

Unit 1

Introduction

eBook and White Paper

Install, Start and Initialize MarkLogic

Exercise 1: eBook and White Paper

Coming from an RDBMS environment, it can become challenging understanding how document databases work and its advantages – especially when dealing with massive amount of data coming from different sources. Several whitepapers have been included in this course material as a starter kit to get you going, along with some highlights of its contents.

1. Enterprise_NoSQL_for_Dummies

- “a NoSQL database has no tables, rows, or columns in the same sense as these elements are used in relational databases”
- “NoSQL databases are designed so joins aren’t necessary or even recommended.”
- “A NoSQL DBMS isn’t a drop-in replacement for your existing RDBMS.”

2. data-hub-guide-for-architects

- “For most data integration use cases, the time and cost associated with a `relational database plus ETL` approach is too great. A multi-model database, by contrast, enables organizations to ingest raw data immediately, lower schema design costs, and deliver faster value for more use cases.”
- “depending upon the state of the data pre-ingestion, no ETL would need to be done to force-fit things into any particular canonical model, since all source models may be staged as is. That said, an ETL tool may still be leveraged to connect to various sources or perhaps perform some very light format marshaling (e.g., RDBMS to CSV).”

Exercise 2: Installation, Start up and Initialization

MarkLogic Server can be installed across different platforms and operating systems. Additionally, there is only one version of MarkLogic Server, i.e. no evaluation version or different tiers. Certain features are controlled by the license configured, e.g. data capacity, language, etc.

1. Open a Terminal window (Applications→System Tools→Mate Terminal).
2. Navigate to the pre-downloaded set of installers:

```
$ cd /home/cent/Downloads
```

- Notice that there are two installers present. The main installer as well as the converters.

3. Use `yum` to install the product. Note: The instructor will confirm the MarkLogic version to install.

```
$ sudo yum install -y MarkLogic-11.3.0-rhel.x86_64.rpm
```

Password for cent: **centos**

```
$ sudo yum install -y MarkLogicConverters-11.3.0-rhel.x86_64.rpm
```

- The latter is optional if you are not intending to use document conversion functions like [xdmp:document-filter](#).

4. Configure MarkLogic to run as a non-daemon user, navigate to view the contents of the prebuilt marklogic.conf configuration file:

```
$ cd /home/cent/Desktop/fundamentals/solutions/unit_01/exercise_02
```

5. Copy the marklogic.conf file to /etc/ folder.

```
$ sudo cp marklogic.conf /etc/
```

- View the contents and note that the MarkLogic Service will run with the 'cent' user.

```
# Only applicable for RHEL/Centos environments
# See: http://docs.marklogic.com/guide/installation/procedures#id_32108
MARKLOGIC_USER=cent
```

6. Start the MarkLogic Server process.

```
$ sudo systemctl start MarkLogic
```

7. Check the MarkLogic Server process to confirm that it is running as `cent`.

```
$ ps -ef | grep MarkLogic
```

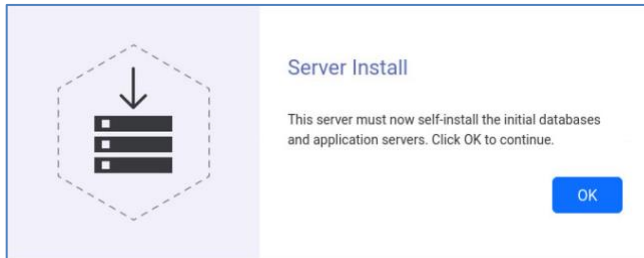
8. Notice the content of the default data directory for MarkLogic Server.

```
$ ls /var/opt/MarkLogic
```

9. Using your web browser, e.g. firefox, open <http://localhost:8001>

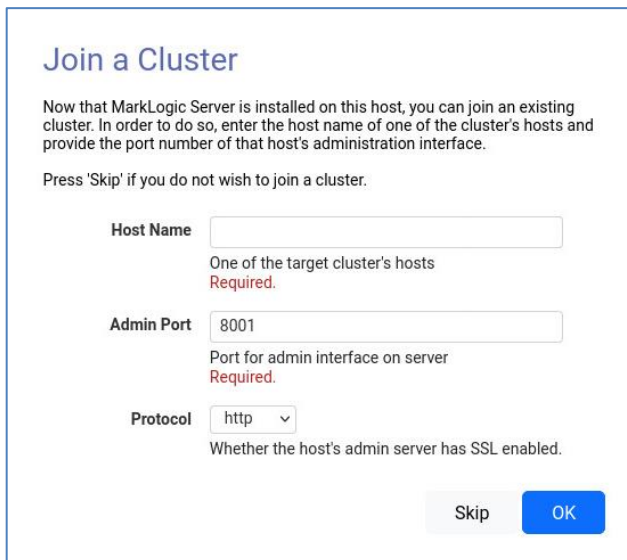
- You will respond to a series of pages.

10. Click on “ok” to start the MarkLogic Server Install.



The dialog box is titled "Server Install". On the left, there is a dashed hexagon containing a downward arrow and three server icons. On the right, the text reads: "This server must now self-install the initial databases and application servers. Click OK to continue." At the bottom right is a blue button labeled "OK".

11. We are initializing the first host of a cluster, not joining an existing cluster, so click on the “skip” button.



The dialog box is titled "Join a Cluster". The text explains that MarkLogic Server is installed and offers to join an existing cluster. It asks for the Host Name, Admin Port, and Protocol. Below these fields are instructions: "One of the target cluster's hosts Required." for Host Name, "Port for admin interface on server Required." for Admin Port, and "Whether the host's admin server has SSL enabled." for Protocol. There are "Skip" and "OK" buttons at the bottom right.

Host Name

One of the target cluster's hosts
Required.

Admin Port

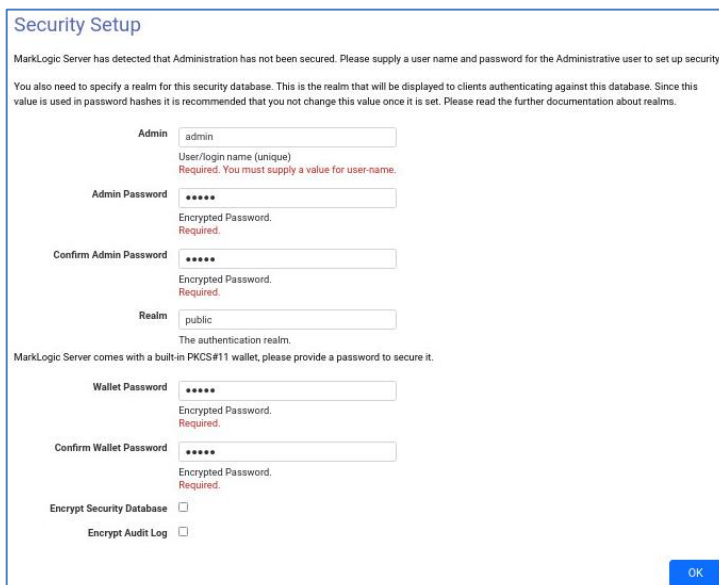
Port for admin interface on server
Required.

Protocol

Whether the host's admin server has SSL enabled.

Skip OK

12. Provide `admin` as credentials for username and password for simplicity. In a production setting, the username should match a person. Never share credentials across multiple people/applications/entities.



The dialog box is titled "Security Setup". It explains that MarkLogic Server has detected that Administration has not been secured and asks for a user name and password for the Administrative user. It also asks for a realm for the security database. Below these fields are instructions: "User/login name (unique) Required. You must supply a value for user-name." for Admin, "Encrypted Password. Required." for Admin Password, "Encrypted Password. Required." for Confirm Admin Password, and "The authentication realm." for Realm. There are also fields for Wallet Password and Confirm Wallet Password, and checkboxes for "Encrypt Security Database" and "Encrypt Audit Log". At the bottom right is a blue button labeled "OK".

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 ☐

Encrypt Audit Log ☐

OK

13. As the process completes, you are prompted to log in. Use the credentials you just configured.

 **localhost:8001**

This site is asking you to sign in.

Username

Password

14. You should see the Admin UI.

