
MarkLogic Server

Query Console User Guide

MarkLogic 5
October, 2011

Last Revised: 5.0-3, March, 2012

Table of Contents

Query Console User Guide

1.0	Introduction to Query Console	3
2.0	Query Console Walkthrough	5
2.1	Accessing Query Console	5
2.2	Creating and Running a Query	6
2.3	Using the Query Execution History	7
2.4	Profiling a Query	8
2.5	Exploring Your Databases	9
2.6	Organizing Queries with Workspaces	10
2.6.1	Workspace Overview	11
2.6.2	Renaming a Workspace	11
2.6.3	Copying a Workspace	11
2.6.4	Deleting a Workspace	12
2.6.5	Exporting a Workspace	12
2.6.6	Importing a Workspace	12
3.0	Keyboard Shortcuts	14
4.0	Administering Query Console	16
4.1	Controlling Access to Query Console	16
4.1.1	qconsole-user	16
4.1.2	qconsole-internal	16
4.2	Removing a User's Data From the Server	16
5.0	Appendix: Differences Between Query Console and CQ	19
5.1	Query Console Installs with MarkLogic Server	19
5.2	Workspaces Replace Sessions	19
5.3	Queries Replace Buffers	19
5.4	Session and Query Data Are Stored on the Server	20
5.5	Query History is Per Query	20
6.0	Technical Support	21
	Product Notices	22
	COPYRIGHT	22
	TRADEMARK NOTICE	29

1.0 Introduction to Query Console

Query Console is an interactive web-based XQuery development tool for writing and executing ad-hoc queries without creating .xqy files. Query Console enables you to quickly test code snippets, debug problems, profile queries, and run administrative XQuery scripts.

The following terms and definitions cover the primary Query Console components:

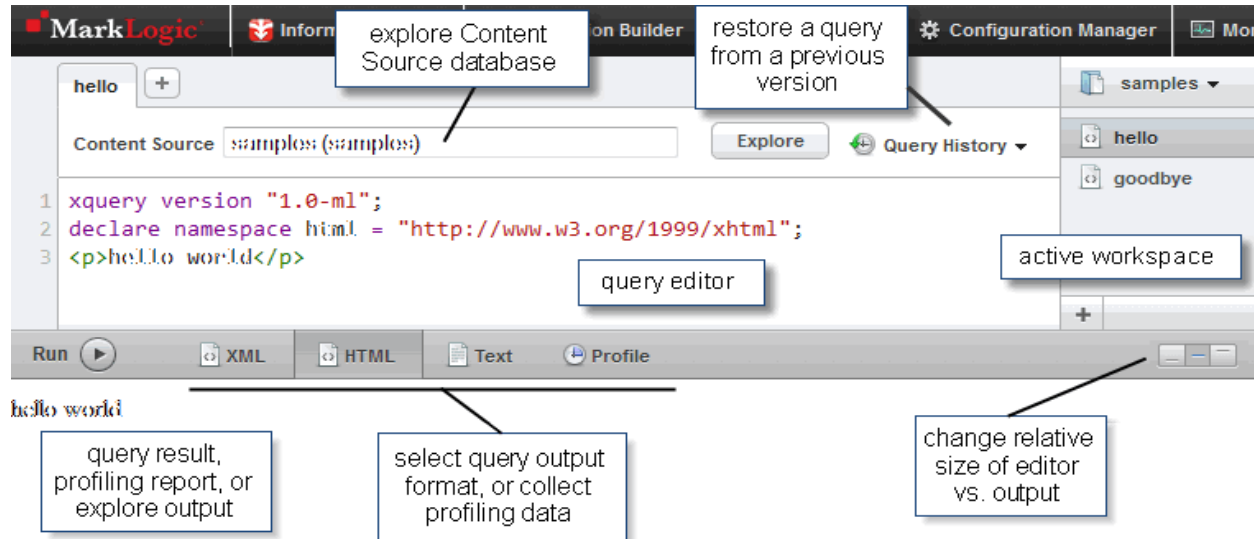
Term	Definition
<i>query</i>	Any executable block of XQuery code. When you run a query in Query Console, you may view the results in your choice of formats.
<i>workspace</i>	A collection of queries. Use workspaces to organize your queries. You may create multiple workspaces, but only one is active at a time.
<i>history</i>	A record of previously executed versions of a query. Each time you execute a query in Query Console, its query text is saved in the history. Use the history to restore a query to a previous state.
<i>content source</i>	The database and application server combination against which your query executes. Query Console automatically builds a list of available content sources for your MarkLogic Server and makes it available in the Content Source list.

Using Query Console, you can:

- Create, modify, delete and rename queries.
- Run a query and view the output as HTML, XML, or plain-text.
- Profile query performance.
- Explore the contents of a database.
- Create, delete, copy, or rename workspaces to improve query organization.
- Restore a query to a previous version from its saved history.
- Export and import workspaces for easy sharing among users or across MarkLogic Server instances.

The workspaces and queries created in Query Console are stored in MarkLogic Server, so they are available to you from any computer with access to your server instance. For example, you can create workspaces and queries on your desktop computer and use them from a lab machine with access to the same MarkLogic Server instance.

The picture below describes key Query Console UI features. For more information on using specific features, see the “Query Console Walkthrough” on page 5.



2.0 Query Console Walkthrough

This chapter provides a quick introduction to using the core Query Console features.

- [Accessing Query Console](#)
- [Creating and Running a Query](#)
- [Using the Query Execution History](#)
- [Profiling a Query](#)
- [Exploring Your Databases](#)
- [Organizing Queries with Workspaces](#)

2.1 Accessing Query Console

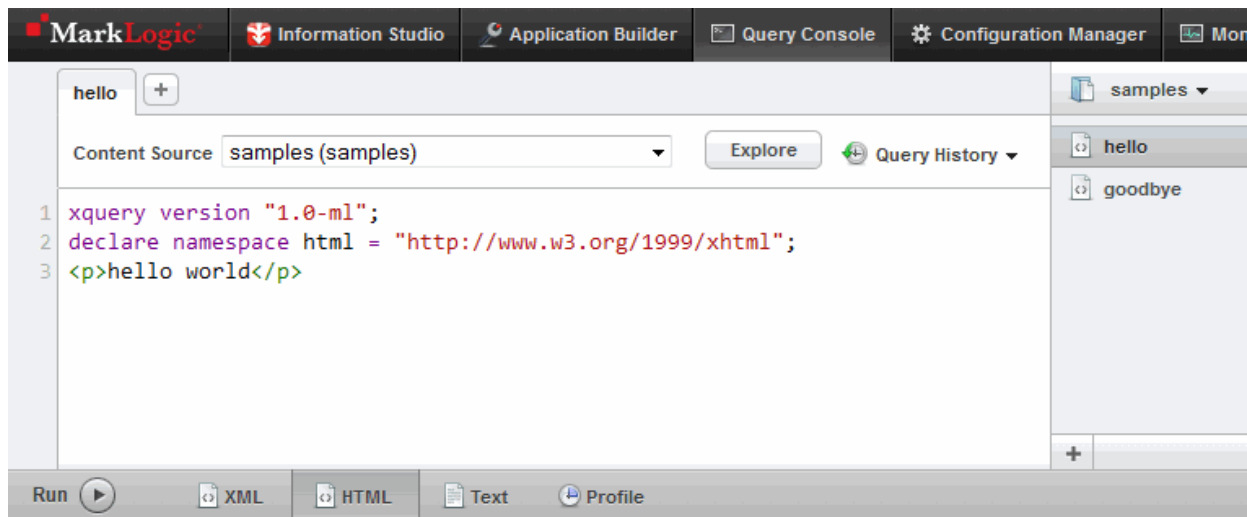
To begin using Query Console, open a browser and enter the URL:

```
http://your_ml_server:8000/qconsole
```

Note: If the application does not appear, you may not have sufficient privileges. To use Query Console, you must be a member of the `qconsole-user` role. If your privileges are insufficient, contact your MarkLogic Server administrator.

Note: Query Console does not grant extra access to databases or documents. To perform operations such as document insertion or deletion or database exploration from Query Console, you must have appropriate security privileges.

You should see a page that looks like the following:



hello world

2.2 Creating and Running a Query

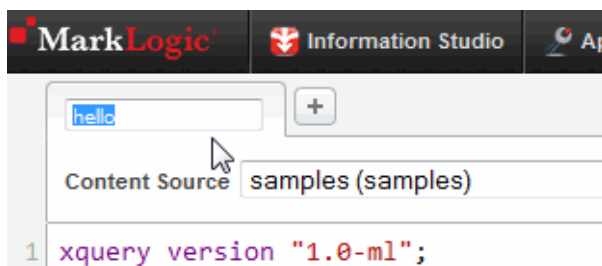
The first time you navigate to Query Console, or any time you create a new workspace, the workspace is seeded with a default query to give you a starting point. In this example, we will start with this default query.

To create and run a query:

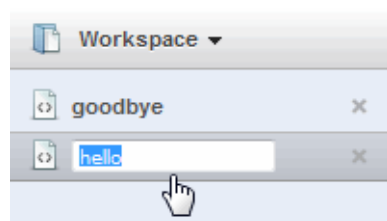
1. If `Query 1` is not the active query, click the tab for `Query 1` in the upper left of the query editor to make `Query 1` the active query.

If `Query 1` is not open in the editor, open it by clicking on its name in the workspace panel to the right.

2. To give your query a meaningful name, double-click on the query name in the tab and type in a new name, such as `hello`. Notice the name changes in the tab and in the workspace panel on the right.

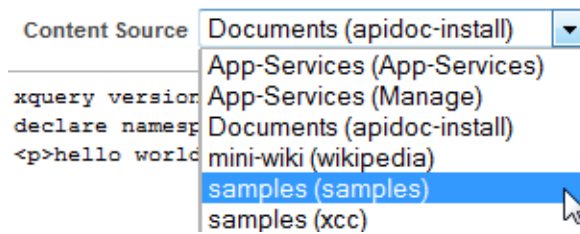


You may also rename a query by double-clicking its name in the workspace panel.



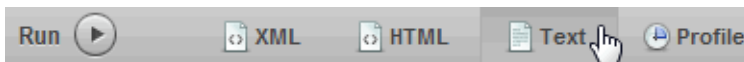
3. Optionally, replace the default query text in the `hello` query with your text. The default content is `<p>hello world</p>`.

- Click on the Source dropdown at the top of the editor to select a content source against which to run the query.

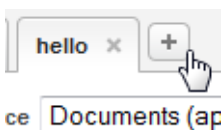


For this example, you may use any content source.

- Click the `Text` button on the Run control bar in the middle of the page to select plain text as the display format for query results.



- Click the Run button to evaluate your query. The results display in the output pane at the bottom of the page.
- Click the HTML or XML button and re-run your query to see the results in XML or HTML. Your query results display in the output pane at the bottom of the page.
- To create another query, click the “+” button to the right of the query tabs in the edit area.



The new query becomes active in the editor and appears in the workspace panel on the right.

2.3 Using the Query Execution History

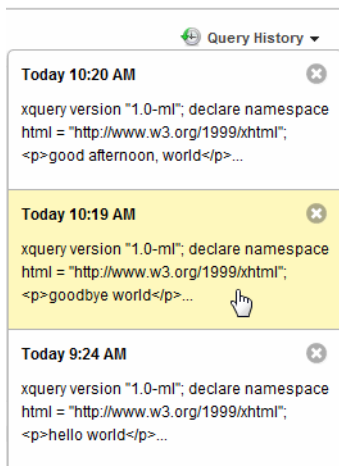
Each time you modify a query and evaluate it, Query Console saves the contents and time of execution in that query’s history. Query Console maintains a separate history for each query.

Query Console adds a history entry for each unique version of a query. If the query text is unchanged between runs or if the changes create a duplicate of an existing history entry for the query, Query Console does not create a new entry.

Query Console saves at most 50 history entries.

To use the query history:

1. Click on `Query History` to display a query's execution history. The history dropdown appears, with the most recent runs at the top of the list.
2. To revert the query to a previous state, click on the history entry. The selected query version is restored in the editor.



3. To remove a history entry, click the delete (X) button in the entry's upper right corner.
4. To close the history dropdown, click on the `history` dropdown again, or simply move the mouse outside the dropdown.

2.4 Profiling a Query

You may use Query Console to profile the performance of a query. Query Console profiles your query as if you passed your query to `prof:invoke`, and then displays a performance report in the results pane. The output from the query is not available when viewing a profiling report.

To profile a query:

1. If your App Server is does not already enable profiling, enable profiling by setting “profile allow” to true in the Admin UI, on App Server configuration settings page.

For detailed instructions, see [MarkLogic Server Profiling Requirements Capabilities](#) in the *Query Performance and Tuning Guide*.

2. Click on Profile to execute your query with profiling enabled.



3. Notice the profiling report generated in the results pane. If no profiling report appears, profiling may not be enabled for your App Server; see Step 1.

Module:Line No.	Count	Shallow %	Shallow µs	Deep %	Deep µs	Expression
.main:3:0	1	-	0	-	0	<p>hello world</p>

Your Query Console query appears as the `.main` module in the profiling report.

For details on profiling queries and the meaning of the profile report columns, see the [Profiling Requests to Evaluate Performance](#) chapter in the *Query Performance and Tuning Guide* guide.

2.5 Exploring Your Databases

Use Query Console's Explore feature to browse the contents of your databases. To explore a database:

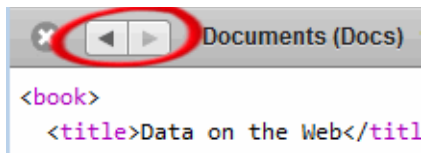
1. Select a database from the `Content` `Source` dropdown at the top of the current query.
2. Click Explore, to the right of the `Content` `Source` dropdown.
3. Query Console overlays the query result pane with a paginated list of all documents in the selected database, similar to this:

Document	Root Element	Properties	Collections
/images/Bone-Thugs-N-Harmony+Tha-Crossroads.jpg	B null	(properties)	(no collections)
/images/The-Supremes+You-Can-t-Hurry-Love.jpg	B null	(properties)	(no collections)
/songs/Akon-featuring-Snoop-Dogg+I-Wanna-Love-You.xml	E top-song	(properties)	(no collections)
/songs/Eddie-Fisher+I-m-Walking-Behind-You.xml	E top-song	(properties)	(no collections)
/songs/Eddie-Fisher+Oh-My-Pa-Pa-O-Mein-Papa.xml	E top-song	(properties)	(no collections)

For each document in the database, the summary includes the document URI, the type and name of the root node, a link to the document properties, and a link to any collections to which the document belongs.

4. Click on a document URI to view the document contents.
5. Use the forward and back buttons in the upper left of the Explore output pane to navigate as you drill down into document contents, properties, and collections. For example, to

return to the database content summary after clicking on a document's URI, click the back arrow.



6. If there are properties associated with the document, click the properties link for the document to view the properties as XML.
7. If the document is part of a collection, click the collection name in the Collections column to explore that collection.
8. To dismiss the Explore view and restore the Run bar, click the close button (X) in the upper left corner of the Explore output pane.

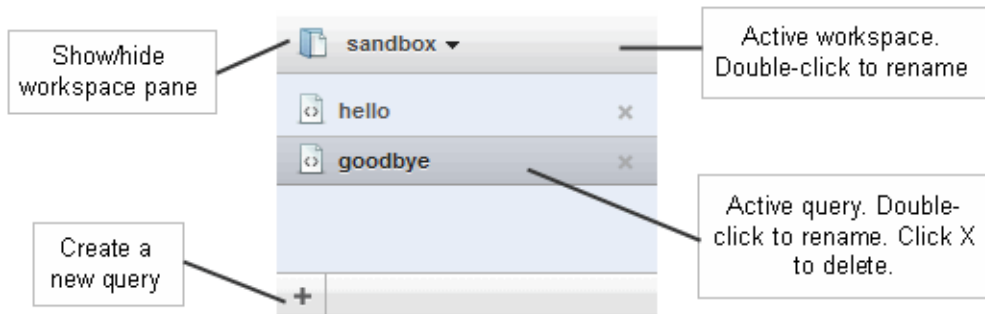
2.6 Organizing Queries with Workspaces

In Query Console, you organize your queries in workspaces. Though only one workspace is active at a time, you may create multiple workspaces. When you create a new query, Query Console automatically saves it in the active workspace.

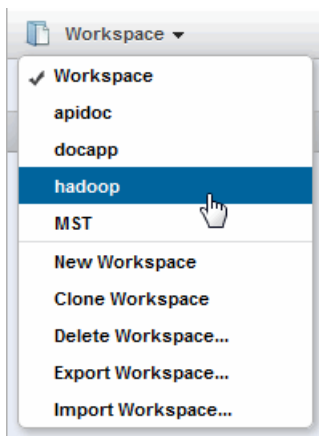
- [Workspace Overview](#)
- [Renaming a Workspace](#)
- [Copying a Workspace](#)
- [Deleting a Workspace](#)
- [Exporting a Workspace](#)
- [Importing a Workspace](#)

2.6.1 Workspace Overview

Use the workspace pane on the upper right of the page to interact with or change the active workspace. The workspace panel shows the name of the active workspace and lists its contained queries:

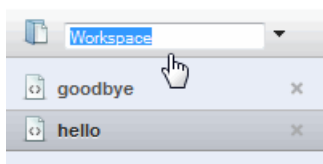


To see a list of available workspaces or to create, clone, delete, import or export a workspace, use the dropdown menu to the right of the workspace name:



2.6.2 Renaming a Workspace

To rename a workspace, double-click on the workspace name at the top of the workspace panel:



2.6.3 Copying a Workspace

To copy a workspace:

1. If the workspace to copy is not the active workspace, make it the active workspace by selecting it in the workspace menu.
2. Click the `Clone Workspace` item in the workspace menu. A new workspace named "Clone of *workspace_name*" is created and becomes the active workspace.
3. To rename the new workspace, double-click on the name at the top of the workspace panel.

When you clone a workspace, all the queries in the original workspace are copied to the new workspace. Query histories are not copied.

2.6.4 Deleting a Workspace

To delete a workspace and all of the queries it contains:

1. If the workspace to delete is not the active workspace, make it the active workspace by selecting it in the workspace menu.
2. Click the `Delete Workspace` item in the workspace menu.
3. Click OK in the confirmation dialog box to confirm deletion of the workspace.

If you delete the last workspace, Query Console automatically creates a workspace with the default initial contents.

2.6.5 Exporting a Workspace

Export a workspace to share it with another user or use it with a different MarkLogic Server instance. Exporting a workspace saves the workspace and queries to an external file which may then be imported back into Query Console. Query history is not exported.

To export a workspace:

1. If the workspace to export is not the active workspace, make it the active workspace by selecting it in the workspace menu.
2. Click the `Export Workspace` item in the workspace menu. The workspace is saved as an external XML file, using your browser download facility.

By default, the exported file is named *workspace_name.xml*.

2.6.6 Importing a Workspace

You may import a previously exported workspace into your Query Console.

To import a workspace:

1. Click the `Import Workspace` item in the workspace menu. The "Import a Workspace" dialog box comes.
2. Use the "Import a Workspace" dialog box to select an exported workspace XML file.
To cancel the import, click anywhere outside the dialog box.
3. Click `Import` to load the workspace. A loading progress window displays.
4. When loading completes, the imported workspace becomes the active workspace.

If a workspace already exists with same name as the imported workspace, the imported workspace name is modified by appending a unique number to the name.

3.0 Keyboard Shortcuts

Query Console provides keyboard shortcuts for controlling the UI minimal mouse interaction.

Where there are combination key sequences in the table below, press and hold the modifier key or keys while pressing the final key. For example, `Ctrl R` means press and hold the `Ctrl` key and then press the (lower case) `R` key.

Operation	Windows/Linux	Macintosh
Run query and show results in the currently selected output format	Ctrl Enter	Ctrl Enter
Run query and show results in XML	Ctrl Alt Enter	Ctrl Option Enter
Run query and show results in HTML	Alt Shift Enter	Option Shift Enter
Run query and show results in plain text	Ctrl Shift Enter	Ctrl Shift Enter
Profile query	Ctrl Alt Shift Enter	Ctrl Option Shift Enter
Create a new query	Alt =	Ctrl =
Close the current query	Alt -	Ctrl -
Change the relative height of the query editor and results pane. (Cycles through positions).	Double Click, or Ctrl Shift Space	Double Click, or Ctrl Shift Space
Bring the next open query to the top in the query editor	Ctrl Alt Shift Right Arrow	Ctrl Option Shift Right Arrow
Bring the previous open query to the top in the query editor	Ctrl Alt Shift Left Arrow	Ctrl Option Shift Left Arrow
Bring the first (leftmost) open query to the top in the editor	Ctrl Alt 1	Ctrl Option 1
Bring the Nth open query from the left to the top in the editor. No shortcut for N > 10.	Ctrl Alt <i>query_num</i> for <i>query_num=2..0</i>	Ctrl Option <i>query_num</i> for <i>query_num=2..0</i>
Maximize editor and hide workspace pane	Ctrl Alt ’	Ctrl Option ’
Expand/collapse query execution history	Ctrl Alt H	Ctrl Option H
Create a new workspace	Ctrl Alt W	Ctrl Option W
Clone the current workspace	Ctrl Alt Shift W	Ctrl Option Shift W

Operation	Windows/Linux	Macintosh
Select query above the current selection, when the workspace panel has the focus	Up Arrow	Up Arrow
Select query below the current selection, when the workspace panel has the focus	Down Arrow	Down Arrow

4.0 Administering Query Console

This chapter covers tasks specific to administering Query Console on your MarkLogic Server.

4.1 Controlling Access to Query Console

Query Console stores per user information about workspaces and queries in MarkLogic Server. Query Console uses the following pre-defined security roles:

- `qconsole-user`
- `qconsole-internal`

Users also require normal privileges to any databases or documents they access through Query Console.

For details about the MarkLogic Server security model and about configuring users and roles, see the *Understanding and Using Security Guide* and [Security Administration](#) in the *Administrator's Guide*.

4.1.1 `qconsole-user`

The `qconsole-user` role is a minimally privileged role that is needed to use Query Console. You must grant this role to all users who are allowed to use Query Console.

The `qconsole-user` role has the following execute privileges:

- `qconsole` (<http://marklogic.com/xdmp/privileges/qconsole>)

4.1.2 `qconsole-internal`

The `qconsole-internal` role is used by Query Console to amp certain functions that Query Console performs. You should not explicitly grant the `qconsole-internal` role to any user; it is only for internal use by Query Console.

4.2 Removing a User's Data From the Server

When Query Console users create workspaces and queries, the data is saved on the server in the App-Services database. If you need to remove all of a user's Query Console state information from the server, use a script similar to the following script.

For further assistance, contact MarkLogic Technical Support.

```
xquery version "1.0-ml";

declare namespace qc="http://marklogic.com/appservices/qconsole";

(: find the user id associated with a user name :)
declare function local:get-user-id($user-name as xs:string)
{
  let $eval :=
```

```

    fn:concat (
      'xquery version "1.0-m1";
      import module namespace
        sec="http://marklogic.com/xdmp/security"
          at "/MarkLogic/security.xqy";
      sec:uid-for-name("", $user-name, '')')
let $options :=
  <options xmlns="xdmp:eval">
    <database>{xdmp:database("Security")}</database>
  </options>
return
  xdmp:eval($eval, (), $options)
};

(: retrieve all workspace URI's for a named user :)
declare function local:get-workspace-uris(
  $user-name as xs:string)
{
  let $user-id := local:get-user-id($user-name)
  return
    if (fn:empty($user-id))
    then ()
    else
      for $d in fn:doc()/qc:workspace/qc:security[qc:userid eq $user-id]
      return base-uri($d)
};

(: retrieve id's for all queries in a given workspace :)
declare function local:get-query-ids(
  $workspace-uri as xs:string)
{
  for $qid in
    fn:doc($workspace-uri)/qc:workspace/qc:queries/qc:query/*:id
  return $qid
};

(: Retrieve id's of all history entries associated with a query id :)
declare function local:get-query-history(
  $qid as xs:unsignedLong)
{
  for $d in fn:doc()
  where $d/qc:history/qc:query[qc:id eq $qid]
  return base-uri($d)
};

let $user-name := xdmp:get-request-field("username")
let $user-documents :=
  for $ws in local:get-workspace-uris($user-name)
  return (
    for $qid in local:get-query-ids($ws)
    return
      (
        fn:concat("/queries/", $qid, ".txt"),
        local:get-query-history($qid)
      )
  )

```

```
    ),  
    $ws  
  )  
  for $d in $user-documents  
  return xdm:document-delete($d)
```

5.0 Appendix: Differences Between Query Console and CQ

Query Console is a fully supported query development tool which includes all the features of CQ. Most Query Console concepts and features should feel familiar to experienced CQ users, but there are some differences, as summarized in this section.

- [Query Console Installs with MarkLogic Server](#)
- [Workspaces Replace Sessions](#)
- [Queries Replace Buffers](#)
- [Session and Query Data Are Stored on the Server](#)
- [Query History is Per Query](#)

5.1 Query Console Installs with MarkLogic Server

Query Console installs when MarkLogic Server is installed. Any user in the `qconsole-user` role may use the tool. No additional configuration is necessary to begin using Query Console.

To access Query Console, navigate to:

```
http://your_ml_server:8000/qconsole
```

5.2 Workspaces Replace Sessions

CQ sessions are equivalent to Query Console workspaces. As with CQ sessions, Query Console workspaces may be created, deleted, and cloned.

Query Console workspaces differ from CQ sessions in the following ways:

- Workspaces may be renamed.
- Workspaces list queries by name, rather than by position/contents.
- Query Console stores workspace data on the server, rather than local to your browser. Therefore, your workspaces and queries are available from any host which can communicate with your MarkLogic Server instance.
- A workspace may be exported from one Query Console session and imported into another, allowing you to easily share queries among users or across MarkLogic Server instances.

5.3 Queries Replace Buffers

CQ buffers are equivalent to Query Console queries. As with CQ buffers, Query Console queries may be created, deleted, and restored from history.

Query Console queries differ from CQ buffers in the following ways:

- Queries are named. The tool supplies a default name when you create a query. You may change the name by double-clicking on the query name in the editor or workspace.
- More than one query may be open for editing at a time.
- The query editor displays line numbers.

5.4 Session and Query Data Are Stored on the Server

In CQ, sessions are stored in a `sessions` sub-directory under your CQ application server root. Though you may share a CQ session and its buffers by copying the session XML file from this location, sessions are otherwise unavailable if you change computers.

Query Console stores your workspace and query data in MarkLogic Server, so your queries are available from any host which can reach your server. Workspaces and their queries cannot be shared across users.

5.5 Query History is Per Query

In CQ, each time you execute the query in a buffer, the query text is saved in the query history. All queries in a session share a single query history.

In Query Console, each query has its own history, making it easier to manage and restore historical versions of queries.

See [Using the Query Execution History](#) for more details.

6.0 Technical Support

MarkLogic provides technical support according to the terms detailed in your Software License Agreement or End User License Agreement. For evaluation licenses, MarkLogic may provide support on an “as possible” basis.

For customers with a support contract, we invite you to visit our support website at <http://support.marklogic.com> to access information on known and fixed issues.

For complete product documentation, the latest product release downloads, and other useful information for developers, visit our developer site at <http://developer.marklogic.com>.

If you have questions or comments, you may contact MarkLogic Technical Support at the following email address:

support@marklogic.com

If reporting a query evaluation problem, please be sure to include the sample XQuery code.

Product Notices

COPYRIGHT

Copyright © 2012 MarkLogic Corporation. All rights reserved.

The MarkLogic software is protected by United States and international copyright laws, and incorporates certain third party libraries and components which are subject to the attributions, terms, conditions and disclaimers set forth below.

1. Contains SAP BusinessObjects Text Analysis XI from SAP AG. Copyright © 1996-2011. All rights reserved.
2. Highslide Software from Highslide Software Torstein Honsi. All Highslide Software is protected by local and international copyright laws. All rights reserved.
3. Icons developed by Yusuke Kamiyamane. Copyright © 2011 Yusuke Kamiyamane. All rights reserved. Icons are licensed subject to <http://creativecommons.org/licenses/by/3.0/legalcode>.
4. Antenna House OfficeHTML Copyright © 2000-2008 Antenna House, Inc. All rights reserved.
5. Argus Copyright ©1999-2008 Icenit Technology Ltd. All rights reserved.
6. Rosette Linguistics Platform 6.5.2/6.5.3 from Basis Technology Corporation, Copyright © 2004-2008 Basis Technology Corporation. All rights reserved.
7. ISYS Search. Copyright © 2011 ISYS™ Search Software, Inc. All rights reserved.
8. Software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>) Copyright © 1995-1998 Eric Young (eay@cryptsoft.com). All rights reserved. Copyright © 1998-2011 The OpenSSL Project. All rights reserved. Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. 3. All advertising materials mentioning features or use of this software must display the following acknowledgment: "This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (<http://www.openssl.org/>)" 4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact openssl-core@openssl.org. 5. Products derived from this software may not be called "OpenSSL" nor may "OpenSSL" appear in their names without prior written permission of the OpenSSL Project. 6. Redistributions of any form whatsoever must retain the following acknowledgment: "This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>)" THIS SOFTWARE

IS PROVIDED BY THE OpenSSL PROJECT ``AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com). Additional terms may apply to the foregoing software as further set forth at <http://www.openssl.org/source/license.html>

9. ICU v. 4.2.1 available from <http://site.icu-project.org/> Copyright © 1995-2011 International Business Machines Corporation and others. All rights reserved. Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, provided that the above copyright notice(s) and this permission notice appear in all copies of the Software and that both the above copyright notice(s) and this permission notice appear in supporting documentation. THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE. Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization of the copyright holder.

10. Tidy available at <http://www.w3.org/People/Raggett/tidy/>. Copyright © 1998-2008 World Wide Web Consortium (Massachusetts Institute of Technology, European Research Consortium for Informatics and Mathematics, Keio University). All Rights Reserved.

11. 'zlib' general purpose compression library v. 1.2.3. Copyright © 1995-2010 Jean-loup Gailly and Mark Adler. http://www.zlib.net/zlib_license.html

12. RSA Data Security, Inc. MD5 Message-Digest Algorithm, copyright © 1991-2, RSA Data Security, Inc. Created 1991. All rights reserved. License to copy and use this software is granted provided that it is identified as the "RSA Data Security, Inc. MD5 Message-Digest Algorithm" in all material mentioning or referencing this software or this function. License is also granted to make and use derivative works provided that such works are identified as "derived from the RSA Data Security, Inc. MD5 Message-Digest Algorithm" in all material mentioning or referencing the derived work. RSA Data Security, Inc. makes no representations concerning either the merchantability of this software or the suitability of this software for any particular purpose. It is provided "as is" without express or implied warranty of any kind. These notices must be retained in any copies of any part of this documentation and/or software.

13. TRE software, available at <http://laurikari.net/tre/>. Copyright © 2001-2009 Ville Laurikari <vl@iki.fi>. All rights reserved. Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: (1) Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. (2) Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDER AND CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

14. Eigen Library, version 2.0.10, available at http://eigen.tuxfamily.org/index.php?title=Main_Page. Eigen Library is free software: you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version. Eigen Library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details. You should have received a copy of the GNU Lesser General Public License along with Eigen Library. If not, see: <http://www.gnu.org/copyleft/lesser.html>

15. FunctX XQuery Library v.1.0 available at <http://www.xqueryfunctions.com/xq/>, Copyright © Datypic (Priscilla Walmsley). You can redistribute such library and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version. This library is distributed in the

hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License as available at <http://www.gnu.org/licenses/lgpl-2.1.html#SEC4> for more details.

16. DeployJava.js v. 1.8, Copyright © 2006, 2011, Oracle and/or its affiliates. All rights reserved. ORACLE PROPRIETARY/CONFIDENTIAL. Use of the foregoing library is subject to the following license terms. Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. Neither the name of Oracle nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission. THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

17. YUI libraries v.2.8 available at <http://developer.yahoo.com/yui/>. Copyright © 2011 Yahoo! Inc. All rights reserved. Use of the foregoing libraries is subject to the following license terms. Redistribution and use of this software in source and binary forms, with or without modification, are permitted provided that the following conditions are met: Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. Neither the name of Yahoo! Inc. nor the names of YUI's contributors may be used to endorse or promote products derived from this software without specific prior written permission of Yahoo! Inc. THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING

NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. Additional notices related to components included in the foregoing library are also available at the following URL: <http://yuilibrary.com/license/>

18. XSLTForms libraries available at <http://sourceforge.net/projects/xsltforms/>. You can redistribute such libraries and/or modify them under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version. These libraries are distributed in the hope that they will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License as available at <http://www.gnu.org/licenses/lgpl-2.1.html#SEC4> for more details.

19. jQuery v.1.7 libraries available at <http://jquery.com/> and jQuery UI v.1.8.2 libraries available at <http://jqueryui.com/>. Copyright © 2011 John Resig. Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions: The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software. THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

20. JSON v. 2 libraries available at <http://www.json.org/json2.js>. Copyright © 2002 JSON.org. Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions: The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software. The Software shall be used for Good, not Evil. THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

21. CodeMirror libraries available at <http://codemirror.net/>. Copyright © 2011 by Marijn Haverbeke marijnh@gmail.com. Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions: The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software. **THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.**

22. cURL v. 7.22.0 available at <http://curl.haxx.se/>. Copyright © 1996 - 2011, Daniel Stenberg, <daniel@haxx.se>. All rights reserved. Permission to use, copy, modify, and distribute this software for any purpose with or without fee is hereby granted, provided that the above copyright notice and this permission notice appear in all copies. **THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.** Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization of the copyright holder.

23. History.js available <https://github.com/balupton/History.js/> Copyright © 2011, Benjamin Arthur Lupton. All rights reserved. Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. Neither the name of Benjamin Arthur Lupton nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission. **THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO,**

PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

24. Sample content provided for use with the software is copyrighted by the respective authors as contributed by each of them to Wikipedia pursuant to the Creative Commons Attribution-ShareAlike License found at <http://creativecommons.org/licenses/by-sa/3.0/>.

25. Visual Studio Tools for Office 3.0 (Microsoft VSTO 3.0) licensed under Microsoft Public License Microsoft Public License (Ms-PL) found at <http://msdn.microsoft.com/en-us/library/ff647676.aspx>.

26. The MarkLogic Connector for Hadoop contains Apache Jakarta Commons Modeler. Copyright 2001-2007 The Apache Software Foundation. Licensed under the Apache License, Version 2.0 (the "License"). You may not use this file except in compliance with the License. You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>. Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

27. jemalloc v 2.2.4. <http://www.canonware.com/jemalloc/index.html>, released under the terms of the following BSD-derived licenses: Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: 1. Redistributions of source code must retain the above copyright notice(s), this list of conditions and the following disclaimer. 2. Redistributions in binary form must reproduce the above copyright notice(s), this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDER(S) ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER(S) BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. Portions of the software are copyright (C) 2002-2011 Jason Evans, and portions copyright (C) 2009-2011 Facebook, Inc. and copyright (C) 2007-2010 Mozilla Foundation. Neither the name of Facebook, Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission. All rights reserved.

28. GzipHelper; version: 1.0, Feb, 2003, authored by Gao Dasheng, is distributed subject to the following terms: This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software. Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions: (1.) the origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required; (2) altered source versions must be plainly marked as such, and must not be misrepresented as being the original software; (3) this notice may not be removed or altered from any source distribution.

TRADEMARK NOTICE

The MarkLogic name and logo are registered trademarks of MarkLogic Corporation in the United States and/or other countries. Excel and PowerPoint are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. Any other names or logos included in the Software, this notice or the documentation are property of the respective trademark owners.