

MigratoryData Server

Installation Guide

Version 6.0
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1. Introduction

This guide describes the installation of MigratoryData Server. Before reading this document, it is recommended to read *MigratoryData Architecture Guide* for a better understanding of the concepts and to have a more comprehensive background.

1.1 Release

This guide is part of the documentation set for MigratoryData Server version 6.0.

1.2 Related Documents

- *MigratoryData Architecture Guide*
- *MigratoryData Configuration Guide*
- *MigratoryData Performance Benchmarking Guide*
- *Developer's Guide* and *Reference Manual* of any available client library
- *Developer's Guide* and *Reference Manual* of any available extension library

2. Requirements and recommendations

2.0.1 Software

Written in pure Java, MigratoryData Server runs on all major operating systems. While running MigratoryData Server on operating systems such as Windows or MacOS could be convenient for development, for production deployments, the recommended operating system is Linux; more precisely, any modern 64-bit Linux enterprise distribution (kernel 2.6 or later) such as RedHat Enterprise Linux, CentOS, or Debian version 6 or later.

MigratoryData Server is self-contained, its object code consists of a single JAR file with no dependencies. Also, the installers for Linux are bundled with Oracle's Java Runtime Environment (JRE) version 8 such that the Linux installers have no dependencies. On the other hand, the platform-independent tarball installer requires Oracle JRE version 8 or later that needs to be installed separately.

2.0.2 Hardware

- In a production environment, it is recommended to have a server with at least four CPU cores, but the recommendation can grow to more CPU cores depending on the load of data on the server and how much simultaneous clients will be connected.

For development or small deployments, there are no special requirements concerning CPU. You can use any decent workstation hardware.

- In a production environment, it is recommended to have 8 GB or more memory depending on the load of data on the server and how much simultaneous clients will be connected.

For development or small deployments, it is recommended to have at least 512 MB memory.

- In a production environment, it is recommended to use for storing the logs a local drive, rather than a network drive.

2.0.3 Capacity Planning

You can estimate the hardware and the number of MigratoryData servers required for your real-time application by using *MigratoryData Benchmark Kit*, a software able to simulate millions of concurrent clients from a single machine and being able to publish messages of a configurable size at a configurable frequency. Also, you can check *MigratoryData Performance Benchmarking Guide* to see if your use case matches any of the already benchmarked use cases.

3. Linux

3.1 RPM Based Linux

The installation procedure described in this section has been tested on the following RPM-based Linux distributions and architectures:

- CentOS i586/x64
- RedHat i586/x64

Download the RPM package of MigratoryData Server and run as root the following command to install it:

```
rpm -vi migratorydata-Version-Architecture.rpm
```

This will deploy MigratoryData Server as follows:

Location	Description
/etc/migratorydata/migratorydata.conf	The default configuration file of MigratoryData Server. Follow the instructions in <i>MigratoryData Configuration Guide</i> to configure MigratoryData Server
/var/log/migratorydata/	The logs folder
/usr/share/migratorydata/	The folder which contains the object code of MigratoryData Server as a JAR file as well as the Oracle JRE bundle
/usr/share/migratorydata/extensions	Folder used for custom extensions. Follow the instructions in <i>MigratoryData Audit Extension API</i> and <i>MigratoryData Authorization Extension API</i> to learn how to build extensions.
/usr/bin/migratorydata	A script used by the <code>init.d</code> daemon script
/etc/init.d/migratorydata	The <code>init.d</code> daemon script used to start, stop, and restart the MigratoryData Server service
/usr/share/doc/migratorydata	Folder containing documentations, examples, and licenses

After installation:

1. The service will start automatically when the machine reboots. To manually start, stop, restart, and get the status of the service, run as root one of the following commands:

```
/etc/init.d/migratorydata start
/etc/init.d/migratorydata stop
/etc/init.d/migratorydata restart
/etc/init.d/migratorydata status
```

2. To test the installation start a web browser on the machine where MigratoryData Server has been installed and open the following URL:

```
http://localhost:8800
```

If a browser is not available on the machine where MigratoryData Server has been installed, then, supposing the address of the machine is `push.example.com` and the port 8800 is not blocked by the firewall of the machine, you can remotely test the installation by opening the following URL from a remote machine connected to `push.example.com`:

```
http://push.example.com:8800
```

This will open the home page of MigratoryData Server which contains documentations and examples.

3. To upgrade MigratoryData Server to a newer version, run as root the following command:

```
rpm -vU migratorydata-NewVersion-Architecture.rpm
```

Note — The upgrade process will preserve the old configuration files to ensure the continuity of your service. A copy of the default configuration of the new version is also provided with the extension `.new`.

4. To remove MigratoryData Server from your system run as root the following command:

```
rpm -ve migratorydata
```

The next step is to build your clients to communicate with your MigratoryData Server installation. Please refer to the *API Developer's Guide and Reference Manual* of any MigratoryData API that you intend to use, to learn how to build clients for MigratoryData Server.

3.2 DEB Based Linux

The installation procedure described in this section has been tested on the following DEB-based Linux distributions and architectures:

- Debian i586/x64
- Ubuntu i586/x64

Download the DEB package of MigratoryData Server and run as root the following command to install it:

```
dpkg -i migratorydata-Version-Architecture.deb
```

This will deploy MigratoryData Server as follows:

Location	Description
<code>/etc/migratorydata/migratorydata.conf</code>	The default configuration file of MigratoryData Server. Follow the instructions in <i>MigratoryData Configuration Guide</i> to configure MigratoryData Server.
<code>/var/log/migratorydata/</code>	The logs folder
<code>/usr/share/migratorydata/</code>	The folder which contains the object code of MigratoryData Server as a JAR file as well as the Oracle JRE bundle
<code>/usr/share/migratorydata/extensions</code>	Folder used for custom extensions. Follow the instructions in <i>MigratoryData Audit Extension API</i> and <i>MigratoryData Authorization Extension API</i> to learn how to build extensions.
<code>/usr/bin/migratorydata</code>	A script used by the <code>init.d</code> daemon script
<code>/etc/init.d/migratorydata</code>	The <code>init.d</code> daemon script used to start, stop, and restart the MigratoryData Server service
<code>/usr/share/doc/migratorydata</code>	Folder containing documentations, examples, and licenses

After installation:

1. The service will start automatically when the machine reboots. To manually start, stop, restart, and get the status of the service, run as root one of the following commands:

```
/etc/init.d/migratorydata start
/etc/init.d/migratorydata stop
/etc/init.d/migratorydata restart
/etc/init.d/migratorydata status
```

2. To test the installation start a web browser on the machine where MigratoryData Server has been installed and open the following URL:

```
http://localhost:8800
```

If a browser is not available on the machine where MigratoryData Server has been installed, then, supposing the address of the machine is `push.example.com` and the port 8800 is not blocked by the firewall of the machine, you can remotely test the installation by opening the following URL from a remote machine connected to `push.example.com`:

```
http://push.example.com:8800
```

This will open the home page of MigratoryData Server which contains documentations and examples.

3. To upgrade MigratoryData Server to a newer version run as root the following command:

```
dpkg -i migratorydata-NewVersion-Architecture.deb
```

Note — The upgrade process will preserve the old configuration files to ensure the continuity of your service. A copy of the default configuration of the new version is also provided with the extension `.new`.

4. To remove MigratoryData Server from the system run as root the following command:

```
dpkg --purge migratorydata
```

The next step is to build your clients to communicate with your MigratoryData Server installation. Please refer to the *API Developer's Guide and Reference Manual* of any MigratoryData API that you intend to use, to learn how to build clients for MigratoryData Server.

4. Platform Independent

Download and extract the tarball distribution of the MigratoryData Server to any folder. You will have the following layout in your installation folder:

Location	Description
doc	Folder containing the documentation set for MigratoryData Server
html	Folder containing the home page of MigratoryData Server including documentations and examples
extensions	Folder used for custom extensions. Follow the instructions in <i>MigratoryData Audit Extension API</i> and <i>MigratoryData Authorization Extension API</i> to learn how to build extensions.
logs	The logs folder
THIRD-PARTY-LICENSES	Folder containing the licenses of the third-party components embedded in MigratoryData Server
LICENSE.txt	Use of MigratoryData Server is subject to the license terms defined by this file
migratorydata.conf	The default configuration file of MigratoryData Server. Follow the instructions in <i>MigratoryData Configuration Guide</i> to configure MigratoryData Server
migratorydata.jar	The object code of MigratoryData Server
README.txt	A short introduction to the product
start-migratorydata.bat	The start script of MigratoryData Server for Windows systems
start-migratorydata.sh	The bash start script of MigratoryData Server for Linux/Unix systems

1. To start MigratoryData Server, open a console/terminal, change to the directory where MigratoryData Server package has been extracted, and run one of the following commands according to your operating system:

```
start-migratorydata.bat    (Windows)
```

```
./start-migratorydata.sh (Linux/Unix)
```

2. To test the installation, start a web browser on the machine where MigratoryData Server has been installed and open the following URL:

```
http://localhost:8800
```

If a browser is not available on the machine where MigratoryData Server has been installed, then, supposing the address of the machine is `push.example.com` and the port 8800 is not blocked by the firewall of the machine, you can remotely test the installation by opening the following URL from a remote machine connected to `push.example.com`:

This will open the home page of MigratoryData Server which contains documentations and examples.

The next step is to build your clients to communicate with your MigratoryData Server installation. Please refer to the *API Developer's Guide and Reference Manual* of any MigratoryData API that you intend to use, to learn how to build clients for MigratoryData Server.

