

## UCS Director 5.4 – Windows/Linux CSV Workflow Deployment

The purpose of this document is to illustrate the steps to implement the CSV Workflow that can be used for Windows or Linux VM deployments. The CSV File can contain a single VM or Multiple VMs.

This CSV VM Deployment workflow is a modification to the 'VM Deployment with USER IP INPUT' which can be found here: <https://communities.cisco.com/docs/DOC-56868> . The original workflow was built on UCSD 5.2.0.1 this new workflow addresses some script changes to address going to UCSD 5.4. Other additional features include cleaning up/deleting the CSV file from '/opt/infra/uploads/' when the workflow is complete, added vDC Template Input for the CSV Inputs, removed the second future workflow input and rearranged the CSV Inputs in the CSV File. For details on how and why this workflow works including the script itself can be found at the link above.

Also included in this document are the steps to create a vDC and vDC Template and all of the policies needed to create them.

### Assumptions/Requirements

- You have a Single or Multi-Node Deployment of UCS Director 5.4.
- You have access to vCenter where your UCS Director has been deployed.
- You have existing Windows and Linux Templates in your vCenter and have been tested for Guest Customization.

### Useful Documents

[Cisco UCS Director Administration Guide, Release 5.4](#)

### Software/OS levels

Listed below are the software and OS versions that were used for the testing and building this document.

- UCS Director 5.4
- VMware 5.1
- VMWare Windows Server 2008 R2 Enterprise Template
- VMware RHEL 6.2 Template

# Table of Contents

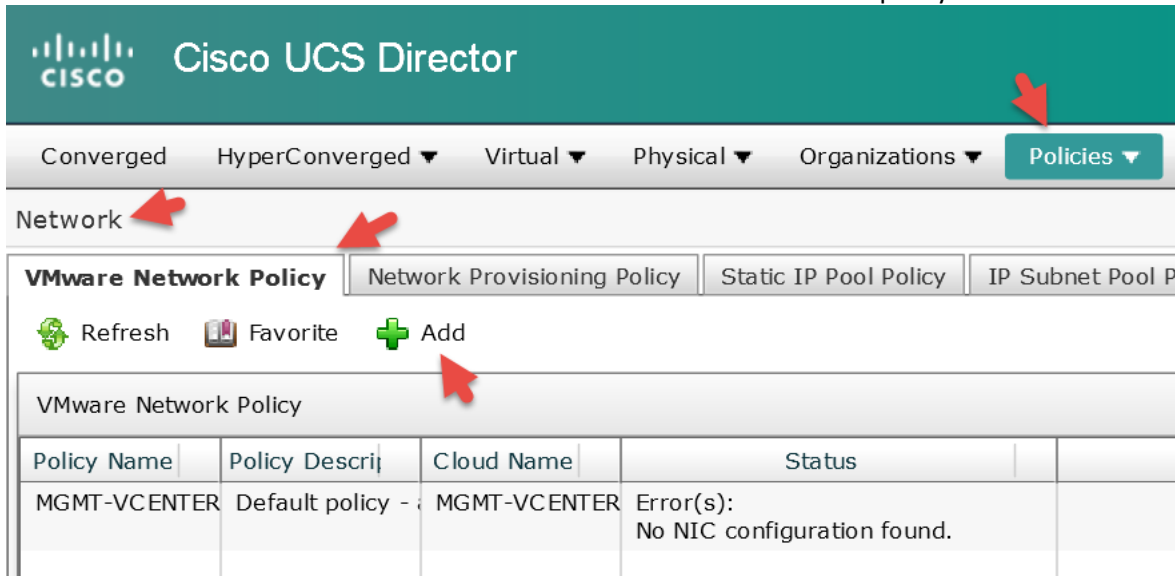
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# 1. Prerequisites - Create Virtual/Hypervisor Policies

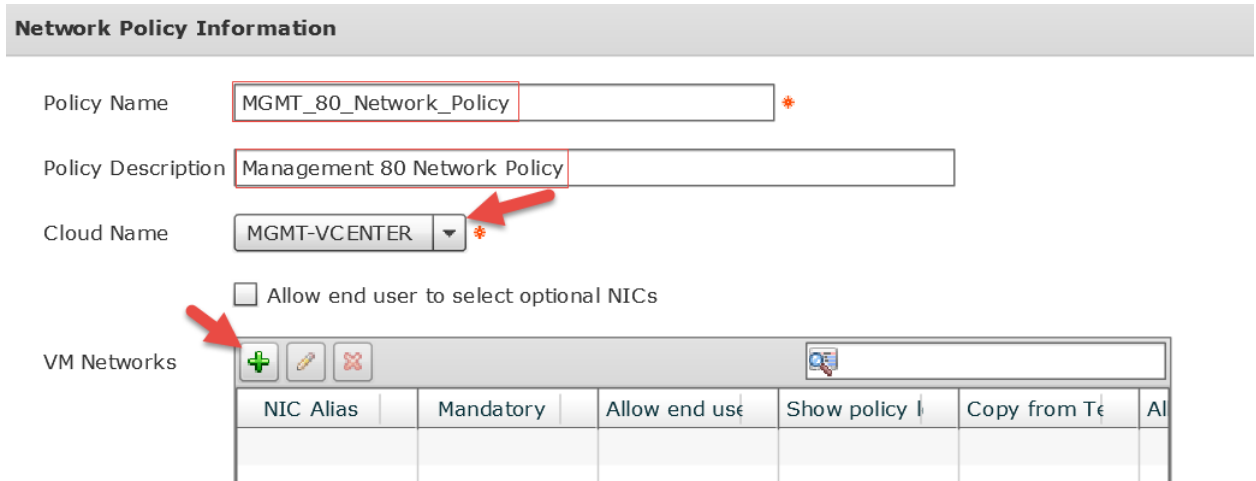
Before Importing the Windows/Linux CSV workflow, we configure the following prerequisites.

## 1.1. Add VMware Network Policy

Create a VMware Network Policy. From UCSD GUI, Navigate to Policies -> Virtual Hypervisor Policies -> Network -> VMware Network Policy -> select 'Add'. You will notice a Default policy with errors. This policy was automatically created when we added the vCenter Virtual Account. We will delete this policy after we create the new one.



Enter a Policy Name, Policy Description, drop down and select a Cloud Name(vCenter Virtual Account) and select '+' for VM Networks.




Enter a Name for the NIC Alias, select 'Show policy level portgroups' check box, select 'Allow end user to override IP Address' check box, drop down and select 'VMXNET3', click '+' to add Port Groups.

**Edit VM Networks Entry**


NIC Alias  \*


Mandatory





Allow end user to choose portgroups

  Show policy level portgroups

Copy Adapter Type from Template

  Allow end user to override IP Address


Adapter Type  

Port Groups    

Port Group	IP Address	IP Address	IPv6	IPv6 Address	IPv6 Address

Click 'Select' for Port Group Name.

**Add Entry to Port Groups**

Port Group Name  



**IPv4 Configuration**


Select IP Address Type  \*

**IPv6 Configuration**

IPv6

Enter your Port Group name in the filter on the right to narrow down the results. Select one of your Port Groups from the list and then click 'Select'. **Note:** This Port Group name is specifically named to work with the Windows/Linux CSV Workflow from the UCSD Communities Site.

Select   

	Cloud Name	Host Node	Switch Name	Port Group Name	VLAN ID	Promiscuous	Port Group Type
 <input checked="" type="checkbox"/>	MGMT-VCENTER	172.17.80.69	vSwitch0	Production 192.168.40.0	40	Disabled	Virtual Machine Portgroup
<input type="checkbox"/>	MGMT-VCENTER	172.17.80.70	vSwitch0	Production 192.168.40.0	40	Disabled	Virtual Machine Portgroup

Drop down and select **'Static'** for IP Address Type, drop down and select **'Inline IP Pool'** for IP Address Source, enter any IP Address for Static IP Pool, Enter a Subnet Mask, enter a Gateway IP Address for that subnet and click **'Submit'**. **Note:** The IP Address can literally be any IP Address because this will get overwritten by the workflow but you have to have something in these field as they are mandatory.

**Add Entry**

Port Group Name  Production 192.168.40.0 \*

**IPv4 Configuration**

Select IP Address Type  \*

Select IP Address Source

Static IP Pool  \*

Subnet Mask  \*

Gateway IP Address

**IPv6 Configuration**

IPv6

Click **'OK'**.

**Submit Result**

Added entry successfully

Review and Click **'Submit'**.

**Add Entry**


- Mandatory
- Allow end user to choose portgroups
- Show policy level portgroups
- Copy Adapter Type from Template
- Allow end user to override IP Address

Adapter Type:

Port Groups

Port Group	IP Address	IP Address	IPv6	IPv6 Address	IPv6 Address
MGMT-VCENT	Static	Inline IP Pool	No	Static	

Total 1 items



Click **'OK'**.

**Submit Result**

Added entry successfully



Review and click **Submit**.

### Network Policy Information

Policy Name  \*

Policy Description

Cloud Name  \*

Allow end user to select optional NICs

VM Networks

NIC Alias	Mandatory	Allow end use	Show policy ↓	Copy from Te	Al
MGMT_80_Netw	Yes	No	Yes	No	N

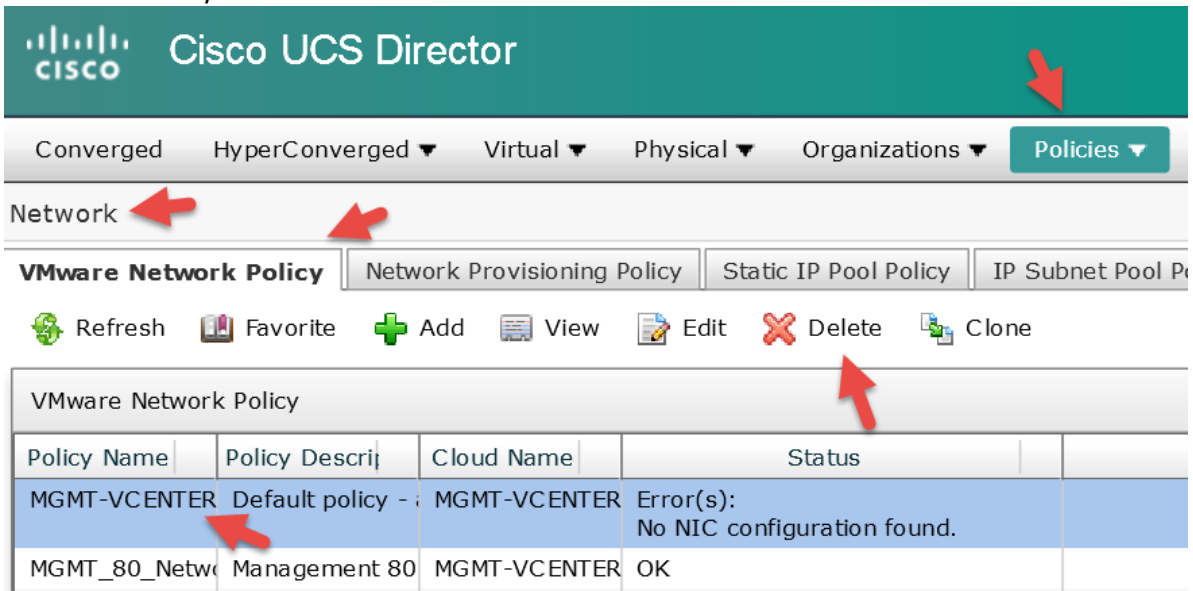
Total 1 items

Click **OK**.

### Submit Result

Added successfully

Delete the original Default Policy. Policies -> Virtual/Hypervisor Policies -> Network -> VMware Network Policy -> select the Default Policy -> click 'Delete'.



Cisco UCS Director

Converged HyperConverged Virtual Physical Organizations Policies

Network

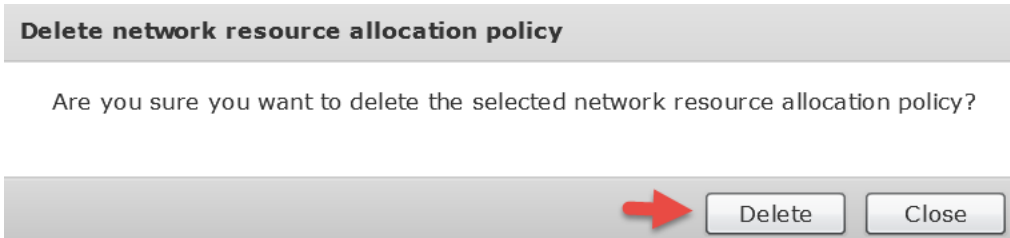
VMware Network Policy Network Provisioning Policy Static IP Pool Policy IP Subnet Pool Policy

Refresh Favorite Add View Edit Delete Clone

VMware Network Policy

Policy Name	Policy Description	Cloud Name	Status
MGMT-VCENTER	Default policy -	MGMT-VCENTER	Error(s): No NIC configuration found.
MGMT_80_Netw	Management 80	MGMT-VCENTER	OK

Click 'Delete'.

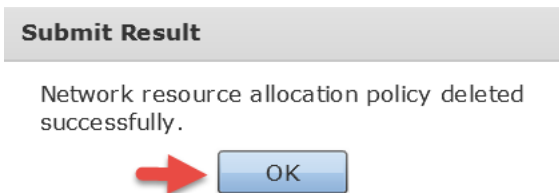


**Delete network resource allocation policy**

Are you sure you want to delete the selected network resource allocation policy?

Delete Close

Click 'OK'.



**Submit Result**

Network resource allocation policy deleted successfully.

OK



## 1.2. Add VMware Storage Policy

Add Virtual Storage Policy. From UCSD GUI, Navigate to Policies -> Virtual Hypervisor Policies -> Storage -> VMware Storage Policy -> select 'Add'.

The screenshot shows the Cisco UCS Director interface. At the top, there is a navigation bar with tabs for 'Converged', 'HyperConverged', 'Virtual', 'Physical', 'Organizations', and 'Policies'. The 'Policies' tab is selected. Below this, there is a 'Storage' section with a sub-tab for 'VMware Storage Policy'. The 'Add' button is highlighted with a red arrow. Below the 'Add' button, there is a table with the following data:

Policy Name	Policy Description	Cloud Name	Status
MGMT-VCENTER - Default S	Default policy -	MGMT-VCENTE	OK

Enter a Policy Name, Policy Description, drop down and select your Cloud Name/vCenter, select 'Use Shared Data Store only', deselect 'Use Local Storage', deselect 'Use NFS', select 'Allow Resizing of Disk', leave everything else default and click 'Next'.

The screenshot shows the 'Add Storage Resource Allocation Policy' form. The form is titled 'Storage Policy - System Disk Policy'. The 'Policy Name' field contains 'MGMT-VCENTER-Storage-Policy'. The 'Policy Description' field contains 'Management vCenter Storage Policy'. The 'Cloud Name' dropdown menu is set to 'MGMT-VCENTER'. The 'System Disk Scope' section has the 'Use Shared Data Store only' checkbox checked. The 'Storage Options' section has the 'Use Local Storage' and 'Use NFS' checkboxes deselected, and the 'Use SAN' checkbox checked. The 'Filter Conditions' section has several options, all of which are deselected. The 'Resizing Options for VM lifecycle' section has the 'Allow Resizing of Disk' checkbox checked. The 'Permitted Values for Disk in GB' field contains '5,10,50,100,500,1024,5120,10240'. The 'Next' and 'Close' buttons are visible at the bottom right.

On the Additional Disk Policies section, leave everything default and click **'Submit'**.

**Add Storage Resource Allocation Policy**

Storage Policy - Additional Disk Policies

System Disk Policy  Additional Disk Policies

Disk Policies

Disk Type	Same As Syst	Use Linked Cl	Selected Data	Selected Data
Data	Yes	false		
Database	Yes	false		
Log	Yes	false		
Swap	Yes	false		

Click **'OK'**.

**Submit Result**

Added successfully



Delete the Default Storage Policy. Navigate to Policies -> Virtual Hypervisor Policies -> Storage -> VMware Storage Policy -> select the Default Storage Policy -> select **'Delete'**.

Cisco UCS Director

Converged HyperConverged Virtual Physical Organizations **Policies** Admin

Storage

Virtual Storage Catalog **VMware Storage Policy** Storage Network Scheme RHEV KVM Storage Poli

Refresh Favorite Add View Edit Delete Clone

VMware Storage Policy

Policy Name	Policy Desc	Cloud Nam	Status
MGMT-VCENTER - Default Storage Polic	Default policy	MGMT-VCENT	OK
MGMT-VCENTER-Storage-Policy	Management	MGMT-VCENT	OK

Click **'Delete'**.

**Delete storage resource allocation policy**

Are you sure you want to delete the selected storage resource allocation policy?



Click **'OK'**.

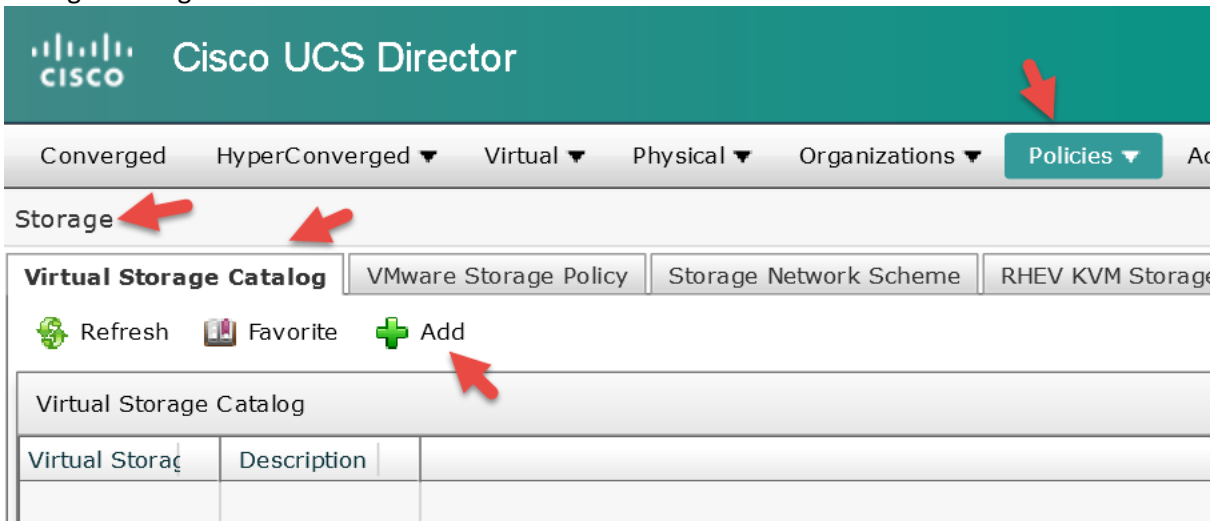
**Submit Result**

Storage resource allocation policy deleted successfully.



### 1.3. Add Virtual Storage Catalog

Add Virtual Storage Catalog. From UCSD GUI, Navigate to Policies -> Virtual Hypervisor Policies -> Storage -> Virtual Storage Catalog -> select 'Add'.



Enter a Catalog Name, optional Catalog Description, drop down and select your vCenter/Cloud Name and click 'Next'.

The screenshot shows the 'Add Catalog' form. The form has a left sidebar with 'Add Catalog' and 'Add Entries' options. The main form area contains the following fields:

- Catalog Name:** A text input field containing 'MGMT-VCENTER-Storage-Catalog'.
- Catalog Description:** A text area containing 'Management vCenter Virtual Storage Catalog'.
- Cloud Name:** A dropdown menu with 'MGMT-VCENTER' selected.
- Select No of Entries:** A dropdown menu with '1' selected.

Red arrows point to the asterisk icons next to the 'Catalog Name', 'Cloud Name', and 'Select No of Entries' fields, indicating required fields.

Enter a name for the 'Storage Entry Name', select the Storage Policy we created in the previous section and click 'Submit'.

**Virtual Storage Catalog**

✓ Add Catalog

Add Entries

---

**Storage Entry#1**

Storage Entry Name  \*

Storage Policy  \*

Click 'OK'.

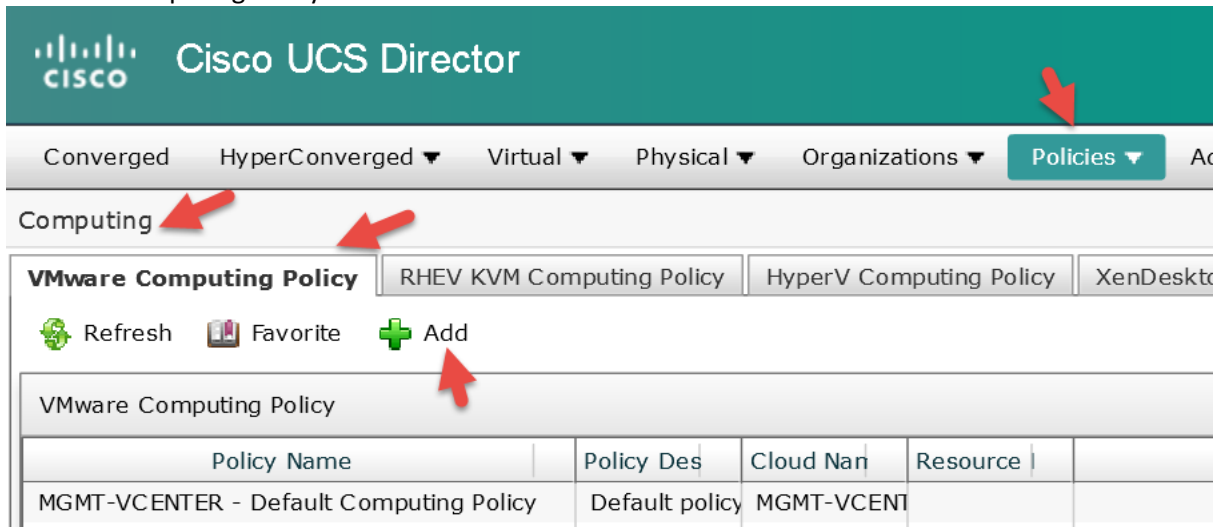
**Submit Result**

Storage Catalog saved successfully



## 1.4. Add VMware Computing Policy

Add VMware Computing Policy. From UCSD GUI, Navigate to Policies -> Virtual Hypervisor Policies -> Computing -> VMware Computing Policy -> select 'Add'.



The screenshot shows the Cisco UCS Director interface. The top navigation bar includes 'Converged', 'HyperConverged', 'Virtual', 'Physical', 'Organizations', and 'Policies'. The 'Policies' menu is expanded to show 'Computing'. Under 'Computing', there are tabs for 'VMware Computing Policy', 'RHEV KVM Computing Policy', 'HyperV Computing Policy', and 'XenDesktop'. The 'VMware Computing Policy' tab is active, showing a table with one entry: 'MGMT-VCENTER - Default Computing Policy'. Above the table are buttons for 'Refresh', 'Favorite', and 'Add'. Red arrows point to the 'Policies' menu, the 'Computing' sub-menu, the 'VMware Computing Policy' tab, and the 'Add' button.

Enter a Policy Name, Policy Description, select your Cloud Name/vCenter Account, drop down and select 'Include Selected Clusters' for Host Node/Cluster Scope and click 'Select' for Selected Clusters.

**Add Computing Policy**

Policy Name:

Policy Description:

Cloud Name:

Host Node/Cluster Scope:

Selected Clusters:

Select the cluster(s) you want to deploy VMs to and click 'Select'.

**Select Items**

Check items below to make a selection.

culpeper1

culpeper2

Richardson

Leave everything else default and click **'Submit'**.

**Add Computing Policy**

Policy Name:  \*

Policy Description:

Cloud Name:  \*

Host Node/Cluster Scope:

Selected Clusters:  culpeper1, culpeper2 \*

Map VM Affinity Rules

Resource Pool:

ESX Type:

ESX Version:

Filter Conditions:

<input type="checkbox"/> Total VMs in the Host Node	less than or equals	<input type="text"/>
<input type="checkbox"/> Active VMs in the Host Node	less than or equals	<input type="text"/>
<input type="checkbox"/> Number of CPU Cores in the Host Node	less than or equals	<input type="text"/>
<input type="checkbox"/> CPU Speed Per Core (GHz)	less than or equals	<input type="text"/>
<input type="checkbox"/> Total Memory (GB) Host Node	less than or equals	<input type="text"/>
<input type="checkbox"/> VCPUs Ratio - Provisioned/Total	less than or equals	<input type="text"/>

**Deployment Options**

Override Template


**Resizing Options**

Allow Resizing of VM

Permitted Values for vCPUs:

Permitted Values for Memory in MB:

Deploy to Folder:



Click **'OK'**.

**Submit Result**

Policy added successfully.



Delete the Default Computing Policy. Navigate to Policies -> Virtual Hypervisor Policies -> Computing -> VMware Computing Policy -> select the Default Computing Policy -> select 'Delete'.

The screenshot shows the Cisco UCS Director interface. The top navigation bar includes 'Converged', 'HyperConverged', 'Virtual', 'Physical', 'Organizations', and 'Policies'. The 'Policies' menu is expanded to show 'Computing'. Under 'Computing', there are tabs for 'VMware Computing Policy', 'RHEV KVM Computing Policy', 'HyperV Computing Policy', and 'XenDesktop'. The 'VMware Computing Policy' tab is active, showing a toolbar with 'Refresh', 'Favorite', 'Add', 'View', 'Edit', 'Delete', and 'Clone'. The 'Delete' button is highlighted with a red arrow. Below the toolbar is a table with the following data:

Policy Name	Policy Des	Cloud Nan	Resource
MGMT-VCENTER - Default Computing Policy	Default policy	MGMT-VCENT	
MGMT-VCENTER-Computing-Policy	Management	MGMT-VCENT	

Click 'Delete'.

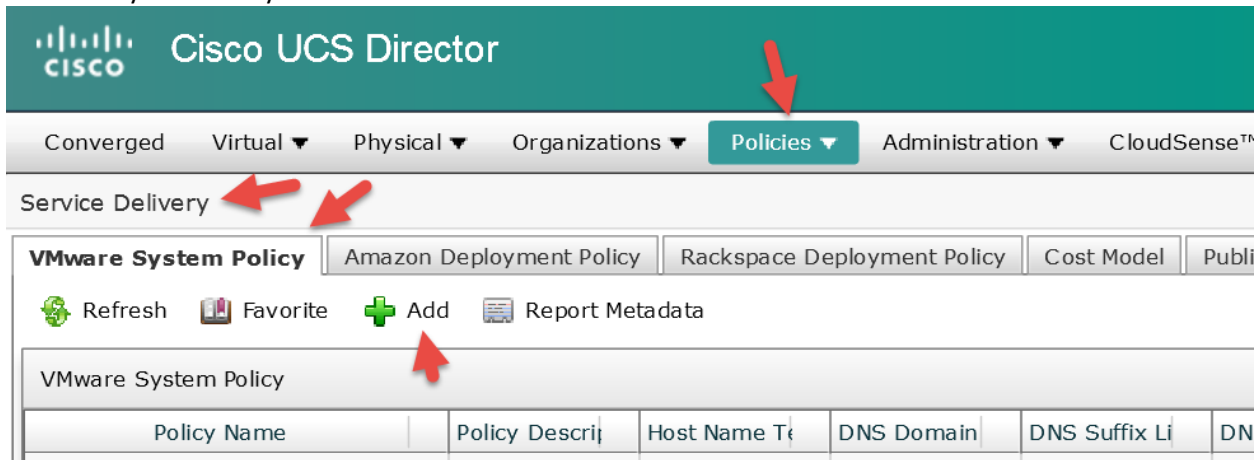
The screenshot shows a dialog box titled 'Delete computing policy'. The text inside the dialog asks: 'Are you sure you want to delete the selected computing policy?'. At the bottom of the dialog, there are two buttons: 'Delete' and 'Close'. The 'Delete' button is highlighted with a red arrow.

Click 'OK'.

The screenshot shows a dialog box titled 'Submit Result'. The text inside the dialog says: 'Computing policy deleted successfully.'. At the bottom of the dialog, there is an 'OK' button, which is highlighted with a red arrow.

## 1.5. Add VMware System Policy

Add VMware System Policy. From UCSD GUI, Navigate to Policies -> Virtual Hypervisor Policies -> Service Delivery -> VMware System Policy -> select 'Add'.



Enter a Policy Name, Policy Description, '**{VMNAME}**' for VM Name Template, select '**End User VM Name or VM Prefix**', enter '**{VMNAME}**' for Host Name Template, select the timezone where this vCenter resides, enter your domain name, drop down and select '**Windows and Linux**' for VM Image Type. Continued on next Page...

**System Policy Information**

Policy Name	<input type="text" value="MGMT-VCENTER-System-Policy"/>
Policy Description	<input type="text" value="Management vCenter System Policy"/>
VM Name Template	<input type="text" value="{VMNAME}"/> <small>If empty, name provided by end user is taken as VM Name.</small>
VM Name Validation Policy	<input type="text"/>
	<input checked="" type="checkbox"/> End User VM Name or VM Prefix
	<input checked="" type="checkbox"/> Power On after deploy
Host Name Template	<input type="text" value="{VMNAME}"/> <small>Windows has a 15 character name limitation</small>
Host Name Validation Policy	<input type="text"/>
Linux Time Zone	<input type="text" value="US/Central"/>
Linux VM Max Boot Wait Time	<input type="text" value="10 Mins"/>
DNS Domain	<input type="text" value="gsp-r5.cloudlab.cisco.com"/>
DNS Suffix List	<input type="text"/>
DNS Server List	<input type="text"/>
VM Image Type	<input type="text" value="Windows and Linux"/>



Enter your Windows Product ID, License Owner Name, Organization, select 'Create a unique SID', enter the Administrator Password, select your timezone, select Workgroup and enter a Workgroup name and click 'Submit'.

**Windows Parameters (applicable only for Windows)**

Product ID	<input type="text" value="DFJMN-V247E-11113-B19K7-7QV3"/>	
	Please make sure to provide the value in OS License Pool or enter the id here.	
License Owner Name	<input type="text" value="Cisco Systems Inc."/>	*
Organization	<input type="text" value="Cisco Systems Inc."/>	*
License Mode	<input type="text" value="Per-Seat"/>	*
Number of License Users	<input type="text" value="5"/>	
Primary WINS	<input type="text"/>	
Secondary WINS	<input type="text"/>	
Windows VM Max Boot Wait Time	<input type="text" value="10 Mins"/>	*
	<input checked="" type="checkbox"/> Create a unique SID	
	<input checked="" type="checkbox"/> Auto Logon	
Auto Logon Count	<input type="text" value="5"/>	
Administrator Password	<input type="password" value="*****"/>	*
Windows Time Zone	<input type="text" value="Central Time"/>	*
Domain/Workgroup	<input type="text" value="Workgroup"/>	*
Workgroup	<input type="text" value="WORKGROUP"/>	*
	<input type="checkbox"/> Define VM Annotation	

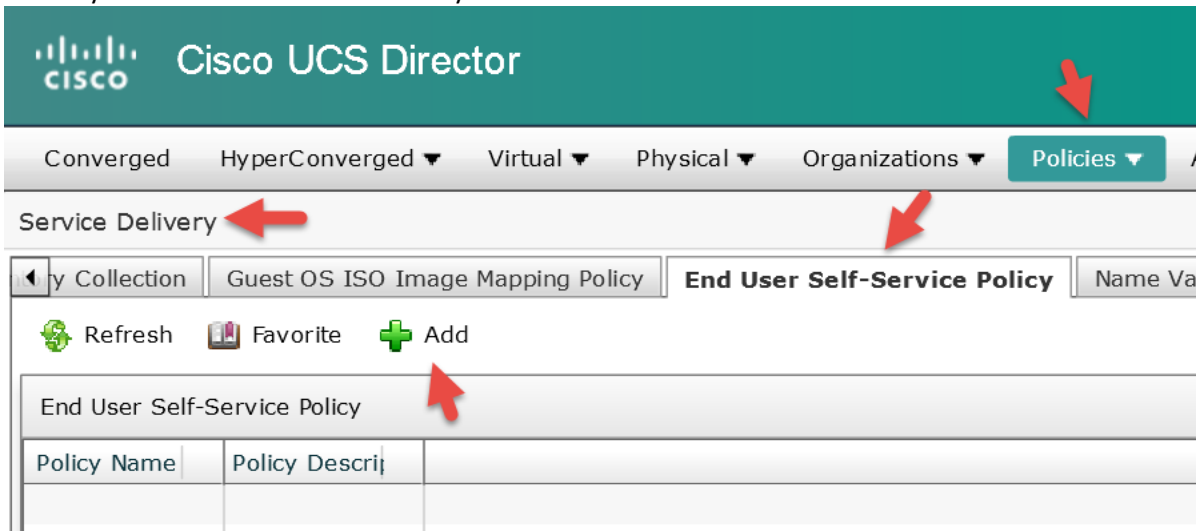
Click 'OK'.

**Submit Result**

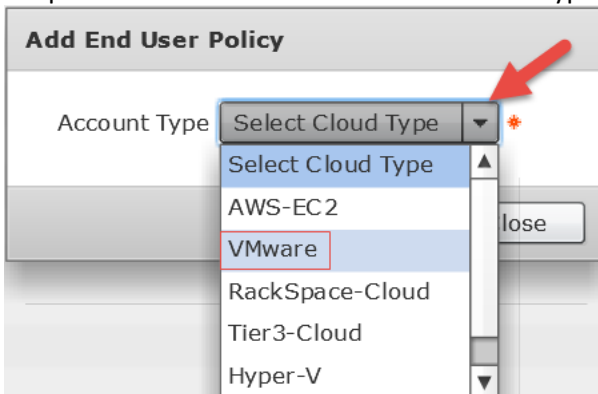
Added successfully

## 1.6. Add End User Self-Service Policy for VMware

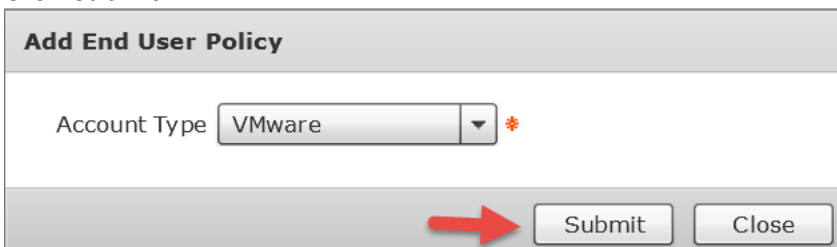
Add an End User Self-Service Policy. From UCSD GUI, Navigate to Policies -> Virtual Hypervisor Policies -> Service Delivery -> End User Self-Service Policy -> select 'Add'.



Drop down and select 'VMware' for Account type.



Click 'Submit'.



Enter a Policy Name, Policy Description, select all options and click 'Submit'.

**End User Policy**

Policy Name  \*

Policy Description

End User Self-Service Options

- VM Power Management
  - Power ON
  - Power OFF
  - Suspend
  - Standby
  - Reset
  - Reboot
  - Shutdown Guest
- VM Resizing
  - Resize VM
- VM Snapshot Management
  - Create Snapshot
  - Revert Snapshot
  - Mark Golden Snapshot
  - Delete Snapshot
  - Delete All Snapshots
- VM Deletion Management
  - Delete VM
- VM Disk Management
  - Create VM Disk
  - VM Disk Resize
  - Delete VM Disk
- VM Network Management
  - Add vNICs
  - Delete vNICs
  - VM Resync
- VM Lease Expiry
  - Configure Lease Time
- VM Console Management
  - Launch VM Client
  - Configure VNC
  - Test VNC
  - Enable/Disable VMRC Console
- VM Clone and Template Management
  - Clone
  - Clone VM as Image
  - Convert VM as Image
  - Move VM To VDC
  - Assign VMs To VDC
- VM ISO Management
  - Mount ISO Image As CD/DVD Drive

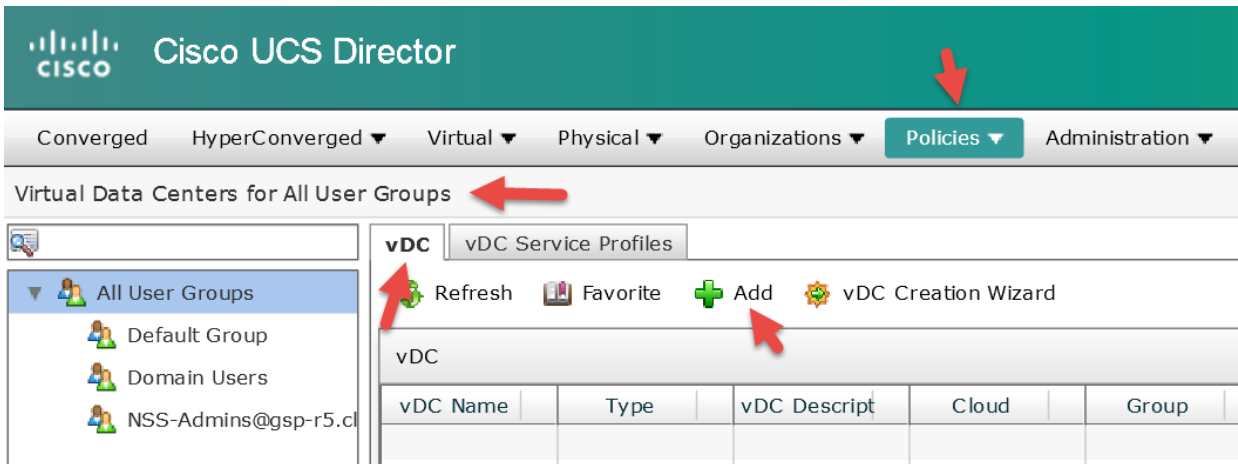
Click 'OK'.

**Submit Result**

End User Self-Service Policy saved successfully

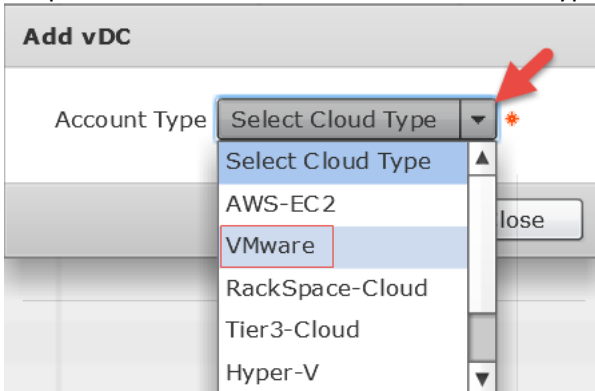
## 1.7. Add Virtual Data Center

Add a Virtual Data Center. From UCSD GUI, Navigate to Policies -> Virtual Hypervisor Policies -> Virtual Data Centers -> vDC -> select **'Add'**.



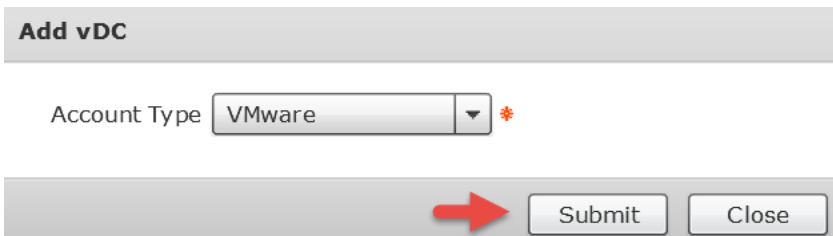
The screenshot shows the Cisco UCS Director interface. The top navigation bar includes 'Policies' with a dropdown arrow. Below it, the breadcrumb path is 'Virtual Data Centers for All User Groups'. On the left, a sidebar shows 'All User Groups' with sub-items: 'Default Group', 'Domain Users', and 'NSS-Admins@gsp-r5.cl'. The main content area is titled 'vDC' and 'vDC Service Profiles'. It features a toolbar with 'Refresh', 'Favorite', 'Add', and 'vDC Creation Wizard'. Below the toolbar is a table with columns: 'vDC Name', 'Type', 'vDC Descript', 'Cloud', and 'Group'. A red arrow points to the 'Add' button in the toolbar.

Drop down and select **'VMware'** for Account Type.



The screenshot shows the 'Add vDC' form. The 'Account Type' field is a dropdown menu with the text 'Select Cloud Type'. A red arrow points to the dropdown arrow. The dropdown menu is open, showing options: 'Select Cloud Type', 'AWS-EC2', 'VMware', 'RackSpace-Cloud', 'Tier3-Cloud', and 'Hyper-V'. The 'VMware' option is highlighted with a red box. A 'Close' button is visible to the right of the dropdown.

Click **'Submit'**.



The screenshot shows the 'Add vDC' form. The 'Account Type' field now displays 'VMware'. At the bottom of the form, there are two buttons: 'Submit' and 'Close'. A red arrow points to the 'Submit' button.

Enter a vDC Name, vDC Description, drop down and select the Cloud Name/vCenter and click 'Select' for Group.


**Add vDC**

**General Information**

vDC Name  \*

vDC Locked


vDC Description

Group   \*

Cloud Name  ▼ \*

Find and select the Group Name you want and click 'Select'.

**Select**



	Group Name	Host	Domain	Group Code	Group Descri	Source	Cost Center	Group Contac	Group Conta
<input checked="" type="checkbox"/>	NSS-Admins@gs	172.17.80.104	gsp-r5.cloudlab.			External			

Select all the Policies we created in the previous sections, including 'VMware All Buttons' and click 'Add'.

**Add vDC**

**General Information**

vDC Name: Richardson-VDC \*

vDC Locked

vDC Description: Richardson VDC

Group: Select... NSS-Admins@gsp-r5.cloudlab.cisco.com \*

Cloud Name: MGMT-VCENTER \*

**Approvers and Contacts**

First Level Approver(s): Select...

Second Level Approver(s): Select...

Approval required from all the users

Number of Approval Request Reminders: 0 \*  
Set number of reminders to 0 if the reminder email should be sent at specified interval till the request is approved/rejected.

Reminder Intervals (Hours): 24 \*

Provider Support Email Address:

Copy Notifications to Email Address:

**Policies**

System Policy: MGMT-VCENTER-System-Policy \*

Computing Policy: MGMT-VCENTER-Computing-Policy \*

Network Policy: MGMT\_80\_Network\_Policy \*

Storage Policy: MGMT-VCENTER-Storage-Policy \*

ISO Image Mapping Policy:

Cost Model: Default Cost Model \*

Disable displaying cost in the SR summary and email page

User Action Policy:

VM Management Policy:

End User Self-Service policy: VMware All Buttons \*

Add Close

Click 'OK'.

**Submit Result**

vDC added successfully.



## 1.8. Add vDC Service Profile

Add vDC Service Profile. From UCSD GUI, Navigate to Policies -> Virtual Hypervisor Policies -> Virtual Data Centers -> vDC Service Profiles -> select 'Add'.

The screenshot shows the Cisco UCS Director interface. The top navigation bar includes 'Policies' with a dropdown arrow. Below it, the breadcrumb path is 'Virtual Data Centers for All User Groups' > 'vDC' > 'vDC Service Profiles'. The 'vDC Service Profiles' page has an 'Add' button (green plus icon) and a table with columns: vDC Name, vDC Descript, Cloud, Group, and Approv. Red arrows point to the 'Policies' menu, the breadcrumb path, and the 'Add' button.

Enter a vDC Profile Name, vDC Description, drop down and select the Cloud Name/vCenter and click 'Select' for Group.

The 'Add vDC Service Profile' form has the following fields:

- vDC Profile Name: Richardson-VDC-Service-Profile \*
- vDC Locked
- vDC Description: Richardson VDC Service Profile
- Group: Select... (with a green plus icon)
- Cloud Name: MGMT-VCENTER \*

Red arrows point to the 'Select...' button and the 'MGMT-VCENTER' dropdown menu.

Find and select the Group Name you want and click 'Select'.

The 'Select' dialog box shows a search bar with 'NSS' and a table of user groups. A red arrow points to the first row, which is selected.

Group Name	Host	Domain	Group Code	Group Descri	Source	Cost Center	Group Contac	Group Conta
<input checked="" type="checkbox"/> NSS-Admins@gsp-r5.cl	172.17.80.104	gsp-r5.cloudlab.			External			

Select all the Policies we created in the previous sections, including 'VMware All Buttons' and click 'Add'.

**Add vDC Service Profile**

**General Information**

vDC Profile Name: Richardson-VDC-Service-Profile \*

vDC Locked

vDC Description: Richardson VDC Service Profile

Group: Select... NSS-Admins@gsp-r5.cloudlab.cisco.com

Cloud Name: MGMT-VCENTER \*

**Approvers and Contacts**

First Level Approver(s): Select...

Second Level Approver(s): Select...

Approval required from all the users

Number of Approval Request Reminders: 0 \*

Set number of reminders to 0 if the reminder email should be sent at specified interval till the request is approved/rejected.

Reminder Intervals (Hours): 24 \*

Provider Support Email Address:

Copy Notifications to Email Address:

**Policies**

System Policy: MGMT-VCENTER-System-Policy \*

Computing Policy: MGMT-VCENTER-Computing-Policy \*

Network Policy: MGMT\_80\_Network\_Policy \*

Storage Policy: MGMT-VCENTER-Storage-Policy \*

ISO Image Mapping Policy:

Cost Model: Default Cost Model \*

Disable displaying cost in the SR summary and email page

User Action Policy:

VM Management Policy:

End User Self-Service policy: VMware All Buttons \*

**Add** **Close**

Click 'OK'.

**Submit Result**

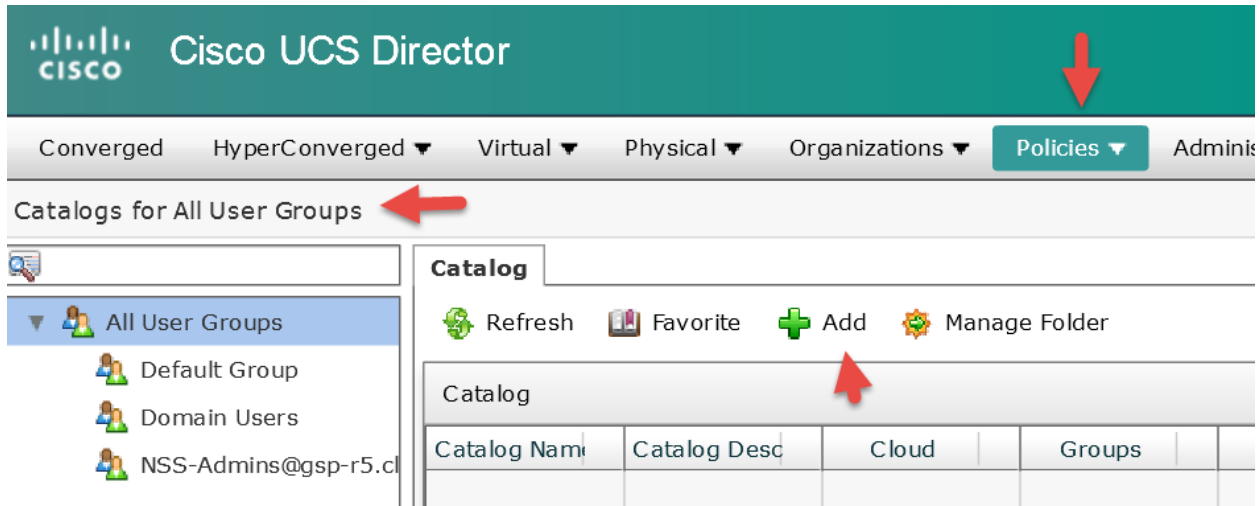
vDC added successfully.

**OK**

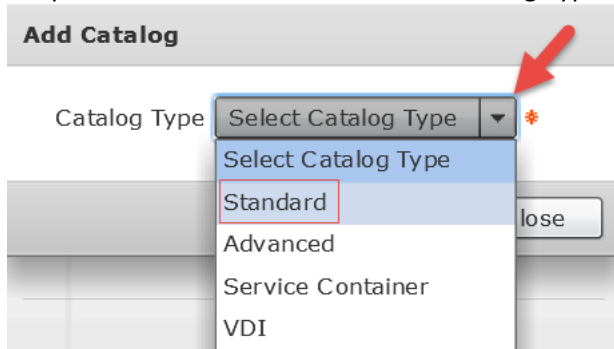


## 2. Create Standard Catalog item for Windows 2012

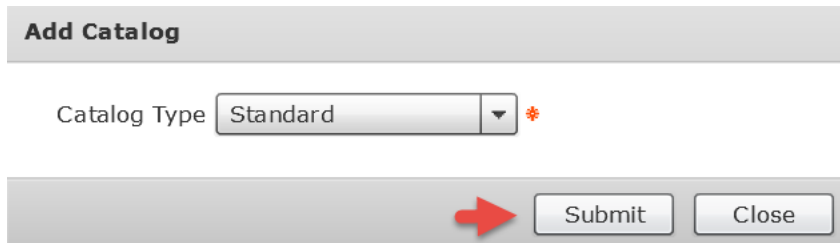
Add Windows 2012 R2 Standard Catalog item. From UCSD GUI, Navigate to Policies -> Catalogs -> All User Groups (Should be selected by default) -> select **'Add'**. This standard catalog is used to select the VMware Windows 2012 R2 Template that will be used/cloned to create the Windows 2012 R2 VMs. This template must be created and available in vCenter.



Drop down and select **'Standard'** for Catalog Type.



Click **'Submit'**.



Enter a name for the Catalog Name, enter a description for Catalog Description, drop down and select an icon for Catalog Icon and click **'Select'** for Selected Groups.

**Add Catalog**

Specify whether this catalog item shall be available to all user groups or to specific groups. When requesting a new service, user will be asked to select the vDC within the Cloud specified here.

Basic Information

Application Details

User credentials

Customization

VM Access

Summary

Catalog Name: Richardson Windows 2012 R2 \*

Catalog Description: Richardson Windows 2012 R2 Image

Catalog Type: Standard \*

Catalog Icon: VM: Windows Image 2

Applied to all groups

Selected Groups: Select...

Enter your group name in the filter on the right and then select your group then click **'Select'**.

**Select**

NSS

Group Name	Host	Domain	Group Code	Group Descri	Source	Cost Center	Group Contac	Group Conte
<input checked="" type="checkbox"/> NSS-Admins@gsp	172.17.80.104	gsp-r5.cloudlab.			External			

Deselect 'Publish to end users' and click **'Select'** for Image.

Selected Groups: Select... NSS-Admins@gsp-r5.cloudlab.cisco.com \*

Publish to end users

Cloud Name: MGMT-VCENTER \*

Provision new vm using ISO Image

Image: Select... \*

Provision all disks in single datastore

Select Folder: Standard

Enter your Windows 2012 Template name in the filter on the right, select the template check box and click **'Select'**.

**Select**

WIN2012R2

Cloud Name	Datacenter Name	Parent Host	Image
<input checked="" type="checkbox"/> MGMT-VCENTER	GSP_MGMT	172.17.80.69	WIN2012R2_Standard-Template

## Review and click 'Next'.

**Add Catalog**


**Basic Information**

Specify whether this catalog item shall be available to all user groups or to specific groups. When requesting a new service, user will be asked to select the vDC within the Cloud specified here.

Catalog Name:  \*

Catalog Description:

Catalog Type:  \*

Catalog Icon:  

Applied to all groups

Selected Groups:  NSS-Admins@gsp-r5.cloudlab.cisco.com \*

Publish to end users

Cloud Name:  \*


Provision new vm using ISO Image


Image:  WIN2012R2\_Standard-Template \*

Use Linked Clone  
Linked or Full Clone will depend on Linked Clone selection in the Storage Policy

Windows License Pool:

Provision all disks in single datastore

Select Folder:   \*



## Accept all the defaults and click 'Next'.

**Add Catalog**

**Basic Information**

**Application Details**

**User credentials**

**Customization**

**VM Access**

**Summary**

The application category determines which policies will be used by the vDC where the service is provided. Application categories and their associations with various policies are managed in vDC Management.

Category:  Generic VM \*

Override  
End user can override category

Support Contact Email Address:

Specify OS:

Specify Other OS:

Specify Applications:

Specify Other Applications:

Application Code:

Above is an application code that may be used in the VM name.  
If specified, value can be between 1-4 chars

Leave default and click 'Next'.

**Add Catalog**

- ✓ Basic Information
- ✓ Application Details
- User credentials**

Specify VM user credential access options. User credential for the VM in the template can be shared with users or it can be reset before sharing. If shared, user can retrieve credentials for the active VM.

Credential Options

Leave default and click 'Next'.

**Add Catalog**

- ✓ Basic Information
- ✓ Application Details
- ✓ User credentials
- Customization**
- VM Access
- Summary

Specify customization options and custom actions. The custom actions are execute

**Automatic Guest Customization**

Enable

**Post Provisioning Custom Actions**

Enable

**Virtual Storage Catalog**

Enable

**Cost Computation**

Charge Duration  \*

Active VM Application Cost USD

Inactive VM Application Cost USD

**Lease Configuration**

Lease Time

Leave default and click 'Next'.

**Add Catalog**

- ✓ Basic Information
- ✓ Application Details
- ✓ User credentials
- ✓ Customization
- VM Access**
- Summary

VM Access  
Specify whether end users will have access to the VM via a web interface or other remote interfaces.

**Web Access Configuration**

Enable

**Remote Desktop Access Configuration**

Enable

**VMRC Console Configuration**

Enable

Review and click 'Submit'.

**Add Catalog**

- ✓ Basic Information
- ✓ Application Details
- ✓ User credentials
- ✓ Customization
- ✓ VM Access
- Summary**


Summary  
Review the information below. Click Back to make further changes to the catalog. Click Submit to modify the catalog.

Catalog	Richardson Windows 2012 R2
Catalog Description	Richardson Windows 2012 R2 Image
Cloud	MGMT-VCENTER
Image	WIN2012R2_Standard-Template
Groups	NSS-Admins@gsp-r5.cloudlab.cisco.com
Category Name	Generic VM
Support Email	
OS	Windows Server 2012
Other OS	
Applications	
Other Applications	
Template User	
Web Access URL	
Web Access Label	
Remote Desktop Server	
Remote Desktop Port	
Remote Desktop Label	
VMRC Enabled	Disabled
Charge Duration	Hourly
Active VM Application Cost	0.0
Inactive VM Application Cost	0.0
Workflow Name	
Workflow Description	
Application Code	
Duration Hours	

Click 'OK'.

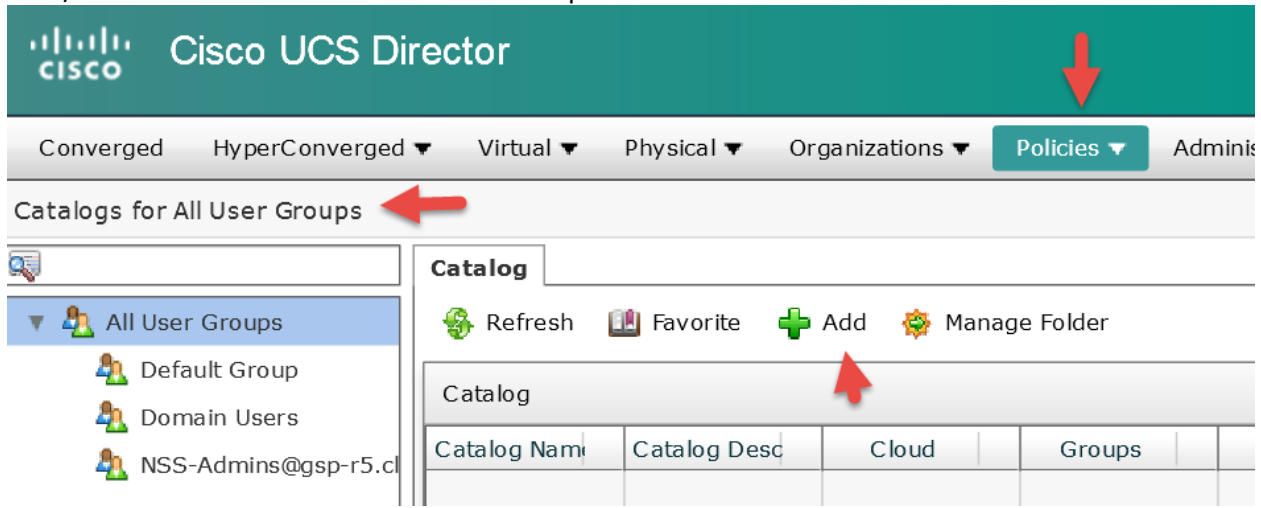
**Submit Result**

Catalog submitted successfully

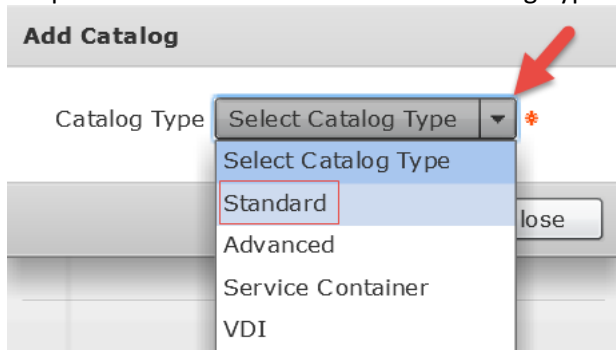


### 3. Create Standard Catalog item for Linux

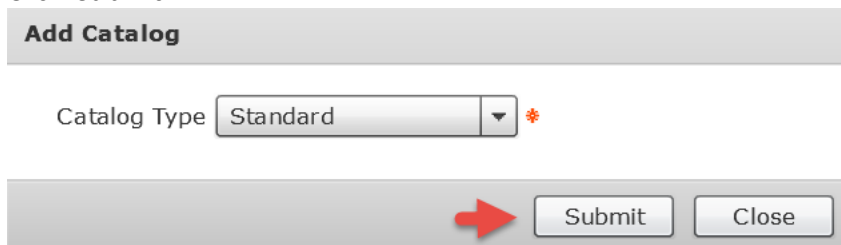
Add a Linux Standard Catalog item. From UCS Director GUI, Navigate to Policies -> Catalogs -> All User Groups (Should be selected by default) -> select 'Add'. This standard catalog is used to select the VMware Linux Template that will be used/cloned to create the Linux VMs. This template must be created and available in vCenter.



Drop down and select 'Standard' for Catalog Type.



Click 'Submit'.



Enter a name for the Catalog Name, enter a description for Catalog Description, drop down and select an icon for Catalog Icon and click 'Select' for Selected Groups.

**Add Catalog**

**Basic Information**

Specify whether this catalog item shall be available to all user groups or to specific groups. When requesting a new service, user will be asked to select the vDC within the Cloud specified here.

Application Details

User credentials

Customization

VM Access

Summary

Catalog Name: Richardson RHEL 6.2 \*

Catalog Description: Richardson RHEL 6.2 Image

Catalog Type: Standard \*

Catalog Icon: VM: Linux \*

Applied to all groups

Selected Groups: Select... \*

Enter your group name in the filter on the right and then select your group then click 'Select'.

**Select**

Filter: NSS

Group Name	Host	Domain	Group Code	Group Description	Source	Cost Center	Group Contact	Group Contact
<input checked="" type="checkbox"/> NSS-Admins@gsp	172.17.80.104	gsp-r5.cloudlab.			External			

Deselect 'Publish to end users' and click 'Select' for Image.

Selected Groups: Select... NSS-Admins@gsp-r5.cloudlab.cisco.com \*

Publish to end users \*

Cloud Name: MGMT-VCENTER \*

Provision new vm using ISO Image

Image: Select... \*

Provision all disks in single datastore

Select Folder: Standard \*

Enter your Linux Template name in the filter on the right, select the template check box and click 'Select'.

**Select**

Filter: RE

Cloud Name	Datacenter Name	Parent Host	Image
<input checked="" type="checkbox"/> MGMT-VCENTER	GSP_MGMT	172.17.80.66	REHL62v2ForSam

## Review and click 'Next'.

**Add Catalog**


**Basic Information**

Specify whether this catalog item shall be available to all user groups or to specific groups. When requesting a new service, user will be asked to select the vDC within the Cloud specified here.

Catalog Name: Richardson RHEL 6.2 \*

Catalog Description: Richardson RHEL 6.2 Image

Catalog Type: Standard \*

Catalog Icon: VM: Linux 

Applied to all groups

Selected Groups: Select... NSS-Admins@gsp-r5.cloudlab.cisco.com \*

Publish to end users


Cloud Name: MGMT-VCENTER \*



Provision new vm using ISO Image

Image: Select... REHL62v2ForSam \*

Use Linked Clone  
Linked or Full Clone will depend on Linked Clone selection in the Storage Policy

Provision all disks in single datastore

Select Folder: Standard 

## Drop down and select Linux OS, accept all other defaults and click 'Next'.

**Add Catalog**

Basic Information


**Application Details**

The application category determines which policies will be used by the vDC where the service is provided. Application categories and their associations with various policies are managed in vDC Management.

Category: Select... Generic VM \*

Override  
End user can override category

Support Contact Email Address:

Specify OS: Linux - Redhat 

Specify Other OS:

Specify Applications: Select...

Specify Other Applications:

Application Code:

Above is an application code that may be used in the VM name.  
If specified, value can be between 1-4 chars



Leave default and click 'Next'.

**Add Catalog**

- ✓ Basic Information
- ✓ Application Details
- User credentials**

Specify VM user credential access options. User credential for the VM in the template can be shared with users or it can be reset before sharing. If shared, user can retrieve credentials for the active VM.

Credential Options

Leave default and click 'Next'.

**Add Catalog**

- ✓ Basic Information
- ✓ Application Details
- ✓ User credentials
- Customization**
- VM Access
- Summary

Specify customization options and custom actions. The custom actions are execute

**Automatic Guest Customization**

Enable

**Post Provisioning Custom Actions**

Enable

**Virtual Storage Catalog**

Enable

**Cost Computation**

Charge Duration  \*

Active VM Application Cost USD

Inactive VM Application Cost USD

**Lease Configuration**

Lease Time

Leave default and click 'Next'.

**Add Catalog**

- ✓ Basic Information
- ✓ Application Details
- ✓ User credentials
- ✓ Customization
- VM Access**
- Summary

VM Access  
Specify whether end users will have access to the VM via a web interface or other remote interfaces.

**Web Access Configuration**

Enable

**Remote Desktop Access Configuration**

Enable

**VMRC Console Configuration**

Enable

Review and click **'Submit'**.

**Add Catalog**

- ✓ Basic Information
- ✓ Application Details
- ✓ User credentials
- ✓ Customization
- ✓ VM Access
- Summary**


Summary  
Review the information below. Click Back to make further changes to the catalog. Click Submit to modify the catalog.

Catalog	Richardson RHEL 6.2
Catalog Description	Richardson RHEL 6.2 Image
Cloud	MGMT-VCENTER
Image	REHL62v2ForSam
Groups	NSS-Admins@gsp-r5.cloudlab.cisco.com
Category Name	Generic VM
Support Email	
OS	Linux - Redhat
Other OS	
Applications	
Other Applications	
Template User	
Web Access URL	
Web Access Label	
Remote Desktop Server	
Remote Desktop Port	
Remote Desktop Label	
VMRC Enabled	Disabled
Charge Duration	Hourly
Active VM Application Cost	0.0
Inactive VM Application Cost	0.0
Workflow Name	
Workflow Description	
Application Code	
Duration Hours	

Click **'OK'**.

**Submit Result**

Catalog submitted successfully



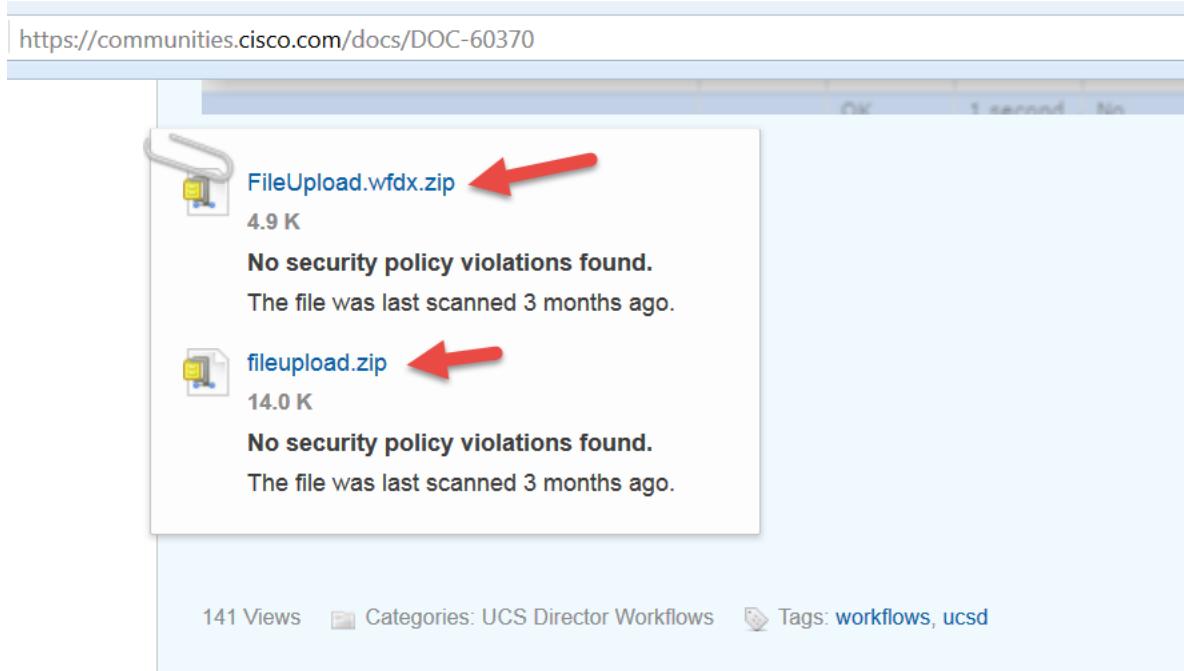
## 4. Setup File Browser

In order to use the CSV File Upload, you will need to setup UCS Director to be able to browse for the CSV file on your local PC.

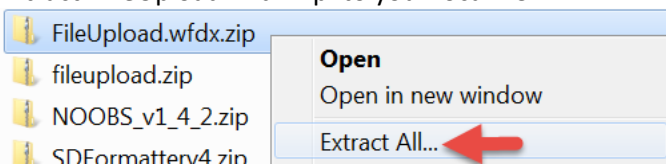
### 4.1. Download File Browser files and extract to local PC

Download fileupload.zip and FileUpload.wfx.zip from the Cisco UCS Director Community site. Link to communities site: <https://communities.cisco.com/docs/DOC-60370>

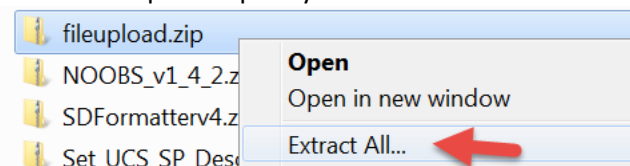
Download both 'fileupload.zip' and 'FileUpload.wfx.zip' to your local PC.



Extract 'FileUpload.wfdx.zip' to your local PC.

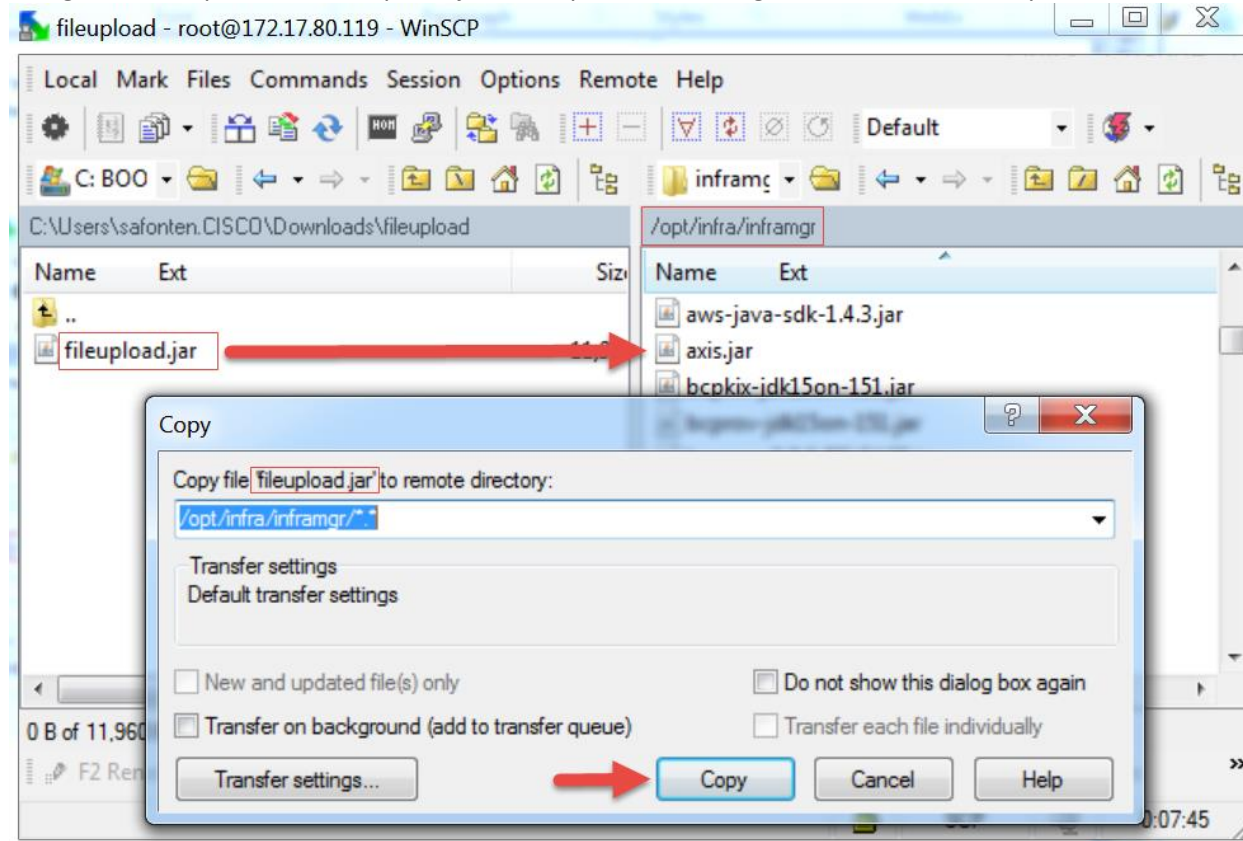


Extract 'fileupload.zip' to your local PC.



## 4.2. Upload fileupload.jar to UCS Director Primary Node

Using WinSCP, upload the 'fileupload.jar' to '/opt/infra/inframgr' on the UCS Director Primary Node as root user account.



SSH to the Primary Node to verify the 'fileupload.jar' is in the '/opt/infra/inframgr' directory.

- enter the following command: '**ls -lR /opt/infra/inframgr | grep fileupload**'

```
[root@CUCSD-P-5_4_0_0 ~]# ls -lR /opt/infra/inframgr | grep fileupload
-rw-r--r--  1 root root  11960 Feb 18  2015 fileupload.jar
[root@CUCSD-P-5_4_0_0 ~]#
```

### 4.3. Add fileupload.jar to run.sh file to load during boot up

SSH to the Primary Node using the root account.

- Use vi to edit 'run.sh' to include 'fileupload.jar': **'vi /opt/infra/inframgr/run.sh'**
- Enter 'i' for insert and cursor to the 'i' in 'inframgr.jar' and type **'fileupload.jar:'**
- Press **'esc'**, then enter **':wq!'** to write the changes and quit vi editor
- verify the changes have been saved: **'cat /opt/infra/inframgr/run.sh'**

```
[root@CUCSD-P-5_4_0_0 ~]# cat /opt/infra/inframgr/run.sh
java -Xms6144m -Xmx6144m -Djava.security.manager -Djava.security.policy=security.policy -DpreInitSchema=true -verbose
:gc -cp .:fileupload.jar:inframgr.jar:google-gson.jar:ruby-gems-1.1.jar:java-xmlbuilder-0.6.jar:vmquest.jar:vim25-wsd
l.jar:vijava60compat.jar:vijava55b20130927.jar:ssoclient-wsd1.jar:srm.jar:pbm-wsd1.jar:jaxen-1.1-beta-6.jar:dom4j-1.6
.1.jar:velocity-1.6.2.jar:velocity-1.6.2-dep.jar:jclouds-vcloud-1.0-beta-7.jar:jclouds-terremark-1.0-beta-7.jar:jclou
ds-scriptbuilder-1.0-SNAPSHOT.jar:jclouds-log4j-1.0-beta-7.jar:jclouds-jsch-1.0-beta-7.jar:jclouds-core-1.0-beta-7-ja
r-with-dependencies.jar:jclouds-compute-1.0-beta-7.jar:vcloud-java-sdk-1.5.0.jar:rest-api-schemas-1.5.0.jar:syslog4j-
0.9.43-bin.jar:maverick-all.jar:pd_ipc_server.jar:nesla-1.1.jar:libthrift-0.9.1.jar:jruby-complete-1.7.9.jar:javaw.s
.rs-api-2.0.1.jar:javax.inject-2.3.0-b10.jar:javax.annotation-api-1.2.jar:gch_client.jar:aopalliance-repackaged-2.3.0
-b10.jar:xalan-2.7.0.jar:trustpool.jar:quartz-2.1.7.jar:gch_server.jar:bcprov-jdk15on-151.jar:bcprov-jdk15on-151.jar:
slf4j-log4j12-1.7.6.jar:slf4j-api-1.7.6.jar:ss_css2.jar:pd4ml.jar:ojdbc14.jar:classes12.jar:manageontap-5.3.1.jar:mys
ql-connector-java-5.1.24-bin.jar:mongo-java-driver-2.11.3.jar:log4j-1.2.15.jar:jxl.jar:junit-4.9b2.jar:json-lib.jar:j
ackson-all-1.9.5.jar:jsch-0.1.45.jar:jfreechart-1.0.13.jar:jcommon-1.0.16.jar:smtp.jar:mailapi.jar:javassist.jar:jssc
.jar:guava-15.0.jar:google-gson.jar:flexlm.jar:vendor_info.jar:EccpressoAll.jar:ehcache-core-2.6.6.jar:aws-java-sdk-1
.4.3.jar:jdo2-api-2.3-eb.jar:datanucleus-rdbms-4.1.0-release.jar:datanucleus-core-4.1.0-release.jar:datanucleus-cache
-4.0.4.jar:datanucleus-api-jdo-4.1.0-release.jar:asm-5.0.4.jar:ucsd-rest-api-sdk-v2.jar:cuic-client.jar:bonecp-0.8.0.
RELEASE.jar:servlet-api.jar:commons-validator-1.4.0.jar:commons-pool-1.6.jar:commons-pool-1.3.jar:commons-net-3.1.jar
:commons-logging-1.1.jar:commons-lang3-3.1.jar:commons-lang-2.5.jar:commons-io-2.0.1.jar:commons-dbc-1.4.jar:commons
-configuration-1.3.jar:commons-compress-1.9.jar:commons-collections-3.2.jar:commons-logging-1.1.jar:httpmime-4.2.2.ja
r:httpcore-4.2.2.jar:httpclient-4.2.2.jar:commons-httpclient-3.1.jar:commons-codec-1.9.jar:wsdl4j-1.5.1.jar:saaj.jar:
jaxrpc.jar:commons-logging-1.0.4.jar:commons-discovery.jar:commons-discovery-0.2.jar:axis.jar:xmlschema-1.4.3.jar:xal
an.jar:serializer.jar:commons-logging.jar:commons-httpclient-3.0.1.jar:stax-api-1.0.jar:jaxb-api-2.0.jar:geronimo-jta
_1.0.1B_spec-1.0.1.jar:geronimo-jms_1.1_spec-1.1.1.jar:geronimo-j2ee-management_1.0_spec-1.0.jar:commons-logging-1.1.
jar:activemq-jaas-5.2.0.jar:activemq-core-5.2.0.jar:activation-1.1.jar:vision-api-2.5.3.0.jar:icontrol.jar:com.cloup
ia.service.CIM.Inframgr.InframgrMain $*
[root@CUCSD-P-5_4_0_0 ~]#
```

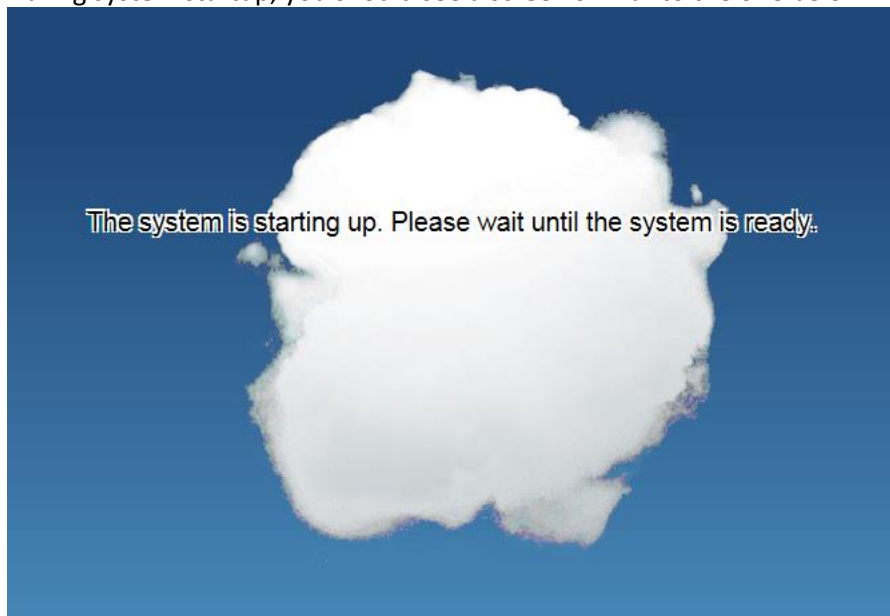
Reboot the Primary Node to load the 'fileupload.jar' file.

```
[root@CUCSD-P-5_4_0_0 ~]# reboot
```

Broadcast message from root@CUCSD-P-5\_4\_0\_0  
(/dev/pts/0) at 11:48 ...

The system is going down for reboot NOW!  
[root@CUCSD-P-5\_4\_0\_0 ~]#

During system startup, you should see a screen similar to the one below.



When the system is completely up, you will see the login screen as seen below.

# Cisco UCS Director

Username:

Password:

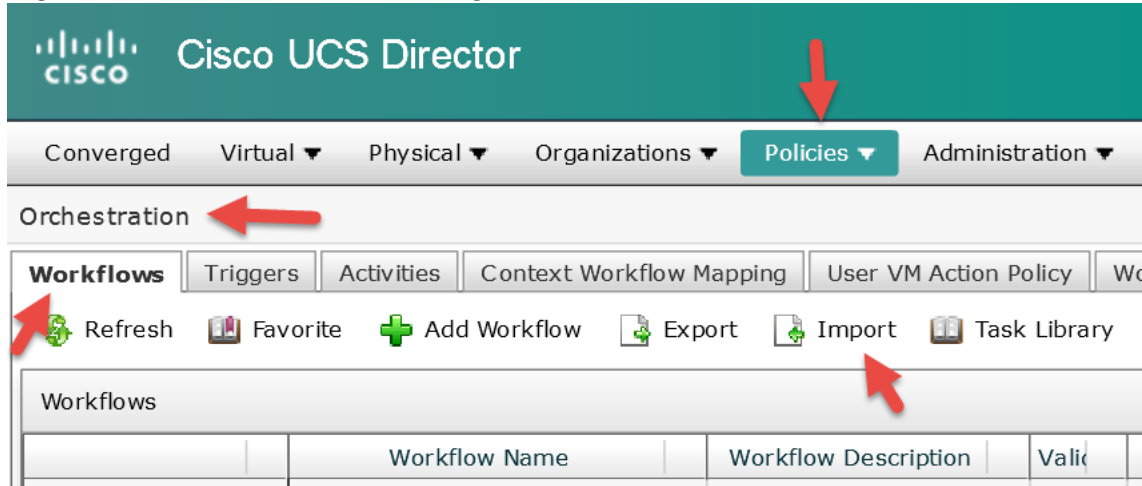
Login

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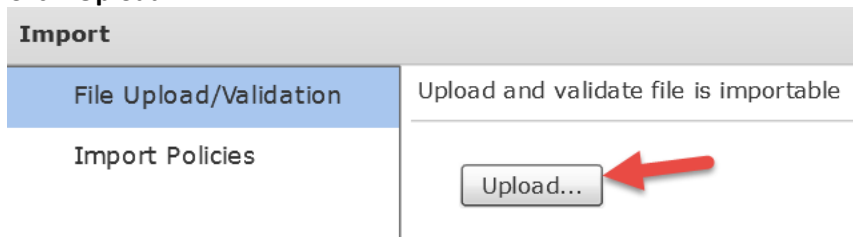


## 4.4. Import File Browser

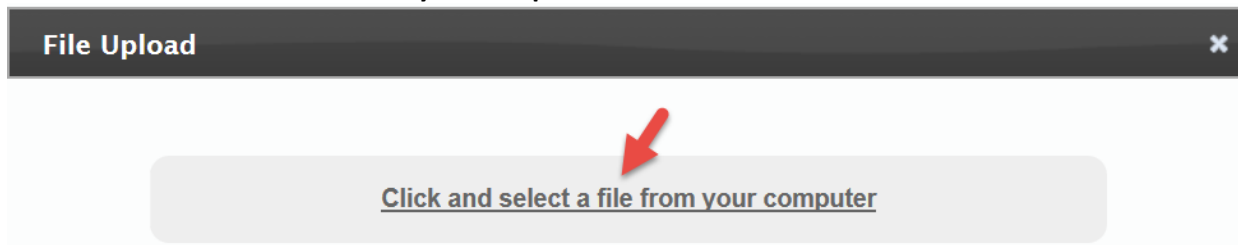
Log into the UCS Director GUI and Navigate to Policies -> Orchestration -> Workflows -> Click 'Import'.



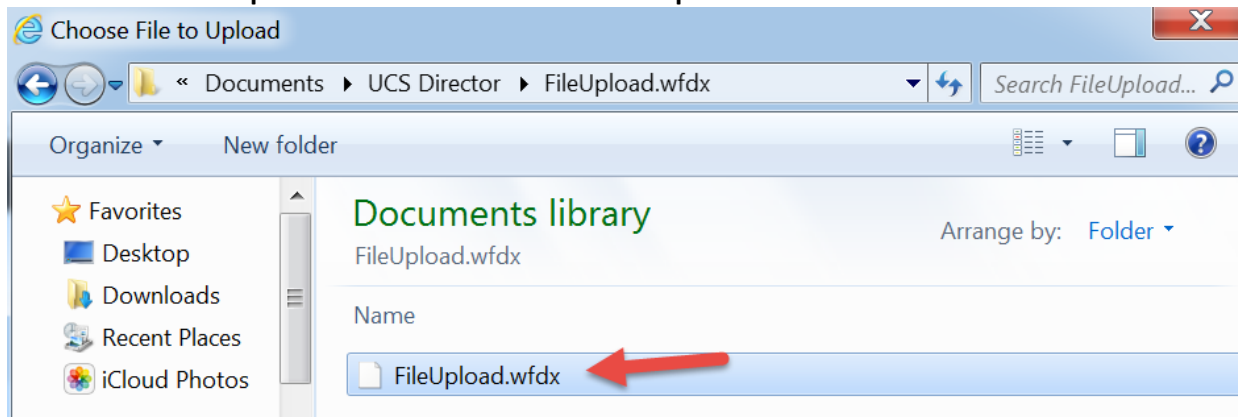
Click 'Upload'.



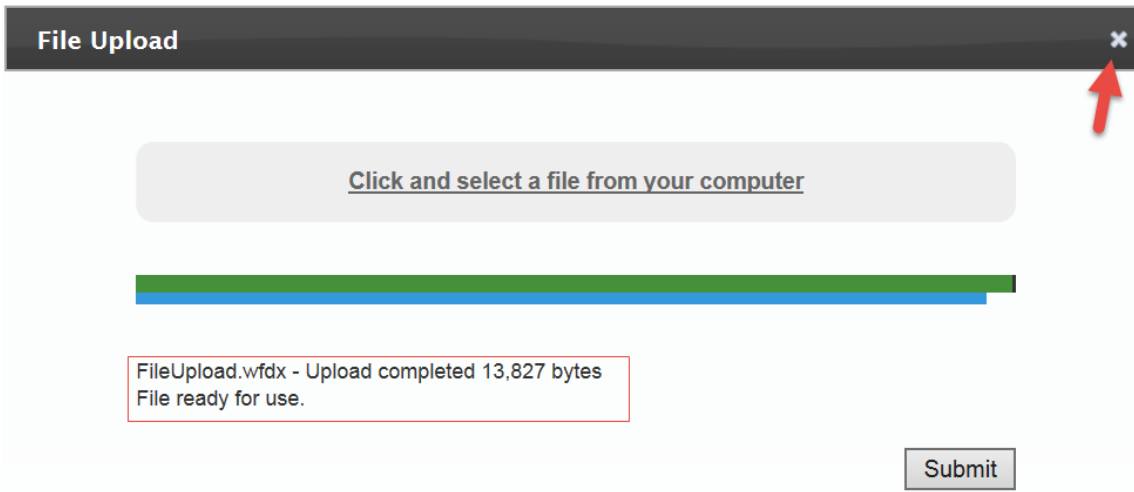
Select 'Click and select a file from your computer'.



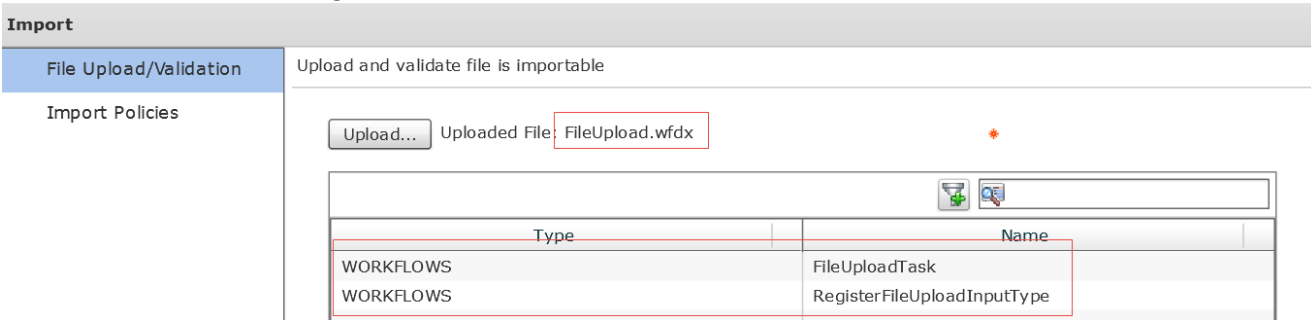
Browse to the 'FileUpload.wfdx' workflow and select 'Open'.



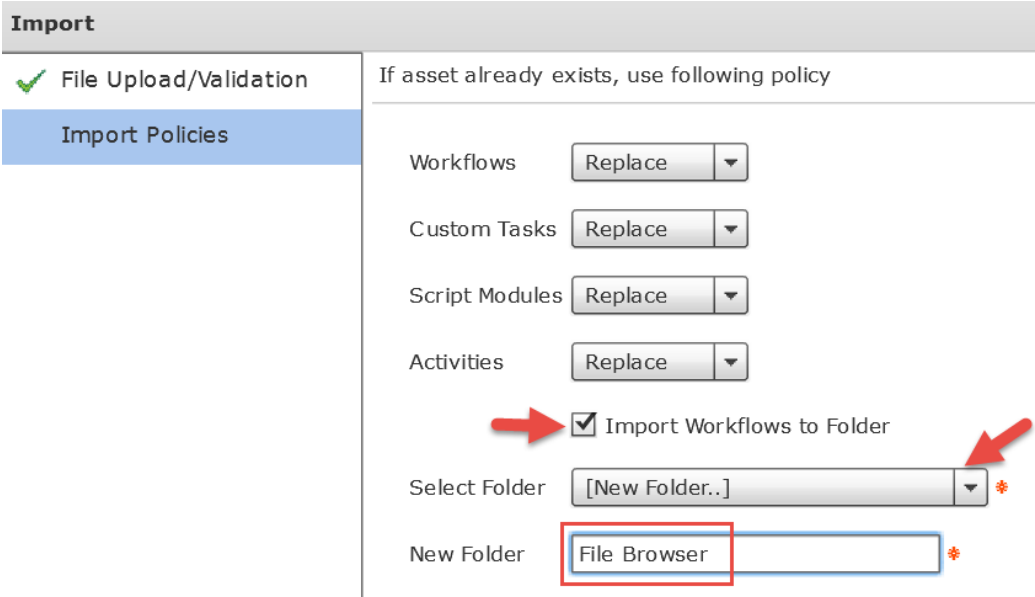
You will see a status of the upload and then once complete you will see the following 'File Ready for use.'. Click the 'x' to close the window.



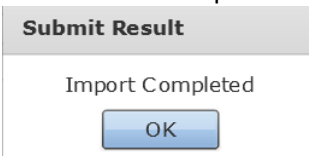
You should see the following screen, click 'Next'.



Here you could leave everything default but I decided to create a new folder, 'File Browser', to place these workflows in and then click 'Import'.



Click 'OK' for complete status.





## 4.5. Execute File Browser Workflow

You should see the following workflows under the 'File Browser' workflow folder.

Cisco UCS Director

Converged Virtual Physical Organizations Policies Administration CloudSense™ Favorites

Orchestration

Workflows Triggers Activities Context Workflow Mapping User VM Action Policy Workflow Templates Workflow Schedule

Refresh Favorite Add Workflow Export Import Task Library

Workflows	Workflow Name	Workflow Description	Valid	Last Validated	Co	
File Browser	FileUploadTask		OK	43 seconds ago	No	0
	RegisterFileUploadInputType		OK	42 seconds ago	No	0

Execute the custom-workflow 'RegisterFileUploadInputType'. It will register the new input type 'file upload'. You can then use this type for file uploading. Right Click on the workflow and select 'Execute now'.

Cisco UCS Director

Converged Virtual Physical Organizations Policies Administration

Orchestration

Workflows Triggers Activities Context Workflow Mapping User VM Action Policy W

Refresh Favorite Add Workflow Export Import Task Library

Workflows	Workflow Name	Workflow Description	Valid
File Browser	FileUploadTask		OK
	RegisterFileUploadInputType		OK

- Edit Workflow
- Validate Workflow
- Clone Workflow
- Delete Workflow
- Execute now

Select 'Submit'.

**Executing Workflow: RegisterFileUploadInputType**

Workflow Version:

0 (default version) \*

Submit Close

Click 'Show Detail Status'.

### Service Request Submit Status

Service request is submitted successfully ID 165



Show Detail Status

Close

Wait until you see a 'Complete' status then click 'Close'.

Workflow Status | Log | Objects Created and Modified | Input/Output

#### Service Request

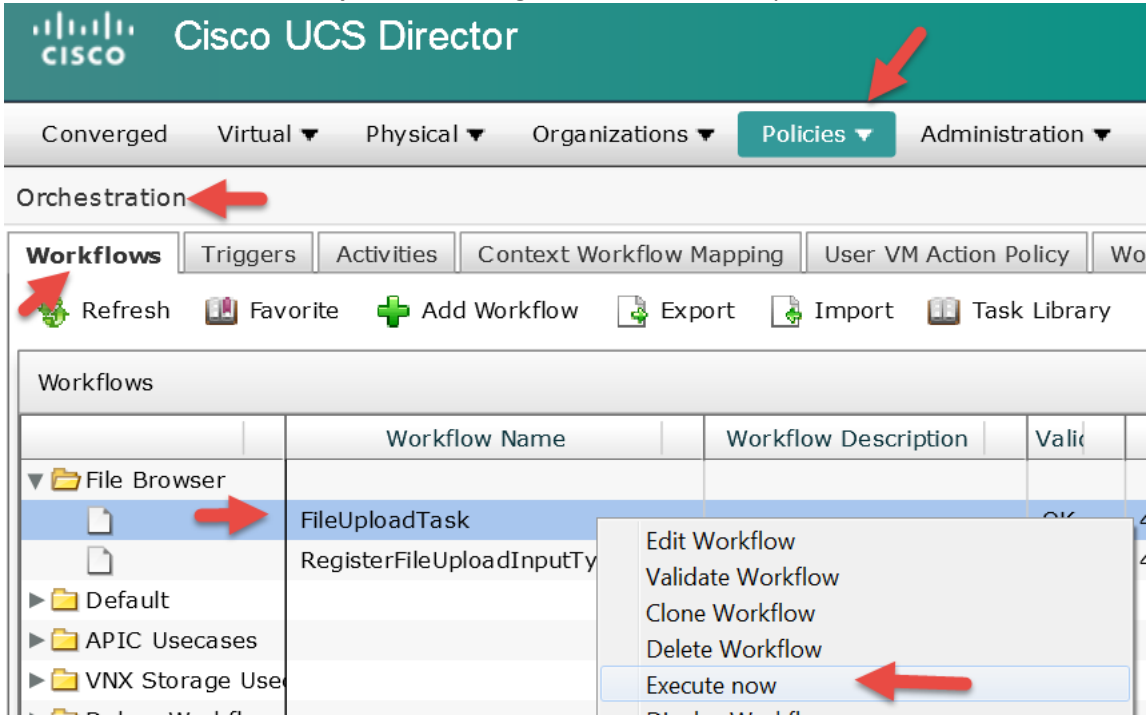
Status Refresh

▼ Overview Current status for the service request.

Request ID	165	1 Initiated by admin	09/24/2015 10:54:08
Request Type	Admin Workflow	2 Execute Cloupla Script (ReadFile) Completed action	09/24/2015 10:54:14
Workflow Name	RegisterFileUploadInputType	3 Complete Completed successfully.	09/24/2015 10:54:20
Workflow Version Label	0		

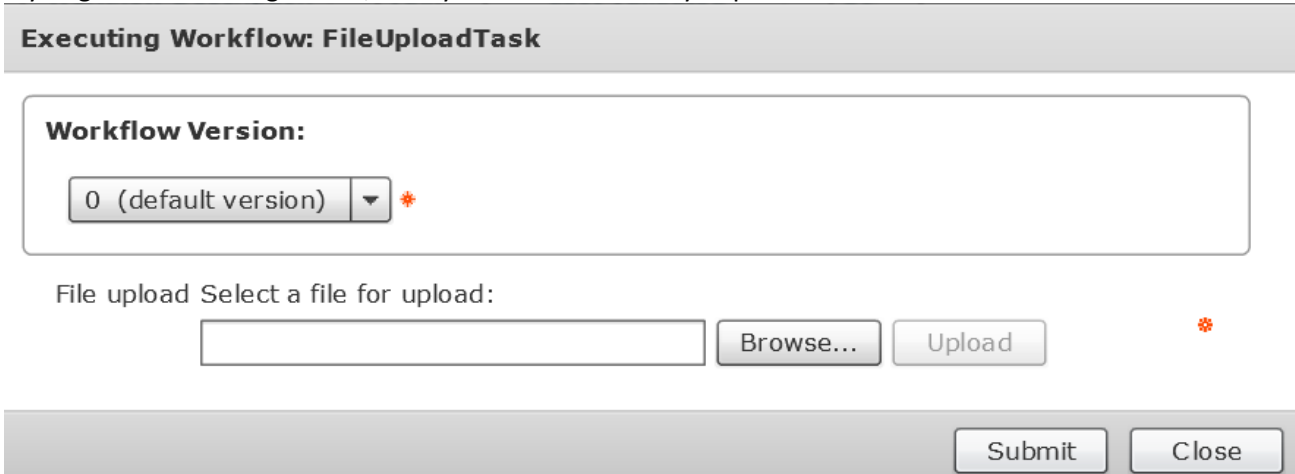
## 4.6. Verify/Test File Browser is working

Execute the workflow 'FileUploadTask'. Right Click on the 'FileUploadTask' workflow and select 'Execute now'.



The screenshot shows the Cisco UCS Director interface. At the top, there is a navigation bar with tabs for Converged, Virtual, Physical, Organizations, Policies, and Administration. Below this is the 'Orchestration' section, which contains a 'Workflows' tab. Under the 'Workflows' tab, there are several icons: Refresh, Favorite, Add Workflow, Export, Import, and Task Library. A table lists workflows, with 'FileUploadTask' selected under the 'File Browser' folder. A context menu is open over 'FileUploadTask', showing options: Edit Workflow, Validate Workflow, Clone Workflow, Delete Workflow, and Execute now. Red arrows point to the 'Policies' tab, the 'Orchestration' section, the 'FileUploadTask' row, and the 'Execute now' option.

If you get the following screen, then you have successfully implemented the file browser workflow.



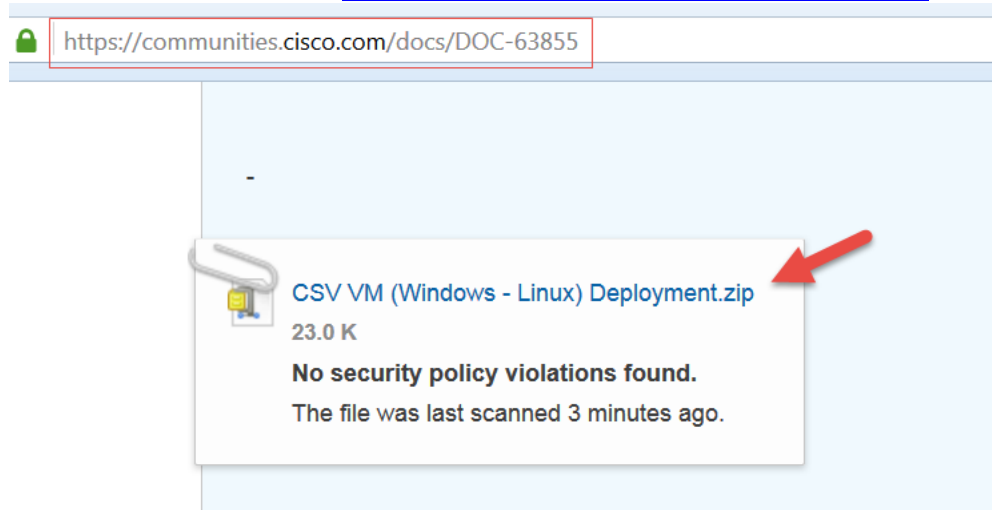
The screenshot shows the 'Executing Workflow: FileUploadTask' dialog box. It has a title bar and a main content area. The first section is 'Workflow Version:', which contains a dropdown menu showing '0 (default version)' and a red asterisk icon. Below this is a 'File upload' section with the text 'Select a file for upload:'. There is an empty text input field, a 'Browse...' button, and an 'Upload' button. A red asterisk icon is also present to the right of the 'Upload' button. At the bottom of the dialog, there are two buttons: 'Submit' and 'Close'.

**Note:** If your File Browser quits working, you may have to re-execute the custom-workflow 'RegisterFileUploadInputType'.

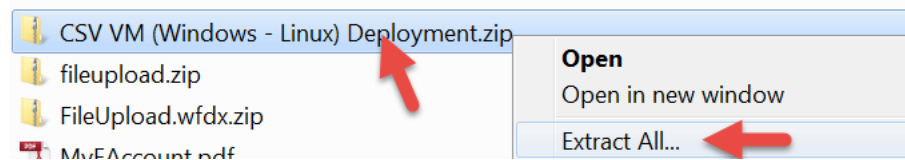
## 5. Deploy CSV Workflow

### 5.1. Download CSV Workflow

Download 'CSV VM (Windows – Linux) Deployment.zip' file from the UCS Director Communities Site to your local PC. The file can be found here: <https://communities.cisco.com/docs/DOC-63855>

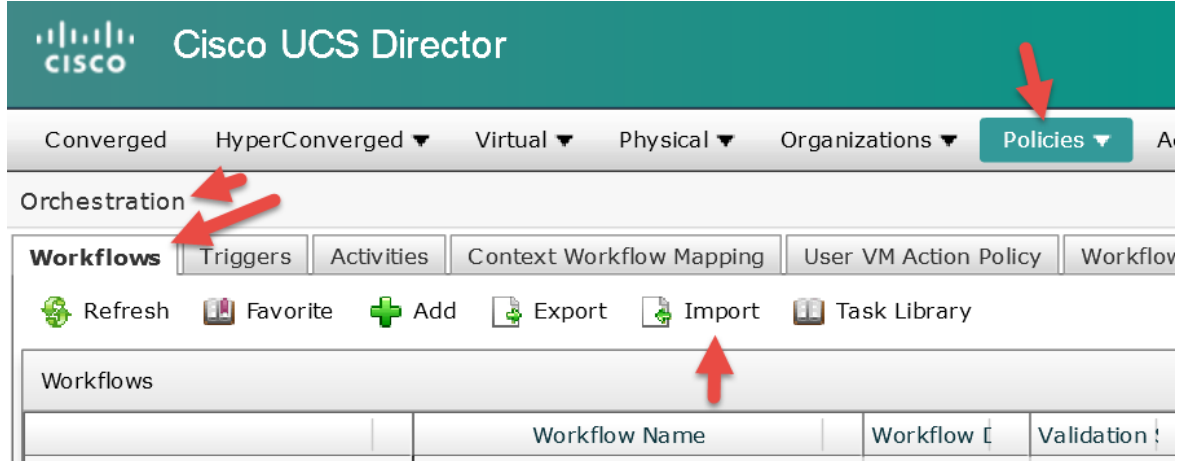


Extract the 'CSV VM (Windows – Linux) Deployment.zip' file.

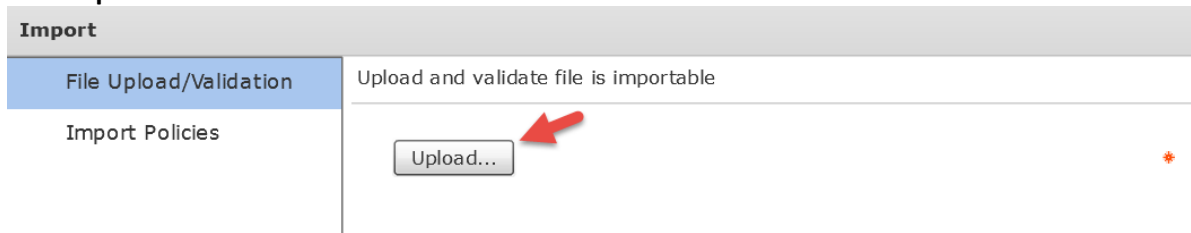


## 5.2. Import CSV Workflow

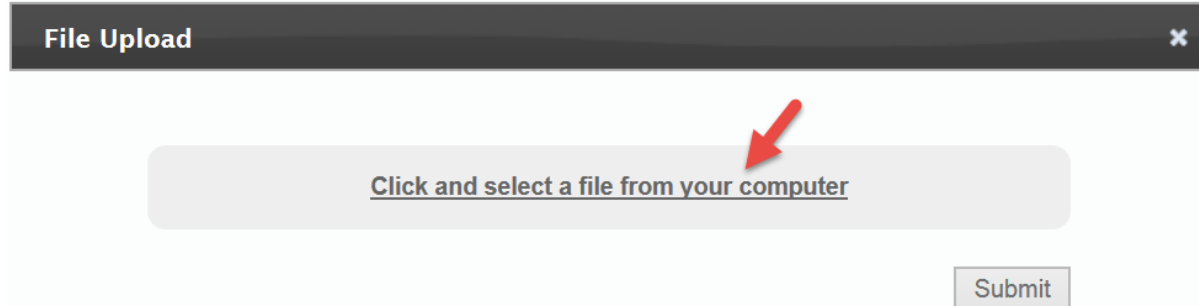
Log into the UCS Director GUI and Navigate to Policies -> Orchestration -> Workflows -> Click 'Import'.



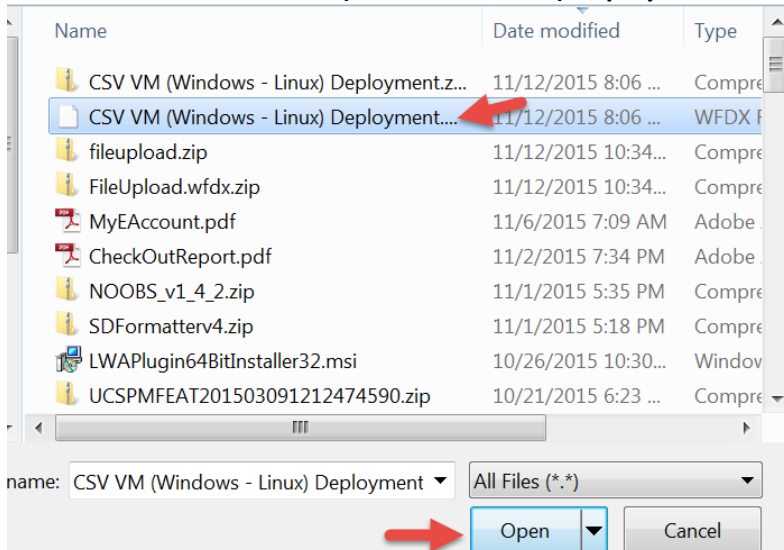
Click 'Upload'.



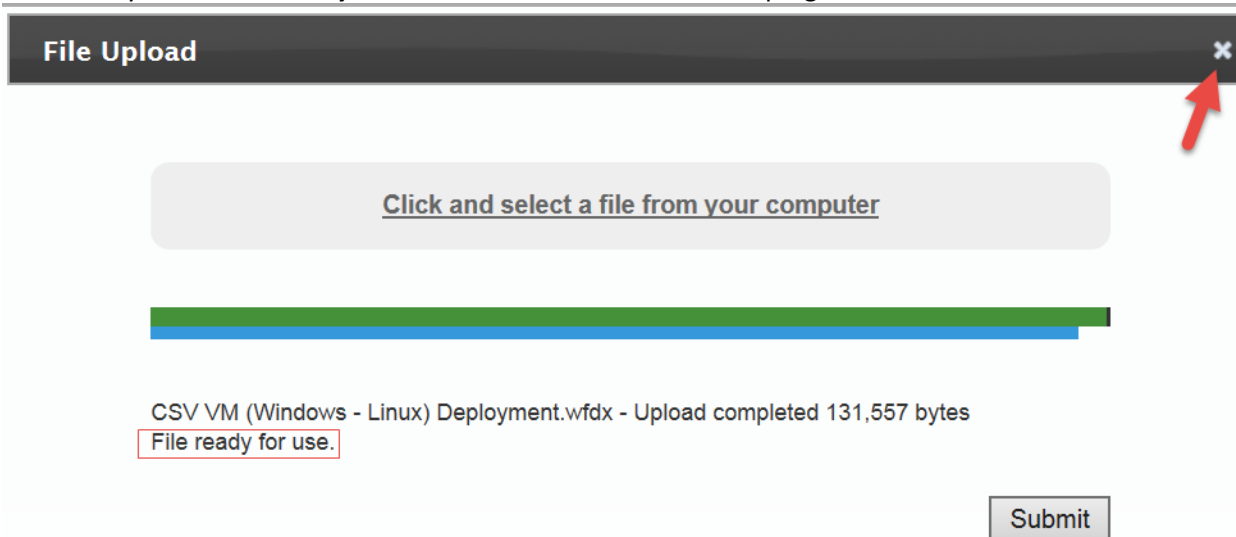
Select 'Click and select a file from your computer'.



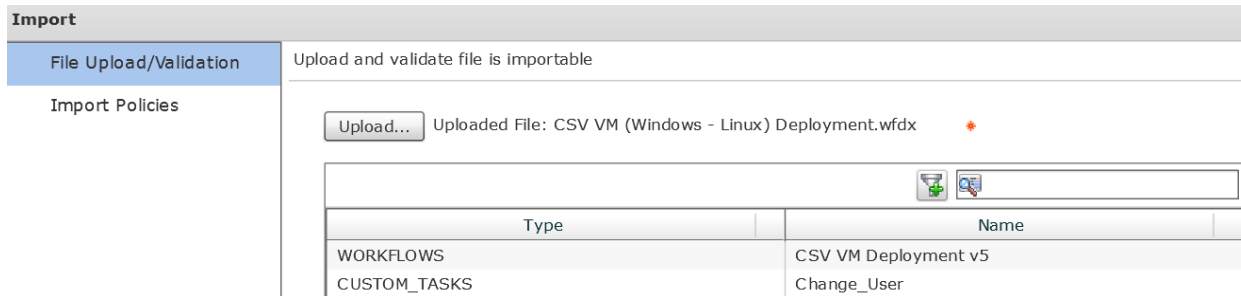
Browse and select 'CSV VM (Windows – Linux) Deployment.wfdx' then click 'Open'.



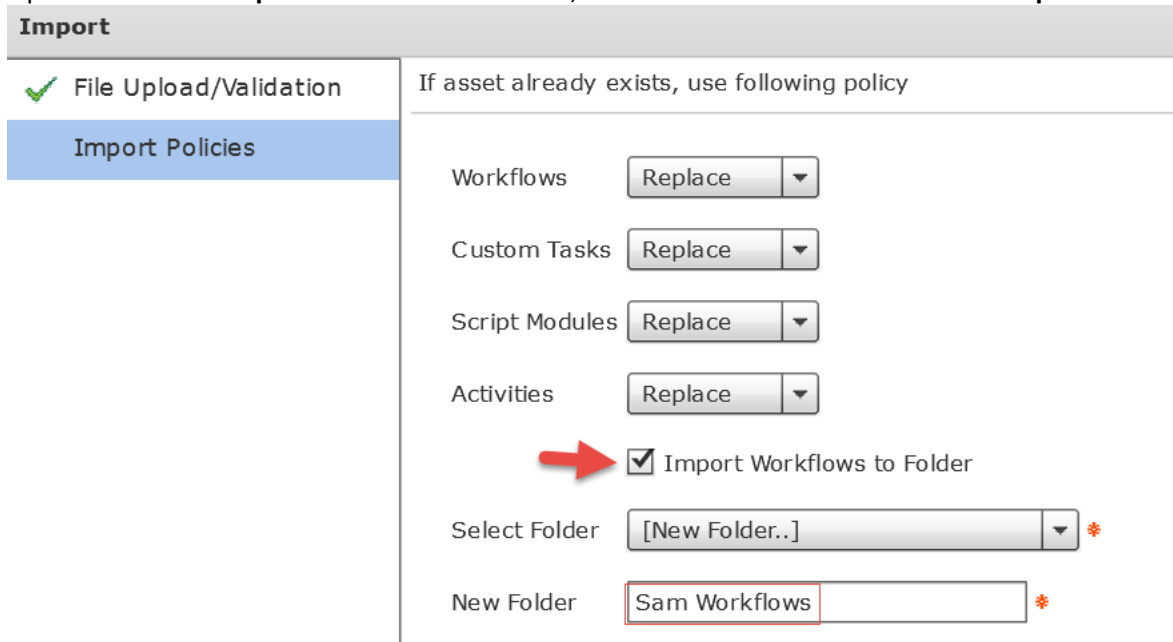
Wait until you see 'File ready for use.' then click the 'x' in the top right corner to close the window.



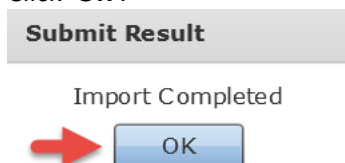
Review and click 'Next'.



Optional – Select 'Import Workflows to Folder', enter a new folder name and click 'Import'.

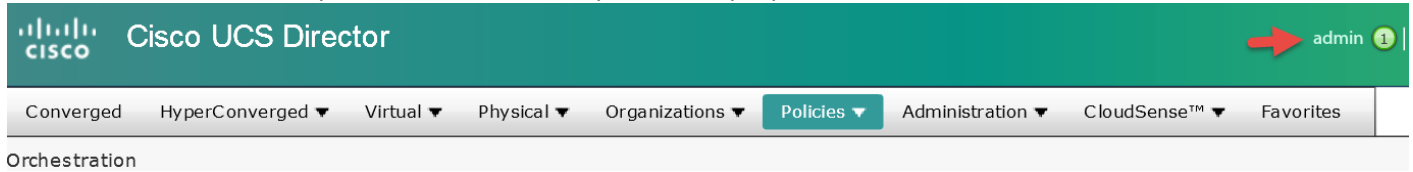


Click 'OK'.

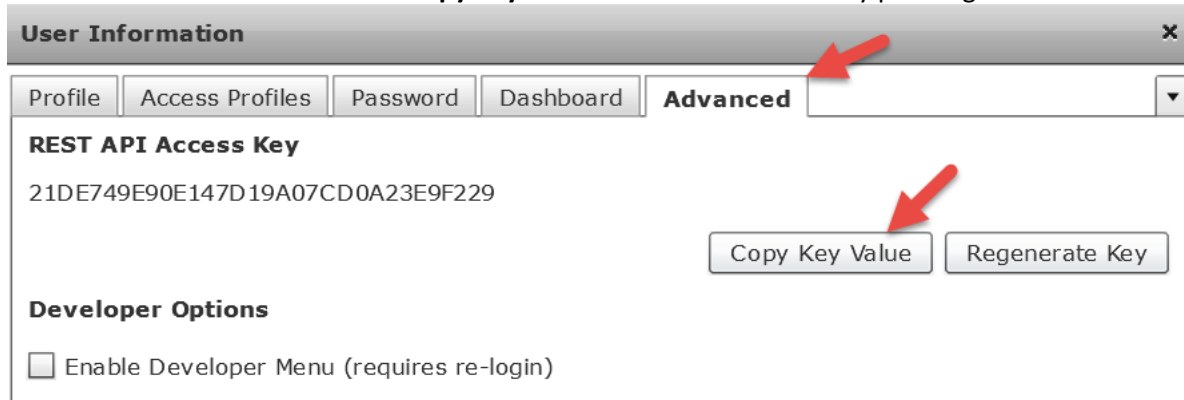


### 5.3. Configure CSV Workflow

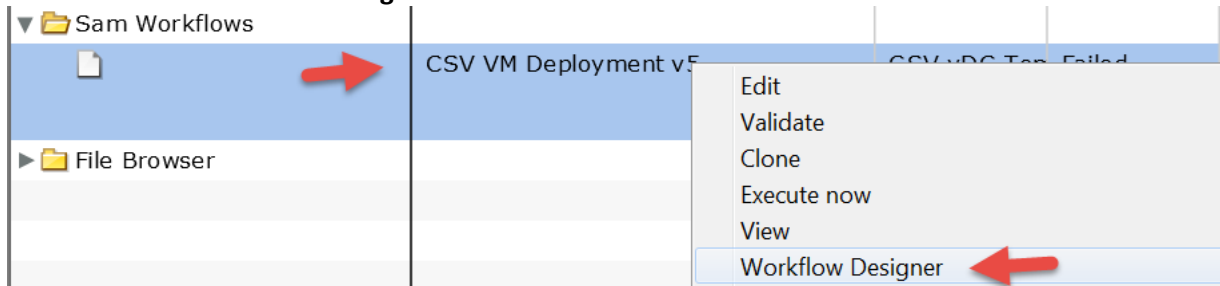
Gather Rest API Access Key. Click on 'admin' to open admin properties.



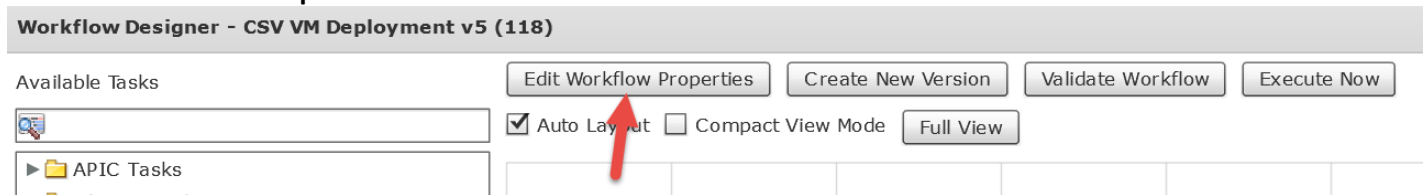
Click 'Advanced' and then select 'Copy Key Value'. Close the window by pressing the 'x'.



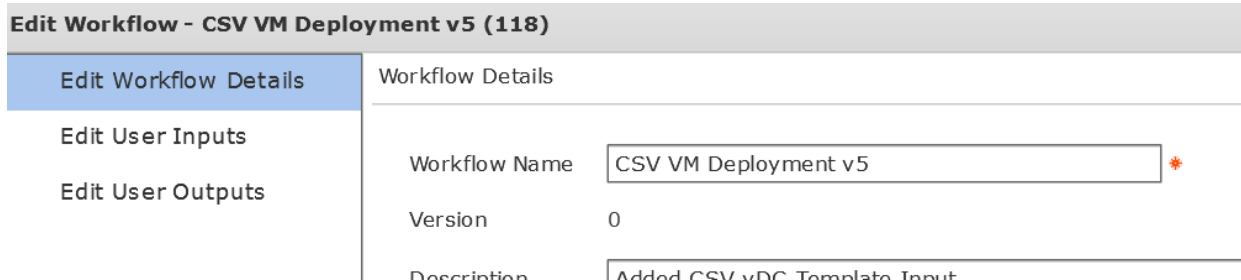
Navigate to Policies -> Orchestration -> Workflows -> expand 'Sam Workflows' -> select 'CSV VM Deployment v5' -> right click and select 'Workflow Designer'.



Click 'Edit Workflow Properties'.



Review and click 'Next'.



Select 'vdc' Input Label and then select the pencil to edit it.

**Edit Workflow**

- ✓ Edit Workflow Details
- Edit User Inputs**
- Edit User Outputs

Workflow User Inputs

Associate to Activity  
If selected, existing workflow's user input(s) will be overridden by selected activities user input(s).

Input Label	Input Description	Mandatory	Type	Admin Input Value
vdc	***CHANGE***	Yes	vDC	2
ID	ID for UCSD	Yes	gen_text_input	admin
Password	***CHANGE*** Pass	Yes	password	*****
Key	***CHANGE*** API	Yes	gen_text_input	84D3655480EA41348
UCSD_IP	Localhost	Yes	gen_text_input	127.0.0.1
Catalog	***CHANGE***	Yes	catalog	8
VM_IP		Yes	gen_text_input	1.1.1.1
VM_Mask		Yes	V1_IP_Mask_Selecto	255.255.255.0
VM_GW		Yes	gen_text_input	1.1.1.1
VM_Owner	***CHANGE*** Valid	Yes	gen_text_input	operator
VM_Name		Yes	gen_text_input	Dummy
VM_Comment		Yes	gen_text_input	dummy
VM_Memory		Yes	Orf-Ram-Selector1_5	1024
VM_CPU		Yes	vCPU_subset_0_10	1

Total 28 items

Choose any VDC from the Drop down. The CSV file will overwrite this so it isn't important but a valid one needs to be chosen. Click 'Submit'.

**Edit Entry**

Input Label vdc

Input Description

Optional

Input Type vDC

**Value Restrictions**

Admin Input

Admin Input Value  \*

Click 'OK'.

**Submit Result**

Entry updated successfully

Select 'Password' Input Label and then the pencil to edit the UCSD Password.

Input Label	Input Description	Mandatory	Type	Admin Input Value
vdc	***CHANGE***	Yes	vDC	2
ID	ID for UCSD	Yes	gen_text_input	admin
<b>Password</b>	<b>***CHANGE*** Pass</b>	<b>Yes</b>	<b>password</b>	<b>*****</b>



Enter the UCSD Admin GUI password and click **'Submit'**.

**Edit Entry**

Input Label Password

Input Description

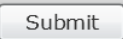
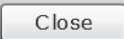
Optional

Input Type password

**Value Restrictions**

Admin Input


Admin Input Value






Click **'OK'**.

**Submit Result**

Entry updated successfully



Select **'Key'** Input Label and then the pencil to edit the UCSD Password.

Input Label	Input Description	Mandatory	Type	Admin Input Value
vdc	***CHANGE***	Yes	vDC	2
ID	ID for UCSD	Yes	gen_text_input	admin
Password	***CHANGE*** Pass	Yes	password	*****
Key	***CHANGE*** API	Yes	gen_text_input	84D3655480EA41348

Paste the **'Key'** we copied earlier from the admin properties and click **'Submit'**.

**Edit Entry**

Input Label Key

Input Description


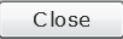
Optional

Input Type gen\_text\_input

**Value Restrictions**

Admin Input

Admin Input Value

Click 'OK'.

### Submit Result

Entry updated successfully



Choose 'Catalog' and select the pencil to edit it.

Input Label	Input Description	Mandatory	Type	Admin Input Value
Key	***CHANGE*** API	Yes	gen_text_input	21DE749E90E147D194
UCSD_IP	Localhost	Yes	gen_text_input	127.0.0.1
Catalog	***CHANGE***	Yes	catalog	8

Select any valid Catalog and click 'Submit'. The CSV input value will override this value.

### Edit Entry

Input Label Catalog

Input Description \*\*\*CHANGE\*\*\*

Optional

Input Type catalog

#### Value Restrictions

Admin Input

Admin Input Value Richardson Windows 2012 R2 \*

Submit

Close

Click 'OK'.

### Submit Result

Entry updated successfully



Select 'VM\_Owner' and select the pencil to edit it.

Input Label	Input Description	Mandatory	Type	Admin Input Value
VM_GW		Yes	gen_text_input	1.1.1.1
VM_Owner	***CHANGE*** Valid	Yes	gen_text_input	operator

Select any valid VM Owner and click **'Submit'**. The CSV input value will override this value.

**Edit Entry**

Input Label VM\_Owner

Input Description

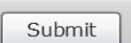
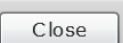
Optional

Input Type gen\_text\_input

**Value Restrictions**

Admin Input

Admin Input Value






Click **'OK'**.

**Submit Result**

Entry updated successfully



Select **'VDC\_Template'** and select the pencil to edit it.

Input Label	Input Description	Mandatory	Type	Admin Input Value
DiskSize1		Yes	V1_Disk_Sizes_2	20
BackupNetwork	Flag in Code	Yes	V1_Backup_Network	0
VMB_IP		No	gen_text_input	1.1.1.2
VMB_GW	In the code this gets	No	gen_text_input	127.0.0.1
BackupNetworkAdap		Yes	gen_text_input	BackupNetwork1
NetWorkAdapterType		Yes	adapterType	VmxNet3
VMB_Mask		Yes	V1_IP_Mask_Selecto	255.255.255.0
VDC_Template	**** CHANGE ****	Yes	vDCProfile	4

Select any valid vDC Template and click **'Submit'**. The CSV input value will override this value.

**Edit Entry**

Input Label VDC\_Template

Input Description

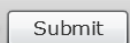
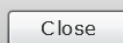
Optional

Input Type vDCProfile

**Value Restrictions**

Admin Input

Admin Input Value

Click 'OK'.

**Submit Result**

Entry updated successfully



Select 'rpassword' and select the pencil to edit it.

Input Label	Input Description	Mandatory	Type	Admin Input Value
PROVISION_QTY		Yes	gen_text_input	1
DiskSize1		Yes	V1_Disk_Sizes_2	20
BackupNetwork	Flag in Code	Yes	V1_Backup_Network	0
VMB_IP		No	gen_text_input	1.1.1.2
VMB_GW	In the code this gets	No	gen_text_input	127.0.0.1
BackupNetworkAdap		Yes	gen_text_input	BackupNetwork1
NetWorkAdapterType		Yes	adapterType	VmxNet3
VMB_Mask		Yes	V1_IP_Mask_Selecto	255.255.255.0
VDC_Template	**** CHANGE ****	Yes	vDCProfile	3
CSV_FILE_FLAG	1 = CSV file 0 = use	Yes	gen_text_input	1
CSV_FILE_PATH		Yes	gen_text_input	/opt/infra/uploads/
CSV_FILE		Yes	File_upload	
rpassword	**** CHANGE ****	Yes	password	*****

Enter the UCSD Root password and click 'Submit'.

**Edit Entry**

Input Label rpassword

Input Description \*\*\*\* CHANGE \*\*\*\* UCSD root password

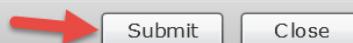
Optional

Input Type password

**Value Restrictions**

Admin Input

Admin Input Value \*\*\*\*\* \*



Click 'OK'.

**Submit Result**

Entry updated successfully



Review and click 'Next'.

**Edit Workflow**

- ✓ Edit Workflow Details
- Edit User Inputs**
- Edit User Outputs

Workflow User Inputs

Associate to Activity  
If selected, existing workflow's user input(s) will be overridden by selected activities user input(s).

Input Label	Input Description	Mandatory	Type	Admin Input Value
DiskSize1		Yes	V1_Disk_Sizes_2	20
BackupNetwork	Flag in Code	Yes	V1_Backup_Network	0
VMB_IP		No	gen_text_input	1.1.1.2
VMB_GW	In the code this gets	No	gen_text_input	127.0.0.1
BackupNetworkAdap		Yes	gen_text_input	BackupNetwork1
NetWorkAdapterType		Yes	adapterType	VmxNet3
VMB_Mask		Yes	V1_IP_Mask_Selecto	255.255.255.0
VDC_Template	**** CHANGE ****	Yes	vDCProfile	3
CSV_FILE_FLAG	1 = CSV file 0 = use	Yes	gen_text_input	1
CSV_FILE_PATH		Yes	gen_text_input	/opt/infra/uploads/
CSV_FILE		Yes	File_upload	
rpassword	**** CHANGE ****	Yes	password	*****
checkExitCode	checkExitCode	Yes	gen_text_input	no

Total 28 items

Back Next

Leave default and click 'Submit'.

**Edit Workflow**

- ✓ Edit Workflow Details
- ✓ Edit User Inputs
- Edit User Outputs**

Workflow User Outputs

Output Label	Output Description	Mandatory	Type
--------------	--------------------	-----------	------

Click 'OK'.

**Submit Result**

Updated successfully

OK

Click 'Validate Workflow'.

**Workflow Designer - CSV VM Deployment v5 (118)**

Available Tasks

Edit Workflow Properties Create New Version **Validate Workflow** Execute Now

Auto Layout  Compact View Mode Full View

- APIC Tasks
- Cloupia Tasks

Click 'OK'.

**Valid Workflow**

This workflow is valid.



## 5.4. Create CSV File

**Open a new txt document and populate with the following fields:**

VM Name, Comment about VM, CPU, Memory, DiskSize, vDC, vDC Template, Catalog, IP, Netmask, Gateway, SecondaryNetwork(0,1), SecondaryIP, SecNetmask, SecGateway, VMOwner

**VM Name:** Name of VM (Hostname)

**Comment:** Comments

**CPUs:** Number of CPUs

**Memory:** Memory Size

**Disk Size:** Disk Size in GB

**VDC:** vDC Name

**VDC Template:** vDC Template

**Catalog:** Name of the "Standard" Catalog (Defines the OS)

**IP:** IP address

**Netmas :** Netmask

**Gatewa:** Default Gateway

**Secondary Network FLAG:** Either 0 if no 2nd Network, 1 to add 2nd NIC

**Secondary IP:** IP address of 2nd NIC

**SecNetmask:** Netmask of 2nd NIC

**2nd Default Gateway:** Default Gateway of 2nd nic (if real address is used, will override default gateway in Linux) normally use 127.0.0.1

**VM Owner:** Valid UCSB user

Example contents of CSV file (One line per VM):

```
vmName6,Comment6,2,2048,20,Operations-VDC2,VDC-  
Template2,RHEL6,192.168.40.75,255.255.255.0,192.168.40.1,0,0.0.0.0,255.255.255.0,127.0.0.1,operator
```

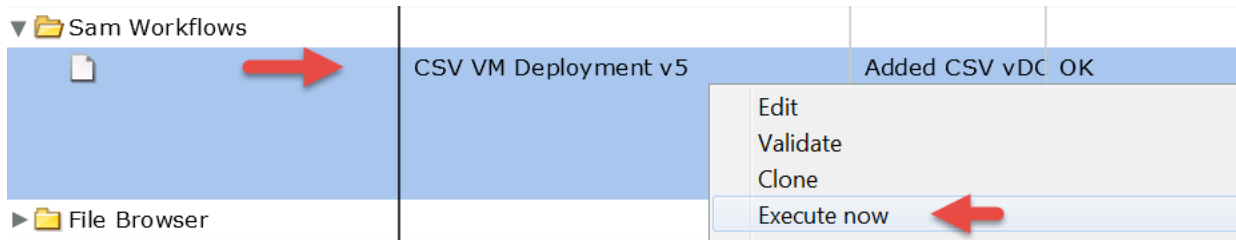
```
vmName7,Comment7,2,2048,20,Operations-VDC2,VDC-  
Template2,RHEL6,192.168.40.76,255.255.255.0,192.168.40.1,0,0.0.0.0,255.255.255.0,127.0.0.1,operator
```

Save the file as '**.txt**'.

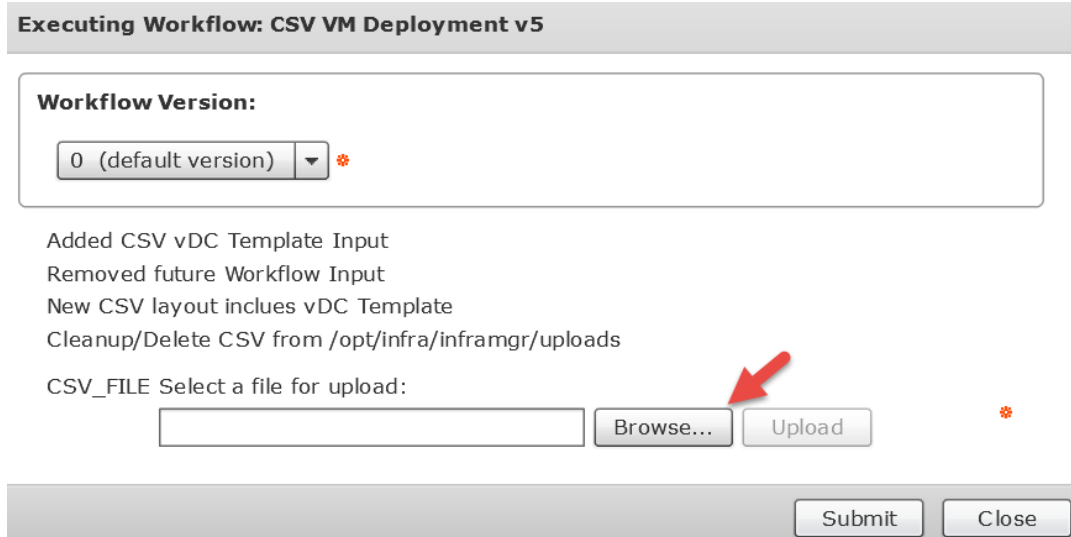
I saved mine as '**samCSVSingleVMv4.txt**' as you will see in the next section.

## 6. Execute Workflow

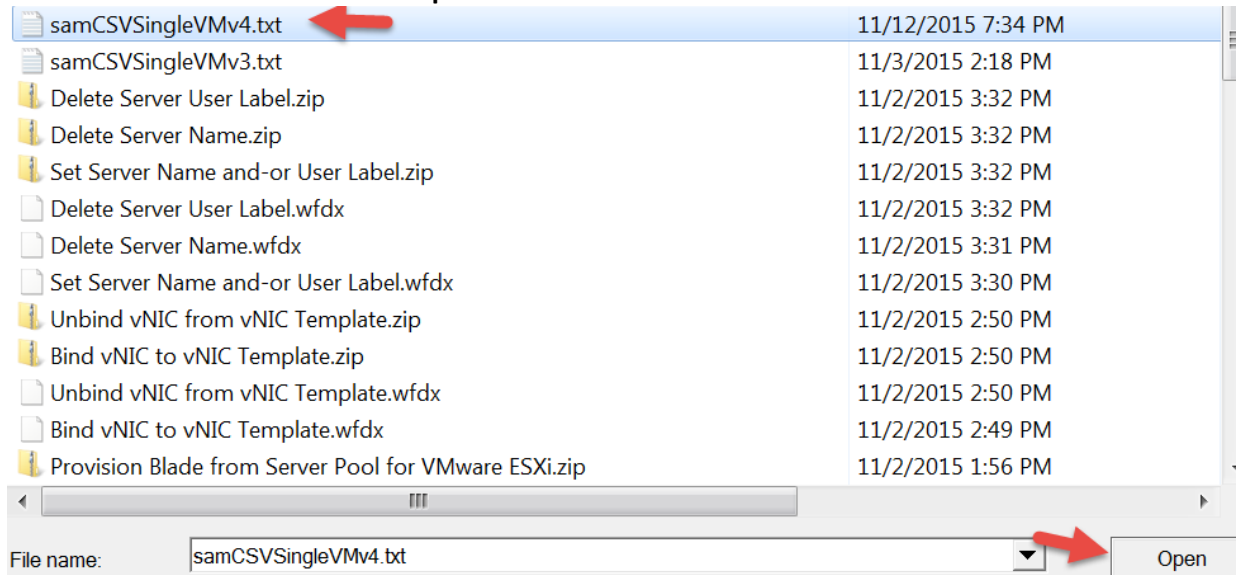
Navigate to Policies -> Orchestration -> Workflows -> expand 'Sam Workflows' -> select 'CSV VM Deployment v5' -> right click and select 'Execute now'.



Click 'Browse'.



Select the CSV File and then click 'Open'.





Click **'Upload'**.

### Executing Workflow: CSV VM Deployment v5

#### Workflow Version:

0 (default version) ▼ \*

Added CSV vDC Template Input  
Removed future Workflow Input  
New CSV layout includes vDC Template  
Cleanup/Delete CSV from /opt/infra/inframgr/uploads

CSV\_FILE Select a file for upload:

samCSVSingleVMv4.txt

Browse...

Upload



Submit

Close

Click **'OK'**.

### File Upload

File upload is completed.



OK

Click **'Submit'**.

### Executing Workflow: CSV VM Deployment v5

#### Workflow Version:

0 (default version) ▼ \*

Added CSV vDC Template Input  
Removed future Workflow Input  
New CSV layout includes vDC Template  
Cleanup/Delete CSV from /opt/infra/inframgr/uploads

CSV\_FILE Select a file for upload:

samCSVSingleVMv4.txt

Browse...

Upload



Submit

Close

Click 'Show Detail Status'.

### Service Request Submit Status

Service request is submitted successfully ID 22

Show Detail Status

Close

Click the 'Log' tab and the click 'Refresh'. This will bring you to the end of the log. Once you see 'Waiting for Child Workflow to Finish', you can open a new tab to director and Navigate to the Child workflow service request to monitor the VM Build.

Workflow Status Log Objects Created and Modified Input/Output

```
operationStatus><response><VDCConfigResponse><VDC_ID>8</VDC_ID><VDC_CLOUD_NAME>MGMT-VCENTER</VDC_CLOUD_NAME><VDC_SYSTEM_POLICY>Richardson-VDC22_System Policy</VDC_SYSTEM_POLICY>
Nov 13, 2015 12:51:01 CST ret10 = <?xml version='1.0' encoding='UTF-8' standalone='yes'?><culcOperationResponse><Log><Messages>4</Messages><Message><TimeStamp>2015-11-13 12:51:01.274</TimeStamp><Severity>INFO</Severity><Text>Cloning The vDC Profile Richardson-VDC-Service-Profile</Text></Message><Message><TimeStamp>2015-11-13 12:51:01.384</TimeStamp><Severity>INFO</Severity><Text>The vDC Richardson-VDC22 created successfully with id 8</Text></Message><Message><TimeStamp>2015-11-13 12:51:01.384</TimeStamp><Severity>INFO</Severity><Text>The computation policy host scope list are: 172.17.80.69@MGMT-VCENTER,172.17.80.70@MGMT-VCENTER</Text></Message><Message><TimeStamp>2015-11-13 12:51:01.384</TimeStamp><Severity>INFO</Severity><Text>The computation policy cluster scope list are: culpeper1@MGMT-VCENTER,culpeper2@MGMT-VCENTER</Text></Message></Log><operationStatus>0</operationStatus></response><VDCConfigResponse><VDC_ID>8</VDC_ID><VDC_CLOUD_NAME>MGMT-VCENTER</VDC_CLOUD_NAME><VDC_SYSTEM_POLICY>Richardson-VDC22_System Policy</VDC_SYSTEM_POLICY>
Nov 13, 2015 12:51:01 CST New VDC Id : 8
Nov 13, 2015 12:51:01 CST Afger NewVDCIDFromClone8
Nov 13, 2015 12:51:01 CST After Function call .....NewVDCIDFromClone = 8
Nov 13, 2015 12:51:01 CST -----Temp VDC info-----
Nov 13, 2015 12:51:01 CST VDC Template Number Clone = 8
Nov 13, 2015 12:51:01 CST VDC Template Name Clone = Richardson-VDC22
Nov 13, 2015 12:51:01 CST VDC Template vdcTempNetworkPolicyName Name Clone = Richardson-VDC22_Network Policy
Nov 13, 2015 12:51:01 CST VDC Template vdcTempComputingPolicyName Name Clone= Richardson-VDC22_Computing Policy
Nov 13, 2015 12:51:01 CST VDC Template vdcTempStoragePolicyName Name Clone = Richardson-VDC22_Storage Policy
Nov 13, 2015 12:51:01 CST VDC Template vdcTempPrimaryDeployPolicyName Name Clone = Richardson-VDC22_System Policy
Nov 13, 2015 12:51:01 CST -----Clone VDC from Template Done-----
Nov 13, 2015 12:51:01 CST What is my new VDC number = 8
Nov 13, 2015 12:51:01 CST What is my Original VDC number = Richardson-VDC
Nov 13, 2015 12:51:01 CST What is my new VDC name = Richardson-VDC22
Nov 13, 2015 12:51:01 CST -----Provision VM-----
Nov 13, 2015 12:51:02 CST childSrId= 23
Nov 13, 2015 12:51:02 CST -----Provision VM Executing in Child Workflow-----
Nov 13, 2015 12:51:02 CST -----Waiting for Child Workflow to Finish-----
```

Refresh

Close

On a new tab in your browser, Navigate to Organizations -> Service Requests -> Service Requests -> click 'Refresh' -> double click on the Service Request 'Create VM' to see the details and status.

The screenshot shows the Cisco UCS Director interface. The top navigation bar includes 'Cisco UCS Director' and user information 'admin | Log Out | Cisco'. Below this, a secondary navigation bar contains 'Converged', 'HyperConverged', 'Virtual', 'Physical', 'Organizations', 'Policies', 'Administration', 'CloudSense', and 'Favorites'. The 'Organizations' menu is expanded, and 'Service Requests for All User Groups' is selected. The main content area shows a 'Service Requests' tab with a 'Refresh' button and a table of requests. The table has columns for 'Service Reqt', 'Request Type', 'Initiating User', 'Group', 'Catalog/Work', 'Initiator Com', 'Request Time', and 'Request Stati'. Two requests are listed: '23 Create VM' and '22 Admin Workflow'. A red arrow points to the 'Refresh' button, and another points to the '23 Create VM' row.

Similarly to the Admin Workflow, you can select the 'Log' tab and monitor the status or stay on the 'Workflow Status' and wait until you see the status change to 'Complete', then click 'Close'. Go back to the 'Admin Workflow' Service Request to see its status.

The screenshot shows the 'Workflow Status' page for a 'Service Request'. The 'Log' tab is selected, showing a vertical timeline of 11 steps. The steps are: 1. Initiated by admin (11/13/2015 12:51:08), 2. VM Provision Inputs (11/13/2015 12:51:15), 3. Budget Allocation (11/13/2015 12:51:17), 4. Resource Limit (11/13/2015 12:51:24), 5. VMware Resource Allocation (11/13/2015 12:51:33), 6. Approval (11/13/2015 12:51:37), 7. Approval (11/13/2015 12:51:40), 8. VMware VM Provision (11/13/2015 12:56:23), 9. Guest Password Reset (11/13/2015 12:56:26), 10. Notification (11/13/2015 12:56:33), and 11. Complete (11/13/2015 12:56:36). A 'Close' button is located at the bottom right of the page.

Step	Action	Time
1	Initiated by admin	11/13/2015 12:51:08
2	VM Provision Inputs	11/13/2015 12:51:15
3	Budget Allocation Budget watch is not requested by the group.	11/13/2015 12:51:17
4	Resource Limit No resource limits are set for the group.	11/13/2015 12:51:24
5	VMware Resource Allocation	11/13/2015 12:51:33
6	Approval No user approval set.	11/13/2015 12:51:37
7	Approval No user approval set.	11/13/2015 12:51:40
8	VMware VM Provision	11/13/2015 12:56:23
9	Guest Password Reset Catalog does not require guest password reset.	11/13/2015 12:56:26
10	Notification Completed action	11/13/2015 12:56:33
11	Complete Completed successfully.	11/13/2015 12:56:36

Wait until you see the 'Complete' Status and then click 'Close'.

Workflow Status | Log | Objects Created and Modified | Input/Output

### Service Request

Status Refresh

▼ Overview Current status for the service request.

Request ID	22	1 Initiated by admin	11/13/2015 12:50:46
Request Type	Admin Workflow	2 Change_User	11/13/2015 12:50:53
Workflow Name	CSV VM Deployment v5	3 VM(s) with IP and Port Group auto selec... Completed action	11/13/2015 12:57:27
Workflow Version Label	0	4 Complete Completed successfully.	11/13/2015 12:57:30
Request Time	11/13/2015 12:50:43 GMT-0600		
Request Status	Complete		
Comments			

▼ Ownership

Initiating User	admin
-----------------	-------

Verify your VM was created in vCenter.

The screenshot shows the vCenter console for a VM named 'vmName6'. The left pane shows a folder hierarchy: rcdn5r44vc0801.gsp-r5.cloud > GSP\_MGMT > culpeper1 > vmName6. A red arrow points to 'vmName6' in the left pane. The right pane shows the 'Summary' tab for 'vmName6'. A red box highlights the 'General' section, which includes:

- Guest OS: Red Hat Enterprise Linux 6 (64-bit)
- VM Version: 8
- CPU: 2 vCPU
- Memory: 2048 MB
- Memory Overhead: 38.36 MB
- VMware Tools: Running (Out-of-date)
- IP Addresses: 192.168.40.75
- DNS Name: vmName6
- EVC Mode: N/A
- State: Powered On
- Host: 172.17.80.69
- Active Tasks: (empty)
- vSphere HA Protection: N/A

Verify the CSV file 'samCSVSingleVMv4.txt' has been deleted from /opt/infra/uploads on the Primary Node.

```
[root@win2k8-solarwin ~]# ls /opt/infra/uploads/
dir1446835545242  dir1446835701081  dir1447212956351  dir1447351222857  external
dir1446835632541  dir1447112825738  dir1447212973071  dir1447382515733  multipart
[root@win2k8-solarwin ~]#
```

To delete/cleanup this test VM, Rollback both the 'Create VM' request.

**Service Requests** | Archived Service Requests | Current Month Budget Availability | Payment Information

Refresh Favorite Create Request Search and Replace Cancel Request Resubmit Request

Service Req	Request Type	Initiating Use	Group	Catalog/Work	Initiator Com	Request
22	Create VM	admin	NSS-Admins@gs	Richardson RHEI	Comment6	11/13/2
21	Admin Workflow	admin				
20	Undo Workflow	admin				
19	Create VM	admin	NSS-Admins@gs			
18	Admin Workflow	admin				
17	Undo Workflow	admin				

- Copy Cell Value
- Cancel Request
- Resubmit Request
- Archive
- Add Notes
- Rollback Request

To delete/cleanup this test VM, Rollback both the 'Admin Workflow' request.

**Service Requests** | Archived Service Requests | Current Month Budget Availability | Payment Information

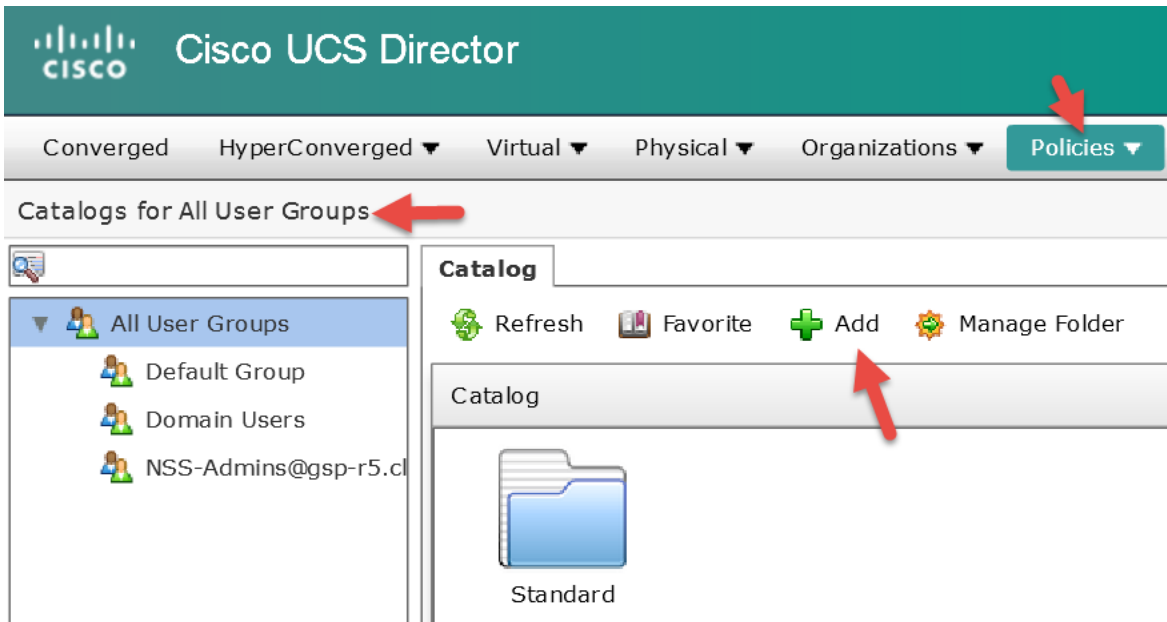
Refresh Favorite Create Request Search and Replace View Details

Service Req	Request Type	Initiating Use	Group	Catalog/Work	Initiator Com
24	Undo Workflow	admin		Rollback Provision	
23	Create VM	admin	NSS-Admins@gs	Richardson RHEI	Comment6
22	Admin Workflow	admin		CSV VM Deploy	
21	Undo Workflow	admin			
20	Undo Workflow	admin			
19	Create VM	admin	NS		
18	Admin Workflow	admin			
17	Undo Workflow	admin			
16	Undo Workflow	admin			
15	Undo Workflow	admin			

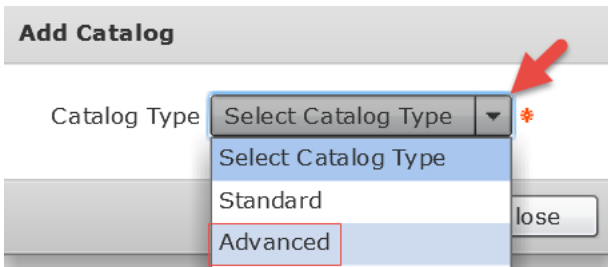
- Copy Cell Value
- View Details
- Cancel Request
- Resubmit Request
- Archive
- Add Notes
- Rollback Request

## 7. Create Advanced Catalog item for CSV Workflow

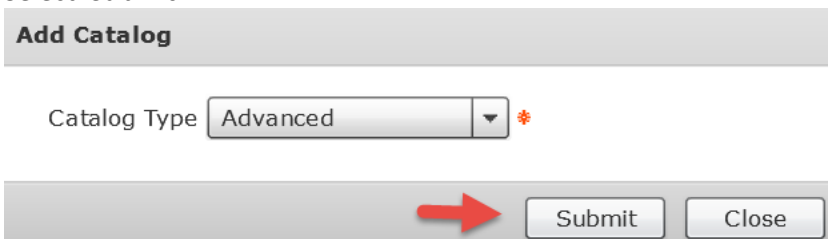
Create an Advanced Catalog Item to call the 'CSV VM Deployment' workflow. Navigate to Policies -> Catalogs -> Catalogs -> click 'Add'.



Select 'Advanced'.



Select 'Submit'.



Enter a Catalog Name, Catalog Description, select a Catalog Icon, click 'Select' for Selected Groups.

### Add Catalog


**Basic Information**

Specify whether this catalog item shall be available to all user groups or asked to select the vDC within the Cloud specified here.

Catalog Name  \*

Catalog Description

Catalog Type  \*

Catalog Icon  

Applied to all groups

Selected Groups  \*

Select the Group you want to see this item when they log into the portal. Click 'Select'.

### Select

<input checked="" type="checkbox"/>	Group Name	Host	Domain	Group Code	Group Descri	Source	Cost Center	Group Contac	Group Cont
<input checked="" type="checkbox"/>	NSS-Admins@g	172.17.80.104	gsp-r5.cloudlab.			External			

Click '+' to add a Folder.


Select Folder   \*

Publish to end users

Enter a Folder Name and click 'Add'.

### Add New Folder


Folder Name  \*

Folder Icon   \*

Click 'OK'.

**Submit Result**

New Folder Added Successfully



Verify details and click 'Next'.

**Add Catalog**


Basic Information | vApp Workflow | Summary

Specify whether this catalog item shall be available to all user groups or to specific groups. When requesting a new service asked to select the vDC within the Cloud specified here.

Catalog Name:  \*

Catalog Description:


Catalog Type:  \*


Catalog Icon:  

Applied to all groups

Selected Groups:  NSS-Admins@gsp-r5.cloudlab.cisco.com \*

Publish to end users

Select Folder:   \*




Click 'Select' to select a Workflow.

**Add Catalog**

✓ Basic Information | vApp Workflow | Summary


vApp Workflow


Workflow  \*



To narrow the results, enter 'CSV' in the Filter on the right. Select the 'CSV VM Deployment' workflow and click 'Select'.

**Select**



	Workflow Id	Name	Description	Folder Name
 <input checked="" type="checkbox"/>	118	CSV VM Deployment v5	Added CSV vDC Template Input Removed future Workflow Input New CSV layout includes vDC Templ Cleanup/Delete CSV from /opt/infra	Sam Workflows



Verify and click 'Next'.

**Add Catalog**

✓ Basic Information

vApp Workflow

Summary

vApp Workflow

Workflow  CSV VM Deployment v5 \*

Selected Workflow has 2 tasks (ExecuteCloupiaScript, custom\_Change\_User)

Verify details and click 'Submit'.

**Add Catalog**

✓ Basic Information

✓ vApp Workflow

Summary


Summary  
Review the information below. Click Back to make further changes to the catalog. Click Submit to modify the catalog.

Catalog	CSV VM Deployment All DCs
Catalog Description	CSV VM (Windows/Linux) Deployment for all Data Centers.
Groups	NSS-Admins@gsp-r5.cloudlab.cisco.com
Workflow Name	CSV VM Deployment v5
Workflow Description	Added CSV vDC Template Input Removed future Workflow Input New CSV layout includes vDC Template Cleanup/Delete CSV from /opt/infra/inframgr/uploads
Duration Hours	


Click 'OK'.

**Submit Result**

Catalog submitted successfully



Verify Folders.

 Cisco UCS Director

Converged HyperConverged ▼ Virtual ▼ Physical ▼ Organizations ▼ Policies ▼

Catalogs for All User Groups

▼ All User Groups

- Default Group
- Domain Users
- NSS-Admins@gsp-r5.c

**Catalog**

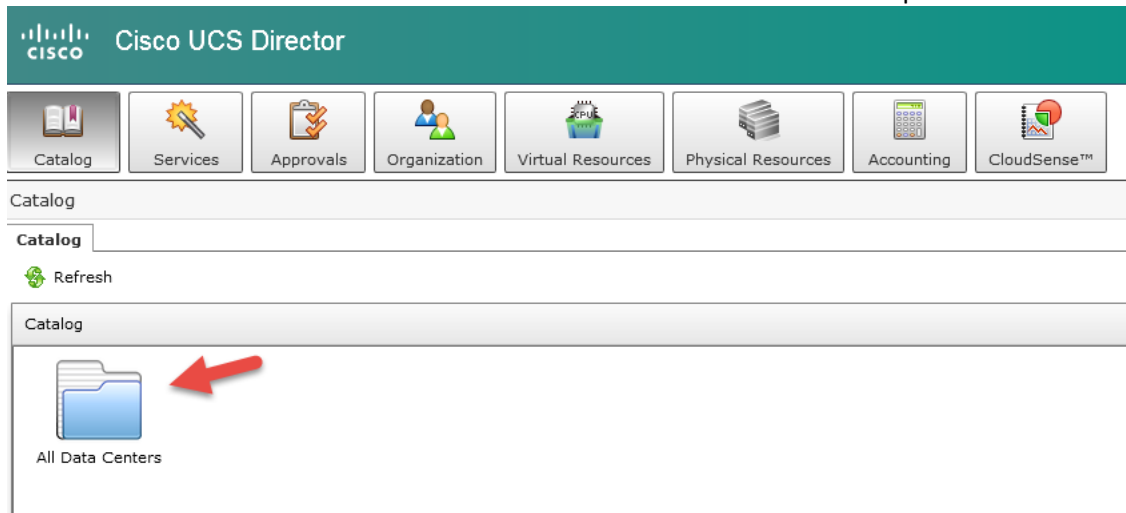
Refresh Favorite Add Manage Folder

Catalog

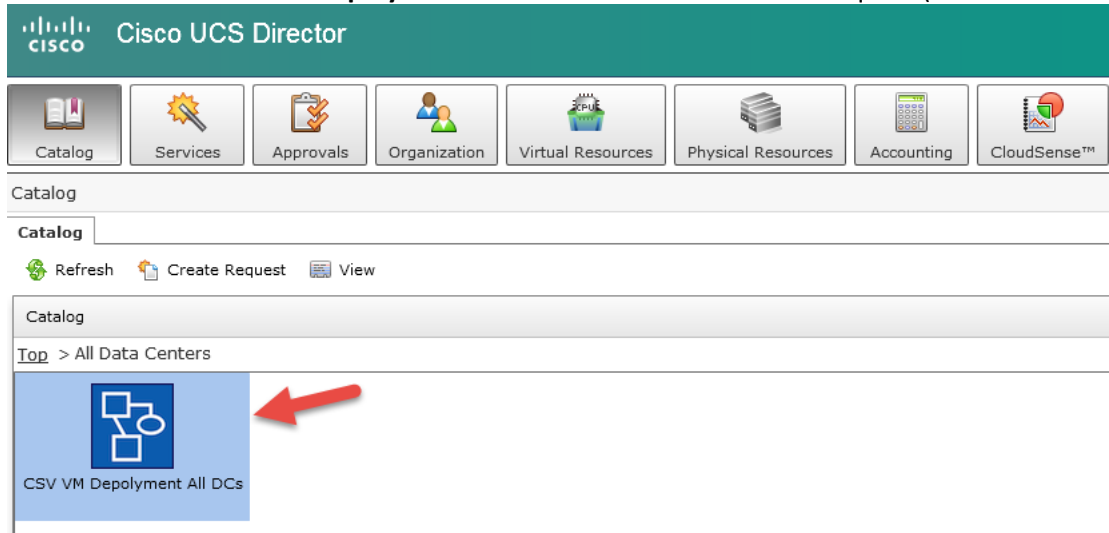
Standard All Data Centers

## 8. Test CSV Workflow

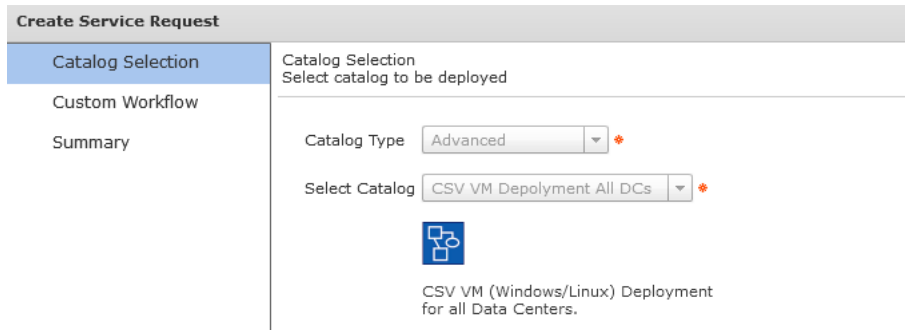
Use a different browser and log into UCS Director with a user in the NSS-Admin group. My 'ucsduser' is in that group so I will use this account for the test. Double click 'All Data Centers' folder to open it.



Double click the 'CSV VM Deployment All DCs' workflow to create a request (execute the workflow).



Review and click 'Next'.



Click **'Browse'** to browse for the CSV file.

**Create Service Request**

✓ Catalog Selection

Custom Workflow

Summary

Custom Workflow Inputs  
If applicable, specify workflow input values

Added CSV vDC Template Input  
Removed future Workflow Input  
New CSV layout includes vDC Template  
Cleanup/Delete CSV from /opt/infra/inframgr/uploads

CSV\_FILE Select a file for upload:

Browse and select the file then click **'Open'**.

File selection dialog showing files:

- samCSVSinglVMv4.txt
- samCSVSinglVMv3.txt
- Delete Server User Label.zip
- Delete Server Name.zip

Name: samCSVSinglVMv4.txt

All Files (\*.\*)

Click **'Upload'**.

**Create Service Request**

✓ Catalog Selection

Custom Workflow

Summary

Custom Workflow Inputs  
If applicable, specify workflow input values

Added CSV vDC Template Input  
Removed future Workflow Input  
New CSV layout includes vDC Template  
Cleanup/Delete CSV from /opt/infra/inframgr/uploads

CSV\_FILE Select a file for upload:

Click **'OK'** then click **'Next'**.

**File Upload**

File upload is completed.

Review and click **'Submit'**.

**Create Service Request**

✓ Catalog Selection

✓ Custom Workflow

Summary

Summary  
Review information below and click Submit to initiate the service request

Group	NSS-Admins@gsp-r5.cloudlab.cisco.com
Catalog	CSV VM Deployment All DCs
Catalog Description	CSV VM (Windows/Linux) Deployment for all Data Centers.
Port Groups	
VM Networks	

Click **'OK'**.

**Submit Result**

Service Request 26 submitted successfully

Click the 'Services' icon. You will see both the 'Admin Workflow' and the 'Create VM' In Progress.

The screenshot shows the Cisco UCS Director interface. At the top, there is a navigation bar with the Cisco logo and the text 'Cisco UCS Director'. Below this is a row of icons for various services: Catalog, Services, Approvals, Organization, Virtual Resources, Physical Resources, Accounting, and CloudSense™. The 'Services' icon is highlighted with a red arrow. Below the navigation bar, there is a 'Services' section with a 'Service Requests' tab selected. There are 'Refresh' and 'Create Request' buttons. Below this is a table of Service Requests.

Service Reql	Request Type	Initiating Use	Group	Catalog/Work	Initiator Com	Request Time	Request Stati
27	Create VM	admin	NSS-Admins@gs	Richardson RHEL	Comment6	11/13/2015 13:4	In Progress
26	Advanced	admin	NSS-Admins@gs	CSV VM Depoly		11/13/2015 13:4	In Progress

Double click on both workflows to monitor the status. You will notice the information is much less verbose than the admin sees. You can go back to the other browser where you are logged in as admin to see the details.

### Create VM Status.

The screenshot shows the 'Service Request' status page for request ID 27. The page is titled 'Service Request' and 'Status'. It features a 'Refresh' button. The main content is divided into two columns. The left column shows details about the request, and the right column shows a timeline of steps.


Request ID	Request Type	Workflow Name	Workflow Version Label	vDC	Image	Request Time	Request Status	Comments
27	Create VM	Provision VMware VM	UCSD 5.4.0.0	Richardson-VDC26	REHL62v2ForSam	11/13/2015 13:46:47 GMT-0600	In Progress	Comment6

Step	Description	Time
1	Initiated by admin	11/13/2015 13:46:44
2	VM Provision Inputs	11/13/2015 13:46:48
3	Budget Allocation Budget watch is not requested by the group.	11/13/2015 13:46:54
4	Resource Limit No resource limits are set for the group.	11/13/2015 13:47:00
5	VMware Resource Allocation	11/13/2015 13:47:09
6	Approval No user approval set.	11/13/2015 13:47:10
7	Approval No user approval set.	11/13/2015 13:47:16
8	VMware VM Provision	11/13/2015 13:53:00
9	Guest Password Reset Catalog does not require guest password reset.	11/13/2015 13:53:06
10	Notification Completed action	11/13/2015 13:53:09
11	Complete Completed successfully.	11/13/2015 13:53:15

# Admin Workflow Status.

### Service Request

Status  Refresh

▼ Overview Current status for the service request.

Request ID	26	①	Initiated by ucsduser@gsp-r5...	11/13/2015 13:46:22
Request Type	Advanced	②	Change_User	11/13/2015 13:46:26
Workflow Name	CSV VM Deployment v5	③	VM(s) with IP and Port Group auto selec...	11/13/2015 13:54:03
Workflow Version Label	0		Completed action	
Request Time	11/13/2015 13:46:22 GMT-0600	④	Complete	11/13/2015 13:54:04
Request Status	Complete		Completed successfully.	
Comments				

▼ Ownership

Group	NSS-Admins@gsp-r5.cloudlab.cisco.com
Initiating User	admin

▼ Catalog Information

Catalog Name	CSV VM Depolyment All DCs
Catalog Description	CSV VM (Windows/Linux) Deployment

To delete/cleanup this test VM, Rollback 'Admin Workflow' request.

Service Requests User OVF Management

Refresh Create Request View Details Cancel Request Resubmit Request Archive Add Notes Rollback Request

Service Reql	Request Type	Initiating User	Group	Catalog/Work	Initiator Com	Request Time	Request Stati
36	Create VM	admin	NSS-Admins@gs	Richardson RHEL	Comment6	11/13/2015 16:3	Complete
35	Advanced	admin	NSS-Admins@gs	CSV VM Depolyr		11/13/2015 16:3	Complete

Select 'Skip user approval who initiated the Service Request' and click 'Submit'.

Rollback Service Request

Are you sure you want to rollback the selected service request?  
Approval is required from the user who initiated this Service Request.

Select Tasks

<input checked="" type="checkbox"/>	Task Name	Task Description	Asset Description	Rollback Status
<input checked="" type="checkbox"/>	ExecuteCloupiascript_706	Cloupia Script executed s	Asset ID: Cloupia Script Asset not found	

Total 1 items

Skip user approval who initiated this Service Request.

Submit Close

Click 'OK'.

Submit Result

The Rollback Workflow submitted successfully  
with service request id 37

OK

To delete/cleanup this test VM, Rollback 'Create VM' request.

Service Requests | User OVF Management

Refresh Create Request View Details Cancel Request Resubmit Request Archive Add Notes Rollback Request

Service Reqt	Request Type	Initiating Use	Group	Catalog/Work	Initiator Com	Request Time	Request Stat
37	Undo Workflow	ucsduser@gsp-r	NSS-Admins@g	Rollback CSV VM		11/13/2015 16:5	Complete
36	Create VM	admin	NSS-Admins@g	Richardson RHEL	Comment6	11/13/2015 16:5	Complete

Select 'Skip user approval who initiated the Service Request' and click 'Submit'.

**Rollback Service Request**

Are you sure you want to rollback the selected service request?  
Approval is required from the user who initiated this Service Request.

Select Tasks

<input checked="" type="checkbox"/>	Task Name	Task Description	Asset Description	Rollback Status
<input checked="" type="checkbox"/>	VMProvisionEngineConfig	VM vmName6 provisioned	Account Name: MGMT-VC Host Name: 172.17.80.69 VM Name: vmName6	
<input checked="" type="checkbox"/>	ResourceAllocationConfig	IP to be released for SR:3	Asset ID: 36 Asset not found	

Total 2 items

Skip user approval who initiated this Service Request.

Submit Close

Click 'OK'.

**Submit Result**

The Rollback Workflow submitted successfully  
with service request id 38

OK