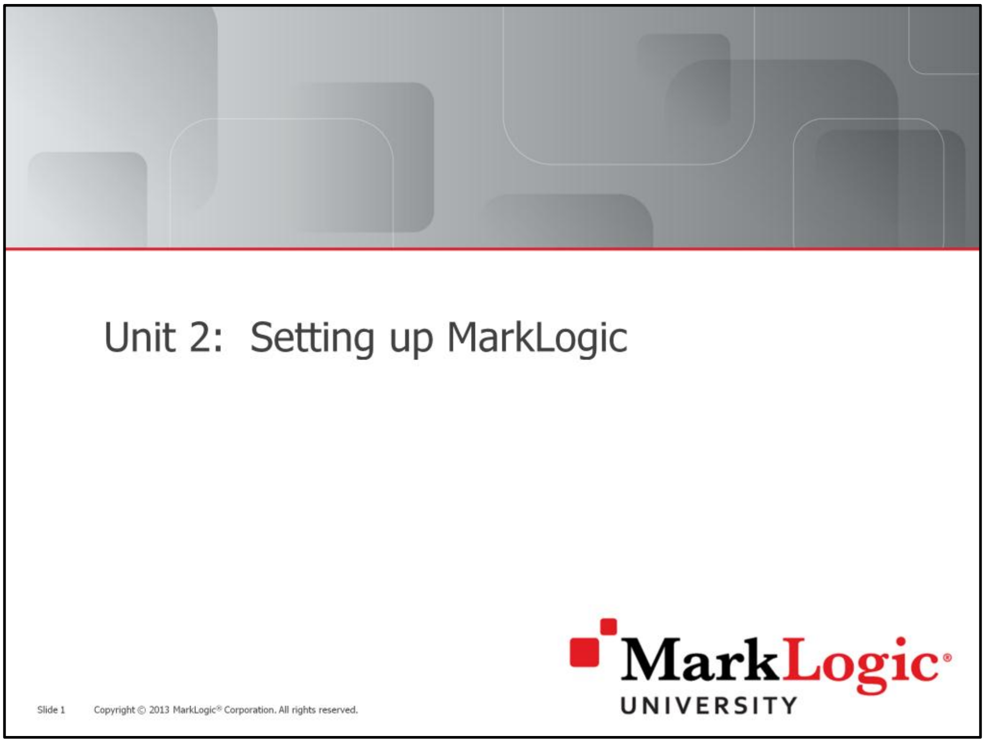

Unit 2: Setting up MarkLogic

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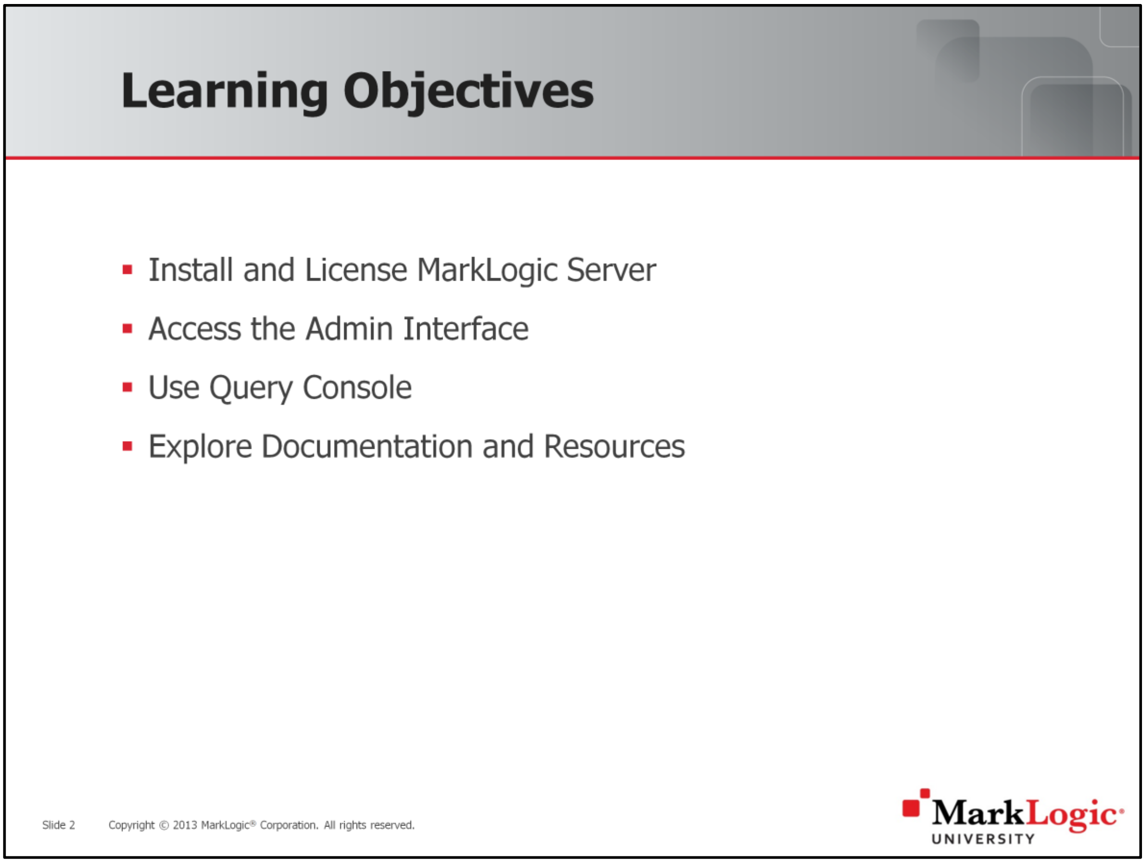
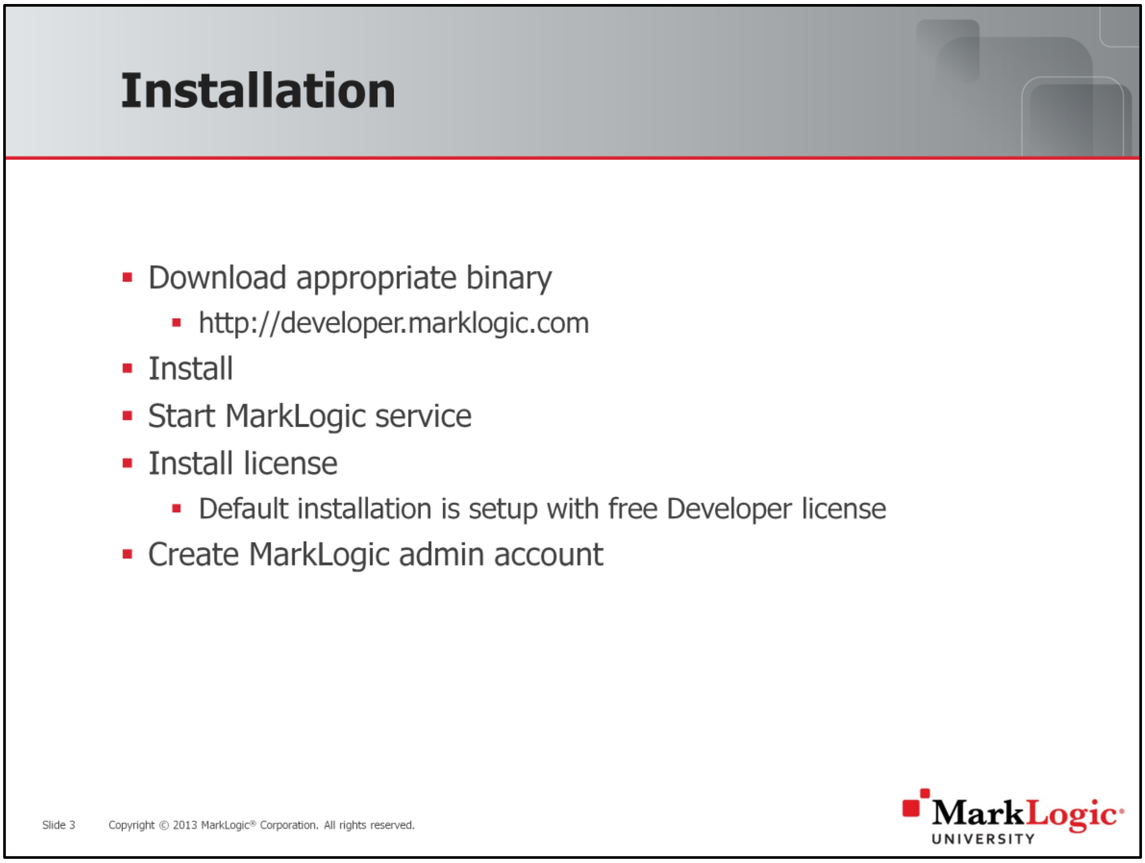


Learning Objectives

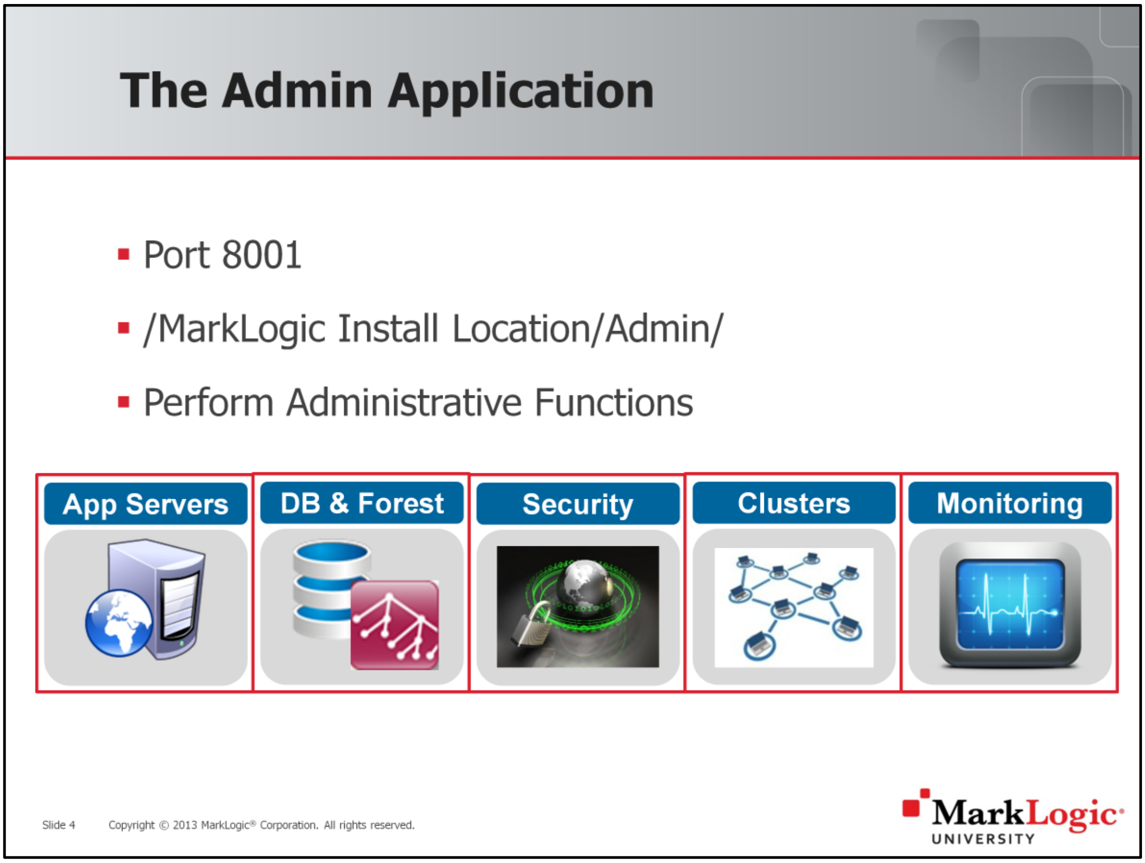
- Install and License MarkLogic Server
- Access the Admin Interface
- Use Query Console
- Explore Documentation and Resources



Installation

- Download appropriate binary
  - http://developer.marklogic.com
- Install
- Start MarkLogic service
- Install license
  - Default installation is setup with free Developer license
- Create MarkLogic admin account

Slide 3



The Admin Application

- Port 8001
- /MarkLogic Install Location/Admin/
- Perform Administrative Functions

App Servers | DB & Forest | Security | Clusters | Monitoring

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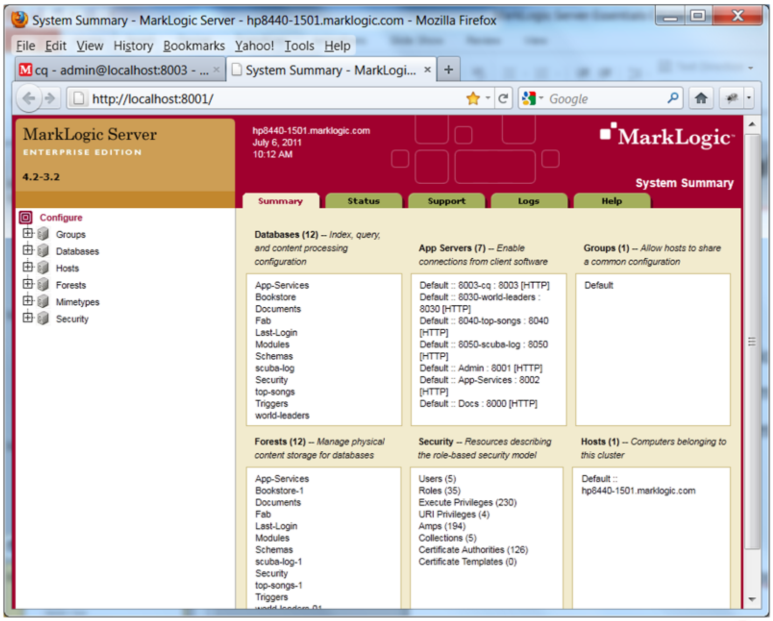
The MarkLogic Administration tool is a prebuilt XQuery application that is available on port 8001 after installation of the product. The codebase for this application can be found in the location where MarkLogic was installed, in the /admin/ folder.

The admin tool provides a UI for performing common tasks related to:

- Application Servers
- Databases and Forests
- Security settings
- Managing groups and clusters
- Monitoring the system

The core functions provided by the admin tool are also packaged as an API that can be used to script many of the tasks performed in the UI.

The Admin Application



System Summary - MarkLogic Server - hp8440-1501.marklogic.com - Mozilla Firefox
File Edit View History Bookmarks Yahoo! Tools Help
cq - admin@localhost:8003 - ...
System Summary - MarkLogi...
http://localhost:8001/
Google
MarkLogic Server
ENTERPRISE EDITION
4.2-3.2
MarkLogic
System Summary
Summary
Status
Support
Logs
Help
Configure
Groups
Databases
Hosts
Forests
Mimetypes
Security

hp8440-1501.marklogic.com
July 6, 2011
10:12 AM

Databases (12) -- *Index, query, and content processing configuration*

App-Services
Bookstore
Documents
Fab
Last-Login
Modules
Schemas
scuba-log
Security
top-songs
Triggers
world-leaders

App Servers (7) -- *Enable connections from client software*

Default :: 8003-cq : 8003 [HTTP]
Default :: 8030-world-leaders : 8030 [HTTP]
Default :: 8040-top-songs : 8040 [HTTP]
Default :: 8050-scuba-log : 8050 [HTTP]
Default :: Admin : 8001 [HTTP]
Default :: App-Services : 8002 [HTTP]
Default :: Docs : 8000 [HTTP]

Groups (1) -- *Allow hosts to share a common configuration*

Default

Forests (12) -- *Manage physical content storage for databases*

App-Services
Bookstore-1
Documents
Fab
Last-Login
Modules
Schemas
scuba-log-1
Security
top-songs-1
Triggers
world-leaders-01

Security -- *Resources describing the role-based security model*

Users (5)
Roles (35)
Execute Privileges (230)
URI Privileges (4)
Amps (194)
Collections (5)
Certificate Authorities (126)
Certificate Templates (0)

Hosts (1) -- *Computers belonging to this cluster*

Default ::
hp8440-1501.marklogic.com

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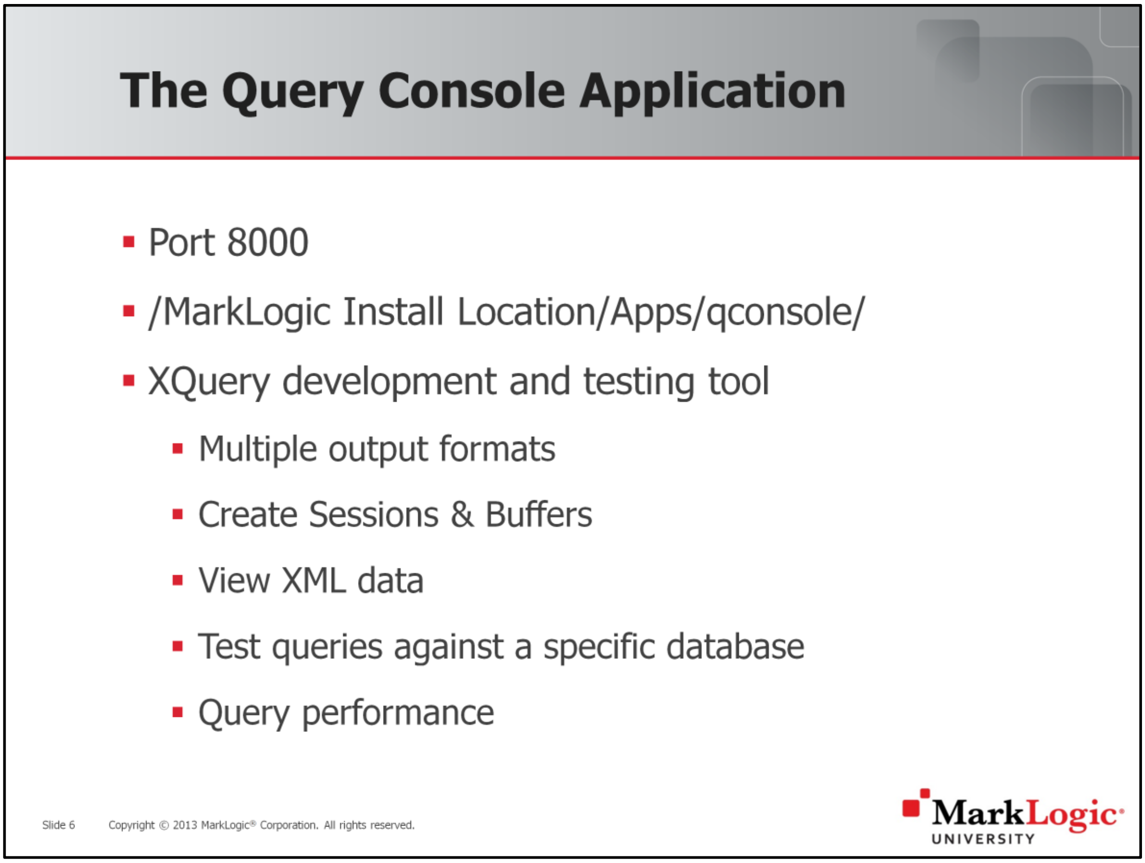
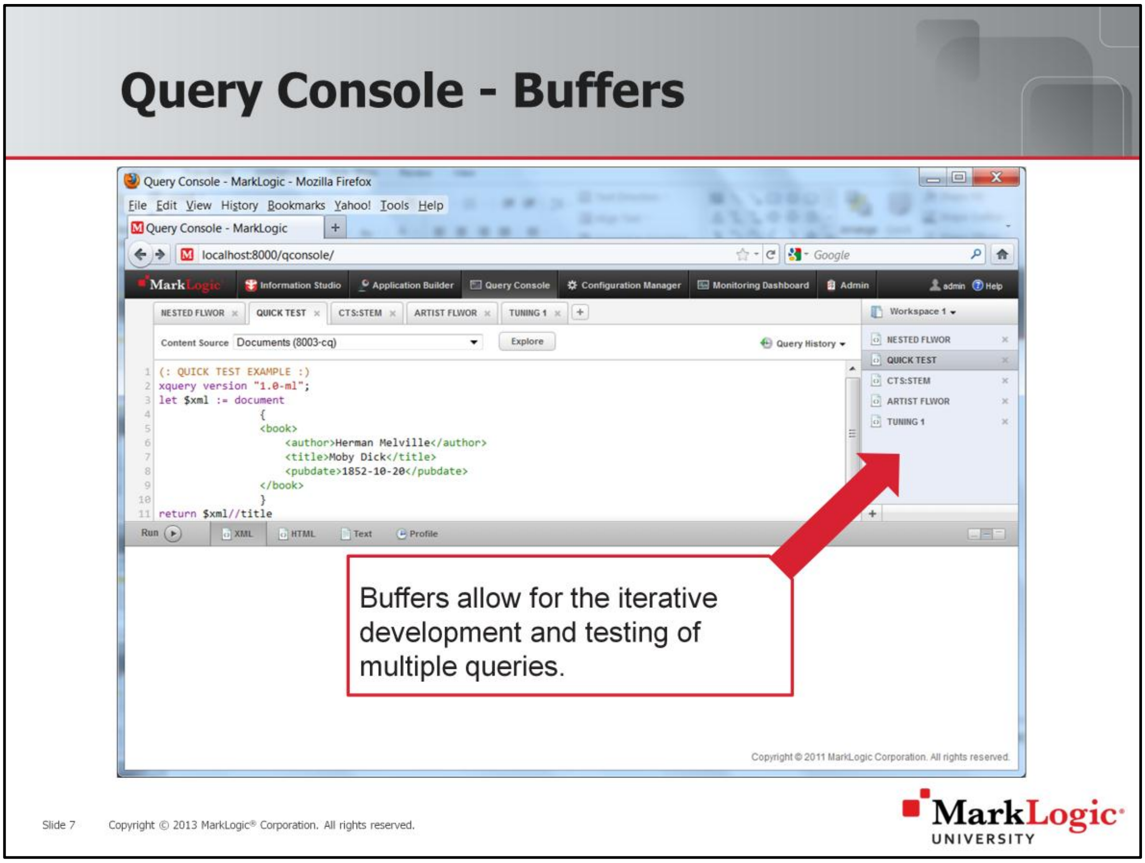


The Query Console Application

- Port 8000
- /MarkLogic Install Location/Apps/qconsole/
- XQuery development and testing tool
  - Multiple output formats
  - Create Sessions & Buffers
  - View XML data
  - Test queries against a specific database
  - Query performance

Slide 6



Query Console - Buffers

```
(: QUICK TEST EXAMPLE :)
xquery version "1.0-ml";
let $xml := document
                {
                <book>
                    <author>Herman Melville</author>
                    <title>Moby Dick</title>
                    <pubdate>1852-10-20</pubdate>
                </book>
                }
return $xml//title
```

Buffers allow for the iterative development and testing of multiple queries.

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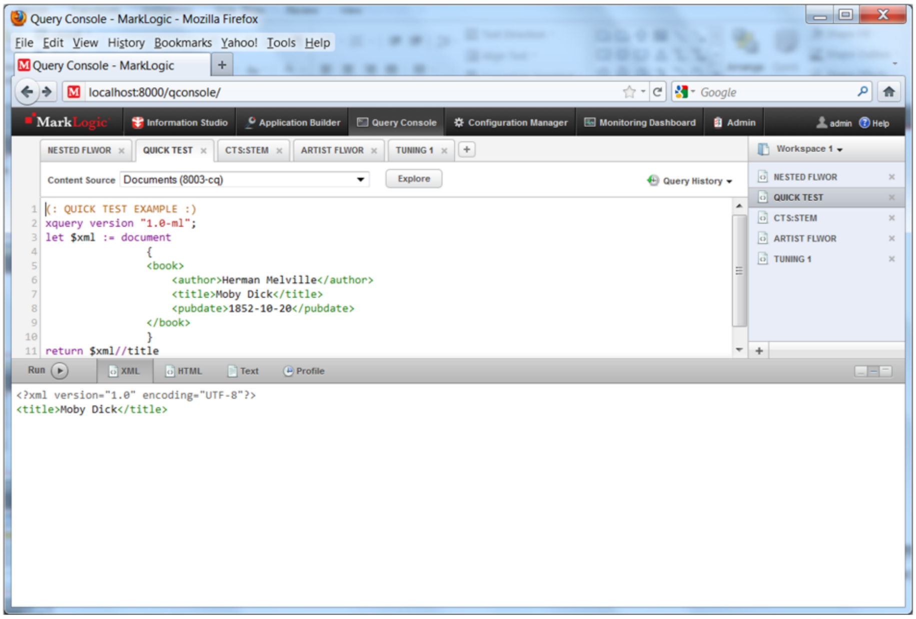
The Query Console tool allows you to write several scripts and keep them saved in various buffers. The buffers will be saved until you overwrite them with new code. If you close out of your browser, they will be there the next time you return to use the Query Console application.

Query Console – XML Output



```
(: QUICK TEST EXAMPLE :)
xquery version "1.0-ml";
let $xml := document
                {
                <book>
                    <author>Herman Melville</author>
                    <title>Moby Dick</title>
                    <pubdate>1852-10-20</pubdate>
                </book>
                }
return $xml//title
```

```
<?xml version="1.0" encoding="UTF-8"?>
<title>Moby Dick</title>
```

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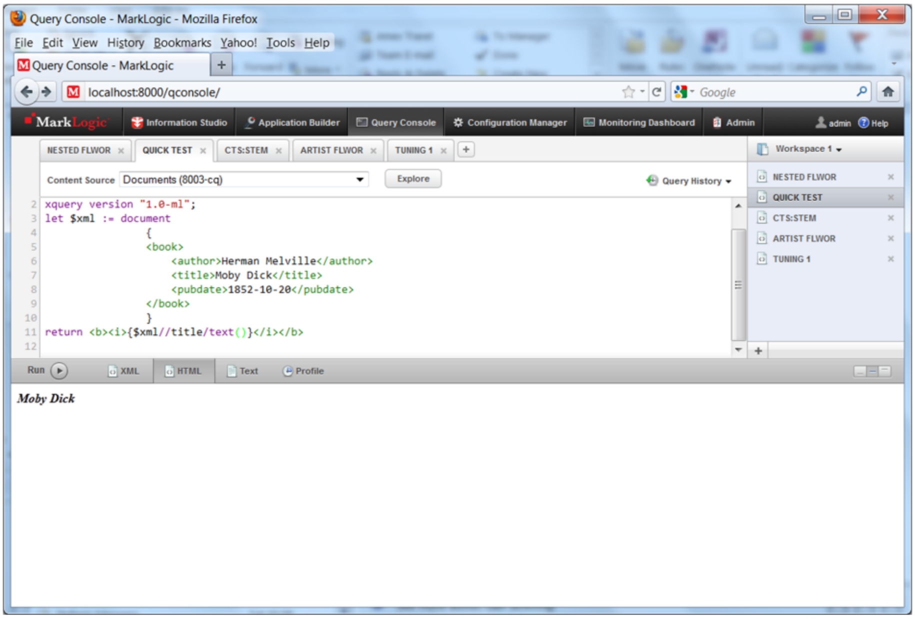
The XML button streams the result of your query as XML. If the result of your query is not XML, it will be wrapped in a <v:warning> tag. This is not an error, rather how Query Console was designed to behave to ensure that the output is formatted as XML.

Query Console – HTML Output



Content Source Documents (8003-cq)

```
xquery version "1.0-ml";
let $xml := document
                {
                <book>
                    <author>Herman Melville</author>
                    <title>Moby Dick</title>
                    <pubdate>1852-10-20</pubdate>
                </book>
                }
return <b><i>{$xml//title/text()}</i></b>
```

Moby Dick

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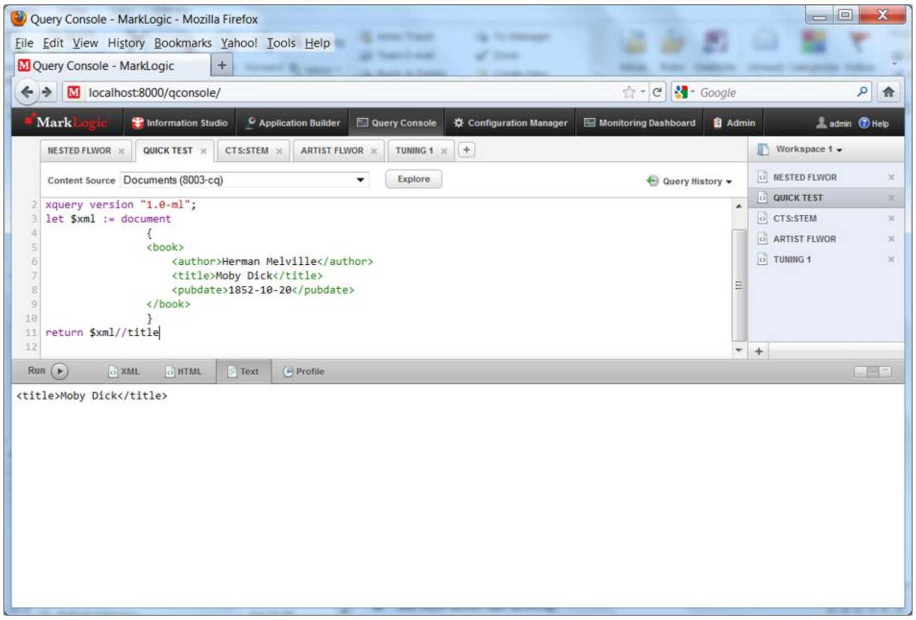
The HTML button provides a way for you to view how a browser would display your query result. This is useful if you have HTML markup being returned as a part of your query.

Query Console – Text Output



```
xquery version "1.0-ml";
let $xml := document
                {
                <book>
                    <author>Herman Melville</author>
                    <title>Moby Dick</title>
                    <pubdate>1852-10-20</pubdate>
                </book>
                }
return $xml//title
```

```
<title>Moby Dick</title>
```

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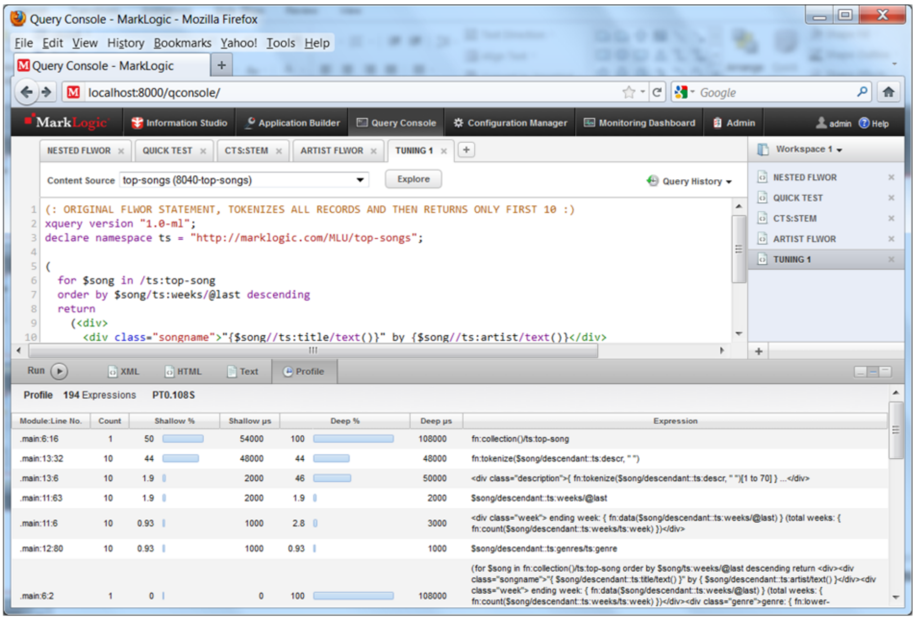
The text button streams your query result as a single text node.

Query Console – Profile Output



Content Source top-songs (8040-top-songs)

```
(: ORIGINAL FLWOR STATEMENT, TOKENIZES ALL RECORDS AND THEN RETURNS ONLY FIRST 10 :)
xquery version "1.0-ml";
declare namespace ts = "http://marklogic.com/MLU/top-songs";

(
  for $song in /ts:top-song
  order by $song/ts:weeks/@last descending
  return
    (<div>
      <div class="songname">"{$song//ts:title/text()}" by {$song//ts:artist/text()}</div>
```

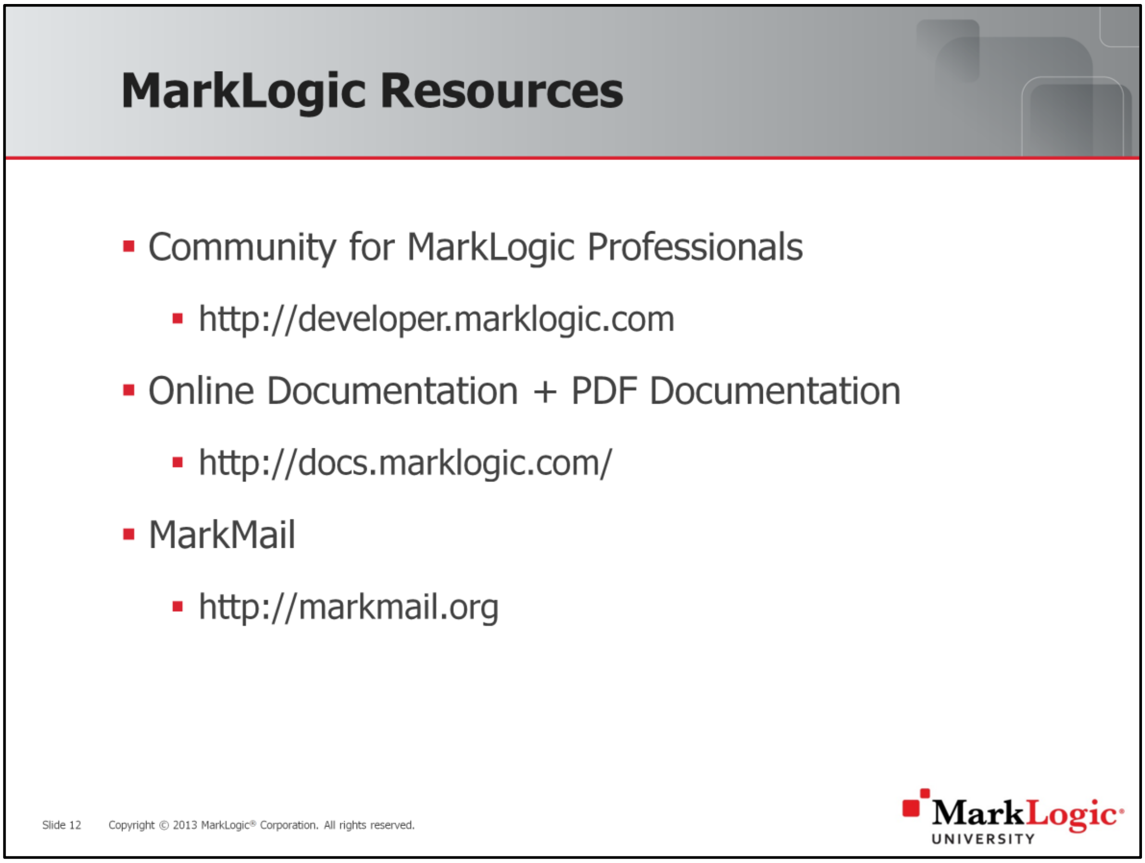
Profile 194 Expressions PT0.108S

Module:Line No.	Count	Shallow %	Shallow µs	Deep %	Deep µs	Expression
.main:6:16	1	50	54000	100	108000	fn:collection()/ts:top-song
.main:13:32	10	44	48000	44	48000	fn:tokenize($song/descendant::ts:descr, " ")
.main:13:6	10	1.9	2000	46	50000	<div class="description">{ fn:tokenize($song/descendant::ts:descr, " ")[1 to 70] } ...</div>
.main:11:63	10	1.9	2000	1.9	2000	$song/descendant::ts:weeks/@last
.main:11:6	10	0.93	1000	2.8	3000	<div class="week"> ending week: { fn:data($song/descendant::ts:weeks/@last) } (total weeks: { fn:count($song/descendant::ts:weeks/ts:week) })</div>
.main:12:80	10	0.93	1000	0.93	1000	$song/descendant::ts:genres/ts:genre
.main:6:2	1	0	0	100	108000	(for $song in fn:collection()/ts:top-song order by $song/ts:weeks/@last descending return <div><div class="songname">"{ $song/descendant::ts:title/text() }" by { $song/descendant::ts:artist/text() }</div><div class="week"> ending week: { fn:data($song/descendant::ts:weeks/@last) } (total weeks: { fn:count($song/descendant::ts:weeks/ts:week) })</div><div class="genre">genre: { fn:lower-

Slide 11

The profile button breaks your query down into expressions, and provides some performance information for each expression.

- Shallow = % of time spent in the single expression
- Deep = % of time spent in the expression + all sub expressions



MarkLogic Resources

- Community for MarkLogic Professionals
  - http://developer.marklogic.com
- Online Documentation + PDF Documentation
  - http://docs.marklogic.com/
- MarkMail
  - http://markmail.org

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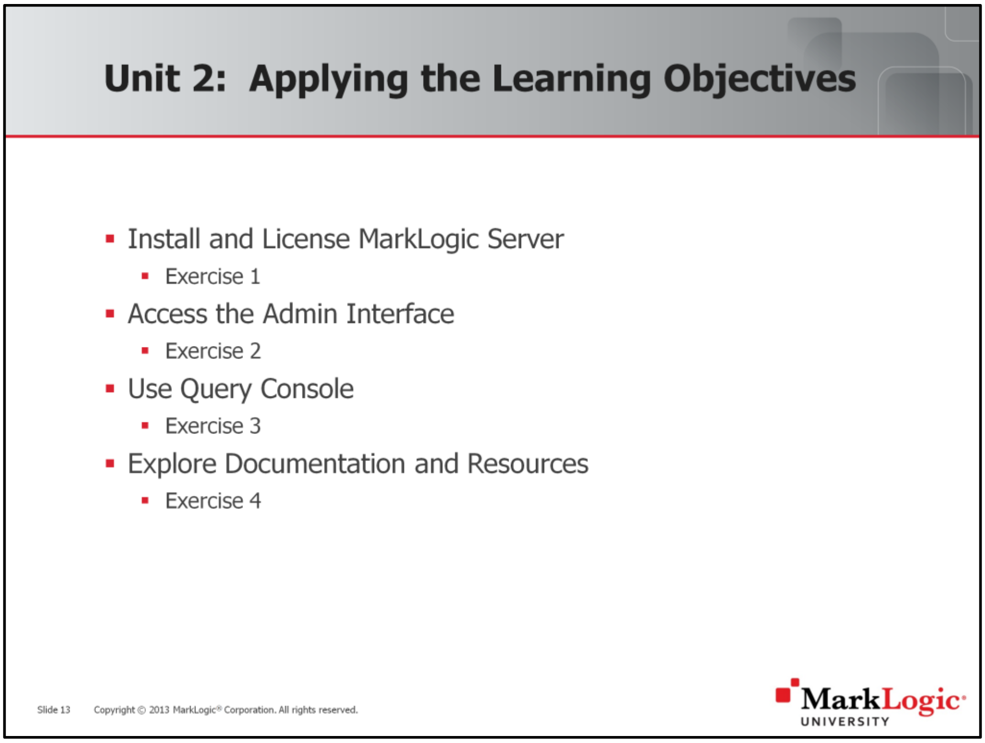
Each of these sites are extremely useful in your day to day work with MarkLogic. Please take a moment to bookmark these now!!



Unit 2: Applying the Learning Objectives

- Install and License MarkLogic Server
  - Exercise 1
- Access the Admin Interface
  - Exercise 2
- Use Query Console
  - Exercise 3
- Explore Documentation and Resources
  - Exercise 4

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