[MS-FSQRCFG]:
Query and Result Configuration File Format

Revision Summary

Date	Revision History	Revision Class	Comments
11/06/2009	0.1	Major	Initial Availability
02/19/2010	1.0	Editorial	Revised and edited the technical content
03/31/2010	1.01	Editorial	Revised and edited the technical content
04/30/2010	1.02	Editorial	Revised and edited the technical content
06/07/2010	1.03	Editorial	Revised and edited the technical content
06/29/2010	1.04	Editorial	Changed language and formatting in the technical content.
07/23/2010	1.04	No change	No changes to the meaning, language, or formatting of the technical content.
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04/11/2012	1.5	No change	No changes to the meaning, language, or formatting of the technical content.
07/16/2012	1.5	No change	No changes to the meaning, language, or formatting of the technical content.

Table of Contents

1 Introduction

This document specifies the Query and Result Configuration File Format, which specifies the file names and formats for the configuration files that are used by a particular implementation of the Query and Result Protocol server.

Sections 1.7 and 2 of this specification are normative and can contain the terms MAY, SHOULD, MUST, MUST NOT, and SHOULD NOT as defined in RFC 2119. All other sections and examples in this specification are informative.

1.1 Glossary

The following terms are defined in [MS-GLOS]:

Augmented Backus-Naur Form (ABNF)
UTF-8

The following terms are defined in [MS-OFCGLOS]:

fallback managed property
index schema
managed property
query refinement
refiner

The following terms are specific to this document:

MAY, SHOULD, MUST, SHOULD NOT, MUST NOT: These terms (in all caps) are used as described in [RFC2119]. All statements of optional behavior use either MAY, SHOULD, or SHOULD NOT.

1.2 References

References to Microsoft Open Specifications documentation do not include a publishing year because links are to the latest version of the technical documents, which are updated frequently. References to other documents include a publishing year when one is available.

1.2.1 Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information. Please check the archive site, http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624, as an additional source.

[MS-FSAS] Microsoft Corporation, "Administration Services Protocol Specification".

[MS-FSCX] Microsoft Corporation, "Configuration (XML-RPC) Protocol Specification".

[MS-FSQR] Microsoft Corporation, "Query and Result Protocol Specification".

[MS-FSSCFG] Microsoft Corporation, "Search Configuration File Format Specification".

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, http://www.rfc-editor.org/rfc/rfc2119.txt

[RFC5234] Crocker, D., Ed., and Overell, P., "Augmented BNF for Syntax Specifications: ABNF", STD 68, RFC 5234, January 2008, http://www.rfc-editor.org/rfc/rfc5234.txt

1.2.2 Informative References

[MS-GLOS] Microsoft Corporation, "Windows Protocols Master Glossary".

[MS-OFCGLOS] Microsoft Corporation, "Microsoft Office Master Glossary".

1.3 Overview

This document specifies configuration files that are used by a particular implementation of the query processing component.

- The preload file specifies a list of configuration files that the query processing component reads on startup of the query and result protocol server, as described in [MS-FSQR].
- The configuration.tango.xml file specifies non-configurable refiner parameters. These parameters specify the number of items that the query processing component uses for refiners, as well as the location of other refiner-related configuration files.
- The templates.rc file specifies symbolic names for the template files that the query processing component uses to format search results.
- The templaterc file specifies templates, content type, and encoding parameters for search results.
- The header.templ, result.templ, footer.templ, and tango.templ files specify the format of search results.
- The nohits.templ file specifies the format of a search result for a search query that does not match any items.
- The error.templ file specifies the format of a search result if an error prevents the successful completion of a search query.

Each time the reload_configfiles file is updated, the query processing component reconfigures itself with any updated configuration data.

Note that a query processing component can be implemented without using any of the configuration files that are specified by this document.

1.4 Relationship to Protocols and Other Structures

The query processing component uses the configuration files that are specified in this document. Implementations of query processing components other than the one identified in Appendix A typically use different configuration files.

The structures in this document are stored and transferred by using the Configuration XML-RPC Protocol, as described in [MS-FSCX].

1.5 Applicability Statement

This document specifies the format of the configuration files that are used by a particular implementation of the query processing component.

With the exception of the reload_configfiles file, these files are not useful in alternate implementations of the query processing component.

Using the reload_configfiles file to trigger the configuration to reload has the advantage of ensuring that all propagated query and result configuration files are activated. This is because the process of reloading the configuration causes a restart of the query and result protocol server, as described in [MS-FSQR].

The use of the reload_configfiles file does, however, have the following disadvantages:

- It takes longer to restart the query and result protocol server than it takes to activate minor configuration changes.
- The query and result protocol server is not available during the restart operation.

The triggering mechanism that the reload_configfiles file provides is appropriate when a new **index schema** is activated or when other substantial changes to the configuration require a complete restart of the query and result protocol server, as described in [MS-FSQR].

It is not appropriate to use the reload_configfiles file to make frequent minor configuration changes.

1.6 Versioning and Localization

None.

1.7 Vendor-Extensible Fields

None.

2 Structures

The set of query and result configuration files MUST include all the configuration files that are specified in the subsections of this section. The query processing component MUST NOT activate an incomplete or partially updated configuration file set.

The files that this document specifies use the **UTF-8** character encoding scheme. The lines in these files MUST be separated either by using the single hexadecimal character 0A, or by using the two hexadecimal characters 0D and 0A.

With the exception of the reload_configfiles file, the file structures that this document specifies are intended for a particular implementation of the query processing component. Alternate implementations SHOULD disregard these files. Alternate implementations MUST respond to the reload_configfiles file trigger, as specified in section 2.12.

With the exception of the reload_configfiles and result.templ files, the files that are specified in this document have fixed contents. This means that the exact contents of the files are specified in this document and do not change.

All the files that are specified in this document are stored and transferred by using the Configuration XML-RPC Protocol, as specified in [MS-FSCX].

The storage paths that are specified for the result.templ and reload_configfiles files MUST be used in the following scenario: When the administration services protocol server, as specified in [MS-FSAS], stores the configuration file in the configuration service, as specified in [MS-FSCX], after a change of index schema that affects any configuration parameter in the result.templ file.

To be notified when these files change, the query processing component MUST register with the Configuration XML-RPC Protocol server by using the **RegisterModule** method, as specified in [MS-FSCX] section 2.2.31. When the query processing component calls the **RegisterModule** method, it MUST provide the parameters described in the following table.

Parameter	Description
port	An integer that contains the TCP port number where the query processing component listens to XML-RPC requests.
type	The string value "Search Dispatcher".
version	A string that identifies the version.
name	The string value "Search Dispatcher".
alerts	An array of strings that contains the single string value "configfile".
hostname	A string value containing the fully qualified DNS host name of the query processing component.
http	An integer value of 13280. The Configuration XML-RPC Protocol server uses this number internally to distinguish the query processing component from other components that reside on the same host.

To update these files, the query processing component MUST use the specified storage path to request each file by using the Configuration XML-RPC Protocol, as specified in [MS-FSCX] section 2.2.26.

2.1 preload file

Storage path: QRServer/webcluster/

The preload file is used by a particular implementation of the query processing component. It specifies a list of configuration files that the query processing component reads on startup of the query and result protocol server, as specified in [MS-FSQR].

2.1.1 File Content

The preload file MUST contain the following:

```
cs!RTSearch:index.cf w:10/20
cs!RTSearch:maptransform.xml
etc/qrserver/fieldspec.xml
etc/qrserver/reload_configfiles
etc/qrserver/resultfield.map
etc/qrserver/sources.xml
etc/qrserver/tango/configuration.attributes.xml
etc/qrserver/tango/configuration.logging.xml
etc/qrserver/tango/configuration.tango.xml
templates/qrserver/search_plain/error.templ
templates/qrserver/search_plain/footer.templ
templates/qrserver/search_plain/header.templ
templates/qrserver/search_plain/nohits.templ
templates/qrserver/search_plain/result.templ
templates/qrserver/search_plain/tango.templ
templates/qrserver/search_plain/templates.rc
templates/qrserver/search_xml/error.templ
templates/qrserver/search_xml/footer.templ
templates/qrserver/search_xml/header.templ
templates/qrserver/search_xml/nohits.templ
templates/qrserver/search_xml/result.templ
templates/qrserver/search_xml/tango.templ
templates/qrserver/search_xml/templates.rc
templates/qrserver/templaterc
```

2.2 configuration.tango.xml file

Storage path: QRServer/webcluster/etc/qrserver/tango/

The configuration.tango.xml file specifies non-configurable **refiner** parameters. These parameters specify the number of items that the query processing component uses for refiners, as well as the location of the following configuration files:

- configuration.attributes.xml, as specified in [MS-FSSCFG] section 2.5
- configuration.logging.xml, as specified in section 2.3

2.2.1 File Content

The configuration.tango.xml file MUST contain the following:

```
<?xml version="1.0"?>

<tango>
```

```
  <!-- This only applies for "shallow" navigators. -->
  <searching    hits           = "100"/>

  <!-- Defines the set of navigators/attributes. Auto-generated by Bliss. -->
  <processing>
    <attributes configuration  = "etc/qrserver/tango/configuration.attributes.xml"/>

  </processing>

  <!-- Defines the destination(s) of various types of log messages. -->
  <logging configuration =
    "etc/qrserver/tango/configuration.logging.xml"/>

</tango>
```

2.3 configuration.logging.xml file

Storage path: QRServer/webcluster/etc/qrserver/tango/

The configuration.logging.xml file specifies non-configurable logging parameters for refiners.

2.3.1 File Content

The configuration.logging.xml file MUST contain the following:

```
<?xml version="1.0"?>

<logConfigs>

  <!-- For general logging. -->
  <logConfig name = "default">
    <stdout>
      <messageType name = "ALL"/>
    </stdout>
  </logConfig>
</logConfigs>
```

2.4 templates.rc file

Storage path: QRServer/webcluster/templates/qrserver/search_plain/

The templates.rc file specifies symbolic names for template files. These names are used by a particular implementation of the query processing component to format search results.

2.4.1 File Content

The templates.rc file MUST contain the following:

```
# This file contains lines in the following format:
# <Template name>  <Source file>
# where <Template name> is the name of the TVM macro
# used to represent the contents of <Source file>.

_HEADER_      "header.templ"
```

```
_RESULT_      "result.templ"
_FOOTER_      "footer.templ"
_NOHITS_      "nohits.templ"
_ERROR_       "error.templ"
_NAVIGATION_  "tango.templ"
```

2.5 templaterc file

Storage path: QRServer/webcluster/templates/qrserver/

The templaterc file specifies templates, content type, and encoding parameters for search results.

2.5.1 File Content

The templaterc file MUST contain the following line:

```
/cgi-bin/search templates\qrserver\search_plain text/plain UTF-8
```

The file MAY contain additional lines with fields that are delimited by the space character. Additional lines that are contained in the file are for testing purposes only, and are not necessary for the proper operation of the product.

2.6 header.templ file

Storage path: QRServer/webcluster/templates/qrserver/search_plain/

The header.templ file specifies the format of portions of a search result as specified in [MS-FSQR] section 3.1.4.1.2.2.1.

2.6.1 File Content

The header.templ file MUST consist of the following:

```
#SEG NAM _CURR:SOURCE_
#MTA SEP
####
#QTF NAM Original query
#QTF ACT NOP
#QTF QRY _QUERY:ENCTEXT_
####
_IF(>,_FEEDBACK:COUNT_,0)<{_OP(set,_IDX_,0)__WHILE(<,_IDX_,_FEEDBACK:COUNT_)<{#QTF NAM
_FEEDBACK:SOURCE[IDX]_
#QTF ACT _FEEDBACK:ACTION[IDX]_
#QTF QRY _FEEDBACK:QUERY[IDX]_
#QTF CUS _FEEDBACK:CUSTOM[IDX]_
#QTF MSG _FEEDBACK:MESSAGE[IDX]_
#QTF MID _FEEDBACK:MESSAGEID[IDX]_
####
_OP(add,_IDX_,1)_}>_}><{}>_#QTF NAM Final query
#QTF ACT NOP
#QTF QRY _QUERY:FINAL_
#QTF CUS _QUERY:FINALTYPE_
####
_IF(>,_CATEGORY:COUNT_,0)<{#CAT LST _CATEGORY:LIST_
####
```

```
}>__NAVIGATION_#FIR _CURR:FIRST_
#LAS _CURR:LAST_
#HTS _CURR:HITCNT_
#CNT _CURR:TOTALHITCNT_
#TIM _CURR:TIME_
#MAR _CURR:MAXRANK_
###/
```

2.7 result.templ file

Storage path: QRServer/webcluster/templates/qrserver/search_plain/

The result.templ file specifies the format of an item in a search result, as specified in [MS-FSQR] section 3.1.4.1.2.2.1.1.4.

2.7.1 ABNF Grammar

The result.templ file MUST be formatted according to the following rules that conform to **Augmented Backus-Naur Form (ABNF)**, as specified in [RFC5234]:

```
result-templ = header body footer

header = "_WHILE(<=,_CURRENTHIT_,_CURR:HITCNT_) "
    "<{_IF(>,_HIT:NO_,0)<{#### _HIT:NO_" endl
    "#rank _HIT:RANK_" endl
    "#ranklog _HIT:[ranklog]_" endl
    "#fcoid _HIT:SITEID_" endl
    "#fcocount _HIT:COUNT_" endl
    "#morehits _HIT:MOREHITS_" endl
    "#internalid _HIT:[internalid]_" endl
    "#contentid _HIT:[contentid]_" endl
    "#contentids _HIT:[contentids]_" endl
    "#collection _HIT:[collection]_" endl

body = *(prop)

footer = "###/" endl
    "}><{#### -1" endl
    "###/" endl
    "}>__OP(add,_CURRENTHIT_,1)_}>_" endl

prop = prop-self-fallback / prop-other-fallback / prop-no-fallback
    / prop-dynamic-summary
prop-self-fallback = "#" prop-name " _IF(>,_SIZE(HIT:[bsum" prop-name
    "])_,0)<{_DYNSUM_HTML(HIT:[bsum" prop-name "])_}><{_HIT:[bsrc"
    prop-name "]_}>_" endl
prop-other-fallback = "#" prop-name " _IF(>,_SIZE(HIT:[bsum"
    prop-name "])_,0)<{_DYNSUM_HTML(HIT:[bsum" prop-name
    "])_}><{_HIT:[bsum" fprop-name "]_}>_" endl

prop-no-fallback = "#" prop-name " _HIT:[bsum" prop-name "]_" endl

prop-dynamic-summary = "#" prop-name " _DYNSUM_HTML(HIT:[bsum"
    prop-name "])_" endl

prop-name = managed-property-name
fprop-name = managed-property-name
```

```
managed-property-name = 1*(ALPHA / DIGIT)
endl = [CR] LF
```

2.7.2 Configuration Parameter Details

For any given **prop** value all instances of **prop-name** MUST be the same.

The **body** MUST contain a **prop** value for each **managed property** in the result view, as specified in [MS-FSSCFG] section 2.15.

The form of each **prop** value MUST correspond to one of the rules described in the following table.

Rule Name	Condition
prop-self-fallback	The managed property has itself as a **fallback managed property**, as specified in [MS-FSSCFG] section 2.7.2.
prop-other-fallback	The managed property has another managed property as its fallback managed property, as specified in [MS-FSSCFG] section 2.7.2.
prop-no-fallback	The managed property has no fallback managed property, as specified in [MS-FSSCFG] section 2.7.2.
prop-dynamic-summary	The managed property has a dynamic summary type, as specified in [MS-FSSCFG] section 1.3.2.1.

2.8 footer.templ file

Storage path: QRServer/webcluster/templates/qrserver/search_plain/

The footer.templ file specifies the format of a portion of a search result, as specified in [MS-FSQR] section 3.1.4.1.2.2.1.1.5.

2.8.1 File Content

The footer.templ file MUST contain the following:

```
_IF(>,_PREV:FIRST_,0)<{
#P _PREV:FIRST_ _PREV:LAST_ _PREV:URL_
}>__IF(>,_NEXT:FIRST_,0)<{#N _NEXT:FIRST_ _NEXT:LAST_ _NEXT:URL_
}>_
```

2.9 nohits.templ file

Storage path: QRServer/webcluster/templates/qrserver/search_plain/

The nohits.templ file specifies the output format, as specified in [MS-FSQR] section 3.1.4.1.2.2.1.2.

2.9.1 File Content

The nohits.templ file MUST contain the following:

```
#C _CURR:TOTALHITCNT_
```

```
#T _CURR:TIME_
_IF(>,_PREV:FIRST_,0)<{
#P _PREV:FIRST_ _PREV:LAST_ _PREV:URL_
}>_
```

2.10 error.templ file

Storage path: QRServer/webcluster/templates/qrserver/search_plain/

The error.templ file specifies the output format that the query processing component returns if an error prevents the successful completion of a search query, as specified in [MS-FSQR] section 3.1.4.1.2.2.1.3.

2.10.1 File Content

The error.templ file MUST contain the following:

```
#SEG NAM _CURR:SOURCE_
####
#ERC _ERROR:CODE_
#ERT _ERROR:TEXT_
####
_IF(>,_ERROR:COUNT_,0)<{_OP(set,_IDX_,0)__WHILE(<,_IDX_,_ERROR:COUNT_)<{#ERR COD
_ERROR:CODE[IDX]_
#ERR TXT _ERROR:TEXT[IDX]_
####
_OP(add,_IDX_,1)_}>_}><{}>_
```

2.11 tango.templ file

Storage path: QRServer/webcluster/templates/qrserver/search_plain/

The tango.templ file specifies the output format of the **query refinement** section of a search result, as specified in [MS-FSQR] section 3.1.4.1.2.2.1.1.3.

2.11.1 File Content

The content of the tango.templ file is fixed, but cannot be represented in its pure form because it contains non-printable characters. The content of this file MUST be formatted according to the following ABNF grammar:

```
tango-templ =
    "#NAV ENT _NAVIGATION:ENTRIES__IF(>,_NAVIGATION:ENTRIES_,0)<{"
    "_WHILE(<,_CURRENTNAVIGATIONHIT_,_NAVIGATION:ENTRIES_) <{" endl
    "####" endl
    "#NAV NAME _NAVIGATION:NAME_" endl
    "#NAV DNAM _NAVIGATION:DISPLAYNAME_" endl
    "#NAV TYPE _NAVIGATION:TYPE_" endl
    "#NAV UNIT _NAVIGATION:UNIT_" endl
    "#NAV MODI _NAVIGATION:MODIFIER_" endl
    "#NAV SCOR _NAVIGATION:SCORE_" endl
    "#NAV UCNT _NAVIGATION:HITS_" endl
    "#NAV HCNT _NAVIGATION:HITCOUNT_" endl
    "#NAV SCNT _NAVIGATION:SAMPLECOUNT_" endl
```

```
    "#NAV RATI _NAVIGATION:RATIO_" endl
    "#NAV MIN  _NAVIGATION:MINIMUM_" endl
    "#NAV MAX  _NAVIGATION:MAXIMUM_" endl
    "#NAV MEAN _NAVIGATION:MEAN_" endl
    "#NAV ETPY _NAVIGATION:ENTROPY_" endl
    "#NAV SUM  _NAVIGATION:SUM_" endl
    "#NAV NAMES _IF(>,_NAVIGATION:BIN:SIZE_,0)<{"
    "_OP(set,_IDX_,0)__OP(set,_TMP0_,_NAVIGATION:BIN:SIZE_)__OP("
    "sub,_TMP0_,1)__WHILE(<,_IDX_,_TMP0_)<{_NAVIGATION:BIN:NAME[IDX]_"
    delim "_OP(add,_IDX_,1)_}>__NAVIGATION:BIN:NAME[IDX]_}>_" endl
    "#NAV MODS _IF(>,_NAVIGATION:BIN:SIZE_,0)<{"
    "_OP(set,_IDX_,0)__OP(set,_TMP0_,_NAVIGATION:BIN:SIZE_)__OP("
    "sub,_TMP0_,1)__WHILE(<,_IDX_,_TMP0_)<{"
    "_NAVIGATION:BIN:MODIFIER[IDX]_"
    delim "_OP(add,_IDX_,1)_}>__NAVIGATION:BIN:MODIFIER[IDX]_}>_" endl
    "#NAV CNTS _IF(>,_NAVIGATION:BIN:SIZE_,0)<{_OP(set,_IDX_,0)__OP("
    "set,_TMP0_,_NAVIGATION:BIN:SIZE_)__OP(sub,_TMP0_,1)__WHILE("
    "<,_IDX_,_TMP0_)<{_NAVIGATION:BIN:COUNT[IDX]_"
    delim "_OP(add,_IDX_,1)_}>__NAVIGATION:BIN:COUNT[IDX]_}>__OP("
    "add,_CURRENTNAVIGATIONHIT_,1)_}>_}>_" endl
    "####" endl

endl = [CR] LF
delim = %x1e
```

2.12 reload_configfiles file

Storage path: QRServer/webcluster/etc/qrserver

The reload_configfiles file is a trigger, and its contents MUST be discarded. When this file is updated, the query processing component MUST reconfigure itself with any updated configuration data. This trigger applies to alternate implementations of the query processing component.

3 Structure Examples

3.1 result.templ file

A default product installation results in the following example result.templ file:

```
_WHILE(<=,_CURRENTHIT_,_CURR:HITCNT_) <{_IF(>,_HIT:NO_,0)<{#### _HIT:NO_
#rank _HIT:RANK_
#ranklog _HIT:[ranklog]_
#fcoid _HIT:SITEID_
#fcocount _HIT:COUNT_
#morehits _HIT:MOREHITS_
#internalid _HIT:[internalid]_
#contentid _HIT:[contentid]_
#contentids _HIT:[contentids]_
#collection _HIT:[collection]_
#title
_IF(>,_SIZE(HIT:[bsumtitle])_,0)<{_DYNSUM_HTML(HIT:[bsumtitle])_}><{_HIT:[bsrctitle]_}>_
#teaser _HIT:[bsumteaser]_
#body _IF(>,_SIZE(HIT:[bsumbody])_,0)<{_DYNSUM_HTML(HIT:[bsumbody])_}><{_HIT:[bsumteaser]_}>_
#contenttype _HIT:[bsumcontenttype]_
#format _HIT:[bsumformat]_
#language _HIT:[bsumlanguage]_
#languages _HIT:[bsumlanguages]_
#charset _HIT:[bsumcharset]_
#urls _HIT:[bsumurls]_
#url _HIT:[bsumurl]_
#domain _HIT:[bsumdomain]_
#tld _HIT:[bsumtld]_
#path _HIT:[bsumpath]_
#crawltime _HIT:[bsumcrawltime]_
#processingtime _HIT:[bsumprocessingtime]_
#docdatetime _HIT:[bsumdocdatetime]_
#size _HIT:[bsumsize]_
#docvector _HIT:[bsumdocvector]_
#docaclsystemid _HIT:[bsumdocaclsystemid]_
#author _HIT:[bsumauthor]_
#createdby _HIT:[bsumcreatedby]_
#fileextension _HIT:[bsumfileextension]_
#isdocument _HIT:[bsumisdocument]_
#modifiedby _HIT:[bsummodifiedby]_
#account _HIT:[bsumaccount]_
#assignedto _HIT:[bsumassignedto]_
#spdocid _HIT:[bsumspdocid]_
#docsubject _HIT:[bsumdocsubject]_
#created _HIT:[bsumcreated]_
#lastmodifiedtime _HIT:[bsumlastmodifiedtime]_
#notes
_IF(>,_SIZE(HIT:[bsumnotes])_,0)<{_DYNSUM_HTML(HIT:[bsumnotes])_}><{_HIT:[bsrcnotes]_}>_
#siteid _HIT:[bsumsiteid]_
#sitename _HIT:[bsumsitename]_
#sitetitle _HIT:[bsumsitetitle]_
#spsiteurl _HIT:[bsumspsiteurl]_
#status _HIT:[bsumstatus]_
#companies _HIT:[bsumcompanies]_
#locations _HIT:[bsumlocations]_
#personnames _HIT:[bsumpersonnames]_
#concepts _HIT:[bsumconcepts]_
```

```
#taxonomy _HIT:[bsumtaxonomy]_
#companyteaser _HIT:[bsumcompanyteaser]_
#locationteaser _HIT:[bsumlocationteaser]_
#personnameteaser _HIT:[bsumpersonnameteaser]_
#company _HIT:[bsumcompany]_
#documentsignature _HIT:[bsumdocumentsignature]_
#detectedlanguage _HIT:[bsumdetectedlanguage]_
#owsmetadatafacetinfo _HIT:[bsumowsmetadatafacetinfo]_
#owstaxid _HIT:[bsumowstaxid]_
#owstaxidmetadataalltagsinfo _HIT:[bsumowstaxidmetadataalltagsinfo]_
#contentclass _HIT:[bsumcontentclass]_
#picturethumbnailurl _HIT:[bsumpicturethumbnailurl]_
#enddate _HIT:[bsumenddate]_
#imagedatecreated _HIT:[bsumimagedatecreated]_
#displaydate _HIT:[bsumdisplaydate]_
#pictureheight _HIT:[bsumpictureheight]_
#picturewidth _HIT:[bsumpicturewidth]_
#isemptylist _HIT:[bsumisemptylist]_
#islistitem _HIT:[bsumislistitem]_
#location _HIT:[bsumlocation]_
#priority _HIT:[bsumpriority]_
#serverredirectedurl _HIT:[bsumserverredirectedurl]_
#owsurl _HIT:[bsumowsurl]_
#metadataauthor _HIT:[bsummetadataauthor]_
#filename _HIT:[bsumfilename]_
#contents _DYNSUM_HTML(HIT:[bsumcontents])_
#owssplocationinfo _HIT:[bsumowssplocationinfo]_
#owstaxidsplocationinfo _HIT:[bsumowstaxidsplocationinfo]_
#owstaxidsplocationlist _HIT:[bsumowstaxidsplocationlist]_
#owstaxidsplocationsite _HIT:[bsumowstaxidsplocationsite]_
#sizelabel _HIT:[bsumsizelabel]_
#collapsingstatus _HIT:[bsumcollapsingstatus]_
#contentmodifiedtime _HIT:[bsumcontentmodifiedtime]_
#discoveredtime _HIT:[bsumdiscoveredtime]_
#email _HIT:[bsumemail]_
#hithighlightedproperties _HIT:[bsumhithighlightedproperties]_
#hithighlightedsummary _HIT:[bsumhithighlightedsummary]_
#popularsocialtags _HIT:[bsumpopularsocialtags]_
#schemasignature _HIT:[bsumschemasignature]_
#workid _HIT:[bsumworkid]_
###/
}><{#### -1
###/
}>__OP(add,_CURRENTHIT_,1)_}>_
```

The following example result.templ file results from the addition of the managed properties "intunique", "doubleunique", "decimalunique", and "dateunique" to the index schema:

```
_WHILE(<=,_CURRENTHIT_,_CURR:HITCNT_) <{_IF(>,_HIT:NO_,0)<{#### _HIT:NO_
#rank _HIT:RANK_
#ranklog _HIT:[ranklog]_
#fcoid _HIT:SITEID_
#fcocount _HIT:COUNT_
#morehits _HIT:MOREHITS_
#internalid _HIT:[internalid]_
#contentid _HIT:[contentid]_
#contentids _HIT:[contentids]_
```

```
#collection _HIT:[collection]_
#title
_IF(>,_SIZE(HIT:[bsumtitle])_,0)<{_DYNSUM_HTML(HIT:[bsumtitle])_}><{_HIT:[bsrctitle]_}>_
#teaser _HIT:[bsumteaser]_
#body _IF(>,_SIZE(HIT:[bsumbody])_,0)<{_DYNSUM_HTML(HIT:[bsumbody])_}><{_HIT:[bsumteaser]_}>_
#contenttype _HIT:[bsumcontenttype]_
#format _HIT:[bsumformat]_
#language _HIT:[bsumlanguage]_
#languages _HIT:[bsumlanguages]_
#charset _HIT:[bsumcharset]_
#urls _HIT:[bsumurls]_
#url _HIT:[bsumurl]_
#domain _HIT:[bsumdomain]_
#tld _HIT:[bsumtld]_
#path _HIT:[bsumpath]_
#crawltime _HIT:[bsumcrawltime]_
#processingtime _HIT:[bsumprocessingtime]_
#docdatetime _HIT:[bsumdocdatetime]_
#size _HIT:[bsumsize]_
#docvector _HIT:[bsumdocvector]_
#docaclsystemid _HIT:[bsumdocaclsystemid]_
#author _HIT:[bsumauthor]_
#createdby _HIT:[bsumcreatedby]_
#fileextension _HIT:[bsumfileextension]_
#isdocument _HIT:[bsumisdocument]_
#modifiedby _HIT:[bsummodifiedby]_
#account _HIT:[bsumaccount]_
#assignedto _HIT:[bsumassignedto]_
#spdocid _HIT:[bsumspdocid]_
#docsubject _HIT:[bsumdocsubject]_
#created _HIT:[bsumcreated]_
#lastmodifiedtime _HIT:[bsumlastmodifiedtime]_
#notes
_IF(>,_SIZE(HIT:[bsumnotes])_,0)<{_DYNSUM_HTML(HIT:[bsumnotes])_}><{_HIT:[bsrcnotes]_}>_
#siteid _HIT:[bsumsiteid]_
#sitename _HIT:[bsumsitename]_
#sitetitle _HIT:[bsumsitetitle]_
#spsiteurl _HIT:[bsumspsiteurl]_
#status _HIT:[bsumstatus]_
#companies _HIT:[bsumcompanies]_
#locations _HIT:[bsumlocations]_
#personnames _HIT:[bsumpersonnames]_
#concepts _HIT:[bsumconcepts]_
#taxonomy _HIT:[bsumtaxonomy]_
#companyteaser _HIT:[bsumcompanyteaser]_
#locationteaser _HIT:[bsumlocationteaser]_
#personnameteaser _HIT:[bsumpersonnameteaser]_
#company _HIT:[bsumcompany]_
#documentsignature _HIT:[bsumdocumentsignature]_
#detectedlanguage _HIT:[bsumdetectedlanguage]_
#owsmetadatafacetinfo _HIT:[bsumowsmetadatafacetinfo]_
#owstaxid _HIT:[bsumowstaxid]_
#owstaxidmetadataalltagsinfo _HIT:[bsumowstaxidmetadataalltagsinfo]_
#contentclass _HIT:[bsumcontentclass]_
#picturethumbnailurl _HIT:[bsumpicturethumbnailurl]_
#enddate _HIT:[bsumenddate]_
#imagedatecreated _HIT:[bsumimagedatecreated]_
#displaydate _HIT:[bsumdisplaydate]_
#pictureheight _HIT:[bsumpictureheight]_
```

```
#picturewidth _HIT:[bsumpicturewidth]_
#isemptylist _HIT:[bsumisemptylist]_
#islistitem _HIT:[bsumislistitem]_
#location _HIT:[bsumlocation]_
#priority _HIT:[bsumpriority]_
#serverredirectedurl _HIT:[bsumserverredirectedurl]_
#owsurl _HIT:[bsumowsurl]_
#metadataauthor _HIT:[bsummetadataauthor]_
#filename _HIT:[bsumfilename]_
#contents _DYNSUM_HTML(HIT:[bsumcontents])_
#owssplocationinfo _HIT:[bsumowssplocationinfo]_
#owstaxidsplocationinfo _HIT:[bsumowstaxidsplocationinfo]_
#owstaxidsplocationlist _HIT:[bsumowstaxidsplocationlist]_
#owstaxidsplocationsite _HIT:[bsumowstaxidsplocationsite]_
#sizelabel _HIT:[bsumsizelabel]_
#collapsingstatus _HIT:[bsumcollapsingstatus]_
#contentmodifiedtime _HIT:[bsumcontentmodifiedtime]_
#discoveredtime _HIT:[bsumdiscoveredtime]_
#email _HIT:[bsumemail]_
#hithighlightedproperties _HIT:[bsumhithighlightedproperties]_
#hithighlightedsummary _HIT:[bsumhithighlightedsummary]_
#popularsocialtags _HIT:[bsumpopularsocialtags]_
#schemasignature _HIT:[bsumschemasignature]_
#workid _HIT:[bsumworkid]_
#intunique _HIT:[bsumintunique]_
#doubleunique _HIT:[bsumdoubleunique]_
#decimalunique _HIT:[bsumdecimalunique]_
#dateunique _HIT:[bsumdateunique]_
###/
}><{#### -1
###/
}>__OP(add,_CURRENTHIT_,1)_}>_
```

4 Security Considerations

None.

5 Appendix A: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include released service packs:

- Microsoft® FAST™ Search Server 2010

Exceptions, if any, are noted below. If a service pack or Quick Fix Engineering (QFE) number appears with the product version, behavior changed in that service pack or QFE. The new behavior also applies to subsequent service packs of the product unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

Unless otherwise specified, any statement of optional behavior in this specification that is prescribed using the terms SHOULD or SHOULD NOT implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies that the product does not follow the prescription.

6 Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.

7 Index

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V