

# Symantec™ Disaster Recovery Orchestrator Getting Started Guide

Microsoft Azure

6.1

# Symantec™ Disaster Recovery Orchestrator Getting Started Guide

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[www.symantec.com/business/support/contact\\_techsupp\\_static.jsp](http://www.symantec.com/business/support/contact_techsupp_static.jsp)

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When you contact Technical Support, please have the following information available:

- Product release level
- Hardware information

- Available memory, disk space, and NIC information
- Operating system
- Version and patch level
- Network topology
- Router, gateway, and IP address information
- Problem description:
  - Error messages and log files
  - Troubleshooting that was performed before contacting Symantec
  - Recent software configuration changes and network changes

## Licensing and registration

If your Symantec product requires registration or a license key, access our technical support Web page at the following URL:

[www.symantec.com/business/support/](http://www.symantec.com/business/support/)

## Customer service

Customer service information is available at the following URL:

[www.symantec.com/business/support/](http://www.symantec.com/business/support/)

Customer Service is available to assist with non-technical questions, such as the following types of issues:

- Questions regarding product licensing or serialization
- Product registration updates, such as address or name changes
- General product information (features, language availability, local dealers)
- Latest information about product updates and upgrades
- Information about upgrade assurance and support contracts
- Information about the Symantec Buying Programs
- Advice about Symantec's technical support options
- Nontechnical presales questions
- Issues that are related to CD-ROMs or manuals

## Support agreement resources

If you want to contact Symantec regarding an existing support agreement, please contact the support agreement administration team for your region as follows:

Asia-Pacific and Japan [customercare\\_apac@symantec.com](mailto:customercare_apac@symantec.com)

Europe, Middle-East, and Africa [semea@symantec.com](mailto:semea@symantec.com)

North America and Latin America [supportolutions@symantec.com](mailto:supportsolutions@symantec.com)

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<http://www.symantec.com/connect/storage-management>

## Documentation

Your feedback on product documentation is important to us. Send suggestions for improvements and reports on errors or omissions. Include the title and document version (located on the second page), and chapter and section titles of the text on which you are reporting. Send feedback to:

[doc\\_feedback@symantec.com](mailto:doc_feedback@symantec.com)

For information regarding the latest HOWTO articles, documentation updates, or to ask a question regarding product documentation, visit the Storage and Clustering Documentation forum on Symantec Connect.

<https://www-secure.symantec.com/connect/storage-management/forums/storage-and-clustering-documentation>

# Getting Started with Symantec Disaster Recovery Orchestrator

This document includes the following topics:

- [About Symantec Disaster Recovery Orchestrator for Microsoft Azure](#)
- [Disaster Recovery Orchestrator architecture](#)
- [Disaster Recovery Orchestrator licensing](#)
- [Supported software](#)
- [Getting started with Disaster Recovery Orchestrator](#)
- [Disaster Recovery Orchestrator Console UI](#)
- [Documentation](#)

## About Symantec Disaster Recovery Orchestrator for Microsoft Azure

Symantec Disaster Recovery Orchestrator provides the following services for applications running on an organization's on-premises systems and in the Microsoft Azure cloud environment:

- Application monitoring
- Disaster recovery (DR)

## Application monitoring

Disaster Recovery Orchestrator provides monitoring capabilities for the applications running in an organization's IT environment. The on-premises systems on which these applications are deployed can be physical computers or virtual machines that are managed in a virtualization environment. In a cloud environment, the applications are deployed on virtual machines. Any virtualization platform may be used.

Disaster Recovery Orchestrator employs an agent framework to monitor the state of applications and their dependent components. Specific agents are available to monitor the application, storage, and network components. Together, these agents monitor the overall health of the configured applications by running specific commands, tests, or scripts.

Disaster Recovery Orchestrator is based on Symantec Cluster Server, and uses similar concepts such as agents, resources, and service groups to provide application monitoring. Disaster Recovery Orchestrator has a lightweight server footprint that allows faster installation and configuration.

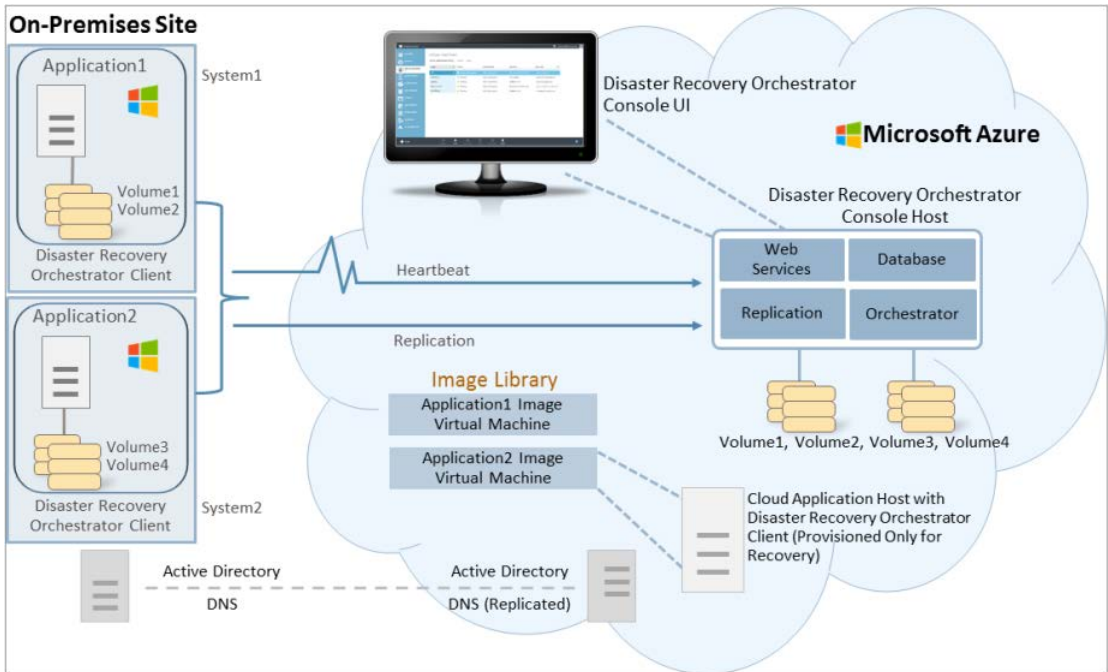
## Disaster recovery

When the Disaster Recovery Orchestrator solution is in place, the Azure cloud acts as a DR site for the applications that run at the on-premises site. In the event of a disaster, you can continue servicing your clients through the applications running in Azure. Later, you can resume application processing at the on-premises site when it is functional again. Even when the on-premises site is fully operational, you can perform a fire drill to test the DR readiness of the configuration.

# Disaster Recovery Orchestrator architecture

The Disaster Recovery Orchestrator architecture comprises of various entities configured at the on-premises and the Microsoft Azure sites.





## On-premises site configuration

- Physical computers or virtual machines that host the applications
- Volumes that store the application data
- Active Directory and DNS configuration
- Disaster Recovery Orchestrator Client  
 The Client components are deployed on each application host. When the application is online at the on-premises site, they monitor it and perform replication activities.

## Azure site configuration

- Virtual networks  
 A virtual network that is used for the production environment is configured within a VPN. A separate network, which may or may not be part of the same VPN, is configured to test the application recovery configurations.  
 The Disaster Recovery Orchestrator components communicate with each other over the WAN links (Heartbeat and Replication) within the VPN.
- Active Directory and DNS configuration

The Active Directory and DNS that are used for the Disaster Recovery Orchestrator solution are replicated from their counterparts at the on-premises site.

- **Virtual machines**

A dedicated virtual machine is used to host the Disaster Recovery Orchestrator Console components. This virtual machine is referred to as the Console host. For each on-premises system that hosts an application to be configured for recovery a corresponding virtual machine is provisioned in the cloud. This virtual machine hosts the application and is referred to as the cloud application host.
- **Cloud storage**

The necessary operating system disks for cloud virtual machines are provisioned from the Azure storage account.

Storage for the application data is also provisioned in accordance with the application storage configured at the on-premises site.
- **Disaster Recovery Orchestrator Console**

The Console components include:

  - Web services to host the Console framework
  - Database to store the Disaster Recovery Orchestrator configuration
  - Replication module to manage the synchronization of application data between the on-premises and the Azure sites
  - Orchestrator (Console UI) to manage the recovery workflow
- **Disaster Recovery Orchestrator Client**

The Client components are deployed on each cloud application host. When the application is online at the Azure site, they monitor it and perform replication activities.

## Disaster Recovery Orchestrator licensing

Disaster Recovery Orchestrator follows a subscription-based licensing model. The licenses are metered on a per-instance basis, and the metering is done manually. An instance is defined as a 'protected application component'. If you change or renew the number of protected applications, you must report it to your Symantec Account Representative or your Symantec Certified Partner Reseller.

All licensing in Disaster Recovery Orchestrator is keyless. The Symantec product installer installs the embedded keys by default. A keyless license lets you use all the available product features.

For more information about the pricing, licensing, and the purchasing model, visit the Symantec website at:

<https://licensing.symantec.com/>

## Supported software

For the latest information about the supported software, refer to the Software Compatibility List (SCL) at the following location:

<http://www.symantec.com/docs/TECH209011>

## Getting started with Disaster Recovery Orchestrator

To get started with Disaster Recovery Orchestrator, follow this sequence of steps:

1. Prepare the Microsoft Azure environment for disaster recovery (DR) readiness.
2. Install the Disaster Recovery Orchestrator components as follows:
  - Install Disaster Recovery Orchestrator Console on a dedicated cloud virtual machine.
  - Install Disaster Recovery Orchestrator Client on the on-premises systems that host the applications that you want to configure for recovery and on the corresponding cloud virtual machines.
3. Configure the recovery administrators and guest users on the Console UI.
4. Configure applications for monitoring and for recovery, and optionally test the configurations by performing fire drills.
5. Monitor the status of the configured applications, perform recovery operations when required, and view the operation reports.

The following figure depicts the steps to get started with Disaster Recovery Orchestrator and the documents that provide the relevant information.



## Disaster Recovery Orchestrator Console UI

The Disaster Recovery Orchestrator Console UI is browser-based, and you can access it using the following URL:

```
https://ConsoleHost:14155/draas/login.html
```

Replace the *ConsoleHost* variable with the virtual machine name or its IP address. On the Console host itself, you can also use **localhost** instead of the virtual machine name.

Disaster Recovery Orchestrator authenticates the users before they can access the various views of the Console UI. Users may log on as security administrators, recovery administrators, or guest users.

Security administrators only have access to the Settings view, which contains the Privilege Settings and the Recovery Settings tabs.

Recovery administrators or guest users do not have access to the Settings view. They have access to the following views:

- Dashboard

This view appears by default when a user logs on to the Console. It provides an overview of the applications that the user can monitor or administer. The following figure depicts the Dashboard view:



- Applications

This view lists all the applications that the logged-on user can monitor or administer. It displays the status of each application at the on-premises and the Microsoft Azure sites, its data replication state, and the ongoing operations if any.

The following figure depicts the Applications view:



The Settings view is available for each application, which displays the resources that are used for its recovery configuration and lets you change some of their settings.

- Takeover, Failback, Firedrill

These views list the applications on which a takeover, failback, or fire drill operation is in progress respectively.

When you select an application from the list, it displays the details of each task that is performed as part of the operation. If a task fails, you can retry the operation from the command bar at the bottom of the view. You can also pause or terminate an ongoing operation.

- Reports

This view lists all the operations that have been performed on the application recovery configurations.

The following figure depicts the Reports view:

APPLICATION	ON-PREMISES SYSTEM	STARTED	ENDED	OPERATION	USERNAME	RPO	STATUS
Microsoft SQL Server 2012	SQLW2K8	2014-04-30 13:04:44	2014-04-30 13:16:03	failback	loginuser	55s	completed
Microsoft SQL Server 2012	VFRSQL	2014-04-30 13:24:00	2014-05-02 05:22:40	takeover	loginuser	0s	completed
Microsoft SQL Server 2012	SQLW2K8	2014-04-30 12:42:37	2014-04-30 12:54:34	takeover	loginuser	45s	completed

TASK	DURATION	STATUS	ACTION
Take 'SQLServer2012_SG' offline on 'SQLW2K8'	47s	completed	None
Synchronizing data	2s	completed	None
Pause replication	1m:45s	completed	None
Detach disk(s) 'SQL2012W2K8-SQL2012W2K8-0-201403010941570164' from 'PW2K8console'	2m:13s	completed	None
Provision 'SQL2012W2K8'	2m:42s	completed	None
Change replication settings on 'SQL2012W2K8'	46s	completed	None
Bring 'SQLServer2012_SG' online on 'SQL2012W2K8'	3m:42s	completed	None

## Documentation

Disaster Recovery Orchestrator documentation is available in the following formats:

- Adobe Portable Document Format (PDF)

You can view and print the PDF documents with Adobe Acrobat Reader. For more information about the latest version of Acrobat Reader, or for help with the Acrobat Reader installation, visit the Adobe website at:

<http://www.adobe.com>

- HTML

Each of the PDF documents is also available online in the HTML format. You can navigate through the topics online and, if required, print individual topics.

- SymHelp  
Except the release notes, all the information that is available in the PDF and the HTML formats is also available online in the SymHelp format. You can search through the available topics, bookmark them, or print them as required.

## List of documents

[Table 1-1](#) lists the titles and file names of the Disaster Recovery Orchestrator documents and describes their contents.

**Table 1-1** Disaster Recovery Orchestrator documentation

Document Title and File Name	Description
<p><i>Symantec Disaster Recovery Orchestrator Getting Started Guide</i></p> <p>sdro_gettingstarted_61_win.pdf</p>	<p>Provides the following information:</p> <ul style="list-style-type: none"> <li>■ Introduction to Disaster Recovery Orchestrator for Microsoft Azure</li> <li>■ Overview of the graphical user interfaces</li> <li>■ Location and description of the relevant documentation</li> </ul>
<p><i>Symantec Disaster Recovery Orchestrator Release Notes</i></p> <p>sdro_releasenotes_61_win.pdf</p>	<ul style="list-style-type: none"> <li>■ Provides an overview of the product and its salient features</li> <li>■ Lists the limitations and the issues that are known at the time of the release</li> </ul>
<p><i>Symantec Disaster Recovery Orchestrator Deployment Guide</i></p> <p>sdro_deploy_61_win.pdf</p>	<p>Provides information about the following:</p> <ul style="list-style-type: none"> <li>■ Setting up the cloud environment for using Disaster Recovery Orchestrator</li> <li>■ Installing the following components: <ul style="list-style-type: none"> <li>■ Disaster Recovery Orchestrator Console on a dedicated virtual machine in the cloud</li> <li>■ Disaster Recovery Orchestrator Client on the on-premises application host and the corresponding application host in the cloud</li> </ul> </li> <li>■ Troubleshooting some of the most common environment setup and deployment issues</li> </ul>

**Table 1-1** Disaster Recovery Orchestrator documentation (*continued*)

Document Title and File Name	Description
<p><i>Symantec Disaster Recovery Orchestrator Administration Guide</i></p> <p>sdro_admin_61_win.pdf</p>	<p>Provides information about the following:</p> <ul style="list-style-type: none"> <li>■ Configuring recovery administrators</li> <li>■ Configuring applications for recovery in the cloud</li> <li>■ Performing operations on the application recovery configurations and viewing reports</li> <li>■ Bundled agents that manage the infrastructure, network, and replication resources</li> <li>■ Disaster Recovery Orchestrator agents for custom applications</li> <li>■ Replication mechanism that is used to keep the application data at the on-premises and cloud sites in sync</li> <li>■ Troubleshooting the most common configuration and administration issues</li> <li>■ Configuring and administering custom applications for application monitoring and recovery</li> </ul>
<p><i>Symantec Disaster Recovery Orchestrator Agent for Microsoft SQL Server 2008 and 2008 R2 Configuration Guide</i></p> <p>sdro_sql2008_61_win.pdf</p>	<ul style="list-style-type: none"> <li>■ Provides information about the Disaster Recovery Orchestrator agent for SQL Server 2008 and 2008 R2</li> <li>■ Describes how to configure SQL Server 2008 and 2008 R2 instances for application monitoring and recovery</li> </ul>
<p><i>Symantec Disaster Recovery Orchestrator Agent for Microsoft SQL Server 2012 Configuration Guide</i></p> <p>sdro_sql2012_61_win.pdf</p>	<ul style="list-style-type: none"> <li>■ Provides information about the Disaster Recovery Orchestrator agent for SQL Server 2012</li> <li>■ Describes how to configure SQL Server 2012 instances for application monitoring and recovery</li> </ul>
<p>Online Help for Symantec Disaster Recovery Orchestrator</p> <p><a href="http://help.symantec.com/CS?ProdId=SDRO_GSG&amp;context=sdro6.1">http://help.symantec.com/CS?ProdId=SDRO_GSG&amp;context=sdro6.1</a></p>	<p>All the previously listed documents, except the release notes, are also available in the SymHelp format. SymHelp is the cloud-based Online Help from Symantec. You can use the Search or the Browse tabs to navigate through the available topics.</p>

## Location of documents

The documentation is available at the following locations:

- On the Symantec Disaster Recovery Orchestrator software disc

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**Note:** The product documentation is not installed with the product. Symantec recommends that you copy the documentation to your local disk for future reference.

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- On the Symantec Operations Readiness Tools (SORT) website at:  
<https://sort.symantec.com>
- As part of the SymHelp topics at:  
[http://help.symantec.com/CS?ProdId=SDRO\\_GSG&context=sdro6.1](http://help.symantec.com/CS?ProdId=SDRO_GSG&context=sdro6.1)