

Arctera™ Desktop and Laptop Option 10.0

Quick Reference Guide for DLO Installation and Configuration

Arctera Desktop and Laptop Option: Quick Reference Guide for DLO Installation and Configuration.

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Introduction

Arctera™ Desktop and Laptop Option is a user centric backup solution that provides flexible implementation and centralized administration for backup and recovery of Windows and Mac desktops and laptops in the organization. This highly scalable solution with distributable components is suitable for environments of any scale, be it single-site, multi-site, or having remote offices, allowing you to protect even the most recent files with your users.

Built-in features include source side deduplication with content aware deduplication of Outlook PST and NSF files, automatic network selection for non-intrusive backup experience which enables switching between the offline, online and backup over internet modes, self-restore capabilities offered through agent, web browser, rollback capabilities for ransomware protection and detailed auto reporting.

This Quick Reference document intends to provide the basic steps in setting up a DLO environment so as to facilitate a smooth product evaluation process. If an administrator is implementing the product for a Production environment, please refer to the latest version of the *DLO Administrator's Guide* and *Best Practices* document, to understand the various implementation possibilities through DLO.

What's New in DLO 10.0

This section provides a brief introduction about the new features included in this release.

Arctera Desktop and Laptop Option 10.0 is a Major release. It mainly includes the Rebranding changes and the following key enhancements:

Support for ADFS

DLO can now be deployed in Active Directory Federation Services environment in a Domain Trust Independent set up.

Support for Azure AD

DLO now supports authenticating DLO domain users configured through Azure active directory.

License administration from console

DLO now provides the administrator with the ability to perform license administration from DLO Administration Console.

DLO Dashboard Enhancement

DLO Dashboard is now enhanced to display the Storage growth details, that helps the Administrator for Storage planning.

Support for Transport Layer Security (TLS) 1.3

DLO now supports Transport Layer Security (TLS) 1.3.

Simplified Installation

DLO now provides the Administrator with the ability to choose from Default or Custom installation options, thereby simplifying the installation process.

Diagnostic Enhancement for BOI

DLO now includes UI enhancements for the DLO Diagnostic utility for DLO Server and Windows DLO Agent that has streamlined Backup Over Internet configuration/issues logging.

Diagnostic Utility for MAC Clients

DLO Diagnostic utility is now supported for MAC clients. It can be used to scan and diagnose the status of Mac clients.

Log Gather Utility for MAC Clients

DLO Log Gather Utility is now supported for MAC clients. It can now be used to collect logs from the MAC clients.

Proliferation Support

- Windows Server 2025
- Windows 11 24H2
- macOS Sequoia (Version 15) support

Security Updates**General Bug Fixation**

DLO Components System Requirements

Arctera DLO is designed with the flexibility of a various possible implementations. However, some factors that affect DLO efficiency and performance should be considered in the planning process for DLO.

Arctera DLO Server has the following components:

1. **DLO Administration Server:** The service responsible for the Administrative activities.
2. **DLO Administration Console:** A graphical user interface for the Administrator to configure, manage and monitor the endpoint backup environment.
3. **DLO Maintenance Server:** Component responsible for revision maintenance and file grooming operations in the storage locations.
4. **Dedupe Server:** Application server that facilitates deduplication by maintaining the Global Hash Table, which helps in identifying unique and duplicate data on the desktop agents.
5. **DLO Storage:** Backup destination where the endpoint data will be stored. Comprises of the DLO Storage Location and Dedupe Storage Location.
6. **DLO Database:** Component that maintains the application information. Comprises of the DLO DB and Dedupe DB.
7. **DLO IO Server:** Application server residing within the corporate network, making the DLO resources accessible over internet.
8. **DLO Edge Server:** Component exposed to internet for front-ending the Application Servers.

Please note that the IO Server and Edge Server components are optional components that need to be configured only when opting for the Backup over Internet (BOI) capability that allows VPN-less backups.

DLO Server components can be installed as a *Standalone* setup in the same machine or can be installed as a *Distributed* setup, across different server machines as well. Within the scope of this document, the *Standalone* setup configuration will be discussed, where all these components reside on the same hardware.

Installation of DLO and its components on a VMware ESXi and Hyper-V servers is supported. The administrator can install all DLO Server components on Microsoft Azure and Amazon Web Services (AWS) cloud.

DLO Server Setup System Requirements

The hardware configuration for a Standalone setup for both non-BOI and BOI modes are as follows.

Users	Administration Server, Maintenance Server, Database, Dedupe Server (Excludes Edge Server and IO Server)		Administration Server, Maintenance Server, Database, Dedupe Server, Edge Server, IO Server	
	CPU	RAM	CPU	RAM
<=1000	64 Bit 6 Core Xeon, or compatible	16 GB	64 Bit 8 Core Xeon, or compatible	32 GB

The latest software configuration is preferred for the DLO Server setup as follows.

OS Version	Platform
Windows 2025 Server (Standard, Data Center)	x64
Windows 2022 Server (Standard, Data Center)	x64

Desktop Agent System Requirements:

CPU	RAM	OS Version
64-bit Pentium, Xeon, AMD, or compatible	Required: 8 GB Recommended: 16 GB for Windows 10 and above versions	Windows 11, 10, Mac 12.5, 12.4, 12.3, 12.2, 12.1, 12

For more information on the supported Operating Systems, refer the *Arctera DLO 10.0 Software Compatibility List* document.

Downloading Arctera DLO

The administrator can download the latest available version from the Trialware Download link on the homepage. If already a customer of Arctera DLO, the administrator can find it from the Download Center webpage as well.

Note: An inbuilt 60-day trialware license is available for the product evaluation.

1. Download the appropriate files into a temporary directory:

Arctera_Desktop_and_Laptop_Option_Y.Y_xxxxxx_64-bit.zip,

Where, Y.Y is the product version number and xxxxxx is the build number

2. To extract the files, double-click the .zip file.

Prerequisites for Installing Arctera DLO

The prerequisites for installing and managing a DLO setup are detailed here. Please ensure these prerequisites are taken care before the actual installation begins, to ensure that there are no problems during the installation process.

Item	Description
Domains and Active Directory	<p>The DLO Administration Server, DLO Database Server, DLO Dedupe Server, DLO Edge Server, DLO IO Server and DLO Storage Locations must be in a Windows Domain or Active Directory. Computers running the Desktop Agent can be outside a Windows Domain or Active Directory, but they must authenticate with the domain or directory to access the DLO Administration Server or Storage Locations.</p>
User privileges for installing and managing DLO	<p>Following are the accounts required for installing and managing DLO Components:</p> <p>Domain User or Domain Administrator account for:</p> <ul style="list-style-type: none"> • Arctera DLO Administration Server: This user should have local administrator privilege on DLO Administration Server machine, Storage Server and SQL Server. This user should have read and write access to the registry on the DLO Administration Server machine. • Mindtree Storesmart Dedupe Server service: This user should have local administrator privilege on the DLO Administration Server machine. This account should be the same as DLO Administration Server service account. • SQL Server (instance): This user should have local administrator privilege on DLO Administration Server, SQL Server machine and Storage Server. • SQL Server Browser: This user should have local administrator privilege on the SQL Server machine. • Arctera DLO Web Server Service: This user should have local administrator privilege on DLO Administration Server machine. This account should be the same as DLO Administration Server service account. <p>Local System Account for:</p> <ul style="list-style-type: none"> • Arctera DLO Edge Server Service • Arctera DLO Maintenance Server <p>Domain User account for:</p> <ul style="list-style-type: none"> • Accessing Dedupe Storage Location. This low privilege domain user account is also known as “Dedupe Storage Location Access Credential” and will be used by the Desktop Agent to access the Dedupe Storage Location. A user account with administrator rights is not permitted to be configured as Dedupe Storage Location Access Credential account. The administrator needs to ensure that the password for this user account does not expire frequently. If the password expires, then reset

	<p>the password for the domain user. This user should have the 'Allow log on locally' policy set in the domain controller group policy object.</p>
User privileges for DLO Agents users	<ul style="list-style-type: none"> • Impersonation privilege is required for the logged on user on the desktop agent machine for impersonating as the Dedupe Storage Location user in order to write the deduped data to the Dedupe Storage Location. • A local system account for the Volume Shadow copy service is required. This service should be up and running in order to provide backup statistics for generation of the Backup Status Report.
Database Selection	<p>By default, DLO installs its own instance of SQL Server 2017 Express. DLO can be manually configured to use an existing local SQL Server instance. The DLO Database Service requires minimum 6 GB hard disk space.</p> <p>Note: Ensure to manually install the Microsoft® SQL Server® 2017 Express Latest Cumulative Update available here.</p> <p>For more information on the supported versions, refer the <i>Arctera DLO 10.0 Software Compatibility List</i> document.</p> <p>DLO Database can be installed as one of the following options: Option 1 : Local SQL Server 2017 Express Instance Prerequisites: <ul style="list-style-type: none"> • DLO Database Service requires minimum 6 GB hard disk space. Details: <ul style="list-style-type: none"> • By default DLO installs its own instance of SQL Server Express edition. • On a 64-bit machine, the DLO and Dedupe databases will be stored on a new local SQL Server 2017 Express instance located on C:\Program Files\Microsoft SQL Server\MSSQL14.DLO. Option 2: Existing SQL Local Server Instance Prerequisites: <ul style="list-style-type: none"> • For existing local SQL server instance, the named pipes and TCP/IP must be enabled on the computer where the SQL server is installed. Once the named pipes and TCP/IP are enabled, restart the SQL server and SQL server browser services. Ensure that the computer browser services are running. • Ensure that the SQL service is running under domain administrator credentials and provide the same user account credential that was used to install the SQL server, else there can be database connectivity issues. Details: <ul style="list-style-type: none"> • The DLO and Dedupe databases will be stored on a local existing SQL Server instance on this computer. Select an instance from the list provided. C:\Program Files\Microsoft SQL Server\MSSQL14.DLO. Option 3: Existing Remote SQL Local Server Instance Prerequisites:</p>

	<ul style="list-style-type: none"> • For existing remote SQL server instance, the named pipes and TCP/IP must be enabled on the computer where the SQL server is installed. Once the named pipes and TCP/IP are enabled, restart the SQL server and SQL server browser services. Ensure that the computer browser services are running. • Ensure that the SQL service is running under domain administrator credentials and provide the same user account credential that was used to install the SQL server, else there can be database connectivity issues. <p>Details:</p> <ul style="list-style-type: none"> • The DLO and Dedupe databases will be stored on a remote SQL server instance. Provide the IP address or host name of the computer where SQL is installed.
Firewalls	<p>DLO is designed to work in firewall environments. The DLO Desktop Agents can be installed on endpoints that are connected either over the corporate network or in the Backup Over Internet (BOI) mode using the private internet connection. The details of the port configuration for the DLO Server components and DLO Clients in a firewall environment are defined for the following three deployment scenarios:</p> <ul style="list-style-type: none"> • Non BOI Deployment: For organizations having endpoints that are always within the organization premises and are connected over the corporate network. • Exclusive BOI Deployment: For organizations having endpoints that are always outside the corporate network and connect only using internet connection. • Occasional BOI Deployment: For organizations having endpoints that are occasionally outside the organization premises, during which they connect using internet connection, but are otherwise within the organization premises connecting over the corporate network. For more information, refer to the section Port Configuration for DLO Components.
Certificates	<p>This is required for the Backup Over Internet (BOI) capability. In order to configure the BOI capability, an SSL certificate procured from a Trusted CA is a pre-requisite. This certificate is required for the Desktop Agents to communicate with the DLO Edge Server over a public URL. However, for product evaluation scenarios, an inbuilt self-signed certificate is provided in the DLO Installer package for validating the BOI capability.</p> <p><i>Note 1: It is recommended to use an SSL certificate procured from a Trusted CA when deploying in production.</i></p> <p><i>Note 2: The administrator can configure multiple Edge Servers ensuring an optimized backup flow for the geographically distributed remote office users connected over the internet. For a multiple Edge Server DLO setup, ensure to procure unique certificates from a Trusted CA and the same should be provided while configuring the new Edge Server in the DLO Administration Console.</i></p>
Remote Install Considerations	<p>For remote installation of the DLO Maintenance Server and DLO Desktop Agents:</p>

	<ul style="list-style-type: none"> • To push-install to a computer, you must enable certain items on the destination computer's Windows Firewall Exceptions list. You must enable the following items: <ul style="list-style-type: none"> ○ File and Printer Sharing ○ Windows Management Instrumentation (WMI) ○ Remote Service Management ○ Remote Registry Service <p>For more information, refer to the Microsoft Windows documentation https://docs.microsoft.com/en-us/windows/</p> <ul style="list-style-type: none"> • To push-install to a computer that runs Symantec Endpoint Protection (SEP) version 11.0 or later, you must configure SEP to share files and printers. The file and printer-sharing feature is turned off by default.
Other Considerations	<ul style="list-style-type: none"> • The latest service pack should be installed to be able to install the DLO components. • WMI service should be running on all machines where the DLO Server components are installed. • .NET 4.6 or above versions should be installed. <p>http://www.microsoft.com/en-in/download/details.aspx?id=17718</p> <p><i>Note 1: On Windows 2012/ 2012 R2 /2016 Server, it is not mandatory to install .NET 4.0 since .NET 4.5 is installed by default in Windows 2012/2012 R2 Server and .NET 4.6 is installed by default in Windows 2016 Server.</i></p>

Port Configuration for DLO Server Components

Process	Port	Port Type	Non BOI Deployment	Exclusive BOI Deployment	Occasional BOI Deployment
DLO Administration Service	3999	TCP/UDP	Source (Outbound): DLO Administration Console Destination (Inbound): DLO Administration Server	Source (Outbound): DLO Administration Console Destination (Inbound): DLO Administration Server	Source (Outbound): DLO Administration Console Destination (Inbound): DLO Administration Server
SQL Server Browser	1434	UDP	Source (Outbound): DLO Administration Server DLO Administration Console DLO Dedupe Server Destination (Inbound): SQL Server	Source (Outbound): DLO Administration Server DLO Administration Console DLO Dedupe Server DLO IO Server Destination (Inbound): SQL Server	Source (Outbound): DLO Administration Server DLO Administration Console DLO Dedupe Server DLO IO Server Destination (Inbound): SQL Server
SQL Server	1433 or dynamic port	TCP	Source (Outbound): DLO Administration Server DLO Administration Console DLO Dedupe Server Destination (Inbound): SQL Server	Source (Outbound): DLO Administration Server DLO Administration Console DLO Dedupe Server DLO IO Server Destination (Inbound): SQL Server	Source (Outbound): DLO Administration Server DLO Administration Console DLO Dedupe Server DLO IO Server Destination (Inbound): SQL Server
File Sharing/ Browsing	135-139, 445	TCP/UDP	Source (Outbound): DLO Administration Server DLO Administration Console DLO Dedupe Server DLO Maintenance Server Destination (Inbound): Storage Location Dedupe Storage Location SQL Server	Source (Outbound): DLO Administration Server DLO Administration Console DLO Dedupe Server DLO Maintenance Server Destination (Inbound): Storage Location Dedupe Storage Location SQL Server	Source (Outbound): DLO Administration Server DLO Administration Console DLO Dedupe Server DLO Maintenance Server Destination (Inbound): Storage Location Dedupe Storage Location SQL Server

Process	Port	Port Type	Non BOI Deployment	Exclusive BOI Deployment	Occasional BOI Deployment
Dedupe Port	8443	HTTPS	Source (Outbound): DLO Administration Console Destination (Inbound): DLO Dedupe Server	Source (Outbound): DLO Administration Console Destination (Inbound): DLO Dedupe Server	Source (Outbound): DLO Administration Console Destination (Inbound): DLO Dedupe Server
Dedupe Port	8080	HTTP	Source (Outbound): DLO Administration Console Destination (Inbound): DLO Dedupe Server	Source (Outbound): DLO Administration Console Destination (Inbound): DLO Dedupe Server	Source (Outbound): DLO Administration Console Destination (Inbound): DLO Dedupe Server
Dedupe Port	8009	AJP	NA	Source (Outbound): DLO Edge Server Destination (Inbound): DLO Dedupe Server	Source (Outbound): DLO Edge Server Destination (Inbound): DLO Dedupe Server
Edge Server Port	443	HTTPS	NA	Source (Outbound): DLO Administration Console Destination (Inbound): DLO Edge Server	Source (Outbound): DLO Administration Console Destination (Inbound): DLO Edge Server
Edge Server Port	90	HTTP	NA	Source (Outbound): DLO Administration Console Destination (Inbound): DLO Edge Server	Source (Outbound): DLO Administration Console Destination (Inbound): DLO Edge Server
IO Server Port	7080	HTTP	NA	Source (Outbound): DLO Administration Console Destination (Inbound): DLO IO Server	Source (Outbound): DLO Administration Console Destination (Inbound): DLO IO Server
IO Server Port	7009	AJP	NA	Source (Outbound): DLO Edge Server Destination (Inbound): DLO IO Server	Source (Outbound): DLO Edge Server Destination (Inbound): DLO IO Server
Additional Ports for Push Installation	135, 1037, 441, 1125 Dynamic Ports (49152 – 65535)	TCP	Source (Outbound): DLO Administration Server DLO Administration Console Destination (Inbound): DLO Clients	NA	Source (Outbound): DLO Administration Server DLO Administration Console Destination (Inbound): DLO Clients

Note: The configuration specified for Storage location will be applicable to Extended Storage Locations as well.

Port Configuration for DLO Clients

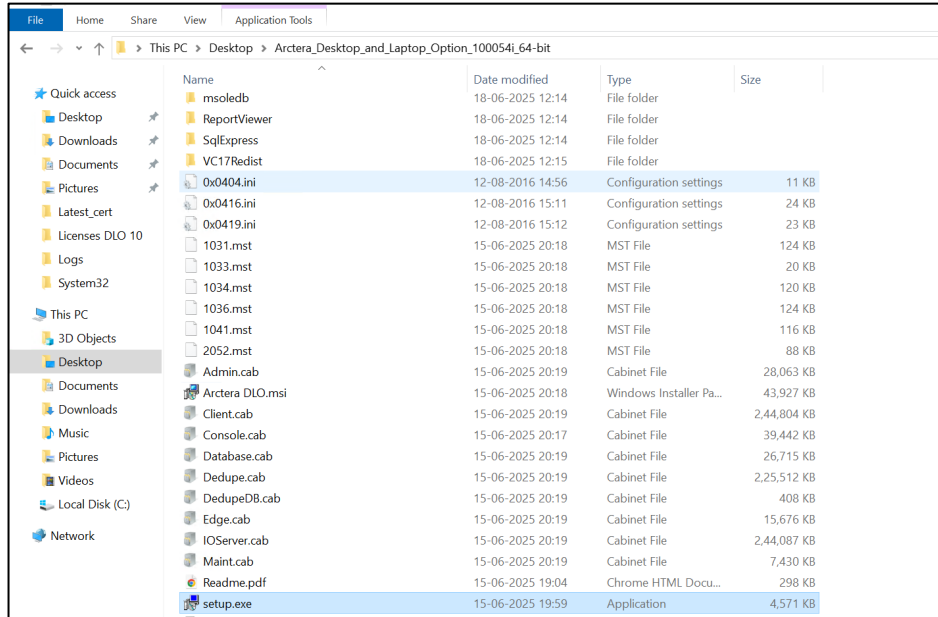
Process	Port	Port Type	Non BOI Deployment	Exclusive BOI Deployment	Occasional BOI Deployment
Edge Server Port	443	HTTPS	NA	Source (Outbound): DLO Clients Web Restore Machine Destination (Inbound): DLO Edge Server	Source (Outbound): DLO Clients Web Restore Machine Destination (Inbound): DLO Edge Server
File Sharing/ Browsing	135-139, 445	TCP/UDP	Source (Outbound): DLO Clients Destination (Inbound): Storage Location Dedupe Storage Location	NA	Source (Outbound): DLO Clients Destination (Inbound): Storage Location Dedupe Storage Location
Dedupe Port	8443	HTTPS	Source (Outbound): DLO Clients Destination (Inbound): DLO Dedupe Server	NA	Source (Outbound): DLO Clients Destination (Inbound): DLO Dedupe Server
Dedupe Port	8080	HTTP	Source (Outbound): DLO Clients Destination (Inbound): DLO Dedupe Server	NA	Source (Outbound): DLO Clients Destination (Inbound): DLO Dedupe Server
SQL Server Browser	1434	UDP	Source (Outbound): DLO Clients Destination (Inbound): SQL Server	NA	Source (Outbound): DLO Clients Destination (Inbound): SQL Server
SQL Server	1433 or dynamic port	TCP	Source (Outbound): DLO Clients Destination (Inbound): SQL Server	NA	Source (Outbound): DLO Clients Destination (Inbound): SQL Server

Note: The configuration specified for Storage location will be applicable to Extended Storage Locations as well.

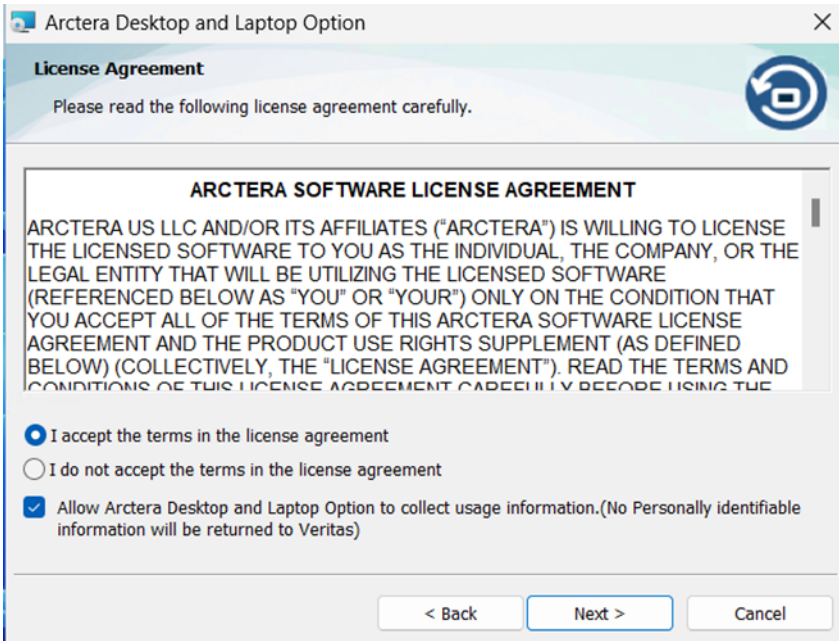
Installing Arctera DLO

The steps to install the DLO setup are as follows:

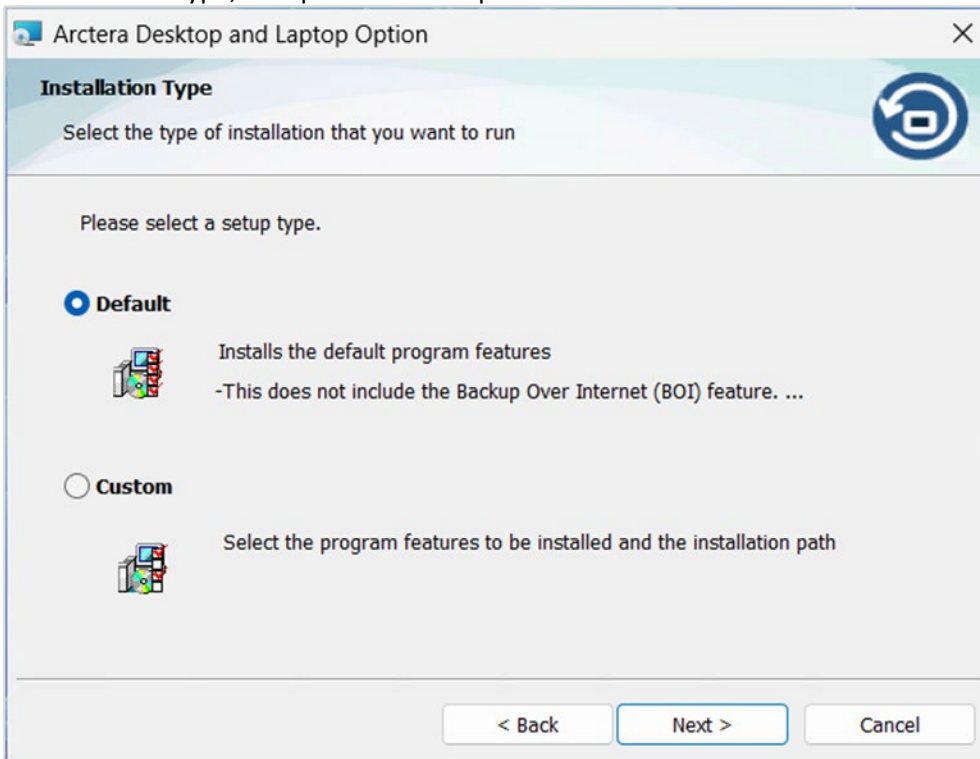
1. Run setup.exe to start the installation wizard.



2. Click **Yes** to continue with the installation.
3. Read the license agreement, and if the administrator accept the terms, select **I accept the terms in the license agreement**.



4. Click **Next**.
5. In Installation Type, DLO provides two options of installation



- **Default Installation**
This installs the following default program features and does not include the option to customize program features:
 - DLO Administration Console
 - DLO Administration Server
 - DLO Maintenance Server

- DLO Database Service
- Dedupe Server

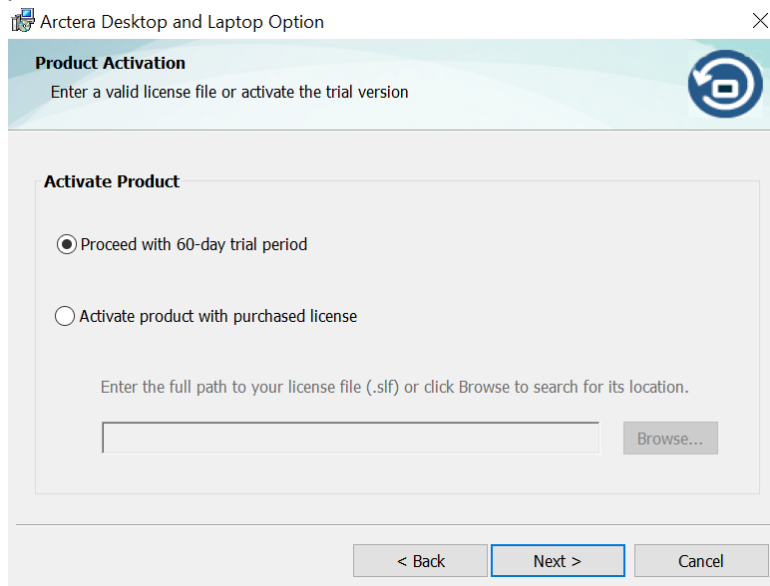
Note: Default Installation does not include the Backup Over Internet (BOI) feature. BOI feature can be configured at a later point in time.

- **Custom Installation**

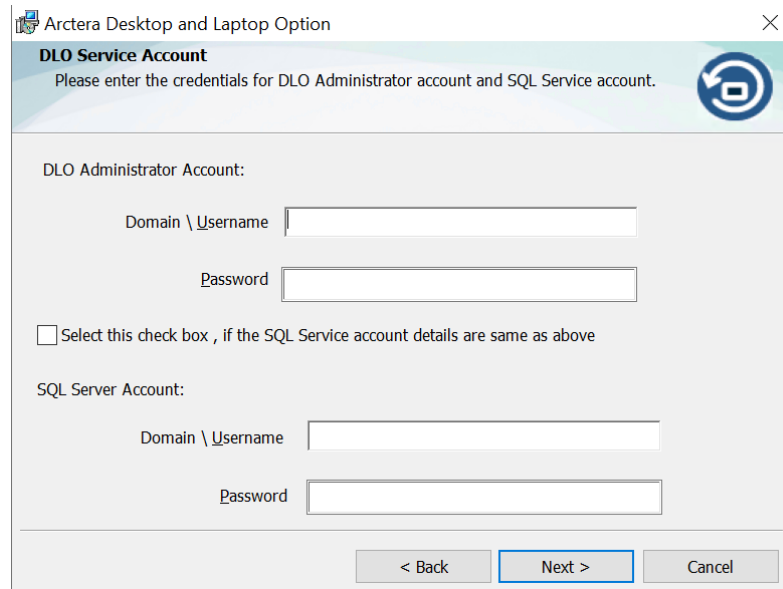
This allows to choose the program features you want to install. You can select and install each component on a separate computer, except the DLO Database Service.

6. **For Default installation**, select **Default** and click **Next**.

- For **Product Activation** , either Proceed with the inbuilt 60-day trialware license or provide the purchased license details. Click **Next**.



- Enter the DLO Administrator account credential.



- If you want to use DLO Administrator account credential as SQL server credential, enable **'Select this check box, if the SQL Service account details are same as above'** option or **Enter the SQL Server credential**.

Arctera Desktop and Laptop Option

DLO Service Account
Please enter the credentials for DLO Administrator account and SQL Service account.

DLO Administrator Account:

Domain \ Username

Password

Select this check box , if the SQL Service account details are same as above

SQL Server Account:

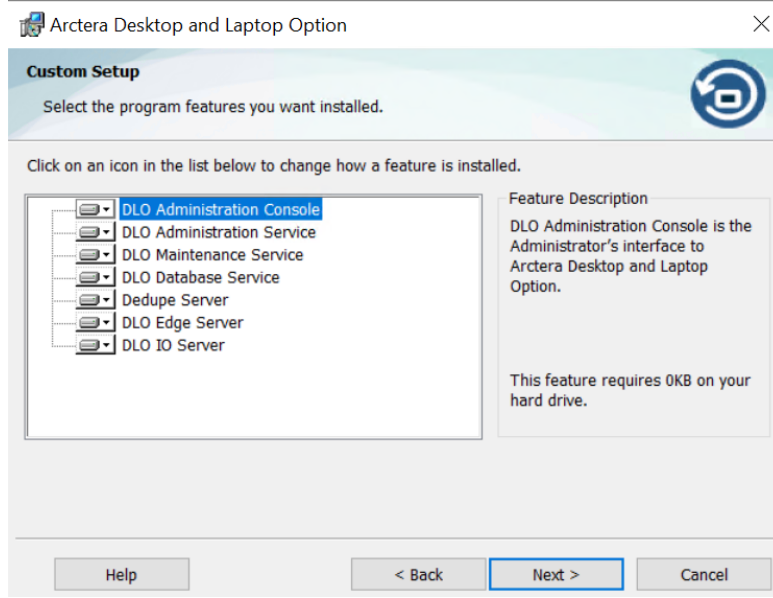
Domain \ Username

Password

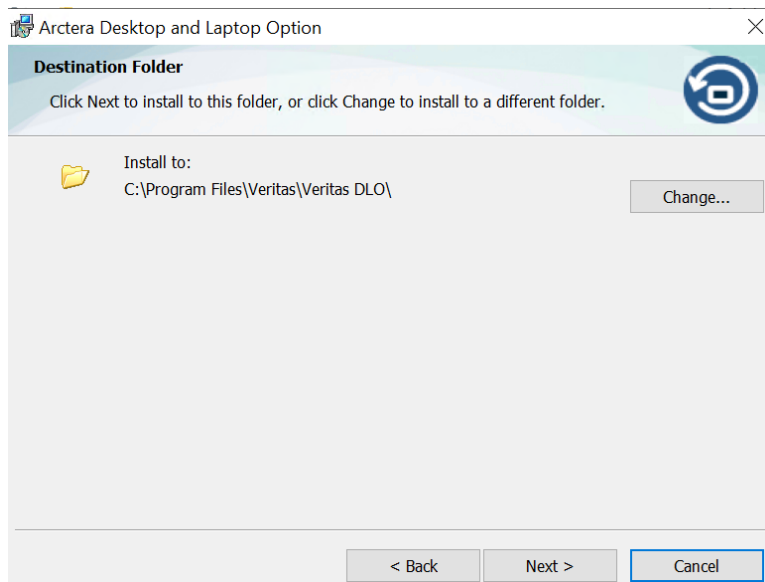
< Back Next > Cancel

- Click **Next**.
 - Click **Finish** once installation is completed.
7. **For Custom installation**, select **Custom** and click **Next**
- a. Select the components that the administrator wants to install on the computer.
 - **DLO Administration Console:** Installs the DLO Administration Console.
 - **DLO Administration Server:** Installs the DLO Administration Server.
 - **DLO Maintenance Server:** Installs the DLO Maintenance Server.
 - **DLO Database Service:** Installs the DLO database and Dedupe database.
 - **Dedupe Server:** Installs the Dedupe Server.
 - **Edge Server:** Installs the Edge Server.
 - **IO Server:** Installs the IO Server.

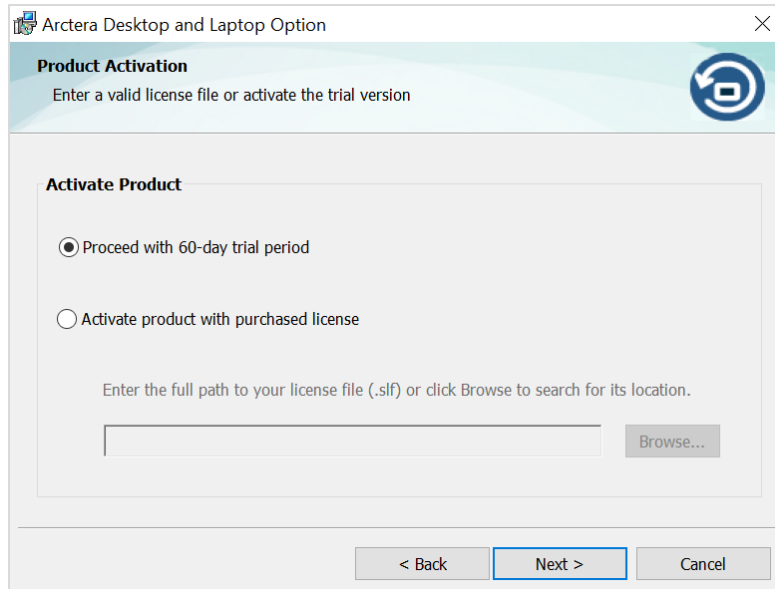
Note: The administrator can select and install each component on a separate computer, except the DLO Database Service. The DLO Database Service alone cannot be selected for installation; it can be installed along with the DLO Administration Server service.



- b. To install DLO in a different directory, click **Change**.



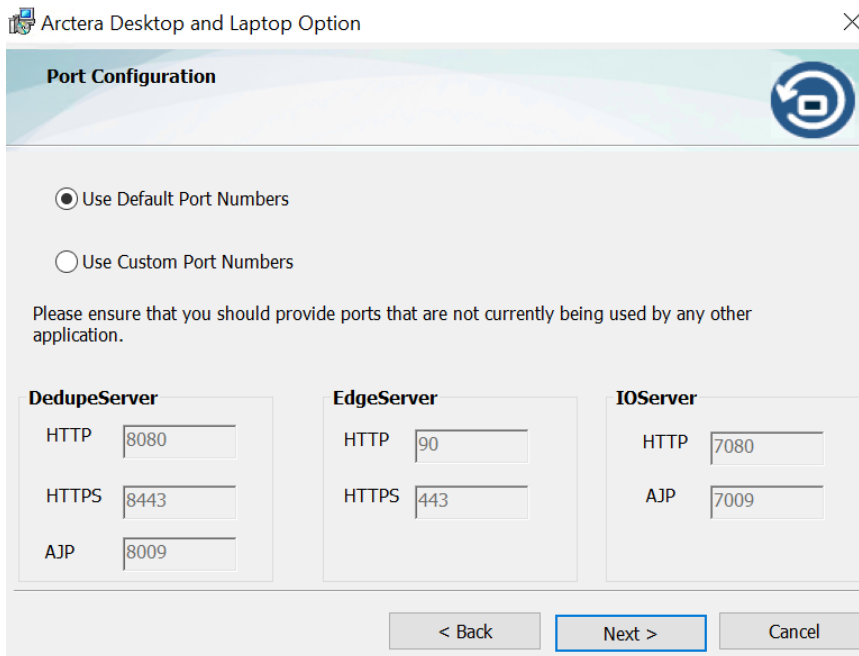
- c. Select the new directory and click **OK**.
d. Click **Next**.
e. For **Product Activation**, choose from the available options and click **Next**.



Note: DLO provides an inbuilt 60-day trialware license for product evaluation.

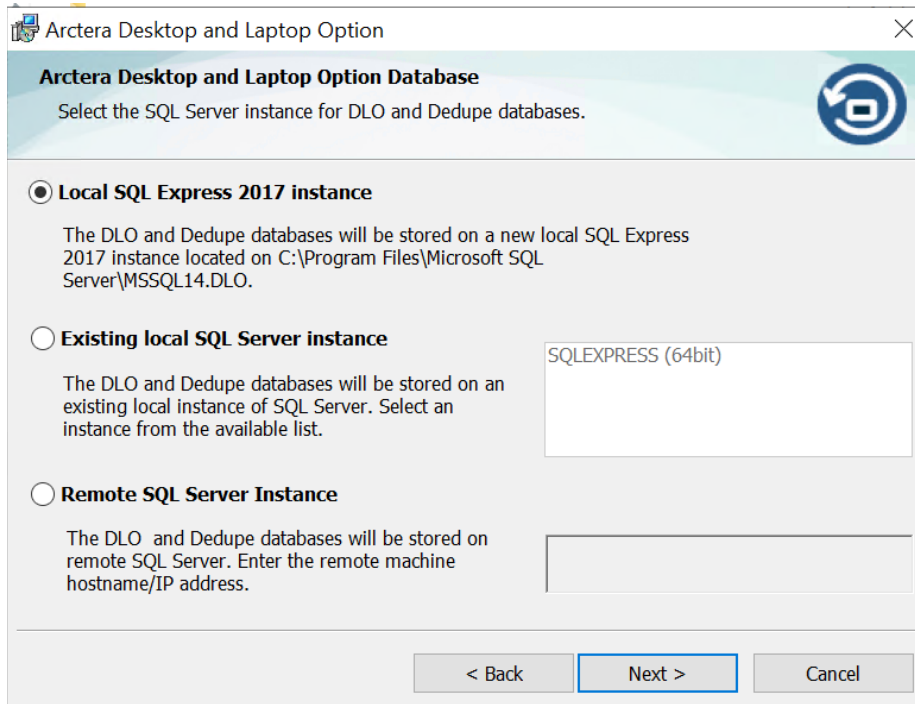
- f. Select **Use Default Port Numbers** to continue with the default port and click **Next**.
or
Select **Use Custom Port Numbers** to choose customized ports for enabled DLO Server Components and click **Next**.

Note: Customized ports are applicable only for Edge, IO, and Dedupe components which are installed on the computer and also ensure that you should provide ports that are not currently being used by any other application.

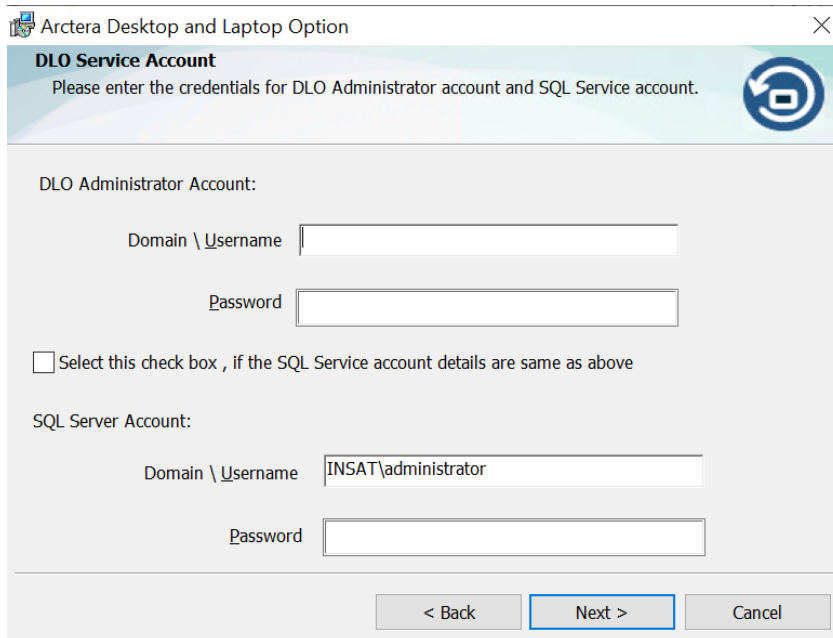


- g. Select one of the following options for the DLO database.

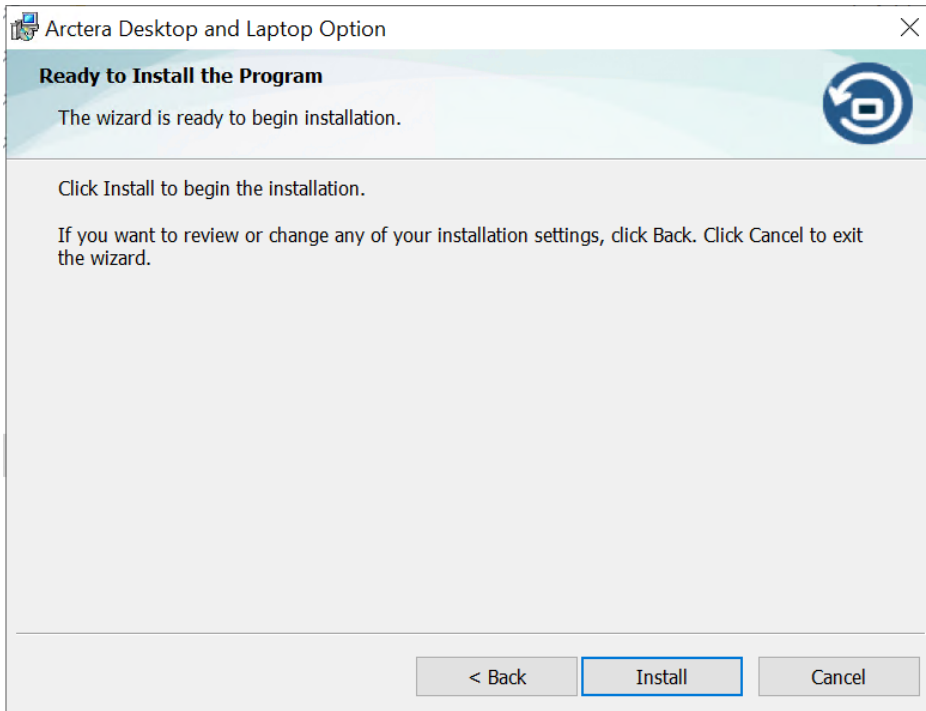
Note: When you use an existing local or remote database instance, TCP/IP and named pipes must be enabled. Refer the link <https://msdn.microsoft.com/en-us/library/ms191294.aspx>.



- h. Click **Next**.
- i. Enter the account credentials, which will be used to create DLO Storage.



- Click **Next**.
- Click **Install** to begin the installation.



- j. Click **Finish** once installation is completed.

Once the DLO Server components are installed and on the first launch of the DLO Administration Console, the Recovery Password wizard appears. The administrator needs to set the recovery password.

The recovery password enables the administrator to retrieve the backed up data, in case of emergency scenarios where the data can be restored using a point in time database and the storage location, without the need for the DLO Administration Service to be up and running. For detailed information on setting Recovery Password, refer to the section *Setting Recovery Password* in the *Arctera Desktop and Laptop Option Administrator's Guide* available [here](#).

Configuring Arctera DLO

This section provides the administrator with the details to configure Arctera DLO.

On the first launch of the DLO Administrations Console, the 'Desktop and Laptop Option Configuration Wizard' flow automatically pops up. Close the pop up window and proceed with the below steps. Within the scope of this document, the manual configuration of DLO will be discussed.

The steps to configure DLO is elaborated across the below sections:

- [Steps to Configure the DLO Server Setup](#)
- [Steps to Configure the BOI capability](#)
- [Deploying the Desktop Agents](#)

Steps to Configure DLO Server Setup

For DLO to start functioning, follow the below steps in the same order:

1. Add the Dedupe Server to the DLO Administration Server.
2. Add DLO Storage Locations.
3. Create and configure a Profile.
4. Configure Users to the created Profile.

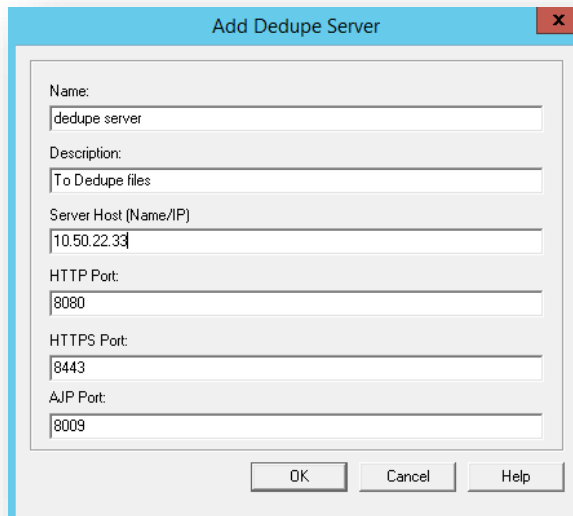
The details for each of the configuration steps are covered below:

Step 1 - Add the Dedupe Server to the DLO Administration Server

Dedupe server manages the deduplication of backup files

To add a Dedupe Server

1. Launch the Arctera DLO Administration Console.
2. On the DLO navigation bar, click **Setup**.
3. Select one of the following options to Add a Dedupe Server:
 - In the **Settings** pane, right-click **Dedupe Server**, and select **New Dedupe Server**.
 - In the **Task** pane, under **Setting Tasks**, click **New Dedupe Server**.



The screenshot shows a dialog box titled "Add Dedupe Server" with a close button (X) in the top right corner. The dialog contains the following fields and values:

Field	Value
Name:	dedupe server
Description:	To Dedupe files
Server Host (Name/IP)	10.50.22.33
HTTP Port:	8080
HTTPS Port:	8443
AJP Port:	8009

At the bottom of the dialog, there are three buttons: "OK", "Cancel", and "Help".

Step 2 - Add DLO Storage Locations

Storage location determines where the user data will be stored on the network. Storage Locations should be in the same domain as the DLO Administration Server or in a domain that trusts the administration server's domain.

To create DLO Storage Locations

1. On the DLO navigation bar, click **Setup**.
2. Select one of the following options to create a new DLO Storage Location.
 - In the **Settings** pane, right-click **Storage Locations** and select **New Storage Location**.
 - In the **Task** pane, under **Settings Tasks**, click **New Storage Location**.
3. Select the appropriate options as described in the following table:

Item	Description
Computer name	Type a computer name or browse to a computer where the administrator wants to create the Storage Location.
Path	Type or browse to a location on the computer where the Storage Location will be created. <i>Note: Storage Locations should be in the same domain as the DLO Administration Server or in a domain that trusts the administration server's domain.</i>
Storage Location name	Type a name for the new DLO Storage Location. The name cannot contain any of the following characters: \'@#%&^*()=+ /{}[]\'
Assign Dedupe Properties	Assign the Dedupe Storage Location by selecting the Automatic mode. For extended SL, the Automatic mode option will be disabled, and the user will be able to choose from existing dedupe storage locations or create a new dedupe storage using the Manual option.
Automatic	In the Automatic mode, both the DLO Storage Location and Dedupe Storage Location will be created in the same storage location path that was specified earlier, and the Dedupe Storage Location will be assigned to the default Dedupe Storage Pool. As the administrator is selecting the Automatic mode for the first time provide the user credentials for the Dedupe Storage Location. <i>Note: For security reasons, read/write access to the Dedupe Storage Locations is not granted to all the users even though they need to read and write data from the Dedupe Storage Locations. Instead, while creating the Dedupe Storage Location, the administrator configures a new user account called "Dedupe Storage Location Access Credential", which is a low privilege domain user account and will be used by the Desktop Agent to access the Dedupe Storage Location. The credentials to be provided as follows DomainName\UserName. A user account with administrator rights is not permitted as a Dedupe Storage Location Access Credential.</i>

4. Click **OK**.

The screenshot shows a dialog box titled "Storage Location Properties" with a close button (X) in the top right corner. The dialog is divided into several sections:

- Storage Location:**
 - Computer name: A2SYMMD20974
 - Path: D:\SL\SL-SL
 - Storage location name: SL-SL
- Assign Dedupe Properties
 - Dedupe Server: DedupeServer
 - Dedupe Storage Location: Default:SL-DSL
- Mode selection: Automatic Mode, Manual Mode, and a "Create..." button.
- Edge Server/IO Server: [NOT DEFINED]
- Summary:**
 - Users assigned to this storage location will back up desktop data to user data folders created in the following location and format:
 - Path: \\A2SYMMD20974\SL-SL\%USERDOMAIN%\%USERNAME%

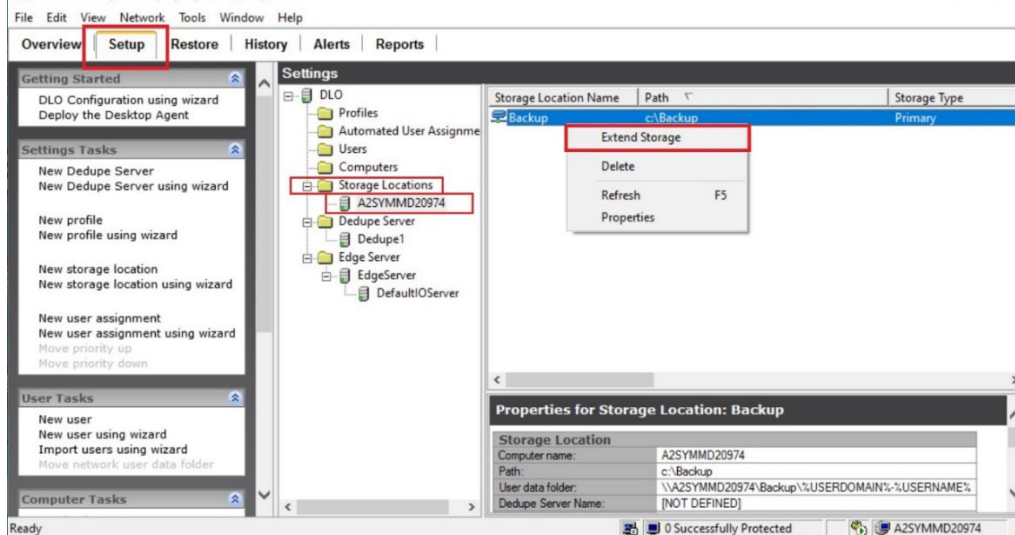
At the bottom of the dialog are three buttons: "OK", "Cancel", and "Help".

Step 3 - Add DLO Extended Storage Locations

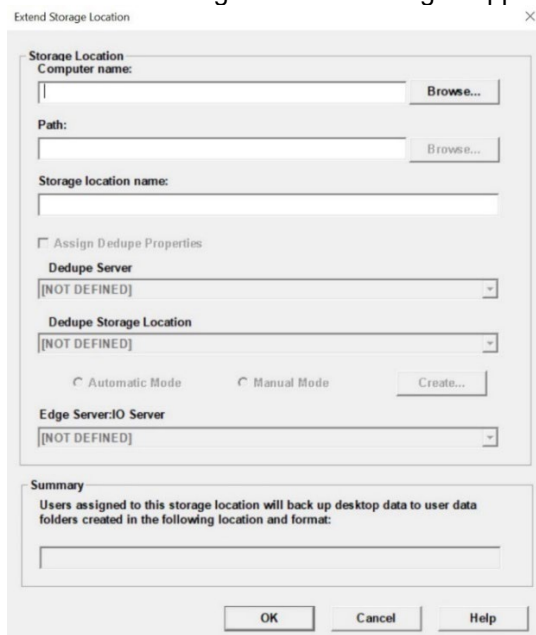
Storage Extension feature lets administrators extend the existing storage location without interrupting the backup process. The Storage Location can be extended before or after the network backup of a Windows or Mac agent user stops in case the storage location or dedupe storage location reaches the maximum disk space available.

To Create DLO Extended Storage Locations

1. On the DLO navigation bar, click **Setup**.
2. In the **Settings pane**, double-click the **Storage Locations** and Click on the name of the Storage Location is displayed.
3. In the Results pane, Right click on SL (Storage Location) and select “**Extend Storage**” to add Extended Storage.



4. The Extend Storage Location Dialogue appears.



5. Select the appropriate options as described in the Table ([Click here](#)).
6. Click **OK**.

Step 4 - Create and configure a Profile

Profiles are used to customize settings for specific groups of similar users. For example, a group of highly technical users may require the option to modify the backup selections and schedules while less experienced users may require a fully automated backup service.

Create a profile, which determines what files are backed up (Backup Selection), when files are backed up (Schedule), and the level of interaction the desktop user has with the Desktop Agent (User Settings).

The screenshot shows the 'New Profile' configuration window. It features three main tabs: 'Connection Policies', 'Restore Throttling', and 'Backup Throttling'. Under 'Connection Policies', there are five sub-tabs: 'General', 'Backup Selections', 'User Settings', 'Schedule', and 'Options'. The 'General' sub-tab is selected, displaying the following settings:

- Profile name: Profile 1
- Description: (empty field)
- Enable profile
- Enable Dedupe
- Enable BOI
- VIP Profile

The 'Storage Limits' section includes:

- Limit network user data folder to (MB): 5000
- Machine level (selected) / User level
- Enable desktop user data folder
- Limit desktop user data folder to:
 - A percentage of the total disk space (%): 10
 - A size (MB): 1024

The 'My Default Desktop User Data Folder Path' section has:

- Override the default desktop user data folder path

The 'Rollback Restore' section has:

- Configure Rollback Window
- Keep revision files for past: 10 days

In a profile, the administrator can set the following options:

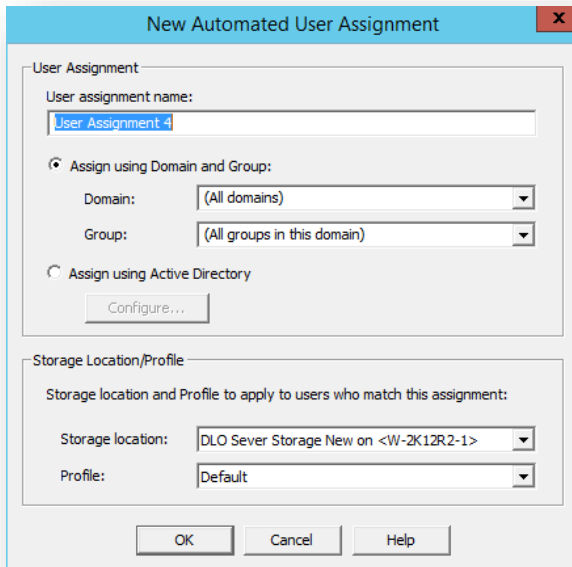
- Backup file and folder selections
- Desktop and network user data folder storage limits
- Backup schedules
- The desktop user's level of interaction with the Desktop Agent
- Logging options
- Network bandwidth usage options for backup and restore operations
- Dedupe backup

Step 5 - Configure Users to the created profile

The users can either be manually added to the profile or the administrator can choose to create an automated user assignment to do this.

Step 5a -Create Automated User Assignment

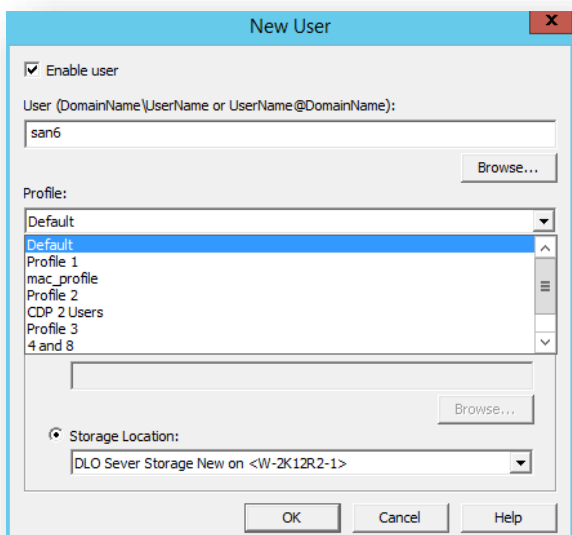
Create an Automated User Assignment (AUA) to automatically assign a Storage Location and Profile to new users. Once the administrator selects the Domain and a Group in the domain, selected Storage locations and Profile get assigned to all the users in that Group.



The screenshot shows the 'New Automated User Assignment' dialog box. It has a title bar with a close button (X). The dialog is divided into two main sections. The top section, 'User Assignment', contains a text field for 'User assignment name' with the value 'User Assignment 4'. Below this are two radio buttons: 'Assign using Domain and Group' (which is selected) and 'Assign using Active Directory'. Under the selected radio button, there are two dropdown menus: 'Domain' set to '(All domains)' and 'Group' set to '(All groups in this domain)'. A 'Configure...' button is located below these options. The bottom section, 'Storage Location/Profile', contains a label 'Storage location and Profile to apply to users who match this assignment:'. It has two dropdown menus: 'Storage location' set to 'DLO Sever Storage New on <W-2K12R2-1>' and 'Profile' set to 'Default'. At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Help'.

Step 5b Adding user to the profile manually

Instead of using AUA, the administrator can manually add users to DLO and assign a profile and storage location to them. This is particularly useful when network shares already exist for storing user data. Users can be added individually or multiple users can be added at the same time by importing the user names from a list.



The screenshot shows the 'New User' dialog box. It has a title bar with a close button (X). The dialog contains a checked checkbox for 'Enable user'. Below this is a text field for 'User (DomainName\UserName or UserName@DomainName):' with the value 'san6' and a 'Browse...' button to its right. The 'Profile:' section features a dropdown menu currently set to 'Default', and a list box below it containing the following items: 'Default', 'Profile 1', 'mac_profile', 'Profile 2', 'CDP 2 Users', 'Profile 3', and '4 and 8'. A 'Browse...' button is located to the right of the list box. The 'Storage Location:' section has a radio button that is selected and a dropdown menu set to 'DLO Sever Storage New on <W-2K12R2-1>'. At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Help'.

Steps to Configure Backup Over Internet (BOI)

This section provides the administrator with the details to configure the BOI capability.

As mentioned in the prerequisites section, an SSL certificate procured from a Trusted CA is required for configuring the BOI setup. However, for product evaluation scenarios, an inbuilt self-signed certificate is provided in the DLO Installer package for validating the BOI capability. Within the scope of this document, the BOI configuration using the inbuilt self-signed certificate will be discussed.

Note: This section does not include the details for configuring BOI for a DLO setup where multiple Edge Servers are configured. For more details on configuring BOI in a multiple Edge Server setup, refer the **BOI Setup and Configuration Guide** available [here](#).

For configuring BOI, the below steps need to be performed in addition to the [Steps to Configure DLO Server Setup](#).

1. Register a Public IP for the DLO Edge Server.
2. Map the SSL certificate to the Registered Public IP.
3. Map the DLO Edge Server and IO Server to the DLO Storage Location.
4. Test Connectivity to the DLO Edge Server.
5. Enable the BOI option in a Profile.

Step 1 - Register a Public IP for the DLO Edge Server

Register a public IP for the DLO Edge Server, so that Desktop Agents will be able to access the DLO Edge Server over internet.

Note: Once the administrator registers the public IP for the DLO Edge Server, the DLO Edge Server needs to be deployed. Below are listed few options on how the DLO Edge Server can be deployed:

- Through NAT (Dynamic or static) configured on the firewall.
- The DLO Edge Server can reside in Demilitarized zone (DMZ).
- Through a Reverse Proxy Server in Demilitarized zone (DMZ) which would redirect all the DLO Agent requests to the DLO Edge Server (residing in the corporate network).

Step 2 - Map the SSL certificate to the Registered Public IP

Map the SSL certificate (Issued to: dlo.arctera.com) to a registered public IP (of DLO Edge Server) either:

- a. In the Domain Name Server (DNS)
- Or**
- b. As a Host entry update in the DLO Edge Server machine.

Note: If this is a host entry update on the DLO Edge Server, additionally on the Desktop Agents machine, update the host file as below:

- Map the **Public IP** to the **Certificate Name**
 - where the **Public IP** is as present in the **SERVERNAME** entry of the **EdgeServer.ini** file present in the paths
 - <Install Path>\Veritas DLO\DLO\

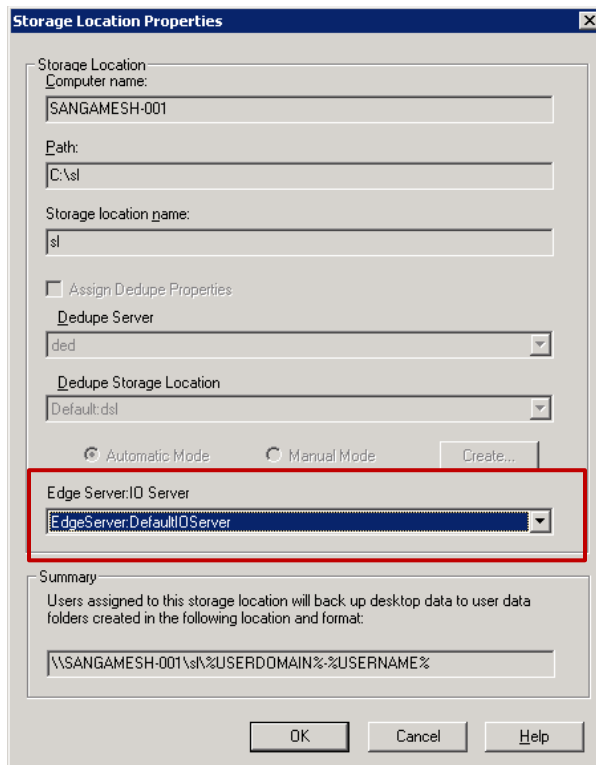
- where the **Certificate Name** is for the DLO Edge Server. (**Issued to: dlo.arctera.com**)

E.g. : <Registered Public IP> dlo.arctera.com

Step 3 - Map the DLO Edge Server and IO Server to the DLO Storage Location

The DLO Edge Server and IO Server can be mapped to the DLO Storage location either while creating a new storage location or by updating properties of an existing Storage location as below

- **Storage Locations Properties > Edge Server: IO Server**



The screenshot shows the 'Storage Location Properties' dialog box. The 'Computer name' is 'SANGAMESH-001', the 'Path' is 'C:\sl', and the 'Storage location name' is 'sl'. The 'Assign Dedupe Properties' checkbox is unchecked. The 'Dedupe Server' dropdown is set to 'ded', and the 'Dedupe Storage Location' dropdown is set to 'Default: dsl'. The 'Automatic Mode' radio button is selected. The 'Edge Server: IO Server' dropdown menu is highlighted with a red box and shows 'EdgeServer:DefaultIO Server' selected. The 'Summary' section contains the text: 'Users assigned to this storage location will back up desktop data to user data folders created in the following location and format:' followed by the path '\\SANGAMESH-001\sl\%USERDOMAIN%\%USERNAME%'.

Step 4 - Test Connectivity to the DLO Edge Server

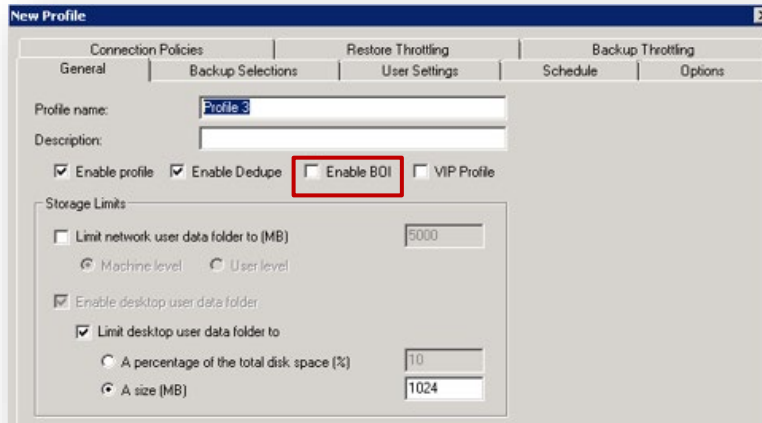
Test the connectivity to the DLO Edge Server by accessing the below URL from any machine with internet connection.

- https://<Public_Edge_Server_IP>

Step 5 - Enable the BOI option in a Profile

The BOI option can be enabled either in an existing profile or while creating a new profile as follows

- **Profile > General > Enable BOI**



Deploying the Desktop Agent

Once the DLO Server is configured, proceed to deploy the DLO Agents on to the endpoints that need to be protected. The Desktop Agent can be deployed through a Pull or Push installation, the details of which are as follows.

Pull Install the Desktop Agent from the Client machines

For client machines that are connected to the corporate network, as part of Non BOI or Occasional BOI deployments, the Desktop Agent package can be obtained from the Server installation directory and installed on the client machines individually as detailed below:

1. Access this path <\\<DLO ServerName\IP>\DLOAgent> from the client machine where the Desktop Agent needs to be installed.
2. Copy the DLO Agent folder to the client machine.
3. Initiate the Desktop Agent installation.

Pull Install the Desktop Agent from Web Restore page

For client machines that are outside the corporate network and connected using internet connection, as part of Exclusive BOI or Occasional BOI deployments, the Desktop Agent package can be obtained from the Web Restore page and installed on the client machines individually as detailed below:

1. Login to Web Restore using the DLO Edge Server URL <https://<Public Edge Server IP>> from the client machine where the Desktop Agent needs to be installed.
2. The **DLO Agent** option in the left pane provides the option to download the DLO Desktop Agent package.
3. Download these files and initiate the Desktop Agent installation.

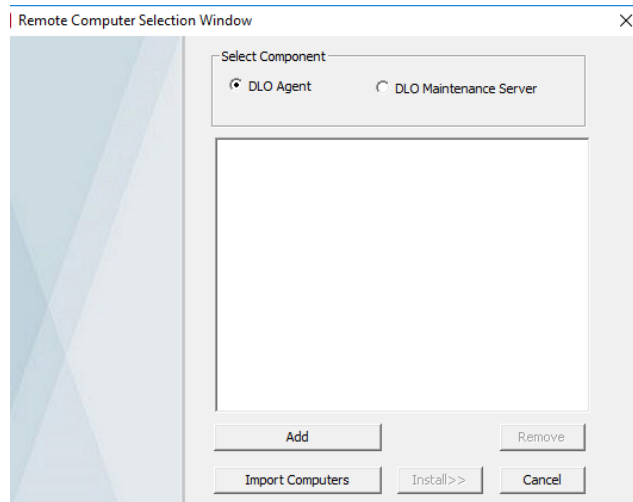
Push Deployment of the Desktop Agent

For client machines that are connected to the corporate network, as part of Non BOI or Occasional BOI deployments, the Desktop Agent can be installed directly for individual or multiple client machines through the push installation as detailed below:

Proceed with the following steps for the Push Deployment:

1. Launch the DLO Administration Console.
2. On Tools, select **Install Agents and maintenance services on remote computers** and click **Next**.
3. On **Install Agent | Maintenance Server to Remote Computers**, select **DLO Agent**.
4. Click **Add**.
5. In Manual Entry of Remote Computer Name, enter the following details:
 - a. **Name/IP Address:** Enter the computer name manually or click the **Browse** button to choose the computer name.

- b. **Domain Name:** Enter the domain name of the remote computer.
 - c. Click **OK**
6. Enter the domain user credential through which installation should be proceeded. Make sure this credential has local administrator privileges on the client machines.
7. Click **OK**.
8. In **Remote Computer Selection Window**, click on **Install** to proceed with the installation.



9. To exit, click **Finish**.

Note: For push installation of the Desktop Agent on a client machine, ensure that the relevant ports are configured as detailed in the [Additional Ports for Push Installation](#). For client machines with Windows 8 or later version, ensure that the remote registry services are enabled and running.

For deploying the Desktop Agents onto the Mac endpoints, refer to the *DLO Mac Getting Started Guide* available [here](#).

Backup and Restore Verification

Once the DLO Agents are deployed on the client machines, the administrator can configure the backup jobs to ensure the endpoints are protected.

Configuring a Backup Job

To configure a backup job, select the appropriate options available for profile creation. For the scope of this document, Enable Dedupe option is selected for the backup profile. In case the Edge Server and the IO server have been configured, Enable BOI option can be selected.

To add a backup selection

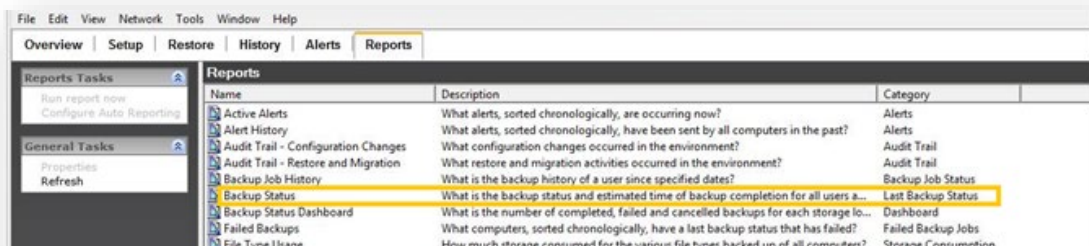
1. On the DLO navigation bar, click **Setup**.
2. In the **Settings** pane, click **Profiles**.
3. In the **Results** pane, select the profile for which the administrator wants to add a backup selection.
4. In the **Task** pane, under **General Tasks**, click **Properties**.
5. Click the **Backup Selections** tab in the **Profile** Properties dialog box.
6. Choose the backup selection from the available list and click **Add**.
7. Click **OK**.

Backup Verification

Once the backup job is run, the administrator can verify the endpoint backup status from the Backup Status Report.

For running the Backup Status Report:

1. Launch DLO Server Console.
2. Go to **Reports** tab.
3. Run **Backup Status** Report.



4. Backup Status report appears.

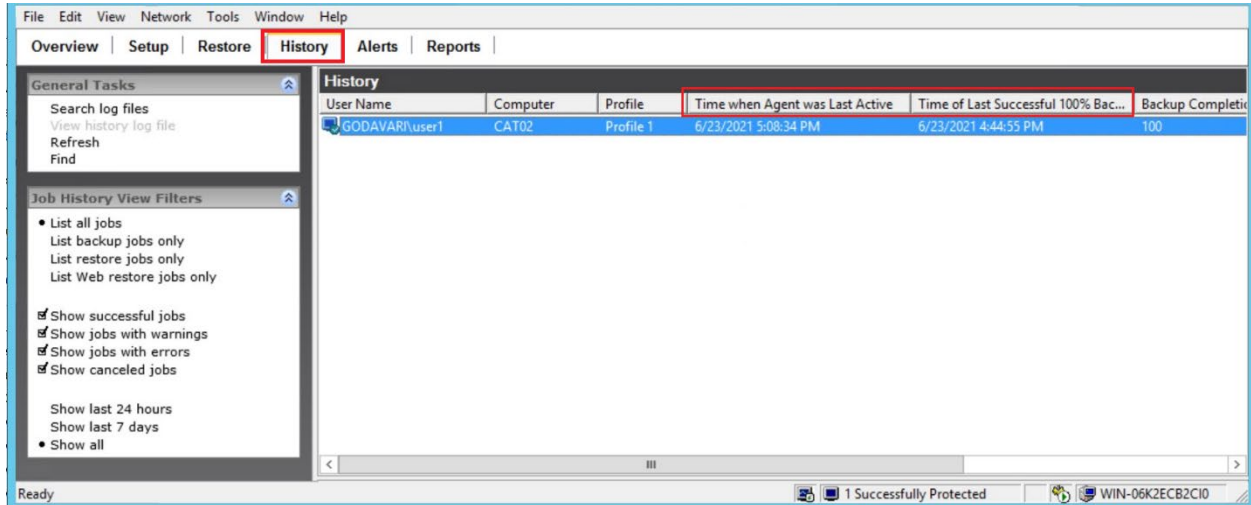
Backup Status											
S.No.	User	Machine	Profile	Time when Agent was Last Active	Time of Last Successful 100% Backup	Files in Backup Selections	Size of Backup Selections (GB)	Backup Completion (% Based on Source Size)	Files Pending for Backup	Estimated Time for Backup Completion (Hours: Minutes)	Average Time Available for Backup (Hours: Minutes per Day)
1	GODAVARI/user1	cat02	Profile 1	2021-06-23 17:08:33.650	2021-06-23 16:44:55.000	29	0.36	100	0	0:00	01:10

Date: 6/23/2021 5:14:28 PM

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Page: 1

Some of the key fields from this report are also displayed in the History and Restore tabs of the DLO Administration Console.



Interpretation of the Backup Status Report

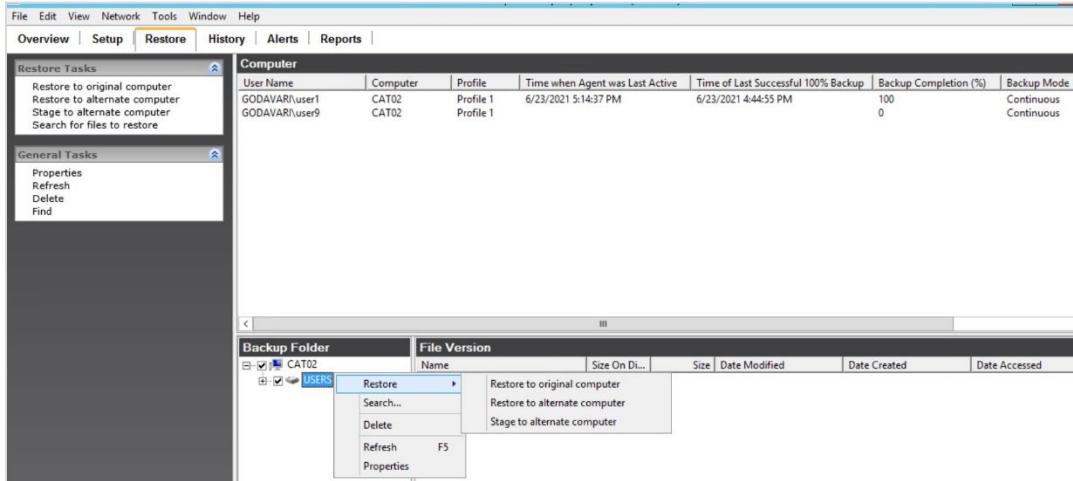
- Time when Agent was Last Active – This column displays DLO Agent’s last active time when the Desktop Agent was able to communicate to the server. The DLO agent in a computer interacts with the DLO server every 15 minutes to update the status of that computer and that’s when the report gets updated as well. As long as there is network connectivity between the agent and the server, this communication continues and this latest time of interaction is what is displayed here.
- Time of Last Successful 100% Backup – This column displays the last time when the Desktop Agent backed up user’s data completely. In simpler terms, this is the time stamp when the machine had achieved a 100% Backed up status (all files in the Backup selection backed up). In case of this column being blank for a computer, it could be interpreted as the first backup, as the computer has not been backed up completely even once.
- Files in Backup Selections– This column displays the Total number of files that are available in the Backup Selections. In case some file extensions were excluded from the backup selection using the filters, these files are not included in the count.
- Size of Backup Selections (GB) - This column displays the Total Size of files that are available in the Backup Selections. . In case some file extensions were excluded from the backup selection using the filters, these files are not included for this size calculation.
- Backup Completion (% Based on Source Size) – This column displays the Percentage of Backups completed. This completion percentage is in terms of the Size of the files in the Backup Selection. For example, 4 Files, namely – A, B, C and D are in backup selection with sizes 1, 1, 2 and 6 GBs respectively. When A, B and C files have been backed up, the Backup completion shows 40%.
- Files pending for backup – This column displays the total count of files in the Backup Selection that are still not backed up. In the above example, file D is still not backed up and hence the count 1 is displayed.
- Estimated time for backup completion - This column displays the amount of time required for the remaining backups to complete. These estimates are calculated based on the time taken for backups taken in that machine in the past 7 days. It is displayed in Hours: Minutes format.
- Average time available for backup – This column displays the average time that the Desktop Agent is available for a backup in a day. It is calculated based on the average availability of the agent in the past 7 days. It is displayed in Hours: Minutes per Day. Based on this information and the estimated time for backup completion, in the previous column, the Administrator can calculate the Time for Backup completion in Days.
- DLO 100% Backup Completion Report - DLO now provides a complete list of all users/computers in the environment who have successfully completed the backup 100% at least once.

Note: Backup Summary fields like Backup Completion may reflect value ‘0’ for some computers in the Backup Status report, History tab and Restore tab.

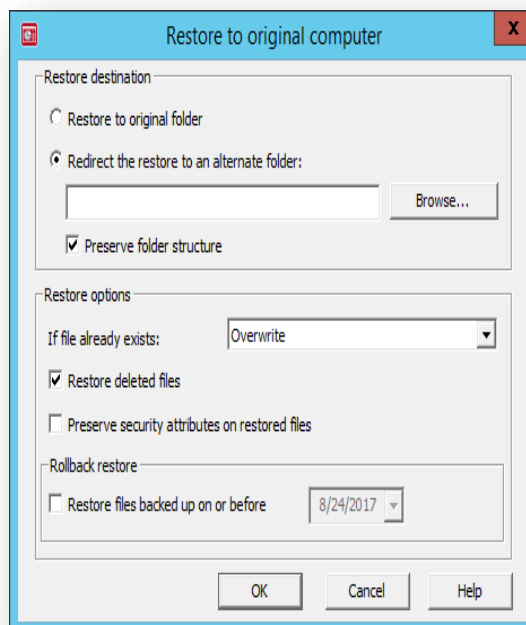
Restore Verification

Restoring files to an Alternate Path on the Same Machine

- Launch the DLO Server Console.
- Go to **Restore** tab.
- Select a User-Machine that needs to be restored.



- Traverse to the required folder, select the files right click and select **Restore to Original Computer**, below dialog appears.
Note: When trying to evaluate restore of an entire machine, ensure that you are selecting a machine that has achieved 100% Backup Completion.



- Select **Redirect the restore to an alternate folder** and specify an alternate folder path.

***Note:** With this option, it is easier to validate the Restore size and Count of files restored.*

- Click on **OK** to initiate and track the restore progress on the Client machine.
- To validate the integrity of the Restore data, compare the File count and File size of the Restored folder with the 'Backup Status' report columns like - Files in Backup Selections and Size of Backup Selections (GB).

In case of any discrepancies, it may be because of:

- All folders are not selected for Restores
- New files would have been backed up after the Backup Status report was generated.

DLO Documents Reference Links

All DLO documents for this release are available [here](#).