SimpliVity RapidDR Guide

Version 1.5.0

www.SimpliVity.com

Trademarks

SimpliVity ®,  ®, SimpliVity cube logo ®, SimpliVity The Data Virtualization Company ®, OmniCube ®, OmniStack ®, Global Federated Architecture ®, Data Virtualization Platform ™, SVT ™, and RapidDR ™ are trademarks or registered trademarks of SimpliVity ® Corporation in the United States and certain other countries.

All other trademarks are the property of their respective owners.

Patents

SimpliVity OmniCube ® and OmniStack ® products are covered by various United States and foreign patents and pending patent applications.

Patents include:

AU 2010265954; BR PI1013789-0; CA 2,776,231; CN ZL201080033630.9; DE 2433226; DK 2433226; EP 2433226; ES 2433226; FI 2433226; FR 2433226; GB 2433226; IN 679/CHENP/2012; IT 2433226; JP 5695040; NO 2433226; SE 2433226; US 8,478,799; US 9,367,551; US 2016/0283498; EP 12738334.7; HK 14110213.4; US US 2013/0024615; AU 2012273295; BR 112013032706-5; CA 2,840,178; CN 201280036259.0; EP 12732895.3; HK 14110215.2; IN 368/CHENP/2014; JP 6059216; US 9,436,748; US 2016-0371354; AU 2013222325; BR 112014020806-9; CA 2,865,240; CN 201380017261.8; EP 13710149.9; HK 15100889.7; IN 6929/CHENP/2014; JP 5902323; US 9,032,183; US 2015/0242315; AU 2014308938; BR 112016003205-5; CA 2,921,039; CN 201480045910.X; EP 14759406.3; IN 201647008897; JP 2016-536408; US 9,043,576; US 2015-0254256; AU 2016206826; BR 112016028144-6; CA WO2016/115219; CN WO2016/115219; EP 16703395.0; IN 201647041955; JP WO2016/115219; US 2016/0202927; US 15/280,347

Copyright

Customer support

To contact SimpliVity Customer Support, visit https://support.simplivity.com. When contacting a representative, you need to know the serial number of your OmniStack server to verify your service subscription.

SimpliVity uses OmniWatch to automatically monitor the health of your OmniStack equipment and have it send us notifications of any alerts or errors.

February 2017
760-000180 Rev A

Preface

Intended audience

This document is intended for users of SimpliVity OmniStack products who want to install, manage, and monitor their hyperconverged IT infrastructure. This information is intended for system administrators experienced in hypervisor technology, virtual machine management, and data center operations.

SimpliVity documentation conventions

SimpliVity documentation uses the following conventions to assist your reading.

General formatting

`Monospace font` represents a command line syntax, file path, system output, or similar code.

Italic font represents a user-defined name or variable.

Bold font represents a user interface element, such as a button or tab, with which a user interacts.

Command Line formatting

SimpliVity documentation uses the following format for CLI commands:

```
command --option variable
```

where

- `command` is the name of the command and should be typed exactly as shown.
- `--option` is a command option and should be typed exactly as shown.
- *variable* is an option variable and should be replaced with the required value.

Informational Alerts

WARNING:

Alerts you to the risk of bodily injury, damage to hardware or software, loss of warranty, or loss of data.

Caution:

Alerts you to the risk of data unavailability or possible issues with regard to security, performance, or configuration.

Note:

Indicates information that is supplemental or that may require additional attention.

Tip:

Provides helpful information such as best practices.

SimpliVity documentation feedback

We welcome your feedback, suggestions, and comments to help us continue to improve the quality of our documentation.

Send your comments to Documentation-Feedback@SimpliVity.com and include as much detail as possible to help us identify the affected area.

Reading path

SimpliVity provides a comprehensive documentation set for this release of the RapidDR software. The following reading path lists the documentation for this release.

Learn about this RapidDR release.

Document	Description
SimpliVity RapidDR Release Notes 760-000181 Rev A	Explains new features, fixed issues, and known issues in this release. Read this document first. Note that the information in these Release Notes may supersede information in other publications in this documentation set.

Install and use RapidDR software.

Document	Description
SimpliVity RapidDR Guide 760-000180 Rev A	Explains the installation and usage steps for RapidDR software.

Contents

Chapter 1: Introduction to SimpliVity RapidDR

About SimpliVity RapidDR

RapidDR is a standalone utility that facilitates the recovery of a failed set of virtual machines from a *source* environment to a *recovery* environment in the event of a site disaster. Using RapidDR, you can:

- Select the virtual machines from the source environment, including those in datacenters, clusters, and resource pools.
- Configure the recovery settings, at the recovery group level or at the virtual machine level.
- Modify the recovery settings on an ongoing basis.
- Execute the recovery configuration to recover the specified site environment.
- Test your recovery configuration.
- Generate a Runbook output of your recovery configuration plan.

SimpliVity RapidDR security

Any user of RapidDR must have Administrator access to both the source and recovery vCenter.

Caution:

The RapidDR recovery configuration file contains information such as IP addresses, software configuration parameters, usernames, and passwords. If your organization considers these to be sensitive information, you should closely guard this file.

SimpliVity RapidDR 1.5 Architecture

The following diagram shows the recommended architecture for RapidDR.

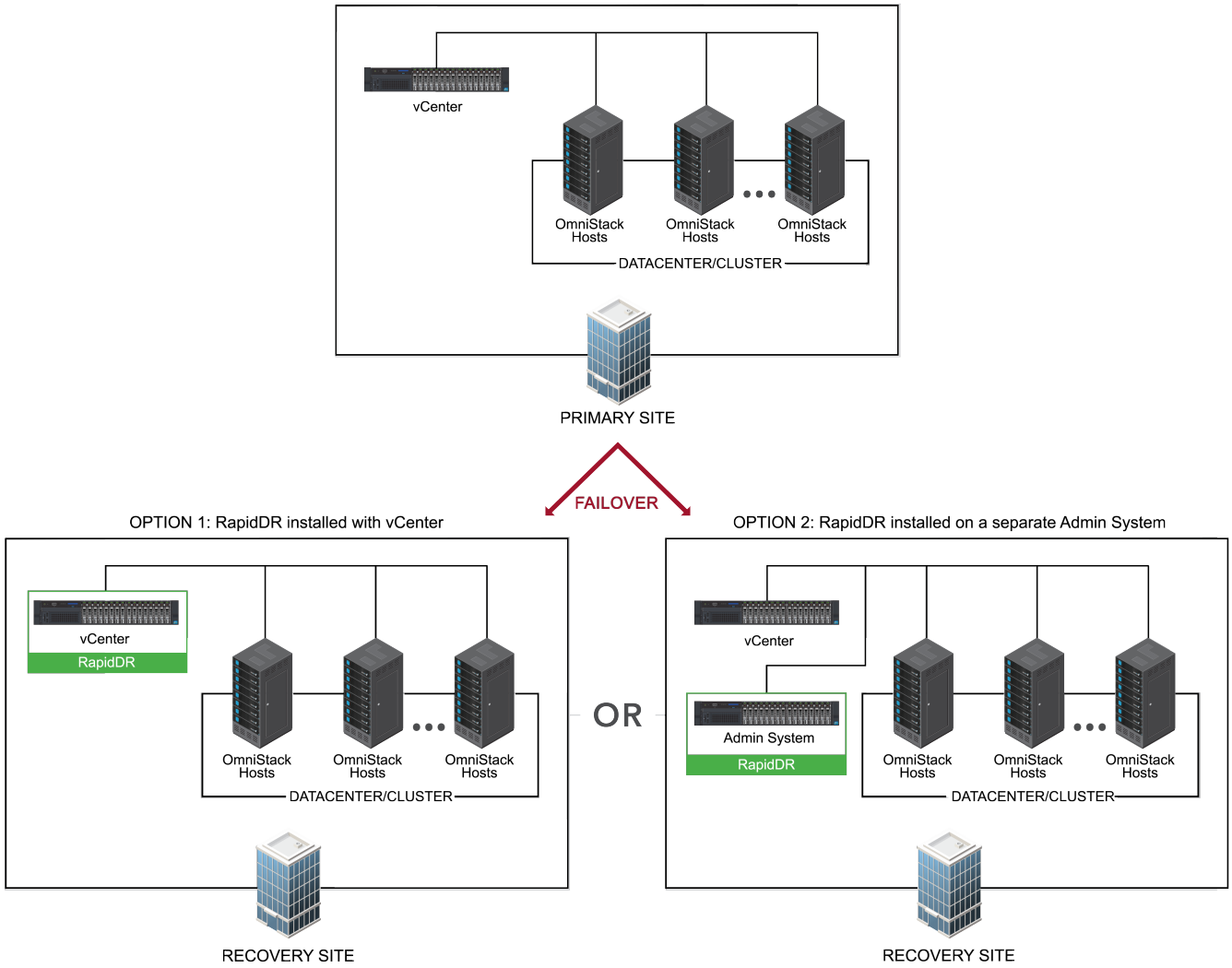

Figure 1: RapidDR Architecture diagram

Chapter 2: Install SimpliVity RapidDR

Install SimpliVity RapidDR

Before you begin

For information on the compatibility of RapidDR with OmniStack software, refer to the *SimpliVity RapidDR OmniStack Interoperability Guide* on the SimpliVity Customer Support site at https://support.simplivity.com.

Note:

Install RapidDR on a laptop or other machine that is outside both the source and recovery environments but has connectivity to those environments. This provides a higher level of availability for the RapidDR machine in the case of a site disaster.

- Be sure the primary (or source) environment is configured the way you want it before using RapidDR.
- Copy the `RapidDRInstaller` file to the machine where you are installing RapidDR.
- The following must be installed on the machine where you are installing RapidDR and the installer notifies you of prerequisites that are not installed or accessible:
  - Microsoft .NET Framework 4 or later
  - PowerShell 5.0
  - vSphere PowerCLI 5.5 R1 or 6.3 R1 release

Procedure overview

This task provides the steps to install RapidDR.

Note:

At any point during the installation, you can click **Back** to return to the previous screen or click **Cancel** to cancel the installation.

Procedure

1. Uninstall any previous version of RapidDR using the Windows Control Panel.
2. Double-click the `setup.exe` RapidDR Installer file.

   The **Welcome to the RapidDR Setup Wizard screen** opens.
3. Click **Next**.

The **License Agreement** screen opens.

4. Do one of the following.
   - To accept the license agreement, select **I Agree** and click **Next**.
   - To cancel the installation of RapidDR, select **I Do Not Agree** and click **Cancel**.
5. On the **Select Installation Folder** screen, perform the following as necessary.
   a) To select a different folder than the default, click **Browse**, and locate or create the new installation folder.

      You can use **Disk Cost** to view the space available on a different disk. This can help you identify the best location for the installation.

   b) Select **Everyone** or **Just me** to specify who can use RapidDR on this computer.
6. Click **Next**.

   The **Confirm Installation** screen opens.
7. Click **Next** to start the installation.

   The **Installing** RapidDR screen opens.

   Note:

   This screen may reload several times as the necessary files are installed.
8. On the **Installation Complete** screen, click **Close** to exit the installer.

Results

A RapidDR shortcut icon is now available on your desktop.

Configure Windows PowerShell

Before you begin

Be sure you have installed RapidDR.

Procedure overview

This task provides the steps to configure Windows PowerShell to run with RapidDR.

Procedure

1. Locate **Windows PowerShell ISE** (either in the **Start** menu or on your desktop).
2. Right-click **Windows PowerShell ISE** and select **Run as administrator**.
3. If prompted, enter the administrator user name and password.
4. Type the following command at the prompt:

   ```
   Set-ExecutionPolicy -ExecutionPolicy RemoteSigned -Scope CurrentUser
   ```
5. Press `<Enter>`.

The **Execution Policy Change** screen opens.

6. Click **Yes**.

Chapter 3: Create a recovery configuration

Create a recovery configuration

Before you begin

- Be sure that the source environment is configured the way you want it before using RapidDR.
- Be sure that the recovery site has adequate resources to handle the configured recovery load.
- All the required port groups must be configured to sustain a failover.
- Be sure that all of the virtual machines that you want to include in the recovery are present in a cluster. Virtual machines on an OmniStack host outside of a cluster are not listed within RapidDR.

Procedure overview

This task provides the steps to run RapidDR, create a recovery configuration, and save the recovery configuration file for use later if a disaster occurs.

Note:

At any point during this procedure, you can click **Back** to return to the previous screen or click **Cancel** to return to the **Select an Operation** screen.

Procedure

1. Double-click the RapidDR icon to open it.
2. On the **Select an Operation** screen, click **Plan**.

   The **Create** and **Modify** buttons appear and the title of the screen changes to **Plan Recovery**.
3. Click **Create**.

   The title of the screen changes to **Plan Recovery: Create Plan**.
4. Accept the default filename and location, or click **Browse**, and specify a location and filename.

   The filename must include the `.sdr` extension and can only include letters, numbers, dashes (-), and underscores (_).

   Note:

   The default file name contains a time stamp.

   ---
5. Click **Next**.
6. Log on to the source and recovery systems.

a) Enter the address and credentials for the source system.

b) Enter the address and credentials for the recovery system. If this system uses the same username and password as the source system, select the **Same Username and Password** option.

c) Optional: If you want to include the username and password for the recovery system in the recovery configuration file, select the **Save password** option.

Note:

If you select the **Save password** option, the RapidDR recovery configuration file will store these usernames and passwords. They become, therefore, available to anyone with access to the file.

---

d) Click **Login**.

7. Select the virtual machines that you want to include in the recovery configuration.

   a) In the list of **Available Virtual Machines**, using the list of datacenters, clusters, and machines, select the virtual machines.

   Note:

   Virtual machines are listed in alphabetical order by name.

   ---

   b) Click the **>>** button to move them to the **Selected Virtual Machines** list.

   The datacenter and cluster names are copied as well, where applicable. You can also double-click individual items to move them.

   c) Optional: To remove a machine from the **Selected Virtual Machines** list, select the virtual machine and click the **<<** button to move it back to the **Available Virtual Machines** list. You can also double-click individual items to move them.

8. Click **Next**.

9. Create your recovery groups.

   a) Above the **Recovery Groups** list, click the add (**+**) icon.

   b) Name the recovery group.

   c) Optional: At any time, you can rename a recovery group, by selecting the group and clicking the edit (pencil) icon.

10. Assign virtual machines to your recovery groups.

    a) If you have multiple recovery groups, select the recovery group you want to work with.

    b) In the list of **Selected Virtual Machines**, select the virtual machines that you want to include in the recovery group, and click the **>>** button to include them in the recovery group.

    Note:

    If you do not create a recovery group, or if you select a virtual machine for recovery but do not add it to a specific recovery group before clicking on the next virtual machine, then RapidDR places the virtual machine in a default recovery group.

    ---

c) Optional: To remove a machine from the recovery group, select the virtual machine and click the **<<** button to move it back to the **Selected Virtual Machines** list.

d) Optional: To change the order of recovery groups or of virtual machines in a recovery group, use the up-arrow or down-arrow.

e) Optional: To move a virtual machine to a different recovery group, you must remove it from the group it is in and add it to the correct group.

f) Optional: To delete a recovery group, select the group and click the delete (trash) icon.

If the recovery group contains any virtual machines, they are moved back to the **Selected Virtual Machines** list.

11. Repeat steps 9.a on page 12 through 10.f on page 13 until you have created all of your recovery groups and assigned all of the selected machines to a group.
12. Click **Next**.
13. On the **Recovery Settings** screen, click the **Recovery Settings** tab and use the Recovery settings on page 14 to complete the recovery configuration for all recovery groups and all virtual machines.
14. Optional: To specify the settings you want to be used when you test a recovery configuration, click the **Test Settings** tab and use the Recovery settings on page 14 to complete the test configuration for all recovery groups and all virtual machines.

Note:

The only information that you can change is the **Apply network settings** section.

15. Click **Next**.
16. If there are any errors with the configuration, an error message provides the necessary correction. Click **OK** to return to the configuration screen and make the necessary changes.
17. On the **Summary** screen, review the summary of the recovery configuration file.
18. Optional: To export the summary report in Excel format, click the corresponding export icon above the summary report.
19. Optional: To export the summary report in a Runbook format using PDF, click the PDF export icon above the summary report.
20. Select the following as necessary:

Option	Description
Back	Go to the previous screen so you can make changes.
Save	Confirms that your configuration is correct and saves the Recovery Configuration file using the name and location you previously specified.
Save and Export	Lets you save the Recovery Configuration file and export the file to an additional name and location.

Next steps

- Save the configuration file somewhere where it is safe and secure.
- Be sure to keep your configuration current. As things change in your environment, be sure to update the configuration recovery file using the Modify a recovery configuration file on page 17 procedure.

Recovery settings

The following are the options in the **Recovery Settings** screen. Settings indicated with an asterisk (*) are required.

- **Recovery group name** or **VM name** — Identifies which recovery group or virtual machine you have selected and for which you are configuring the recovery settings. So that you can identify recovered virtual machines, each virtual machine name is appended with `_recovery`. You can change a **VM name**; you cannot change the **Recovery Group Name**.

  Note:

  The virtual machine name allows a maximum of 80 characters, including the `_recovery` suffix. If you need a longer name, you can remove the `_recovery` suffix.

- **Datacenter** — Specifies the datacenter name. This list is populated from the list of datacenters present in the recovery vCenter.

  Select an option from the drop-down list.

- **Resource Pool** — Specifies the resource pool for the selected datacenter. This list is populated from the resource pools present in the selected datacenter in the recovery vCenter.

  Select an option from the drop-down list.

- **Folder** — Specifies the folder into which the virtual machines will be placed after recovery. This list is populated from the virtual machine folders present in the selected datacenter in the recovery vCenter.

  Select an option from the drop-down list.

- **Datastore** — Specifies the datastore in which the virtual machines will be recovered. This list is populated from the datastores present in the selected datacenter in the recovery vCenter.

  Select an option from the drop-down list.

- **Wait for VM Tools to be ready** — If this option is selected, when a recovery configuration is executed, RapidDR waits for VMware tools to be ready before continuing with the recovery of the next virtual machine. If this option is not selected, RapidDR does not wait for VMware tools to be ready; it continues with the next operations for the virtual machine. This is enabled by default.
- **Wait time before recovery** — Specifies the amount of time that RapidDR waits before starting the recovery of the next virtual machine. The default value is 0 seconds. This time starts after the **Wait for VM Tools to be ready** time, if that option is selected.
- **Wait time after recovery** — Specifies the amount of time that RapidDR waits after the recovery of one virtual machine is complete before moving to the next virtual machine. The default value is 0 seconds.
- **Disable guest reboot** — If this option is selected and a recovery configuration is executed, RapidDR does not reboot the guest operating system on the virtual machine after the configuration

is complete. If this option is not selected, RapidDR reboots the guest operating system after the configuration is complete. This is enabled by default.

- **Before reboot** — Specifies the command or script that RapidDR executes after the recovery of the virtual machine but before rebooting the virtual machine.
- **After reboot** — Specifies the command or script that RapidDR executes after the recovery is complete and the virtual machine is rebooted.
- **Guest username** and **password** — Specifies the credentials for the guest account. This is required if guest reboot is allowed. These credentials are also used for command execution and network configuration of the virtual machine.

  Note:

  The guest username must be a local account on the guest. Network authentication (such as to Active Directory, NIS, LDAP, etc.) is not supported. This is due to a lack of networking on the guest virtual machine until after recovery has been completed.

  Also, the guest user must have administrator privileges.

- **Apply network settings** — This section includes the settings for the network options for the selected recovery group or virtual machine. Once you select the following values for a recovery group, if you select a virtual machine within that recovery group, the settings are applied to that virtual machine and you can adjust the settings for the individual virtual machine.
  - vNIC settings — These settings apply to the recovery group or the virtual machine. If you select a virtual machine with more than one vNIC, multiple lines appear in the grid to allow you to set the options for each vNIC.
    - **vNIC** — Lists the vNIC name or number. You cannot change this value. vNIC1 is mandatory for each virtual machine and must be present.

      Note:

      This is populated from the source virtual machine. If you attempt to modify a recovery configuration file and the source virtual machine is unavailable, only the default vNIC is displayed.

    - **Port group** — Specifies the port group name. This list is populated from the port groups present in the selected datacenter in the recovery vCenter. Select an option from the drop-down list.

      Note:

      If the port group at the recovery site is removed or its name changes, an error will occur during recovery. Make sure you keep all port groups up to date in the recovery plan.

    - **DHCP** — Specifies if DHCP is enabled on the network for this recovery group. If the DHCP option is enabled for vNIC1, then the option must be enabled for all other vNICs in the virtual machine. If the DHCP option is disabled for vNIC1, then the option must be disabled for all other vNICs in the virtual machine.
    - **IP Address** — This option is only visible for virtual machines; not for recovery groups. This specifies the static IP address for the virtual machine. This must be a valid IP address.

If the **DHCP Enabled** option is selected, this field is not required.

- **Subnet mask** — This specifies the subnet mask for the static IP address. If the **DHCP Enabled** option is selected, this field is not required. Enter a valid subnet mask.

- **Default Gateway** — This specifies the IP address of the default gateway for the selected virtual machine or for all of the virtual machines in the selected recovery group. Enter a valid IP address. If **DHCP Enabled** is selected, this is not required.
- **DNS** — This specifies the IP address of the DNS server for the selected virtual machine or for all of the virtual machines in the selected recovery group. Enter a valid IP address. Multiple IP addresses can be specified using a comma separator. If **DHCP Enabled** is selected, this is not required.

Chapter 4: Modify a recovery configuration file

Modify a recovery configuration file

Before you begin

You must have a valid RapidDR recovery configuration file.

Procedure overview

This task provides the steps to edit a RapidDR recovery configuration file.

Caution:

RapidDR may not work properly if your recovery file has been edited outside of the RapidDR interface. You should only use the following procedure to modify a RapidDR recovery file.

Note:

At any point during this procedure, you can click **Back** to return to the previous screen or click **Cancel** to return to the **Select an Operation** screen.

Procedure

1. Double-click the RapidDR icon to open it.
2. On the **Select an Operation** screen, click **Plan**.

   The **Create** and **Modify** buttons appear and the title of the screen changes to **Plan Recovery**.
3. Click **Modify**.

   The title of the screen changes to **Plan Recovery: Modify Plan**.
4. Click **Import** and select the file.
5. Click **Next**.
6. Optional: If you are attempting to load a recovery configuration file from a previous version, you must update the file. Do one of the following:
   - To update the current file and continue, click **Yes**. A backup copy of the file will be saved as `Previous-Config_backup.sdr`.
   - To choose a different file, click **No**.
7. Do one of the following:
   - To keep the current file name and continue, click **Yes**.

- To change the file name, select **Change file name**, type the new file name, and click **Yes**.

  The filename can only include letters, numbers, dashes (-), and underscores (_). You do not need to add the `.sdr` extension when renaming the file.
- To choose a different file or action, click **No**.

8. Log on to the recovery system.

   The address is populated automatically from the recovery configuration file. If the recovery configuration file includes a username and password, those are populated automatically as well.

9. Select the virtual machines that you want to include in the recovery configuration.

   a) In the list of **Available Virtual Machines**, using the list of datacenters, clusters, and machines, select the virtual machines.

   Note:

   Virtual machines are listed in alphabetical order by name.

   b) Click the **>>** button to move them to the **Selected Virtual Machines** list.

   The datacenter and cluster names are copied as well, where applicable. You can also double-click individual items to move them.

   c) Optional: To remove a machine from the **Selected Virtual Machines** list, select the virtual machine and click the **<<** button to move it back to the **Available Virtual Machines** list. You can also double-click individual items to move them.

10. Click **Next**.

11. Create your recovery groups.

    a) Above the **Recovery Groups** list, click the add (**+**) icon.

    b) Name the recovery group.

    c) Optional: At any time, you can rename a recovery group, by selecting the group and clicking the edit (pencil) icon.

12. Assign virtual machines to your recovery groups.

    a) If you have multiple recovery groups, select the recovery group you want to work with.

    b) In the list of **Selected Virtual Machines**, select the virtual machines that you want to include in the recovery group, and click the **>>** button to include them in the recovery group.

    Note:

    If you do not create a recovery group, or if you select a virtual machine for recovery but do not add it to a specific recovery group before clicking on the next virtual machine, then RapidDR places the virtual machine in a default recovery group.

    c) Optional: To remove a machine from the recovery group, select the virtual machine and click the **<<** button to move it back to the **Selected Virtual Machines** list.

    d) Optional: To change the order of recovery groups or of virtual machines in a recovery group, use the up-arrow or down-arrow.

e) Optional: To move a virtual machine to a different recovery group, you must remove it from the group it is in and add it to the correct group.

f) Optional: To delete a recovery group, select the group and click the delete (trash) icon.

If the recovery group contains any virtual machines, they are moved back to the **Selected Virtual Machines** list.

13. Repeat steps 11.a on page 18 through 12.f on page 19 until you have created all of your recovery groups and assigned all of the selected machines to a group.
14. Click **Next**.
15. On the **Recovery Settings** screen, click the **Recovery Settings** tab and use the Recovery settings on page 14 to complete the recovery configuration for all recovery groups and all virtual machines.
16. Optional: To specify the settings you want to be used when you test a recovery configuration, click the **Test Settings** tab and use the Recovery settings on page 14 to complete the test configuration for all recovery groups and all virtual machines.

Note:

The only information that you can change is the **Apply network settings** section.

17. Click **Next**.
18. If there are any errors with the configuration, an error message provides the necessary correction. Click **OK** to return to the configuration screen and make the necessary changes.
19. On the **Summary** screen, review the summary of the recovery configuration file.
20. Optional: To export the summary report in Excel format, click the corresponding export icon above the summary report.
21. Optional: To export the summary report in a Runbook format using PDF, click the PDF export icon above the summary report.
22. Select the following as necessary:

Option	Description
Back	Go to the previous screen so you can make changes.
Save	Confirms that your configuration is correct and saves the Recovery Configuration file using the name and location you previously specified.
Save and Export	Lets you save the Recovery Configuration file and export the file to an additional name and location.

Next steps

- Save the configuration file somewhere where it is safe and secure.
- Be sure to keep your configuration current. As things change in your environment, be sure to update the configuration recovery file using the Modify a recovery configuration file on page 17 procedure.

Related tasks

Create a recovery configuration on page 11

Chapter 5: Test a recovery

Test a recovery

Before you begin

You must have a valid SimpliVity RapidDR recovery configuration file.

Caution:

RapidDR may not work properly if your recovery configuration file has been edited outside of the RapidDR interface.

Procedure overview

This task provides the steps to test your RapidDR recovery configuration file.

Note:

At any point during this procedure, you can click **Back** to return to the previous screen or click **Cancel** to return to the **Select an Operation** screen.

Procedure

1. Double-click the RapidDR icon to open it.
2. On the **Select an Operation** screen, click **Failover**.

   The **Execute** and **Test** buttons appear and the title of the screen changes to **Execute Failover**.
3. Click **Test**.
4. Click **Import** and select the file.
5. Click **Next**.
6. On the **Confirmation** screen, verify that this is the recovery that you want to test and click **Test Recovery**.

   If this is not the correct recovery configuration, click **Cancel** to return to the previous screen.
7. Log on to the recovery system.

   The address is populated automatically from the recovery configuration file. If the recovery configuration file includes a username and password, those are populated automatically as well.
8. On the **Test Failover: In Progress** screen, monitor the recovery progress.

9. If the recovery of a virtual machine fails at a certain step, RapidDR presents an error message with a request for how to continue. (Each error message and action is included in the **Status** column of the log screen, in the **Restore issues** section of the screen, and in the log files.)
10. Optional: For any errors, perform the following steps:
    a) Use the **Restore issues** list to identify the virtual machine that failed the restore process.
    b) Outside of RapidDR, resolve the issue.
    c) If you want to retry the action during the recovery, click the retry icon.
    d) If you wait until the recovery is complete, resolve the issue using one of the following options:

Option	Description
Retry action	Attempts to retry the recovery of the virtual machine.
Skip VM	Skips the virtual machine currently being recovered and proceeds with the recovery of the next virtual machine.
Abort recovery	Cancels the entire recovery. You can make any necessary changes and restart the recovery.

    - If none of these options is selected before the message times out, RapidDR performs the **Retry Action** option.
    - The first time the error occurs, the error message dialog box opens and stays open for 90 seconds. To extend the time, click the Stop Timer icon. You must then select an option to continue.
    - The second time the same error occurs, the error message dialog box opens with no timer. You must select an option to continue.
11. Once the entire recovery is complete, or if you chose **Abort recovery** or **Cancel recovery**, click **Continue**.

    The **Summary** screen opens.
12. To export the Summary Report in Excel format, click the export icon above the summary report.
13. Verify that the recovery is complete and successful by reviewing the results on the **Summary** screen.
14. Clean up your recovery environment by clicking **Clean Up VMs**.
15. On the **Confirmation** screen, verify that you want to perform the identified cleanup and click **Yes**.

    If this is not the correct recovery configuration, click **No** to return to the previous screen.
16. On the **Test Failover: Cleanup** screen, monitor the cleanup.
17. Verify that the cleanup was complete and successful by reviewing the results and click **Continue**.

    RapidDR returns you to the **Select an Operation** screen.

Chapter 6: Execute a recovery

Execute a recovery

Before you begin

You must have a valid SimpliVity RapidDR recovery configuration file.

Caution:

RapidDR may not work properly if your recovery configuration file has been edited outside of the RapidDR interface.

Procedure overview

This task provides the steps to recover your site configuration after a disaster using your RapidDR recovery configuration file.

Note:

At any point during this procedure, you can click **Back** to return to the previous screen or click **Cancel** to return to the **Select an Operation** screen.

Procedure

1. Double-click the RapidDR icon to open it.
2. On the **Select an Operation** screen, click **Failover**.

   The **Execute** and **Test** buttons appear and the title of the screen changes to **Execute Failover**.
3. Click **Execute**.
4. Click **Import** and select the file.
5. Click **Next**.
6. On the **Confirmation** screen, verify that this is the recovery that you want to execute and click **Execute Recovery**.

   If this is not the correct recovery configuration, click **Cancel** to return to the previous screen.
7. Log on to the recovery system.

   The address is populated automatically from the recovery configuration file. If the recovery configuration file includes a username and password, those are populated automatically as well.
8. On the **Execute Failover: In Progress** screen, monitor the recovery progress.

9. If the recovery of a virtual machine fails at a certain step, RapidDR presents an error message with a request for how to continue. (Each error message and action is included in the **Status** column of the log screen, in the **Restore issues** section of the screen, and in the log files.)
10. Optional: For any errors, perform the following steps:
    a) Use the **Restore issues** list to identify the virtual machine that failed the restore process.
    b) Outside of RapidDR, resolve the issue.
    c) If you want to retry the action during the recovery, click the retry icon.
    d) If you wait until the recovery is complete, resolve the issue using one of the following options:

Option	Description
Retry action	Attempts to retry the recovery of the virtual machine.
Skip VM	Skips the virtual machine currently being recovered and proceeds with the recovery of the next virtual machine.
Abort recovery	Cancels the entire recovery. You can make any necessary changes and restart the recovery.

    - If none of these options is selected before the message times out, RapidDR performs the **Retry Action** option.
    - The first time the error occurs, the error message dialog box opens and stays open for 90 seconds. To extend the time, click the Stop Timer icon. You must then select an option to continue.
    - The second time the same error occurs, the error message dialog box opens with no timer. You must select an option to continue.
11. Once the entire recovery is complete, or if you chose **Abort recovery** or **Cancel recovery**, click **Continue**.

    The **Summary** screen opens.
12. To export the Summary Report in Excel format, click the export icon above the summary report.
13. Verify that the recovery is complete and successful by reviewing the results on the **Summary** screen, and click **Continue**.

    RapidDR returns you to the **Select an Operation** screen.

Results

RapidDR has recovered your system and you can proceed with any manual steps to complete the failover to your recovery site.

Appendix A: Troubleshooting

SimpliVity RapidDR log files

RapidDR generates log files that you can use to identify issues. These log files are located in the same directory where RapidDR is installed.

`RapidDR_UI_Log.txt`

This file contains the logs and errors generated during the use of the RapidDR application. This includes the creation, modification, and execution of a recovery configuration file. New information is appended each time one of these procedures is run.

`RapidDR_Recovery_RestoreLog.txt`

This file contains all of the information generated during a restore process for each virtual machine.

`RapidDR_Recovery_ConfigLog.txt`

This file contains all of the information generated during the configuration recovery process for each virtual machine.

General troubleshooting tips

The following troubleshooting tips may help in the event of an error while using SimpliVity RapidDR.

"Username and Password not valid"

You must modify the recovery plan and provide a valid username and password.

"Incorrect file extension. Please select a valid Automated Recovery Configuration file."

The recovery configuration file must have the `.sdr` extension. Rename the file or select the correct file.

"Duplicate Virtual Machine Name"

This error occurs if the virtual machine name already exists. You must modify the recovery plan and provide a different, unique virtual machine name. Or rename the virtual machine that is causing the conflict in the recovery site

No virtual machines are shown in the virtial machine selection list.

Verify that PowerCLI and PowerShell are both installed and have the proper versions.

The virtual machine you are looking for is not listed.

Virtual machines are only listed if they are present in the cluster and eligible for recovery. A virtual machine is eligible for recovery if it meets all of the following criteria:

- It is on an OmniStack host.
- It is in a datastore.
- It is being backed up to the recovery site.

Virtual machines on an OmniStack host outside of a cluster are not listed within RapidDR.

Troubleshooting tips for executing a SimpliVity RapidDR recovery

The following troubleshooting tips may help in the event of an error while running an execution using SimpliVity RapidDR.

"The requested operation requires elevation"

This error occurs during the network configuration on the recovered virtual machine. Ensure that the specified user has administrator privileges and is a local account. Authenticating against a domain may not be possible as network connectivity may not yet be available.

Note:

The guest username must be a local account on the guest. Network authentication (such as to Active Directory, NIS, LDAP, etc.) is not supported. This is due to a lack of networking on the guest virtual machine until after recovery has been completed.

Also, the guest user must have administrator privileges.

"No backup found"

Verify that the virtual machine has a backup policy set to backup to the recovery site.

Verify that the backup site has been receiving backups using the "search backups" functionality at the virtual machine level.

"Failed to relocate VM"

The specified resource pool is missing.

"Failed to power on VM"

The resource pool does not have enough resources (such as CPU or memory resources) to power on the virtual machine.

"Timeout while waiting for VMware Tools"

- Verify that VMware Tools is installed on the virtual machine and ensure that the service is set to start automatically within the virtual machine.

- The script specified for **Execute command/script before reboot** or **Execute command/script after reboot** failed to complete.

"Failed to restore VM from backup"

The remote server returned an error `(400) Bad request`. The size of the datastore is less than the size of the virtual machine backup.

"Failed to modify port group of network interface"

The port group at the recovery site has been removed or its name was changed. Virtual machines that have been recovered must be manually attached to the appropriate port group.

Appendix B: SimpliVity terminology

The following table contains SimpliVity terms and definitions.

Term	Definition
Arbiter	Alternate name for the SimpliVity Arbiter. (See SimpliVity Arbiter.)
cluster	A collection of SimpliVity OmniStack hosts that share resources and provide high availability and load-balancing services.
datacenter	A building with a collection of internet technology (IT) systems used to host IT services.
failure domain	A collection of SimpliVity OmniStack hosts that serve as potential high availability failover targets for each other for purposes of high availability and disaster recovery.
Federation	A collection of SimpliVity OmniStack hosts and clusters managed in a single globally-unified management domain.
guest operating system	The operating system that runs inside a virtual machine.
guest user	A user on a guest operating system with administrative privileges used while configuring the virtual machine during recovery in RapidDR.
host	A generic term referring to either an OmniStack host or a standard host.
OmniCube host	See OmniStack host.
OmniStack Accelerator	A SimpliVity PCI card that provides non-volatile memory, accelerated compression, and cryptographic hashing. The Accelerator card communicates with the OmniStack software.
OmniStack host	A host (server) containing an OmniStack Accelerator card that communicates with the OmniStack software and some supported virtualization software. An OmniStack host uses a dedicated virtual machine called the OmniStack

Term	Definition
	Virtual Controller, which runs the OmniStack software. (Previously referred to as an OmniCube host.)
OmniStack software	The SimpliVity software running on the OmniStack Virtual Controller. (Previously referred to as OmniCube software.)
OmniStack Virtual Controller (OVC)	A virtual machine dedicated to the OmniStack host that runs the OmniStack software. This software in turn communicates with the OmniStack Accelerator card inside the host. (Previously referred to as an OmniCube Virtual Controller.)
RapidDR	The SimpliVity disaster recovery automation utility that facilitates the recovery of a failed set of virtual machines from a source environment to a recovery environment in the event of a disaster.
recovery configuration	The collection of configuration parameters that specify the details for virtual machine reconfiguration during failover execution. These parameters are stored in a RapidDR `.sdr` configuration file.
recovery group	A container within a recovery configuration used for the organization of virtual machines and as a parent container for virtual machine default settings in RapidDR.
recovery vCenter	A vCenter located at the recovery site in a RapidDR configuration that is used to recover failed virtual machines from the source site.
SimpliVity Arbiter	The SimpliVity software that facilitates communication between OmniStack hosts in a Federation and enables failover and recovery operations. The Arbiter casts a tie-breaking vote in datacenter or cluster failure scenarios that include an even number of OmniStack hosts. This arbitration ensures the resiliency of the Federation. (Previously referred to as an OmniCube Arbiter.)
source vCenter	A vCenter located at the source (primary) site in a RapidDR configuration, where the virtual machines run under normal circumstances.
standard host	A host that does not contain OmniStack software.
virtual machine (VM)	A virtualized (software) computer environment that runs a guest operating system and associated application software. Multiple virtual machines can operate concurrently on the same physical host machine.