Asigra Cloud Backup v14.2
Client Software Installation Guide

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Contents

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Document history

Version	Date	Summary
v1.0	August 31, 2020	Released for General Availability.
v1.1	October 2, 2020	• The following operating systems are now supported: – CentOS 7.8, 8.2 – Red Hat Enterprise Linux 7.8, 8.2 – SUSE Linux Enterprise Server 12 SP5, 15 SP2 **Note**: To install the Asigra software on a machine running CentOS 7.8, 8.2 or Red Hat Enterprise Linux 7.8, 8.2, you must download and install the required RPM library files from https://support.asigra.com/service-packs
v1.2	January 20, 2021	• The sections on how to install the DS-Recovery Tools and Local DS-VDR Tool have been moved to the Tools User Guide. • Management Console users can now remotely manage DS-Clients without opening a port in the firewall on the DS-Client machine. Requires DS-Client (14.2.0.2), DS-System (14.2.0.2) and Management Console (14.2.0.2) or later. • The following operating systems are now supported: – Red Hat Enterprise Linux 7.9 **Note**: To install the Asigra software on a machine running Red Hat Enterprise Linux 7.9, you must download and install the required RPM library files from https://support.asigra.com/service-packs

1 Installing the DS-Client software

This chapter provides detailed instructions on how to install the DS-Client software.

1.1 Preparing to install the DS-Client software

This section describes the system requirements for installing the DS-Client software.

1.1.1 Hardware requirements

The following table lists the recommended hardware requirements for installing the DS-Client software.

Requirement	Details
Processor	4 core @ 3.0 GHz
Memory	16 GB
Disk space	300 GB for operating system and embedded database

Table 1   Recommended hardware requirements for DS-Client

1.1.2 Software requirements

The following table lists the requirements for installing the DS-Client software.

The DS-Client Docker container is supported only on Windows Server 2019 and CentOS 7.7. For more information on the Asigra DS-Client Docker container, go to https://hub.docker.com/u/asigra

Operating System	Database
Windows 10, Windows Server 2016, 2019	• PostgreSQL 11 (embedded) • Microsoft SQL Server 2016 SP2, 2017 (manual upgrade only)
CentOS 7.5, 7.6, 7.7, 7.8, 8.0, 8.1, 8.2	PostgreSQL 11 (embedded)
Red Hat Enterprise Linux 7.5, 7.6, 7.7, 7.8, 7.9, 8.0, 8.1, 8.2	PostgreSQL 11 (embedded)
SUSE Linux Enterprise Server 12 SP5, 15 SP2	PostgreSQL 11 (embedded)
Mac OS X 10.13, 10.14, 10.15	PostgreSQL 11 (embedded)

Table 2   Software requirements for DS-Client

NOTE: Only the 64-bit version of the supported operating system is supported.

1.1.3 Port requirements

The following table lists the port requirements for the DS-Client software.

Ports	Description
80	DS-Client to DS-NOC (http)
443	DS-Client to DS-NOC (https)
4401	DS-Client to DS-System
4403	DS-User to DS-Client
4405	DS-Client to DS-MLR
4407	DS-Client to Local DS-VDR
4408	DS-Client to DS-Recovery Tools
4410	DS-Client to DS-Client (Grid DS-Client)
4411	API Connections to DS-Client service / daemon
5432	Linux DS-Client to external PostgreSQL
5433	Windows DS-Client to embedded PostgreSQL
5433	Linux DS-Client to embedded PostgreSQL
8090	DS-Client to DS-Client (VM Replication)

Table 3   Port requirements for DS-Client

NOTE: Port numbers 4400-4406 are IANA-assigned. Ensure that the required ports are not blocked by a firewall. If you want full control of the DS-Client from DS-User, enable port 4401 (TCP) and port 4403 (TCP and UDP) with transparency.

1.2 Installing the DS-Client software

This section describes how to install the DS-Client software on a Windows, Linux, or Mac machine.

1.2.1 Before you begin

Before installing the DS-Client software, do the following:

•   Ensure there is enough disk space available on the DS-Client machine to accommodate the embedded PostgreSQL database.

•   Ensure the maximum server memory is set within acceptable levels so the database does not use all the available memory. For more information, see the *PostgreSQL* documentation.

•   Ensure the DS-Client machine and DS-User machine are synchronized with a time server to ensure consistency. You can use UTC (Coordinated Universal Time) via a recognized NTP (Network Time Protocol) server to keep the time synchronized.

1.2.2 Installing the DS-Client software (Windows)

This section describes how to install the DS-Client software on a Windows machine.

To install the DS-Client software:

1. Log on to the computer as an Administrator.

2. Create a Windows user account for the DS-Client service to use. This account should be a member of the Administrators Group.

3. On the DVD, click **setup.exe.**

4. On the **Windows Product Installation Center** page, click **DS-Client**.

5. Select the language for the installation, and then click **OK**.

NOTE: If the *inst_param.txt* file exists in the current directory, setup will run a simplified installation or a silent mode installation based on the specified XML installation template file.

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6. On the **License Agreement** page, read the license agreement carefully, click **I agree to the terms of the license agreement**, and then click **Next**.

7. On the **Install Options** page, specify a destination folder for the installation files, select the component you want to install, and then click **Next**. A prerequisite check is performed.

    –   **Classic DS-User**: (default) This installs the DS-User application.

    –   **DS-Client Service**: (default) This installs the DS-Client service.

8. When the prerequisite check is complete, click **Next**.

9. On the **Deployment Type** page, do the following:

    a) Select **Standalone DS-Client/Grid DS-Client (Database Node)**.

    b) In the **TCP Port** box, type the TCP port that will be used by the DS-Client or retain the default value.

    c) In the **Drive (Required/Free)** box, select the drive with adequate space for the embedded PostgreSQL database.

    d) Click **Next**.

10. On the **Service Account** page, enter the credentials for the account that the DS-Client service will use, and then click **Next**.

    –   To use the Windows *Local System account* instead of a specific user account, select **Local System Account**.

    –   **This account**: Enter the Windows User Account and Password the DS-Client service will use. The Windows user account must be a member of the Administrators group.

- If the computer is a member of a domain and you are installing the DS-Client under a domain account, select the **Register DS-Client SPN to Active Directory** check box.

  For uninterrupted service, ensure that the Service Account is not disabled and the password never expires. For information on how to configure the service account, see the *Microsoft* documentation.

11. On the **Installation Complete** page, select the required options, and then click **Finish**.

1.2.3 Installing the DS-Client software (Linux)

This section describes how to install the DS-Client software on a Linux machine.

To install the DS-Client software:

1. Log onto the computer as a root user.

2. On the DVD, click **setup_lin.sh**.

NOTE: The setup_lin.sh command will automatically install the required Linux libraries and launch the installation process.

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3. Select the language to launch the Installation Center*,* and then click **Install**.

4. On the **Linux Product Installation Center** page, click **DS-Client**.

5. Select the language for the DS-Client installation, and then click **Install**.

6. On the **Software License Agreement** page, accept the agreement, and then click **Next**.

7. On the **Select Installation Type and Destination** page, select the component you want to install, specify a destination folder for the installation files, and then click **Next**.

   - **Classic DS-User**: (default) This installs the DS-User application.

   - **DS-Client Service**: (default) This installs the DS-Client service.

8. On the **Select Database Volume** page, select the volume with adequate space for the embedded PostgreSQL database. A prerequisite check is performed.

9. When the prerequisite check is complete, click **Next**.

10. On the **DS-Client Installation Summary** page, review the installation parameters, and then click **Install**.

11. On the **Complete Installation** page, select the required option(s), and then click **Done**.

1.2.4 Installing the DS-Client software (Mac)

This section describes how to install the DS-Client software on a Macintosh machine.

To install the DS-Client software:

1. Log on to the computer as the user **admin**.

2. Run the setup program from the following location on the DVD:

   ```
   \Software\DS-Client\DS-Client_FullFeatured\MAC_OS_X\setup.command
   ```

3. Select the language for the Mac DS-Client installation, and then click **Install**.

4. On the **Software License Agreement** page, accept the agreement, and then click **Next**.

5. On the **Select Installation Type and Destination** page, select the component you want to install, specify a destination folder for the installation files, and then click **Next**.

   – **Classic DS-User**: (default) This installs the DS-User application.

   – **DS-Client Service**: (default) This installs the DS-Client service.

6. On the **Select Database Volume** page, select the volume with adequate space to accommodate the embedded PostgreSQL database, and then click **Next**. A prerequisite check is performed.

7. On the **DS-Client Installation Summary** page, review the installation parameters, and then click **Install**.

8. On the **Complete Installation** page, select the required option(s), and then click **Done**.

1.2.5 Installing the VSS Nimble Provider (Windows)

The VSS Nimble Provider facilitates the integration of Nimble with the backup and restore of Microsoft SQL Server (VSS-aware) backup sets. Windows DS-Client has the ability to perform application consistent snapshots of the Microsoft SQL Server databases. These snapshots are stored on the Nimble Storage Array.

NOTE: Before proceeding with the installation of VSS Nimble Provider, you must install the **Nimble Storage Windows Integration Toolkit** on the same machine where the Microsoft SQL Server database resides.

The VSS Nimble Provider is supported on all operating systems compatible with the Windows DS-Client and all Windows operating systems that are compatible with the Microsoft SQL Server host. The VSS Nimble Provider must be installed on the same machine where the Microsoft SQL Server database resides.

To install the VSS Nimble Provider:

1. Log onto the target DS-Client computer as a local administrator.

2. On the DVD, click **Setup.exe**.

3. On the **Windows Product Installation Center** page, click **VSS Nimble Provider**. A prerequisite check is performed.

4. Once the prerequisite check is complete, click **Next**.

5. On the **License Agreement** page, accept the agreement, and then click **Next**.

6. On the **Select Destination Location** page, specify a folder where the installation files will be copied.

7. Click **Finish**.

1.2.6 Installing in console mode (Linux or Mac)

The console mode can be used on machines where no GUI is installed.

To install the DS-Client software in console mode:

1. Log on to the computer as a *root user* for Linux and as *admin user* for Mac.

2. To proceed with the installation, do one of the following:

    •   For Linux: Open the command line and change the directory to the root folder of the installation DVD. Then run the following command:

        ```
        ./setup_lin.sh -console
        ```

    •   For Mac: Run the command *setup.command -i console* from the following path: DVD\Software\DS-Client\DS_Client_FullFeature\MAC_OS_X.

3. Select the **Setup Language** to launch the installation center (For Linux only).

    –   For English: Press **[1]** then **Enter**.

    –   For German: Press **[2]** then **Enter.**

    –   For Simplified Chinese: Press **[3]** then **Enter**.

4. Press **[1]** for DS-Client, and then press **Enter** (For Linux only).

5. Select the language for the DS-Client installation.

    –   For German: Press **[1]** then **Enter**.

    –   For English: Press **[2]** then **Enter.**

    –   For Simplified Chinese: Press **[3]** then **Enter**.

    NOTE: For Mac, the installer requires administrative permission and may require a password for installing Sudo.Type the password and then click Enter.

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6. On the **Software License Agreement** page, read the agreement, press **[Y]** to accept, and then press **Enter**.

7. On the **Select Installation Type and Destination** page, select the component you want to install, specify a destination folder for the installation files, and then click **Next**.

    –   Press **[1]** to select DS-Client.

    –   Press **[2]** to select Classic DS-User.

8. Select the destination folder where DS-Client will be installed, and click **Enter**.

    –   For Linux, the default folder is: `/opt/CloudBackup/DS-Client`.

    –   For Mac, the default folder is: `/Library/cloudBackup/DS-Client`.

9. Select the **Database Volume** where the DS-Client database will be installed. It must be the same volume where DS-Client is being installed.

    –   Press **[1]** to install the DS-Client database to the original location, and then press **Enter**.

    –   Press **[2]** to install to the DS-Client database to an alternate volume, and then press **Enter**.

10. On the **DS-Client Installation Summary** page, review the installation parameters, and then lick **Enter**.

11. On the **Setup Complete** page, select the component(s) you want to launch, and then press **Enter**.

NOTE: If you are using Linux, press **[2]** to start DS-Client when you restart the system. By default, both DS-User and DS-Client will start upon exiting the Installation.

1.2.7 Installing from a command line (Linux or Mac)

To install DS-Client software from the command line:

•   For Linux: type **setuplinuxclient.bin**.

•   For Mac: type **setup.command**.

The following installation options are available:

•   **i silent**: Installs the application in silent mode (i.e without any interaction from the user's side). Parameters are taken from the same command line, otherwise default values are used. Default values are the ones used for the GUI mode (installation folder is /opt/CloudBackup, both DS-Client and DS-User are installed, and default language is English.

•   **DINSTALL_FOLDER=/target/install/folder**: Specifies the installation folder; if it does not exist, the folder is created by the installer application.

•   **DCHOSEN_FEATURE_LIST="DS-C,DS-U"**: Specifies the components to be installed. For full-featured DS-Client, **"DS-U"** installs classic DS-User. For DS-Notebook, **"DS-U"** installs DS-Notebook. A combination of the following is possible: "DS-C" (DS-Client service), "DS-U" (Classic DS-User). There are no spaces after commas between the quotes in this string.

•   **DDB_INSTALL_VOLUME="/target/DS-Client/database/volume"**: Specifies a valid read/write volume (mount point) where the DS-Client database will be located (Full-featured DS-Client only).

NOTE: This is not the actual full path for the database. The full path is determined by the installer based on the DS-Client installation folder.

- **DXML=/source/path/config-update.xml**: Instructs the installer to copy the file with an .xml extension from /source/path to the installation folder in /etc.

- **l de or -l en**: Selects the language (for either Console Mode or GUI Mode installation) to be German (-l en is the default setting).

NOTE: Users must have read/write access to the folder specified for installation.

1.3 Installing a Grid DS-Client (Windows)

Grid DS-Client is a configuration of several DS-Client nodes working together with a common DS-Client database to balance the processing load in a high availability environment. From the DS-System perspective, the Grid DS-Client is a single DS-Client with the same registration information on each node. The private and account encryption keys are the same for all DS-Client nodes in a grid.

1.3.1 Before you begin

Before installing a Grid DS-Client, do the following:

- Ensure the service account of each node has enough credentials to remotely start/ stop the DS-Client service on all other nodes. This is required for the Auto upgrade feature.

- Ensure all the DS-Client nodes are members of the same domain and have the same access permissions to network resources and the source database.

- Ensure all nodes have the same operating system with the same version and the database is common to all DS-Client nodes in the grid. The service account is the same for all DS-Clients in a grid.

- Ensure all computers on the grid have identical software installations to backup any of the special backup types.

- Ensure all nodes are synchronized with the same time server and configured to the same time zone to ensure consistency. You can use UTC (Coordinated Universal Time) via a recognized NTP (Network Time Protocol) server.

- On each node, perform the following (if applicable):

    – Ensure the firewall allows remote control of the DS-Client service between the nodes with the following commands:

    ```
    sc \\[other-node] start|stop ds-client
    ```

```
taskkill /S \\[other-node] /IM dsclient.exe
```

> **NOTE:** Replace [other-node] with the IP address or machine name of the target node. If these commands fail, you have a network or configuration issue that you must resolve before you can continue.

- Ensure port 4410 is open on all nodes of the Grid DS-Client as it is used for communication between the nodes.

- Ensure there is no firewall on the Grid DS-Client LAN which could block communication on port 4410.

- Ensure the DS-System is accessible from any DS-Client belonging to the same Grid DS-Client.

- Set the network access: Sharing and security model for local accounts. Set its value to **Classic** - **local users authenticate as themselves**.

- Turn on file and printer sharing.

- Ensure **File and printer sharing** and **Remote Administration** are in the exception list.

1.3.2 Installing a Grid DS-Client

To configure a Grid DS-Client, you must first install a standalone DS-Client on the main node in the grid. Subsequent nodes must point to the main node configuration file (dsgridconfig.conf) that was generated by the standalone DS-Client installation.

To install a Grid DS-Client:

1. Install a Standalone DS-Client on the main node that you want to use for the Grid DS-Client. For more information, see Section 1.2.2, "Installing the DS-Client software (Windows)", on page 9.

2. Run the DS-Client setup program again on the other nodes that will be part of the Grid DS-Client.

3. On the **Deployment Type** page, do the following:

   a) Select **Grid DS-Client (Leaf Node)**.

   b) Browse to the configuration file (dsgridconfig.conf) that was generated by the standalone DS-Client installation on the main node.

   c) Click **Next**.

> **NOTE:** The DS-Client service account and the DS-Client-PostgreSQL service account must have full control permissions for the dsgridconfig.conf file.

4. On the **Installation Complete** page, do the following:

a) Clear the **Start the DS-Client service** option.

b) Select the **Keep existing DS-Client database** option.

c) Click **Finish**.

NOTE: On every grid node, clear the selection for **Start the DS-Client service** option.

---

5. Once DS-Client is installed on all the nodes, start the DS-Client service on any one node, and then connect to that node. You are prompted to run the Initial DS-Client configuration.

6. Enter all the required information, and then click **Save**.

IMPORTANT: Do not select the **Connect to DS-System and verify information** option.

---

7. Stop the DS-Client service on the node.

8. Run the Grid DS-Client Configuration Tool on any one of the nodes and configure the grid.

    Once you have finished adding all the DS-Clients that will belong to the grid, the DS-Client service is started automatically on all the nodes.

9. Connect to the main node and verify or set the following:

    a) Set the parameter *DSCDBDumpPath* to the UNC path of the PostgreSQL dump location.

        If this is not configured, the DS-Client will use the default DS-Client buffer path, which may cause errors during Admin activities.

10. Set the parameter *LogArchivePath* to the UNC path of the archived DS-Client logs location.

1.4 Upgrading the DS-Client software

This section describes how you can upgrade the DS-Client software.

NOTE: We strongly recommend that you perform a Weekly/Daily admin process prior to performing an upgrade.

1.4.1 Performing an automatic upgrade

By default, the DS-System is configured to upgrade its DS-Clients automatically. Each time a DS-Client connects to the DS-System, the DS-System validates the DS-Client's version number. If the upgrade package on the DS-System is higher than the current DS-Client version, the DS-Client will silently upgrade itself.

If the *AllowAutoUpgrade* advanced configuration parameter is enabled, the DS-Client will automatically send system information once every 24 hours to the DS-System. The automatic upgrade must be approved by the administrator using the DS-Operator. For more information, see the *DS-Client User Guide*.

When performing an automatic upgrade from a previous version of the DS-Client, the existing Microsoft SQL Server or PostgreSQL database will be automatically migrated to the embedded PostgreSQL database. Users who want to retain their existing Microsoft SQL Server database must perform a manual upgrade.

When upgrading an embedded PostgreSQL database, the DS-Client retains a copy of the original database and engine in the following folders:

- PostgreSQL_<upgrade-date>

- ds-pg-database_<upgrade-date>

The folders and associated files are automatically deleted two weeks after a successful upgrade. You can copy the folders and associated files to another folder if you want to retain them longer or delete them earlier if required.

IMPORTANT: Before you begin the upgrade process, ensure there is enough disk space available on the DS-Client machine to accommodate the embedded PostgreSQL database. If the size requirements are not met, the auto-upgrade process will fail and the existing DS-Client will continue to run and connect to the updated DS-System.

If your environment has multiple DS-Clients and you do not want to upgrade them all at the same time, do one of the following:

- Upgrade each DS-Client in a controlled manner by performing a rolling upgrade. For more information, see the *DS-System User Guide*.

- Disable the **AllowAutoUpgrade** advanced configuration parameter (Setup > Configuration > Advanced tab > Miscellaneous) on each DS-Client that you do not want to upgrade.

NOTE: If you disable the automatic upgrade feature for DS-Client, you must manually install hotfixes and service packs on the affected DS-Client.

If there are errors in the database migration and the upgrade fails, you can view the details in the databasemigration.log file located in the DS-Client installation directory. If the autoupgrade fails, you can view the reason for failure in the silentlist.log file located in the DS-Client installation directory.

1.4.2 Performing a manual upgrade

Before you perform a manual upgrade, ensure that DS-Client is not running any backup/restore activities.

To upgrade the DS-Client software manually:

1. Stop the DS-Client service/daemon.

2. Run the new installation on the machine where the DS-Client software is installed.

    •   The installation will detect the existing DS-Client database and apply the required database patches.

    •   The installation will detect and upgrade the DS-Client components installed on the DS-Client machine.

3. On the **Deployment Type** page, in the **Database type** box, do one of the following:

    a) To migrate to an embedded PostgreSQL database, from the drop-down list, select **Embedded PostgreSQL**.

    b) To retain your existing Microsoft SQL Server database, from the drop-down list, select **Microsoft SQL Server**.

    c) If you selected Embedded PostgreSQL, in the **Drive (Required/ Free):...MB** box, select the drive with adequate space for the database.

4. When the installation is complete, start the DS-Client service/daemon.

5. Check the connectivity to the DS-Client service using the upgraded version of the DS-User GUI. If connection is successful, check the DS-Client Event Log for errors.

6. In the DS-User, on the **Setup** menu, click **View Quotas** to check the connectivity between DS-System and DS-Client.

NOTE: You can view the database migration progress in the MigrateStatus.txt file located in the DS-Client installation folder. The file is updated every 10 seconds until the migration process is completed.

1.5 Upgrading a Grid DS-Client

This section describes how you can upgrade the Grid DS-Client.

1.5.1 Performing an automatic upgrade

Grid DS-Clients can auto-upgrade if their DS-System is configured to allow it.

The first node that downloads a higher version auto-upgrade package from DS-System will stop the DS-Client service on all other nodes. After the first node has finished upgrading, it will restart the DS-Client services on all other nodes.

Once those nodes restart, they will connect to DS-System and download the auto-upgrade package (this time auto-upgrade will only stop the DS-Client service on the local node).

Auto-upgrade is triggered if the following occurs:

- When starting DS-Client service, at least one other node is found to have a higher version (only the node performing upgrading will be stopped for upgrading and restarted automatically).

- When connecting to DS-System, a higher version DS-Client auto-upgrade package is available.

NOTE: If a node's version is lower than the highest version on the Grid DS-Client, it will perform auto-upgrade right after starting the DS-Client service. If auto-upgrade is not allowed or fails to upgrade, a version compatibility check will be performed and nodes that are not compatible will not be allowed to start.

1.5.2 Performing a manual upgrade

If the existing database on a node is embedded PostgreSQL, you must upgrade that node first, and only then upgrade the remaining nodes.

If the existing database on a node is not embedded PostgreSQL, then you must upgrade the node (selected on the DS-System side) first, install PostgreSQl database, and only then upgrade the remaining nodes.

IMPORTANT: If the earlier version of DS-Client is using a Microsoft SQL database, then during the upgrade, you have the option of retaining the Microsoft SQL database or migrating it to PostgreSQL. By default an embedded PostgreSQL database is installed on the first Grid DS-Client node that is upgraded.

To manually upgrade Grid DS-Client:

1. Stop the DS-Client services on all Grid DS-Client nodes.

2. Run the DS-Client installer on the first Grid DS-Client node on which you want to install the database.

3. On the **Deployment Type** page, do one of the following:

   • To migrate the existing Microsoft SQL database to PostgreSQL or to install PostgreSQL, select the **Embedded PostgreSQL** option.

   • To retain the Microsoft SQL database, select the **MSSQL Server** option.

   NOTE: Ensure there is enough disk space available on the DS-Client machine to accommodate the embedded PostgreSQL database.

4. Click **Next** and follow the steps for a Standalone DS-Client installation.

   IMPORTANT: After the upgrade of the first node is completed and the database is migrated to the embedded PostgreSQL, do not start the DS-Client service.

5. Copy the dsgridconfig.conf file that is automatically generated in the DS-Client installation folder (on the upgraded node) to the other grid nodes.

6. Run the DS-Client installer on the remaining grid nodes.

7. On the **Deployment Type** page, select **Grid Install**, click **[...]**, and then select the dsgridconfig.conf file.

   IMPORTANT: Do not start the DS-Client service until you have completed steps 5-7 on all the grid nodes.

8. When all the nodes have been upgraded, start the DS-Client service on each Grid DS-Client node.

2 Installing the Management Console software

This chapter provides detailed instructions on how to install the Management Console software.

NOTE: Ensure the DS-Client machine and Management Console machine are synchronized with a time server to ensure consistency. You can use UTC (Coordinated Universal Time) via a recognized NTP (Network Time Protocol) server to keep the time synchronized.

2.1 Preparing to install the Management Console software

This section describes the system requirements for installing the Management Console software.

2.1.1 Hardware requirements

The following table lists the recommended hardware requirements for installing the Management Console software.

Requirement	Details
Processor	4 core @ 3.0 GHz
Memory	16 GB
Disk space	200 GB for operating system and embedded database
Display	1366 x 768 or higher

Table 4　　　*Recommended hardware requirements for Management Console*

2.1.2 Software requirements

The following table lists the requirements for installing the Management Console software.

NOTE: Management Console supports the following web browsers: Google Chrome (Windows, Linux, Mac), Microsoft Edge v79 or later (Windows), Mozilla Firefox (Windows, Linux, Mac), and Safari (Mac).

Operating System	Database
Windows 10, Windows Server 2016, 2019	PostgreSQL 10 (embedded)
CentOS 7.5, 7.6, 7.7, 7.8, 8.0, 8.1, 8.2	PostgreSQL 10 (embedded)
Red Hat Enterprise Linux 7.5, 7.6, 7.7, 7.8, 7.9, 8.0, 8.1, 8.2	PostgreSQL 10 (embedded)
SUSE Linux Enterprise Server 12 SP5, 15 SP2	PostgreSQL 10 (embedded)
Mac OS X 10.13, 10.14, 10.15	PostgreSQL 10 (embedded)

Software requirements for Management Console

NOTE: Only the 64-bit version of the supported operating system is supported.

2.2 Installing the Management Console software

This section describes how to install the Management Console software.

To install the Management Console software:

1. Log onto the computer as an administrator.

2. On the DVD, do one of the following:

    •   Windows: Click **setup.exe**, and then on the **Windows Product Installation Center** page, click **Management Console**.

    •   Linux: Click **AMCInstall.bin**, and then on the **Linux Product Installation Center** page, click **Management Console**.

    •   Mac: Click **setup_amc.command**.

3. On the **License Agreement** page, read the license agreement carefully, click **I accept the terms of the license agreement**, and then click **Next**.

4. On the **Select Installation Folder** page, select the destination folder where you want to copy the installation files, and then click **Install**.

5. On the **Management Console Settings** page, do the following:

a) Select **Https port** or **Http port**, and then type a port number.

b) If you selected **Https port**, and want to import your SSL certificate, select the **I want to import my SSL certificate** check box, and then do the following:

  – Select a **Key store type** for the certificate.

  – In the **Key alias** box, type a name for the key alias.

  – In the **Password** box, type a password to protect the key.

  – Click **Browse** and select the SSL certificate file.

NOTE: To change the Management Console settings after installation, on the **Start** menu, click **Configuration Tool** in the Management Console folder.

6. To start the Management Console service automatically when you restart the machine, select the **Start Management Console service after reboot** check box, and then click **Next**.

7. On the **Installation Complete** page, select the **Start the Management Console service** check box, if required, and then click **Done**.

NOTE: To manually start or stop the Management Console service, on the **Start** menu, click **Process Manager** in the Management Console folder.

2.3 Installing the Management Console Relay Server

To remotely manage DS-Clients from the Management Console without opening a port in the firewall on the DS-Client machine, you must install the Management Console Relay Server on the Management Console machine.

NOTE: The Management Console Relay Server is installed as a service (Windows) or daemon (Linux) called **MCRelayService**.

To install the Management Console Relay Server:

1. Copy the **server_install.exe** (Windows) or **server_install** (Linux) file into a folder on the machine where you installed the Management Console software.

NOTE: To obtain the files, contact your Technical Account Manager (TAM) or Technical Support representative.

2. Open a command prompt as an administrator (Windows) or terminal window as a root user (Linux), and then do one of the following:

   • On Windows, run the following command:

   ```
   server_install.exe
   ```

   • On Linux, run the following command:

   ```
   server_install
   ```

   NOTE: If the Management Console software was installed in a different folder than the default location, you will prompted to enter the installation directory and the Relay Server will be installed in the same location.

   Wait for the following message to appear:

   ```
   relay_server installed successfully
   ```

3. To start, stop or check the status of the Management Console Relay Server, do one of the following:

   • On Windows, open the Services window.

   • On Linux, run the following command:

   ```
   systemctl start/stop/status MCRelayService.service
   ```

2.4 Uninstalling the Management Console Relay Server

If you no longer want to remotely manage DS-Clients from the Management Console, you can uninstall the Management Console Relay Server.

To uninstall the Management Console Relay Server:

• In the folder where you installed the Management Console Relay Server, open a command prompt as an administrator (Windows) or a terminal window as a root user (Linux), and then do one of the following:

   • Windows: Run the following command:

   ```
   server_uninstall.exe
   ```

   • Linux: Run the following command:

   ```
   server_uninstall
   ```

   Wait for the following message to appear:

   ```
   relay_server uninstalled successfully
   ```

3 Installing the DS-Mobile Client software (Windows)

This chapter provides detailed instructions on how to install the DS-Mobile Client software.

NOTE: The DS-Mobile Client does not support the backup or restore of Windows Server operating systems.

3.1 Preparing to install the DS-Mobile Client software

This section describes the system requirements for installing the DS-Mobile Client software.

3.1.1 Hardware requirements

The following table lists the recommended hardware requirements for installing the DS-Mobile Client software.

Requirement	Details
Processor	2 core @ 2.0 GHz
Memory	4 GB
Disk space	40 GB for operating system and embedded database

Table 5   *Recommend hardware requirements for DS-Mobile Client*

3.1.2 Software requirements

The following table lists the requirements for installing the DS-Mobile Client software.

Operating system	Database
Windows 10, Windows Server 2016, 2019	Firebird (embedded)

Table 6   *Software requirements for DS-Mobile Client*

NOTE: Only the 64-bit version of the supported operating system is supported.

3.1.3 Port requirements

The following table lists the port requirements for the DS-Mobile Client.

Ports	Description
4401	DS-Mobile Client to DS-System

Table 7   Port requirements for DS-Mobile Client

NOTE: Port numbers 4400-4406 are IANA-assigned.

3.2 Installing the DS-Mobile Client software

This section describes how to install the DS-Mobile Client software.

To install the DS-Mobile Client software:

1. Log onto the computer as a local Administrator.

2. On the DVD click **Setup.exe**.

3. On the Windows Product Installation Center page, click **DS-Mobile Client**.

4. On the **Choose the Setup Language** page, select the language for the installation, and then click **Next**. A prerequisite check is performed.

5. Once the prerequisite check is complete, click **Next**.

6. On the **License Agreement** page, read the license agreement carefully, click **I accept the terms of the license agreement**, and then click **Next**.

7. On the **Select Installation Location** page, specify a destination folder for the installation files and click **Next**.

8. On the **Specify Service Logon Account** page, specify the user account and password that the DS-Mobile Client will use to log on when it is started as a Windows service, and then click **Next**.

    •   If you leave the fields empty, the *Local System* account credentials will be used for the service.

    •   Select **This Account** to specify a user that is a member of the Administrator group of the local computer and type the credentials.

    •   If you specify the same user account and password you used to log on to the Windows computer, *Classic DS-Mobile User* will use those credentials to automatically log into the DS-Mobile Client when it is launched.

- On the **Completing the wizard** page, click **Finish** to complete the installation.

NOTE: Your service provider can provide on their website a simplified "custom wrapped" installation that contains several predefined selections. When installing, you only select the language, agree to the license, select a private encryption key, and enter your email address. Once you have entered the required information, click **Next** to complete the installation.

3.3 Upgrading the DS-Mobile Client software

By default, the DS-Mobile Client software downloads the automatic upgrade packages from the DS-Client. If an upgrade package is required (and available on the DS-System), the DS-Client will download the upgrade package and silently push the installation to the target DS-Mobile Client installation.

For more information, see Section 1.4.1, "Performing an automatic upgrade".

Installing the DS-Mobile Client software (Windows)

Upgrading the DS-Mobile Client software

4 Installing the DS-Notebook Client software (Mac)

This chapter provides detailed instructions on how to install the DS-Notebook Client software.

4.1 Preparing to install the DS-Notebook Client software

This section describes the system requirements for installing the DS-Notebook Client software.

4.1.1 Hardware requirements

The following table lists the recommended hardware requirements for installing the DS-Notebook Client software.

Requirement	Details
Processor	2 core @ 2.0 GHz
Memory	4 GB
Disk space	40 GB for operating system and embedded database

Table 8   Recommended hardware requirements for DS-Notebook Client

4.1.2 Software requirements

The following table lists the requirements for installing the DS-Notebook Client software.

Operating System	Database
Mac OS X 10.13, 10.14, 10.15	PostgreSQL 10 (embedded)

Table 9   Software requirements for DS-Notebook Client software

NOTE: Only the 64-bit version of the supported operating system is supported.

4.1.3 Port requirements

The following table lists the port requirements for the DS-Mobile Client.

Ports	Description
4401	DS-Notebook Client to DS-System

Table 10   Port requirements for DS-Notebook Client

NOTE: Port numbers 4400-4406 are IANA-assigned.

4.2 Installing the DS-Notebook Client software

This section describes how to install the DS-Notebook Client software.

To install the DS-Notebook Client software:

1. Log on to the computer as a root user.

2. Run the setup program from the following location on the DVD:

    `\Software\DS-Client\DS-Notebook_Client\MAC_OS_X`

    • If you are logged in as a user with administrative privileges, Service Manager will require your password.

3. On the **License Agreement** page, read the license agreement carefully, click **I accept the terms in the license agreement**, and then click **Next**. A prerequisite check is performed.

4. Once the prerequisite check is complete, click **Next**.

5. On the **Select Installation Location** page, specify a destination folder for the installation files, and then click **Install**.

6. On the **Setup Complete** page, click **Done**, and then start the DS-Client daemon. You can manually start and stop the DS-Client service (daemon) using the following commands:

    `/Library/StartupItems/DSNClient/DSNClient start`

    `/Library/StartupItems/DSNClient/DSNClient stop`

4.3 Installing the DS-Notebook Client software from a command line

To install DS-Client from the command line, type **setuplinuxclient.bin**.The following installation options are available:

- **i silent**: Installs the application in silent mode. Parameters are taken from the same command line, otherwise default values are used. Default values are the ones used for the GUI mode, both DS-Client and DS-User are installed, and default language is English.

- **i console**: Starts the installation in console mode instead of GUI mode. This can be used on machines where no GUI is installed.

- **DINSTALL_FOLDER=/target/install/folder**: Indicates the desired installation folder; if it does not exist, the folder is created by the installer application.

- **DXML=/source/path/config-update.xml**: Instructs the installer application to copy the file with an .xml extension from /source/path to the installation folder in /etc.

4.4 Upgrading the DS-Notebook Client software

By default, the DS-Notebook Client software downloads the automatic upgrade packages from the DS-Client. If an upgrade package is required (and available on the DS-System), the DS-Client will download the upgrade package and silently push the installation to the target DS-Notebook Client installation.

For more information, see Section 1.4.1, "Performing an automatic upgrade".

Installing the DS-Notebook Client software (Mac)

Upgrading the DS-Notebook Client software