

Getting Started with vCloud® Connector in the VMware Cloud Evaluation

A VMware Cloud Evaluation Reference Document



Contents

About Cloud Computing

Cloud computing is an approach to computing that pools or aggregates IT infrastructure resources. Using Infrastructure-as-a-Service (IaaS), through cloud computing, gives you a more efficient, flexible and cost-effective infrastructure. Clouds typically include a set of virtual machines ("VM"s). A virtual machine is an isolated software container that can run its own operating systems and applications as if it were a physical computer, and contains its own virtual (i.e., software-based) CPU, RAM, hard disk and network interface card (NIC). Users can start and stop Virtual Machines or use compute cycles, as needed. Clouds can be on-site (commonly referred to as 'Private Clouds'), with a Service Provider ('Public Cloud'), or a combination of the two ('Hybrid Cloud').

What is vCloud?

VMware vCloud is a software suite that empowers enterprises to transform their existing vSphere™ infrastructure into a consumable, self-managed, web-based service. It provides a window for end-user provisioning and deployment of servers, and enables enterprises to isolate departmental IT deployments to provide unique quality of service requirements to each business unit. Organizations can maintain one or many shared catalogues, so business units can quickly and easily deploy custom servers on-the-fly without the need for further IT intervention. The VMware vCloud suite is built on top of vSphere, the industry standard in virtualization technology, and carries with it the enterprise-grade quality and features that you would expect from VMware.

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Introduction

The **VMware Cloud Evaluation** is a enterprise-class Infrastructure-as-a-Service (IaaS) sandbox from VMware that allows you to explore the capabilities of a VMware-based hybrid cloud and experience the ease of moving workloads without commitment. VMware provides a free 90-day trial that includes starter cloud resources for a fast and easy way to experience the cloud. Access to unlimited click-to-buy resources are available with a premium account.

This easy to use service provides high performance functionality that can be leveraged in many ways such as:

- “Proof of Concept” work
- Development/test environment for new tools until production ready
- Evaluation of vCloud Director for use in a public or private cloud
- Hosting a simple or a complex blog
- Hosting of Microsoft-based small or large office software
- And much more

Multiple, connected ‘clouds’ together with a single pane-of-glass to operate within them describe a ‘hybrid’ cloud. **vCloud Connector** is the tool for making this happen.

VMware vCloud Connector (vCC) is the key component in building VMware-based hybrid clouds. It is a free, downloadable product from VMware that lets you copy, view, and work with your virtual machines (referred to as ‘workloads’ in the hybrid cloud context) across private and public vSphere and vCloud Director environments.

This document will guide you through the requirements and the process of getting started with vCloud Connector as deployed from the VMware Cloud Evaluation.

For information on using vCloud Connector once it is deployed, please review this guide:

vmware.com/go/vccuserguide

Introduction

Before getting started, it is important to understand the architecture of vCloud Connector. The 3 major components are:

- **vCloud Connector Server**

A virtual appliance that coordinates the activity of vCloud Connector, controls vCloud Connector Nodes, and produces the vCloud Connector UI. Only one vCloud Connector Server is needed.

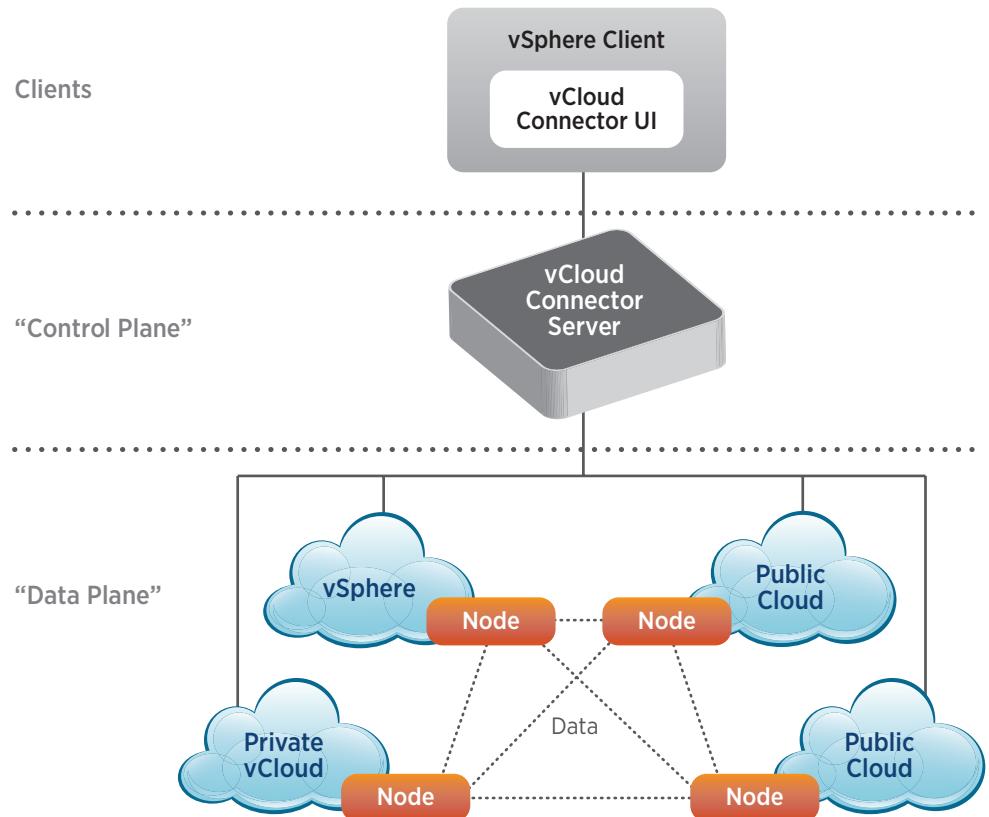
- **vCloud Connector Node**

Virtual appliances that handle transferring content from one cloud to another. Transfers between clouds that are interrupted, for example because of network problems, can be resumed at the point at which they were interrupted. A vCloud Connector Node must be installed in every vSphere or cloud that vCloud Connector oversees.

- **User Interface (UI)**

The Connector UI is the user interface that vCloud Connector Server produces. It can be accessed from within the vSphere Client.

vCloud Connector Architecture



Features

vCloud Connector allows you to connect, monitor and move content among multiple clouds.

Main Features Include:

- Easily add new clouds to be connected
- Delete, suspend and resume, power on/off, or reset a virtual machine or vApp
- Update an added cloud's credentials for functionality and admin access
- Browse the connected clouds hierarchy
- View the latest content within a cloud
- View cloud information such as URL, type, user, public or private classification, and the time it was last updated
- View detailed information such as current CPU, memory, and storage capacity & usage of a template, virtual machine or vApp
- Monitor task status

New in vCloud Connector 2.0

Datacenter Extension - Enables you to extend your private datacenter to a public vCloud. You can move virtual machines and vApps from your private datacenter to a public vCloud, retain their original network settings, and continue to use them as if they were still in your private datacenter. You use the Datacenter Extension feature through the Stretch Deploy command in vCloud Connector.

Content Sync - Enables you to synchronize templates across clouds. You can publish a folder or catalog of templates to a Content Library, have users subscribe to it, and keep the templates synchronized for all subscribed users.

Cross-cloud Search – Enables you to search for a virtual machine, vApp, or template across all the clouds that you have added to your vCloud Connector installation.

Copy and Deploy in One Operation – Provides the ability to copy and deploy in one step, as well as the option of using the commands separately.

New User Interface – Includes new Copy and Deploy wizards, new interface for Tasks, Details panel, and new cross-cloud search, among others.

Requirements

Note: While only 1 vCloud Connector Server is required across all clouds, there must be 1 Node deployed per individual Cloud or vCloud Organization. To use vCloud Connector as designed, a minimum of 2 infrastructures ("Clouds") is necessary. For example, your private datacenter via vSphere and the VMware Cloud Evaluation.

To satisfy the requirements of vCloud Connector and to build a VMware-based hybrid cloud, you will need the following:

- **A My VMware™ Account**
 - To download vCC components
- **One or More Private Clouds**
 - vCloud Director or vSphere infrastructure with vCloud Connector Server and/or Node deployed
 - Supported vCloud Director versions: 1.0, 1.0.1, or 1.5.x , 5.1
 - Supported vSphere versions: 4.x or 5.x

And/Or

- **One or More Public Clouds**
 - vCloud Service Evaluation account with vCloud Connector Server and/or Node deployed
- or**
- vCloud Certified Service Provider account with vCloud Connector Server and/or Node deployed

Two Ways to Manage VM's in the Evaluation

Simplified Interface View – a quick and easy-to-use way for new users to begin creating their cloud. We recommend this view for new users to create and manage their VM's.

vCloud Director View – vCloud Director (vCD) is a more advanced tool and provides more sophisticated provisioning, management and control. More cloud experience is needed for vCD. Learn more about vCloud Director at vmware.com/products/vcloud-director/overview.html

Deployment

This section will guide you through the requirements and the process of properly deploying vCloud Connector with the VMware Cloud Evaluation.

For information on using vCloud Connector once it is installed, please review this guide:

vmware.com/go/vccuserguide

Installing & Configuring Components

Downloading vCC Server & Node Components

To download the vCC Server and Node components a free My VMware account must first be registered with VMware.

Note: You may already have a My VMware account if you have VMware product license keys, or used VMware downloads or support.

To register and download the Server and Node components for your private cloud or other public cloud:

1. Navigate your web browser to the vCloud Connector download page by clicking [here](#)
2. Click either “Download Manager” or ‘Manual Download’ for both Node and Server components as needed
3. Log into vmware.com using your My VMware Login if you are not already logged in
Note: If you do not have a login you can create one at this time by selecting the ‘Register’ tab and entering form info
4. Once logged in, agree to the VMware End User License Agreement (EULA) and click ‘Accept’
5. The download should begin automatically

The screenshot shows the My VMware login page. It features a header with 'My VMware™' and a sub-header 'Simplified management of license keys and support'. Below this is a section titled 'Announcing: New Features You've Been Asking For!' listing three new features: 'Export to CSV', 'Custom License Key Labels', and 'Reporting Capability'. A 'Learn More' button is present. To the right is a login form with fields for 'Email address or customer number' and 'Password', and options for 'Forgot your password?' and 'Remember me'. Buttons for 'Log In' and 'Register' are also visible. At the bottom, there's a link 'Need help downloading?' and two download sections for 'vCCServer-2.0.0.0-909532.zip' and 'vCCNode-2.0.0.0-909531.zip', each with 'Download Manager' and 'Manually Download' buttons.

FILE	INFORMATION
vCCServer-2.0.0.0-909532.zip File size:1.34 GB File type: zip Release Date:2012-12-20 Build Number:909532	VMware vCloud Connector Server virtual appliance in ZIP. This can be downloaded, unzipped, and deployed in either VMware vCenter 4.0, 4.1, 5.0 and 5.1 via VMware vSphere Client or in VMware vCloud Director 1.5 and 5.1 based private or public clouds via the vCloud Director user interface. MD5SUM:63ab143421c240794267f761ac9667ee SHA1SUM:62be2adfa4a77659fa75e66499d96ba68b7b8377
vCCNode-2.0.0.0-909531.zip File size:819.15 MB File type: zip Release Date:2012-12-20 Build Number:909531	VMware vCloud Connector Node virtual appliance in ZIP. This can be downloaded, unzipped, and deployed in either VMware vCenter 4.0, 4.1, 5.0 and 5.1 via VMware vSphere Client or in VMware vCloud Director 1.5 and 5.1 based private or public clouds via the vCloud Director user interface. MD5SUM:e898e5fde0bc88f5ffffde730b9c94cc SHA1SUM:f5d7d32ff12edddde8a6339c680268dfcfccf136c

Installing & Configuring Components

Private vCloud / vSphere Deployment

Once you have downloaded the Virtual Appliance (OVF) files, you will need to deploy them in your vSphere or vCloud environment(s).

Note: Only 1 'Server' is required across all clouds. However, 1 'Node' is required for each cloud. You can register Nodes from one cloud into the Server located in a different cloud or datacenter

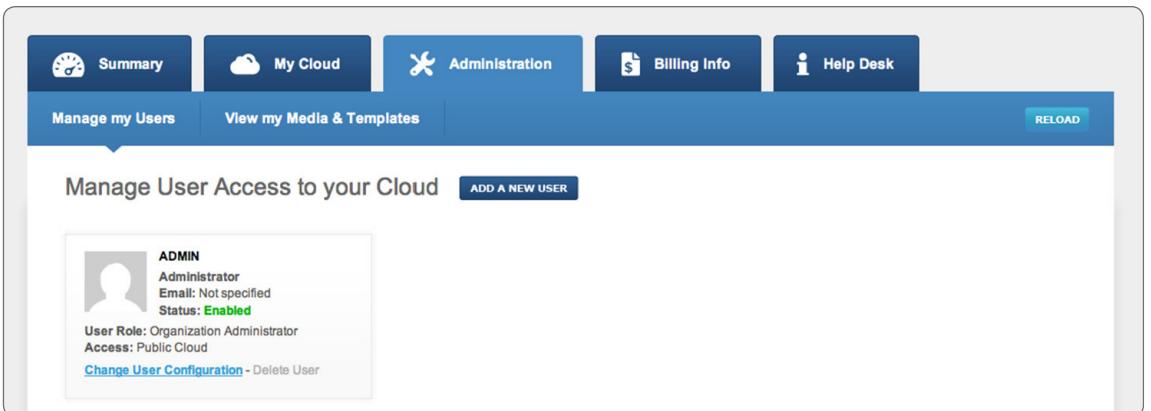
A quick-start setup follows however for detailed information and steps to deploy the vCC Node and Server components in your Private vCloud or vSphere environment, please review these guides:

- vmware.com/go/vccinstallguide
- pubs.vmware.com/hybridcloud/index.jsp

Deploying the Node from the VMware Hybrid Cloud Evaluation

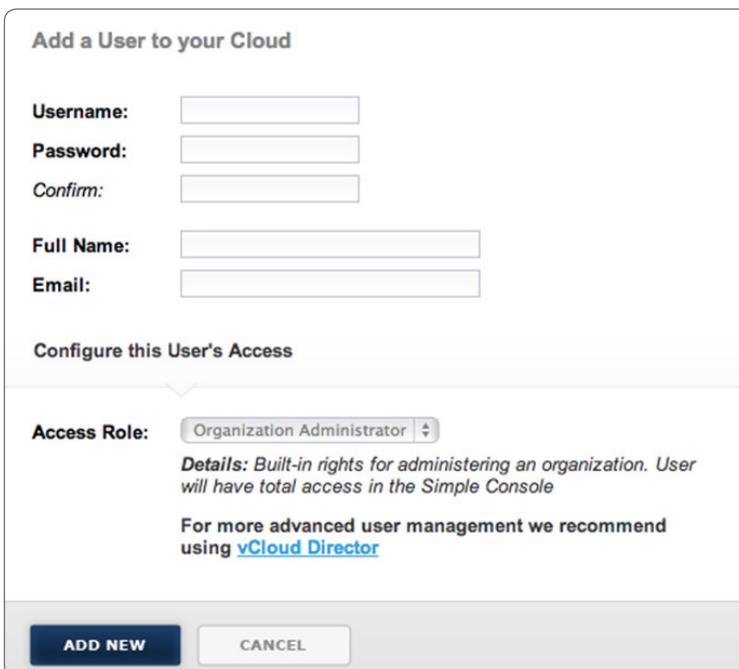
Add an Additional Organizational Administrator Account

Note: The initial login provided to you for logging in to the VMware Cloud Evaluation should not be used to connect the Node appliances; you must add Organization Administrators or service accounts to perform these functions. Simply go to the Administration tab in the ‘Simplified UI’ and add a new user to assign them as an Organization Administrator.



The screenshot shows the 'Administration' tab in the Simplified UI. At the top, there are tabs for Summary, My Cloud, Administration, Billing Info, and Help Desk. Below the tabs, there are two buttons: 'Manage my Users' and 'View my Media & Templates'. A large blue button labeled 'ADD A NEW USER' is prominently displayed. The main content area shows a user named 'ADMIN' with the following details: Administrator, Email: Not specified, Status: Enabled, User Role: Organization Administrator, and Access: Public Cloud. There are links to 'Change User Configuration' and 'Delete User'.

Administration tab within the Simplified UI



The screenshot shows the 'Add a User to your Cloud' dialog box. It includes fields for Username, Password, Confirm, Full Name, and Email. Below these, there is a section titled 'Configure this User's Access' with a dropdown for 'Access Role' set to 'Organization Administrator'. A detailed description states: 'Details: Built-in rights for administering an organization. User will have total access in the Simple Console'. It also recommends using vCloud Director for more advanced user management. At the bottom, there are 'ADD NEW' and 'CANCEL' buttons.

Add User dialog pop-up

Deploying vCC Node & Server in Your Private Cloud

Deploying vCC Node & Server in Your Private Cloud

1. Start up the VMware vSphere Client
2. Click: File > Deploy OVF Template



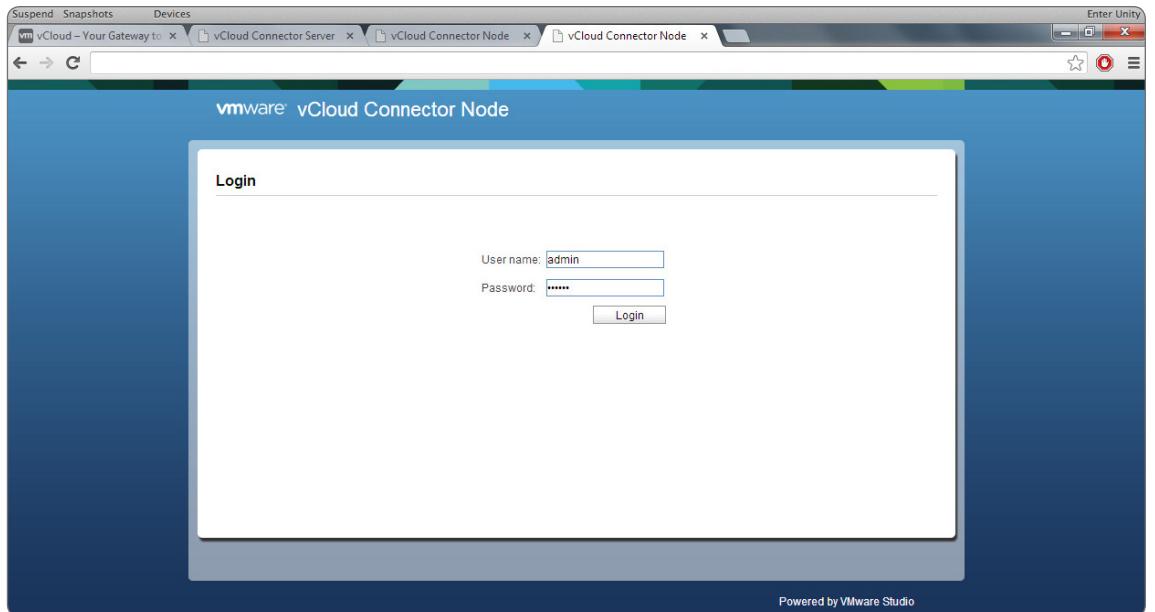
Follow these next steps to deploy each of 'vCC Server' and 'vCC Node'

3. Browse to select the vCCServer or vCCNode OVF file
4. Complete the deployment wizard
5. Note the addresses deployed for both vCC Server and vCC Node

Deploying vCC Node & Server in Your Private Cloud

In a supported web browser, go to the IP address at port 5480 (e.g. <https://192.168.0.2:5480>) of the Node and register the Node to the cloud.

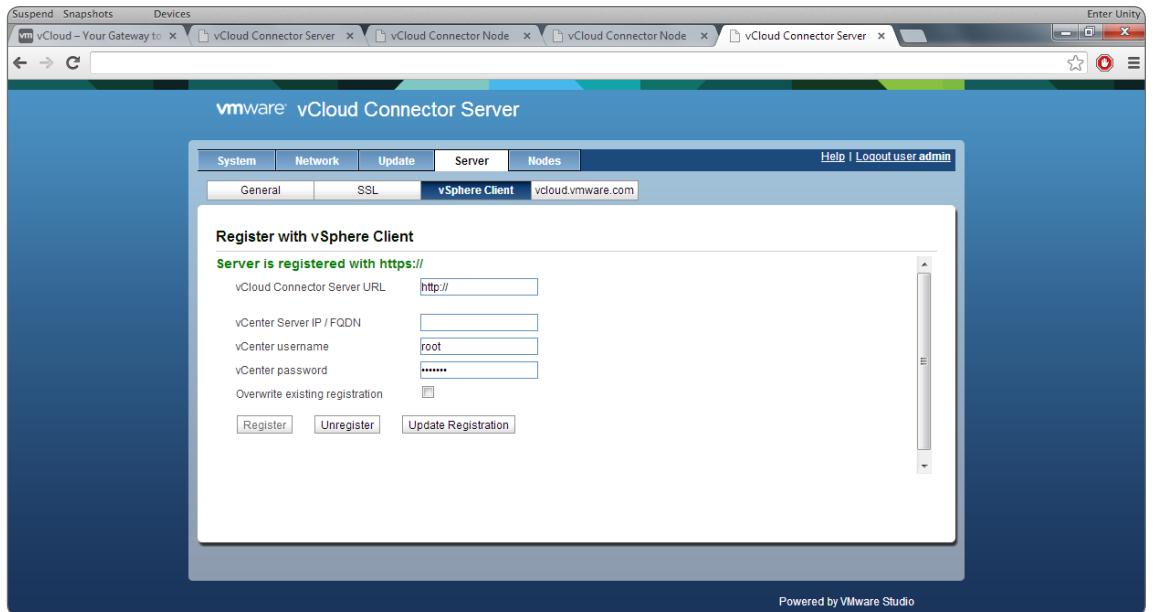
6. Log into the vCC Node at its IP address using port 5480
7. On the “Node” tab select “Cloud”
8. Select Cloud type (ie vSphere) and enter its URL
9. Select ‘Update Configuration’



Deploying vCC Node & Server in Your Private Cloud

Register vCC with vSphere Client

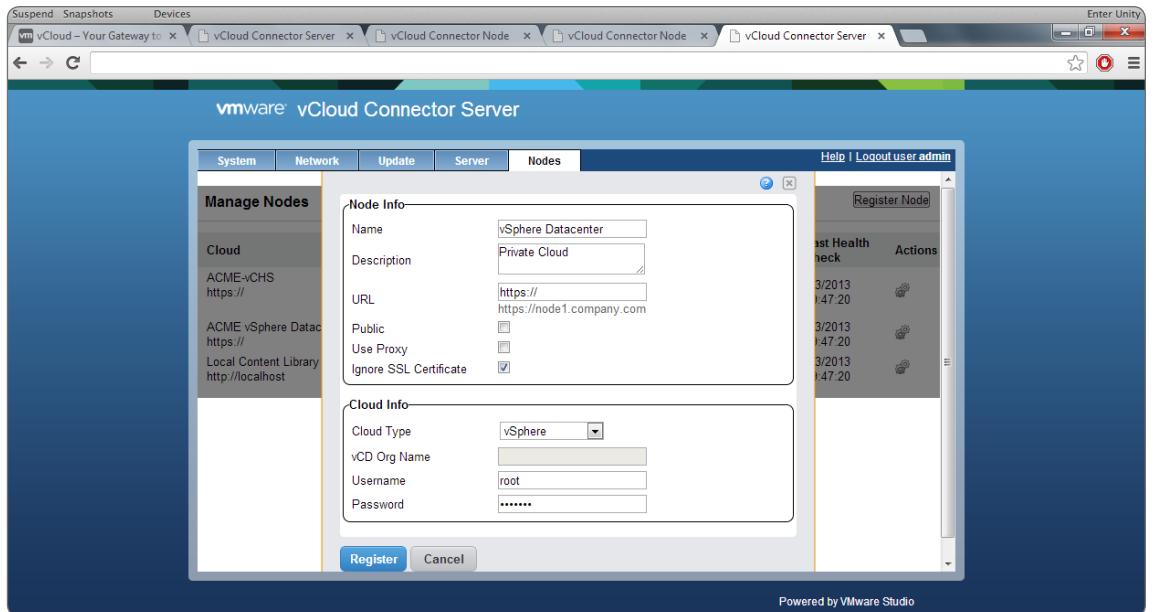
1. Log into the vCC Server at its IP address using port 5480
2. On the “Server” tab select vSphere Client
3. Enter the vCC Server URL
4. Enter Server IP, username and password
5. Select ‘Update Configuration’



Deploying vCC Node & Server in Your Private Cloud

Go to the IP address of the vCC Server and register the Node to the Server

1. Select the “Nodes” tab
2. Enter the name, description and URL address for the vCC node
3. Select Cloud Type as vSphere or vCloud Director depending on the environment and enter username and password
4. Select ‘Register’

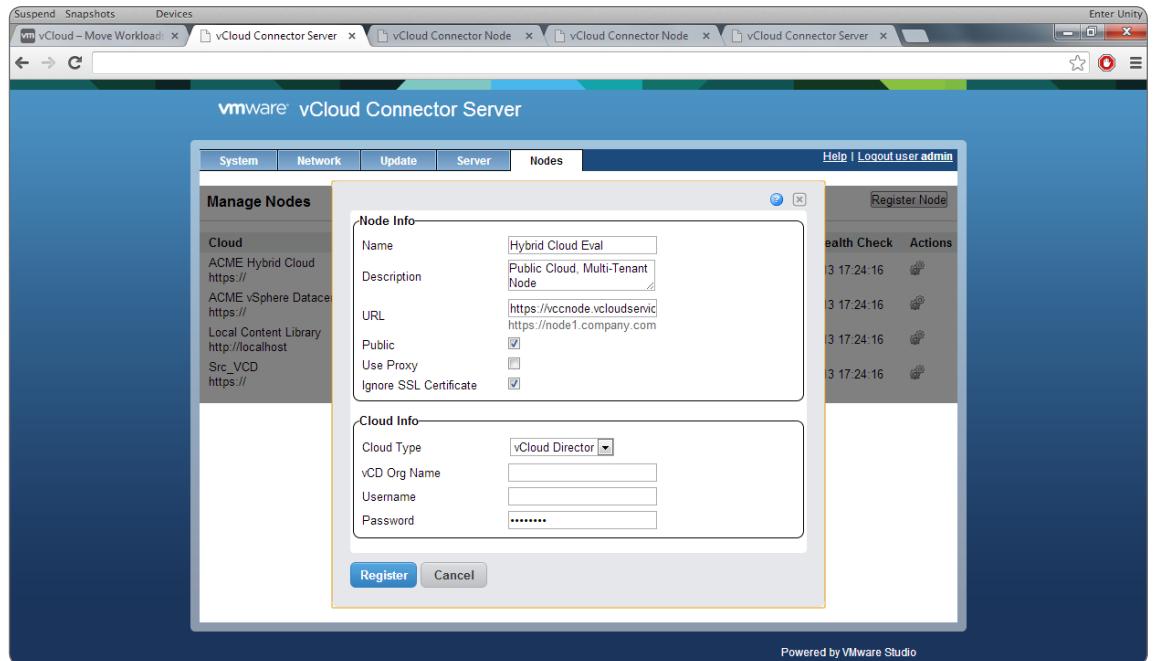


Connecting to the Multi Tenant Node

The initial (default) login provided to you for logging in to the VMware Cloud Evaluation cannot be used to connect the Node appliances; you must add Organization Administrators or service accounts to perform these functions. Simply go to the Administration tab in the ‘Simplified UI’ of the Evaluation add a new user to assign them as an Organization Administrator.

After creating the additional admin, do the following to connect to the multi-tenant node:

1. Select the “Nodes” tab
2. Enter the name, description
3. Add the URL: <https://vccnode.vcloudservice.vmware.com>
4. Select Cloud Type as ‘vCloud Director’
5. Enter your 4 digit Org name used to sign into your evaluation console at vcloudservice.vmware.com and enter the username & password
- Note: use the 2nd organization admin (service account) username and password that you have created*
6. Select ‘Register’



Registering the Nodes in vCC

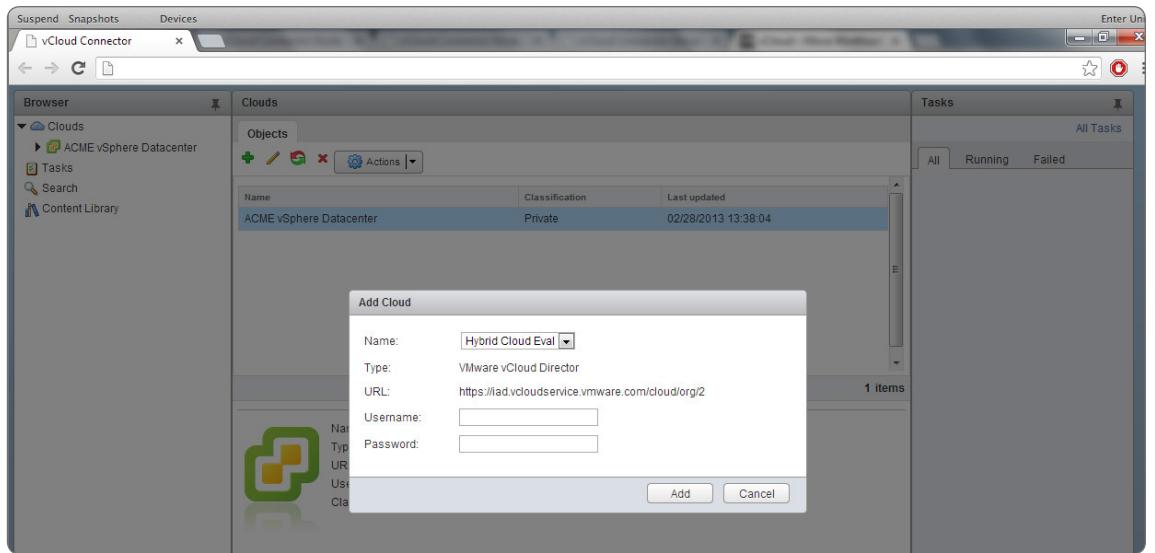
Begin from the ‘Home’ view of the vSphere Client and select the vCloud Connector plug-in under ‘Solutions and Applications’.

Registering the Nodes

In addition to registering vCC Nodes with the vCC Server for hybrid functionality, each Cloud must also be registered with the vCloud Connector UI to be exposed to the user interface.

For each cloud (ie Cloud Eval or other vCloud) and your vSphere datacenter do the following:

1. Select Clouds from the Browser menu of the vCloud Connector UI
2. Select ‘Add’ from the Actions (gear icon) drop-down list
3. Select the Cloud (Name) you wish to add from the drop-down list
4. Enter a valid Org Administrator username & password
5. Click the ‘Add’ button to register the Cloud to the vCC UI



Managing Your Clouds in vCC

Now that there are clouds connected and registered in vCC you will be able to manage your cloud and perform actions from the drop-down such as copying a VM from one cloud to another in just a few clicks.

For more information on using vCloud Connector please refer to the users guide at:

vmware.com/go/vccuserguide

Name	Location	Status
CF-Springboard	2-Public	Stopped
LAMPstack_Ubuntu	2-Public	Stopped
Springboard-2	2-Public	Started
vcc-2	2-Public	Started
vCC2_Server	2-Public	Started

Child Virtual Machines:
Springboard-2
Name: Springboard-2
Guest OS: Microsoft Windows Server 2008 R2 (64-bit)
Memory Capacity: 2048 MB
Storage Capacity: Not Available
Parent vApp: vcc

Conclusion & Next Steps

Conclusion

Using vCloud Connector to migrate workloads to the VMware Cloud Evaluation is an easy way to quickly see the flexibility and power of a vCloud solution. Our aim is that once you understand what is possible with a public cloud provider by using the evaluation, you will be able to make a more informed decision when choosing the right partner in a vCloud Powered or vCloud Datacenter certified provider.

Next Steps

Once you are ready to choose a full-time solution to meet your long-term public cloud needs, check out our extensive ecosystem of vCloud Service Provider partners and find a perfect match at vcloud.vmware.com/partners/vspp. The network of vCloud Service Providers can provide you with a production-ready vCloud Powered service, complete with custom SLAs, geographic choice and supporting engineering services.



Resources

For more information about VMware vCloud Connector, please visit the product page at:

vmware.com/go/vcc

For more technical information regarding deploying, installing and configuring vCloud Connector in your private environment, please refer to the “vCloud Connector Installation and Configuration” guide:

vmware.com/go/vccinstallguide

For more detailed technical information on using VMware vCloud Connector, refer to the “Using vCloud Connector” guide:

vmware.com/go/vccuserguide

For information regarding vCloud Director:

vmware.com/products/vcloud-director/overview.html

VMware Contact Information

If you would like to contact VMware directly, you can reach a representative at 1-877-4-VMWARE (650-475-5000 outside North America) or email the VMware Cloud Evaluation team directly at: vcloudeval@vmware.com

Providing Feedback

VMware appreciates your feedback on the material included in this guide, and in particular, would be grateful for any guidance on the following topics:

- How useful was the information in this guide?
- What other specific topics would you like to see covered?

Please send your feedback to vcloudeval@vmware.com

Thank you for your help in making this guide a valuable resource.



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