

[MS-FSCDCFG]: Component Distribution Configuration File Format Specification

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1 Introduction

This document specifies the Component Distribution Configuration File Format. This file format contains detailed structure information that specifies how a **search service application** is distributed over multiple search service application nodes. One or more **services** will run on each node in the search service application.

1.1 Glossary

The following terms are defined in [\[MS-GLOS\]](#):

fully qualified domain name (FQDN)
Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS) service

The following terms are defined in [\[MS-OFCGLOS\]](#):

administration component
connection string
content distributor
duplicate server
hyperlink
index column
indexer row
indexing component
indexing connector
indexing dispatcher
indexing node
link processing component
multinode scheduler
node scheduler
query matching component
query processing
search clickthrough
search row
search service application
Web analyzer
Web crawler
XML schema

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

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-FSCMW] Microsoft Corporation, "[Configuration Middleware Protocol Specification](#)", November 2009.

[MS-FSWASDS] Microsoft Corporation, "[WebAnalyzer/SPRel Data Serving Protocol Specification](#)", November 2009.

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

1.2.2 Informative References

[MS-FSO] Microsoft Corporation, "[FAST Search System Overview](#)", November 2009.

[MS-GLOS] Microsoft Corporation, "[Windows Protocols Master Glossary](#)", March 2007.

[MS-OFCGLOS] Microsoft Corporation, "[Microsoft Office Master Glossary](#)", June 2008.

1.3 Structure Overview (Synopsis)

This document specifies the format of the Component Distribution Configuration file. This file format represents the layout of nodes and services in a search service application. Each search service application has one Component Distribution Configuration file.

The purpose of the Component Distribution Configuration file format is to enable central control over search service application nodes and services in an installation. Each node in a search service application can read the Component Distribution Configuration file and determine the services that run locally. In addition, each node can also determine the location of other services with which it needs to communicate. An administrator can reconfigure the search service application by adding or removing nodes or services in the Component Distribution Configuration file.

1.4 Relationship to Protocols and Other Structures

The following figure provides a high level overview of the services and protocols that are related to this file format. See [\[MS-FSO\]](#) for more information about the services and protocols listed in the following figure.

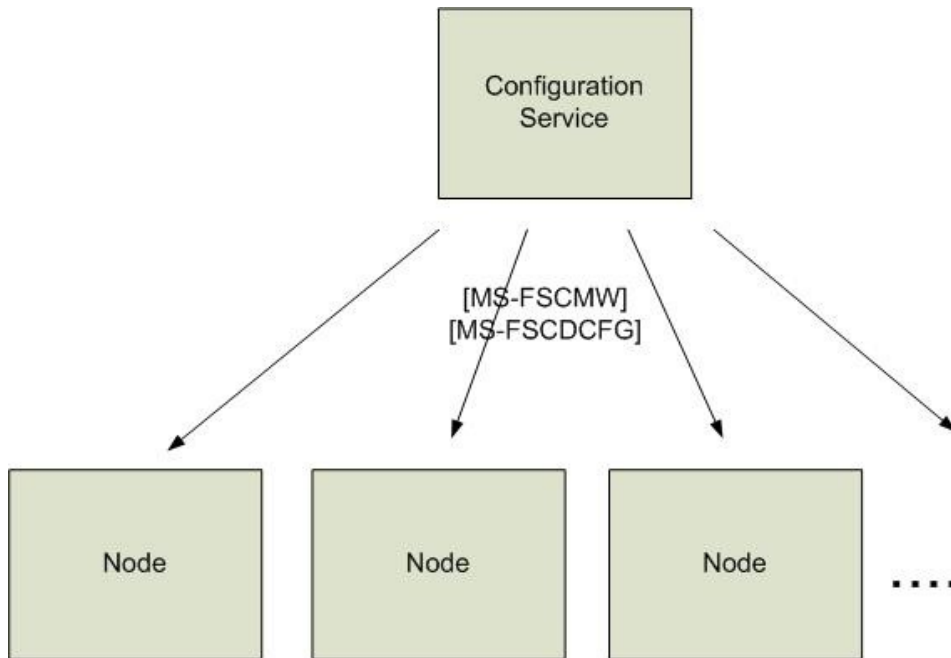


Figure 1: Service and Protocol relationship

The Component Distribution Configuration file format specifies the return value of a call to the `load_config_file` method, using the parameters `modulename="deployment"` and `filepath="deployment.xml"`, as specified in [\[MS-FSCMW\]](#). This file format specifies all nodes and their respective services in a search service application.

An administrator creates the Component Distribution Configuration file on the node where the administration component runs. All other nodes in the search service application download and interpret the configuration file, reconfigure the nodes, and start and stop services based on the information in the configuration file.

1.5 Applicability Statement

This document specifies an XML-based file format that represents nodes and their respective services in a search service application. All content is represented as text. The file format is applicable for all search service applications that use the same search service application components and services, as described in [\[MS-FSQ\]](#).

1.6 Versioning and Localization

None.

1.7 Vendor-Extensible Fields

None.

2 Structures

2.1 Global Elements

2.1.1 deployment

This element contains all nodes and their respective services in the search service application.

```
<xs:element name="deployment" type="CT_deployment" />
```

2.2 Global Attributes

None.

2.3 Complex Types

2.3.1 CT_deployment

This complex type contains all nodes and their respective services in the search service application.

Referenced by
<deployment>

Child Elements:

instanceId: Represents an identifier for the search service application. There are no specific requirements for the format of the **instanceId** element.

connector-databaseconnectionstring: **Indexing connectors** SHOULD [<1>](#) use a **connection string** to a database to specify information. The connection string, if used, MUST follow the specified format
"jdbc:sqlserver://[serverName[<instanceName>[:portNumber]];DatabaseName=[databaseName]".

The following table describes specifications for the preceding connection string:

Format Text	Description
jdbc:sqlserver://	Required and constant. This is referred to as the sub-protocol.
serverName	Optional. This is the address of the server to which to connect. This MUST be a fully qualified domain name (FQDN) .
instanceName	Optional. This is the instance to connect to on serverName . If this is not specified, the protocol client makes a connection to the default instance.
portNumber	Optional. This is the port to connect to on serverName .
databaseName	Required. This is the name of the database that the string will connect to.

host: A **CT_host** element that specifies a node and its services.

searchcluster: A **CT_searchcluster** element that specifies how the **query matching components** and **indexing components** are distributed within the search service application.

Attributes:

Name	Description
comment	A textual comment by the author of the Component Distribution Configuration file.
modifiedby	The name of the person that edited the Component Distribution Configuration file.
modifiedTime	The date and time of the last update to the Component Distribution Configuration file.
version	The current version of the Component Distribution Configuration file.

```
<xs:complexType name="CT_deployment">
  <xs:sequence minOccurs="1" maxOccurs="unbounded">
    <xs:element name="instanceid" minOccurs="1" maxOccurs="1"
      type="xs:string" />
    <xs:element name="connector-databaseconnectionstring" minOccurs="1"
      maxOccurs="1" type="xs:string" />
    <xs:element name="host" type="CT_host" minOccurs="1"
      maxOccurs="unbounded" />
    <xs:element name="searchcluster" type="CT_searchcluster"
      minOccurs="1" maxOccurs="1" />
  </xs:sequence>
  <xs:attribute name="version" use="optional" type="xs:int" />
  <xs:attribute name="modifiedBy" use="optional" type="xs:string" />
  <xs:attribute name="modifiedTime" use="optional" type="xs:dateTime" />
  <xs:attribute name="comment" use="optional" type="xs:string" /> </xs:complexType>
```

2.3.2 CT_host

This complex type represents a node in the search service application. This element contains all services that **MUST** run on the node.

Referenced By
<CT_deployment>

Child Elements:

admin: A **CT_admin** element. The **admin** element **MUST** be specified exactly once in the Component Distribution Configuration file because there can only be one **administration component** in the search service application.

content-distributor: A **CT_content-distributor** element.

indexing-dispatcher: A **CT_indexing-dispatcher** element.

document-processor: A **CT_document-processor** element.

crawler: A **CT_crawler** element.

webanalyzer: A **CT_webanalyzer** element.

searchengine: A **CT_searchengine** element.

query: A **CT_query** element.

custom: A **CT_custom** element.

Attributes:

Name	Description
name	The FQDN of the node.
useadminservicehttps	A Boolean value that is set to true if services on this node MUST use HTTPS when communicating with the administration component.

```
<xs:complexType name="CT_host">
  <xs:all>
    <xs:element name="admin" type="CT_admin" minOccurs="0"
      maxOccurs="1" />
    <xs:element name="content-distributor" type="CT_content-distributor" minOccurs="0"
      maxOccurs="1" />
    <xs:element name="indexing-dispatcher" type="CT_indexing-dispatcher" minOccurs="0"
      maxOccurs="1" />
    <xs:element name="document-processor" type="CT_document-processor" minOccurs="0"
      maxOccurs="1" />
    <xs:element name="crawler" type="CT_crawler" minOccurs="0"
      maxOccurs="1" />
    <xs:element name="webanalyzer" type="CT_webanalyzer" minOccurs="0" maxOccurs="1" />
    <xs:element name="searchengine" type="CT_searchengine" minOccurs="0" maxOccurs="1" />
    <xs:element name="query" type="CT_query" minOccurs="0"
      maxOccurs="1" />
    <xs:element name="custom" type="CT_custom" minOccurs="0"
      maxOccurs="1" />
  </xs:all>
  <xs:attribute name="name" type="xs:string" use="required" />
  <xs:attribute name="useadminservicehttps" type="xs:boolean" use="optional"
    default="false" />
</xs:complexType>
```

2.3.3 CT_admin

This complex type represents the administration component. See [\[MS-FSO\]](#) for more information.

Referenced By
<CT_host>

```
<xs:complexType name="CT_admin" />
```

2.3.4 CT_content-distributor

This complex type represents the content distributor component. See [\[MS-FSO\]](#) for more information.

Referenced By
<CT_host>

Attributes:

Name	Description
id	A unique identifier of the content distributor component. The identifier MUST be unique for each content-distributor element in the Component Distribution Configuration file.

```
<xs:complexType name="CT_content-distributor">
  <xs:attribute name="id" use="optional" type="xs:int" default="1" />
</xs:complexType>
```

2.3.5 CT_indexing-dispatcher

This complex type represents the **indexing dispatcher**. See [\[MS-FSO\]](#) for more information.

Referenced By
<CT_host>

```
<xs:complexType name="CT_indexing-dispatcher" />
```

2.3.6 CT_document-processor

This complex type represents an item processing component. See [\[MS-FSO\]](#) for more information.

Referenced By
<CT_host>

Attributes:

Name	Description
processes	The number of item processing components on the current node.

```
<xs:complexType name="CT_document-processor">
  <xs:attribute name="processes" use="optional" type="xs:int" default="1" />
</xs:complexType>
```

2.3.7 CT_crawler

This complex type represents the **Web crawler**. See [\[MS-FSO\]](#) for more information.

Referenced By
<CT_host>

Attributes:

Name	Description
role	Specifies whether the Web crawler is distributed between several nodes, or if it is contained within one node. The value MUST be of type ST_crawler-role.
multi-node-	A Boolean value that is set to "true" if a multinode scheduler component runs on the

Name	Description
scheduler	current node. There MUST only be one crawler element in the Component Distribution Configuration file that has this attribute set to "true".
node-scheduler	A Boolean value that is set to "true" if a node scheduler component runs on the current node.
duplicate-server	A Boolean value that is set to "true" if a duplicate server component runs on the current node.
duplicate-server-replica	A Boolean value that is set to "true" if a duplicate server replica component runs on the current node.
duplicate-server-replica-host	Specifies the FQDN of the duplicate server replica component node. This value MUST be specified if the duplicate-server attribute is set to "true".

```

<xs:complexType name="CT_crawler">
  <xs:attribute name="role" type="ST_crawler-role" />
  <xs:attribute name="multi-node-scheduler" use="optional" type="xs:boolean"
  default="false"/>
  <xs:attribute name="node-scheduler" use="optional" type="xs:boolean"
  default="false"/>
  <xs:attribute name="duplicate-server" use="optional" type="xs:boolean" default="false"/>
  <xs:attribute name="duplicate-server-replica-host" use="optional"
  type="xs:string"/>
  <xs:attribute name="duplicate-server-replica" use="optional"
  type="xs:boolean" default="false"/>
</xs:complexType>

```

2.3.8 CT_webanalyzer

This complex type represents the **Web analyzer**. See [\[MS-FSO\]](#) for more information.

Referenced By
<CT_host>

Attributes:

Name	Description
server	A Boolean value that MUST be "true" if the current node runs the Web analyzer component. There MUST only be one webanalyzer element in the Component Distribution Configuration file with the server attribute set to "true".
lookup-db	A Boolean value that MUST be "true" if the current node runs the lookup database component.
link-processing	A Boolean value that MUST be "true" if the current node runs the link processing component .
max-targets	This value specifies the number of parallel operations that the link processing component can run , where one operation is one process. The number is per analysis type, so if both search clickthrough and hyperlink analysis are running, the actual number of processes running at the same time could be twice as high as the max-target value. This number MUST be at least 1.

Name	Description
redundant-lookup	A Boolean that specifies if the lookup database components are to run in fault tolerant mode or not. If „true“ then all lookup database components MUST run both a primary lookup database and a backup lookup database. See [MS-FSWASDS] for more details.

```
<xs:complexType name="CT_webanalyzer">
  <xs:attribute name="server" use="required" type="xs:boolean" />
  <xs:attribute name="lookup-db" use="required" type="xs:boolean" />
  <xs:attribute name="link-processing" use="required" type="xs:boolean" />
  <xs:attribute name="max-targets" use="optional" type="xs:int" />
  <xs:attribute name="redundant-lookup" use="optional" type="xs:boolean" />
</xs:complexType>
```

2.3.9 CT_searchengine

This complex type represents the indexing component and query matching component. See [\[MS-FSQ\]](#) for more information.

Referenced By
<CT_host>

This complex type has a **row** attribute that **MUST** be equal to the **id** attribute of a **row** element. The **row** element determines whether or not the indexing component and the query matching component **MUST** run on all nodes in a specific **search row**, as specified in section [2.3.13](#).

Attributes:

Name	Description
row	Specifies the row number of the query matching component and indexing component. This value MUST be equal to the id attribute of a row element, as specified in section 2.3.13 .
column	Specifies the index column number of the query matching component and indexing component. Index column numbers MUST be zero based, meaning that the first index column number MUST be 0, and for each additional index column, the index column number MUST be incremented by 1.

```
<xs:complexType name="CT_searchengine">
  <xs:attribute name="row" type="xs:int" use="required" />
  <xs:attribute name="column" type="xs:int" use="required" />
</xs:complexType>
```

2.3.10 CT_query

This complex type represents the **query processing** component. See [\[MS-FSQ\]](#) for more information.

Referenced By
<CT_host>

```
<xs:complexType name="CT_query"/>
```

2.3.11 CT_custom

This complex type is not in use and is for future use.

Referenced By
<CT_host>

```
<xs:complexType name="CT_custom">  
  <xs:attribute name="ref" type="xs:string" use="required" />  
</xs:complexType>
```

2.3.12 CT_searchcluster

This complex type specifies how the query matching component and indexing components are distributed in the system.

Referenced By
<CT_deployment>

Child Elements:

row: A **CT_row** element that represents a search row and **indexer row**.

```
<xs:complexType name="CT_searchcluster">  
  <xs:sequence>  
    <xs:element name="row" type="CT_row" minOccurs="1" maxOccurs="unbounded" />  
  </xs:sequence>  
</xs:complexType>
```

2.3.13 CT_row

This complex type represents a search row and indexer row over which the query matching components and indexing components are distributed.

Referenced By
<CT_searchcluster>

The attributes of this complex type specify the type of search and indexing that **MUST** run on all nodes in the row.

Attributes:

Name	Description
id	Specifies the row number of this row. The id attribute of the first row MUST be 0, and for each additional row, the id attribute MUST be incremented by 1.
index	Specifies the type of indexing component on this row. The value MUST be of type ST_index.
search	A Boolean value that MUST be "true" if the query matching component runs on all nodes in this row.

```

<xs:complexType name="CT_row">
  <xs:attribute name="id" type="xs:int" use="required" />
  <xs:attribute name="index" type="ST_index" use="required" />
  <xs:attribute name="search" type="xs:boolean" use="required" />
</xs:complexType>

```

2.4 Simple Types

2.4.1 ST_crawler-role

This simple type specifies whether or not the Web crawler is distributed between several nodes, or it is contained within one node. The value **MUST** be "single" if the Web crawler is contained within one node, or it **MUST** be "multi" if it is distributed between several nodes.

Referenced By
<CT_crawler>

```

<xs:simpleType name="ST_crawler-role">
  <xs:restriction base="xs:string">
    <xs:enumeration value="single"></xs:enumeration>
    <xs:enumeration value="multi"></xs:enumeration>
  </xs:restriction>
</xs:simpleType>

```

2.4.2 ST_index

This simple type specifies the type of indexing component on an indexer row.

Referenced By
<CT_row>

The **ST_index** simple type **MUST** be one of the following values:

Value	Description
primary	The indexing nodes on this row are main indexers.
secondary	The indexing nodes on this row are backup indexers.
none	There is no indexing on nodes in this row.

```

<xs:simpleType name="ST_index">
  <xs:restriction base="xs:string">
    <xs:enumeration value="primary"></xs:enumeration>
    <xs:enumeration value="secondary"></xs:enumeration>
    <xs:enumeration value="none"></xs:enumeration>
  </xs:restriction>
</xs:simpleType>

```

3 Structure Examples

3.1 Single Node

The following example illustrates a Component Distribution Configuration file that represents a search service application running on only one node.

```
<?xml version="1.0" encoding="utf-8" ?>
<deployment version="14" modifiedBy="system" modifiedTime=""
  comment=""
  xmlns="http://www.microsoft.com/enterprisesearch"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation=
    "http://www.microsoft.com/enterprisesearch deployment.xsd">

  <instanceid>FAST-tfcsyw</instanceid>

  <connector-databaseconnectionstring>
    <![CDATA[jdbc:sqlserver://localhost\sqlexpress:1433;
      DatabaseName=TestDatabase]]>
  </connector-databaseconnectionstring>

  <host name="mymachine.domain.com">
    <admin />
    <document-processor />
    <content-distributor />
    <indexing-dispatcher />
    <crawler role="single" />
    <webanalyzer server="true" max-targets="4"
      link-processing="true" lookup-db="true" />
    <searchengine row="0" column="0" />
    <query />
  </host>

  <searchcluster>
    <row id="0" index="primary" search="true" />
  </searchcluster>
</deployment>
```

3.2 Multiple Nodes

The following example illustrates a Component Distribution Configuration file that represents a search service application over two nodes. The first node contains only the administration component. The second node contains all other services.

```
<?xml version="1.0" encoding="utf-8" ?>
<deployment version="14" modifiedBy="system" modifiedTime="" comment=""
  xmlns="http://www.microsoft.com/enterprisesearch"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation=
    "http://www.microsoft.com/enterprisesearch deployment.xsd">

  <instanceid>FAST-tfcsyw</instanceid>

  <connector-databaseconnectionstring>
```

```
        <![CDATA[jdbc:sqlserver://mymachine.domain.com\sqlexpress:1433;
        DatabaseName=TestDatabase]]>
</connector-databaseconnectionstring>

<host name="mymachine.domain.com">
    <admin />
</host>

<host name="myothermachine.domain.com">
    <document-processor />
    <content-distributor />
    <indexing-dispatcher />
    <crawler role="single" />
    <webanalyzer server="true" max-targets="4" link-processing="true"
        lookup-db="true" />
    <searchengine row="0" column="0" />
    <query />
</host>

<searchcluster>
    <row id="0" index="primary" search="true" />
</searchcluster>

</deployment>
```


4 Security Considerations

None.

5 Appendix A: Complete XML Schema

The following **XML schema** specifies the Component Distribution Configuration file format.

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema targetNamespace="http://www.microsoft.com/enterprisesearch"
  elementFormDefault="qualified"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns="http://www.microsoft.com/enterprisesearch">

  <!-- ***** Global elements ***** -->

  <xs:element name="deployment" type="CT_deployment" />

  <!-- ***** Simple types ***** -->

  <xs:simpleType name="ST_crawler-role">
    <xs:restriction base="xs:string">
      <xs:enumeration value="single"></xs:enumeration>
      <xs:enumeration value="multi"></xs:enumeration>
    </xs:restriction>
  </xs:simpleType>

  <xs:simpleType name="ST_index">
    <xs:restriction base="xs:string">
      <xs:enumeration value="primary"></xs:enumeration>
      <xs:enumeration value="secondary"></xs:enumeration>
      <xs:enumeration value="none"></xs:enumeration>
    </xs:restriction>
  </xs:simpleType>

  <!-- ***** Complex types ***** -->

  <xs:complexType name="CT_deployment">
    <xs:sequence minOccurs="1" maxOccurs="unbounded">
      <xs:element name="instanceid" minOccurs="1" maxOccurs="1" type="xs:string" />
      <xs:element name="connector-databaseconnectionstring" minOccurs="1"
        maxOccurs="1" type="xs:string" />
      <xs:element name="host" type="CT_host" minOccurs="1" maxOccurs="unbounded" />
      <xs:element name="searchcluster" type="CT_searchcluster" minOccurs="1"
        maxOccurs="1" />
    </xs:sequence>
    <xs:attribute name="version" use="optional" type="xs:int" />
    <xs:attribute name="modifiedBy" use="optional" type="xs:string" />
    <xs:attribute name="modifiedTime" use="optional" type="xs:dateTime" />
    <xs:attribute name="comment" use="optional" type="xs:string" />
  </xs:complexType>

  <xs:complexType name="CT_host">
    <xs:all>
      <xs:element name="admin" type="CT_admin" minOccurs="0" maxOccurs="1" />
      <xs:element name="content-distributor" type="CT_content-distributor"
        minOccurs="0" maxOccurs="1" />
      <xs:element name="indexing-dispatcher" type="CT_indexing-dispatcher"
        minOccurs="0" maxOccurs="1" />
      <xs:element name="document-processor" type="CT_document-processor"
        minOccurs="0" maxOccurs="1" />
    </xs:all>
  </xs:complexType>

```

```

    <xs:element name="crawler" type="CT_crawler" minOccurs="0" maxOccurs="1" />
    <xs:element name="webanalyzer" type="CT_webanalyzer" minOccurs="0"
      maxOccurs="1" />
    <xs:element name="searchengine" type="CT_searchengine" minOccurs="0"
      maxOccurs="1" />
    <xs:element name="query" type="CT_query" minOccurs="0" maxOccurs="1" />
    <xs:element name="custom" type="CT_custom" minOccurs="0" maxOccurs="1" />
  </xs:all>
  <xs:attribute name="name" type="xs:string" use="required" />
  <xs:attribute name="useadminservicehttps" type="xs:boolean" use="optional"
default="false" />
</xs:complexType>

<xs:complexType name="CT_admin" />

<xs:complexType name="CT_content-distributor">
  <xs:attribute name="id" use="optional" type="xs:int" default="1" />
</xs:complexType>

<xs:complexType name="CT_indexing-dispatcher" />

<xs:complexType name="CT_document-processor">
  <xs:attribute name="processes" use="optional" type="xs:int" default="1" />
</xs:complexType>

<xs:complexType name="CT_crawler">
  <xs:attribute name="role" type="ST_crawler-role" />
  <xs:attribute name="multi-node-scheduler" use="optional" type="xs:boolean"
default="false"/>
  <xs:attribute name="node-scheduler" use="optional" type="xs:boolean"
default="false"/>
  <xs:attribute name="duplicate-server" use="optional" type="xs:boolean"
default="false"/>
  <xs:attribute name="duplicate-server-replica-host" use="optional"
type="xs:string"/>
  <xs:attribute name="duplicate-server-replica" use="optional" type="xs:boolean"
default="false"/>
</xs:complexType>

<xs:complexType name="CT_webanalyzer">
  <xs:attribute name="server" use="required" type="xs:boolean" />
  <xs:attribute name="lookup-db" use="required" type="xs:boolean" />
  <xs:attribute name="link-processing" use="required" type="xs:boolean" />
  <xs:attribute name="max-targets" use="optional" type="xs:int" />
  <xs:attribute name="redundant-lookup" use="optional" type="xs:boolean" />
</xs:complexType>

<xs:complexType name="CT_searchengine">
  <xs:attribute name="row" type="xs:int" use="required" />
  <xs:attribute name="column" type="xs:int" use="required" />
</xs:complexType>

<xs:complexType name="CT_query" />

<xs:complexType name="CT_custom">
  <xs:attribute name="ref" type="xs:string" use="required" />
</xs:complexType>

<xs:complexType name="CT_searchcluster">

```

```
<xs:sequence>
  <xs:element name="row" type="CT_row" minOccurs="1" maxOccurs="unbounded" />
</xs:sequence>
</xs:complexType>

<xs:complexType name="CT_row">
  <xs:attribute name="id" type="xs:int" use="required" />
  <xs:attribute name="index" type="ST_index" use="required" />
  <xs:attribute name="search" type="xs:boolean" use="required" />
</xs:complexType>

</xs:schema>
```

6 Appendix B: 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.

[<1> Section 2.3.1:](#) The connection string should be to a SQL Server database.

7 Change Tracking

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

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