

PJ Pillai
Sr. Software Engineer
October 21, 2014

Product Implementation Training (PIT)

Content Platform Engine 5.2.1 GA

Background Search: Addendum



Introduction

- Course Overview
 - Background Search
- Target Audience
 - Support Teams and Field Technical Resources
- Suggested Prerequisites
 - Familiarity with CPE Search and Sweep frameworks, metadata concepts
- Version Release Date
 - November 2014

Course Objectives

After this course you will be able to:

- Describe what a Background Search is
- Perform the necessary steps to create and run a Background Search
- List the results of Background Search

Course Roadmap

- Background Search Overview
- Demonstration

Background Search main purposes

- It allows user to issue a query, carry on other tasks while the query is processed then view result when it is finished
- Provides the basis for the new set of reporting features
 - Export to CSV
 - Build OLAP cube

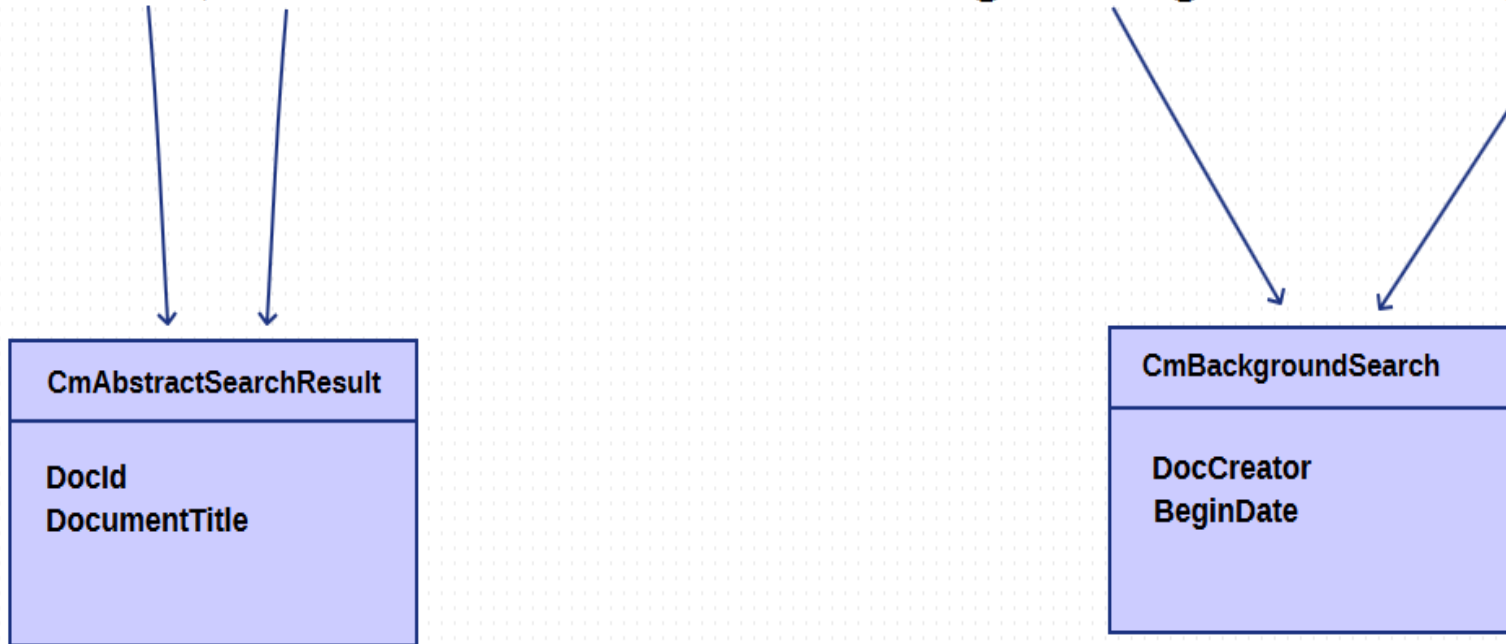
Background Search Basic Model

- Administrator defines a “Logical Template” for search consisting of search expression, parameters can be entered, Classes and properties of the result objects
- Regular User can then issue a query from the template with their own choice of parameter values

Logical Template

- Logical template is composed of two Class Definitions
 - CmBackgroundSearch subclass
 - CmAbstractSearchResult subclass

SELECT Id AS DocId, DocumentTitle FROM Document WHERE Creator = @DocCreator@ AND DateCreated > @BeginDate@

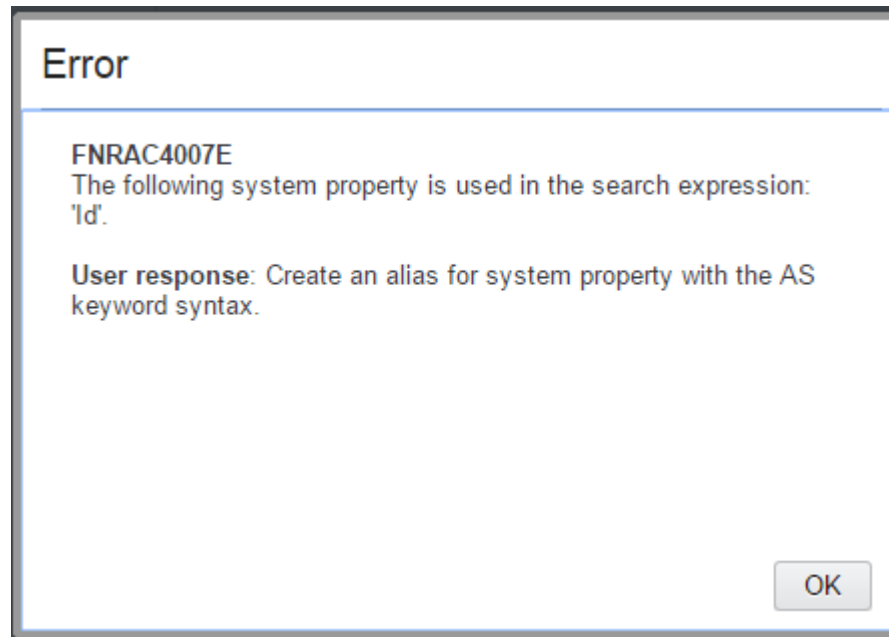


Search Authoring

- Identify what is searched and what filtering is to be applied to produce the result
- Define property template for custom properties that represent named parameters
- Determine result values and create CmASR subclass with custom properties
- Define CmBS subclass with search expression, parameter defining custom properties, class of search result (CmASR)
- ACCE does above all automatically!

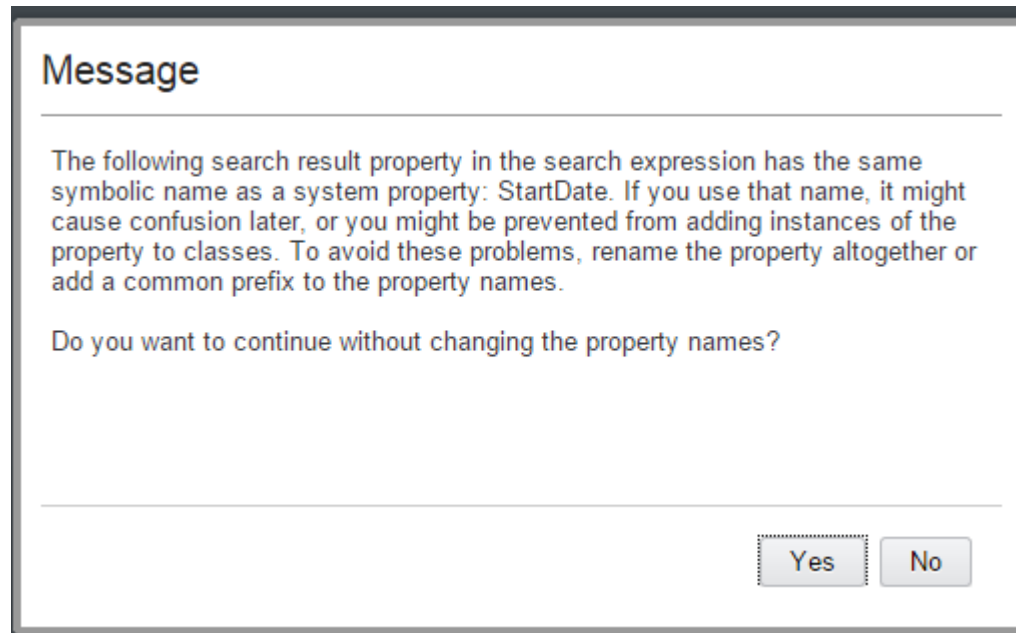
Banned Properties in CmBackgroundSearch and CmAbstractSearchResult subclass

- ID, THIS, CLASSDESCRIPTION, CREATOR, DATECREATED, LASTMODIFIER, DATELASTMODIFIED, BACKGROUNDSEARCH, OWNER, NAME



System Property Name usage

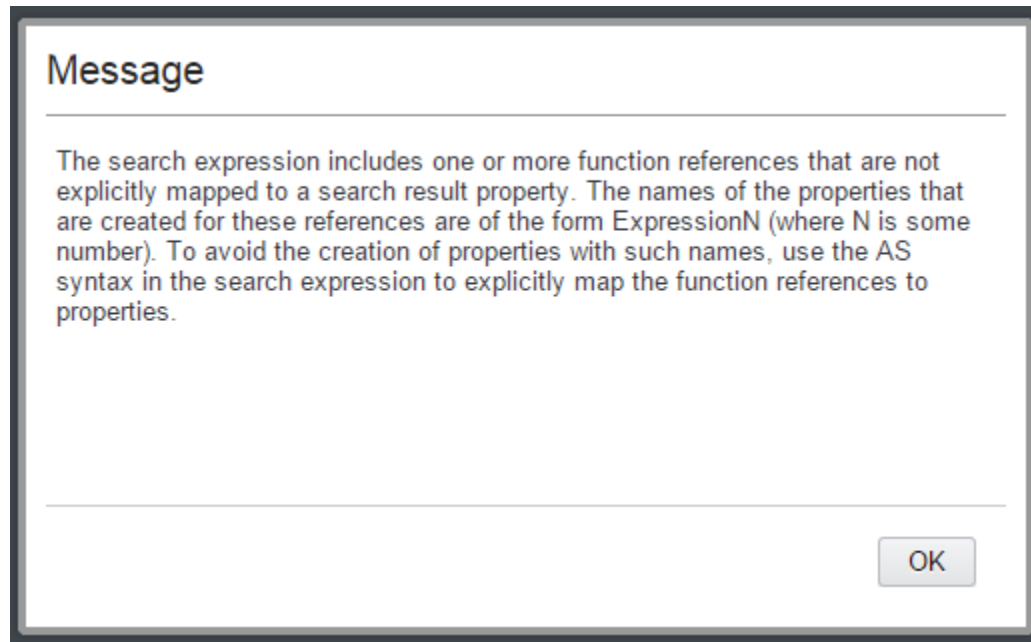
- ACCE will display a warning message when search result property Symbolic Name is same as System property name



ExpressionN for non-alias property

- ACCE will display a warning message when search result property does not have an alias.

`SELECT SUM(d.Price), Author FROM sbsBook b GROUP BY Author`



Search Initiation

- User can initiate a search by creating a instance of CmBS subclass and providing parameter defining properties
- Background process will start the search automatically
- User can monitor search results any time by querying CmASR subclass

ACCE UI Design

- New wizard for Search authoring
- New wizard to initiate a Search
- Tree nodes for Search Templates
- Tree nodes for Search Result Classes
- Tree nodes for Background Searches Instances
- Various tabs for Background Search Instance (Similar to Sweep jobs)
- Download CSV (Reporting Enablement Extension)

Product Demonstration

Demonstration

Course Summary

You have completed this course and can:

- Describe what a Background Search is
- Perform the necessary steps to create and run a Background Search
- List the results of Background Search

Search Expression examples used in the Demo

Search Expressions:

1. In Clause

```
SELECT b.DocumentTitle AS BookTitle,  
b.ISBN,  
Author,  
Pages,  
Genre,  
Region,  
Store,  
Price  
FROM sbsbook b  
INNER JOIN sbssales s  
ON b.this = s.book  
WHERE Genre IN @Genres@  
AND Store = @Store@  
AND Price >= @Price@
```


Search Expression examples used in the Demo (cont.)

2. **Intersects**

```
SELECT Id as MyID, DocumentTitle  
FROM BSTest  
WHERE Creator = @DocumentCreator@  
AND ListProp INTERSECTS @ListProps@
```

3. **Satisfies**

```
SELECT DocumentTitle  
FROM Document  
WHERE ExternalReplicaIdentities  
SATISFIES (  
  ExternalRepository =  
  @ExternalRepositoryObject@ and  
  ExternalObjectIdIdentity =  
  @ExternalObjectIdIdentity2@  
)  
AND Creator = @DocCreator@
```

Search Expression examples used in the Demo (cont.)

4. Sub Query

```
SELECT Id AS FolderId,  
creator AS FolderCreator  
FROM Folder AS f  
WHERE Creator = @FolderCreator@  
AND EXISTS  
(  
  SELECT DateCreated  
  FROM CustomObject  
  WHERE f.creator = @CoCreator@  
  AND ID = @Cold@  
)  
AND ID = @FolderId@
```

5. Timespan Function

```
SELECT DocumentTitle  
FROM Document  
WHERE DateCreated > Now() - TimeSpan  
(@TimeSpanArg1 @, 'Days')
```

Search Expression examples used in the Demo (cont.)

6. **Object Literal**

```
SELECT ID as MyId, Name as  
FolderFiledIn  
FROM Folder  
WHERE Parent = OBJECT(@FLName@)
```

Search Expression examples used in the Demo (cont.)

7. **Contains function**

```
SELECT d.Documenttitle
FROM Document d
WITH allaccessgranted(66560)
INNER JOIN contentsearch cs
ON d.this = cs.queriedobject
WHERE
t.issystemgenerated=@System_Generated
_bool@
AND CONTAINS(d.*,
@Text_to_search_on@)
AND d.documenttitle IS NULL
AND EXISTS
(
SELECT t.id AS thumbnail_id
FROM cmthumbnail t
WHERE t.imagebytecount
<@Image_byte_count@
)
AND d.datecreated < now()
```

Search Expression examples used in the Demo

8. Define parameter data type/ cardinality

```
SELECT ID as myid,  
DocumentTitle  
FROM Document b  
where ABS(b.pages * @page_multiplier@)  
>= (@PageCount@ +  
@Min_Page_Count@)/@page_divider@
```

9. Lower Function

```
SELECT b.City  
From Doc1 b  
where LOWER(b.City) LIKE  
@LOWER_City_Like2@
```

Search Expression examples used in the Demo

10. **Aggregate function**

```
SELECT SUM(b.Price) as SumPrice2,  
Author  
FROM sbsBook b GROUP BY Author
```

11. **Custom function usage in result properties**

```
SELECT PJs::RoundUpFloat(b.Price) as  
Price2,  
b.Price, b.Author,  
b.Documenttitle  
FROM sbsBook b
```

Product Help/Documentation/Resources

Background Search Topics

Administration - Finding objects with background search queries (parent topic):

http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.ce.admin.tasks.doc/p8pcc261.htm

Background search query syntax:

http://www.ibm.com/support/knowledgecenter/api/content/SSNW2F_5.2.1/com.ibm.p8.ce.dev.ce.doc/query_sql_syntax_rel_queries.htm#background_search_query_syntax

Developer's guide – concepts:

http://www.ibm.com/support/knowledgecenter/api/content/SSNW2F_5.2.1/com.ibm.p8.ce.dev.ce.doc/query_concepts.htm#background_searches

Custom Function Topics

Administration - How to create custom search functions via ACCE:

http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.ce.admin.tasks.doc/p8pcc263.htm

Custom search function query syntax:

http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.ce.dev.ce.doc/query_sql_syntax_rel_queries.htm%23query_sql_syntax_rel_queries_custom_function_query_syntax

Developer's guide – concepts:

http://www.ibm.com/support/knowledgecenter/SSNW2F_5.2.1/com.ibm.p8.ce.dev.ce.doc/query_concepts.htm%23query_concepts_custom_functions

Performance tuning Content Platform Engine background searches

<http://www.ibm.com/support/docview.wss?uid=swg27043132>

Contacts

- Product Marketing Manager:
 - Robert Finn
- Product Manager:
 - Stephen Hussy
- Subject Matter Experts (SME) / Area of Expertise:
 - Michael Seaman (Architect)
 - Kevin Bates (Software Engineer)
 - David Skinner (Software Engineer)
 - PJ Pillai (Software Engineer)
 - Robert Kyle (Software Engineer)
- Support:
 - Eric Fonkalsrud Jr (L3 Manager)