



# VMware Cloud Director Availability

## 4.4 Datasheet update

### AT A GLANCE

VMware Cloud Director Availability offers simple, secure, and cost-effective onboarding, migration, and disaster recovery as a service (DRaaS) to or between multitenant VMware Cloud Director and vSphere clouds.

### KEY BENEFITS NEW IN VERSION 4.4

#### vSphere DR & MIGRATION

With 4.4, VMware Cloud Director Availability Cloud Providers can extend disaster recovery and migration support for cloud-based in vSphere. This is supported in an on-premise vSphere to or from Cloud Provider vSphere Cloud, as well as between two Cloud Provider vSphere clouds.

#### vSphere DR & MIGRATION METERING

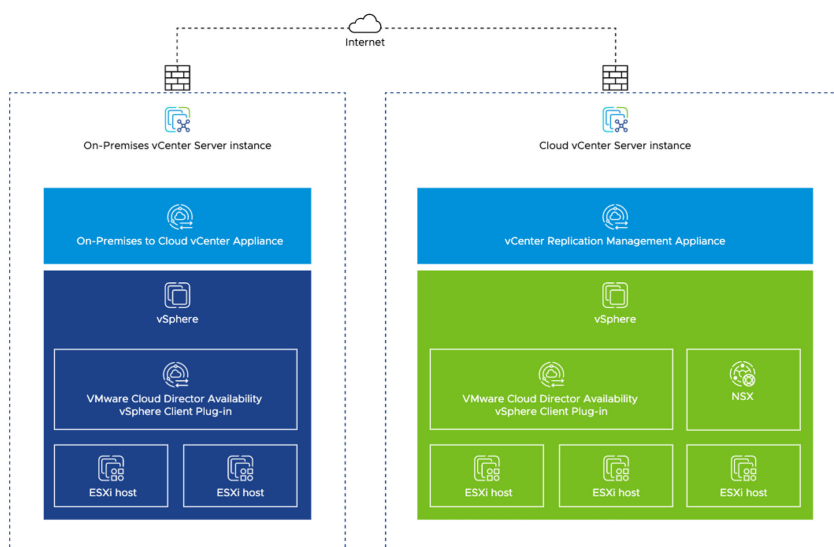
Cloud Providers can track and monitor vSphere replications and migrations with the help of Usage Meter version 4.4 and higher. To accelerate quick adoption, tiering and monetization of vSphere DR & Migration, the vCenter to vCenter (v2v) manager service mimics the cloud appliance Usage Meter APIs to meter vSphere replications and migration.



### 4.4 Feature Spotlight

#### vSphere DR & Migration

VMware Cloud Director Availability 4.4 has introduced a ground-breaking feature for VMware Customer Connect Cloud Provider partners to expand their DR & Migration service for vSphere-based clouds (i.e. without the need of VMware Cloud Director as the endpoint). This is supported in an on-premises vSphere plugin and updated replicator appliance to or from one or many Cloud Provider dedicated vSphere cloud. It is only supported for dedicated vSphere Cloud Provider vCenter endpoint instances, not shared vCenter endpoints. In terms of interoperability, this feature is compatible with vSphere 6.5 and higher and Usage Meter 4.4 and higher. For successful workload replication, all sites need to have a valid vSphere license assigned which includes the vSphere Replication feature.



This feature offers two new deployment options to facilitate the replication of workloads between vSphere source destinations – 1) vCenter Replication Management and 2) On-premises to Cloud vCenter Replication Appliance. Both the appliances run on a single virtual machine. To deploy on-premises vSphere to Cloud Provider vSphere cloud use case, Cloud Providers need to download the OVA files from the customer connect portal. For details, please [visit](#). The pairing between an on-premises site and a cloud site is a two-way

## ONE-CLICK MIGRATION

The migration process is simplified in this release for customers to enjoy a faster path to the cloud. This is a fantastic addition to VMware Cloud Director Availability's self-service capability as it eliminates the effort of having to define replication settings resulting in a fast migration achieved instantly from the on-premises vSphere Plug-in.

## RECOVERY PLANS EXECUTION REPORT & MONITORING

DR & Migration recovery plan execution reporting offers granular information on the status of the plan and outcome at all stages in the plan along with errors and warnings. This reporting capability is available for test runs, migration and failover.

## RPO COMPLIANCE

The latest release of VMware Cloud Director Availability allows Cloud Providers to generate RPO reports identifying all the violations of the existing replications, if any. This report can be extracted in HTML & CSV format as required. Note that this is a troubleshooting feature and should be used to investigate RPO violations.

process, meaning both sites need to exchange pairing information and be accessible to each other. The replication functionality can be activated from VMware Cloud Director Availability portal, VMware Cloud Director Availability vSphere Client Plug-in, or directly through the vSphere UI by right-clicking on a virtual machine. Following the replication, Cloud Providers have the capability to change RPO settings, activate/deactivate quiescing, select thick/thin disk provisioning type and much more. The current build is suitable for dedicated vSphere destinations due to its present design.

## vSphere DR & Migration Metering

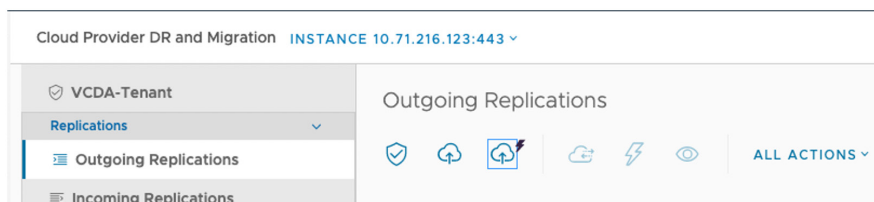
The metering feature is built-in with a view to expedite quick adoption, tiering and monetization the new vSphere to vSphere DR & Migration functionality. It is implemented to adapt to existing versions of vCloud Usage Meter hence versions 4.4 and 4.5 can both be utilized. For metering, a provider must register each cloud side vCenter Replication Management Appliance the same way as the Cloud Replication Management Appliance. Replications are reported in the following cases:

- vCenter Cloud-to-vCenter Cloud migrations and protection where the registered VMware Cloud Director Availability appliance is the destination.
- vCenter-to-vCenter Cloud migrations and protection where the registered VMware Cloud Director Availability appliance is the destination.
- vCenter Cloud-to-vCenter migrations and protections where the registered VMware Cloud Director Availability is the source.

In vCloud Usage Meter 4.4 and 4.5 vSphere DR & Migration replications are easily mapped to the old use cases in the Monthly Usage Report, e.g., Cloud-to-Cloud replication is mapped to vCenter Cloud-to-vCenter Cloud replication etc. All the use cases will be separately reported in the post- vCloud Usage Meter 4.5 version. Furthermore, with the help of Usage Meter Cloud Providers can get visibility on diagnostic and health of the overall process.

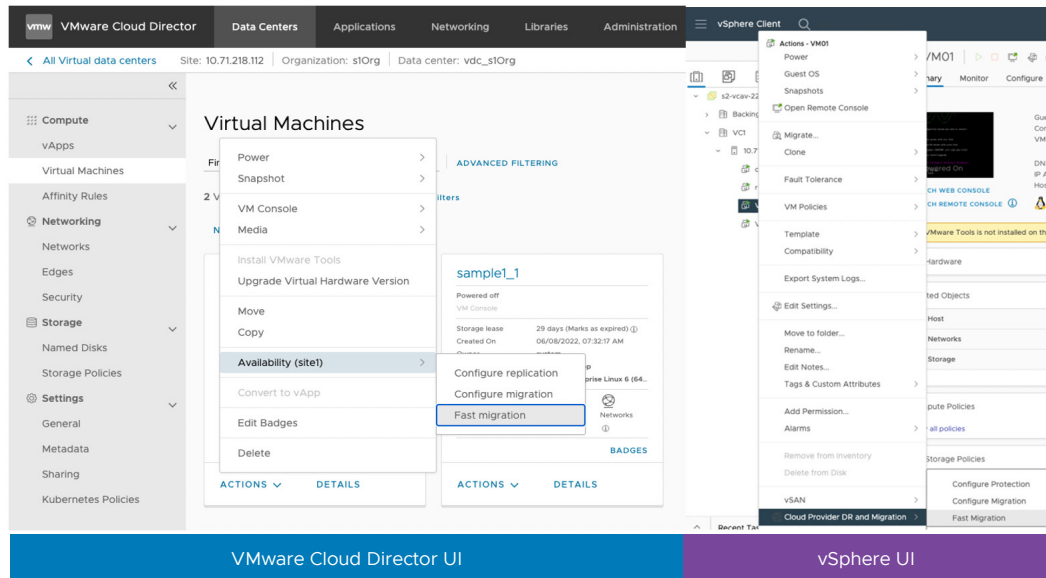
## One-Click Migration

One-Click migration is a perfect add-on to the VMware Cloud Director Availability's highly competitive and popular self-service migration capability. It has been designed with user-centricity in mind therefore, the execution of this functionality can be carried out literally in just one clicks. One-Click migration is specifically convenient for tenants to perform self-service migration, as the users are only required to select the VM, which can be achieved through the vSphere console directly or the VMware Cloud Director Availability plugin in vSphere console.



A new button with the bolt icon has been added to the UI for users to run One-Click migration.

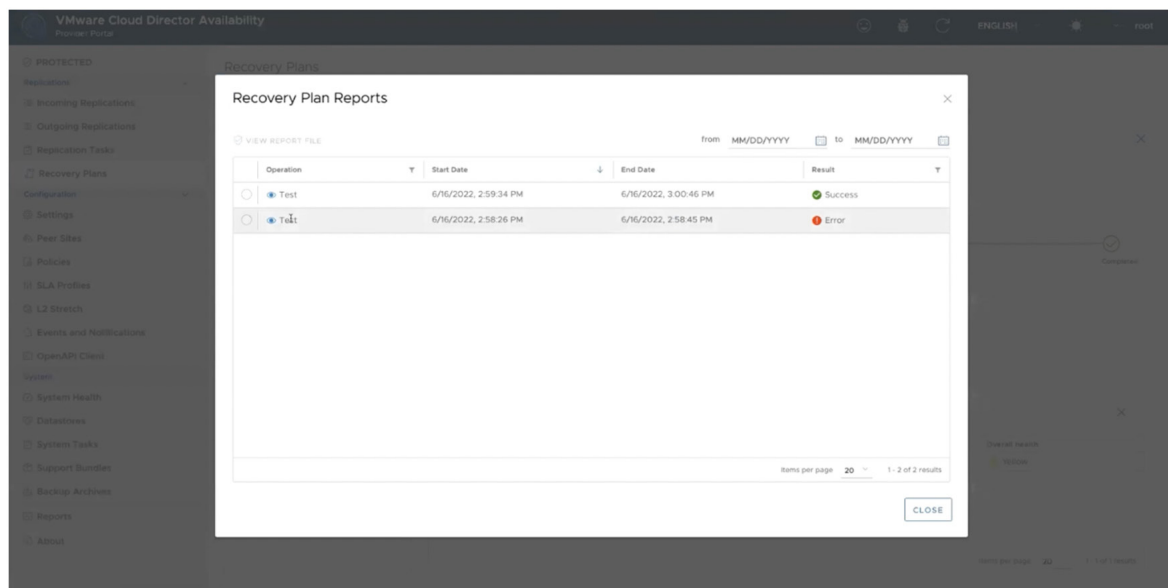
This functionality is also reflected across vSphere portal as well as the Cloud Director Availability user interface.



When a user chooses One-Click migration for a selected VM, the wizard takes them directly to the migration summary screen to finalize it. The destination Cloud Director Virtual Data Center (VDC) and VDC storage policy is automatically selected as the first available value from the pick list if there is more than one at the target endpoint. The additional migration settings keep their default values - activated compression of replication traffic, deactivated delayed start synchronization, no excluded disks, and no seed VM.

## Recovery Plans Execution Report and Monitoring

This feature is purpose-built to solidify the reporting capability for the Recovery Plan Execution process. In the previous release, Cloud Providers were only able to create DR & migration plans by defining exact steps to perform during failover or migration. And with version 4.4 now Recovery Plan Execution report offers granular information on the status of the plan and outcome along with a timeline, errors, and warnings in case of any failover. Cloud Providers and tenants can get a readable report in real-time to monitor each step of the execution process. This feature adds an extra layer of confidence and boosts security for users running recovery processes testing or real events. The report can be extracted in an HTML format.



## RPO Compliance

To offer visibility and control to Cloud Providers over the protection of vApp and VMs, the newly added reporting capability ensures that the Recovery Point Objective (RPO) is complying with the pre-defined policies. This is critical for Cloud Providers to maintain their SLA requirements, especially useful to troubleshoot replications with a very fast RPO, as these use more overhead than longer RPO settings. In 4.4, Cloud Providers can extract RPO compliance reports in different formats (HTML & CSV) listing any violations of the existing protections associated at an organization level at any given timeframe. The source of the RPO violation data is the HBR server. When the report is requested, the system retrieves data on all active and deleted VM replications, IDs of the manager replications for previously collection replication and much more.

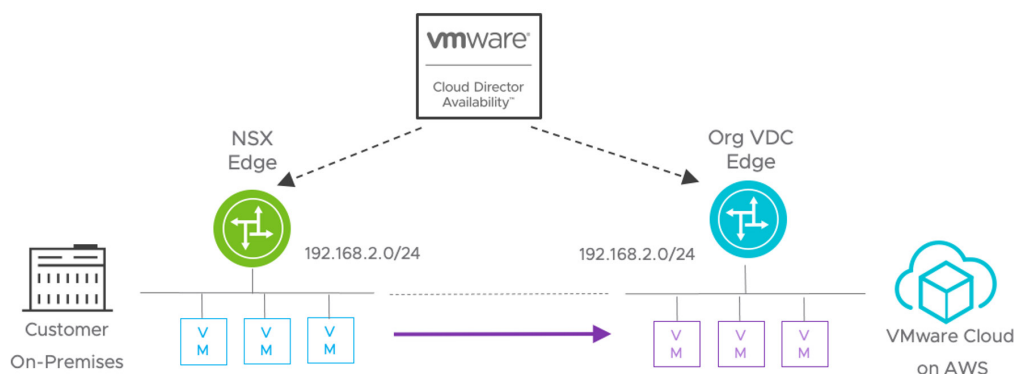
VM	VApp	Replication ID	Violations	Source site	Is alive
sample_1_1	sample_1_vapp	C4-3370ea4f-01ef-4bc2-aae9-0d9291ec59e1	3 violations	site1	Yes
sample_1_2	sample_1_vapp	C4-1f810bf6-d2ae-4ffc-be19-3bf5f505430	2 violations	site1	Yes
sample_3_1	sample_3_vapp	C4-c3626714-e5f9-4df3-af89-ad9252522a0e	2 violations	site2	Yes
sample_3_2	sample_3_vapp	C4-53f091c3-dfac-4930-aca8-aled3c3516d3	2 violations	site2	Yes
mailserver	sampleVapp	C4-ebddae66-c6d7-4ab6-8a61-9a4729025acd	No violations	site2	Yes

Within the UI, Cloud Providers can navigate to the 'Reports' tab on the left menu panel, and the RPO dashboard will be displayed with sub-menus such as RPO Compliance report, Traffic and Storage, Organization Resources and VDC Resources. Cloud Providers can generate the report using the date picker.

## Network Extension for migration to VMware Cloud on AWS

Stretching on-premises networks to the cloud is especially useful for seamlessly migrating application workloads allowing them to preserve their original network settings, especially when large applications that consist of multiple VMs have complex network configurations. Prior 4.4 VMware Cloud Director Availability, tenants could stretch an on-premises network to the Provider's cloud backed by NSX-V or NSX-T using the NSX Edge appliance.

With VMware Cloud Director Availability 4.4, it is now possible to stretch an on-premises network to the VMware Cloud on AWS following the same configuration process, note that only one-way migration is supported to VMware Cloud on AWS, and not DR.

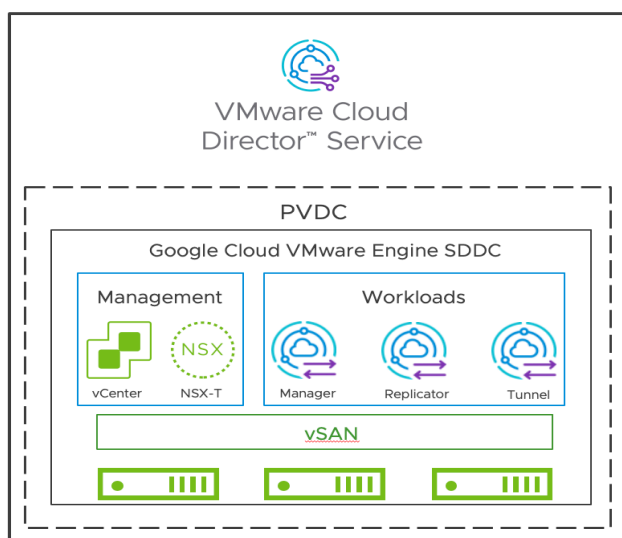


Once the network is created and configured in VMware Cloud on AWS, a new L2 VPN Server Session must be created via L2 Stretch menu within the VMware Cloud Director Availability Portal. This operation can be handled by the Provider as well as the organization admin with sufficient rights. Following that process, on the on-premises site, the tenants will need to perform the following steps:

- Deploy an NSX Autonomous Edge Appliance in the On-premises Data Center
- Register the NSX Autonomous Edge in the VMware Cloud Director Availability On-Premises Appliance
- Configure the Networks of the NSX Autonomous Edge On-Premises
- Create a Client L2 VPN Session from On-Premises to the Cloud
- For more information, you can check the [VMware Cloud Director Availability documentation](#).

### DR and Migrations to VMware Cloud Director service with a Google Cloud VMware Engine SSDC

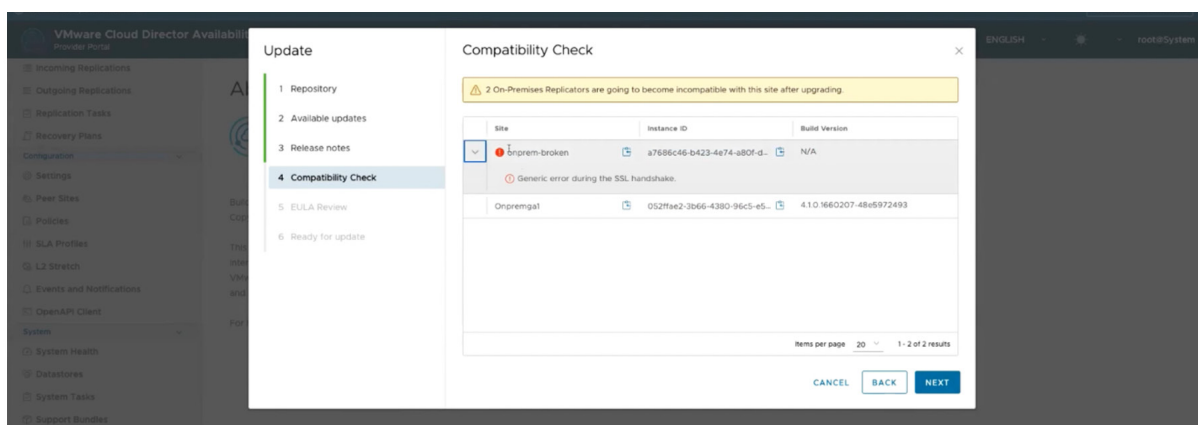
Disaster recovery and migration are supported into Google Cloud VMware Engine by VMware Cloud Director Availability from on-prem deployments of VMware Cloud Director, other hyperscaler endpoints, as well as other Google Cloud VMware Engine private cloud endpoints. For more information on how to configure Google Cloud VMware Engine with VMware Cloud Director Availability, see [DR & Migration to VMware Cloud Director service using VMware Cloud Director Availability](#).



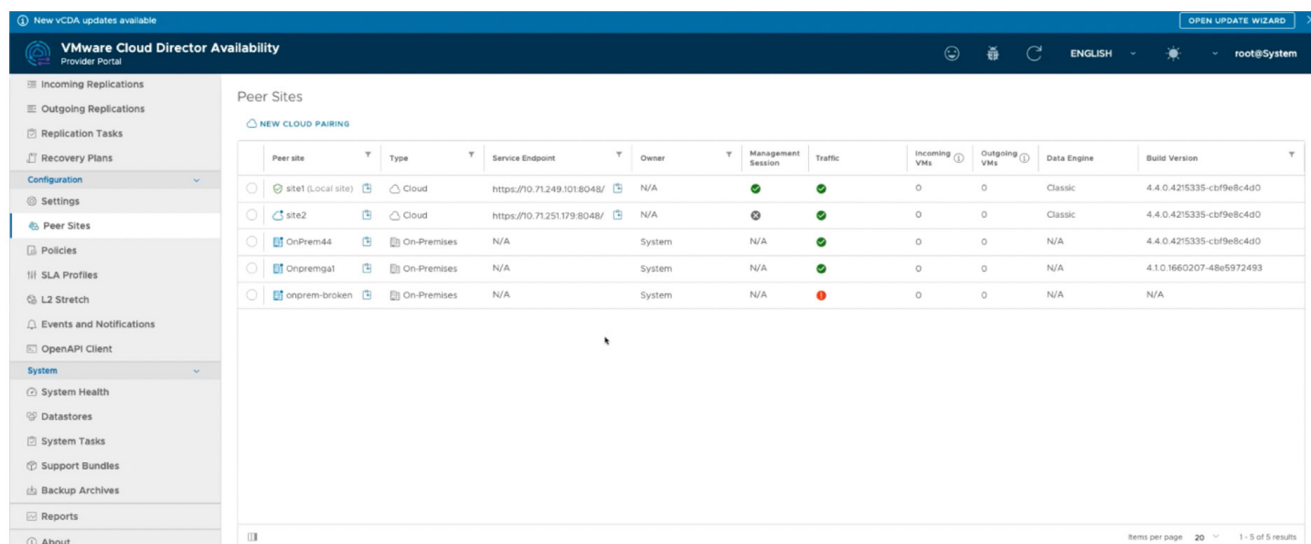
## 4.4 Operational Enhancements

### Remote site compatibility pre-upgrade check

Ensuring the compatibility of on-premises appliances is critical to maintaining an operational service and assists the upgrade process. 4.4 introduces a new feature to identify incompatible on-premises appliances (that would stop service if not upgraded by the provider side) for the planned upgrade via the upgrade wizard. During the pre-upgrade check, incompatibility issues are flagged in form of a warning message without disrupting the upgrade process.



In the 'Peer Site' view service providers that run 4.4 or higher can see the VCD build version of the cloud site (only if it is 4.4 or later) and on-prem site (irrespective of its version). This feature is also further supported by a filter which allows Cloud Providers to report sites with errors such as API version mismatch, connectivity, etc.

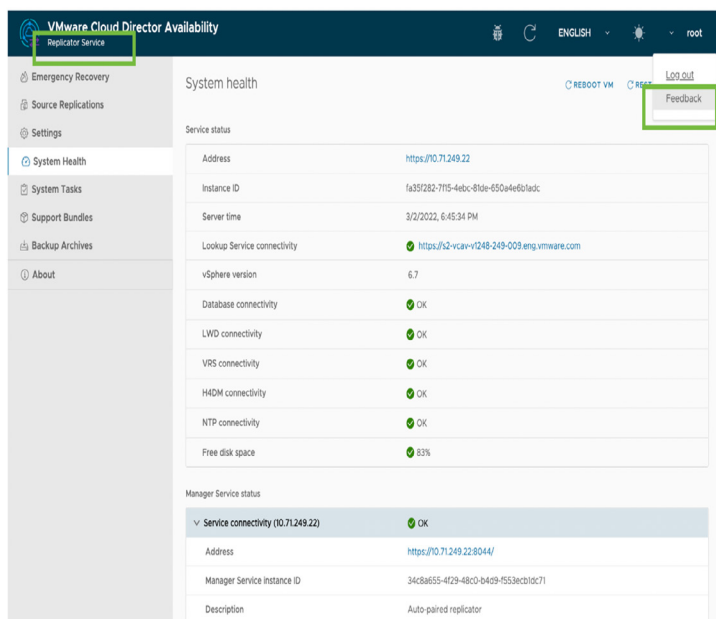


The screenshot shows the 'Peer Sites' view in the VMware Cloud Director Availability interface. A table lists various peer sites with columns for Peer site, Type, Service Endpoint, Owner, Management Session, Traffic, Incoming VMs, Outgoing VMs, Data Engine, and Build Version. The table includes entries for 'site1 (Local site)', 'site2', 'OnPrem44', 'OnPrem41', and 'onprem-broken'. The 'onprem-broken' entry shows a red status icon, indicating an error.

Peer site	Type	Service Endpoint	Owner	Management Session	Traffic	Incoming VMs	Outgoing VMs	Data Engine	Build Version
site1 (Local site)	Cloud	https://10.71.249.101:8048/	N/A	✓	✓	0	0	Classic	4.4.0.4215335-cbf9e8c4d0
site2	Cloud	https://10.71.251.179:8048/	N/A	✗	✓	0	0	Classic	4.4.0.4215335-cbf9e8c4d0
OnPrem44	On-Premises	N/A	System	N/A	✓	0	0	N/A	4.4.0.4215335-cbf9e8c4d0
OnPrem41	On-Premises	N/A	System	N/A	✓	0	0	N/A	4.1.0.1660207-48e5972493
onprem-broken	On-Premises	N/A	System	N/A	✗	0	0	N/A	N/A

## In Product Feedback

In product feedback feature will enable VMware Cloud Director Availability users to provide real-time rating and comments on key workflows and features. This is a great step in improving user experience and engagement. Cloud Providers and Tenants navigate to the top right dropdown menu in VMware Cloud Director Availability dashboard and add in their comments by clicking on the 'Feedback' call to action. The feedback form can be initiated by the users through the dashboard whereas the ratings form is triggered on URL visit or can randomly pop up during a session.

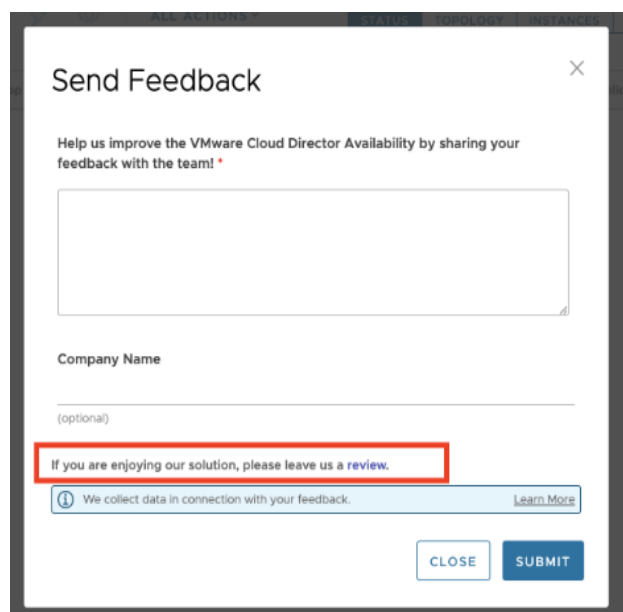


The screenshot shows the 'System Health' page in the VMware Cloud Director Availability interface. It displays various system health metrics and service status. The 'Service status' section includes details for the main service, and the 'Manager Service status' section shows details for the service connectivity.

System health	
Address	https://10.71.249.22
Instance ID	fa3f282-715-4ebc-81de-650a4e6b1ad0
Server time	3/2/2022, 6:45:34 PM
Lookup Service connectivity	✓ https://s2-vcar-v1248-249-009.eng.vmware.com
vSphere version	6.7
Database connectivity	✓ OK
LWD connectivity	✓ OK
VRS connectivity	✓ OK
HADM connectivity	✓ OK
NTP connectivity	✓ OK
Free disk space	✓ 83%

Manager Service status	
Service connectivity (10.71.249.22)	✓ OK
Address	https://10.71.249.22:8044/
Manager Service Instance ID	34c8a655-4f29-48c0-b4d9-f553ec010c71
Description	Auto-paired replicator



The screenshot shows the 'Send Feedback' form in the VMware Cloud Director Availability interface. The form includes a text area for feedback, a 'Company Name' field, and a 'Feedback' button. A red box highlights the 'Feedback' button. Below the form, there is a message: 'If you are enjoying our solution, please leave us a review.' and a 'Learn More' link.

**Send Feedback**

Help us improve the VMware Cloud Director Availability by sharing your feedback with the team! \*

Company Name

(optional)

**If you are enjoying our solution, please leave us a review.**



## LEARN MORE

For more information visit:

<https://www.vmware.com/products/cloud-director-availability.html>

### 4.4 Release Notes:

<https://docs.vmware.com/en/VMware-Cloud-Director-Availability/4.4/rn/vmware-cloud-director-availability-44-release-notes/index.html>

### Provider download:

[https://my.vmware.com/en/web/vmware/downloads/info/slug/datacenter\\_cloud\\_infrastructure/vmware\\_cloud\\_director\\_availability/4\\_4#product\\_downloads](https://my.vmware.com/en/web/vmware/downloads/info/slug/datacenter_cloud_infrastructure/vmware_cloud_director_availability/4_4#product_downloads)

### Tenant download:

[https://my.vmware.com/en/web/vmware/downloads/info/slug/datacenter\\_cloud\\_infrastructure/vmware\\_cloud\\_director\\_availability/4\\_4#drivers\\_tools](https://my.vmware.com/en/web/vmware/downloads/info/slug/datacenter_cloud_infrastructure/vmware_cloud_director_availability/4_4#drivers_tools)

## GET INVOLVED.

Join our VMware Cloud Director Availability [SLACK](#) channel



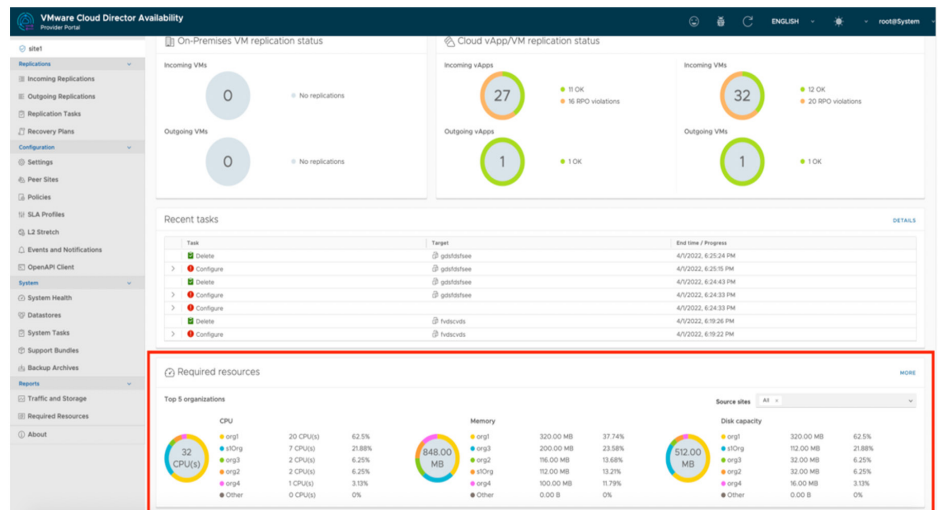
## FOR MORE INFORMATION OR TO PURCHASE VMWARE PRODUCTS

Call 877-4-VMWARE (outside North America, +1-650-427-5000), visit [vmware.com/products](https://www.vmware.com/products), or search online for an authorized reseller. For detailed product specifications and system requirements, always refer to the online documentation.

Feedback will allow our product engineers to develop a better solution for our Cloud Providers and Tenants, it is anonymized and no customer data is shared. The feedback form also has a link to [leave a review](#) on our new public review page.

## Endpoint Capacity filter

VMware Cloud Director Availability 4.4 has built-in endpoint resource capacity filter to understand what resources (compute, and RAM) will be required at the destination cloud to support the protected workloads, in the event of a failover. This is especially useful to ensure that Cloud Providers maintain enough resources on the failover site for failover events.



## Replication alignment with the destination storage profile

Prior to version 4.4, storage needed to be manually aligned to the Cloud Director storage profiles used. Now in 4.4 when creating new replications, the disk type provisioned (thin or thick) is mapped automatically to the Cloud Director supported endpoint storage profile of the target organization VDC. After creating a replication, the disk provisioning type never changes. Remember that all replications will, on initial sync create a full copy of the source VMDK, then once the sync is complete, the copy is removed and deltas are used, please ensure there is enough storage at the target site for the initial copy.

## Managed service replication assignment

With this feature users can select the tenant organization as a default owner for new replications (in the case of self-service) or leave the system administrator as a default owner (in the case of a managed service). This is specifically helpful for Cloud Providers delivering DRaaS or Migration as a Service as a managed service for their tenants.

## Cloud Collection of support bundles

During the initial configuration and pairing of the on-premises appliance and during re-pairing with a cloud site, now you can allow log collection from the cloud site. To simplify troubleshooting, activate log collection from the cloud site. This allows the provider to easily obtain new on-premises support bundles for VMware Global Support Services troubleshooting if necessary.

There are many more enhancements and improvements in VMware Cloud Director

Availability 4.4, please check out the [release notes](#) for a complete update on all changes.