

# Installing MarkLogic Server

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## MarkLogic 11

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# 1. Requirements and Database Compatibility

This section introduces MarkLogic Server, lists the product requirements and supported platforms, and describes the database compatibility with previous releases.

## 1.1. Introduction

MarkLogic Server is a powerful NoSQL database for harnessing your digital content base, complete with enterprise features demanded by real-world, mission-critical applications. MarkLogic enables you to build complex applications that interact with large volumes of content in JSON, XML, SGML, HTML, and other popular content formats, as well as binary formats. The unique architecture of MarkLogic ensures that your applications are both scalable and high performance, delivering query results at search-engine speeds while providing transactional integrity over the underlying content repository. MarkLogic can be configured for a distributed environment, enabling you to scale your infrastructure through hardware expansion.

This installation guide explains the procedures needed to install MarkLogic on your system. It is intended for a technical audience. This document explains how to install the software, not how to use the software. To learn how to get started using the software, see the rest of the [MarkLogic documentation](#), including the following documents:

- [What's New in MarkLogic 11](#)
- [Getting Started with MarkLogic Server](#)
- [Concepts Guide](#)
- [Administering MarkLogic Server](#)
- [Getting Started with Optic](#)
- [Application Developer's Guide](#)
- [Search Developer's Guide](#)
- [JavaScript Reference Guide](#)
- [MarkLogic XQuery and XSLT Function Reference](#)

## 1.2. MarkLogic Server Assumptions

During the installation process, MarkLogic sets memory and other settings based on the characteristics of the computer in which it is running. MarkLogic is a scalable, multi-threaded server product, and as such it assumes it has the entire machine available to it, including the CPU and disk I/O capacity. It is important to follow the guidelines as described. Furthermore, MarkLogic assumes there is only one MarkLogic Server process running on any given machine, so it is not recommended to run multiple instances of MarkLogic on a single machine.

MarkLogic Server expects the system clocks to be synchronized across all the nodes in a cluster. The clock skew should be less than 0.5 seconds. You should use a time service such as NTP to keep your system clocks synchronized. For more details, see the following Knowledge Base article: <https://help.marklogic.com/knowledgebase/article/View/24/15/synchronizing-system-clocks-in-a-cluster>.

## 1.3. Memory, Disk Space, and Swap Space Requirements

Before installing the software, be sure that your system meets the following requirements:

- For a production deployment, MarkLogic recommends at least 8 vCPUs per host, with 8 GB of memory per vCPU. For example, for a production host with 16 vCPUs the recommended memory is at least 128 GB. For bare-metal systems, a hardware thread (hyperthread), is equivalent to a vCPU. Use memory optimized cloud compute instances or virtual machines. Memory requirements may increase over time as projects evolve and databases grow with more content and more indexes. See [comment 1](#) in the following table.

- For a prototyping or development deployment, MarkLogic requires a minimum of 4 GB of system memory and recommends at least 8 GB of memory. See [comment 1](#) in the following table.
- For small forests that will not grow, such as Security and Schemas, the reserve size is two times the size of the forest.

For data forests, we recommend a size of 500 GB, where 400 GB is allocated to content, and 100 GB is left as reserved space to handle merges. See [comment 2](#) in the following table for details about this storage calculation.

- On Linux systems, you need at least as much swap space as the amount of physical memory on the machine or 32 GB, whichever is lower.

If you have Huge Pages set up on a Linux system, your swap space on that machine must be at least the size of your physical memory minus the size of your Huge Pages (because Linux Huge Pages are not swapped), or 32 GB, whichever is lower. For example, if you have 48 GB of physical memory, and if you have Huge Pages set to 18 GB, then you need swap space of 30 GB (48 - 18). For details on setting up Huge Pages, see <https://access.redhat.com/solutions/1578873> on the Red Hat website.



**NOTE**

A Red Hat subscription is required to view the content on the Web page.

At system startup on Linux machines, MarkLogic Server logs a message to the `ErrorLog.txt` file showing the size of the Huge Pages, and the message indicates if the size is below the recommended level.

If you are using Red Hat Enterprise Linux 7, you must turn off Transparent Huge Pages (Transparent Huge Pages are configured automatically by the operating system). For details on disabling Transparent Huge Pages, see <https://access.redhat.com/solutions/1320153>.

- On Windows systems, twice the physical memory is also recommended for the swap (page) file. For Windows 10, you configure this by searching for **View Advanced System Settings** in the taskbar. Next, click the icon. Then, in the **Performance** area, click **Settings > Advanced** and set the virtual memory to twice the physical memory. For earlier Windows systems, click **System Control Panel > Advanced System Settings > Performance Settings > Advanced** tab and set the virtual memory settings to twice the physical memory.

No	Comment
[1]	MarkLogic automatically configures itself to reserve as much system memory as it can the first time it runs. If you need to change the default configuration, you can manually override these defaults later, using the Admin Interface.
[2]	For content forests that are expected to grow over time, with the default merge settings, you need to reserve 100 GB of storage. Here is the calculation:  You need at least 2 times the <code>merge_max_size</code> of free space per forest, regardless of the forest size. Therefore, with the default <code>merge_max_size</code> of 48 GB, you need at least 96 GB of free space. Additionally, if your journals are not yet created, you need 2 times the journal size of free disk space (if the journal space is not yet allocated). Therefore, to be safe, you need 100 GB of free space for each content forest.

## 1.4. Supported Platforms

MarkLogic Server is supported on the following platforms:

Platform	Comment
Microsoft Windows Server 2019 Microsoft Windows Server 2016 Microsoft Windows Server 2012 (x64)	Microsoft Windows Server supports Open Neural Network Exchange format (ONNX) for machine learning. To use the ONNX APIs and obtain the required Machine Learning libraries, download the GPU-enabled version of MarkLogic Server for Windows.
Microsoft Windows 10 (x64)	Desktop Microsoft Windows 10 (x64) is supported for development only. Use Windows Server for Production.
Mac OS X 10.14 or later	Mac OS X is supported for development only. Conversion (Office and PDF) and entity enrichment are not available on Mac OS X. A 64-bit capable processor is required ( <a href="http://support.apple.com/kb/HT3696">http://support.apple.com/kb/HT3696</a> ).

Platform	Comment
Docker	Docker is supported for development and production (one container per host recommended). For more details, see <a href="https://developer.marklogic.com/code/docker/">https://developer.marklogic.com/code/docker/</a> .
Red Hat Enterprise Linux 7 (x64) Red Hat Enterprise Linux 8 (x64) CentOS 7 (x64) Amazon Linux 1 (x64) Amazon Linux 2 (x64)	<p>Red Hat Enterprise Linux 7 (x64) and CentOS 7 (x64) are supported on VMware ESXi 6.0 and Kernel-based Virtual Machine. Starting with MarkLogic 10.0-2, Red Hat Enterprise Linux 8 (x64) is also supported.</p> <p>CentOS 7 (x64) is supported on the Azure platform.</p> <p>All Linux platforms support Open Neural Network Exchange format (ONNX) for machine learning. To use the ONNX APIs and obtain the required Machine Learning libraries, download MarkLogic Server for Linux.</p> <p>Either <code>none</code>, <code>deadline</code>, <code>mq-deadline</code>, or <code>kyber</code> I/O scheduler is required to ensure efficient disk I/O for MarkLogic Server on Linux. When configuring an I/O scheduler with SSDs in a virtualized environment (including any cloud-based virtual machines), the OS I/O scheduling must be set to <code>none</code> for 4.x kernels or <code>noop/none</code> for older 3.x kernels. For more details, see:</p> <ul style="list-style-type: none"> <li><a href="https://help.marklogic.com/Knowledgebase/Article/View/8/0/notes-on-io-schedulers">https://help.marklogic.com/Knowledgebase/Article/View/8/0/notes-on-io-schedulers</a></li> <li><a href="https://lonesysadmin.net/2013/12/06/use-elevator-noop-for-linux-virtual-machines/">https://lonesysadmin.net/2013/12/06/use-elevator-noop-for-linux-virtual-machines/</a></li> <li><a href="https://access.redhat.com/solutions/5427">https://access.redhat.com/solutions/5427</a></li> </ul> <p>For a list of packages required for each Linux platform, see <a href="#">Appendix: Packages by Linux Platform</a>.</p>




**NOTE**

MarkLogic now supports the 1-Click AWS option in AWS Marketplace. Because of this, the published MarkLogic AMIs will have data volumes predefined.

## 1.5. Supported Filesystems

MarkLogic relies on the operating system for filesystem operations. While any filesystem that works properly (including under heavy load) should work, the following table lists the operating systems along with the filesystems under which they are supported. Other filesystems may work but have not been thoroughly tested by MarkLogic.

Operating System	Supported Filesystems
Linux (all varieties)	<p>XFS (recommended), EXT3, and EXT4 as well as the clustered filesystems for shared-disk failover mentioned in <a href="#">Requirements for Failed Disk Failover</a> in the <i>Scalability, Availability and Failover Guide</i>.</p> <div style="border: 1px solid gray; padding: 10px; margin: 10px 0;">  <p><b>WARNING</b> Do not use <code>data=writeback</code> with EXT3 and EXT4 filesystems.</p> </div> <p>NAS is supported on Red Hat Enterprise Linux 7 and NetAPP.</p>
Windows	NTFS
Mac OS	HFS+
All	Amazon S3 (no journaling with S3).

**NOTE**

The Solaris OS is not supported.

## 1.6. Supported Browsers

The following browsers are supported:

- Google Chrome
- Mozilla Firefox
- Microsoft Edge

## 1.7. Java Virtual Machine Requirements

MarkLogic Server can function with or without a Java Virtual Machine (JVM). The only requirement needed for a JVM to be installed on MarkLogic Server would be if you use HDFS (Hadoop Distributed File System).

Our provided Amazon AMIs have a JDK pre-installed that is used during the MarkLogic bootstrap process to setup and configure MarkLogic in the Amazon environment. Therefore, you do not need to install a JVM on any EC2 instance.

The following MarkLogic products and features require a JVM to either run or install:

- Gradle (<https://developer.marklogic.com/code/ml-gradle/>)
- DHF (<https://marklogic.github.io/marklogic-data-hub/>)

MarkLogic supports the Java 8, 9, 10, and 11 versions of the following JVMs:

- Oracle/Sun
- OpenJDK

**NOTE**

The IBM JRE is not supported.

By default, MarkLogic looks for Java in the location specified via the `JAVA_HOME` environment variable or in a specific set of default locations. If `JAVA_HOME` is not set in the startup environment, MarkLogic uses the first JRE or JDK found in one of the following locations. These locations are searched in the order listed.

- `/usr/java/default`
- `/usr/java/latest`
- `/usr/java/jdk1.N*`

\*where **N** is a supported Java version. For example, `/usr/java/jdk1.8.0_202`.

- `/usr/lib/jvm/java`
- `/usr/lib/jvm/java-openjdk`
- `/usr/lib/jvm/jre-1.N.0-*.x86_64`

\*where **N** is a supported Java version, such as Java 8.

If you have Java installed in a different location, you can communicate your `JAVA_HOME` to MarkLogic through the file `/etc/marklogic.conf`. For example:

```
cat > /etc/marklogic.conf
export JAVA_HOME=/path/to/your/jdk
```

## 1.8. Upgrades and Database Compatibility

MarkLogic 11 supports upgrades from MarkLogic 9.

During the upgrade, the Security database, the Schemas database, and the configuration files are automatically upgraded. The Security database is upgraded with the latest execute privileges and the Schemas database is upgraded with the latest version of the Schemas used by MarkLogic Server. The upgrade occurs as part of the installation procedure.

Databases that contain your own content are also upgraded; once you upgrade, you will no longer be able to use that database with previous versions of MarkLogic.



### NOTE

MarkLogic Corporation strongly recommends performing a backup of your databases before upgrading. Additionally, MarkLogic Corporation recommends that you first upgrade to the latest maintenance release of the major version of MarkLogic you are running before upgrading.

For the procedure for upgrading, see [Upgrading from Previous Releases](#). For details about known incompatibilities, see [What's New in MarkLogic Server 11](#).

## 1.9. MarkLogic Converters Installation Changes Starting at Release 9.0-4

*MarkLogic Converters* are used to convert Microsoft Office Word, Excel, and PowerPoint documents, as well as Adobe PDF files, to XHTML. *MarkLogic filters* are used to filter a variety of document formats, extract metadata and text from them, and return XHTML. The following MarkLogic XQuery API functions, described in the [MarkLogic XQuery and XSLT Function Reference](#), provide this functionality:

```
xdmp:word-convert()
xdmp:excel-convert()
xdmp:powerpoint-convert()
xdmp:pdf-convert()
xdmp:document-filter()
```

Converters/filters are also used as part of the *conversion pipeline* in Content Processing Framework. For more details, see [The Default Conversion Option](#) in the *Content Processing Framework Guide*.

Prior to MarkLogic release 9.0-4, converters/filters were bundled and automatically installed with MarkLogic Server. Starting with MarkLogic release 9.0-4, converters/filters are offered as a separate package: *MarkLogic Converters*.

This change provides better flexibility and enables you to install/uninstall MarkLogic converters/filters separately from MarkLogic Server.

With this change, MarkLogic Server does not include MarkLogic Converters. To use converters/filters, install both packages: MarkLogic Server and MarkLogic Converters. An `XDMP-CVTNOTFOUND` error will be thrown upon an attempt to use converters/filters on a MarkLogic node with no MarkLogic Converters installed.

The version of MarkLogic Converters is synchronized with the version of MarkLogic Server. For example, MarkLogic Converters 9.0-4 corresponds to MarkLogic Server 9.0-4 and may be installed with it.

You can obtain the version of MarkLogic Converters installed on a node by calling to MarkLogic server-side API function `xdmp:host-status` and examining the value of the `converters-version` element in the response. If the converters package is not installed on a node, the `converters-version` element will be empty.

MarkLogic Converters packages for all supported platforms are available for download at the same location where MarkLogic Server packages are available, namely at <http://developer.marklogic.com>.

If you want to use the converters package with MarkLogic 9.0-4 or later, you will have to perform a two-step installation: first install MarkLogic Server and then install MarkLogic Converters.

For details on MarkLogic Server and MarkLogic Converters installation for all supported platforms, see [Installing MarkLogic](#).

If you want to uninstall MarkLogic 9.0-4 or later, and if the converters package was previously installed with it, you will have to perform a two-step uninstall: first uninstall MarkLogic Converters and then uninstall MarkLogic Server.

For details on uninstalling MarkLogic Server and MarkLogic Converters, see [Removing MarkLogic](#).



## 2. Procedures

This section describes the procedures to install MarkLogic on your system.

### 2.1. Upgrading from Previous Releases

If you have previously installed MarkLogic on a machine, you must uninstall the old release before proceeding with the new installation. For information on removing the software, see [Removing MarkLogic](#) or the Installation Guide from the previous release.

If you are upgrading a cluster to a new release, see [Upgrading a Cluster to a New Maintenance Release of MarkLogic Server](#) in the *Scalability, Availability and Failover Guide*. The Security database and the Schemas database must be on the same host, and that host should be the first host you upgrade when upgrading a cluster.



#### WARNING

MarkLogic Server does not support downgrades. Once you have upgraded to a later release, you cannot downgrade to a previous version. To retain the option to restore to a previous version of MarkLogic Server, make a complete backup of your content and security databases before upgrading.

#### 2.1.1. Windows Service Parameters

When you upgrade MarkLogic on Windows as a different user from the user that installed the previous version, the MarkLogic service parameters in the Windows registry will be changed. When the old version of MarkLogic is uninstalled, the service is deleted from the registry, including any customizations to the service parameters. When the new version of MarkLogic is installed, the service is re-created in the registry, with the default service parameters.

Before starting the upgraded version of MarkLogic, make any customization to the service parameters. Otherwise, the default service parameters will be set and MarkLogic will start up running as the local system user. Any MarkLogic configuration files saved as the local system user (such as those modified when making changes in the Admin Interface) will be created with the Windows file permissions for the local system user.



#### NOTE

When you make changes to the user in the service parameters, you should also change data directory file permissions. This is because files may be written when MarkLogic is running as the local system user.

#### 2.1.2. Upgrading from Release 9.0-1 or Later

To upgrade from release 9.0-1 or later, follow these steps:

1. Stop MarkLogic Server (as described in step 1 of [Removing MarkLogic](#)).
2. Uninstall the old MarkLogic release (as described in [Removing MarkLogic](#)).

**NOTE**

If you want to uninstall MarkLogic 9.0-4 or later, and if the converters package was previously installed with it, you will have to perform a two-step uninstall: first uninstall MarkLogic Converters and then uninstall MarkLogic Server. For more detail, see [MarkLogic Converters Installation Changes Starting at Release 9.0-4](#) and [Removing MarkLogic](#).

3. Install the new MarkLogic release (as described in [Installing MarkLogic](#)).

**NOTE**

If you want to install MarkLogic 9.0-4 or later, and you plan to use the converters package with it, you will have to perform a two-step installation: first install MarkLogic Server and then install MarkLogic Converters. For more detail, see [MarkLogic Converters Installation Changes Starting at Release 9.0-4](#) and [Installing MarkLogic](#).

4. Start MarkLogic Server (as described in [Starting MarkLogic Server](#)).
5. Open the Admin Interface in a browser (<http://localhost:8001>).
6. When the Admin Interface prompts you to upgrade the databases and the configuration files, click the button to confirm the upgrade.

If you are upgrading a cluster to a new release, see [Upgrading a Cluster to a New Maintenance Release of MarkLogic Server](#) in the *Scalability, Availability and Failover Guide*. The Security database and the Schemas database must be on the same host, and that host should be the first host you upgrade when upgrading a cluster.

If you are upgrading two clusters that make use of database replication to replicate the Security database on the master cluster, then you must enter the following to manually upgrade the Security database configuration files on the machine that hosts the replica Security database:

```
http://host:8001/security-upgrade-go.xqy?force=true
```

**WARNING**

There is no direct upgrade path from Early Access releases to this release. If you need to move any data from an Early Access release to this release, you must re-create the data in the current release.

### 2.1.3. Upgrading Clusters with DB Replication Configured


If you are upgrading clusters with DB replication configured, see [Upgrading Clusters Configured with Database Replication](#) in the *Database Replication Guide* for details.




### 2.1.4. Upgrading a Cluster Configured with Local Disk Failover





1. If the security database is configured for local disk failover, make sure that the primary security, schema, and auxiliary forests are on the same host and are acting as primary.
2. To perform a rolling upgrade, see [Rolling Upgrades](#) in *Administering MarkLogic Server*.




## 2.2. Installing MarkLogic

This section describes the procedure for installing MarkLogic Server on each platform. Perform the procedure corresponding to the platform to which you are installing.

Platform	Steps
Windows x64	<ol style="list-style-type: none"> <li>1. If you are upgrading from a previous MarkLogic release, review <a href="#">Upgrading from Previous Releases</a> and perform the necessary steps from that section first.</li> <li>2. Download the MarkLogic Server installation package. The latest installation packages are available from <a href="https://www.marklogic.com/product/getting-started/">https://www.marklogic.com/product/getting-started/</a>.</li> <li>3. Double-click the .msi file to start the installer.</li> <li>4. The Welcome page displays. Click <b>Next</b>.</li> <li>5. Select <b>Typical</b>.</li> <li>6. Click <b>Install</b>.</li> <li>7. A dialog appears with the question <b>Do you want to allow this app to make changes to your device?</b> Click <b>Yes</b>.</li> <li>8. The installation process will begin. When the process is completed, click <b>Finish</b>.</li> </ol> <div style="background-color: #f0f0f0; padding: 10px; margin: 10px 0;">  <p><b>NOTE</b> If you plan to use the converters package, also perform the following steps:</p> </div> <ol style="list-style-type: none"> <li>1. Download the MarkLogic Converters package (.msi) for Windows from <a href="http://developer.marklogic.com">http://developer.marklogic.com</a>.</li> <li>2. Double-click the .msi file to start the installer.</li> <li>3. The welcome page displays <b>Welcome to the MarkLogic Converters Setup Wizard</b>. Click <b>Next</b>.</li> <li>4. The <b>Choose Setup Type</b> page displays. Select <b>Typical</b>.</li> <li>5. The <b>Ready to Install</b> page displays. Click <b>Install</b> to start the installation.</li> <li>6. A dialog appears with the question <b>Do you want to allow this app to make changes to your device?</b> Click <b>Yes</b>.</li> <li>7. The <b>Installing MarkLogic Converters</b> page displays.</li> <li>8. The final page displays <b>Completing the MarkLogic Converters Setup Wizard</b>. Click <b>Finish</b>.</li> </ol>

Platform	Steps
Red Hat Linux x64	<ol style="list-style-type: none"> <li data-bbox="352 232 1318 282">1. If you are upgrading from a previous MarkLogic release, review <a href="#">Upgrading from Previous Releases</a> and perform the necessary steps from that section first.</li> <li data-bbox="352 286 1318 336">2. Download the MarkLogic Server installation package to <code>/tmp</code> or another location. The latest installation packages are available from <a href="http://developer.marklogic.com">http://developer.marklogic.com</a>.</li> <li data-bbox="352 340 1374 389">3. We recommend that you use <code>yum</code> to install MarkLogic instead of an <code>rpm</code> install. The <code>yum</code> install will automatically determine the dependencies. As the <code>root</code> user, install the package with the following command: <pre data-bbox="392 405 900 427">yum install /tmp/MarkLogic-11.0.0-rhel.x86_64.rpm</pre> </li> </ol> <div data-bbox="395 443 1385 629" style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;">  <p><b>TIP</b> If a <code>yum</code> installation cannot be completed, an <code>rpm</code> install can be used. To do an <code>rpm</code> install, as the <code>root</code> user, install the package with the following command:</p> <pre data-bbox="549 577 1005 600">rpm -i /tmp/MarkLogic-11.0.0-rhel.x86_64.rpm</pre> </div> <div data-bbox="355 694 1385 837" style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;">  <p><b>NOTE</b> If you are installing MarkLogic 9.0-4 or later, and you plan to use the converters package, also perform the following steps:</p> </div> <ol style="list-style-type: none"> <li data-bbox="352 904 1334 976">1. Download the MarkLogic Converters package for Linux platform (for example, <code>MarkLogicConverters-11.0.0-rhel.x86_64.rpm</code>) from <a href="http://developer.marklogic.com">http://developer.marklogic.com</a> to <code>/tmp</code> or another location.</li> <li data-bbox="352 981 1374 1030">2. We recommend that you use <code>yum</code> to install MarkLogic instead of an <code>rpm</code> install. The <code>yum</code> install will automatically determine the dependencies. As the <code>root</code> user, install the package with the following command: <pre data-bbox="392 1046 962 1068">yum install /MarkLogicConverters-11.0.0-rhel.x86_64.rpm</pre> </li> </ol> <div data-bbox="395 1084 1385 1270" style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;">  <p><b>TIP</b> If a <code>yum</code> installation cannot be completed, an <code>rpm</code> install can be used. To do an <code>rpm</code> install, as the <code>root</code> user, install the package with the following command:</p> <pre data-bbox="549 1218 1107 1240">rpm -i /tmp/MarkLogicConverters-11.0.0-rhel.x86_64.rpm</pre> </div>

Platform	Steps
CentOS Linux	<ol style="list-style-type: none"> <li data-bbox="355 237 1318 286">1. If you are upgrading from a previous MarkLogic release, review <a href="#">Upgrading from Previous Releases</a> and perform the necessary steps from that section first.</li> <li data-bbox="355 288 1318 338">2. Download the MarkLogic Server installation package to <code>/tmp</code> or another location. The latest installation packages are available from <a href="http://developer.marklogic.com">http://developer.marklogic.com</a>.</li> <li data-bbox="355 340 1377 389">3. We recommend that you use <code>yum</code> to install MarkLogic instead of an <code>rpm</code> install. The <code>yum</code> install will automatically determine the dependencies. As the <code>root</code> user, install the package with the following command:                     <pre data-bbox="395 409 900 427">yum install /tmp/MarkLogic-11.0.0-rhel.x86_64.rpm</pre> </li> </ol> <div data-bbox="395 450 1385 629" style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;">  <p><b>TIP</b> If a <code>yum</code> installation cannot be completed, an <code>rpm</code> install can be used. To do an <code>rpm</code> install, as the <code>root</code> user, install the package with the following command:</p> <pre data-bbox="552 580 1005 598">rpm -i /tmp/MarkLogic-11.0.0-rhel.x86_64.rpm</pre> </div> <div data-bbox="355 696 1385 837" style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;">  <p><b>NOTE</b> If you are installing MarkLogic 9.0-4 or later, and you plan to use the converters package, also perform the following steps:</p> </div> <ol style="list-style-type: none"> <li data-bbox="355 904 1350 976">1. Download the MarkLogic Converters package for the Linux platform (for example, <code>MarkLogicConverters-11.0.0-rhel.x86_64.rpm</code>) from <a href="http://developer.marklogic.com">http://developer.marklogic.com</a> to <code>/tmp</code> or another location.</li> <li data-bbox="355 978 1377 1028">2. We recommend that you use <code>yum</code> to install MarkLogic instead of an <code>rpm</code> install. The <code>yum</code> install will automatically determine the dependencies. As the <code>root</code> user, install the package with the following command:                     <pre data-bbox="395 1048 911 1066">yum install /MarkLogicConverters-11.0.0.x86_64.rpm</pre> </li> </ol> <div data-bbox="395 1088 1385 1267" style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;">  <p><b>TIP</b> If a <code>yum</code> installation cannot be completed, an <code>rpm</code> install can be used. To do an <code>rpm</code> install, as the <code>root</code> user, install the package with the following command:</p> <pre data-bbox="552 1218 1107 1236">rpm -i /tmp/MarkLogicConverters-11.0.0-rhel.x86_64.rpm</pre> </div> <div data-bbox="355 1335 1385 1476" style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;">  <p><b>NOTE</b> For CentOS 8, MarkLogic has a dependency on <code>libnsl.so.1()</code>. You can either rely on <code>yum</code> to pull in the dependency automatically, or install it manually.</p> </div>

Platform	Steps
<p>Amazon Linux 2</p>	<ol style="list-style-type: none"> <li>If you are upgrading from a previous MarkLogic release, review <a href="#">Upgrading from Previous Releases</a> and perform the necessary steps from that section first.</li> <li>Download the MarkLogic Server installation package to <code>/tmp</code> or another location. The latest installation packages are available from <a href="http://developer.marklogic.com">http://developer.marklogic.com</a>.</li> <li>We recommend that you use <code>yum</code> to install MarkLogic instead of an <code>rpm</code> install. The <code>yum</code> install will automatically figure out the dependencies. As the <code>root</code> user, load additional packages for EC2 support with the following command: <pre>sudo yum install java-11-openjdk xfsprogs</pre> </li> <li>As the <code>root</code> user, create a symbolic link with the following command: <pre>sudo ln -s system-lsb /etc/redhat-lsb</pre> </li> <li>As the <code>root</code> user, install the MarkLogic Server installation package with the following command: <pre>sudo yum install MarkLogic-11.0.0-rhel.x86_64.rpm</pre> </li> </ol> <div data-bbox="357 651 1385 792" style="background-color: #f0f0f0; padding: 10px; margin-top: 20px;"> <p> <b>NOTE</b> If you are installing MarkLogic 9.0-4 or later, and you plan to use the converters package, also perform the following steps:</p> </div> <ol style="list-style-type: none"> <li>Download the MarkLogic Converters package for Linux platform (for example, <code>MarkLogicConverters-11.0.0-rhel.x86_64.rpm</code>) from <a href="http://developer.marklogic.com">http://developer.marklogic.com</a> to <code>/tmp</code> or another location.</li> <li>We recommend that you use <code>yum</code> to install MarkLogic instead of an <code>rpm</code> install. The <code>yum</code> install will automatically determine the dependencies. As the <code>root</code> user, install the package with the following command: <pre>yum install /MarkLogicConverters-11.0.0.x86_64.rpm</pre> </li> </ol> <div data-bbox="395 1043 1385 1227" style="background-color: #f0f0f0; padding: 10px; margin-top: 20px;"> <p> <b>TIP</b> If a <code>yum</code> installation cannot be completed, an <code>rpm</code> install can be used. To do an <code>rpm</code> install, as the <code>root</code> user, install the package with the following command: <pre>rpm -i /tmp/MarkLogicConverters-11.0.0-rhel.x86_64.rpm</pre></p> </div>
<p>Mac OS X</p>	<ol style="list-style-type: none"> <li>If you are upgrading from a previous MarkLogic release, review <a href="#">Upgrading from Previous Releases</a> and perform necessary steps from that section first.</li> <li>Download the MarkLogic Server installation package to your desktop. The latest installation packages are available from <a href="http://developer.marklogic.com">http://developer.marklogic.com</a>.</li> <li>Double-click <b>MarkLogic-11.0.0-x86_64.dmg</b> to open the folder that contains the <code>.pkg</code> installer. Double-click on the installer to start.</li> <li>The Welcome page displays. Click <b>Continue</b>.</li> <li>In the <b>Select a Destination</b> window, select a destination to install MarkLogic Server or continue to select the default destination.</li> <li>In the <b>Installation Type</b> window, click <b>Install</b>. An Installation window appears that displays the progress of the installation.</li> <li>When the <b>Installation Summary</b> window appears, click <b>Close</b>.</li> <li>A MarkLogic control window appears from which you can start/stop MarkLogic Server, open the Admin Interface, and view the Error Log.</li> </ol> <div data-bbox="395 1610 1385 1751" style="background-color: #f0f0f0; padding: 10px; margin-top: 20px;"> <p> <b>NOTE</b> If you are installing MarkLogic 9.0-4 or later, and you plan to use the converters package, also perform the following steps:</p> </div> <ol style="list-style-type: none"> <li>Download the MarkLogic Converters package for Mac OS platform (e.g. <code>MarkLogicConverters-11.0.0-x86_64.dmg</code>) from <a href="http://developer.marklogic.com">http://developer.marklogic.com</a> to your desktop.</li> <li>Double-click the <code>MarkLogicConverters-11.0.0-x86_64.dmg</code> icon to open the folder that contains <code>MarkLogicConverters-11.0.0-x86_64.dmg</code> installer. Double-click on the installer to start.</li> <li>The Welcome page displays. Click <b>Continue</b>.</li> <li>In the <b>Select a Destination</b> window, select the default destination.</li> <li>In the <b>Installation Type</b> window, click <b>Install</b>. An Installation window appears that displays the progress of the installation.</li> <li>When the <b>Installation Summary</b> window appears, click <b>Close</b>.</li> </ol>

If you are upgrading a cluster to a new release, see [Upgrading a Cluster to a New Maintenance Release of MarkLogic Server](#) in the *Scalability, Availability and Failover Guide*. The Security database and the Schemas database must be on the same host, and that host should be the first host you upgrade when upgrading a cluster.



## NOTE

It is not recommended to install the converters while MarkLogic Server is running. The reason for this is that the server checks the converters presence and version number only upon start-up. So, the server will not have accurate information about the converters in this case. The recommended installation procedure is to stop the server if it is running, install or upgrade the server, install the converters, then start the server.

The following table shows the installation directory (<marklogic-dir>) and the default data directory for each platform:

Platform	Installation Directory	Default Data Directory for configuration and log files
Windows	c:\Program Files\MarkLogic\	c:\Program Files\MarkLogic\Data
Red Hat Linux	/opt/MarkLogic	/var/opt/MarkLogic
Mac OS X	~/Library/MarkLogic	~/Library/Application Support/MarkLogic/Data

The default forest directory is the same as the default data directory if the optional data directory is not specified during forest creation. On UNIX platforms, if you want MarkLogic Server to use another location for its default data directory, make your data directory (`/var/opt/MarkLogic` on Linux) a soft link to the alternate location.

In MarkLogic release 9.0-4 and later, MarkLogic Converters installation directory remains the same as in previous releases, namely:

Platform	Converters Installation Directory
Windows	c:\Program Files\MarkLogic\Converters
Red Hat Linux	/opt/MarkLogic/Converters
Mac OS X	~/Library/MarkLogic/Converters





## NOTE

When a new node joins an existing cluster, the server does not try to figure out automatically whether the MarkLogic Converters package is needed or not. An `XDMP-CVTNOTFOUND` error will be thrown if converters/filters built-in functions are called on nodes that do not have MarkLogic Converters installed.

## 2.3. Starting MarkLogic Server

MarkLogic Server will automatically start when the computer reboots. To start MarkLogic Server without rebooting, perform the following command for the corresponding platform:

Platform	Steps
Windows 10	<ol style="list-style-type: none"> <li>1. In the Windows taskbar, click in the search area.</li> <li>2. Type <code>MarkLogic</code>.</li> <li>3. Right-click on <b>Start MarkLogic Server</b>.</li> <li>4. Select <b>Run as administrator</b>.</li> <li>5. When prompted, allow the app to make changes to your device.</li> </ol>
Windows	<p>Select <b>Start &gt; Programs &gt; MarkLogic Server &gt; Start MarkLogic Server</b>.</p> <div style="border: 1px solid #ccc; padding: 10px; background-color: #f9f9f9;">  <p><b>NOTE</b> When you start MarkLogic Server from the Start menu, the Windows service configuration for MarkLogic Server is set to start automatically. Also, to start the service, right-click the <b>Start MarkLogic Server</b> link in the Start menu and choose <b>Run as Administrator</b>, then choose to allow the action.</p> </div>
Red Hat Linux	<p>As the root user, enter <code>service MarkLogic start</code></p> <div style="border: 1px solid #ccc; padding: 10px; background-color: #f9f9f9;">  <p><b>NOTE</b> On an Azure MarkLogic VM, as well as some more recent Linux distributions, you must use <code>sudo systemctl start MarkLogic</code>. For more information on Linux language settings, see <a href="https://help.marklogic.com/Knowledgebase/Article/View/marklogic-fails-to-start-with-initialization-xdmp-encodi">https://help.marklogic.com/Knowledgebase/Article/View/marklogic-fails-to-start-with-initialization-xdmp-encodi</a></p> </div>
Mac OS X	<p>Select <b>System Preferences &gt; MarkLogic</b> to open the MarkLogic control window. Click <b>Start MarkLogic Server</b>.</p>

This starts all of the App Servers that are configured on your MarkLogic Server.

## 2.4. Configuring the First and Subsequent Hosts

The configuration procedures differ depending on if you run MarkLogic Server in a cluster configuration or on a single host.

If you are configuring MarkLogic Server as a standalone host, or if this is the first host in a cluster configuration, follow the installation instructions in [Configuring a Single Host or the First Host in a Cluster](#). Otherwise, follow the installation instructions in [Configuring an Additional Host in a Cluster](#).

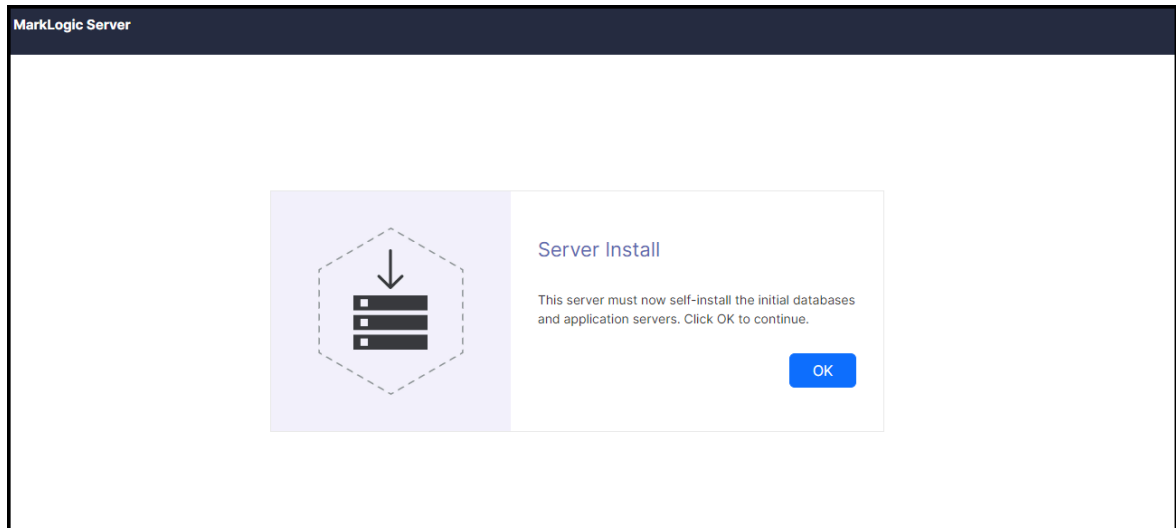
If you are upgrading a cluster to a new release, see [Upgrading a Cluster to a New Maintenance Release of MarkLogic Server](#) in the *Scalability, Availability and Fallover Guide*. The Security database and the Schemas database must be on the same host, and that host should be the first host you upgrade when upgrading a cluster.

### 2.4.1. Configuring a Single Host or the First Host in a Cluster

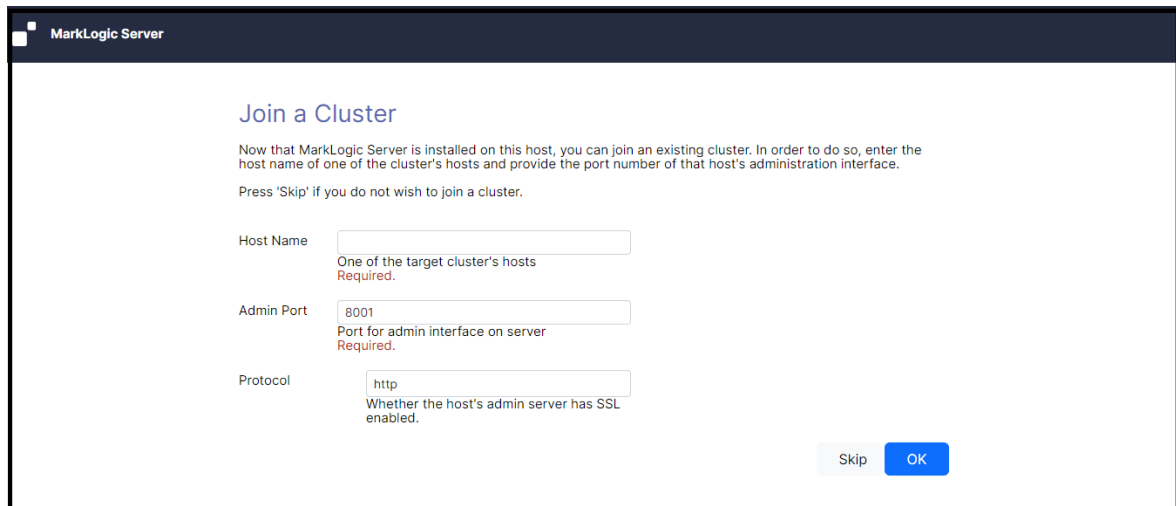
To configure this installation as either a single host or as the first host in a cluster, perform the following steps:

1. Install and start MarkLogic as described in [Installing MarkLogic](#) and [Starting MarkLogic Server](#).
2. Log into the Admin Interface in a browser. It is on port 8001 of the host in which MarkLogic is running (for example, on the localhost, `http://localhost:8001`). The **Server Install** page appears:





3. Click **OK** to continue.
4. Wait for the server to restart.
5. After the server restarts, you will be prompted to join a cluster:



6. Click **Skip**.
7. You will be prompted to create an admin user and a PKCS#11 wallet password. Enter a login name and password for the admin user, and enter a wallet password.

**Security Setup**

MarkLogic Server has detected that Administration has not been secured. Please supply a user name and password for the Administrative user to set up security.

You also need to specify a realm for this security database. This is the realm that will be displayed to clients authenticating against this database. Since this value is used in password hashes it is recommended that you not change this value once it is set. Please read the further documentation about realms.

**Admin**   
User/login name (unique)  
 Required. You must supply a value for user-name.

**Admin Password**   
Encrypted Password.  
 Required.

**Confirm Admin Password**   
Encrypted Password.  
 Required.

**Realm**   
The authentication realm.

MarkLogic Server comes with a built-in PKCS#11 wallet, please provide a password to secure it.

**Wallet Password**   
Encrypted Password.  
 Required.

**Confirm Wallet Password**   
Encrypted Password.  
 Required.

Encrypt Security Database

**OK**

8. Click **OK**.
9. You will be prompted to log in with your admin username and password.

You will now see the Admin Interface. If you do not need to add any hosts at this time, skip to [Checking for the Correct Software Version](#).

### 2.4.2. Configuring an Additional Host in a Cluster

All hosts in a cluster have to be on the same platform. To configure this installation as an additional host in a cluster of the same platform, perform the following steps:

1. On the node you want to add to an existing cluster, install and start MarkLogic as described in [Installing MarkLogic](#) and [Starting MarkLogic Server](#).
2. Log into the Admin Interface in a browser. It is on port 8001 of the host in which MarkLogic is running (for example, on the localhost, `http://localhost:8001`). The Server Install page appears:

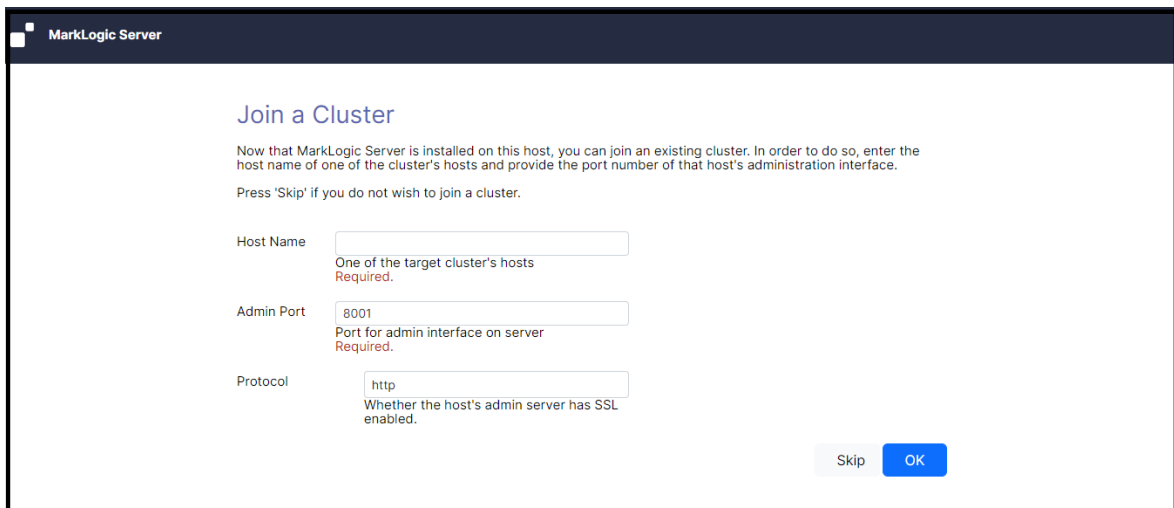
**MarkLogic Server**

**Server Install**

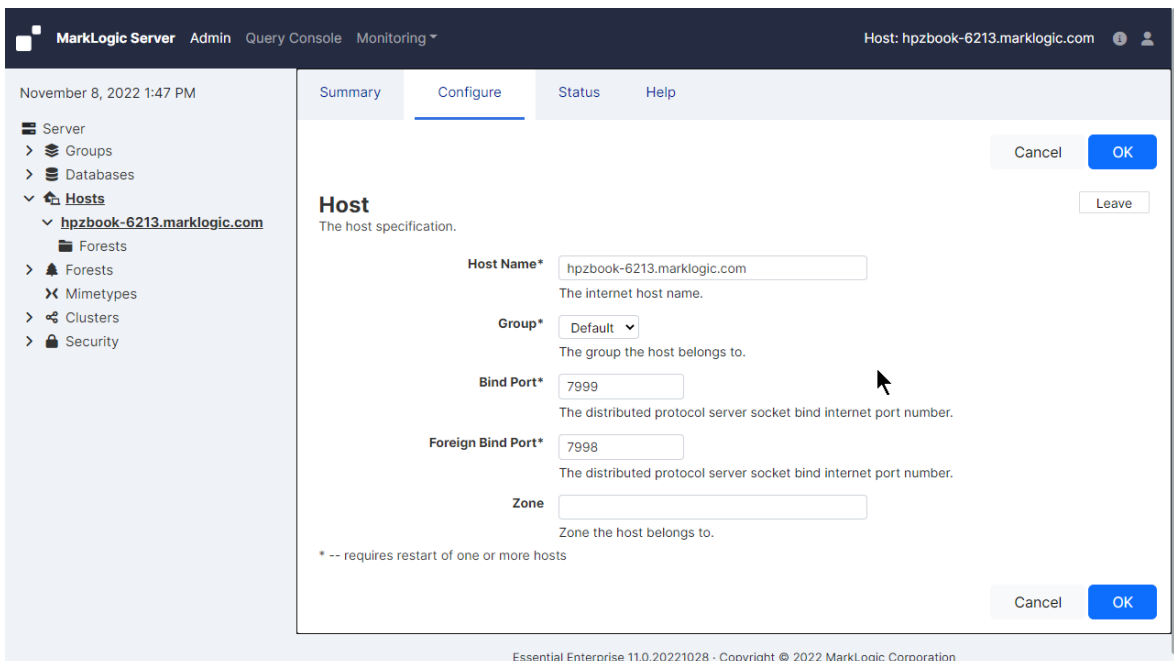
This server must now self-install the initial databases and application servers. Click OK to continue.

**OK**

3. Click **OK** to continue.
4. Wait for the server to restart.
5. After the server restarts, you will be prompted to join a cluster:



6. Enter the DNS name or the IP address of one of the machines in the cluster. For instance, if this is the second host you are installing, you can enter the DNS name of the first host you installed.
7. Click **OK**.
8. You will be prompted for an admin username and password. You can use the admin username and password you created when installing the first host. Click **OK**.
9. Select a **Group** to assign this host. Click **OK**.



10. Click **OK** to confirm that you are joining the cluster.
11. You have now joined the cluster.
12. Click **OK** to transfer the cluster configuration information.

You have completed the process to join a cluster and will now see the Admin Interface.

### 2.4.3. Leaving a Cluster and Becoming a Single Host

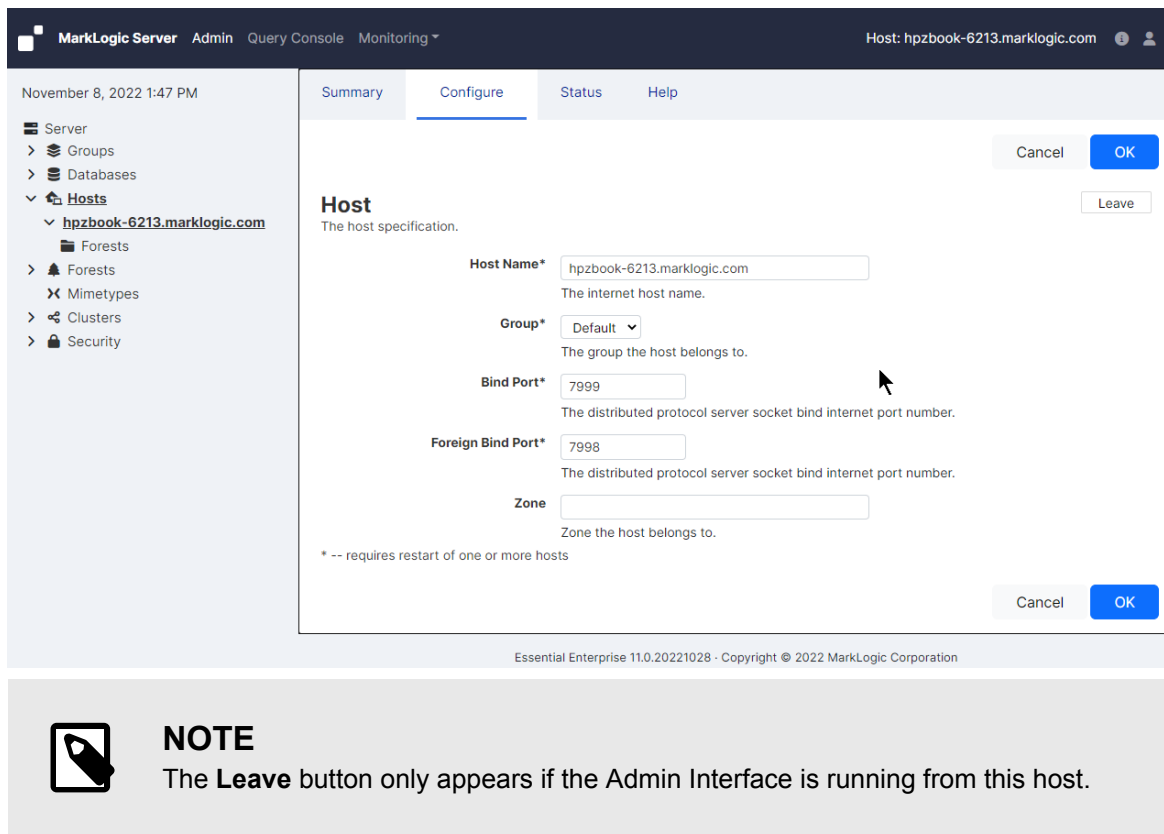
If your host is currently in a cluster of multiple hosts, and you would like to leave the cluster and switch to a single host environment, follow the steps in this section.

A host cannot leave a cluster if there are still forests assigned to it or if it has any foreign clusters associated with it. You must delete all forests assigned to the host and de-couple any clusters associated with a host before you can leave the cluster. However, if you delete only the configuration for a forest, the forest data will remain on the filesystem, allowing you to add the forest back to the

host after changing the configuration. For instructions on adding a forest to a host, see [Administrating MarkLogic Server](#).

Follow these steps to leave the cluster to which a host is connected:

1. Run the Admin Interface from the host you want to remove from the cluster.
2. Click the **Hosts** icon in the left menu tree. The **Host Summary** page appears.
3. Click the name of the host you want to remove from the cluster, either from the left menu tree or from the **Host Summary** page. The Host Configuration page appears:



The screenshot shows the 'Host Configuration' page in the MarkLogic Admin Console. The left sidebar contains a navigation tree with 'Hosts' selected. The main content area has tabs for 'Summary', 'Configure', 'Status', and 'Help'. The 'Configure' tab is active, showing fields for 'Host Name\*', 'Group\*', 'Bind Port\*', 'Foreign Bind Port\*', and 'Zone'. Each field has a text input and a descriptive label below it. At the top right of the configuration area, there are 'Cancel' and 'OK' buttons, and a 'Leave' button is also present. A note at the bottom of the configuration area states: '\* -- requires restart of one or more hosts'. Below the configuration area, a 'NOTE' box with a pencil icon states: 'The **Leave** button only appears if the Admin Interface is running from this host.'

4. Click the **Leave** button.
5. Click **OK** to confirm leaving the cluster.
6. The host restarts to load the new configuration.
7. Follow the instructions in sections [Configuring a Single Host or the First Host in a Cluster](#) or [Configuring an Additional Host in a Cluster](#) as appropriate.

## 2.5. Entering a License Key

MarkLogic will run without a license key, but after installing MarkLogic, you should enter a valid license key for the usage and features for which you are licensed. At any time, you can change the license key for a host from the Host Status page.

These are some reasons that you would need to change your license key:

- Your license key has expired.
- You need to use some features that are not covered by your existing license key.
- You upgraded your hardware with more CPUs and/or more cores.
- You need a license that covers a larger database.
- You require different languages.

Changing the license key sometimes results in an automatic restart of MarkLogic (for example, if your new license enables a new language).

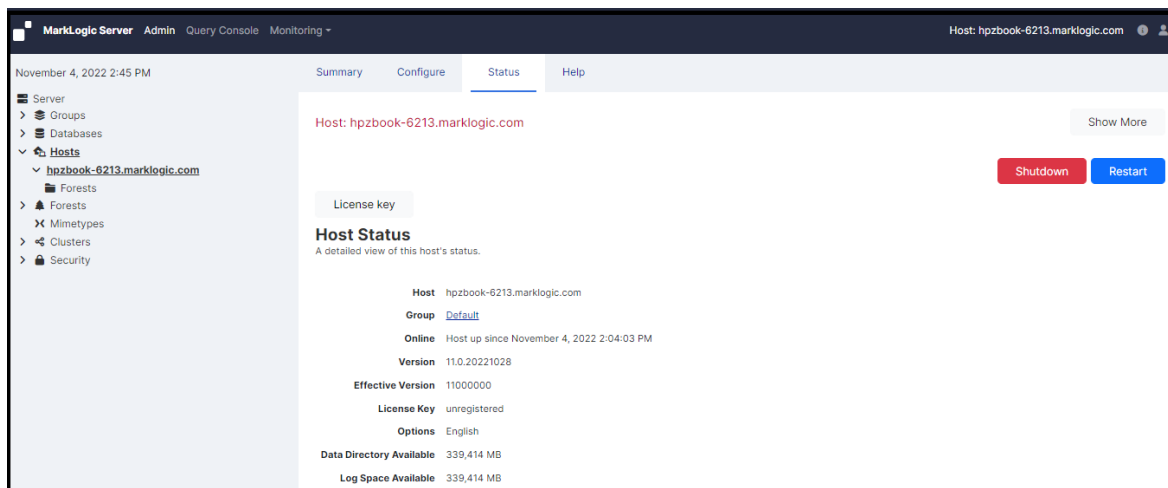
To change the license key for a host, perform the following steps using the Admin Interface:

1. Click the **Hosts** icon on the left tree menu.
2. Click the name of the host for which you want to change the license key, either on the tree menu or the summary page. The **Host Configuration** page appears.
3. Click the **Status** tab. The **Host Status** page appears.
4. Click the **License key** button. The **License Key Entry** page appears.
5. Enter your new license key information. For information about licensing MarkLogic Server, contact your MarkLogic sales representative.
6. After entering valid information in the **Licensee** and **License Key** fields, click **OK**. If it needs to, MarkLogic will automatically restart, and the new license key will take effect.

## 2.6. Checking for the Correct Software Version

After you log in with your admin username and password, the Admin Interface appears. To view more details about the release of MarkLogic Server that is installed and licensed, complete the following steps:

1. Click the **Hosts** icon on the left menu tree.
2. Select the name of the host you just installed, either from the left menu tree or from the **Host Summary** page.
3. Click the **Status** tab. The **Host Status** page appears.
4. Check that `<version>` is correct.



You have successfully installed MarkLogic onto your system.

To begin using MarkLogic Server, see [Getting Started with MarkLogic Server](#).

## 2.7. Configuring MarkLogic Server to Run as a Non-Daemon User

On UNIX-based systems (Linux), MarkLogic runs as the UNIX user named `daemon`. This section describes how to change a configuration to run as a different UNIX user. This procedure must be run by the `root` user. Additionally, the `root` user is still required for installing and uninstalling MarkLogic and for starting and stopping MarkLogic from the startup scripts.

To modify an installation to run as a user other than `daemon`, perform the following steps:

1. In a command window on the machine in which you installed MarkLogic, log in as the `root` user.
2. Make sure MarkLogic is stopped. If it is still running, stop it as follows:

Platform	Steps
Red Hat Linux	As the root user, enter the following command: <pre>/sbin/service MarkLogic stop</pre>

3. Edit the configuration file for your platform using a text editor such as `vi`.

Platform	Configuration file
Red Hat Linux	<code>/etc/marklogic.conf</code>



**NOTE**

You must create the `/etc/marklogic.conf` file if it does not exist. The file is only read by the MarkLogic startup: it is never written to. Therefore, it will survive uninstalling MarkLogic.

4. In the file `/etc/marklogic.conf`, add or edit the `MARKLOGIC_USER` environment variable to point to the user in which you want MarkLogic Server to run. For example, if you want it to run as a user named `raymond`, change the following line:

```
export MARKLOGIC_USER=daemon
```

to the following:

```
export MARKLOGIC_USER=raymond
```

5. Save the changes to the `/etc/marklogic.conf` file.
6. If you have not yet started MarkLogic after performing a clean installation (that is, after installing into a directory where MarkLogic has never been installed), then you are done and you can skip the rest of the steps in this procedure. If you have an existing installation (for example, if you are upgrading to a maintenance release), then continue with the following steps.
7. For all of the MarkLogic files owned by `daemon`, you need to change the owner to the new user. This includes all forest data and all of the configuration files. By default, the forest data is in the following directories:

Platform	Configuration file
Red Hat Linux	<code>/var/opt/marklogic</code>

8. For example, on a Linux system, perform a command similar to the following, which changes the owner to the user specified earlier in the `/etc//MarkLogic.conf` file:

```
chown -R raymond /var/opt/MarkLogic
```

9. Make sure to change the owner for all forests in the system; otherwise, forests will fail to mount upon startup. Note that the above command only changes the owner for forests installed in the default directory. You need to run a similar command on the data directory for each forest in which a data directory is specified.
10. When you have completed all the file and directory ownership changes, start MarkLogic as described in [Starting MarkLogic Server](#).

Once you have performed this procedure, all new files created by MarkLogic are created with the new user ownership; there will be no need to change any ownership again.



### WARNING

On Linux systems, use the `/etc/marklogic.conf` script to set environment variables. Any configuration changes you make to the MarkLogic-supplied startup script (for example, `/etc/sysconfig/MarkLogic`) will not survive an upgrade and need to be merged in during any upgrade of MarkLogic (because the installation installs a new version of the startup scripts). Under Linux, the uninstallation process saves an old version of the scripts (for example, `/etc/sysconfig/MarkLogic.rpmsave`), so you can use that version to merge in your changes. If you perform a clean installation (not an upgrade installation), however, you will need to run this entire procedure again. If you use `/etc/marklogic.conf` for your environment variable changes, they will survive an upgrade and you will not need to merge your changes.

The following are default values of environment variables you can override in `/etc/marklogic.conf` on Linux-based systems (you will have to create the file if it does not exist):

```
export MARKLOGIC_INSTALL_DIR=/opt/MarkLogic
export MARKLOGIC_DATA_DIR=/var/opt/MarkLogic
export MARKLOGIC_FSTYPE=ext4
export MARKLOGIC_USER=daemon
export MARKLOGIC_PID_FILE=/var/run/MarkLogic.pid
export MARKLOGIC_UMASK=022
export MARKLOGIC_DISABLE_JVM=0
export MARKLOGIC_EC2_HOST
export TZ=:/etc/localtime
```

## 2.8. Removing MarkLogic

To remove MarkLogic from your system, complete the following steps for the corresponding platform:

Platform	Perform the following:
Windows 10	<ol style="list-style-type: none"> <li>In the Windows taskbar, click in the search area.</li> <li>Type <code>MarkLogic</code>.</li> <li>Click <b>Stop MarkLogic Server</b>, then choose to allow the action. The server is now stopped.</li> <li>[Uninstalling MarkLogic 9.0-4 or later] If you have the converters package installed, you need to uninstall it before continuing: Go to <b>Add or remove programs</b>, select <b>MarkLogic Converters</b> and click <b>Uninstall</b>.</li> <li>Uninstall MarkLogic by navigating to <b>Add or remove Programs</b>, selecting <b>MarkLogic Server</b> and clicking <b>Uninstall</b>.</li> </ol>
Windows	<ol style="list-style-type: none"> <li>Select <b>System Control Panel &gt; Programs &gt; MarkLogic Server &gt;</b>.</li> <li>Right-click <b>Stop MarkLogic Server</b>.</li> <li>Select <b>Run as Administrator</b>, then choose to allow the action. The server is now stopped.</li> <li>[Uninstalling MarkLogic 9.0-4 or later] If you have the converters package installed, you need to uninstall it before continuing: Select <b>MarkLogic Converters</b> in <b>Add/Remove Programs of Control Panel</b>, right click on it, and select <b>Uninstall</b>.</li> <li>Uninstall MarkLogic: select <b>MarkLogic Server</b> in <b>Add/Remove Programs of Control Panel</b>, right click on it, and select <b>Uninstall</b>.</li> </ol>

Platform	Perform the following:
Red Hat Linux	<ol style="list-style-type: none"> <li>1. Stop MarkLogic: as the <code>root</code> user, enter the following command: <pre>/sbin/service MarkLogic stop</pre></li> <li>2. [Uninstalling MarkLogic 9.0-4 or later] If you have the converters package installed, you need to uninstall it before continuing: As the <code>root</code> user: enter the following command: <pre>yum remove MarkLogicConverters</pre> For environments that don't allow a <code>yum</code> uninstallation, the <code>rpm</code> uninstall can be used. To do an <code>rpm</code> uninstall: As the <code>root</code> user, uninstall the package with the following command: <pre>rpm -e MarkLogicConverters</pre></li> <li>3. Uninstall MarkLogic: as the <code>root</code> user, enter the following command: <pre>yum remove MarkLogic</pre> For environments that don't allow a <code>yum</code> uninstallation, the <code>rpm</code> uninstall can be used. To do an <code>rpm</code> uninstall: as the <code>root</code> user, uninstall the package with the following command: <pre>rpm -e MarkLogic</pre></li> </ol>
Mac OS X	<ol style="list-style-type: none"> <li>1. Stop MarkLogic: select <b>System Preferences &gt; MarkLogic</b> to open the MarkLogic control window, and click <b>Stop MarkLogic Server</b>.</li> <li>2. [Uninstalling MarkLogic 9.0-4 or later] if you have the converters package installed, you need to uninstall it before continuing: Use these commands: <pre>sudo pkgutil --forget com.marklogic.converters</pre> <pre>rm ~/Library/MarkLogic/Converters</pre></li> <li>3. No action is necessary when upgrading. If you want to remove the user data and do a fresh install, then remove the following directory: <pre>~/Library/ApplicationSupport/MarkLogic/Data</pre></li> <li>4. To entirely remove MarkLogic, remove the following directories: <pre>~/Library/MarkLogic</pre> <pre>~/Library/Application Support/MarkLogic</pre> <pre>~/Library/StartupItems/MarkLogic</pre> <pre>~/Library/PreferencePanels/MarkLogic.prefPane</pre></li> <li>5. To make Mac OS X completely forget it ever had a MarkLogic installation, run the following command from a terminal window: <pre>sudo pkgutil --forget com.marklogic.server</pre></li> </ol>



**NOTE**

Using this procedure to remove MarkLogic from your system will not remove user data (configuration information, XQuery files used by HTTP or XDBC servers, or forest content). This data is left in place to simplify the software upgrade process. If you wish to remove the user data, you must do so manually using standard operating system commands.

In case you previously used converters/filters and want to remove this functionality:

- To remove MarkLogic Converters from a node that has MarkLogic 9.0-4 or later release installed, you can use a package management tool, such as Control Panel on Windows or `rpm` on Linux, to uninstall MarkLogic Converters.
- To remove converters/filters from a node that has MarkLogic 9.0-3 or earlier release installed, you need to uninstall that release of MarkLogic, and then install MarkLogic Server from release 9.0-4 or later but do not install MarkLogic Converters.



## 3. Appendix: Packages by Linux Platform

This appendix is a reference guide for packages by Linux platform used for installing MarkLogic Server installation and MarkLogic Converters packages. If you cannot download the MarkLogic Server installation and MarkLogic Converters packages from <http://developer.marklogic.com>, you can download the packages required for the Linux platform you are installing.

### 3.1. Red Hat Enterprise Linux 7

#### 3.1.1. MarkLogic Server

Dependency	Package
gdb	gdb-7.6.1-114.el7.x86_64
libc.so.6(GLIBC_2.14) (64bit)	glibc-2.17-260.el7.x86_64
libgcc_s.so.1()(64bit)	libgcc-4.8.5-39.el7.x86_64
libltdl.so.7()(64bit)	libtool-ltdl-2.4.2-22.el7_3.x86_64
libnsl.so.1()(64bit)	glibc-2.17-196.el7.x86_64
libstdc++.so.6(GLIBCXX_3.4.15)(64bit)	libstdc++-4.8.5-39.el7.x86_64
lsb-core-amd64	redhat-lsb-core-4.1-27.el7.x86_64
rpmLib(CompressedFileNames) <= 3.0.4-1	rpm-libs-4.11.3-35.el7.x86_64
/bin/sh	bash-4.2.46-31.el7_4.x86_64

#### 3.1.2. MarkLogic Converters

Dependency	Package
libc.so.6(GLIBC_2.14)	glibc-2.17-260.el7.i686
libc.so.6(GLIBC_2.14)(64bit)	glibc-2.17-260-.el7.x86_64
libgcc_s.so.1	libgcc-4.8.5-39.el7.i686
libgcc_s.so.1()(64bit)	libgcc-4.8.5-16.el7.x86_64
libstdc++.so.6(GLIBCXX_3.4.15)	libstdc++-4.8.5-16.el7.i686
libstdc++.so.6(GLIBCXX_3.4.15)(64bit)	libstdc++-4.8.5-39.el7.x86_64
rpmLib(CompressedFileNames) <= 3.0.4-1	rpm-libs-4.11.3-35.el8.x86_64
/bin/sh	bash-4.2.46-31.el7_4.x86_64

### 3.2. Red Hat Enterprise Linux 8

#### 3.2.1. MarkLogic Server

Dependency	Package
gdb	gdb-8.2-5.el8.x86_64
libc.so.6(GLIBC_2.14)(64bit)	glibc-2.28-42.el8_0.1.x86_64
libgcc_s.so.1()(64bit)	libgcc-8.2.1-3.5.el8.x86_64
libltdl.so.7()(64bit)	libtool-ltdl-2.4.6-25.el8.x86_64
libnsl.so.1()(64bit)	libnsl-2.28-42.el8_0.1.x86_64
libstdc++.so.6(GLIBCXX_3.4.15)(64bit)	libstdc++-8.2.1-3.5.el8.x86_64
lsb-core-amd64	redhat-lsb-core-4.1-47.el8.x86_64
rpmLib(CompressedFileNames) <= 3.0.4-1	rpm-libs-4.14.3-23.el8.x86_64
/bin/sh	bash-4.4.19-7.el8.x86_64

### 3.2.2. MarkLogic Converters

Dependency	Package
libc.so.6(GLIBC_2.14)	glibc-2.28-42.el8_0.1.i686
libc.so.6(GLIBC_2.14)(64bit)	glibc-2.28-42.el8_0.1.x86_64
libgcc_s.so.1	libgcc-8.2.1-3.5.el8.i686
libgcc_s.so.1()(64bit)	libgcc-8.2.1-3.5.el8.x86_64
libstdc++.so.6(GLIBCXX_3.4.15)	libstdc++-8.2.1-3.5.el8.i686
libstdc++.so.6(GLIBCXX_3.4.15)(64bit)	libstdc++-8.2.1-3.5.el8.x86_64
rpmllib(CompressedFileNames) <= 3.0.4-1	rpm-libs-4.14.3-23.el8.x86_64
/bin/sh	bash-4.4.19-7.el8.x86_64

## 3.3. CentOS 7

### 3.3.1. MarkLogic Server

Dependency	Package
gdb	gdb-7.6.1-119.el7.x86_64
libc.so.6(GLIBC_2.14)(64bit)	glibc-2.17-307.el7.1.x86_64
libgcc_s.so.1()(64bit)	libgcc-4.8.5-39.el7.x86_64
libltdl.so.7()(64bit)	libtool-ltdl-2.4.2-22.el7_3.x86_64
libnsl.so.1()(64bit)	glibc-2.17-307.el7.1.x86_64
libstdc++.so.6(GLIBCXX_3.4.15)(64bit)	libstdc++-4.8.5-39.el7.x86_64
lsb-core-amd64	redhat-lsb-core-4.1-27.el7.centos.1.x86_64
rpmllib(CompressedFileNames) <= 3.0.4-1	rpm-libs-4.11.3-43.el7.x86_64
/bin/sh	bash-4.2.46-34.el7.x86_64

### 3.3.2. MarkLogic Converters

Dependency	Package
libc.so.6(GLIBC_2.14)	
libc.so.6(GLIBC_2.14)(64bit)	glibc-2.17-307.el7.1.x86_64
libgcc_s.so.1	libgcc-4.8.5-39.el7.i686
libgcc_s.so.1()(64bit)	libgcc-4.8.5-39.el7.x86_64
libstdc++.so.6(GLIBCXX_3.4.15)	libstdc++-4.8.5-39.el7.i686
libstdc++.so.6(GLIBCXX_3.4.15)(64bit)	libstdc++-4.8.5-39.el7.i686
rpmllib(CompressedFileNames) <= 3.0.4-1	rpm-libs-4.11.3-43.el7.x86_64
/bin/sh	bash-4.2.46-34.el7.x86_64

## 3.4. Amazon Linux 1

### 3.4.1. MarkLogic Server

Dependency	Package
gdb	gdb-7.6.1-64.33.amzn1.x86_64
libc.so.6(GLIBC_2.14)(64bit)	glibc-2.17-292.180.amzn1.x86_64
libgcc_s.so.1()(64bit)	libgcc72-7.2.1-2.59.amzn1.x86_64
libltdl.so.7()(64bit)	libtool-ltdl-2.4.2-20.4.8.5.32.amzn1.x86_64
libnsl.so.1()(64bit)	glibc-2.17-292.180.amzn1.x86_64
libstdc++.so.6(GLIBCXX_3.4.15)(64bit)	libstdc++72-7.2.1-2.59.amzn1.x86_64

Dependency	Package
lsb-core-amd64	redhat-lsb-core-4.0-7.14.amzn1.x86_64
rpmllib(CompressedFileNames) <= 3.0.4-1	rpm-libs-4.11.3-40.76.amzn1.x86_64
/bin/sh	bash-4.2.46-28.37.amzn1.x86_64

### 3.4.2. MarkLogic Converters

Dependency	Package
libc.so.6(GLIBC_2.14)	glibc-2.17-292.180.amzn1.i686
libc.so.6(GLIBC_2.14)(64bit)	glibc-2.17-292.180.amzn1.x86_64
libgcc_s.so.1	libgcc64-6.4.1-1.45.amzn1.i686
libgcc_s.so.1()(64bit)	libgcc72-7.2.1-2.59.amzn1.x86_64
libstdc++.so.6(GLIBCXX_3.4.15)	libstdc++64-6.4.1-1.45.amzn1.i686
libstdc++.so.6(GLIBCXX_3.4.15)(64bit)	libstdc++72-7.2.1-2.59.amzn1.x86_64
rpmllib(CompressedFileNames) <= 3.0.4-1	rpm-libs-4.11.3-40.76.amzn1.x86_64
/bin/sh	bash-4.2.46-28.37.amzn1.x86_64

## 3.5. Amazon Linux 2

### 3.5.1. MarkLogic Server

Dependency	Package
gdb	gdb-8.0.1-30.amzn2.0.3.x86_64
libc.so.6(GLIBC_2.14)(64bit)	glibc-2.26-34.amzn2.x86_64
libgcc_s.so.1()(64bit)	libgcc-7.3.1-6.amzn2.0.4.x86_64
libltdl.so.7()(64bit)	libtool-ltdl-2.4.2-22.2.amzn2.0.2.x86_64
libnsl.so.1()(64bit)	glibc-2.26-34.amzn2.x86_64
libstdc++.so.6(GLIBCXX_3.4.15)(64bit)	libstdc++-7.3.1-6.amzn2.0.4.x86_64
lsb-core-amd64	system-lsb-core-4.1-27.amzn2.3.6.x86_64
rpmllib(CompressedFileNames) <= 3.0.4-1	rpm-libs-4.11.3-40.amzn2.0.4.x86_64
/bin/sh	bash-4.2.46-33.amzn2.x86_64

### 3.5.2. MarkLogic Converters

Dependency	Package
libc.so.6(GLIBC_2.14)	glibc-2.26-34.amzn2.i686
libc.so.6(GLIBC_2.14)(64bit)	glibc-2.26-34.amzn2.x86_64
libgcc_s.so.1	libgcc-7.3.1-6.amzn2.0.4.i686
libgcc_s.so.1()(64bit)	libgcc-7.3.1-6.amzn2.0.4.x86_64
libstdc++.so.6(GLIBCXX_3.4.15)	libstdc++-7.3.1-6.amzn2.0.4.i686
libstdc++.so.6(GLIBCXX_3.4.15)(64bit)	libstdc++-7.3.1-6.amzn2.0.4.x86_64
rpmllib(CompressedFileNames) <= 3.0.4-1	rpm-libs-4.11.3-40.amzn2.0.4.x86_64
/bin/sh	bash-4.2.46-33.amzn2.x86_64

## 4. Technical Support

MarkLogic provides technical support according to the terms detailed in your Software License Agreement or End User License Agreement.

We invite you to visit our support website at <http://help.marklogic.com> to access information on known and fixed issues, knowledge base articles, and more. For licensed customers with an active maintenance contract, see the [Support Handbook](#) for instructions on registering support contacts and on working with the MarkLogic Technical Support team.

Complete product documentation, the latest product release downloads, and other useful information is available for all developers at <http://developer.marklogic.com>. For technical questions, we encourage you to ask your question on [Stack Overflow](#).

## 5. Copyright

MarkLogic Server 11 and supporting products. Last updated: October, 2023.

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