

Advanced Searches in Documentum REST Services (4): Search Templates

Overview

This is the last tutorial of Search Services Series in Documentum REST 7.3. A saved search we discussed in Part 3 is "fixed" - once it is saved, the AQL cannot be changed anymore, for instance, conditions for keywords, range or relative date. In many scenarios, users may want to change some pieces of attribute values or facets to customize the realtime search. Search templates resource is introduced to bring this flexibility. You will learn how to create and execute search template in this post.

Part 1. [Advanced Searches in Documentum REST Services \(1\): AQL](#)

Part 2. [Advanced Searches in Documentum REST Services \(2\): Facets](#)

Part 3. [Advanced Searches in Documentum REST Services \(3\): Saved Searches](#)

Part 4. Advanced Searches in Documentum REST Services (4): Search Templates

Here is a sample of a saved search, which has these conditions:

- full-text keyword *rest*
- full-text keyword *tutorial*
- object name starting with *DOC*
- owner name is in the list *[dmadmin]*

<!--Saved Search Sample--> <saved-search definition="http://localhost:8080/dctm-rest/repositories/REPO/types/dmc_search_templ

What if users want to change the full-text term *rest* when executing it? This is actually what users can leverage search templates to do - substituting the term *rest* with any terms like *git* and *documentum* during search execution, without changing the AQL on the server side.

Preliminary

Please refer to the *Preliminary* section in [Advanced Searches in Documentum REST Services \(1\): AQL](#) to prepare the environment.

Discover Search Templates Resource

In Documentum REST 7.3, Search Templates resource can be discovered in Repository resource with the link relation <http://identifiers.emc.com/linkrel/search-templates>.

```
<!--Representation of Repository Resource--> <repository xmlns="http://identifiers.emc.com/vocab/documentum" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
```

Create Search Template

Let's start with the below AQL. It's a normal AQL request except line 8. Please note at line 8, the *fulltext* expression has an attribute **templated="true"**. When this attribute is true, this expression is made as a template expression and its value can be externalized. In execution, users can specify a different *fulltext* term other than *rest*.

```
<!--Template Enabled AQL--> <search xmlns="http://identifiers.emc.com/vocab/documentum" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
```

A new search template is created by issuing the POST method to Search Templates resource.

```
POST /dctm-rest/repositories/ubuntutdb/search-templates HTTP/1.1 Host: localhost:8080 Content-Type: application/vnd.emc.documentum+xml
```

```
<!--Request Body--> <search-template xmlns="http://identifiers.emc.com/vocab/documentum" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
```

Similar to a saved search, the properties for a search template are: *object_name* - search template name, *subject* - search template description and *r_is_public* - access control.

It's interesting to navigate into the response representation of search template. The representation has meta attributes, query document and an additional section - **external-variables**.

```
<search-template definition="http://localhost:8080/dctm-rest/repositories/ubuntutdb/types/dmc_search_template" xmlns="http://identi
```

The **templated** *fulltext* expression has a corresponding external variable named *fulltext-variable*, which contains several elements.

- *id*, xPath-like identity for each external variable
- *expression-type* and *data-type*, *their meaning is quite clear*
- *variable-value*, the original value of the condition in query document, which can work as default value if users don't specify one.

Shortcut to Create Search Template

Instead of creating search template from scratch, users can also **convert a saved search into a search template**; all expressions in the saved search will be *templated*.

At first, let's save a search following the *Overview* section. The POST request is submitted to Saved Searches resource and the request body is omitted below.

```
POST /dctm-rest/repositories/ubuntutdb/saved-searches.xml HTTP/1.1 Host: localhost:8080 Content-Type: application/vnd.emc.doc
```

The response will return a new saved search as below. We can see a link relation

```
<!--Request Body--> <saved-search xmlns="http://identifiers.emc.com/vocab/documentum" xmlns:xsi="http://www.w3.org/200
```

Users can follow the href with link relation <http://identifiers.emc.com/linkrel/as-search-template> and make a POST request. The request body is a search template with a reference to an existing saved search resource URI by attribute **search-reference**. Since a saved search reference is specified, the *query-document* element is not needed.

```
POST /dctm-rest/repositories/ubuntutdb/search-templates.xml HTTP/1.1 Host: localhost:8080 Content-Type: application/vnd.emc.doc
```

```
<!--Request Body --> <search-template search-reference="http://localhost:8080/dctm-rest/repositories/ubuntutdb/saved-searches/08
```

You can see from the result that a number of external variables emerge in the element *external-variables*, which came from expressions of the original saved search.

```
<!--Response Body--> <search-template xmlns="http://identifiers.emc.com/vocab/documentum" xmlns:xsi="http://www.w3.org/2
```

Execute Search Template

The last question we are going to answer is how to execute a search template. Before executing a search template, it is necessary to navigate the target template and get to know what variables are available. For our search template created in section *Create Search Template*, there is only one external variable for *fulltext* expression.

```
<!--External Variable--> <external-variables> <fulltext-variable> <id>/expression[0]</id> <expression-type>fulltext</exp
```

To execute a search template, users can specify the *variable-value* and issue a POST request to the href of link relation <http://identifiers.emc.com/linkrel/search-execution>.

```
POST /dctm-rest/repositories/ubuntutdb/search-templates/0900a79e80002f5e/execution?include-total=true HTTP/1.1 Host: localhos
```

As to the request body, the *id* and *variable-value* of each external variable are mandatory. If no external variables are specified in the request body, the existing values saved in the template will work as default variable values.

```
<!--Request Body--> <search-template definition="http://localhost:8080/dctm-rest/repositories/ubuntutdb/types/dmc_search_template
```

This request should return only 1 result as it searches the tutorials with the other *fulltext* term "*momentum*".

Conclusion

This tutorial is an introduction for search template. After learning from this article, you get to know:

Advanced Searches in Documentum REST Services (4): Search Templates

- Using search templates is a convenient way to construct new search criteria based on the existing template
- Search templates are created with *AQL*
- Search template execution depends on new elements *external-variable*
- Saved searches can be converted to search templates

[Learn more about Documentum REST Services >>](#)