Veritas™ Resiliency Platform User Guide

VERITAS™

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https://sort.veritas.com/data/support/SORT_Data_Sheet.pdf

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Chapter 1

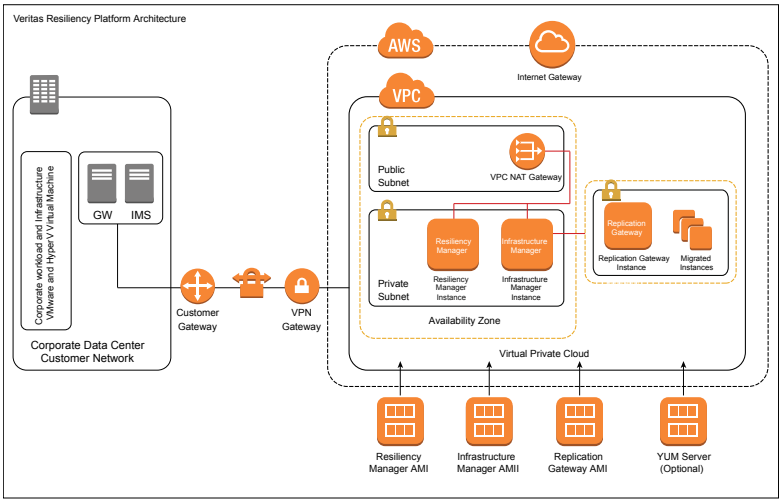
Recovery to cloud data center

This chapter includes the following topics:

Recovering VMware virtual machines to AWS

Using Veritas Resiliency Platform 3.3.2, you can configure and protect your VMware virtual machines for recovery to AWS using the Resiliency Platform Data Mover.

Figure 1-1 Overview of deployment Infrastructure for recovery to AWS



The following table provides the summary for deployment, configuration, and recovery of virtual machines to a data center on AWS.

Table 1-1 Recovering VMware virtual machines to AWS

Tasks	More information
Plan your environment 	Refer to the *Veritas Resiliency Platform Overview and Planning Guide* to know about the product, its components, features, and capabilities. Refer to the *Veritas Resiliency Platform Release Notes* for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment are compatible with the requirements mentioned in the checklist. ■

Table 1-1 Recovering VMware virtual machines to AWS *(continued)*

Tasks	More information
Deploy and configure the virtual appliances	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances in the AWS cloud data center as well as in the premises data center. ■ Download the files required for deployment ■ About deploying the virtual appliances ■ Deploy the Resiliency Platform components in AWS by using one of the following methods: ■ ■ ■ Deploy the virtual appliances for one or more IMS and Replication Gateway in the premises data center: ■ ■ Deploy Data Gateway in AWS environment if you want to use Object Storage for replication: ■ ■ Configure the virtual appliances as Veritas Resiliency Platform components: ■ ■ ■ ■
Set up the resiliency domain	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console. ■ ■ ■ Configure the settings for the resiliency domain: ■ ■ ■ Add cloud data center (if not done during getting started wizard) ■ Add Data Gateway (only if you want to use Object Storage mode of replication) ■ ■ Manage alerts, notifications, and other product settings -

Table 1-1 Recovering VMware virtual machines to AWS *(continued)*

Tasks	More information
Add asset infrastructure 	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console. ■ Add VMware servers ■ Prepare host for replication
Infrastructure Pairing	For recovering assets to AWS you have to do following infrastructure pairing: ■ Navigate to **Infrastructure Pairing > Replication Appliance**, refer Create Replication Gateway pair. ■ Navigate to **Settings > Infrastructure > Access Profile > Network** to mark purpose of the networks, refer Add and map network objects. ■ Create Network group of Cloud Subnets, refer Add network groups (Optional). ■ For DNS customization, refer Add DNS servers. ■ Create network mappings, refer Network pairs for recovering virtual machines to AWS.
Create resiliency groups 	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. You can create a resiliency group either for basic monitoring (start or stop virtual machines) or for remote recovery. ■ ■ Prerequisites for configuring resiliency groups for recovery to AWS ■ Configure resiliency groups for recovery to AWS
Advanced features 	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ ■ ■

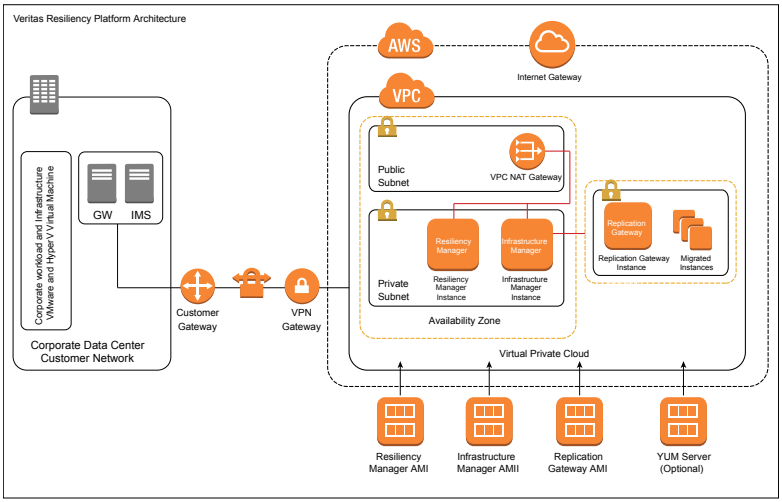
Table 1-1 Recovering VMware virtual machines to AWS *(continued)*

Tasks	More information
Perform remote recovery operations 	Once you have configured the resiliency groups for remote recovery, you can perform rehearsal and cleanup rehearsal operations on the resiliency groups. You can also perform migrate, takeover, or resync operations on the resiliency groups. ▪ ▪ ▪ ▪ ▪
Monitor assets 	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ▪ ▪ ▪
Miscellaneous references 	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. You can also use klish to update Resiliency Platform components. ▪ ▪ ▪ ▪

Recovering Hyper-V virtual machines to AWS

Using Veritas Resiliency Platform 3.3.2, you can configure and protect your VMware and Hyper-V virtual machines for recovery to AWS using the Resiliency Platform Data Mover.

Figure 1-2 Overview of deployment Infrastructure for recovery to AWS



The following table provides the summary for deployment, configuration, and recovery of virtual machines to a data center on AWS.

Table 1-2 Recovering Hyper-V virtual machines to AWS

Tasks	More information
Plan your environment 	Refer to the Overview and Planning Guide to know about the product, its components, features, and capabilities. Refer to the Release Notes for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment are compatible with the requirements mentioned in the checklist. ■ Overview and Planning Guide ■ Release Notes ■ Checklist for deployment and disaster recovery configuration

Table 1-2 Recovering Hyper-V virtual machines to AWS *(continued)*

Tasks	More information

Deploy and configure the virtual appliances	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances in the AWS cloud data center as well as in the premises data center.
	■ Download the files required for deployment
	■ About deploying the virtual appliances
	■ Deploy the Resiliency Platform components in AWS by using one of the following methods:
	  ■ Through AWS marketplace using CloudFormation templates
	  ■ Using OVA files
	■ Deploy the virtual appliances for one or more IMS and Replication Gateway in the premises data center:
	  ■ Using Hyper-V Manager
	■ Deploy Data Gateway in AWS environment if you want to use Object Storage for replication:
	  ■ Deploy Data Gateway
	■ Configure the virtual appliances as Veritas Resiliency Platform components:
	  ■ About configuring the virtual appliances
	  ■ Configuring Resiliency Manager or IMS
	  ■ Configuring Replication Gateways

Set up the resiliency domain	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console.
	■ ■ Create the resiliency domain using getting started wizard
	  ■ Configure the settings for the resiliency domain:
	  ■ Add IMS
	  ■ Add Replication Gateways
	  ■ Add cloud data center (if not done during getting started wizard)
	  ■ Add Data Gateway (only if you want to use Object Storage mode of replication)
	  ■ Manage user authentication and permission
	  ■ Manage alerts, notifications, and other product settings

Table 1-2 Recovering Hyper-V virtual machines to AWS *(continued)*

Tasks	More information
Add asset infrastructure 	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console. ■ Add Hyper-V servers ■ Prepare host for replication
Infrastructure Pairing	For recovering assets to AWS you have to do following infrastructure pairing: ■ Navigate to **Infrastructure Pairing > Replication Appliance**, refer Create Replication Gateway pair. ■ Navigate to **Settings > Infrastructure > Access Profile > Network** to mark purpose of the networks, refer Add and map network objects. ■ Create Network group of Cloud Subnets, refer Add network groups (Optional). ■ For DNS customization, refer Add DNS servers. ■ Create network mappings, refer Network pairs for recovering virtual machines to AWS.
Create resiliency groups 	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. You can create a resiliency group either for basic monitoring (start or stop virtual machines) or for remote recovery. ■ Configure resiliency groups for basic monitoring ■ Configure resiliency groups for recovery to AWS
Advanced features 	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ Virtual business services ■ Resiliency plans ■ Evacuation plans

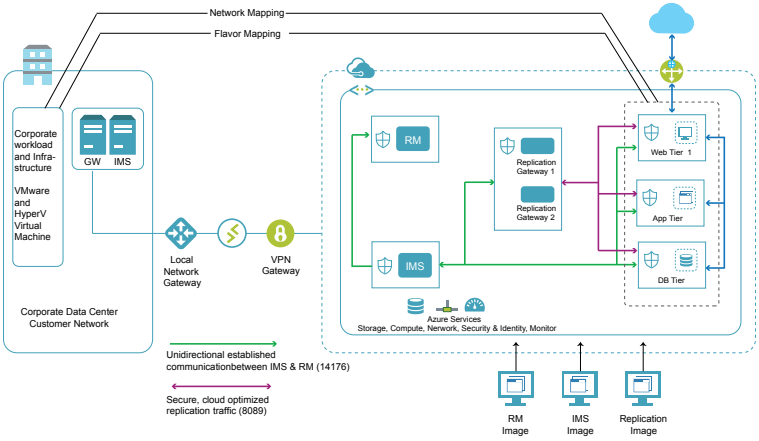
Table 1-2 Recovering Hyper-V virtual machines to AWS *(continued)*

Tasks	More information
Perform remote recovery operations	Once you have configured the resiliency groups for remote recovery, you can perform rehearsal and cleanup rehearsal operations on the resiliency groups. You can also perform migrate, takeover, or resync operations on the resiliency groups. ■ Rehearsal ■ Cleanup rehearsal ■ Migrate ■ Take over ■ Resync
Monitor assets	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities
Miscellaneous references	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. ■ Using klish ■ Troubleshooting ■ Updating ■ References

Recovering VMware virtual machines to Azure

Using Veritas Resiliency Platform 3.3.2, you can configure and protect your VMware virtual machines for recovery to Azure using the Resiliency Platform Data Mover.

Figure 1-3 Overview of deployment Infrastructure for recovery to Azure



The following table provides the summary for deployment, configuration, and recovery of virtual machines to a data center on Azure.

Table 1-3 Recovering VMware virtual machines to Azure

Tasks	More information
Plan your environment	Refer to the Overview and Planning Guide to know about the product, its components, features, and capabilities. Refer to the Release Notes for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment are compatible with the requirements mentioned in the checklist. ■ Overview and Planning Guide ■ Release Notes ■ Checklist for deployment and disaster recovery configuration

Table 1-3 Recovering VMware virtual machines to Azure *(continued)*

Tasks	More information
Deploy and configure the virtual appliances	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances in the Azure cloud data center as well as in the premises data center. ■ Download the files required for deployment ■ About deploying the virtual appliances ■ Deploy the virtual appliances for Resiliency Manager, Infrastructure Management Server (IMS), and Replication Gateway in the Azure cloud data center, using any of the following options: ■ ■ ■ Deploy the virtual appliances for one or more IMS and Replication Gateway in the premises data center: ■ Using VMware vSphere client ■ Configure the virtual appliances as Veritas Resiliency Platform components: ■ About configuring the virtual appliances ■ Configuring Resiliency Manager or IMS ■ Configuring Replication Gateways
Set up the resiliency domain	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console. ■ ■ Create the resiliency domain using getting started wizard ■ Configure the settings for the resiliency domain: ■ Add IMS ■ Add Replication Gateways ■ Add cloud data center (if not done during getting started wizard) ■ Manage user authentication and permission ■ Manage alerts, notifications, and other product settings
Add asset infrastructure	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console. ■ Add VMware servers ■ Prepare host for replication

Table 1-3 Recovering VMware virtual machines to Azure *(continued)*

Tasks	More information
Infrastructure Pairing	For recovering assets to Azure you have to do following Infrastructure Pairing: ■ Navigate to **Infrastructure Pairing > Replication Appliance**, refer Create Replication Gateway pair. ■ Navigate to **Settings > Infrastructure > Access Profile > Network** to mark purpose of the networks, refer Add and map network objects. ■ For DNS customization, refer Add DNS servers. ■ Create network mappings, refer Network pairs for recovering virtual machines to Azure.
Create resiliency groups	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. You can create a resiliency group either for basic monitoring (start or stop virtual machines) or for remote recovery. ■ Configure resiliency groups for basic monitoring ■ Configure resiliency groups for recovery to Azure
Advance features	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ Virtual business services ■ Resiliency plans ■ Evacuation plans
Perform remote recovery operations	Once you have configured the resiliency groups for remote recovery, you can perform rehearsal and cleanup rehearsal operations on the resiliency groups. You can also perform migrate, takeover, or resync operations on the resiliency groups. ■ Rehearsal ■ Cleanup rehearsal ■ Migrate ■ Take over ■ Resync

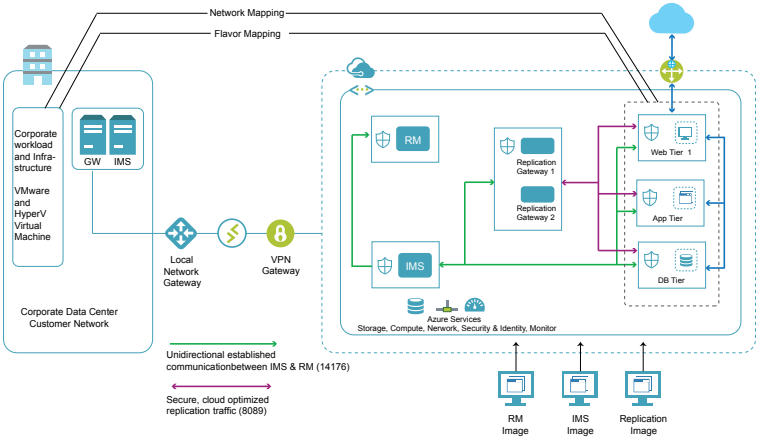
Table 1-3 Recovering VMware virtual machines to Azure *(continued)*

Tasks	More information
Monitor assets 	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities
Miscellaneous references 	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. ■ Using klish ■ Troubleshooting ■ Updating ■ References

Recovering Hyper-V virtual machines to Azure

Using Veritas Resiliency Platform 3.3.2, you can configure and protect your Hyper-V virtual machines for recovery to Azure using the Resiliency Platform Data Mover.

Figure 1-4 Overview of deployment Infrastructure for recovery to Azure



The following table provides the summary for deployment, configuration, and recovery of virtual machines to a data center on Azure.

Table 1-4 Recovering Hyper-V virtual machines to Azure

Tasks	More information
Plan your environment	Refer to the Overview and Planning Guide to know about the product, its components, features, and capabilities. Refer to the Release Notes for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment are compatible with the requirements mentioned in the checklist. ■ Overview and Planning Guide ■ Release Notes ■ Checklist for deployment and disaster recovery configuration

Table 1-4 Recovering Hyper-V virtual machines to Azure *(continued)*

Tasks	More information
Deploy and configure the virtual appliances 	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances in the Azure cloud data center as well as in the premises data center. ■ Download the files required for deployment ■ About deploying the virtual appliances ■ Deploy the virtual appliances for Resiliency Manager, Infrastructure Management Server (IMS), and Replication Gateway in the Azure cloud data center using any of the following options: ■ ■ ■ Deploy the virtual appliances for one or more IMS and Replication Gateway in the premises data center: ■ Using Hyper-V Manager ■ Configure the virtual appliances as Veritas Resiliency Platform components: ■ About configuring the virtual appliances ■ Configuring Resiliency Manager or IMS ■ Configuring Replication Gateways
Set up the resiliency domain 	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console. ■ ■ Create the resiliency domain using getting started wizard ■ Configure the settings for the resiliency domain: ■ Add IMS ■ Add Replication Gateways ■ Add cloud data center (if not done during getting started wizard) ■ Manage user authentication and permission ■ Manage alerts, notifications, and other product settings
Add asset infrastructure 	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console. ■ Add Hyper-V servers ■ Prepare host for replication

Table 1-4 Recovering Hyper-V virtual machines to Azure *(continued)*

Tasks	More information
Infrastructure Pairing	For recovering assets to Azure you have to do following Infrastructure Pairing: ■ Navigate to **Infrastructure Pairing > Replication Appliance**, refer Create Replication Gateway pair. ■ Navigate to **Settings > Infrastructure > Access Profile > Network** to mark purpose of the networks, refer Add and map network objects. ■ For DNS customization, refer Add DNS servers. ■ Create network mappings, refer Network pairs for recovering virtual machines to Azure.
Create resiliency groups 	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. You can create a resiliency group either for basic monitoring (start or stop virtual machines) or for remote recovery. ■ Configure resiliency groups for basic monitoring ■ Configure resiliency groups for recovery to Azure
Advance features 	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ Virtual business services ■ Resiliency plans ■ Evacuation plans
Perform remote recovery operations 	Once you have configured the resiliency groups for remote recovery, you can perform rehearsal and cleanup rehearsal operations on the resiliency groups. You can also perform migrate, takeover, or resync operations on the resiliency groups. ■ Rehearsal ■ Cleanup rehearsal ■ Migrate ■ Take over ■ Resync

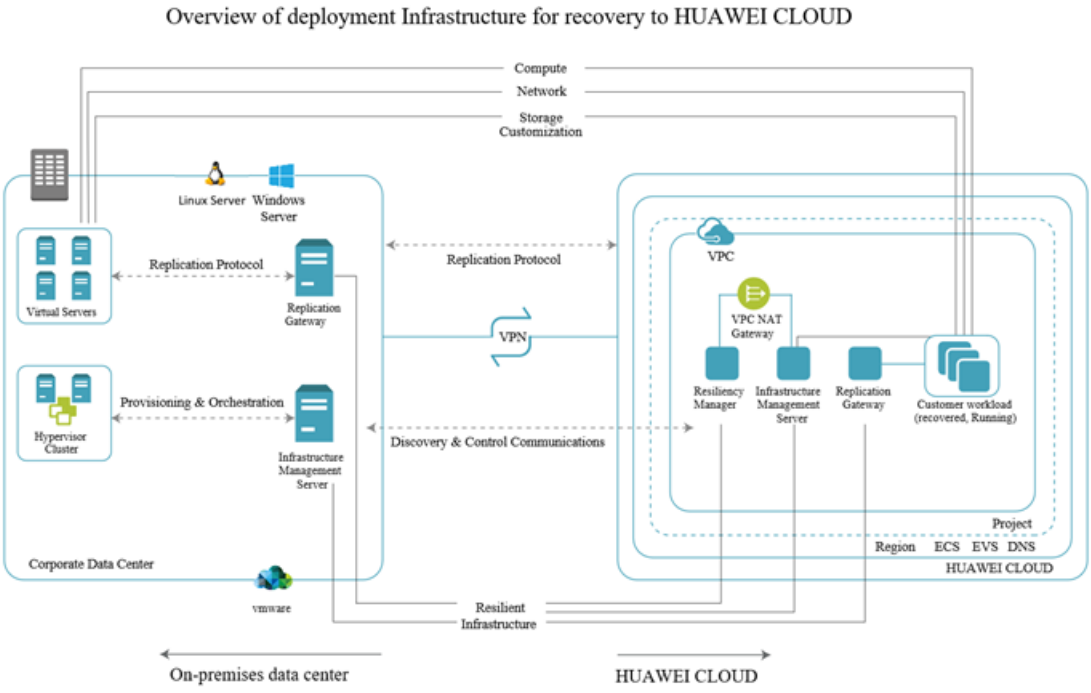
Table 1-4 Recovering Hyper-V virtual machines to Azure *(continued)*

Tasks	More information
Monitor assets	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities
Miscellaneous references	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. ■ Using klish ■ Troubleshooting ■ Updating ■ References

Recovering VMware virtual machines to HUAWEI CLOUD

Using Veritas Resiliency Platform 3.3.2, you can configure and protect your VMware virtual machines for recovery to HUAWEI CLOUD using the Resiliency Platform Data Mover.

Figure 1-5 Overview of deployment Infrastructure for recovery to HUAWEI CLOUD



The following table provides the summary for deployment, configuration, and recovery of virtual machines to a data center on HUAWEI CLOUD.

Table 1-5 Recovering VMware virtual machines to HUAWEI CLOUD

Tasks	More information
Plan your environment	Refer to the Overview and Planning Guide to know about the product, its components, features, and capabilities. Refer to the Release Notes for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment are compatible with the requirements mentioned in the checklist. ■ Overview and Planning Guide ■ Release Notes ■ Checklist for deployment and disaster recovery configuration

Table 1-5 Recovering VMware virtual machines to HUAWEI CLOUD *(continued)*

Tasks	More information

Deploy and configure the virtual appliances 	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances in the HUAWEI CLOUD data center as well as in the premises data center.
	■ Download the files required for deployment
	■ About deploying the virtual appliances
	■ Deploy the virtual appliances for Resiliency Manager, Infrastructure Management Server (IMS), and Replication Gateway in the HUAWEI CLOUD data center:
	  ■ Using HUAWEI CLOUD
	■ Deploy the virtual appliances for one or more IMS and Replication Gateway in the premises data center:
	  ■ Using VMware vSphere client
	■ Configure the virtual appliances as Veritas Resiliency Platform components:
	  ■ About configuring the virtual appliances
	  ■ Configuring Resiliency Manager or IMS
	  ■ Configuring Replication Gateways

Set up the resiliency domain 	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console.
	■ Create the resiliency domain using getting started wizard
	■ Configure the settings for the resiliency domain:
	  ■ Add IMS
	  ■ Add Replication Gateways
	  ■ Add cloud data center (if not done during getting started wizard)
	  ■ Manage user authentication and permission
	  ■ Manage alerts, notifications, and other product settings

Add asset infrastructure 	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console. ■ Add VMware servers ■ Prepare host for replication

Table 1-5 Recovering VMware virtual machines to HUAWEI CLOUD *(continued)*

Tasks	More information
Infrastructure Pairing	For recovering assets to HUAWIE CLOUD you have to do following Infrastructure Pairing: ■ Navigate to **Infrastructure Pairing > Replication Appliance**, refer Create Replication Gateway pair. ■ Navigate to **Settings > Infrastructure > Access Profile > Network** to mark purpose of the networks, refer Add and map network objects. ■ For DNS customization, refer Add DNS servers. ■ Create network mappings, refer Network pairs for recovering virtual machines to HUAWIE CLOUD.
Create resiliency groups 	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. You can create a resiliency group either for basic monitoring (start or stop virtual machines) or for remote recovery. ■ Configure resiliency groups for basic monitoring ■ Configure resiliency groups for recovery to HUAWEI CLOUD
Advance features 	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ Virtual business services ■ Resiliency plans ■ Evacuation plans
Perform remote recovery operations 	Once you have configured the resiliency groups for remote recovery, you can perform rehearsal and cleanup rehearsal operations on the resiliency groups. You can also perform migrate, takeover, or resync operations on the resiliency groups. ■ Rehearsal ■ Cleanup rehearsal ■ Migrate ■ Take over ■ Resync

Table 1-5 Recovering VMware virtual machines to HUAWEI CLOUD *(continued)*

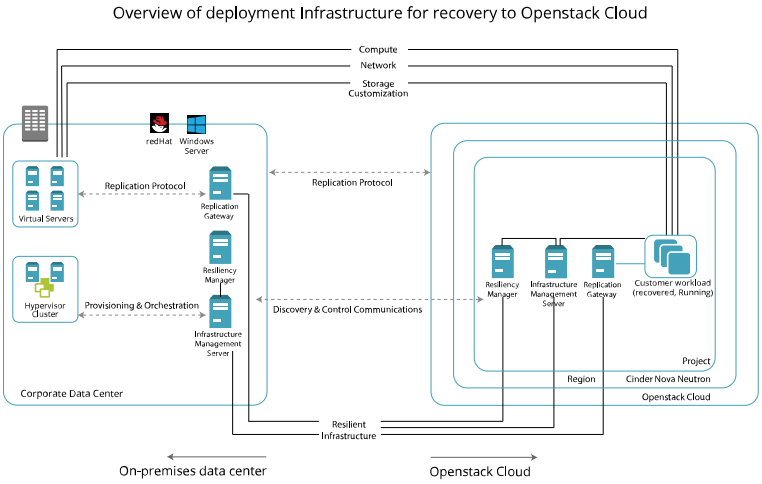
Tasks	More information
Monitor assets 	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities
Miscellaneous references 	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. ■ Using klish ■ Troubleshooting ■ Updating ■ References

Recovering VMware virtual machines to OpenStack

Using Veritas Resiliency Platform 3.3.2, you can configure and protect your VMware virtual machines for recovery to OpenStack using Resiliency Platform Data Mover. You have the option to configure your OpenStack based cloud as a cloud data center, or as a private cloud instance within your on-premises data center.

Note: This feature is in technical preview mode.

Figure 1-6 Overview of deployment Infrastructure for recovery of VMware virtual machines to OpenStack



The following table provides the summary for deployment, configuration, and recovery of virtual machines to a data center on OpenStack.

Table 1-6 Recovering VMware virtual machines to OpenStack

Tasks	More information
Plan your environment 	Refer to the Overview and Planning Guide to know about the product, its components, features, and capabilities. Refer to the Release Notes for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment are compatible with the requirements mentioned in the checklist. ■ Overview and Planning Guide ■ Release Notes ■ Checklist for deployment and disaster recovery configuration

Table 1-6 Recovering VMware virtual machines to OpenStack *(continued)*

Tasks	More information

Deploy and configure the virtual appliances	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances in OpenStack cloud data center as well as in the on-premises data center.
	■ Download the files required for deployment
	■ About deploying the virtual appliances
	■ Deploy the virtual appliances for Resiliency Manager, Infrastructure Management Server (IMS), and Replication Gateway in the OpenStack cloud data center using any of the following methods:
	  ■ Using OpenStack dashboard
	  ■ Using volumes
	■ Deploy the virtual appliances for one or more IMS and Replication Gateway in the on-premises data center:
	  ■ Using VMware vSphere client
	■ Configure the virtual appliances as Veritas Resiliency Platform components:
	  ■ About configuring the virtual appliances
	  ■ Configuring Resiliency Manager or IMS
	  ■ Configuring Replication Gateways

Set up the resiliency domain	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console.
	■ ■ Create the resiliency domain using getting started wizard
	  ■ Configure the settings for the resiliency domain:
	  ■ Add IMS
	  ■ Add Replication Gateways
	  ■ ■ For adding public cloud data center
	  Add cloud data center(if not done during getting started wizard)
	  ■ For adding private cloud instances
	  Add OpenStack private cloud instance
	  ■ Manage user authentication and permission
	  ■ Manage alerts, notifications, and other product settings

Add asset infrastructure	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console. ■ Add VMware servers ■ Prepare host for replication

Table 1-6 Recovering VMware virtual machines to OpenStack *(continued)*

Tasks	More information
Infrastructure Pairing	For recovering assets to OpenStack you have to do following Infrastructure Pairing: ■ Navigate to **Infrastructure Pairing > Replication Appliance**, refer Create Replication Gateway pair. ■ Navigate to **Settings > Infrastructure > Access Profile > Network** to mark purpose of the networks, refer Add and map network objects. ■ For DNS customization, refer Add DNS servers. ■ Create network mappings, refer Network pairs for recovering virtual machines to OpenStack.
Create resiliency groups 	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. You can create a resiliency group either for basic monitoring (start or stop virtual machines) or for remote recovery. ■ Configure resiliency groups for basic monitoring ■ Configure resiliency groups for recovery to OpenStack
Advanced features 	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ Virtual business services ■ Resiliency plans ■ Evacuation plans
Perform remote recovery operations 	Once you have configured the resiliency groups for remote recovery, you can perform rehearsal and cleanup rehearsal operations on the resiliency groups. You can also perform migrate, takeover, or resync operations on the resiliency groups. ■ Rehearsal ■ Cleanup rehearsal ■ Migrate Note that Resync, Takeover operation, and migrating back from target to source data center is not supported.

Table 1-6 Recovering VMware virtual machines to OpenStack *(continued)*

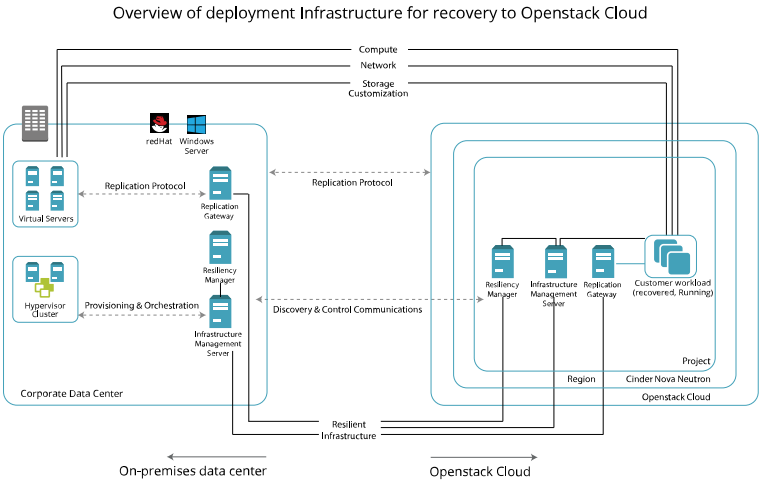
Tasks	More information
Monitor assets	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities
Miscellaneous references	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. You can also use klish to update Resiliency Platform components. ■ Using klish ■ Troubleshooting ■ Updating ■ References

Recovering Hyper-V virtual machines to OpenStack

Using Veritas Resiliency Platform 3.3.2, you can configure and protect your Hyper-V virtual machines for recovery to OpenStack using Resiliency Platform Data Mover. You have the option to configure your OpenStack based cloud as a cloud data center, or as a private cloud instance within your on-premises data center.

Note: This feature is in technical preview mode.

Figure 1-7 Overview of deployment Infrastructure for recovery of Hyper-V virtual machines to OpenStack



The following table provides the summary for deployment, configuration, and recovery of virtual machines to a data center on OpenStack.

Table 1-7 Recovering Hyper-V virtual machines to OpenStack

Tasks	More information
Plan your environment 	Refer to the Overview and Planning Guide to know about the product, its components, features, and capabilities. Refer to the Release Notes for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment are compatible with the requirements mentioned in the checklist. ■ Overview and Planning Guide ■ Release Notes ■ Checklist for deployment and disaster recovery configuration

Table 1-7 Recovering Hyper-V virtual machines to OpenStack *(continued)*

Tasks	More information

Deploy and configure the virtual appliances	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances in the OpenStack cloud data center as well as in the on-premises data center.
	■ Download the files required for deployment
	■ About deploying the virtual appliances
	■ Deploy the virtual appliances for Resiliency Manager, Infrastructure Management Server (IMS), and Replication Gateway in the OpenStack cloud data center using any of the following methods:
	  ■ Using OpenStack dashboard
	  ■ Using volumes
	■ Deploy the virtual appliances for one or more IMS and Replication Gateway in the premises data center:
	  ■ Using Hyper-V Manager
	■ Configure the virtual appliances as Veritas Resiliency Platform components:
	  ■ About configuring the virtual appliances
	  ■ Configuring Resiliency Manager or IMS
	  ■ Configuring Replication Gateways

Set up the resiliency domain	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console.
	■ Create the resiliency domain using getting started wizard
	■ Configure the settings for the resiliency domain:
	  ■ Add IMS
	  ■ Add Replication Gateways
	  ■ ■ For adding public cloud data center
	  Add cloud data center (if not done during getting started wizard)
	  ■ For adding private cloud instances
	  Add OpenStack private cloud instance
	  ■ Manage user authentication and permission
	  ■ Manage alerts, notifications, and other product settings

Add asset infrastructure	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console. ■ Add Hyper-V servers ■ Prepare host for replication

Table 1-7 Recovering Hyper-V virtual machines to OpenStack *(continued)*

Tasks	More information
Infrastructure Pairing	For recovering assets to OpenStack you have to do following Infrastructure Pairing: ■ Navigate to **Infrastructure Pairing > Replication Appliance**, refer Create Replication Gateway pair. ■ Navigate to **Settings > Infrastructure > Access Profile > Network** to mark purpose of the networks, refer Add and map network objects. ■ For DNS customization, refer Add DNS servers. ■ Create network mappings, refer Network pairs for recovering virtual machines to OpenStack.
Create resiliency groups	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. You can create a resiliency group either for basic monitoring (start or stop virtual machines) or for remote recovery. ■ Configure resiliency groups for basic monitoring ■ Configure resiliency groups for recovery to OpenStack
Advance features	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ Virtual business services ■ Resiliency plans ■ Evacuation plans
Perform remote recovery operations	Once you have configured the resiliency groups for remote recovery, you can perform rehearsal and cleanup rehearsal operations on the resiliency groups. You can also perform migrate, takeover, or resync operations on the resiliency groups. ■ Rehearsal ■ Cleanup rehearsal ■ Migrate Note that Resync, Takeover operation, and migrating back from target to source data center is not supported.

Table 1-7 Recovering Hyper-V virtual machines to OpenStack *(continued)*

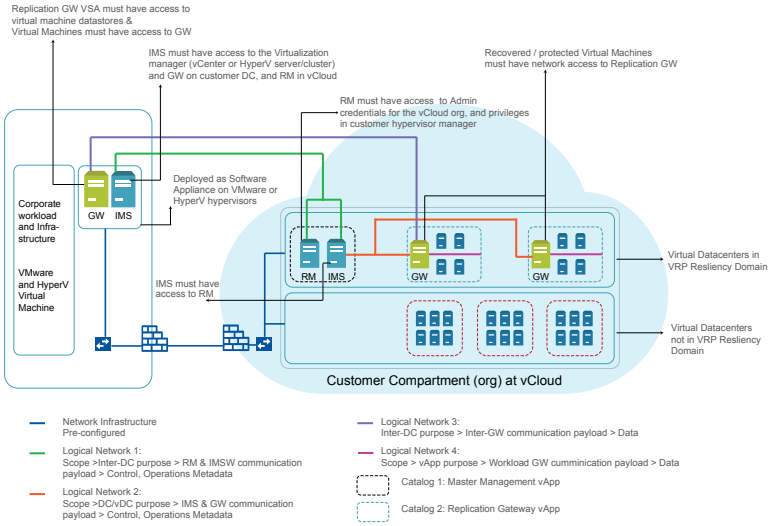
Tasks	More information
Monitor assets	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities
Miscellaneous references	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. ■ Using klish ■ Troubleshooting ■ Updating ■ References

Recovering VMware virtual machines to vCloud Director

Using Veritas Resiliency Platform 3.3.2, you can configure and protect your VMware virtual machines for recovery to vCloud Director using the Resiliency Platform Data Mover.

Before starting the product deployment in your data center, ensure that the cloud tenant is created for you and you have the cloud credentials to access it.

Figure 1-8 Overview of deployment infrastructure for recovery to vCloud Director



The following table provides the summary for deployment, configuration, and recovery of virtual machines to a data center on vCloud Director. These operations can be performed by the end user or the service subscriber.

Table 1-8 Recovering VMware virtual machines to vCloud Director

Tasks	More information
Plan your environment	Refer to the Overview and Planning Guide to know about the product, its components, features, and capabilities. Refer to the Release Notes for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment matches the requirements mentioned in the checklist. ■ Overview and Planning Guide ■ Release Notes ■ Checklist for deployment and disaster recovery configuration

Table 1-8 Recovering VMware virtual machines to vCloud Director *(continued)*

Tasks	More information

Deploy and configure the virtual appliances 	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances in the premises as well as cloud data center.
	■ Download the files required for deployment
	■ About deploying the virtual appliances
	■ Deploy the virtual appliances in vCloud Director for Resiliency Manager, Infrastructure Management Server (IMS), and Replication Gateway. Each virtual data center in vCloud is represented as an individual data center in Resiliency Platform. If you have multiple virtual data centers, you need to create multiple data centers in Resiliency Platform and then deploy Resiliency Manager and IMS in one virtual data center and only IMS in rest of the virtual data centers:
	  ■ Using vCloud Director
	■ Deploy the virtual appliances for one or more IMS and Replication Gateway in the premises data center:
	  ■ Using VMware vSphere client
	■ Configure the virtual appliances as Veritas Resiliency Platform components:
	  ■ About configuring the virtual appliances
	  ■ Configuring Resiliency Manager or IMS
	  ■ Configuring Replication Gateways

Set up the resiliency domain 	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console.
	■ Create the resiliency domain using getting started wizard
	■ Configure the settings for the resiliency domain:
	  ■ Add IMS
	  ■ Add Replication Gateways
	  ■ Add cloud data center (if not done during getting started wizard)
	  ■ Manage user authentication and permission
	  ■ Manage alerts, notifications, and other product settings

Add asset infrastructure 	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console. ■ Add VMware servers ■ Prepare host for replication

Table 1-8 Recovering VMware virtual machines to vCloud Director *(continued)*

Tasks	More information
Infrastructure Pairing	For recovering assets to vCloud Director you have to do following Infrastructure Pairing: ■ Navigate to **Infrastructure Pairing > Replication Appliance**, refer Create Replication Gateway pair. ■ Navigate to **Settings > Infrastructure > Access Profile > Network** to mark purpose of the networks, refer Add and map network objects. ■ Create Network group of vLAN/Port Group, refer Add network groups (Optional). ■ For DNS customization, refer Add DNS servers. ■ Create network mappings, refer Network pairs for recovering virtual machines to vCloud Director.
Create resiliency groups	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. You can create a resiliency group either for basic monitoring (start or stop virtual machines) or for remote recovery. ■ Configure resiliency groups for basic monitoring ■ Manage resiliency groups for remote recovery
Advanced features	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ Virtual business services ■ Resiliency plans ■ Evacuation plans
Perform remote recovery operations	Once you have organized your assets into resiliency groups, you can perform migrate, takeover, or resync operations on the resiliency groups. ■ Migrate ■ Take over ■ Resync Note that, Rehearsal and Cleanup Rehearsal operations are not supported for recovery to vCloud Director.

Table 1-8 Recovering VMware virtual machines to vCloud Director *(continued)*

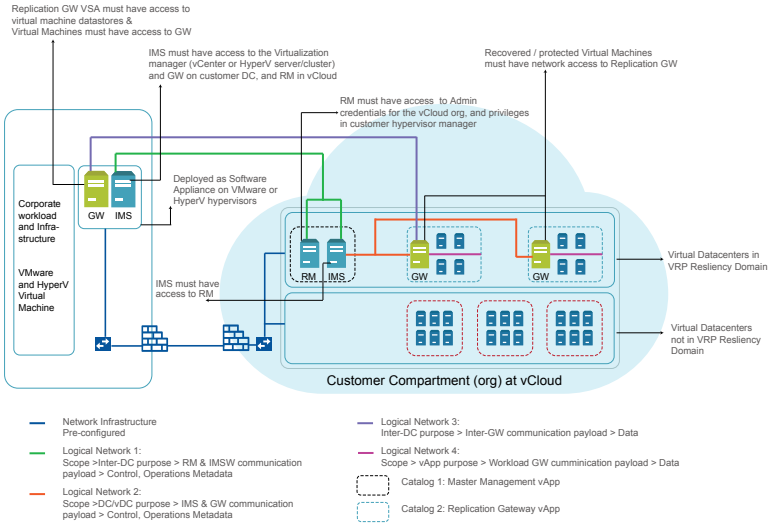
Tasks	More information
Monitor assets 	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities
Miscellaneous references 	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. ■ Using klish ■ Troubleshooting ■ Updating ■ References

Recovering Hyper-V virtual machines to vCloud Director

Using Veritas Resiliency Platform 3.3.2, you can configure and protect your Hyper-V virtual machines for recovery to vCloud Director using the Resiliency Platform Data Mover.

Before starting the product deployment in your data center, ensure that the cloud tenant is created for you and you have the cloud credentials to access it.

Figure 1-9 Overview of deployment infrastructure for recovery to vCloud Director



The following table provides the summary for deployment, configuration, and recovery of virtual machines to a data center on vCloud Director. These operations can be performed by the end user or the service subscriber.

Table 1-9 Recovering Hyper-V virtual machines to vCloud Director

Tasks	More information
Plan your environment	Refer to the Overview and Planning Guide to know about the product, its components, features, and capabilities. Refer to the Release Notes for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment are compatible with the requirements mentioned in the checklist. ■ Overview and Planning Guide ■ Release Notes ■ Checklist for deployment and disaster recovery configuration

Table 1-9 Recovering Hyper-V virtual machines to vCloud Director *(continued)*

Tasks	More information

Deploy and configure the virtual appliances	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances in the premises as well as cloud data center.
	■ Download the files required for deployment
	■ About deploying the virtual appliances
	■ Deploy the virtual appliances in vCloud Director for Resiliency Manager, Infrastructure Management Server (IMS), and Replication Gateway. If you have multiple virtual data centers, deploy Resiliency Manager and IMS in one virtual data center and only IMS in rest of the virtual data centers:
	  ■ Using vCloud Director
	■ Deploy the virtual appliances for one or more IMS and Replication Gateway in the premises data center:
	  ■ Using Hyper-V Manager
	■ Configure the virtual appliances as Veritas Resiliency Platform components:
	  ■ About configuring the virtual appliances
	  ■ Configuring Resiliency Manager or IMS
	  ■ Configuring Replication Gateways

Set up the resiliency domain	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console.
	■ Create the resiliency domain using getting started wizard
	■ Configure the settings for the resiliency domain:
	  ■ Add IMS
	  ■ Add Replication Gateways
	  ■ Add cloud data center (if not done during getting started wizard)
	  ■ Manage user authentication and permission
	  ■ Manage alerts, notifications, and other product settings

Add asset infrastructure	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console. ■ Add Hyper-V servers ■ Prepare host for replication

Table 1-9 Recovering Hyper-V virtual machines to vCloud Director *(continued)*

Tasks	More information
Infrastructure Pairing	For recovering assets to vCloud Director you have to do following Infrastructure Pairing: ■ Navigate to **Infrastructure Pairing > Replication Appliance**, refer Create Replication Gateway pair. ■ Navigate to **Settings > Infrastructure > Access Profile > Network** to mark purpose of the networks, refer Add and map network objects. ■ Create Network group of vLAN/Port Group, refer Add network groups (Optional). ■ For DNS customization, refer Add DNS servers. ■ Create network mappings, refer Network pairs for recovering virtual machines to vCloud Director.
Create resiliency groups	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. You can create a resiliency group either for basic monitoring (start or stop virtual machines) or for remote recovery. ■ Configure resiliency groups for basic monitoring ■ Manage resiliency groups for remote recovery
Advanced features	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ Virtual business services ■ Resiliency plans ■ Evacuation plans
Perform remote recovery operations	Once you have organized your assets into resiliency groups, you can perform migrate, takeover, or resync operations on the resiliency groups. ■ Migrate ■ Take over ■ Resync Note that, Rehearsal and Cleanup Rehearsal operations are not supported for recovery to vCloud Director.

Table 1-9 Recovering Hyper-V virtual machines to vCloud Director *(continued)*

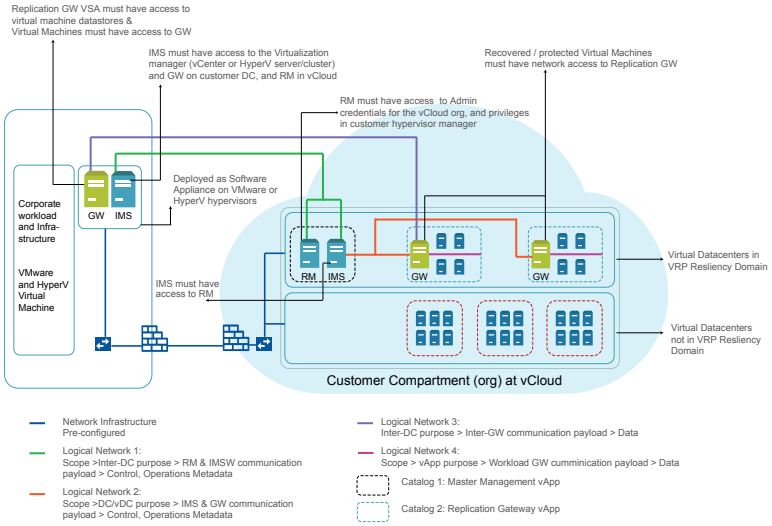
Tasks	More information
Monitor assets 	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities
Miscellaneous references 	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. You can also use klish to update Resiliency Platform components. ■ Using klish ■ Troubleshooting ■ Updating ■ References

Recovering VMware virtual machines to vCloud Director without adding vCenter server

Using Veritas Resiliency Platform 3.3.2, you can configure and protect your VMware virtual machines for recovery to vCloud Director using the Resiliency Platform Data Mover without adding the vCenter server.

Before starting the product deployment in your data center, ensure that the cloud tenant is created for you and you have the cloud credentials to access it.

Figure 1-10 Overview of deployment infrastructure for recovery to vCloud Director



The following table provides the summary for deployment, configuration, and recovery of virtual machines to a data center on vCloud Director. These operations can be performed by the end user or the service subscriber.

Table 1-10 Recovering VMware virtual machines to vCloud Director without adding vCenter server

Tasks	More information
Plan your environment 	Refer to the Overview and Planning Guide to know about the product, its components, features, and capabilities. Refer to the Release Notes for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment are compatible with the requirements mentioned in the checklist. ■ Overview and Planning Guide ■ Release Notes ■ Checklist for deployment and disaster recovery configuration

Table 1-10 Recovering VMware virtual machines to vCloud Director without adding vCenter server *(continued)*

Tasks	More information

Deploy and configure the virtual appliances	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances in the premises as well as cloud data center.
	■ Download the files required for deployment
	■ About deploying the virtual appliances
	■ Deploy the virtual appliances in vCloud Director for Resiliency Manager, Infrastructure Management Server (IMS), and Replication Gateway. If you have multiple virtual data centers, deploy Resiliency Manager and IMS in one virtual data center and only IMS in rest of the virtual data centers:
	  ■ Using vCloud Director
	■ Deploy the virtual appliances for one or more IMS and Replication Gateway in the premises data center:
	  ■ Using VMware vSphere client
	■ Configure the virtual appliances as Veritas Resiliency Platform components:
	  ■ About configuring the virtual appliances
	  ■ Configuring Resiliency Manager or IMS
	  ■ Configuring Replication Gateways

Set up the resiliency domain	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console.
	■ Create the resiliency domain using getting started wizard
	■ Configure the settings for the resiliency domain:
	  ■ Add IMS
	  ■ Add Replication Gateways
	  ■ Add cloud data center (if not done during getting started wizard)
	  ■ Manage user authentication and permission
	  ■ Manage alerts, notifications, and other product settings

Add asset infrastructure	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console. ■ Prepare host for replication

Table 1-10 Recovering VMware virtual machines to vCloud Director without adding vCenter server *(continued)*

Tasks	More information
Infrastructure Pairing	For recovering assets to vCloud Director you have to do following Infrastructure Pairing: ■ Navigate to **Infrastructure Pairing > Replication Appliance**, refer Create Replication Gateway pair. ■ Navigate to **Settings > Infrastructure > Access Profile > Network** to mark purpose of the networks, refer Add and map network objects. ■ For DNS customization, refer Add DNS servers. ■ Create network mappings, refer Network pairs for recovering virtual machines to vCloud Director.
Create resiliency groups 	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. ■ Manage resiliency groups for remote recovery
Advanced features 	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ Virtual business services ■ Resiliency plans ■ Evacuation plans
Perform remote recovery operations 	Once you have organized your assets into resiliency groups, you can perform migrate, takeover, or resync operations on the resiliency groups. ■ Migrate ■ Take over ■ Resync Note that, Rehearsal and Cleanup Rehearsal operations are not supported for recovery to vCloud Director.

Table 1-10 Recovering VMware virtual machines to vCloud Director without adding vCenter server *(continued)*

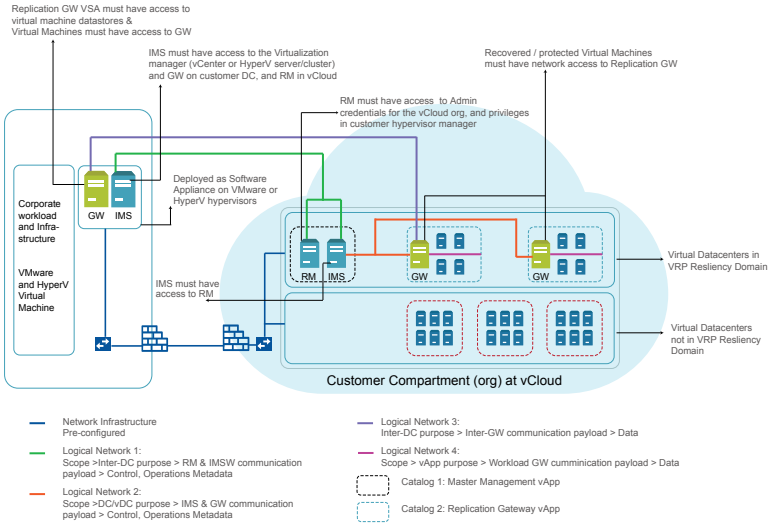
Tasks	More information
Monitor assets 	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities
Miscellaneous references 	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. ■ Using klish ■ Troubleshooting ■ Updating ■ References

Recovering Hyper-V virtual machines to vCloud Director without adding Hyper-V server

Using Veritas Resiliency Platform 3.3.2, you can configure and protect your Hyper-V virtual machines for recovery to vCloud Director using the Resiliency Platform Data Mover without adding Hyper-V server.

Before starting the product deployment in your data center, ensure that the cloud tenant is created for you and you have the cloud credentials to access it.

Figure 1-11 Overview of deployment infrastructure for recovery to vCloud Director



The following table provides the summary for deployment, configuration, and recovery of virtual machines to a data center on vCloud Director. These operations can be performed by the end user or the service subscriber.

Table 1-11 Recovering Hyper-V virtual machines to vCloud Director without adding Hyper-V server

Tasks	More information
Plan your environment 	Refer to the Overview and Planning Guide to know about the product, its components, features, and capabilities. Refer to the Release Notes for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment are compatible with the requirements mentioned in the checklist. ■ Overview and Planning Guide ■ Release Notes ■ Checklist for deployment and disaster recovery configuration

Table 1-11 Recovering Hyper-V virtual machines to vCloud Director without adding Hyper-V server *(continued)*

Tasks	More information

Deploy and configure the virtual appliances 	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances in the premises as well as cloud data center.
	■ Download the files required for deployment
	■ About deploying the virtual appliances
	■ Deploy the virtual appliances in vCloud Director for Resiliency Manager, Infrastructure Management Server (IMS), and Replication Gateway. If you have multiple virtual data centers, deploy Resiliency Manager and IMS in one virtual data center and only IMS in rest of the virtual data centers:
	  ■ Using vCloud Director
	■ Deploy the virtual appliances for one or more IMS and Replication Gateway in the premises data center:
	  ■ Using Hyper-V Manager
	■ Configure the virtual appliances as Veritas Resiliency Platform components:
	  ■ About configuring the virtual appliances
	  ■ Configuring Resiliency Manager or IMS
	  ■ Configuring Replication Gateways

Set up the resiliency domain 	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console.
	■ Create the resiliency domain using getting started wizard
	■ Configure the settings for the resiliency domain:
	  ■ Add IMS
	  ■ Add Replication Gateways
	  ■ Add cloud data center (if not done during getting started wizard)
	  ■ Manage user authentication and permission
	  ■ Manage alerts, notifications, and other product settings

Add asset infrastructure 	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console. ■ Prepare host for replication

Table 1-11 Recovering Hyper-V virtual machines to vCloud Director without adding Hyper-V server *(continued)*

Tasks	More information
Infrastructure Pairing	For recovering assets to vCloud Director you have to do following Infrastructure Pairing: ■ Navigate to **Infrastructure Pairing > Replication Appliance**, refer Create Replication Gateway pair. ■ Navigate to **Settings > Infrastructure > Access Profile > Network** to mark purpose of the networks, refer Add and map network objects. ■ For DNS customization, refer Add DNS servers. ■ Create network mappings, refer Network pairs for recovering virtual machines to vCloud Director.
Create resiliency groups 	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. ■ Manage resiliency groups for remote recovery
Advanced features 	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ Virtual business services ■ Resiliency plans ■ Evacuation plans
Perform remote recovery operations 	Once you have organized your assets into resiliency groups, you can perform migrate, takeover, or resync operations on the resiliency groups. ■ Migrate ■ Take over ■ Resync Note that, Rehearsal and Cleanup Rehearsal operations are not supported for recovery to vCloud Director.

Table 1-11 Recovering Hyper-V virtual machines to vCloud Director without adding Hyper-V server *(continued)*

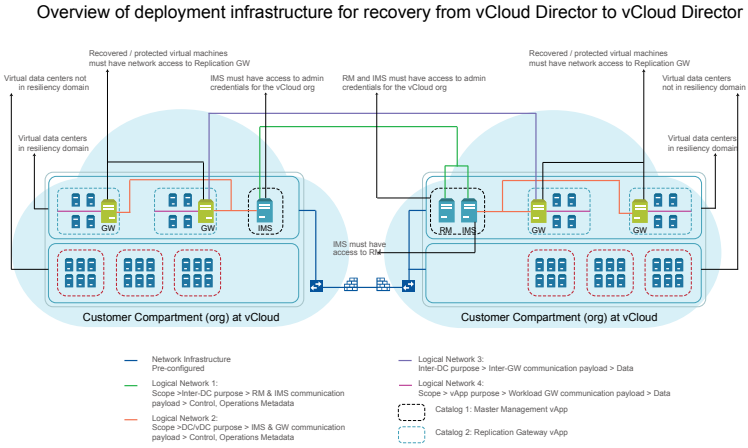
Tasks	More information
Monitor assets 	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities
Miscellaneous references 	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. You can also use klish to update Resiliency Platform components. ■ Using klish ■ Troubleshooting ■ Updating ■ References

Recovering virtual machines from vCloud Director to vCloud Director

Using Veritas Resiliency Platform , you can configure and protect your virtual machines for recovery from vCloud Director to vCloud Director using the Resiliency Platform Data Mover.

Before starting the product deployment in your data center, ensure that the cloud tenant is created for you and you have the cloud credentials to access it.

Figure 1-12 Overview of deployment infrastructure for recovery from vCloud Director to vCloud Director



The following table provides the summary for deployment, configuration, and recovery of virtual machines from a vCloud Director data center to a vCloud Director data center . These operations can be performed by the end user or by the service subscriber.

Table 1-12 Recovering virtual machines from vCloud Director to vCloud Director

Tasks	More information
Plan your environment	Refer to the Overview and Planning Guide to know about the product, its components, features, and capabilities. Refer to the Release Notes for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment are compatible with the requirements mentioned in the checklist. ■ Overview and Planning Guide ■ Release Notes ■ Checklist for deployment and disaster recovery configuration

Table 1-12 Recovering virtual machines from vCloud Director to vCloud Director *(continued)*

Tasks	More information

Deploy and configure the virtual appliances	Veritas Resiliency Platform is deployed as virtual appliances.
	Download and deploy the virtual appliances on source as well as on the target cloud data center.
	■ Download the files required for deployment
	■ Deploy the virtual appliances for Infrastructure Management Server (IMS) and Replication Gateway in vCloud Director on both the cloud data centers. Resiliency Manager should be deployed either on source or on target data center.
	If you have multiple virtual data centers, deploy Resiliency Manager , IMS and Replication Gateway in one virtual data center and only IMS and Replication Gateway in rest of the virtual data centers:
	  ■ About deploying the virtual appliances
	  ■ Using vCloud Director
	■ Configure the virtual appliances as Veritas Resiliency Platform components:
	  ■ About configuring the virtual appliances
	  ■ Configuring Resiliency Manager or IMS
	  ■ Configuring Replication Gateways

Set up the resiliency domain	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console.
	■ Create the resiliency domain using getting started wizard
	■ Configure the settings for the resiliency domain:
	  ■ Add IMS
	  ■ Add Replication Gateways
	  ■ Add another cloud data center
	  ■ Manage user authentication and permission
	  ■ Manage alerts, notifications, and other product settings

Add asset infrastructure	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console. ■ Prepare host for replication

Table 1-12 Recovering virtual machines from vCloud Director to vCloud Director *(continued)*

Tasks	More information
Infrastructure Pairing	For recovering assets from vCloud Director to vCloud Director you have to do following Infrastructure Pairing: ■ Navigate to **Infrastructure Pairing > Replication Appliance**, refer Create Replication Gateway pair. ■ Navigate to **Settings > Infrastructure > Access Profile > Network** to mark purpose of the networks, refer Add and map network objects. ■ For DNS customization, refer Add DNS servers. ■ Create network mappings, refer Network pairs for recovering from vCloud Director to vCloud Director.
Create resiliency groups 	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. You can create a resiliency group either for basic monitoring (start or stop virtual machines) or for remote recovery. ■ Configure resiliency groups for basic monitoring ■ Manage resiliency groups for remote recovery
Advanced features 	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ Virtual business services ■ Resiliency plans ■ Evacuation plans
Perform remote recovery operations 	Once you have organized your assets into resiliency groups, you can perform migrate, takeover, or resync operations on the resiliency groups. ■ Migrate ■ Take over ■ Resync Note that, Rehearsal and Cleanup Rehearsal operations are not supported for recovery from vCloud Director to vCloud Director.

Table 1-12 Recovering virtual machines from vCloud Director to vCloud Director *(continued)*

Tasks	More information
Monitor assets 	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities
Miscellaneous references 	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. ■ Using klish ■ Troubleshooting ■ Updating ■ References

Chapter 2

Recovery to on-premises data center

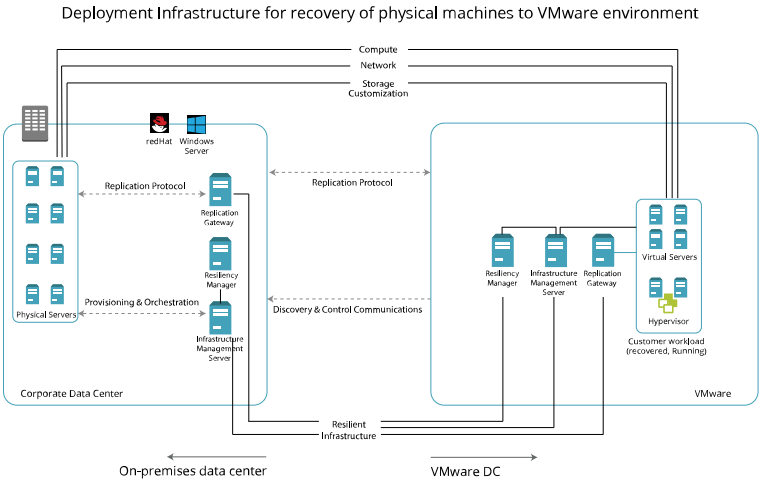
This chapter includes the following topics:

Recovering physical machines to VMware virtual machines on an on-premises data center using Resiliency Platform Data Mover

Using Veritas Resiliency Platform, you can recover physical machines to VMware virtual machines on an on-premises data center using Resiliency Platform Data Mover.

Note: SD card and USB disks on physical hosts with Veritas Resiliency Platform data mover are not supported.

Figure 2-1 Overview of deployment Infrastructure for recovery of physical machines to VMware virtual machines



The following table provides the summary for deployment, configuration, and recovery of physical machines to on-premises data center using Resiliency Platform Data Mover.

Table 2-1 Recovering physical machines to on-premises data center using Resiliency Platform Data Mover

Tasks	More information
Plan your environment	Refer to the Overview and Planning Guide to know about the product, its components, features, and capabilities. Refer to the Release Notes for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment are compatible with the requirements mentioned in the checklist. ■ Overview and Planning Guide ■ Release Notes ■ Checklist for deployment and disaster recovery configuration

Table 2-1 Recovering physical machines to on-premises data center using Resiliency Platform Data Mover *(continued)*

Tasks	More information

Deploy and configure the virtual appliances 	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances for Resiliency Manager, IMS, and Replication Gateway in both the data centers.
	■ Download the files required for deployment
	■ About deploying the virtual appliances
	■ Deploy the virtual appliances using VMware vSphere client
	■ Configure the virtual appliances as Veritas Resiliency Platform components:
	  ■ About configuring the virtual appliances
	  ■ Configuring Resiliency Manager or IMS
	  ■ Configuring Replication Gateways

Set up the resiliency domain 	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console.
	■ Create the resiliency domain using getting started wizard
	■ Configure the settings for the resiliency domain:
	  ■ Add IMS
	  ■ Add Replication Gateways
	  ■ Configuring Replication Gateway as a PXE Boot server and DHCP server
	  ■ Manage user authentication and permission
	  ■ Manage alerts, notifications, and other product settings

Add asset infrastructure 	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console. ■ Add VMware virtualization servers ■ Prepare host for replication
Infrastructure Pairing	For recovering assets to VMware you have to do following Infrastructure Pairing: ■ Navigate to **Infrastructure Pairing > Replication Appliance**, refer Create Replication Gateway pair. ■ Navigate to **Settings > Infrastructure > Access Profile > Network** to mark purpose of the networks, refer Add and map network objects. ■ For DNS customization, refer Add DNS servers. ■ Create network mappings, refer Network pairs for recovering physical machines to VMware.

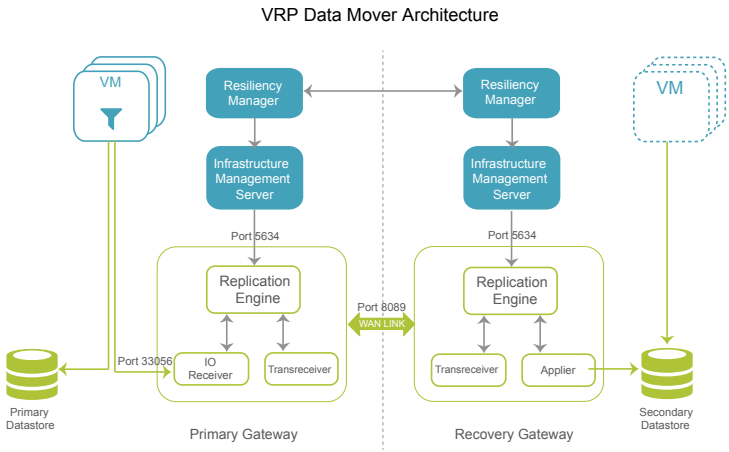
Table 2-1 Recovering physical machines to on-premises data center using Resiliency Platform Data Mover *(continued)*

Tasks	More information
Create resiliency groups 	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. ■ Configure physical machines for recovery to on-premises data center
Perform remote recovery operations 	Once you have configured the resiliency groups for remote recovery, you can perform rehearsal and cleanup rehearsal operations on the resiliency groups. You can also perform migrate, takeover, or resync operations on the resiliency groups.
Monitor assets 	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities
Miscellaneous references 	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. You can also use klish to update Resiliency Platform components. ■ Using klish ■ Troubleshooting ■ Updating ■ References

Recovering VMware virtual machines to on-premises data center using Resiliency Platform Data Mover

Using Veritas Resiliency Platform, you can recover VMware virtual machine to on-premises data center using Resiliency Platform Data Mover. For recovering VMware virtual machines to on-premises data center, Resiliency Platform Data Mover uses VMware VAIO (vSphere APIs for IO Filter) interfaces published and supported by VMware.

Figure 2-2 Overview of deployment Infrastructure for recovery using Resiliency Platform Data Mover



The following table provides the summary for deployment, configuration, and recovery of VMware virtual machines to on-premises data center using data mover.

Table 2-2 Recovering VMware virtual machines using VMware VAIO

Tasks	More information
Plan your environment	Refer to the Overview and Planning Guide to know about the product, its components, features, and capabilities. Refer to the Release Notes for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment are compatible with the requirements mentioned in the checklist. ■ Overview and Planning Guide ■ Release Notes ■ Checklist for deployment and disaster recovery configuration

Table 2-2 Recovering VMware virtual machines using VMware VAIO *(continued)*

Tasks	More information

Deploy and configure the virtual appliances	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances for Resiliency Manager, IMS, and Replication Gateway in both the data centers.
	■ Download the files required for deployment
	■ About deploying the virtual appliances
	■ Deploy the virtual appliances using VMware vSphere client
	■ Configure the virtual appliances as Veritas Resiliency Platform components:
	  ■ About configuring the virtual appliances
	  ■ Configuring Resiliency Manager or IMS
	  ■ Configuring Replication Gateways

Set up the resiliency domain	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console.
	■ Create the resiliency domain using getting started wizard
	■ Configure the settings for the resiliency domain:
	  ■ Add IMS
	  ■ Add Replication Gateways
	  ■ Manage user authentication and permission
	  ■ Manage alerts, notifications, and other product settings

Add asset infrastructure	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console. ■ Add VMware virtualization servers
Infrastructure Pairing	For recovering assets to VMware you have to do following Infrastructure Pairing: ■ Navigate to **Infrastructure Pairing > Replication Appliance**, refer Create Replication Gateway pair. ■ Navigate to **Settings > Infrastructure > Access Profile > Network** to mark purpose of the networks, refer Add and map network objects. ■ For DNS customization, refer Add DNS servers. ■ Create network mappings, refer Network pairs for recovering machines to on-premises data center.

Table 2-2 Recovering VMware virtual machines using VMware VAIO *(continued)*

Tasks	More information
Create resiliency groups	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. You can create a resiliency group either for basic monitoring (start or stop virtual machines) or for recovery to remote data center. ■ Configure resiliency groups for monitoring ■ Configure VMware virtual machines for recovery to on-premises data center
Advanced features	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ Virtual business services ■ Resiliency plans ■ Evacuation plans
Perform remote recovery operations	Once you have configured the resiliency groups for remote recovery, you can perform rehearsal and cleanup rehearsal operations on the resiliency groups. You can also perform migrate, takeover, or resync operations on the resiliency groups.
Monitor assets	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities

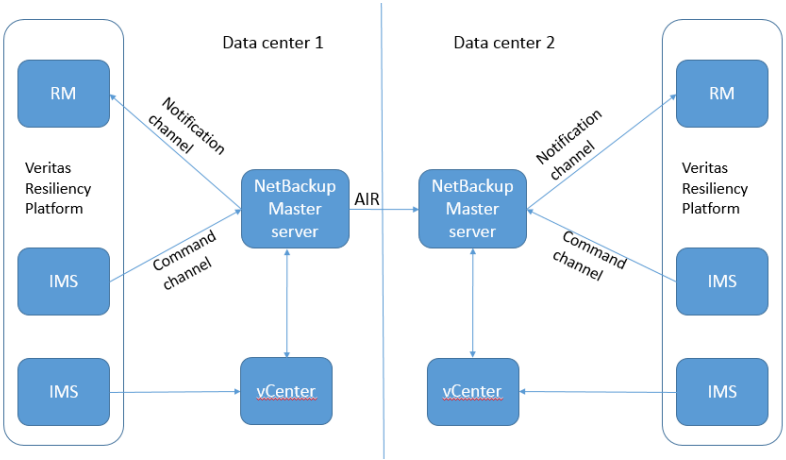
Table 2-2 Recovering VMware virtual machines using VMware VAIO *(continued)*

Tasks	More information
Miscellaneous references	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. You can also use klish to update Resiliency Platform components. ■ Using klish ■ Troubleshooting ■ Updating ■ References

Recovering VMware virtual machines from VMware to VMware using NetBackup

Using the Veritas Resiliency Platform 3.3.2, you can restore VMware virtual machine from NetBackup generated backup images to the target data center. For more information on NetBackup and NetBackup Appliances, see About NetBackup and NetBackup Appliances.

Figure 2-3 Deployment architecture for NetBackup master server



In the image, data center 1 is the source data center and data center 2 is target data center. Targeted Auto Image Replication, denoted as AIR in the below image, ensures that the backup images are available on NetBackup master server in the

target data center. The image shows two Infrastructure Management Servers (IMS) although you can have only one IMS which discovers the vCenter and is also added as an additional server to NetBackup.

The following table provides the summary for deployment, configuration, and recovery of virtual machines from NetBackup generated backup images.

Table 2-3 Recovering virtual machines using NetBackup images

Tasks	More information
Plan your environment 	Refer to the *Veritas Resiliency Platform Overview and Planning Guide* to know about the product, its components, features, and capabilities. Refer to the *Veritas Resiliency Platform Release Notes* for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment matches the requirements mentioned in the checklist.

Deploy and configure the virtual appliances 	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances for Resiliency Manager and IMS in both the data centers.
	■ Download the files required for deployment
	■ About deploying the virtual appliances
	■ Deploy the virtual appliances using VMware vSphere client
	■ Configure the virtual appliances as Veritas Resiliency Platform components:
	  ■ About configuring the virtual appliances
	  ■ Configuring Resiliency Manager or IMS

Set up the resiliency domain 	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console.
	■ Create the resiliency domain using getting started wizard
	■ Configure the settings for the resiliency domain:
	  ■ Add IMS
	  ■ Manage user authentication and permission
	  ■ Manage alerts, notifications, and other product settings

Table 2-3 Recovering virtual machines using NetBackup images *(continued)*

Tasks	More information
Add asset infrastructure	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console. ■ Add VMware servers ■ Add NetBackup master server ■ Add IMS to NetBackup master server as an additional server
Infrastructure Pairing	For recovering assets to VMware you have to do following Infrastructure Pairing: ■ Navigate to **Settings > Infrastructure > Access Profile > Network** to mark purpose of the networks, refer Add and map network objects. ■ For DNS customization, refer Add DNS servers. ■ Create network mappings, refer Network pairs for recovering machines to on-premises data center.
Create resiliency groups	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. You can create a resiliency group either for basic monitoring (start or stop virtual machines) or for recovery on local or remote data center. ■ Configure resiliency groups for basic monitoring ■ Manage VMware virtual machines for remote recovery using NetBackup images
Advanced features	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ Virtual business services ■ Resiliency plans ■ Evacuation plans

Table 2-3 Recovering virtual machines using NetBackup images *(continued)*

Tasks	More information
Perform recovery operations 	Once you have configured the resiliency groups for remote recovery, you can perform rehearsal and cleanup rehearsal operations on the resiliency groups. You can also perform restore (local or remote) operations on the resiliency groups. ■ Rehearsal ■ Cleanup rehearsal ■ Restore virtual machines
Monitor assets 	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities
Miscellaneous references 	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. ■ Using klish ■ Troubleshooting ■ Updating ■ References

Recovering VMware virtual machines using third-party replication technology

When you configure VMware virtual machines for disaster recovery, Veritas Resiliency Platform lets you select the replication technology to replicate data from a production data center to a recovery data center.

Veritas Resiliency Platform supports the following replication technologies. Depending on your environment, select the replication technology that best fits your business needs.

- EMC SRDF

- EMC Recoverpoint
- Netapp (cDOT) Snapmirror
- HP 3PAR Remote Copy
- Hitachi TrueCopy/HUR
- IBM SVC Global Mirror
- IBM XIV Remote Mirror

Table 2-4 Recovering VMware virtual machines using third-party replication technology

Tasks	More information
Plan your environment 	Refer to the Overview and Planning Guide to know about the product, its components, features, and capabilities. Refer to the Release Notes for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment are compatible with the requirements mentioned in the checklist. ■ Overview and Planning Guide ■ Release Notes ■ Checklist for deployment and disaster recovery configuration

Deploy and configure the virtual appliances 	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances for Resiliency Manager and IMS in both the data centers.
	■ Download the files required for deployment
	■ About deploying the virtual appliances
	■ Deploy the virtual appliances using VMware vSphere client
	■ Configure the virtual appliances as Veritas Resiliency Platform components:
	  ■ About configuring the virtual appliances
	  ■ Configuring Resiliency Manager or IMS

Set up the resiliency domain 	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console.
	■ Create the resiliency domain using getting started wizard
	■ Configure the settings for the resiliency domain:
	  ■ Add IMS
	  ■ Manage user authentication and permission
	  ■ Manage alerts, notifications, and other product settings

Table 2-4 Recovering VMware virtual machines using third-party replication technology *(continued)*

Tasks	More information
Add asset infrastructure	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console. ■ Add VMware virtualization servers ■ Add enclosures
Infrastructure Pairing	For recovering assets to VMware you have to do following Infrastructure Pairing: ■ Navigate to **Settings > Infrastructure > Access Profile > Network** to mark purpose of the networks, refer Add and map network objects. ■ For DNS customization, refer Add DNS servers. ■ Create network mappings, refer Network pairs for recovering machines to on-premises data center.
Create resiliency groups	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. You can create a resiliency group either for basic monitoring (start or stop virtual machines) or for recovery on local or remote data center. ■ Configure resiliency groups for basic monitoring ■ Manage resiliency groups for remote recovery
Advanced features	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ Virtual business services ■ Resiliency plans ■ Evacuation plans

Table 2-4 Recovering VMware virtual machines using third-party replication technology *(continued)*

Tasks	More information
Perform remote recovery operations 	Once you have configured the resiliency groups for remote recovery, you can perform rehearsal and cleanup rehearsal operations on the resiliency groups. You can also perform migrate, takeover, or resync operations on the resiliency groups. ■ Rehearsal ■ Cleanup rehearsal ■ Migrate ■ Take over ■ Resync
Monitor assets 	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities
Miscellaneous references 	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. ■ Using klish ■ Troubleshooting ■ Updating ■ References

Recovering Hyper-V virtual machines using third-party replication technology

When you configure Hyper-V virtual machines for disaster recovery, Veritas Resiliency Platform lets you select the replication technology to replicate data from a production data center to a recovery data center.

Veritas Resiliency Platform supports the following replication technologies. Depending on your environment, select the replication technology that best fits your business needs.

- Hyper-V Replica

- EMC SRDF
- EMC Recoverpoint
- Netapp (cDOT) Snapmirror
- HP 3PAR Remote Copy
- Hitachi TrueCopy/HUR
- IBM SVC Global Mirror
- IBM XIV Remote Mirror

Table 2-5 Recovering Hyper-V virtual machines using third-party replication technology

Tasks	More information
Plan your environment 	Refer to the Overview and Planning Guide to know about the product, its components, features, and capabilities. Refer to the Release Notes for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment are compatible with the requirements mentioned in the checklist. ■ Overview and Planning Guide ■ Release Notes ■ Checklist for deployment and disaster recovery configuration

Deploy and configure the virtual appliances 	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances in both the data centers.
	■ Download the files required for deployment
	■ About deploying the virtual appliances
	■ Deploy the virtual appliances for Resiliency Manager and Infrastructure Management Server (IMS)
	  ■ Using VMware vSphere client
	  ■ Using Hyper-V Manager
	■ Configure the virtual appliances as Veritas Resiliency Platform components:
	  ■ About configuring the virtual appliances
	  ■ Configuring Resiliency Manager or IMS

Table 2-5 Recovering Hyper-V virtual machines using third-party replication technology *(continued)*

Tasks	More information

Set up the resiliency domain 	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console.
	■ Create the resiliency domain using getting started wizard
	■ Configure the settings for the resiliency domain:
	  ■ Add IMS
	  ■ Manage user authentication and permission
	  ■ Manage alerts, notifications, and other product settings

Add asset infrastructure 	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console. ■ Add Hyper-V servers ■ Add enclosures
Infrastructure Pairing	For recovering assets to Hyper-V you have to do following Infrastructure Pairing: ■ Navigate to **Settings > Infrastructure > Access Profile > Network** to mark purpose of the networks, refer Add and map network objects. ■ For DNS customization, refer Add DNS servers. ■ Create network mappings, refer Network pairs for recovering machines to on-premises data center.
Create resiliency groups 	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. You can create a resiliency group either for basic monitoring (start or stop virtual machines) or for recovery on local or remote data center. ■ Configure resiliency groups for basic monitoring ■ Manage resiliency groups for remote recovery

Table 2-5 Recovering Hyper-V virtual machines using third-party replication technology *(continued)*

Tasks	More information
Advanced features 	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ Virtual business services ■ Resiliency plans ■ Evacuation plans
Perform remote recovery operations 	Once you have configured the resiliency groups for remote recovery, you can perform rehearsal and cleanup rehearsal operations on the resiliency groups. You can also perform migrate, takeover, or resync operations on the resiliency groups. ■ Rehearsal ■ Cleanup rehearsal ■ Migrate ■ Take over ■ Resync
Monitor assets 	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities
Miscellaneous references 	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. ■ Using klish ■ Troubleshooting ■ Updating ■ References

Recovering Applications using third-party replication technology

When you configure applications for disaster recovery, Veritas Resiliency Platform lets you select the replication technology to replicate data from a production data center to a recovery data center.

Veritas Resiliency Platform supports the following replication technologies. Depending on your environment, select the replication technology that best fits your business needs.

- EMC SRDF
- EMC Recoverpoint
- Netapp (cDOT) Snapmirror
- HP 3PAR Remote Copy
- Hitachi TrueCopy/HUR

Table 2-6 Recovering applications using third-party replication technology

Tasks	More information
Plan your environment 	Refer to the Overview and Planning Guide to know about the product, its components, features, and capabilities. Refer to the Release Notes for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment are compatible with the requirements mentioned in the checklist. ■ Overview and Planning Guide ■ Release Notes ■ Checklist for deployment and disaster recovery configuration

Deploy and configure the virtual appliances 	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances in both the data centers.
	■ Download the files required for deployment
	■ About deploying the virtual appliances
	■ Deploy the virtual appliances for Resiliency Manager and Infrastructure Management Server (IMS)
	  ■ Using VMware vSphere client
	  ■ Using Hyper-V Manager
	■ Configure the virtual appliances as Veritas Resiliency Platform components:
	  ■ About configuring the virtual appliances
	  ■ Configuring Resiliency Manager or IMS

Table 2-6 Recovering applications using third-party replication technology *(continued)*

Tasks	More information

Set up the resiliency domain 	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console.
	■ Create the resiliency domain using getting started wizard
	■ Configure the settings for the resiliency domain:
	  ■ Add IMS
	  ■ Manage user authentication and permission
	  ■ Manage alerts, notifications, and other product settings

Add asset infrastructure 	Before you can monitor and manage data center assets from the console, you must add the asset infrastructure to Veritas Resiliency Platform. The IMS then discovers the asset information for monitoring and operations in the console.
	■ Add virtualization servers:
	  ■ Add VMware virtualization servers
	  ■ Hyper-V servers
	■ Add host assets
	■ Add enclosures
	■ Add DNS servers

Create resiliency groups 	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. You can create a resiliency group either for basic monitoring (start or stop virtual machines) or for recovery on local or remote data center. ■ Managing applications ■ Configure resiliency groups for basic monitoring ■ Manage applications for remote recovery
Advanced features 	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ Virtual business services ■ Resiliency plans ■ Evacuation plans

Table 2-6 Recovering applications using third-party replication technology *(continued)*

Tasks	More information
Perform remote recovery operations	Once you have configured the resiliency groups for remote recovery, you can perform rehearsal and cleanup rehearsal operations on the resiliency groups. You can also perform migrate, takeover, or resync operations on the resiliency groups. ■ Rehearsal ■ Cleanup rehearsal ■ Migrate ■ Take over ■ Resync
Monitor assets	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities
Miscellaneous references	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. ■ Using klish ■ Troubleshooting ■ Updating ■ References

Recovering InfoScale applications

Veritas InfoScale Operations Manager gives you a single, centralized management console for the Veritas InfoScale products. You can use it to monitor, visualize, and manage storage and cluster resources, and generate reports about these components in the Management Server domain.

Veritas Resiliency Platform lets you manage the InfoScale applications that are already configured in Veritas InfoScale Operations Manager. You cannot add or modify InfoScale applications through Resiliency Platform. They can be added or modified only by an administrator through Veritas InfoScale Operations Manager.

The InfoScale applications are automatically discovered in the Resiliency Platform when the Veritas InfoScale Operations Manager server is added to the resiliency domain. Veritas InfoScale Operations Manager users must download and install Veritas Resiliency Platform Enablement add-on to automatically discover the InfoScale applications. You can download the add-on from Veritas Services and Operations Readiness Tools (SORT).

A typical workflow of Veritas Resiliency Platform for InfoScale applications consists of a Veritas InfoScale Operation Manager server reporting to a Resiliency Manager. The InfoScale applications should be already configured in Veritas InfoScale Operations Management server. You can group the InfoScale applications into resiliency groups or VBSs to recover, monitor, visualize, and generate reports about these applications in the Resiliency Platform.

The following diagram depicts the general workflow of configuring the InfoScale applications using Resiliency Platform.

Figure 2-4 A typical workflow for recovering managed InfoScale applications

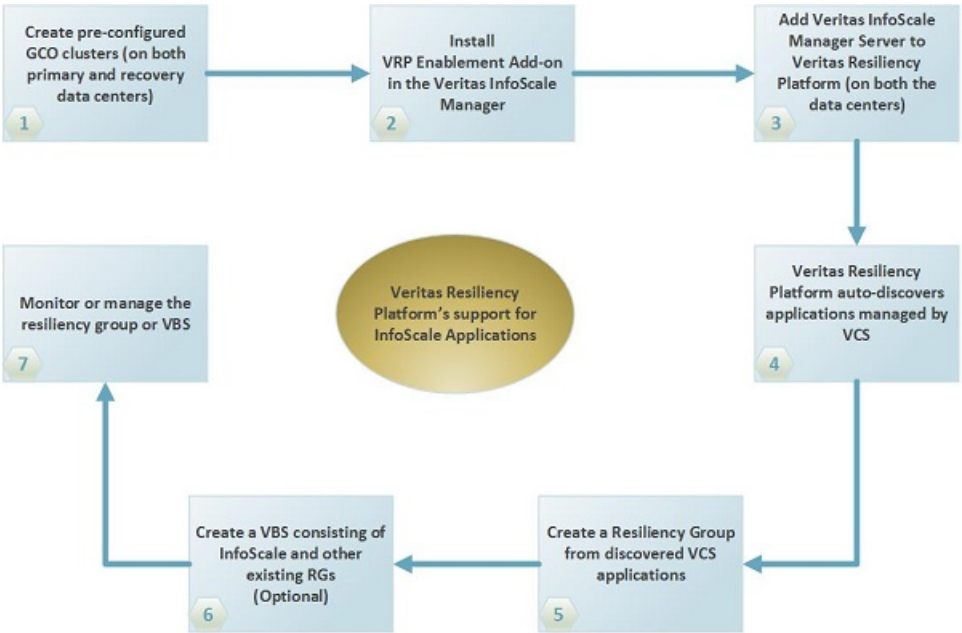


Table 2-7 Recovering InfoScale applications

Tasks	More information
Plan your environment 	Refer to the Overview and Planning Guide to know about the product, its components, features, and capabilities. Refer to the Release Notes for release information such as main features, known issues, and limitations. Ensure that the configuration details in your environment are compatible with the requirements mentioned in the checklist. ■ Overview and Planning Guide ■ Release Notes ■ Checklist for deployment and disaster recovery configuration

Deploy and configure the virtual appliances 	Veritas Resiliency Platform is deployed as virtual appliances. Download and deploy the virtual appliances for Resiliency Manager and IMS in both the data centers.
	■ Download the files required for deployment
	■ About deploying the virtual appliances
	■ Deploy the virtual appliances for Resiliency Manager and Infrastructure Management Server (IMS)
	  ■ Using VMware vSphere client
	  ■ Using Hyper-V Manager
	■ About configuring the virtual appliances
	■ Configuring Resiliency Manager or IMS

Set up the resiliency domain 	Set up the infrastructure and basic settings of the Veritas Resiliency Platform resiliency domain. These tasks are performed after you configure the Resiliency Manager and log in to the web console.
	■ Create the resiliency domain using getting started wizard
	■ Configure the settings for the resiliency domain:
	  ■ Add InfoScale Operations Manager server
	  ■ Manage user authentication and permission
	  ■ Manage alerts, notifications, and other product settings

Create resiliency groups 	After adding the assets to Resiliency Platform, you organize the related assets into a resiliency group that you can protect and manage as a single entity. You can create a resiliency group either for basic monitoring (start or stop virtual machines) or for recovery on local or remote data center. ■ Configure resiliency groups for basic monitoring ■ Manage applications for remote recovery

Table 2-7 Recovering InfoScale applications *(continued)*

Tasks	More information
Advanced features	Virtual business services, resiliency plans, and evacuation plans are some of the features of Veritas Resiliency Platform that you can additionally use to customize the process of recovery of your assets. ■ Virtual business services ■ Resiliency plans ■ Evacuation plans
Perform remote recovery operations	Once you have configured the resiliency groups for remote recovery, you can perform rehearsal and cleanup rehearsal operations on the resiliency groups. You can also perform migrate, takeover, or resync operations on the resiliency groups. ■ Rehearsal ■ Cleanup rehearsal ■ Migrate ■ Take over ■ Resync
Monitor assets	You can monitor risks to the recoverability or continuity of your protected assets. Run various reports to view the status of the assets in your data center. And view details about operations such as the status (in-progress, finished, or failed), start and end time, and the objects on which the operation was performed on the Activities page. ■ Risks ■ Reports ■ Activities
Miscellaneous references	After the virtual appliances are deployed and configured, you are given limited menu-based access to the operating system and the product. You need to use klish menu to manage the configuration-related changes to the product and to troubleshoot. ■ Using klish ■ Troubleshooting ■ Updating ■ References

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Glossary

activity	A task or an operation performed on a resiliency group.
add-on	An additional software package that can be installed on hosts by the Infrastructure Management Server (IMS) for specialized uses.
asset infrastructure	The data center assets that can be added to the Infrastructure Management Server (IMS) for IMS discovery and monitoring. For example, virtualization servers, virtual machines, enclosures, and applications.
assets	The virtual machines, physical machines, or applications that have been discovered by the Infrastructure Management Server (IMS) and that can be grouped into resiliency groups.
data center	A location that contains asset infrastructure to be managed by Veritas Resiliency Platform. For the disaster recovery use case, the resiliency domain must contain at least two data centers in different locations, a source data center and target data center. Each data center has a Resiliency Manager and one or more IMSs.
host	In Veritas Resiliency Platform, the term hosts means Application host, Resiliency Platform Data Mover host, Storage discovery host, VMware Discovery host, and Hyper-V host.
Infrastructure Management Server (IMS)	The Veritas Resiliency Platform component that discovers, monitors, and manages the asset infrastructure within a data center. The IMS transmits information about the asset infrastructure to the Resiliency Manager.
klish	Command Line Interface SHell. Provides the command line menu on the virtual appliance for use after the initial bootstrap configuration.
migrate	A planned activity involving graceful shutdown of assets at the source data center and starting them at the target data center. In this process, replication ensures that consistent data is made available at the target data center.
persona	A user role that has access to a predefined set of jobs (operations). Used to assign permissions to users and groups for Veritas Resiliency Platform web console operations.
rehearsal	A zero-downtime test that mimics the configuration, application data, storage, and the failover behavior of the resiliency group.

	Rehearsal verifies the ability of the resiliency group to fail over to the recovery data center during a disaster.
Replication Gateway	The Veritas Resiliency Platform component that performs data replication between the source and the target data center.
resiliency domain	The logical scope of a Resiliency Platform deployment. It can extend across multiple data centers.
resiliency group	The unit of management and control in Veritas Resiliency Platform. Related assets are organized into a resiliency group to be managed and monitored as a single entity.
Resiliency Manager	The Veritas Resiliency Platform component that provides resiliency capabilities within a resiliency domain. It is composed of loosely coupled services, a distributed data repository, and a management web console.
resiliency plan	A collection of tasks or operations, along with the relevant assets, which are performed in a predefined sequence.
resiliency plan template	A template defining the execution sequence of a collection of tasks or operations.
Resiliency Platform Data Mover Replication host	To enable replication using Resiliency Platform Data Mover replication technology, you need to add an asset and prepare it for replication. Asset can be a physical machine or a virtual machine.
source data center	The data center that is normally used for business.
take over	An activity initiated by a user when the source data center is down due to a disaster and the assets need to be restored at the target data center to provide business continuity.
target data center	The data center that is used if a disaster scenario occurs.
tier	Within a virtual business service (VBS), resiliency groups are arranged as tiers. Tiers represent the logical dependencies between the resiliency groups and determine the relative order in which operations are performed on the resiliency groups.
VAIO framework	VMware framework consisting of vSphere APIs for I/O Filtering. This framework enables Veritas Resiliency Platform to run filters on ESXi servers and intercept any I/O requests from a guest operating system to a virtual disk.
virtual appliance	An appliance that includes the operating system environment and the software application which are deployed together as a virtual machine.
	The Veritas Resiliency Platform virtual appliance is deployed as a virtual machine and then configured with basic settings and a role (for example, Resiliency Manager).

virtual business service (VBS) A multi-tier IT service where each VBS tier hosts one or more resiliency groups. A VBS groups multiple services as a single unit for visualization, automation, and recovery in case of a disaster in the desired order.

Veritas Replication Set A virtual machine, which belongs to the resiliency group, is termed as Veritas Replication Set. All the disks attached to this virtual machine, including the boot and data disk, constitute a Veritas Replication Set. The write order fidelity is maintained across all disks in a given replication set.

web console The web-based management console on the Resiliency Manager that is used to configure the settings for the resiliency domain and perform operations.