

Veritas™ Desktop and Laptop Option 9.6

Disaster Recovery Scenarios

Veritas Desktop and Laptop Option

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- Problem description:
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Worldwide (except Japan)

CustomerCare@veritas.com

Japan

CustomerCare_Japan@veritas.com

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Introduction

This document explains the Disaster recovery scenarios for DLO versions 7.6 and above.

In a distributed and standalone setup, DLO is dependent on the following services:

- DLO Administration Service
- MindTree Storesmart Dedupe Server
- SQL Server (DLO / Instance Name)
- SQL Server (Dedupe / Instance Name)
- SQL Server Browser
- DLO Desktop Agent Change Journal Reader
- DLO Maintenance Service
- DLO Edge Server Service (Applicable to DLO 8.0 and above versions)
- DLO Web Server Service (Applicable to DLO 8.0 and above versions)

Important: For data restoration to be successful, we recommend that you take a periodic point in time (PIT) backups of critical components and server states.

The following are the four critical components required for data restoration:

1. DLO Database
2. Dedupe Database
3. DLO Network User Data Folder (NUDF)
4. Dedupe Storage Location (DSL)

The following configuration files on the Dedupe Server component should be backed up to preserve the configuration settings post a disaster recovery scenario:

For example, if Dedupe Server is installed in the path C:\Program Files\Veritas.

On the Dedupe Server:

S.No	Filename	Path
1.	All conf files	C:\Program Files\Veritas\Veritas DLO\Dedupe\Tomcat\conf
2.	Web.xml	C:\Program Files\Veritas\Veritas DLO\Dedupe\Tomcat\webapps\DedupeServer\WEB-INF
3.	log4j.properties	C:\Program Files\Veritas\Veritas DLO\Dedupe\Tomcat\webapps\DedupeServer\WEB-INF\classes

Note: Post the Disaster Recovery steps are performed, the above configuration files have to be manually replaced in their respective paths on the Dedupe Server. The DLO Administrator also needs to restart the Mindtree Storesmart Dedupe Server Service.

Overview of DLO-Dedupe Setup

Note: This recovery process is applicable to the setup where the DLO and Dedupe components are installed and configured together.

When a DLO Administration Server is configured with a Dedupe Server, the following components form a single logical entity in time.

- DLO configuration database
- Dedupe Server database files
- DLO file data in file server
- Dedupe Storage Location data

Hence, the backup and restore of these components should be performed together at a single logical point in time (PIT).

PIT across all the components requires the data writes to be stopped on all the components. The data writes can be stopped by disconnecting the individual components from the network or the Dedupe Server can be switched to maintenance mode by scheduling a Maintenance Window from the DLO Administration Console.

Backup

- Schedule a Maintenance Window with sufficient time out for backing up all components. If backup time cannot be estimated in advance, then a time out of '9999' minutes can be specified.
- Back up all the components and tag them together for easy identification of the same Point in Time for all the components.
- Stop the Maintenance Window from the DLO Administration Console.

For more information on scheduling or stopping a Maintenance Window, refer to the section "*Dedupe Server Maintenance*" in the *DLO Administrator's Guide*.

Restore

In case of a disaster, data of all the components should be restored to a suitable logical PIT backup.

To restore the data, follow these steps:

1. Shut down the Dedupe Server if it is running.
2. Restore all components data to the same logical Point in Time.
3. Run the following command: `DDAdminCU.exe -ConfirmDR`
4. Start the Dedupe Server.

We recommend that you follow this procedure for backup and restore operations, and thus prevent data loss or any issue related to data integrity.

Disaster Recovery Scenarios

The disaster recovery scenarios have been tested and qualified in the following distributed setup:

- Server 1: DLO Administration Server, DLO Admin Console and DLO Maintenance Server
- Server 2: Mindtree Storesmart Dedupe Server
- Server 3: Database Service (DB Service)
- Server 4: DLO Storage Location (NUDF)

- Server 5: Dedupe Storage Location (DSL)
- All DLO components residing on a single computer

The following table contains various disaster recovery scenarios where data can be restored successfully.

No.	Scenario	Result	Remarks
Dedupe Disabled Profile			
1	All critical components and server states are backed up	All the components are restored to the point in time when it was backed up. To restore data using the Emergency Restore feature, use the recovery password that was provided while configuring DLO for the first time.	Restore and backups are successful.
2	Only the DLO Database and NUDF are backed up	<ol style="list-style-type: none"> 1. After the DLO installation is completed, stop the SQL service on the DB server. 2. Replace the DLO DB files and start the SQL service. 3. Now, launch the DLO Admin console. 4. Restore the data. 	The DLO clients that were configured earlier can continue to back up and restore data.
3	Only NUDF is backed up	Once the server components are installed similar to the setup that was available earlier, data that was already backed up can be restored using the Emergency Restore feature. Use the recovery password that was provided while configuring DLO for the first time.	Data can be restored using emergency restore.
Dedupe Enabled Profile			
4	All critical components and server states are backed up	All the components are restored to the point in time when it was backed up. To restore data using the Emergency Restore feature, use the recovery password that was provided while configuring DLO for the first time.	Restore and backups are successful.
5	Dedupe DB,DLO DB,DSL and DLO Storage backed up	<ol style="list-style-type: none"> 1. After the DLO installation is completed, stop the SQL service on the DB server. 2. Replace the existing DLO DB files with the files that were backed up at an earlier PIT. 3. Start the SQL service. 4. Stop the Mindtree Storesmart Dedupe Server service. 5. Open the command prompt on the Dedupe server machine and run this command from the installation path: DDAdminCU.exe - ConfirmDR 	Data can be restored from the DLO Admin console and by using the Emergency Restore feature. The DLO clients that were configured earlier can continue to back up and restore data.

No.	Scenario	Result	Remarks
		<ol style="list-style-type: none"> 6. Click OK and complete the DR process. 7. Start the Mindtree Storesmart Dedupe Server service. 8. Now, launch the DLO Admin console. 9. To verify that the data restored from the PIT backup is intact, click the Restore tab on the DLO Admin console and restore data. 	

Combination of Dedupe and Non-Dedupe Data			
6	All critical components and Server states are backed up	<p>All the components are restored to the point in time when it was backed up.</p> <p>To restore data using the Emergency Restore feature, use the recovery password that was provided while configuring DLO for the first time.</p>	Restore and backups are successful
7	Only the DLO Database and NUDF are backed up	<ol style="list-style-type: none"> 1. After the DLO installation is completed, stop the SQL service on the DB server. 2. Replace the existing DLO DB files with the files that were backed up at an earlier PIT. 3. Start the SQL service. 4. Now, launch the DLO admin console. 5. Restore the non-dedupe data. 	Non-Dedupe data can be restored

Note: For DLO 8.0 and above versions, Edge and IO Servers are not critical components with respect to data recovery. These components can be reconfigured once all components are recovered to original state.
