Dataverse

Server Installation Guide

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Contact us

If you encounter any technical issues, we recommend that you visit the Dataverse Forums at https://help.lavastorm.com/. If your query has not been discussed previously in the forums, you can create a new topic and receive answers from our Dataverse experts. Alternatively, you can log a ticket by emailing support at help@lavastorm.com.

Our product is constantly evolving and input from you is highly valued. If you have any suggestions, please contact the product team at product@lavastorm.com.

Download

Lavastorm recommends that you use the latest version of the product. To download Dataverse, please go to http://www.lavastorm.com/product-downloads/.

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1. Setup requirements

Supported platforms

The following operating systems are supported on Dataverse Server:

- Windows Server 2016 64-bit (Server with Desktop Experience)

- Windows Server 2012R2 64-bit

- RedHat Enterprise 6.X 64-bit

- RedHat Enterprise 7.X 64-bit

The following browsers are supported:

- Chrome

- Internet Explorer 11

System requirements

The minimum hardware specification for this release is as follows:

- 8GB RAM base + 1GB for Database + 2GB per core.

For installations on Windows Server, you must install the required Visual C++ Redistributable Packages for Visual Studio 2013.

> **Note:** As the number of users and/or the number of scheduled jobs increases, you should look to increase the number of cores and thus memory.

> **Note:** The Power R node and the nodes in the Statistical and Predictive Node Pack process data in-memory. Additional RAM will be required when processing data sets with a large volume of data. Similarly, if the R node is used, the machine hosting the R environment must have sufficient available RAM to process the data.

App servers

- Tomcat 8.5.23

App server databases

- Postgres

Authentication servers

- Active Directory

- OpenLDAP

Authentication protocols

- LDAP

- LDAPs

Single Sign-On

- CA Single Sign-On - Dataverse is tested against CA Single Sign-On v12.6 where it is integrated via the SiteMinder Access Gateway component. Other versions of CA Single Sign-On which support the SiteMinder Access Gateway may also work. Integrating with previous versions of CA Single Sign-On, where the SiteMinder Access Gateway is not available, may also work where those versions support the SiteMinder Secure Proxy Server component.

Accessible databases

Within the Designer, you can connect your analytic application to a number of databases. The following accessible databases are supported:

- Oracle 11g, 12c

- Teradata 14.10 / 15.10

- MySQL

- MS SQL Server 2012

- MongoDB 2.4.9

- Spark 1.5.0

- Hadoop 2.6.0

2. Pre-installation steps (Linux only)

The following steps are only applicable if you are installing on Linux. If you are installing Dataverse on Windows Server the following steps do not apply, please see Downloading and installing Dataverse.

1. Disable Security Enhanced (SE) Linux before installing.

2. Create a user to install Dataverse (you can use any username). To create a user account as root execute the following command:
   ```
   /usr/sbin/adduser -m -d <users-directory> <user name>
   ```

3. Prepare for installation by identifying the following directories:

Directory	Description / example
Dataverse installation directory	By default, the Dataverse software installs under your local user location, but you can change this to any other location that you have access to. Default location: /home/<user>/Dataverse
Site configuration directory	This is the location where your customer-specific files are stored, including configuration files and application logs. During installation, you can set this to any location that you have access to that has sufficient space.
Data directory	This is the location where the Postgres Database and all of your data files are stored. During installation, you can set this to any location that you have access to. As the data directory will grow in size as you work with Dataverse, ensure that you choose a location that has sufficient space and fast access.

3. Downloading and installing Dataverse

✓ If you are installing on Linux, you must first complete the steps outlined in Pre-installation steps (Linux only), before following the steps below.

✓ If you are installing on Windows Server, in order to run Postgres, you must ensure that you have installed the required Visual C++ Redistributable Packages for Visual Studio 2013.

If you are upgrading from a previous version of Dataverse, please see Upgrading to the latest version of Dataverse. If you have no existing installation of Dataverse, please follow the steps below:

1. Download the software from: http://www.lavastorm.com/product-downloads/

2. After purchasing a server edition of Dataverse, or if you are participating in an evaluation of the product, you will receive an email with a link to activate your license:

   a. From the machine that you will be installing Dataverse on, click the link provided, then enter your machine's **Hostname** (Computer name).

   b. Click the blue **Activate** button.

   c. Download the license file by clicking the green **Download** button, then save the license file in a safe location as you will need to reference the location during installation.

3. **Windows Server**: You must have administrative privileges to run the installation. Right-click the application installation file and select **Run as administrator**.

   Linux: The user who will be performing the installation should be logged onto the computer.
   Start the installation by typing the following command, where <Dataverse installer> is replaced with the name of the installer e.g. Dataverse_3_1_7-Server-linux-x86-64 (note that if no GUI is available, the installer will fall back to a command line install):
   ```
   ./<Dataverse installer>.sh
   ```

   The installer will guide you through the process step by step. The key steps are called out below.

4. If you have previously had an installation of this version of Dataverse and have a backup file that you want to restore to, when prompted, select **Restore from a backup** then browse to the backup file.

> **Note:** The backup / restore facility can only be used to restore your system to a previously known state on the same version. For example, if you are installing Dataverse 3.1.6, you can only restore to a backup file that was created on a 3.1.6 installation.

5. After choosing where to install Dataverse, you will be asked to provide a location for the **Site Configuration Directory**. This is the location where your customer-specific files are stored, including your license file, configuration files and application logs.

   You also need to specify a location for the **Data Directory**. This is the location where your data files and the Postgres Database are stored. You can set these to any locations that you have access to.

   > **Note:** As the Data Directory will grow in size as you work with Dataverse, ensure that you choose a location that has sufficient space and fast access.

6. When prompted, accept the default port number for the Dataverse server, or specify any other port number that is not in use. You will be required to repeat this action for the Tomcat Server and the Postgres Database later in the installation.

7. When prompted, enter the path to your **Dataverse License File**, then click **Next**. The license file must be a ".lic" file.

8. To integrate Dataverse with CA Single Sign-On, when prompted select **Enable SSO deployment**. By selecting this option, your users will be able to sign in to Dataverse with the same set of user credentials that they use elsewhere in your business.

   a. If you have selected **Enable SSO deployment**, you also have the option to select **Disable Logout** if you want to prevent users from being able to sign out of Dataverse. Select this option if you would prefer users to close Dataverse and return to the portal to log out or to choose another application.

   b. If you have selected **Enable SSO deployment**, and you have not selected **Disable Logout**, enter a **Logout URL** to specify where users should be redirected to after signing out of Dataverse.

9. When prompted, enter a **Security Store Password**. For increased security, do not select **Store Password**. If you do not store the security store password, you will be asked to enter it each time you restart the Tomcat Server and then launch Dataverse before you reach the Dataverse sign in screen.

   > **Tip:** The security store safely stores encrypted values, such as the LDAP/AD import binding user password and encryption keys used to encrypt password property values.

10. If you selected to restore from a backup, after installation, complete the following additional steps:

    a. Stop the server, see Starting and stopping the Dataverse Server.

    b. Replace the site/conf and site/lib folders with the ones that you copied before uninstalling a previous version of Dataverse (see Uninstalling Dataverse).

    c. Inspect your cust.prop file (site/conf/cust.prop) to ensure that any paths are suitable for the new installation.

d. Replace the securityStore.jks file in the data directory with the one that you copied before uninstalling a previous version of Dataverse.

e. Restart the server, see Starting and stopping the Dataverse Server.

The installer will deploy all Dataverse components on the same machine (web application, hosting app server, Dataverse server and database).

You are assigned the following default user credentials:

- Username: admin

- Password: welcome

> **Tip:** We recommend that you change your password the first time that you sign in to Dataverse. You can change your password from the Directory, see the integrated help for more information.

See Post-installation configuration for a list of additional configuration steps to complete after installation.

4. Upgrading to the latest version of Dataverse

If you do not have an existing installation of Dataverse, please see Downloading and installing Dataverse.

If you have an existing installation of Dataverse and want to upgrade, you can choose one of the following options:

- Run an "in place upgrade" to replace your existing installation with the new version, see In place upgrade.

    - Or -

- Run a "side by side upgrade" to keep your existing installation and install the latest version on another machine, enabling you to have two systems running side by side, see Side by side upgrade.

In place upgrade

1. Before upgrading, ensure that you have a copy of a recent backup file. By default, a backup is performed daily at 2:00 a.m (if Dataverse is running), and the twenty most recent backups are saved in the Dataverse data directory that you specified when you first installed Dataverse, for example:
`C:\Users\<username>\Dataverse\data-7731` on Windows or
`/home/<user>/Dataverse/data-7731` on Linux.

    In addition, take a copy of the following:

    - `<Dataverse site directory>/conf` which contains your cust.prop file and license file, e.g.
      `C:\Users\<username>\Dataverse\site-7731\conf` on Windows or
      `/home/<user>/Dataverse/site-7731/conf` on Linux.

    - `<Dataverse site directory>/lib` (you only need to copy this folder if you have added any custom JAR files).

    - Your securityStore.jks file found in the data directory.

2. Download the software from: http://www.lavastorm.com/product-downloads/

3. **Windows Server**: You must have administrative privileges to run the installation. Right-click the application installation file and select **Run as administrator**.

    Linux: The user who will be performing the installation should be logged onto the computer.
    Start the installation by typing the following command, where <Dataverse installer> is replaced with the name of the installer e.g. Dataverse_3_1_7-Server-linux-x86-64 (note that if no GUI is available, the installer will fall back to a command line install):
    `./<Dataverse installer>.sh`

    The installer will guide you through the upgrade step by step. The key steps are called out below.

4. You will be prompted to choose where to install Dataverse. Select **Yes, update the existing installation** to uninstall the previous version of Dataverse before installing the latest version in the same location.

   The upgrade process creates a backup of the Dataverse site configuration directory that you specified when you first installed Dataverse.

5. Launch Dataverse, see [Launching the software and accessing help](#).

The installer will use your existing license to complete the upgrade process. If at any point after installation you want to apply a new license, you can do this by selecting **Licensing** from the Help menu in the top right corner of the Dataverse screen. For more information on applying a new license, see the integrated product help.

The installer will deploy all Dataverse components on the same machine (web application, hosting app server, Dataverse server and database). The settings that you specified when you first installed Dataverse will be reused, including the site configuration directory, data directory, port numbers, and security store settings.

See [Post-installation configuration](#) for a list of additional configuration steps to complete after installation.

Side by side upgrade

1. Make a copy of the following folders:

    -   Data directory e.g. C:/Users/<username>/Dataverse/data-7731

    -   Site directory e.g. C:/Users/<username>/Dataverse/site-7731

    > **Note:** Save a copy of these folders on another machine in the same path location as on the original machine.

    You may need to edit some of the property paths in the site/conf/cust.prop file to suit the new location.

2. Download the latest version of the software from: http://www.lavastorm.com/product-downloads/
    Install the new version of Dataverse on a different machine to your existing installation.

3. **Windows Server**: You must have administrative privileges to run the installation. Right-click the application installation file and select **Run as administrator**.

    Linux: The user who will be performing the installation should be logged onto the computer.
    Start the installation by typing the following command, where <Dataverse installer> is replaced with the name of the installer e.g. `Dataverse_3_1_7-Server-linux-x86-64` (note that if no GUI is available, the installer will fall back to a command line install):
    `./<Dataverse installer>.sh`

    The installer will guide you through the upgrade step by step. The key steps are called out below.

4. When asked to provide a location for the **Site Configuration Directory** and the **Data Directory**, for each of the directories, click **Browse** and navigate to the location of the folders that you copied in step 1.

5. Launch Dataverse, see Launching the software and accessing help.

See Post-installation configuration for a list of additional configuration steps to complete after installation.

5. Launching the software and accessing help

Launch the application in your browser. The default URL is http://*<yourdomain>*:8080.

You can access the Getting Started guide from inside the product by clicking the Help icon in the corner of the screen.
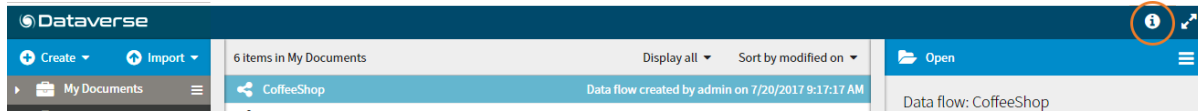
For further information about this release, please see the Release Notes. If you encounter any issues, we recommend that you visit the Dataverse Forums at https://help.lavastorm.com/. If your query has not been discussed previously, you can create a new topic and receive answers from our Dataverse experts. Alternatively, you can log a ticket by emailing support at help@lavastorm.com.

6. Post-installation configuration

After installation, there are a number of additional configuration steps that you may want to complete before working with Dataverse:

- Create and import users and groups.

- Integrate Dataverse with your LDAP/AD source system.

- Install any required database drivers.

- Import any existing data flows.

- Add SSL certificates.

- Change the location of temporary files.

- Configure system backup properties.

- Configure file upload / download properties.

- Configure the automatic clean up of scheduled runs.

- Configure the usage data collection settings, if required.

- Configure the timeout period.

- Adjust the Java heap space, if required.

> **Note:** The ulimit is not set during installation. It is recommended that you set the maximum number of open file descriptors based on the anticipated workload of Dataverse. This should minimally be set to 4096.

The actual functionality of your installation may vary depending on your license and user role. To learn more about Dataverse product options, please visit http://www.yourdataverse.com/product/#features.

You can read more about each of the above steps in the integrated product help.

7. Starting and stopping the Dataverse Server

The default port numbers are shown below, where <port> is the port number on which the server is listening:

Server	Default port number
Dataverse-<port>-Server3.1.x	7731
Dataverse-<port>-PostgresServer-3.1.x-<port>	5432
Dataverse-<port>-TomcatServer3.1.x-<port>	HTTP: 8080 Stop: 8089

7.1 Starting / stopping the server on Windows Server

From time to time, you may want to restart the Dataverse servers, for example, when directed to do so by Support.

⚠️ **Caution:** The Dataverse server must be stopped before the Tomcat server.

⚠️ **Caution:** The Postgres database must be started before the Tomcat server and the Dataverse server.

1. Open the Windows **Services** dialog.

2. From the Windows **Services** dialog, you can complete the following actions:

   - You can start, stop and restart the Dataverse, Tomcat and Postgres database services by right-clicking the service and selecting the relevant option from the context menu.

   - You can configure the server settings by selecting **Properties** from the context menu. For example, you can select a Manual or Automatic Startup type. By default, the server Status is set to Started and the Startup type is set to Automatic.

   - You can view the port number that each service is running on.

7.2 Starting / stopping the server on Linux

You can start or stop the server processes on Linux by executing the following commands:

```
./launchDataverse.sh
./stopDataverse.sh
```

These commands start / stop all required processes in the correct order on Linux.

8. Uninstalling Dataverse

To successfully uninstall Dataverse, an admin user must run the uninstall process.

1. If you want to restore to a backup during a future installation (to restore your system to an earlier state), you must first complete this step before uninstalling:

   a. Make a copy of the following:

      - `<Dataverse site directory>/conf` which contains your cust.prop file and license file, e.g. `C:\Users\<username>\Dataverse\site-7731\conf` on Windows or `/home/<user>/Dataverse/site-7731/conf` on Linux.

      - `<Dataverse site directory>/lib` (you only need to copy this folder if you have added any custom JAR files).

      - Your securityStore.jks file found in the data directory e.g. `C:\Users\<username>\Dataverse\data-7731\securityStore.jks` on Windows or `/home/<user>/Dataverse/data-7731/securityStore.jks` on Linux.

   b. Save a copy of these files in a different location.

2. Navigate to your Dataverse installation directory and double-click the **uninstall** file.

   Or, use `./uninstall` to uninstall on Linux via the command line.

   The uninstaller will guide you through the process step by step.

3. During the uninstall process you will be prompted to enter a username and password, this user must be an Administrator.

4. When prompted, specify whether you want to retain your data and backup files.

   > **Note:** If you want to restore to a backup file during a fresh installation, when prompted, do <u>not</u> select **Include backups for deletion**. This will ensure that any backup files are not deleted from the default location. If you want to retain your data, including data flows and custom nodes, do <u>not</u> select **Delete data directory**.

   You can remove all data and backup files by selecting both options. If you select only **Delete data directory**, but do not select **Include backups for deletion**, then your data will be removed but your backup files will be retained, giving you the option to restore to a backup file during a fresh installation.