Manager

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# Contents

---

## Chapter 1: Introduction 7

## Chapter 2: Administer Users and Profiles 9

User Onboarding .....	10
Edit Profiles .....	11
Add Users to Service Groups .....	12
Request Access to Service Groups .....	13

## Chapter 3: Chargeback Services 15

Create a Chargeback Service Offering Using VM Template .....	16
Create a Chargeback Service Offering Using Reservation Template .....	18
(Optional) Change the Image of a Service Option Group .....	20
Example of a Consuming Service .....	21
Configure Chargeback in CA Server Automation .....	22
Configure Email Notifications in CA Server Automation .....	23
Configure Resource Pool Allocation in CA Server Automation .....	24
Configure Email Notifications in CA Service Catalog .....	25
Configure Chargeback in CA Service Catalog .....	25
Configure Clone/Snapshot in CA Service Catalog .....	26
Provision VM - Set Reservation to Ready Automatically CA Service Catalog .....	28
How to Set Up and Run Report on Cost Centers .....	29
Add Cost Center and Department Details .....	30
Generate Invoice On-Demand .....	31
Run Report Builder .....	32
Add Secondary Owners to Local Administrator Group .....	33
Configure Super User in CA Server Automation .....	33
Add Secondary Owners to Local Administrator Group .....	34
Configure Request Management in CA Service Catalog .....	34

## Chapter 4: Configure and Provision the Datastore 37

Configure Enhanced Storage Policy Details .....	38
Configure Storage .....	39
Configure Storage Policy Mapping .....	39
Configure Storage Charge Back .....	40
Provision the Datastore .....	40

---

Deprovision the Datastore .....	41
---------------------------------	----

<b>Chapter 5: Configure Network Settings</b>	<b>43</b>
----------------------------------------------	-----------

vSwitch Architecture .....	43
Review the Prerequisites.....	44
Define Network Address Pools.....	44
Enable VLANs .....	45

<b>Chapter 6: Enable Primary Disk Extension Support</b>	<b>47</b>
---------------------------------------------------------	-----------

Review the Prerequisites.....	48
Import sshremoteejectool.jar Utility.....	48
Verify LinuxAdmin Parameters in ASC_GlobalDataset for VMware ESX.....	49
Update the sudoers File .....	50

<b>Chapter 7: Access and Run Reports</b>	<b>51</b>
------------------------------------------	-----------

<b>Chapter 8: Customize VM Name</b>	<b>53</b>
-------------------------------------	-----------

# Chapter 1: Introduction

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This guide describes the processes for a Service Provider to administer CA Automation Suite for Clouds Base Configuration. Your responsibilities require you to:

- Manage the users and their profiles.
- Configure Chargeback Services.
- Configure enhanced storage policy and use them in creating new datastores.
- Configure CA Automation Suite for Clouds templates.
- Configure network settings in CA Server Automation.
- Access and run reports.
- Configure cost of resources.





# Chapter 2: Administer Users and Profiles

---

As a Service Provider, you manage users and their profiles in the system. Before you can manage users and their profiles, you must import users from CA EEM or other external directories. You can use the syncuputil.bat file to import users in bulk. You need to import users only one time.

For more information about running the utility, see the section Specify the Configuration File Properties, in the CA Service Catalog Integration Guide.

After you import users, you can manage the service groups to which the users are assigned. By default, only Service Providers and Approving Managers have rights to edit user profiles (other than their own) and to add users to groups.

The self-service portal allows you to manage users, profiles, and service groups. The portal is accessible from CA Service Catalog with the URL and your credentials.

Use the self-service portal to navigate to User and Access Management.

**Follow these steps:**

1. Log in to CA Service Catalog.

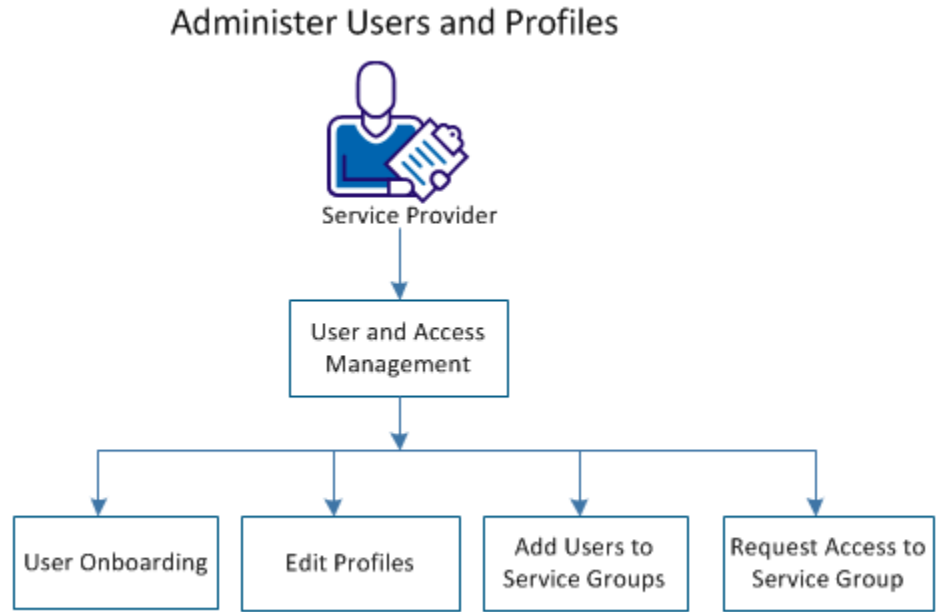
2. Click Requests.

The available services list opens.

3. Click CA Automation Suite for Clouds, Foundation Management Services, User and Access Management.

The User and Access Management page opens.

The following diagram illustrates how a provider can manage users.



Perform the following functions:

- [User Onboarding](#) (see page 10).
- [Edit Profiles](#) (see page 11).
- [Add Users to Service Groups](#) (see page 12).
- [Request Access to Service Groups](#) (see page 13).

## User Onboarding

You add users to CA Automation Suite for Clouds using the User Onboarding form.

**Follow these steps:**

1. Access User and Access Management.
2. Click User Onboarding.

The User Onboarding form opens.

3. Complete the User, Contact, and Organization Details and verify that you completed the required fields at a minimum.

**Note:** The Organization that you select determines the templates available to the user.

4. Click Add to Cart to continue adding more requests to the cart.  
The request is added to the cart.
5. Click Check Out when you complete adding the requests.  
The Cart Check Out page opens and the reservation cost displays in the My Selections pane. Click the request and verify the request details before submitting your request.
6. Click Save and Submit Cart.  
A confirmation displays indicating that your request was submitted. The My Recent Requests pane updates showing your new and previous requests. This update can take several seconds.  
  
This request does not require approval.

## Edit Profiles

You can edit the profiles of other users. By default, only Service Providers and Approving Managers have rights to edit user profiles and to add users to groups. You can edit your own profile using the Edit My Profile link.

### Follow these steps:

1. Access User and Access Management.
2. Click Edit User Profile.  
The Edit User Profile form opens.
3. Click the magnifying glass icon to search a user and enter the User ID in the Lookup User field.  
A list of users appears.
4. Select a user and click OK.  
The Edit User Profile form updates with the selected user information.
5. Update the fields.  
**Note:** You cannot edit the First Name, Last Name, User ID, or Organization of the user.
6. Click Add to Cart to continue adding more requests to the cart.  
The request is added to the cart.
7. Click Check Out when you complete adding the requests.  
The Cart Check Out page opens and the reservation cost displays in the My Selections pane. Click the request and verify the request details before submitting your request.

8. Click Save and Submit Cart.

A confirmation displays indicating that your request was submitted. The My Recent Requests pane updates showing your new and previous requests.

User profile changes do not require approval and your changes take effect immediately.

## Add Users to Service Groups

The service groups determine the access right an user has to the service offerings.

Refer to the group\_service.properties located in %USM\_HOME% folder for all offerings to groups mapping.

### Follow these steps:

1. Access User and Access Management.

2. Click Add User to Service Group.

The User to Service Group form opens.

3. (Optional) Select the Starts With or Wildcard option and type the search string in the Select User field. This filters the users that appear in the Select User drop-down list.

4. Select a user from the drop-down list.

The Subscribed Groups and Subscribe to Group panes populate.

5. Add or remove the user from service groups using the arrows.

6. Click Add to Cart to continue adding more requests to the cart.

The request is added to the cart.

7. Click Check Out when you complete adding the requests.

The Cart Check Out page opens and the reservation cost displays in the My Selections pane. Click the request and verify the request details before submitting your request.

8. Click Save and Submit Cart.

A confirmation displays indicating that your request was submitted. The My Recent Requests pane updates showing your new and previous requests.

Adding users to service groups does not require approval. Your changes take effect immediately.

## Request Access to Service Groups

The service groups determine the access right an user has to the service offerings.

**Follow these steps:**

1. Access User and Access Management.
2. Click Request Access to Service Group.

The Request Access to Service Group page opens with the User ID field populated with your ID. The Belongs to Group(s) field displays the groups that you currently belong to.

3. Add or remove yourself from service groups using the arrows.
4. Click Add to Cart to continue adding more requests to the cart.

The request is added to the cart.

5. Click Check Out when you complete adding the requests.

The Cart Check Out page opens and the reservation cost displays in the My Selections pane. Click the requests and verify the request details before submitting your request.

6. Click Save and Submit Cart.

A confirmation displays indicating that your request was submitted. The My Recent Requests pane updates showing your new and previous requests. This update can take several seconds.



# Chapter 3: Chargeback Services

---

CA Automation Suite for Clouds supports allocation-based billing to charge the Service Consumer for the services they use. As a Service Provider (Administrator), you create service offerings for your Service Consumers. This scenario describes how you can create a service offering using templates. Service Consumers can then consume a service, which is presented as an example in this scenario. The scenario also covers how you can generate invoice and can build reports.

Currently, CA Automation Suite for Clouds solution supports the following services for chargeback services on the VMware ESX cartridge:

- Service Offering Using Reservation Template

This offering allows you to publish services that Service Consumers can consume to provision virtual machines using the Reservation Manager (SSRM) reservation template. As a Service Provider, you have an option to preset the cost and reservation template for the services that can be published.

- Extend Template Reservation

This offering allows Service Consumers to extend reservations that are made using the published *Service Offering Using Reservation Template*.

- Return Template Reservation

This offering allows Service Consumers to return reservations that are made using the published *Service Offering Using Reservation Template*.

- Service Offering Using VM Template

This offering allows you to publish services that Service Consumers can consume to provision virtual machines using the SSRM VM template. As a Service Provider, you have an option to preset the cost, CPU, memory, disk, and VM template for the services that can be published.

- Extend VM Reservation

This offering allows Service Consumers to extend reservations that are made using the published *Service Offering Using VM Template*.

- Return VM Reservation

This offering allows Service Consumers to return VM reservations that are made using the published *Service Offering Using VM Template*.

## Create a Chargeback Service Offering Using VM Template

The following procedure describes how you create a service offering using VM template and later the Service Consumer can consume this service.

**Follow these steps:**

1. Log in to CA Service Catalog.
2. Click Request, CA Automation Suite for Clouds, Server Automation Services.  
The Server Automation Services page opens.
3. Click Chargeback under VMware ESX Management.  
A list of all chargeback services appears.
4. Click Service Offering Using VM Template.  
A form opens.
5. Complete the following information to create a service offering:

**Service Details**

Specifies the details of the service.

**Name**

Specifies a name for the service.

**Description**

Specifies the description of the service.

**Icon**

Specifies an image to the service. Click Select Image to select the image from the %USM\_HOME%\filestore\images\offerings folder.

**Folder**

Specifies the location where the published service appears.



## Service Packages

Select the organization name from the drop-down menu, click + to add a new row to provide package details. You can specify the cost of components and can save the details. If you have more than one package to be associated with the current service then each package will be represented as independent service option group after you publish the service. To add more packages click + again and complete the required information.

Name	Description	Template	Resource P...	Base Cost	CPUs	Memory(GB)	Storage(GB)	Storage Co...
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Buttons: + Add, Save, Remove

Page 1 of 1 | Displaying 1 - 1 of 1

Complete the following to add a package:

### Name

Specifies a name for the package. Type a name for the package.

### Description

Specifies a description for the package name.

### Template

Specifies the SSRM VM template to use.

### Resource Pool

Specifies the name of resource pool to be used for VM provisioning.

### Base Cost

Specifies the cost for the reservation.

### CPUs

Specifies the number of CPUs for the reservation.

### Memory (GB)

Specifies the memory size in GB.

### Storage (GB)

Specifies the predefined size of primary storage in GB.

### Storage Cost (Per GB)

Specifies the cost for 1 GB of storage space.

**Note:** Optionally, to delete an item from the package details list, select, and click Remove.

### Permissions

Select the user groups to grant access to the service. You can search for the group name and then add the required groups to the list.

**Note:** Before you submit the request, make sure that you select all the required package items from the list.

6. Click Add to Cart to continue adding more requests to the cart.

The request is added to the cart.

7. Click Check Out when you complete adding the requests.

8. Click Save and Submit.

You have enabled your Service Consumer to request a new reservation using the new service offering.

## Create a Chargeback Service Offering Using Reservation Template

The following procedure describes how you create Service Offering Using Reservation Template and which enables the Service Consumer to request a new reservation.

### Follow these steps:

1. Log in to CA Service Catalog.
2. Click Request, CA Automation Suite for Clouds, Server Automation Services.  
The Server Automation Services page opens.
3. Click Chargeback under VMware ESX Management.  
A list of all chargeback services appears.
4. Click Service Offering Using Reservation Template.  
A form opens.
5. Complete the following information to create a service offering:

#### Service Details

Specifies the details of the service.

#### Name

Specifies a name for the service.

**Description**

Specifies the description of the service.

**Icon**

Specifies an image to the service. Click *Select Image* to select the image from the %USM\_HOME%\filestore\images\offerings folder.

**Folder**

Specifies the location where the published service appears.

**Service Packages**

Select the organization name from the drop-down menu, click + to add a new row to provide package details. You can specify the cost of components and can save the details. If you have more than one package to be associated with the current service then each package will be represented as independent service option group after you publish the service. To add more packages click + again and complete the required information.

Name	Description	Template	Cost

Buttons: Add, Save, Remove

Page 1 of 1 | Displaying 1 - 1 of 1

Complete the following package information:

**Name**

Specifies a name for the package.

**Description**

Specifies a description for the package name.

**Template**

Specifies the SSRM reservation template to use.

**Cost**

Specifies the cost for the reservation template.

**Note:** Optionally, to delete an item from the package details list, select, and click Remove.

**Permissions**

Select the user groups to grant access to the service. You can search for the group name and then add the required groups to the list.

**Note:** Before you submit the request, make sure that you select all the required package items from the list.

6. Click Add to Cart to continue adding more requests to the cart.

The request is added to the cart.

7. Click Check Out when you complete adding the requests.

8. Click Save and Submit.

You have enabled your Service Consumer to request a new reservation using the new service offering.

## (Optional) Change the Image of a Service Option Group

Optionally, you can change any of the Service Option Group image that is listed under the Service Offering page.

### **Follow these steps:**

1. Log in to CA Service Catalog.
2. Click Catalog, Service Offerings.
3. Click the Option Group tab.

4. Select a service option group from the list.

The service option group page for the selected service opens.

5. Click the Definition tab.

6. Click the Edit button.

A new page opens with the details of the service option group.

7. Click the Edit Description button and perform the following steps:

- a. Remove the existing image.
- b. Select an image of your choice from the available images.
- c. Verify that the Rich Display Text check box is selected.

8. Click Update.

9. Click Save Selection from the service option group page.

The updated image appears on the selected service option group.

## Example of a Consuming Service

Now that you have successfully published the service, a service consumer can go the folder that is used during publishing of the service and begin to consume the published services.

For example, assume that you have created a service with the name *Test VM Template*, using the *Service Offering Using VM Template* under the *Catalog Services* folder. Now your Service Consumer can create a new reservation.

### Follow these steps:

1. Log in to CA Service Catalog.
2. Click Requests.
3. Click the Catalog Services folder.

The services page lists the Test VM Template.

4. Click Test VM Template.

The reservation form opens.

**Note:** Contact your Service Provider, if you need to [change the image](#) (see page 20) displayed in the form.

5. Complete the following information:

#### **Reservation Name**

Specifies the name for the reservation.

#### **Reservation Date and Time**

Specifies the date and time required for the reservation. You can specify the starting and ending date and time.

#### **Grace Period**

Specifies the period in which VM is in archived state. It can be restored when required but before the expiration.

#### **Cost Center**

Specifies the name of the cost center.

**Department**

Specifies the name of the department.

**Quantity**

Specifies the number of virtual machines.

**Additional Disk (in GB)**

Specifies the size of additional disks required.

**(Optional) Add Users**

Specifies the names of secondary users and grant access permission to them.

6. Click Add to Cart to continue adding more requests to the cart.

The request is added to the cart.

7. Click Check Out when you complete adding the requests.

After you check out, the recurring cost of the reservation for the period selected is displayed as follows:

- Base Cost = quantity X configured base cost
- Storage Cost = size of the configured storage X configured storage cost
- Additional Storage Cost = size of additional disk X size of the storage cost

8. Click Save and Submit.

You get email notification after the reservation request gets approved and completed.

## Configure Chargeback in CA Server Automation

You can configure the VMWare VM chargeback information in CA Server Automation. This chargeback information is used to charge the customer for the VMs they request.

**Follow these steps:**

1. Log in to the Reservation Manager using the CA Server Automation administrator user credentials and the following URL:

`https://servername:port/ssrm`

See your Installation Worksheet for the values.

2. Click Home, Administer your Reservation Manager, Manage your chargeback Models, VMWare Virtual Machines.

A form opens.

3. Complete the following information:

**Base Hourly Rate**

Specifies the hourly rate for VM reserved with defined base VM configuration.

**Base Memory (GB)**

Specifies the memory (RAM) for the base configuration.

**Base Disk (GB)**

Specifies the disk space for the base configuration.

**Base CPU**

Specifies the number of CPUs for the base configuration.

**Additional Memory**

Specifies that an additional memory (RAM) must be charged.

**Per Memory (GB)**

Specifies the cost of additional memory (RAM) per GB.

**Additional Disk**

Specifies that an additional disk must be charged.

**Per Disk (GB)**

Specifies the cost of additional disk per GB.

**Additional CPU**

Specifies that an additional CPU must be charged.

**Per CPU**

Specifies the cost of an additional CPU.

4. Click OK.

The chargeback rates for VMWare VM are configured.

## Configure Email Notifications in CA Server Automation

You can get notifications from CA Server Automation when a reservation is about to expire. You can configure CA Server Automation to receive only the desired notifications and can also specify the time when you require the notifications.

**Follow these steps:**

1. Log in to the Reservation Manager using the CA Server Automation administrator user credentials and the following URL:

https://servername:port/ssrm

See your Installation Worksheet for the values.

2. Click Administer your Reservation Manager, Manage your configuration settings.
3. Expand the property category Notification - End User.
4. Click a property to edit the settings.

**Example:** Notify End User on Reservation Expired.

A form opens.

5. Change the property Value as required.
6. Click OK.
7. Repeat steps 3 to 6 to configure more notifications.

**Important:** You can enable all necessary notifications but the configuration is redundant to the CA Service Catalog notifications. You can configure to receive notifications for either CA Service Catalog or CA Server Automation notifications except for Expiration for which catalog cannot send notifications.

You have configured the email notifications.

## Configure Resource Pool Allocation in CA Server Automation

The resource pool may be fully allocated but may not be fully utilized by the users. You can increase the memory used on VMware servers or clusters when the actual memory usage permits it. Doing this lets you deploy more virtual machines.

**Follow these steps:**

1. Log in to the Reservation Manager using the CA Server Automation administrator user credentials and the following URL:

https://servername:port/ssrm

See your Installation Worksheet for the values.

2. Click Administer your Reservation Manager, Manage your Resource Pools.



3. Select the required resource pool.

The Resource Pool Details page opens, with the Properties tab displayed.

4. Select the Allow memory overcommitment check box.

5. Type or select a value in the Percentage field.

The CA Server Automation accepts additional reservation up to the specified percentage more than the actual capacity.

For example, if an ESX server has 30 GB of physical memory available for the VMs it hosts, an over commitment of 50 percent would increase the memory to 45 GB.

6. Click OK.

You have configured the resource pool over allocation limit.

## Configure Email Notifications in CA Service Catalog

You can get notifications from CA Service Catalog on the status of a reservation request.

### Follow these steps:

1. Log in to CA Service Catalog as an administrator.
2. Click Administration, Events-Rules-Actions.
3. Select the Request Pending Action Change Event Type.
4. Select the required Rule from the Rule List.  
A form opens.
5. Change the rule details as required.
6. Click Done.
7. Repeat steps 4 to 6 to configure more notifications.

You have configured the email notifications.

## Configure Chargeback in CA Service Catalog

After configuring the chargeback details in reservation manager you must enable the feature in CA Service Catalog. When the feature is enabled the chargeback information is displayed in the reservation form.

### Follow these steps:

1. Log in to CA Service Catalog as an administrator.
2. Click Catalog, Configuration, Content Configuration, ASC VMWare Chargeback.

A page opens.

3. Select the Show Charge Back Details in Forms checkbox.

The charge back details loads from the reservation manager.

4. Click Save.

You have enabled chargeback to be displayed in reservation forms.

You can click Refresh and Save to update the chargeback information when there is any change in the chargeback information in the reservation manager.

## Configure Clone/Snapshot in CA Service Catalog

You can configure the clone or snapshot settings using this procedure. The clone/snapshot setting is applied to all future snapshot requests which are submitted under the Business Unit.

**Follow these steps:**

1. Log in to CA Service Catalog as an administrator.
2. Click Catalog, Configuration, Content Configuration, ASC ESX General Configuration.

3. Complete the following information:

**Default NIC Configuration Required**

Specifies whether the default NIC is required for the reservation or not.

**Set to ready**

See [Provision VM - Set Reservation to Ready Automatically CA Service Catalog](#) (see page 28) for further details.

**Remove Failed VMs**

See [Provision VM - Set Reservation to Ready Automatically CA Service Catalog](#) (see page 28) for further details.

**Thin Provision**

Specifies to provision additional disks with Thin provisioning.

**The following fields require explanation:**

The following fields are available if you are using CA Server Automation 12.8.1. They are not available in CA Server Automation 12.8 or earlier versions. Select the Use Clone for Snapshot check box to see the clone configuration options. The default configuration creates a snapshot of virtual machine.

**Use Clone for Snapshot**

Specifies to create clone of the virtual machine. The default configuration creates a snapshot of virtual machine. Selecting the check box enables advanced options to create a clone.

**Maximum Clones**

Specifies the maximum number of clones a Service Consumer can create.

**Restrict when limit is reached**

Specifies that a Service Consumer cannot submit a new clone request when the maximum clone size is reached.

**Recycle the oldest clone when limit is reached**

Specifies to delete the oldest clone when a new request is raised.

4. Click Save.

You have configured clone/snapshot settings.

## Provision VM - Set Reservation to Ready Automatically CA Service Catalog

If at least one VM is provisioned successfully with individual status as Ready, the entire reservation request is set to ready. This option enables you to access provisioned VMs for change, extend, and power function and so on.

Clear this option to send the Pending Remedial Action status to the administrator and the reservation status in CA Server Automation remains as Failed. This option does not allow you to access the reservation in the CA Service Catalog.

### Follow these steps:

1. Log in to CA Service Catalog as an administrator.
2. Click Catalog, Configuration, Content Configuration, ASC ESX General Configuration.
3. Complete the following information:

#### **Set to ready**

Specifies when at least one VM in the reservation request is available the entire reservation status must be set to Ready.

#### **Remove Failed VMs**

Specifies to delete the VMs that fail during the reservation. If this option is not selected, the failed VM remains in the data center and the administrator must delete them manually.

4. Click Save.

You have configured the reservation settings.

#### **More Information:**

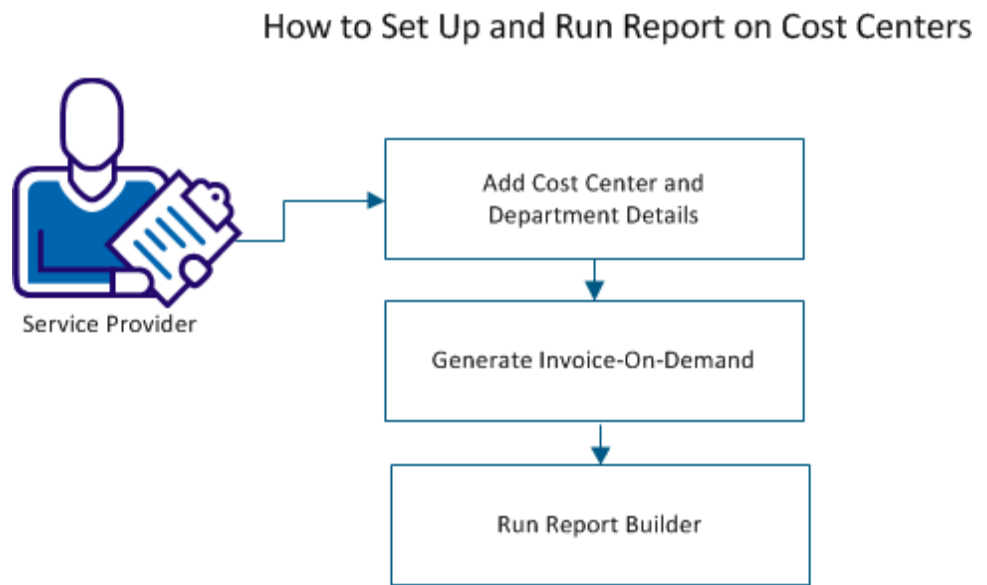
[Configure Clone/Snapshot in CA Service Catalog](#) (see page 26)

## How to Set Up and Run Report on Cost Centers

This scenario describes how you can set up the cost center and department in CA Service Catalog. The scenario also explains how to generate the chargeback reports based on cost center and department. This helps in getting the financial reports for the resources used by different cost center and by departments in each cost center.

The service consumer must select the cost center and department to which they belong when requesting for virtual machine. This information can be used when generating financial reports.

This following graphic illustrates process to set up and report on cost centers:



This section contains the following topics:

1. [Add Cost Center and Department Details](#) (see page 30).
2. [Generate Invoice On-Demand](#) (see page 31).
3. [Run Report Builder](#) (see page 32).

## Add Cost Center and Department Details

You can configure the cost center and department name to enable Service Consumers to select these details while requesting a Virtual Machine.

### Follow these steps:

1. Log in to CA Service Catalog.
2. Click Catalog, Configuration, Content Configuration.
3. Click ASC Cost Center and Department.
4. Complete the following details:

#### Add Cost Center

Specifies a Cost Center name.

Type the name in the Enter Cost Center field, and click Add Cost Center. The cost center name appears in the Select Cost Center drop-down list.

**Note:** Optionally, to remove a cost center, select the cost center name from the drop-down list, and click Remove Cost Center. This step also removes the associated departments.

#### Add Department

Specifies a department name.

Select the Cost Center, type the name in the Enter Department field, and click Add Department. The new department name is associated with the selected cost center and appears in the Select Department drop-down list.

**Note:** Optionally, to remove a department, select the cost center under which the Department exists, select the Department, and click Remove Department.

5. Click Save.

You have configured the cost center and department details. The newly added cost center and department are listed in the service offering reservation forms.

## Generate Invoice On-Demand

Invoices can be generated on-demand. On-demand invoicing enables an administrator to bypass the scheduled invoicing time and instantaneously produce the current standing invoice for an account. Performing an invoice on-demand produces the same results against the account as if it had been processed as a scheduled bill run. A new invoice is generated for the current billing period and the accounting profile is updated. For more information on accounting, see CA Service Catalog Administration Guide.

### Follow these steps:

1. Log in to CA Service Catalog.
2. Click Accounting, Account Management.
3. Click the account for which you want to generate an invoice.

The Accounting Profile page opens.

**Important!** Configure the period start date and end date. Set the Period start date to the period from which the services get consumed. Set the Period end date that is based on the billing cycle, as appropriately.

4. Click the Invoices tab.

**Note:** Roll back all invoices, if there are any in the Invoice History page, before you generate an Invoice On-Demand.

5. Click the Invoice On-Demand button.
6. Click Yes to the popup, "Perform invoice on-demand?".
7. Click OK to refresh the Invoice History page.

The invoice records are displayed in the Invoice History section.

## Run Report Builder

Using the Report Builder, you can view the following reports for chargeback:

- **Get Server Costs By Cost Center**  
This report provides information about the server costs by cost center per annum. The report details about the reservations that are made by Service Consumers for their cost center and the costs that are incurred for each reservation.
- **Get VM Reservations By Cost Center**  
This report provides information about the reservations that are made through a cost center in a particular month.
- **Get VM Reservations For Month**  
This report provides information about the reservations that are newly added and returned in a particular month.

**Note:** Before you generate a report, generate an [invoice-on-demand](#) (see page 31).

The following chargeback reports display the same information as the above reports but get the details from Reservation Manager:

- Get Server Costs By Cost Center - SSRM
- Get VM Reservations By Cost Center - SSRM
- Get VM Reservations For Month - SSRM

As an example, this procedure describes how you can generate the *Get VM Reservations By Cost Center* report. For more details on the report builder, see CA Service Catalog Administration Guide.

### Follow these steps:

1. Log in to CA Service Catalog as an Administrator.
2. Click Administration, Report Builder.  
The Report Builder page appears, with Data Objects selected in the left menu under the main menu.
3. Click Data Views in the left menu.  
The list of existing data view folders appears.
4. Expand the Chargeback folder under Data View List.
5. Click the link Get VM Reservations By Cost Center.  
A form opens to enter parameters.



6. Enter the cost center name and other fields on the screen and click OK.  
A confirmation message appears and the report opens in a new window.  
Repeat the procedure and provide the parameters at step 6 to generate other available reports.

## Add Secondary Owners to Local Administrator Group

Do one of the following tasks to add secondary owners to local administrator group in provisioned VM during reservation process:

- [Configure Super User in CA Server Automation](#) (see page 33).
- [Add Secondary Owners to Local Administrator Group](#) (see page 34).

## Configure Super User in CA Server Automation

Perform the following procedure to enable the ability to add secondary users as local administrators.

**Follow these steps:**

1. Log in to the CA Server Automation server.
2. Open a Command Prompt window, change directory to:  
C:\CA\ServerAutomation\bin
3. Run the following command:  

```
dpmutil -set --super
```
4. Type the CA EEM credentials at the prompt.
5. Type 1 at the following prompt:  
Enter the number for one of the following, or press enter for default:
6. Type the System Administrator credentials.  
On the successful configuration, the Configuration finished successfully message appears. You have completed setting the set super user.
7. Run the following command:  

```
dpmutil -get --super
```
8. Type the CA EEM Administrator credentials at the prompt.  
The Administrator username and platform details are displayed.  
On the successful verification, the Configuration finished successfully message appears again. You have verified the super user configuration.

## Add Secondary Owners to Local Administrator Group

To add secondary owners to local administrator group in provisioned VM during reservation process, update the AD Login Parameters in ASC\_GlobalDataset.

**Note:** This procedure is applicable to windows platform only, adding secondary users as local administrators to non-windows platform is not supported.

**Follow these steps:**

1. Log in to the CA Process Automation web client.
2. Click Library tab.
3. Click the CA ASC folder.
4. Double-click ASC\_GlobalDataset, and click Check Out.
5. Click AD Login Parameters CHANGE ME and then update the following information:

**domainName**

Specifies the name of the domain.

**domainAdmin**

Specifies the name of the domain user with administrative privileges on the domain.

**domainAdminPassword**

Specifies the domain administrator password.

**isDomainAdminPasswordProvided**

Specifies whether domain administrator password is provided or not.

**Default:** False

Change it to True when the domain administrator password is specified.

6. Click Save, Check In.

## Configure Request Management in CA Service Catalog

You can configure how the CA Service Catalog must handle the multiple requests added in a single cart when the requests handling is of different nature.

**Follow these steps:**

1. Log in to CA Service Catalog as an administrator.
2. Click Catalog, Configuration, Options, Request Management Configuration.  
A page opens.
3. Change the configuration values for the following properties and click Update Configuration.

**Allow discrete handling for reject**

Yes - Specifies that rejection of one of the requests in the cart does not affect the actual request which has multiple requests.

No - Specifies when you reject one item in cart the entire call is rejected.

Select the check box to set the value to Yes and click Update Configuration.

**Allow discrete handling of service options After**

Submitted - Specifies that all the service options must be in the Submitted status to complete start the request.

Pending Fulfillment - Specifies that all the service options must be in the Pending Fulfillment status to complete start the request.

Completed - Specifies that all the service options must be in the Completed status to complete start the request.

Change the property value to Submitted and click Update Configuration.

**Allow Discrete Request Life Cycle After**

Submitted - Request in the cart that does not need approval is processed immediately.

Pending Fulfillment - All the requests must be in Pending Fulfillment status to start the request life cycle for an individual request.

Completed - All the individual requests must be in completed status to complete the request life cycle.

Change the property value to Submitted and click Update Configuration.

You have configured the request management in CA Service Catalog.

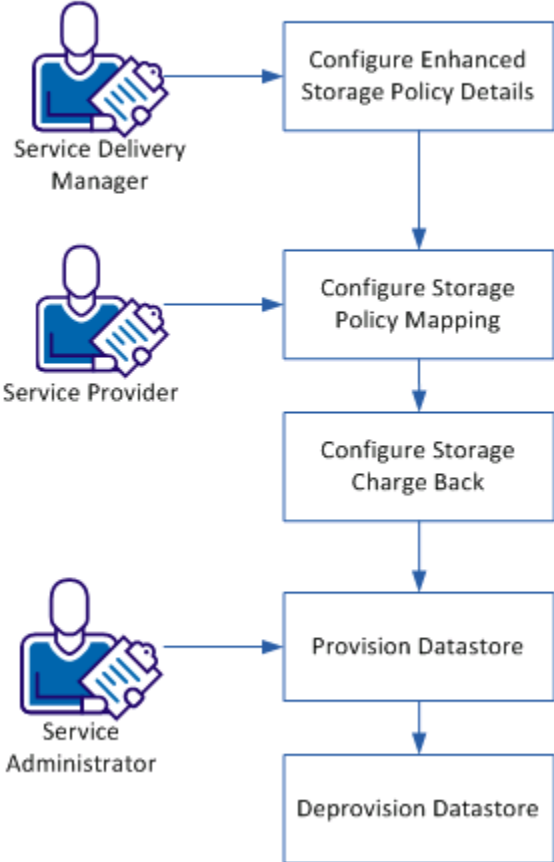


# Chapter 4: Configure and Provision the Datastore

---

As a Service Delivery Manager, you configure the enhanced storage policy and enable the Service Provider to use these policies in creating new datastores. The Service Administrator (Tenant Administrator) can later request to provision the new datastore and deprovision the unused datastore in their environment.

## Configure and Provision the Datastore



**Follow these steps:**

1. [Configure Enhanced Storage Policy Details](#) (see page 38).
2. [Configure Storage Policy Mapping](#) (see page 39).
3. [Configure Storage Charge Back](#) (see page 40).
4. [Provision Datastore](#) (see page 40).
5. [Deprovision Datastore](#) (see page 41).

## Configure Enhanced Storage Policy Details

As a Service Delivery Manager, you configure the enhanced storage policy details in CA Server Automation to enable the Service Provider to provision the datastore.

**Follow these steps:**

1. Log in to CA Server Automation as a Service Delivery Manager.
2. Click Management, Resources.
3. From the left-side pane, click Configure, Policies, Storage.  
The Enhanced Storage Policies page opens.
4. Click the plus icon to add a storage policy.  
The Select Policy Type and Name page opens.
5. Complete the following policy details and click Next:
  - Policy Name
  - Description
  - Provisioning Method
  - Protocol
  - NetApp OnCommand Server or EMC SMI-S ServerThe Choose Policy Attributes page opens.
6. Complete the following details and click Next:  
(From the Required Properties section)
  - NetApp or EMC Provisioning Policy
  - Resource Pool

(From the Provisioning section)

- Dataset Description
- Dataset Prefix
- Maximum Allowed Size

The Associate Servers with Policy page opens.

7. Click Finish.

The enhanced storage policy configuration is complete. You have enabled the service provider to proceed with the storage configuration. Verify by creating a data store.

## Configure Storage

As a Service Provider, you configure the policies and then add the charge back details for each profile.

### Configure Storage Policy Mapping

**Follow these steps:**

1. Log in to CA Service Catalog.
2. Click the Catalog, Configuration, Content Configuration, ASC Storage Policy Mapping, in the left-side pane menu.
3. Select the Organization Unit name from the drop-down menu.

A list of storage policies loads in the table.

4. Select the policies and click Add Policies.

Newly added policies are listed in the Delete Existing Storage Policies section.

**Note:** If you want to remove existing policies, select the policies from the Delete Existing Storage Policies section and click Delete Existing Policies.

5. Repeat steps 3 and 4 for adding policies for other organizational units.
6. Click Save.

Mapping the storage policies to organizations is complete.

## Configure Storage Charge Back

**Follow these steps:**

1. Log in to CA Service Catalog.
2. Click the Catalog, Configuration, Content Configuration, ASC Storage Charge Back, in the left-pane menu.
3. Select the Organization Unit name from the drop-down menu.
4. Select the Storage Policy name from the drop-down menu.

The Policy Description, Storage Protocol, and Policy Max Size (GB) information get populated.

5. Enter the values for Hourly Price, Minimum Size (GB), and Maximum Size (GB).
6. Add Default Hourly Price value.

This value is used if the charge back is not defined for any combination of policy and disk size.

**Note:** If you add two or more policy prices within same range for a policy, the system automatically picks the policy with lowest price.

7. Click Save Policy Price.

Newly added policies are listed in the Existing policy and price details section.

8. Repeat step 3 to 7 for each policy and organizational unit and add the charge back details for the profiles.

Updated policy and price details appear in the table.

You can select the policies from the table and click Delete Policy Price to remove any existing price configuration.

**Note:** If you choose to delete Policy from the ASC Storage Policy Mapping configuration page for the selected organization, all the price configurations are deleted automatically.

The storage configuration is complete. You have enabled the Service Administrator to provision the datastore.

## Provision the Datastore

As a Service Provider, you can add storage to the available organizational units when you need more storage space in the environment.



**Follow these steps:**

1. Log in to CA Service Catalog as a Service Administrator.
2. Click Requests,  
The available services list opens.
3. Click CA Automation Suite for Clouds, Server Automation Services.
4. Click Infrastructure Management under the VMware ESX Management menu.  
The Infrastructure Management page opens.
5. Click Provision Datastore.  
A list of configured vCenter Server Resource Pools for your organization opens.
6. Select a pool that needs more storage, then enter the name and size for the new datastore.
7. Click Fetch Available Storage Policies.  
A list of available policies with the price details based on the organization of the selected pool appears.
8. Select a policy.
9. Click Add to Cart to continue adding more requests to the cart.  
The request is added to the cart.
10. Click Check Out when you complete adding the requests.
11. Click Save and Submit Cart.  
A confirmation message appears indicating that your request was submitted.  
  
The price of the request is calculated based on the selected policy. A new datastore is created and the status of the request is changed to Pending SSRM Resource Pool Modification. The request is assigned to a Service Administrator (defined in the configuration) and an email is sent to the Service Provider.  
  
The Service Administrator modifies the pool manually and the status of the request is changed to Completed.  
  
A new datastore is created and attached to the computer resource of the selected pool.

## Deprovision the Datastore

You can select one or more datastores and can submit the request to deprovision. If the selected datastore is in use, the deprovisioning request is canceled and you receive an email notification.

**Follow these steps:**

1. Log in to CA Service Catalog as a Service Administrator.
2. Click Requests,  
The available services list opens.
3. Click CA Automation Suite for Clouds, Server Automation Services.
4. Click Infrastructure Management under the VMware ESX Management menu.  
The Infrastructure Management page opens.
5. Click Deprovision Datastore.  
A list of datastores that are provisioned to the user opens.
6. Select the datastore that you want to return.
7. Click Add to Cart to continue adding more requests to the cart.  
The request is added to the cart.
8. Click Check Out when you complete adding the requests.
9. Click Save and Submit Cart.  
A confirmation message appears indicating that your request was submitted.  
The status of the request is changed to Pending SSRM Resource Pool Modification.  
The request gets assigned to the Service Administrator (defined in the configuration), and an email is sent to the Service Provider.  
The Service Administrator modifies the pool manually by removing the datastore from the pool and changes the request status to Datastore detached from Pool.  
The request is processed to remove the datastore from the ESX Host or Cluster, and the dataset is deleted from the storage server.  
The selected datastore is removed.

# Chapter 5: Configure Network Settings

As a Service Provider you configure the network settings in CA Server Automation to enable the network configuration capability for Service Consumers. After you complete the configuration, Service Consumers can configure multiple VLANs depending on the template they chose to reserve the cloud virtual machine.

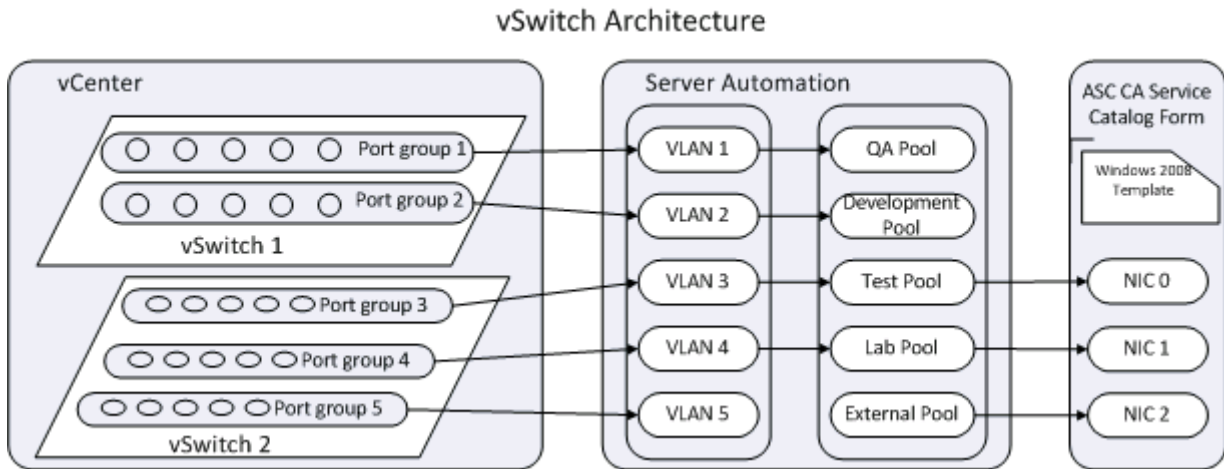
## vSwitch Architecture

Understanding the architecture of vSwitch helps you to configure vSwitch as a Service Provider.

The VMware vCenter server provides the central point of control for configuring, provisioning, and managing virtualized IT environments.

When multiple vSwitches are present in the vCenter server, you define network pools for each vSwitch by tagging them to different VLAN IDs.

The following diagram illustrates how the components interact and enable multiple network support for Service Consumers:



In the vCenter, you configure the vSwitch 1 and vSwitch 2 by creating port groups based on the user requirement. Created VLAN IDs are then tagged to the port groups.

The Service provider defines the network pools in CA Server Automation. For example, as shown in the vSwitch Architecture diagram network pools like QA Pool, Development Pool, and Test Pool are created in CA Server Automation. Each network pool is then associated and tagged to a VLAN ID with a set of IP addresses (IP Pool).

In the Reserve Virtual Machine form, the Service Consumer can select one of the network pools to a Network Interface Card (NIC) associated to the template. This option enables the Service Consumer to select the network when submitting a request.

## Review the Prerequisites

To complete all tasks consider the following items:

- Configure templates. Create custom specifications in the VMware vCenter Server so that the custom specification file consists of equivalent NIC information corresponding to the template. Configure the system image in CA Server Automation by selecting the same custom specification file.
- Contact your network administrator to collect the following details:
  - Virtual LAN (VLAN) IDs tagged to the Port Group of the vSwitch.
  - IP addresses pool configured to VLAN ID, Subnet mask, Gateway address, and DNS name.

## Define Network Address Pools

The first step in enabling IP addresses at your site is defining network address pools in the main user interface of the product. Network address pools consist of a range of IP addresses.

**Note:** Reservation Manager does not permit editing or deleting a network address pool that has been used for reservations. If you want to change something like the IP address range, make a new network address pool. Also, deleting a network that is associated with a VM or logical partition is not allowed.

**Follow these steps:**

1. Log in to CA Server Automation.
2. Click Management, Resources.
3. Expand Explore DataCenter  
The Data Center page opens.
4. Click Manage Networks.  
The Manage Networks page opens.
5. Click + (New), and enter information in the required fields, which are Network Address Pool Name, IP Address, Subnet Mask, and VLAN ID.
6. Click Next.  
A new page for entering network information appears.

7. Enter information in the required fields, which are Default Gateway, Preferred DNS Server, and Domain Name. Click Next.

A dialog for IP address ranges appears.

8. Enter information in the required fields, and click Add.

**Note:** Each address in the pool must have a DNS name entry when the pool is created. When you define network address pools, verify that the static IP address ranges are not assigned to another type of data center.

The Virtual Hosts pane opens.

9. Select one or more virtual hosts, click Add, and then click Finish.

Each virtual host must be associated with the network before IP addresses can be assigned to VMs created on the host.

The network address pool is created and visible on the Reservation Manager page.

## Enable VLANs

Network address pools are not accessible for use until you explicitly grant access to users. As a Service Provider you must scope which VLANs are accessible for end user selection. This is done by specifying the network address pools that are accessible to members of each organizational unit.

### Follow these steps:

1. Log in to Reservation Manager.
2. Click Select Administer your Reservation Manager, Manage your organizational units.  
The Organizational Units page opens.
3. Click to open the organizational unit to which you want to add VLANs.
4. Go to the Network Access tab, and select one or more VLANs.
5. Click OK.

Verify the network configurations. Create a new virtual machine. The name of the network pool that you defined is available in the options.



# Chapter 6: Enable Primary Disk Extension Support

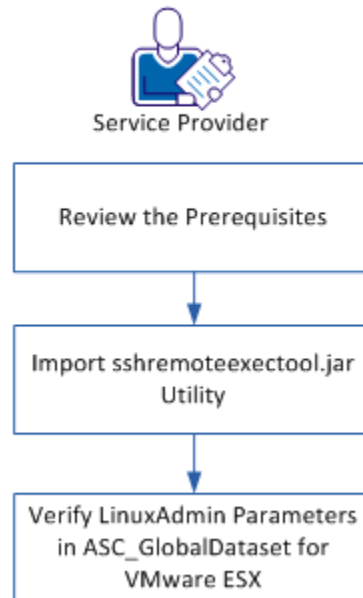
---

As a Service Provider you enable the primary disk extension on the VMware ESX cartridge.

**Note:** This feature is supported only for CA Server Automation Release 12.7 SP01.

The following diagram illustrates how a Service Provider enables the primary disk extension support:

## Enable Primary Disk Extension Support



**Follow these steps:**

1. [Review the Prerequisites](#) (see page 48)
2. [Import sshremoteexec tool.jar Utility](#) (see page 48)
3. [Verify LinuxAdmin Parameters in ASC GlobalDataset for VMware ESX](#) (see page 49)

## Review the Prerequisites

Review the following prerequisites to enable support for the primary disk extension:

- CA Process Automation server must have a network access to provisioned virtual machines.
- **(For Windows)** Enable WMI service. Make sure that WMI service automatically starts on the virtual machines that are provisioned.
- **(For Linux)** Verify that the SSH and SCP services are available and automatically starts on the virtual machines that are provisioned.

## Import sshremotexectool.jar Utility

SSHRemoteexectool utility is used for connecting the provisioned Linux virtual machines through Secure Shell (SSH) protocol. You copy and execute primary disk expansion scripts on the utility.

**Follow these steps:**

1. Log in to CA Process Automation.
2. Click the Configuration tab.
3. Expand Manage User Resources, Repository, Orchestrator Resources.
4. Click New.

The new resource page opens.

5. Complete the following details:

**Resource Name**

Specifies the resource name.

**Resource File**

Specifies the resource file.

Click Browse, navigate to the CA ASC Server Automation - ESX content pack folder, and then open util folder to select the sshremotexectool.jar file.

**(Optional) Module Name**

Specifies the module name. Select the module name from the drop-down menu.

**(Optional) Resource Description**

Specifies the description for the resource.

6. Click Save.



## Verify LinuxAdmin Parameters in ASC\_GlobalDataset for VMware ESX

Verify that the LinuxAdmin VM parameters in the ASC\_Globaldataset for the VMware ESX cartridge are configured.

**Follow these steps:**

1. Log in to the CA Process Automation console.
2. Click Library tab.
3. Click the CA ASC folder.
4. Click ASC\_GlobalDataset and Check Out.
5. Expand Misc Parameters CHANGE ME and verify the following details:

**LinuxAdmin**

Specifies the Linux VM template parameters.

For each Linux VM Template, verify the following LinuxAdmin parameters:

**Template**

Specifies the name of the Linux virtual machine template.

**AdminUserName**

Specifies the user name of the virtual machine that accesses the newly provisioned Linux VM using the template.

**Default:** root

**AdminPassword**

Specifies the administrator password.

**SSHPort**

Specifies the port where SSH service is listening on the newly provisioned Linux virtual machine with the template.

**Default:** 22

**UseSudo**

Specify true if you want to use the sudo user in the Linux environment. For information about configuring the sudo user, see the [Update the sudoers File](#) (see page 50) section.

6. Click Save.
7. Click Check In.
8. Click Save and Close.

You have enabled the support for primary disk extension.

## Update the sudoers File

Updating the sudoers file lets you issue commands from CA Process Automation using `sudo` without prompting for the root credentials. If the `UseSudo` parameter is enabled in the `ASC_GlobalDataset`, you update the sudoers file before creating the VM template.

### Follow these steps:

1. Edit the `/etc/sudoers` file using the `visudoers` command.
2. Add the following entry:

```
# simple entry for issueing commands if the client does not need granularity
ascuser ALL=NOPASSWD: ALL

# detailed entry for permitting only those commands used by ASC for disk extension
ascuser ALL = NOPASSWD: /sbin/fdisk, /usr/sbin/pvcreate, /usr/sbin/vgdisplay,
/usr/sbin/vgextend, /usr/sbin/lvdisplay, /usr/sbin/lvextend
```

3. Save and close the sudoers file.

# Chapter 7: Access and Run Reports

---

Reports can assist with request approvals by giving you a picture of resource usage and availability. You also can generate service accounting reports and query data within a range to generate reports for stakeholders or verify compliance with Service Level Agreements.

You can run available reports from InfoView directly from CA Service Catalog.

## **Follow these steps:**

1. Log in to CA Service Catalog.
2. Click Administration, Report Builder, InfoView.  
The BusinessObjects InfoView page opens.
3. Click Document List and navigate to Public Folders, CA Reports, CA SLCM.  
The CA SLCM folder contains two folders:

### **Admin Reports**

Provides reports of interest to Approving Managers and Service Providers.

### **User Reports**

Provides reports of interest to service consumers, such as the User Requests report. This report provides details about requests that were opened, approved, or fulfilled within specific time periods.

**Note:** Your access to folders and reports depends on your access privileges.

4. Double-click a report.  
The Prompt dialog opens.
5. Type specific parameters to generate the report.
6. Click Run Query.  
The report generates and opens.



# Chapter 8: Customize VM Name

---

The following procedure enables you to customize the VM name through CA Process Automation.

**Follow these steps:**

1. Log in to the CA Process Automation web client.
2. Click the Library tab.
3. Click the CA ASC folder.  
Contents open on the right side pane.
4. Edit ASC\_GlobalDataset, click Check Out.
5. Expand the Parameters folder.
6. Change the value of UseServerNamingProcess to True.
7. Click Check In.
8. Click OK to confirm Check In and return to the main CA Process Automation window.
9. Click the Library tab, expand CA ASC, Samples folder.  
Contents of the folder open to the right side pane.
10. Right-click and edit the ServerNamingSample process.  
The operator opens in the Designer tab.
11. Click "Set Create Reservation Parameters Naming" operator.
12. Click the Source Code button under the Run Java script section.  
The source code editor opens.
13. Edit the following line of code to change the VM name:

```
Process.customName = "DEMO:" + Process.requestID + ":Automatic:~";
```