

VMware vCloud Air - Disaster Recovery User's Guide

vCloud Air

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Contents

	About this vCloud Air – Disaster Recovery User's Guide	5
1	The Disaster Recovery Service	7
	Overview of the Disaster Recovery Service	7
	About Setting up the Disaster Recovery Service	9
	Workflow for Using the Disaster Recovery Service	10
2	Managing Disaster Recovery in vCloud Air	11
	Assign a User to the Roles for Disaster Recovery	12
	About Networks for the Disaster Recovery Service	13
	About Placeholders in vCloud Air	13
	Lease Times for Tests and Recoveries	15
	About Test Recoveries	15
	Test a Recovery	16
	Clean up a Test Recovery	17
	About Recovery to vCloud Air	18
	Recover a Virtual Machine When the Source Site Is Unavailable	18
	Remove a Replication from vCloud Air	19
	About Failback for Virtual Machines to the Source Site	20
	Index	21

About this vCloud Air – Disaster Recovery User's Guide

The *vCloud Air – Disaster Recovery User's Guide* provides information about vCloud Air – Disaster Recovery (formerly known as vCloud Hybrid Service – Disaster Recovery) from VMware®.

VMware provides a Disaster Recovery service. This guide provides information about using the Disaster Recovery service to manage virtual machines replicated from your source site to the cloud. This guide provides information in two parts:

- The first part of this guide provides an overview of the Disaster Recovery service and how to configure and manage it by using both the vSphere Web Client and vCloud Air.
- The second part of this guide explains how to perform the Disaster Recovery service tasks in vCloud Air.

Intended Audience

This guide documents the tasks for disaster recovery administrators who are responsible for configuring and managing disaster recovery from their source sites to vCloud Air. This guide documents the capabilities and tasks that you do in vCloud Air.

Related Documentation

In addition to reading this guide, see the following documentation for complete information about using the Disaster Recovery service:

- [vSphere Replication for Disaster Recovery to Cloud](#) for information about using the vSphere Web Client to manage the Disaster Recovery service from your source site
- [vCloud Air User's Guide](#) for general information about managing your virtual machines in the cloud
- [vCloud Air Networking Guide](#) for general information about setting up networking for virtual machines in the cloud

VMware Technical Publications Glossary

VMware Technical Publications provides a glossary of terms that might be unfamiliar to you. For definitions of terms as they are used in VMware technical documentation, go to

<http://www.vmware.com/support/pubs>.

The Disaster Recovery Service

vCloud Air – Disaster Recovery is a new Recovery-as-a-Service (RaaS) offering intended to protect virtual workloads managed by VMware vSphere that are either deployed in a private cloud or data center. To implement and consume vCloud Air – Disaster Recovery, you require the following VMware products and services:

- vSphere Replication

vSphere Replication is a feature of the VMware vSphere platform. vSphere Replication copies a virtual machine to another location, within or between clusters, and makes that copy available for recovery through the VMware vSphere Web Client or through the orchestration of a full disaster recovery product such as VMware vCenter Site Recovery Manager.

- vCloud Air

vCloud Air is a secure Infrastructure-as-a-Service (IaaS) cloud owned and operated by VMware, built on the trusted foundation of vSphere. The service supports existing workloads and new application development, giving IT administrators and architects a common platform for seamlessly extending existing data centers to the cloud by leveraging the same tools and processes they use today.

- vCloud Connector

vCloud Connector provides support for initial data seeding and failback of workflows to your source site by using vCloud Connector Offline Data Transfer (ODT).

This user guide addresses configuration, setup, and management aspects of vCloud Air in support of the Disaster Recovery service.

For information about vSphere Replication, see the [vSphere Replication 5.6 Disaster Recovery to Cloud](#) documentation.

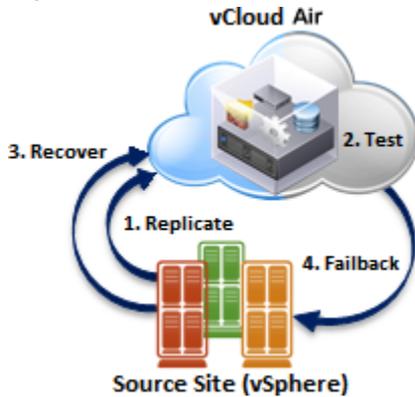
This chapter includes the following topics:

- [“Overview of the Disaster Recovery Service,”](#) on page 7
- [“About Setting up the Disaster Recovery Service,”](#) on page 9
- [“Workflow for Using the Disaster Recovery Service,”](#) on page 10

Overview of the Disaster Recovery Service

The Disaster Recovery service enables site administrators to protect their vSphere virtual workloads from a broad range of potential disruptions by asynchronously replicating those workloads from a source site to the cloud for recovery. The Disaster Recovery service uses vSphere Replication (host-based replication) to replicate virtual machines to vCloud Air.

Administrators can perform a variety of disaster recovery operations for their virtual machines, including testing, planned migrations, and recovery by using the Disaster Recovery service.

Figure 1-1. Interaction Between vSphere Replication and vCloud Air

Features of the Disaster Recovery Service

Using the Disaster Recovery service to replicate workloads from a source site to vCloud Air provides the following benefits:

- Introduces major efficiency gains over traditional business continuity and disaster recovery (BC/DR) practices.
- Affords organizations and IT operations groups of various sizes the opportunity to improve business resiliency and compliance standards based on cloud-scale economics.
- Allows for improved recovery point objective (RPO) and recovery time objective (RTO) policy compliance while reducing total cost of ownership (TCO).
- Introduces alternatives for migrating production applications to the cloud with reduced downtime and limited need for offline data transfers (ODT).
- Provides subscription-based Recovery-as-a-Service (RaaS) for vSphere customers.

The following key features provide the benefits of the Disaster Recovery service:

- Simple and secure (enterprise to cloud) asynchronous replication and recovery for virtual machines
- Self-service disaster recovery testing and recovery of workflows per virtual machine
- Guaranteed (warm standby) resource availability
- On-premise monitoring and management with the vSphere Web Client
- Flexible subscription options for elastic consumption
- Support for initial data seeding by using VMware vCloud Connector Offline Data Transfer (ODT)
- Failback of workflows to your source site via ODT
- Self-service RPO settings from 15 minutes to 24 hours per virtual machine

NOTE RPO policy compliance is dependent on available bandwidth from the source site to vCloud Air.

About Setting up the Disaster Recovery Service

Subscribing to the Disaster Recovery service is a standard enrollment process whether you already have a separate subscription with vCloud Air.

Prerequisites

Before setting up the Disaster Recovery service, you must meet the following prerequisites:

- You are a licensed vSphere customer running vSphere 5.1 or later on-premises.
See [Disaster Recovery to Cloud System Requirements and Compatibility](#) in *vSphere Replication 5.6 for Disaster Recovery to Cloud* for information.
- You have registered for a My VMware account.

Procedure

- 1 As a vSphere customer or vSphere and vCloud Air customer, contact your VMware sales representative to purchase a vCloud Air – Disaster Recovery subscription.

NOTE Once a subscription to the vCloud Air – Disaster Recovery service is submitted and approved, management of subscription options, such as feature add-ons, will become available in My VMware.

Similar to the Virtual Private Cloud and Dedicated Cloud services for vCloud Air, the Disaster Recovery service is a core service, which you cannot order directly through My VMware. Follow a standard purchase order process to subscribe to the Disaster Recovery service.

As part of the enrollment process, VMware sets up your virtual data center enabled for disaster

recovery (designated by the Reserved for Disaster Recovery icon ) that serves as your replication target and recovery site. VMware emails your login credentials for the Disaster Recovery service in vCloud Air.

- 2 Log into My VMware and download the vSphere Replication 5.6 appliance.
vSphere Replication Disaster Recovery is distributed as an OVF virtual appliance. You can deploy the vSphere Replication appliance by using the standard vSphere OVF Deployment wizard. Download the vSphere Replication OVF package to a local directory or obtain its online URL.
- 3 Log into the vSphere Web Client at your source site to install the vSphere Replication appliance. Select the vCenter hosts and clusters where you will deploy the OVF template for the vSphere Replication appliance.
See [Installing and Configuring vSphere Replication to Cloud](#) in *vSphere Replication 5.6 for Disaster Recovery to Cloud* for information.
- 4 Using the vSphere Web Client at your source site, configure your connection to vCloud Air.
See [Configuring the Connection to the Cloud](#) in *vSphere Replication 5.6 for Disaster Recovery to Cloud* for information.
- 5 Log into vCloud Air to create user roles to manage your Disaster Recovery service.
See [“Assign a User to the Roles for Disaster Recovery,”](#) on page 12 for information.

What to do next

See [“Workflow for Using the Disaster Recovery Service,”](#) on page 10 for an overview of using vSphere Replication and vCloud Air to manage your Disaster Recovery service.

Workflow for Using the Disaster Recovery Service

To configure and recover virtual machines protected by the Disaster Recovery service, perform the following tasks in vSphere Replication and vCloud Air:

- 1 Using vSphere Replication, replicate the virtual machines you plan to protect from your source site to vCloud Air.

NOTE You must initiate replication to the cloud by using vSphere Replication at your source site because replication between your source site and the cloud is not symmetrical, like it is when using VMware Site Recovery Manager. You can initiate replication to the cloud from your source site but, for security reasons, you cannot communicate with the virtual machines at your source site from the cloud.

See [Replicating Virtual Machines to Cloud](#) in *vSphere Replication 5.6 for Disaster Recovery to Cloud* for information about configuring and running vSphere Replication Disaster Recovery.

- 2 After replicating your virtual machines to the cloud, log into vCloud Air to view your virtual data center enabled for disaster recovery and the placeholder virtual machines that you selected for replication.

See [“About Placeholders in vCloud Air,”](#) on page 13 for information.

- 3 Using vSphere Replication or vCloud Air, test recovery for a virtual machine and cleanup the test after you run it.

See [“Test a Recovery,”](#) on page 16 for information.

- 4 In the event that your source site becomes unavailable, log into vCloud Air and recover your virtual machines to vCloud Air.

See [“Recover a Virtual Machine When the Source Site Is Unavailable,”](#) on page 18 for information.

Managing Disaster Recovery in vCloud Air

2

When you subscribe to the Disaster Recovery service, you can use vCloud Air to monitor and manage the virtual machines you are replicating to the cloud.

After setting up virtual machines for replication, use vCloud Air to monitor and manage the replication and recovery for those virtual machines; for example, testing recovery or performing a recovery from a placeholder virtual machine in vCloud Air in the event of a disruption at the source site.

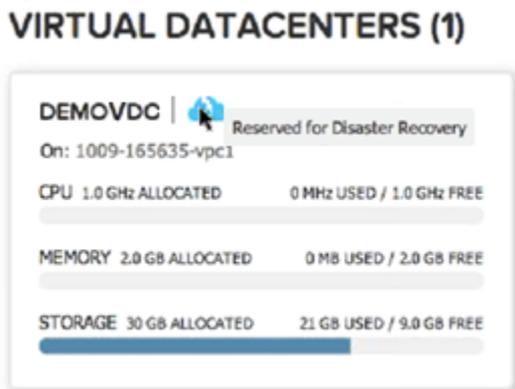
After replication from the source site begins, you can modify the network and customization settings configured for the placeholder virtual machine. Other settings for a placeholder virtual machine are not available before you recover the virtual machine to the cloud. After you recover a virtual machine to the cloud, it has the same capability that the virtual machine had at the source site. You can access and operate your virtual machines recovered to the cloud for the following time periods:

- 7 days to access and operate virtual machines when performing tests
- 30 days to access and operate virtual machines when performing recovery

Confirm that a virtual data center is enabled for disaster recovery by viewing the virtual data center in the dashboard of vCloud Air.

If you are an existing vCloud Air customer when you subscribed to the Disaster Recovery service, you see in your dashboard your existing virtual data centers and your new virtual data centers enabled for disaster recovery.

Figure 2-1. vCloud Air Dashboard



Clicking a virtual data center enabled for disaster recovery displays the Replication tab, where you can view your placeholder virtual machines.

Usage Metering (**Dashboard > Virtual Data Center Details > Usage & Allocation**) for your Disaster Recovery service is based on the storage capacity consumed by virtual machines being replicated to the cloud. Usage metrics appear in the vCloud Air Web console.

This chapter includes the following topics:

- [“Assign a User to the Roles for Disaster Recovery,”](#) on page 12
- [“About Networks for the Disaster Recovery Service,”](#) on page 13
- [“About Placeholders in vCloud Air,”](#) on page 13
- [“Lease Times for Tests and Recoveries,”](#) on page 15
- [“About Test Recoveries,”](#) on page 15
- [“Test a Recovery,”](#) on page 16
- [“Clean up a Test Recovery,”](#) on page 17
- [“About Recovery to vCloud Air,”](#) on page 18
- [“Recover a Virtual Machine When the Source Site Is Unavailable,”](#) on page 18
- [“Remove a Replication from vCloud Air,”](#) on page 19
- [“About Failback for Virtual Machines to the Source Site,”](#) on page 20

Assign a User to the Roles for Disaster Recovery

To use the Web console for vCloud Air to manage the virtual machines you replicated to the cloud, you must have a user account in vCloud Air and be a member of an administrative role in vCloud Air.

A user in vCloud Air can either be an administrator or an end user. vCloud Air groups administrator privileges in to specific administrator roles. An account administrator can assign a user to one or more of the administrator roles.

Prerequisites

Before assigning a user to an administrative role to access the Disaster Recovery service, you must meet the following prerequisites:

- You have subscribed to the Disaster Recovery service and received the email explaining how to log into vCloud Air for the first time.
- You are assigned to the Account Administrator role in vCloud Air so that you can assign users to roles.
- You have created the user account to which you want to add Disaster Recovery permissions.

See [Add Users](#) in the *vCloud Air User's Guide* for information.

Procedure

- 1 Click **Users** in the top right of the vCloud Air **Dashboard** tab.
- 2 Select the user for whom you want to grant permissions to the Disaster Recovery service.
- 3 In the **More** drop-down menu, select **View and Edit Details**.
- 4 In the **Roles** section, assign any of the following roles to the user's account:

Choose this option:	To grant these permissions:
Virtual infrastructure	Manage replications and recovered virtual machines, view virtual data centers, virtual machines, activity logs, and users
Network	Manage networks and gateways, and view virtual data centers, virtual machines, activity logs, and users
Read-only	View virtual data centers, virtual machines, gateways, networks, activity logs, and users

Choose this option:	To grant these permissions:
Account	Add users and reset passwords, and view virtual data centers, virtual machines, and activity logs
Subscription	Manage user accounts in My VMware and have permission to file support requests, and view virtual data centers, virtual machines, activity logs, and users

About Networks for the Disaster Recovery Service

When you subscribe to the Disaster Recovery service, VMware creates two default networks for the service — an isolated network and an external routed network. The gateway for the routed network has a public IP address on its outside interface so that the routed network on the inside interface is accessible through the Intranet. You can use these networks for your virtual machines protected by the Disaster Recovery service.

When you configure Disaster Recovery in vSphere Replication by using the **Connect to a cloud provider** wizard, you specify which networks to use for the Test network and the Recovery network. The network choices that appear in the wizard are the networks configured for vCloud Air.

See [Connect to a Cloud Provider Site](#) in *vSphere Replication 5.6 for Disaster Recovery to Cloud* for information.

You can choose to use the vCloud Air default networks for the Disaster Recovery service; for example, specify the default isolated network as your test network and the default routed network as your recovery network. If you decide to create networks for test and recovery in vCloud Air, you must update the target networks in the vSphere Web Client.

For information about updating your target networks in the vSphere Web Client, see [Select Recovery Networks on the Target Virtual Data Center](#) in *vSphere Replication 5.6 for Disaster Recovery to Cloud*.

For information about adding networks in vCloud Air, see [Add a Network to a Virtual Data Center](#) in the *vCloud Air Networking Guide*.

When you test a recovery or recover a virtual machine to the cloud, vCloud Air attaches the virtual machine to the test or recovery networks respectively.

See [“Test a Recovery,”](#) on page 16 and [“Recover a Virtual Machine When the Source Site Is Unavailable,”](#) on page 18 for information.

About Placeholders in vCloud Air

When you configure replication by using vSphere Replication at your source site, the Disaster Recovery service creates placeholder virtual machines in vCloud Air which represent the virtual machines at your source site.

Placeholder virtual machines are accessible in two areas of vCloud Air for a virtual data center enabled for disaster recovery:

- The Replication tab—contains placeholders for the virtual machines replicated from your source site. Use the Replication tab to verify that your virtual machines are protected by the Disaster Recovery service and to view the status of your replications.
- The Virtual Machines tab—contains placeholders, virtual machines for which you are testing recovery, and virtual machines recovered to the cloud. A placeholder virtual machine appears in the Virtual Machines tab after the initial full synchronization of replication data from the source site successfully completes.

Use the Virtual Machines tab to test recovery and recover the virtual machines to the cloud in the event your source site is unavailable.

The status of each placeholder determines what actions are available for that virtual machine represented. After you test a recovery or recover a virtual machine to the cloud, the Disaster Recovery service replaces the placeholder with a test or production virtual machine respectively.

About the Replication of Placeholders

vCloud Air displays the following information about virtual machine replication.

Figure 2-2. Placeholders in the Replication Tab

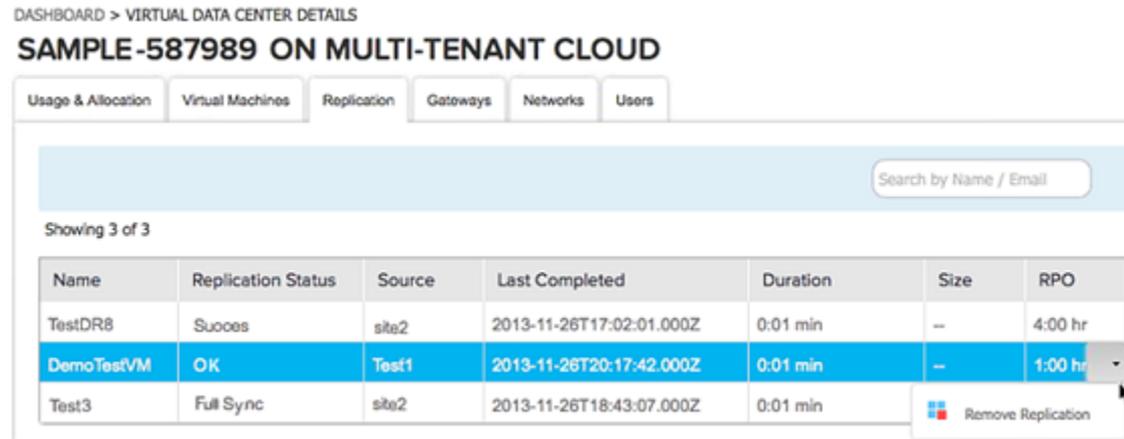


Table 2-1. Replication Information Displayed for Each Placeholder

Column	Description
Name	The name of the placeholder virtual machine
Replication Status	The current status of the replication
Source	The source being used for replication
Last Completed	Last synchronization completed; displayed using the local time of the browser time zone
Transfer Duration	The length of time the last synchronization took
Transfer Size	The size of the last data replicated (not the size of the virtual machine)
RPO	Recovery point objective, which is the replication time interval that you specify, depending on your data protection needs vSphere Replication applies all changes made to virtual machines configured for replication at the source site to their replicas in the cloud. Replication occurs at the RPO interval that you set in the vSphere Web Client. NOTE Lower RPO times reduce potential data loss but use more bandwidth and system resources. By default, the vSphere Web Client sets 4 hours as the RPO value.

Table 2-2. About the Replication Status Values

Replication Status	Description
Configuring	Virtual machine configuration is in progress.
Full Sync	Full synchronization is in progress.
Initial Full Sync	Initial full synchronization is in progress. This status only appears for the first initial synchronization when the virtual machine is added to the system.
Not Active	The virtual machine replication is configured properly and vCloud Air did not encounter a replication error. However, vCloud Air is not receiving replication traffic for the placeholder or does not have an open connection for the placeholder.

Table 2-2. About the Replication Status Values (Continued)

Replication Status	Description
OK	The replication is configured correctly—no configuration or replication errors are present. However, the Disaster Recovery service has not sent replication traffic to the cloud.
Paused	The replication is not running because a vSphere Replication user paused the replication. See Pause or Resume a Replication Task in <i>vSphere Replication 5.6 for Disaster Recovery to Cloud</i> for information.
Recovered	The Disaster Recovery service recovered the virtual machine to the cloud successfully.
Recovering	The Disaster Recovery service is recovering the virtual machine to the cloud.
Sync	The virtual machine data at the source site is synchronizing with the placeholder virtual machine in vCloud Air.

See [Monitoring the Status of Replication Tasks](#) in *vSphere Replication 5.6 for Disaster Recovery to Cloud* for information.

NOTE An RPO violation can occur when vCloud Air (the replication target) loses connectivity to the source site.

Lease Times for Tests and Recoveries

When a virtual machine powers on as a result of a test or recovery, its operation in vCloud Air is subject to the following runtime leases:

- Virtual machines powered on during a disaster recovery test—7 business day lease
- Virtual machines powered on after being recovered to the cloud—30 day lease

To view the lease times for a test or recovered virtual machine in vCloud Air, go to the virtual data center enabled for disaster recovery > **Virtual Machine** tab > **Running Time** column.

The **Running Time** column shows the time since a test or recovery; displayed using the local time of the browser time zone.

About Test Recoveries

Although you can initiate tests from the vSphere Web Client at your source site or from the vCloud Air Web console, most often you will initiate tests from the vSphere Web Client at your source site.

However, initiating tests from vCloud Air is necessary when your source site is unavailable and you want to run a final test before executing disaster recovery.

The following conditions apply to testing recoveries:

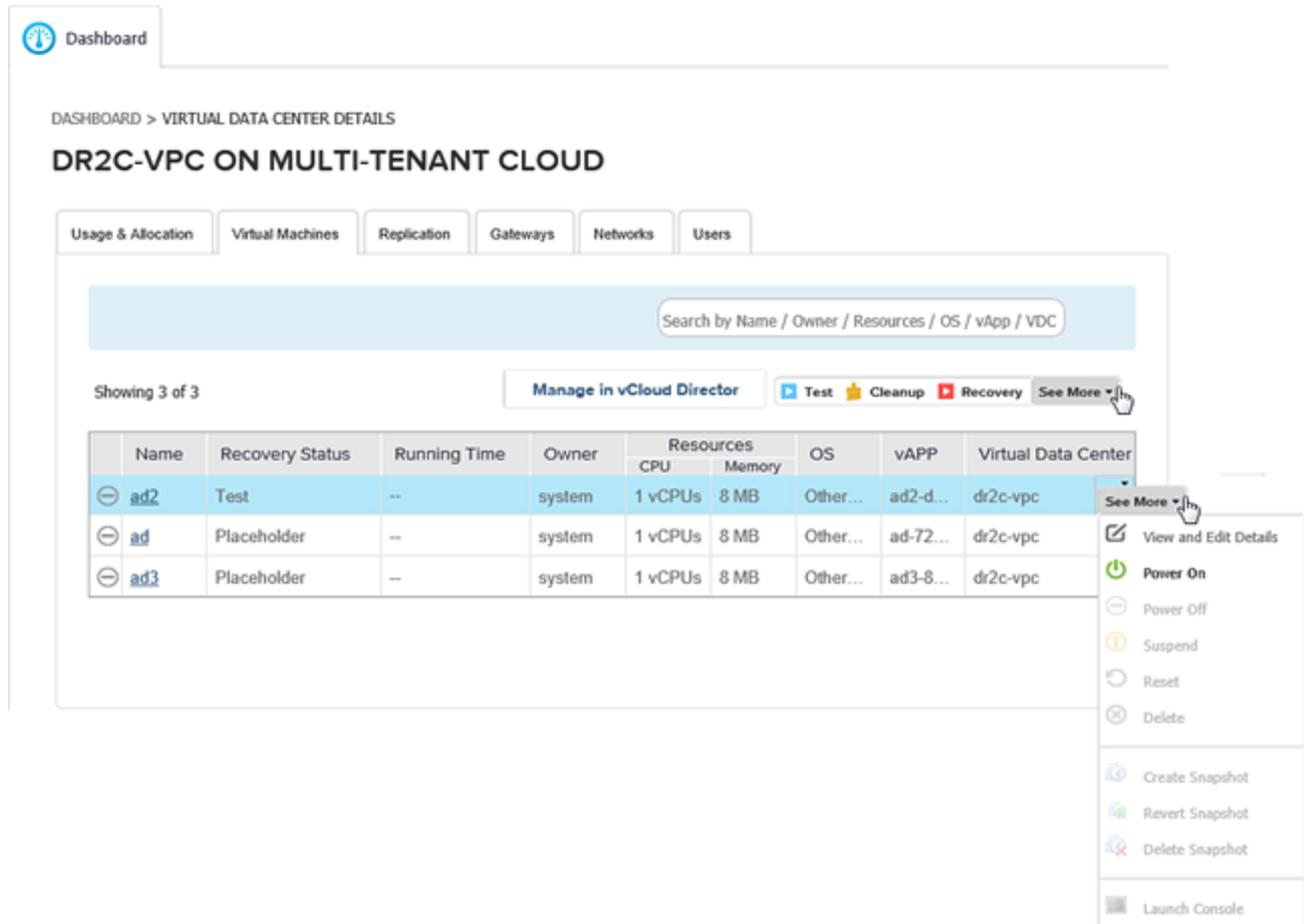
- When you invoke a test from your source site, you have the option to synchronize data between the source site and the cloud before creating the test recovery. This option is not available when initiating a test from vCloud Air.
- Initiating a test from the cloud creates a test recovery using replicated virtual machine data, re-configures the virtual machine to connect to the test network, and applies guest customization.
- Testing a recovery does not affect services at the source site.
- While a test recovery runs, the Disaster Recovery service continues to replicate data from the virtual machines at your source site configured for protection to vCloud Air.

NOTE Your subscription for the Disaster Recovery service requires your coordination with VMware Global Support Services when testing recoveries for virtual machines in vCloud Air. Contact your Global Support Services representative for information.

For information about testing a recovery, see [“Test a Recovery,”](#) on page 16.

A successful test recovery powers on the virtual machine. When you perform a test, the Recovery Status changes from Placeholder to Test.

Figure 2-3. Virtual Machines Tab in vCloud Air



For information about testing a recovery by using the vSphere Web Client at your source site, see [Test Recovery to Cloud](#) in *vSphere Replication 5.6 for Disaster Recovery to Cloud* for information.

Test a Recovery

To guarantee a recovery in the event of disruption at your source site, you should test a placeholder virtual machine to ensure its integrity is intact.

Prerequisites

- Verify that a test network was configured.
See [“About Networks for the Disaster Recovery Service,”](#) on page 13 for information.
- You have the correct user permissions to perform the test.
See [“Assign a User to the Roles for Disaster Recovery,”](#) on page 12 for information.

Procedure

- 1 In the **Dashboard** tab, click the virtual data center that is enabled for disaster recovery.

- 2 Click the **Virtual Machine** tab.
The table of virtual machines appears.
- 3 For the placeholder you want to test, click the link in the **Name** column.
The virtual machine details for the placeholder appear. The **Guest OS Customization** field indicates whether guest customization is enabled.
- 4 If necessary, enable guest customization by using vCloud Director:
 - a Click **Manage VM in vCloud Director**.
 - b In the **My Cloud** pane, click **VMs**. The list of your virtual machines appears.
 - c In the list of virtual machines, select the machine for which you need to enable guest customization, right-click and select **Properties**. The virtual machine properties dialog box appears.
 - d Click the **Guest OS Customization** tab.
 - e Select the **Enable guest customization** checkbox and click **OK**.
(Exit vCloud Director.)
- 5 In the **Virtual Machines** tab in vCloud Air, select the virtual machine placeholder you want to test.
- 6 From the menu, click **Test**.
A confirmation dialog box appears.
- 7 Click **Continue**.

Testing a placeholder creates a test virtual machine using replicated data, reconfigures the test virtual machine to connect to the test network, and applies guest customization to the virtual machine.

A successful test powers on the virtual machine. In the Virtual Machines table, the Recovery Status changes from Placeholder to Test.

For more information about configuring guest customization for a virtual machine, see [Guest Operating Systems](#) in the *vCloud Director User's Guide*.

Clean up a Test Recovery

After you test a recovery for a placeholder virtual machine, return the virtual machine to the ready state by running a cleanup. Cleaning up a test recovery releases resources consumed by the test and prepares for the next test, planned migration, or disaster recovery.

You can run a cleanup from the vSphere Web Client at your source site or from vCloud Air regardless of where you initiated the preceding test.

For information about cleaning up a test recovery by using the vSphere Web Client, see [Clean Up a Test Recovery](#) in *vSphere Replication 5.6 for Disaster Recovery to Cloud*.

Prerequisites

- Verify that you tested the placeholder virtual machine.
- You have the correct user permissions to clean up the test.
See [“Assign a User to the Roles for Disaster Recovery,”](#) on page 12 for information.

Procedure

- 1 In the **Dashboard** tab, click the virtual data center that is enabled for disaster recovery.
- 2 Click the **Virtual Machines** tab.
The table of virtual machines appears.

- 3 Select the tested recovery you want to clean up.
- 4 From the menu, click **Clean up**.
A confirmation dialog box appears.
- 5 Click **Continue**.

Running a clean up after a test resets the test recovery for the virtual machine by performing these tasks:

- Powers off the test virtual machine.
- Replaces the test virtual machine with a placeholder, preserving the virtual machine identity and configuration information.
- Cleans up replicated storage snapshots that the virtual machine used during testing.
- Resets the Recovery Status from Test to Placeholder.

About Recovery to vCloud Air

Run this workflow to recover your production virtual machines from your source site to vCloud Air. When possible, VMware recommends you test the recovery before running the recovery.

You can recover a virtual machine by using vCloud Air when your source site is no longer accessible. You might be able to begin a recovery from your source site by using your local vSphere Web Client; for example, you have sufficient warning of an outage and still have access to your local vSphere Web Client so that you can run a planned migration.

For information about recovering virtual machines to the cloud by using planned migration, see [What Happens During a Planned Migration](#) in *vSphere Replication 5.6 for Disaster Recovery to Cloud*.

When you recover a virtual machine from your source site to vCloud Air, the production state of the virtual machine represents a point in time before the outage. Data accumulated after the last replication to vCloud Air and before the recovery is not available in the cloud.

Recovering a virtual machine to vCloud Air stops replication from the source site.

Recover a Virtual Machine When the Source Site Is Unavailable

Recovering a virtual machine shuts down the virtual machine at your source site (if possible) and recovers it in the cloud. During recovery, all replication activity is stopped.

Prerequisites

You have the correct user permissions to recover the virtual machine to the cloud. See [“Assign a User to the Roles for Disaster Recovery,”](#) on page 12 for information.

If possible, meet these prerequisites:

- Verify that you tested the recovery before recovering the virtual machine to the cloud.
- Verify that you cannot run a planned migration from your source site.

See [Migrate a Virtual Machine to Cloud](#) in *vSphere Replication 5.6 for Disaster Recovery to Cloud* for information about planned migration from your source site.

- Contact VMware Global Support Services and declare a disaster prior to recovering your virtual machines.

Procedure

- 1 In the **Dashboard** tab, click the virtual data center that is enabled for disaster recovery.
- 2 Click the **Virtual Machine** tab.

The table of virtual machines appears.

- 3 Select the virtual machine that you want to recover.
- 4 From the menu, click **Recovery**.
The confirmation dialog box appears.
- 5 Click **Continue**.

Recovering the virtual machine has the following result:

- In the Virtual Machine tab, the Recovery Status changes from Placeholder or Test to Recovered.
- Connects the virtual machine to the production network.
- Powers on the virtual machine in the cloud.

After you recover a virtual machine to the cloud, it has the same capabilities that the virtual machine had at the source site. You can access and operate your virtual machine recovered to the cloud for the time periods listed in [“Lease Times for Tests and Recoveries,”](#) on page 15.

Remove a Replication from vCloud Air

When disaster recovery is no longer required for a virtual machine, you can stop the virtual machine replication to vCloud Air.

Stop the replication by using the vSphere Web Client at the source site. See [Stop a Replication Task](#) in *vSphere Replication 5.6 for Disaster Recovery to Cloud* for information.

Stopping a replication from the source site, removes the replication data from the source site and the cloud when both sites are connected.

If the cloud is offline when you stop a replication from the source site, the Disaster Recovery service does not remove the replication data from vCloud Air. You must manually remove the replication from vCloud Air.

NOTE Use caution when removing a placeholder virtual machine from vCloud Air because placeholders are not protected in vCloud Air from accidental deletion.

Prerequisites

You have the correct user permissions to remove the replication.

See [“Assign a User to the Roles for Disaster Recovery,”](#) on page 12 for information.

Procedure

- 1 In the **Dashboard** tab, click the virtual data center that is enabled for disaster recovery.
- 2 Click the **Replication** tab.
The table of replication placeholders appears.
- 3 In the row for the placeholder that you want to remove, click to display the disaster recovery menu.
- 4 From the menu, choose **Remove**.
A confirmation dialog box appears.
- 5 Click **Continue**.

The placeholder virtual machine is deleted from the list in the Replication tab and all replication data is deleted from cloud storage.

About Failback for Virtual Machines to the Source Site

Failback of virtual machines that you have previously recovered in vCloud Air is available by using vCloud Connector.

After successfully recovering your replicated virtual machines in vCloud Air, you can failback those virtual machines. Use vCloud Connector to copy a virtual machine or vApp from vCloud Air to your source site.

You must power off the virtual machine or vApp before you copy it. You can start multiple copies simultaneously and run them in parallel. By default, vCloud Connector runs a maximum of 10 concurrent tasks per cloud.

For information about using vCloud Connector to failback virtual machines to your source site, see the following vCloud Connector documentation:

- [Installing vCloud Connector](#)
- [Copy a Virtual Machine or vApp to a vSphere Cloud](#)

Index

A

access, Disaster Recovery **12**

C

clean up
 results **17**
 test recovery **17**

D

data seeding **7**
Disaster Recovery
 default networks **13**
 features **7**
 login credentials **9**
 prerequisites **9, 12**
 related documentation **5**
 required VMware products **7**
 setup **9**
 task workflow **10**
 usage metering **11**
DR-VDC, vCloud Air Dashboard **11**

F

failback, vCloud Connector **20**

G

guest customizations, test recovery **15**

I

intended audience **5**

M

migrate, virtual machine to cloud **18**
My VMware, Disaster Recovery subscription **9**

N

network
 customization **11**
 production **18**
networks, Disaster Recovery **13**

O

offline data transfer
 Disaster Recovery feature **7**
 vCloud Connector **20**

P

permissions, Disaster Recovery **12**
placeholder
 cleanup test **17**
 integrity test **16**
 overview **13**
 status **13**
 virtual machine settings for **11**
planned migration, source site **18**
prerequisites, Disaster Recovery **12**
production network **13**

R

recovery
 network **13**
 overview **18**
 results **18**
 source site unavailable **18**
 test **16**
 time periods to access **11**
replication
 image size **13**
 manage **11**
 remove **19**
 source site **10**
 status values **13**
 tab overview **13**
RPO
 feature **7**
 times **13**
 violation **13**
Running Time column **15**

S

Site Recovery Manager **10**
source site
 cleanup test **17**
 connectivity loss **13**
 failback virtual machine **20**
 planned migration **18**
 unaccessible **18**
stop replication **19**

T

test
 network **13**

- overview **15**
- recovery **16**
- reset virtual machine after **17**
- schedule **15**
- successful **15**

U

- usage metering **11**

V

- vCloud Connector
 - failback for Disaster Recovery **20**
 - tasks **7**
- vCloud Director, guest customization **15**
- virtual machine
 - data after recovery **18**
 - Disaster Recovery leases **15**
 - failback to source site **20**
 - power on **15, 18**
 - recover **18**
- VMware Global Support Services **15**
- vSphere
 - Connect to a cloud provider wizard **13**
 - OVF Deployment wizard **9**
 - test recovery **15**
 - Web Client **9**
- vSphere Replication
 - documentation **7**
 - download appliance **9**
 - tasks **7, 10**