



Ramco Aviation Solution

Version 5.7

SmartSearch Installation

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Application Search Component Installation and Configuration

Prepare for Installation in APP server

- Check jdk1.6.0_21 or higher version is installed or not. Open command prompt and type
“Java –version “(without quotation) to verify the java installation.
If java is not installed, download the Java SE Development Kit 7u45 and above from below location and install it.

<http://www.oracle.com/technetwork/java/javase/downloads/jdk7-downloads-1880260.html>

- Set the JAVA_HOME Environment Variables.
Right-click Computer and click Properties.
Click Advanced System Settings link in the left column.
In the System Properties window click the Environment Variables button.
Click New Tab in System Variables Section. Type

Variable Name : JAVA_HOME

Variable Value : C:\Program Files\Java\jdk1.6.0_21 (find the java installed directory and provide the path for the directory)

- Copy the Reaps_utils.zip, Identify the drive into which the Reaps would be installed. Make sure enough disk space (50 GB) is available for index storage.
- Unzip “Reaps_utils.zip” content into “Reaps” folder in “VirtualWorks” , for example “*D:\Program Files (x86)\Reaps*” is the place into which the contents unzipped. You should have subdirectory called **reaps** created under *D:\Program Files (x86)*.
- Verify does the unzipped folder contain Solr.zip, synchronizer.zip, reapsconfig.xml, ReapsTestBed.exe.
- Unzip the Solr.zip, synchronizer.zip to *D:\Program Files (x86)\Reaps*.

- Extracted content of solr and synchronizer should be available under the reaps home directory *D:\Program Files (x86)\Reaps*.
- The new directory *D:\Program Files (x86)\Reaps* called as **reaps home**.
- *Select the root directory and change the read only attribute by selecting properties and uncheck the read only attribute.*
- Download SQL Server External Service Broker from the Microsoft Site

Microsoft® SQL Server® Service Broker External Activator for Microsoft® SQL Server® 2008

<http://www.microsoft.com/en-us/download/details.aspx?id=30440>

<http://www.microsoft.com/en-in/download/details.aspx?id=6375>

Windows 64 Bit Intel processor

<http://go.microsoft.com/fwlink/?LinkId=202342&clcid=0x409>

Select appropriate version based on the Windows Processor Editions

SSBEAS_amd64.msi – Windows AMD 64 Bit server (for AMD Processors alone)

SSBEAS_ia64.msi – Windows 64 Bit server (for Other Processors)

SSBEAS_x86.msi – Windows 32 bit servers

Microsoft® SQL Server® Service Broker External Activator for Microsoft® SQL Server® 2012

<http://www.microsoft.com/en-in/download/confirmation.aspx?id=29065>

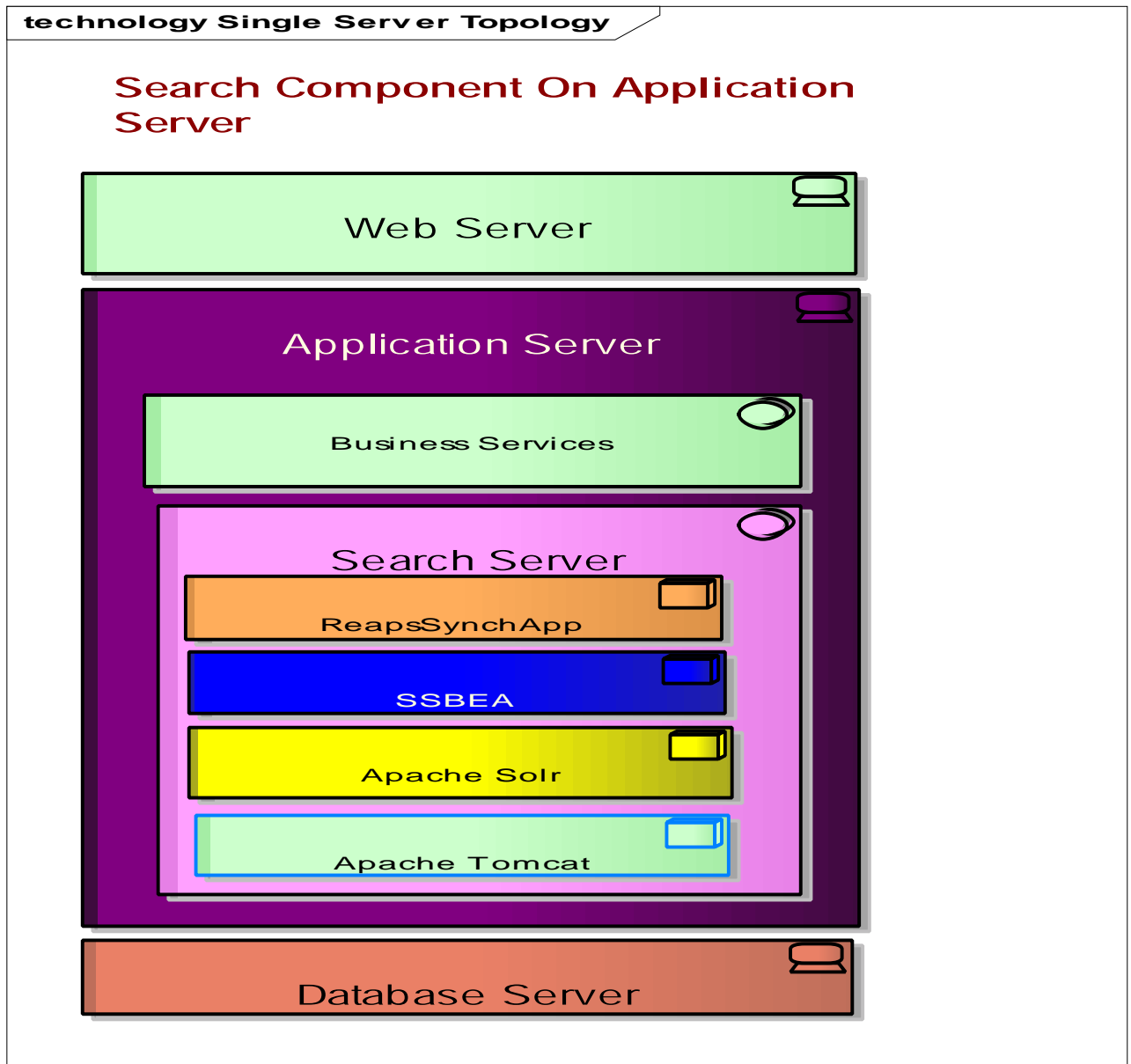
X86 Package(SSBEAS.msi)

X64 Package (SSBEAS.msi)

- Refer the Topology Section Below and Set up the required Infrastructure

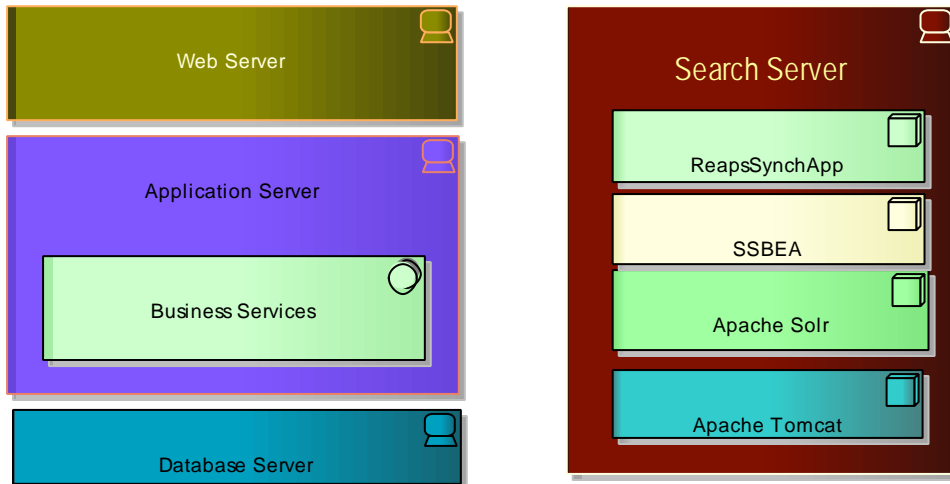
Topology

Following are the Suggested Topology of Deploying Search Server Component in Ramco M&E Solution.



Search Component can be deployed on the Application Server where the current usage of the application resources are minimal and have adequate resources as per hardware requirements specified below.

Search Component on the dedicated Server



Hardware Requirements

The hardware requirements vary depending on the number of business entities enabled for the search. The first version of the search component requires 2GB RAM. This could be changed as additional business entities enabled for searching. Depending on the usage of existing RAM, allocate the resources required for effective performance of the search component.

Installing Tomcat6 or Tomcat7

Note: In case Tomcat 7 installed read Tomcat6 as Tomcat 7 in this document

URL to Download Apache Tomcat 7

<http://tomcat.apache.org/download-70.cgi>

Download the apache tomcat6 or tomcat7 and unzip the contents into reaps home\ **tomcat6 or 7**.

1. Go to Bin Folder located under tomcat6
2. Install the service named 'Tomcat6'

Open command Prompt window and Go To Bin folder of Tomcat6 and execute *service.bat Install*

D:\Program Files (x86)\Reaps \tomcat6\bin service.bat install

Ref: <http://tomcat.apache.org/tomcat-6.0-doc/windows-service-howto.html>

```
D:\Projects\reaps\tomcat6\bin>service.bat install
Installing the service 'Tomcat6' ...
Using CATALINA_HOME:      "D:\Projects\reaps\tomcat6"
Using CATALINA_BASE:      "D:\Projects\reaps\tomcat6"
Using JAVA_HOME:          "C:\Program Files (x86)\Java\jre6"
Using JVM:                 "auto"
The service 'Tomcat6' has been installed.
```

Installing Search Engine (Apache Solr)

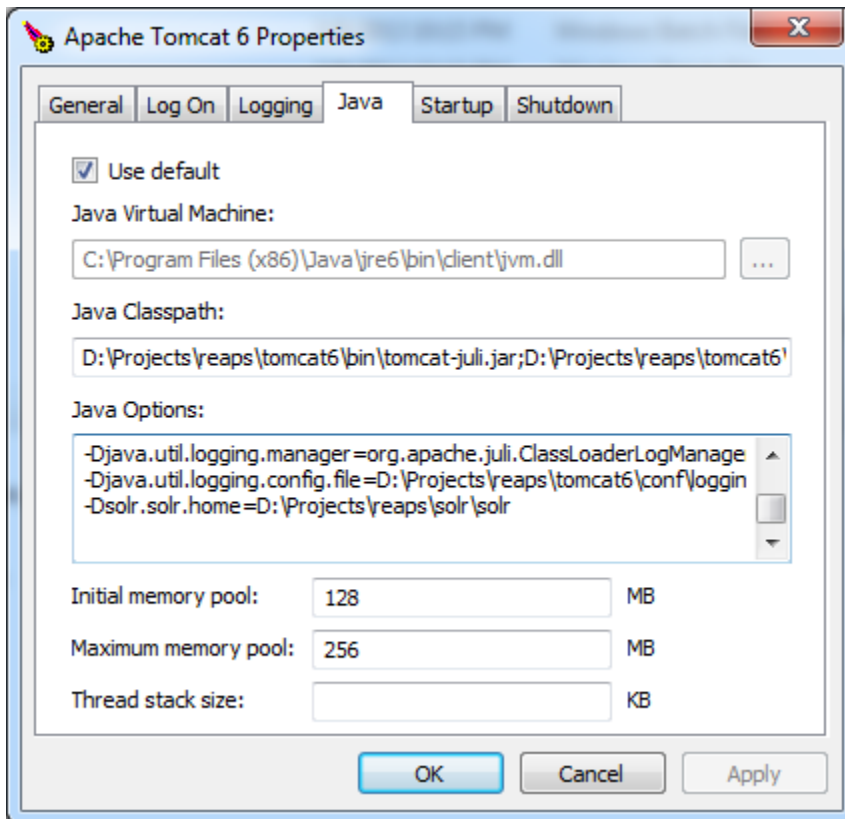
A. Preparing solr home directory

Make note of **solr home** directory as **<Reaps Home>\solr\solr**

B. Configuring tomcat to detect solr

1. Run **<Reaps Home>\tomcat6\bin\tomcat6w.exe** (6 is for the version), select java tab and in java options pane write **-Dsolr.solr.home=<Reaps Home>\solr\solr** .
2. Change Initial Memory pool to 512 MB and Maximum Memory pool to 2048 MB
Note: The initial and maximum memory pool could be required to be changed based on the actual usage and Environments. Training and Simulation Environments could have smaller values.
3. Check "Use Default" Checkbox for Java Virtual Machine and Click OK and configuration is done.

Refer the below screen shot for point 1, 2 and 3.



4. Configure the tomcat server to listen on 8095 port, Edit
 ..\tomcat7\conf\server.xml, default value set to 8080, change it to 8095

```
<Connector port="8095" protocol="HTTP/1.1"
  connectionTimeout="20000"
  redirectPort="8443" />
```
5. Change the "Apache Tomcat service" startup type to Automatic and restart the service from service panel.

Note: Ensure no space after the solr home details in the above screen shot

6. Launch the tomcat home page by entering <http://localhost:8095>. It should show the apache tomcat home page
7. Copy **reaps home\solr\dist\apache-solr-4.0.0.war** file to **..\tomcat6\webapps** directory and rename it to **solr**. If tomcat service is on you will find that a **solr** directory is

automatically created. If tomcat is off don't bother it would be created next time tomcat starts.

C. Securing Solr Installation

Restricting access using a user account

1. Open [Tomcat install dir]\conf\tomcat-users.xml for editing.

Example path:

D:\Program Files (x86)\Reaps\tomcat7\conf\tomcat-users.xml

2. Add the following lines within the <tomcat-user> element and save the changes (using your own username and password):

```
<role rolename="tomcat"/>

<role rolename="role1"/>

<role rolename="solr_admin"/>

<user username="admin" password="admin" roles="solr_admin"/>

<user username="both" password="tomcat" roles="tomcat,role1"/>

<user username="role1" password="tomcat" roles="role1"/>
```

3. Open [Tomcat install dir]\webapps\solr\WEB-INF\web.xml for editing.

"solr" in the path is the name of the instance you want to secure. Typically this is "solr," but may be different if you are running an advanced setup.

Add the following lines within the <web-app> element:

```
<security-constraint>
  <web-resource-collection>
    <web-resource-name>Solr Lockdown</web-resource-name>
    <url-pattern>/*</url-pattern>
  </web-resource-collection>
  <auth-constraint>
    <role-name>solr_admin</role-name>
```

```
<role-name>admin</role-name>
</auth-constraint>
</security-constraint>
<login-config>
  <auth-method>BASIC</auth-method>
  <realm-name>Solr</realm-name>
</login-config>
```

4. Save the changes and restart Tomcat. Test your changes by starting a **new** browser session and navigating to your site, for ex. <http://localhost:8095/solr/>. You should be prompted for credentials.

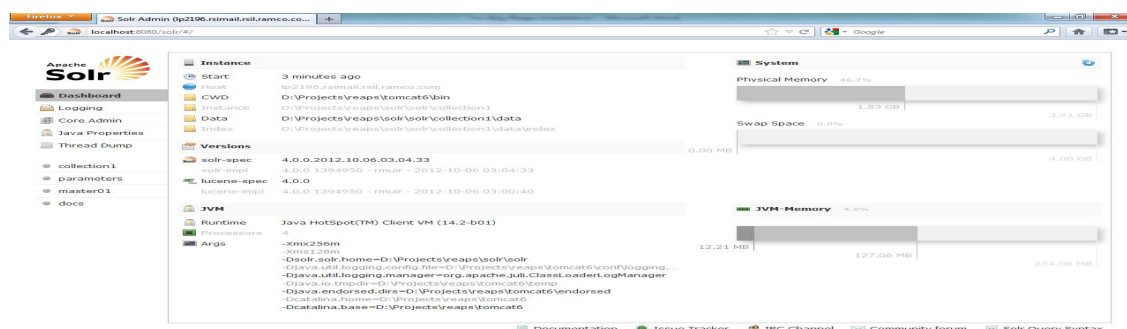
c) Test Reaps Search Engine

In Mozilla Firefox browser enter **<http://localhost:8095/solr/admin>** and you should be prompted for credentials. If not prompted, it means the security is not set to on.

The URL to be opened only in Mozilla Firefox.

Enter user name as *admin* and password as *admin*.

The admin credentials can be modified in Open [Tomcat install dir]\conf\tomcat-users.xml for editing.



Configuring Solr Data Config Files

Open <Reaps Home>\solr\solr\master01\conf\db-data-config.xml

Change the servername , Server Instance Name, database user and password for accessing AVNAPPDB

```
jdbc:sqlserver://RAMCOBL355;InstanceName=R56UT;database=AVNAPPDB;user=readuser;password=read;
```

Open <Reaps Home>\solr\solr\parameters\conf\db-data-config.xml

Change the servername , Server Instance Name, database user and password for accessing AVNAPPFB

```
jdbc:sqlserver://RAMCOBL355;InstanceName=R56UT;database=AVNAPPDB;user=readuser;password=read;
```

Enabling logging

Note: This optional step required to be done for any analysis purpose only

Tomcat Logging Settings

Tomcat offers a choice between settings for all applications or settings specifically for the Solr application.

To change logging settings for Solr only, edit tomcat/webapps/solr/WEB-INF/classes/logging.properties. You will need to create the classes directory and the logging.properties file. You can set levels from FINEST to SEVERE for a class or an entire package. Here are a couple of examples:

```
org.apache.commons.digester.Digester.level = FINEST  
org.apache.solr.level = WARNING
```

Installing Reaps Configurator Database Scripts

Go to databasescrpts folder under the root of the release folder

Connect to AVNAPPDB and run the following scripts in the sequence specified below

- 1) databasescrpts\Reaps Setup\01-reaps_schema_setup.sql
- 2) databasescrpts\Reaps Setup\02-reaps_service_broker_setup.sql
- 3) ALL the scripts under the folder \databasescrpts\Transactions
- 4) Enable Trigger Script under the folder \databasescrpts\Trigger

Update Reaps Configurator Properties File

Go to Reaps home directory in the APP server

Edit reapsconfig.xml file in Reaps folder like below

Step1:

Open reapsconfig.xml and set the values for search server URL, Application database server details and search engine user name (solrusr) and password (solrpwd).

```
<?xml version="1.0" encoding="utf-8"?>
<reaps>
  <rooturl>http://RAMCOWEB:8095/solr</rooturl>

  <baseurl>http://RAMCOWEB:8095/solr/core01/select?q={!boost%20b=\$dateboost%20v=\$qq}&dateboost=ord%28last\_upd\_date%29&qq=%3A\*&wt=xml&f=document\_type.facet.mincount=1&start=0&rows=10&fq={!join+from%3Drole\_document\_type+to%3Ddocument\_type}role:LAUNCH\_ROLE&fq=OUIINSTANCE:LAUNCH\_INSTANCE</baseurl>
  <lookupurl>http://RAMCOWEB:8095/solr/wordlookup/select?</lookupurl>

  <parameters>http://RAMCOWEB:8095/solr/parameters/select?q=.\*&wt=xml&start=0&rows=1&fl=LOOKUP\_QUERY,BOOST\_QUERY&fq=SEARCH\_ID:</parameters>
  <solrinstance>core01</solrinstance>

  <layout_url>http://RAMCOWEB:8095/solr/parameters/select?q=%3A\*&fl=DOCUMENT\_TYPE,FIELD\_COLUMN\_NAME,FIELD\_COLUMN\_DISPLAY\_NAME,FIELD\_ROW\_NO,FILED\_LBL\_COLUMN\_NO,FILED\_VAL\_COLUMN\_NO&wt=xml&sort=FIELD\_ROW\_NO%20asc,FILED\_LBL\_COLUMN\_NO%20asc,FILED\_VAL\_COLUMN\_NO%20asc&fq=DOCUMENT\_TYPE:%22\*\*%22&fq=DOCUMENT\_INFO:%22DISPLAY\_DEF%22</layout_url>;
```

```
<action_url>http://RAMCOWEB:8095/solr/parameters/select?q=%3A\*&fq=ENTITY\_CODE%3ADOCUMENT\_ROLE\_ACTION\_MAPPER&fq=DOCUMENT\_TYPE:%22\*\*%22&wt=xml</action_url>;

<view_url>http://RAMCOWEB:8095/solr/parameters/select?q=%3A\*&fq=ENTITY\_CODE%3ADOCUMENT\_ROLE\_ACTION\_MAPPER&fq=DOCUMENT\_TYPE:%22\*\*%22&wt=xml</view_url>;

<datatransfer_url>http://RAMCOWEB:8095/solr/parameters/select?q=%3A\*&fq=ENTITY\_CODE%3ADOCUMENT\_ACTION\_DATA\_TRANSFER\_CONTROLS&fq=APP\_COMP\_CODE:%22DATA\_TRANSFER\_APP\_COMP\_CODE\_REQUEST%22&wt=xml&fl=UI\_SOURCE\_CONTROL,UI\_TARGET\_CONTROL&fq=APP\_TASK\_DESC:View&wt=xml</datatransfer_url>;
  <rmserver>RAMCORMSERVER</rmserver>
  <database>AVNAPPDB</database>
  <schema>dbo</schema>
<rmuser>readuser</rmuser>
<rmpwd>read</rmpwd>
<transform_templates_path>D:\ProgramFiles
x86)\Reaps\synchronizer\</transform_templates_path>
<solrauth>ON</solrauth>
<solrusr> Tomcat Login User for Solr URL</solrusr>
<solrpwd> Tomcat Login User Password for Solr URL </solrpwd>
<tracelvl>Information</tracelvl>
</reaps>
```

Note 1: The below lines are case sensitive in reapsconfig.xml, do not change the case in the below lines.

```
<rmserver>RAMCORMSERVER</rmserver>
  <database>AVNAPPDB</database>
  <schema>dbo</schema>
<solrauth>ON</solrauth>
```

Note 2: If Web and App servers are different environments, reapsconfig.xml should be placed in both web and app servers and modified like above as mentioned.

The above step is mentioned to configure the reapsconfig.xml in App server.

To configure the reapsconfig.xml in Web server, copy the reapsconfig.xml from App Server Reaps home directory and replace it to Web server.....\virtualworks\iis\bin

Step2:

Set up system environment variable REAPS_CONFIG_PATH with value as repsconfig.xml folder path in App Server.

If Web and App Servers are different, set the environment variable REAPS_CONFIG_PATH in both web and app servers

In App server -- repsconfig.xml directory will be reaps home directory
In Web Server-- repsconfig.xml directory will be.....\virtualworks\iis\bin

Step3:

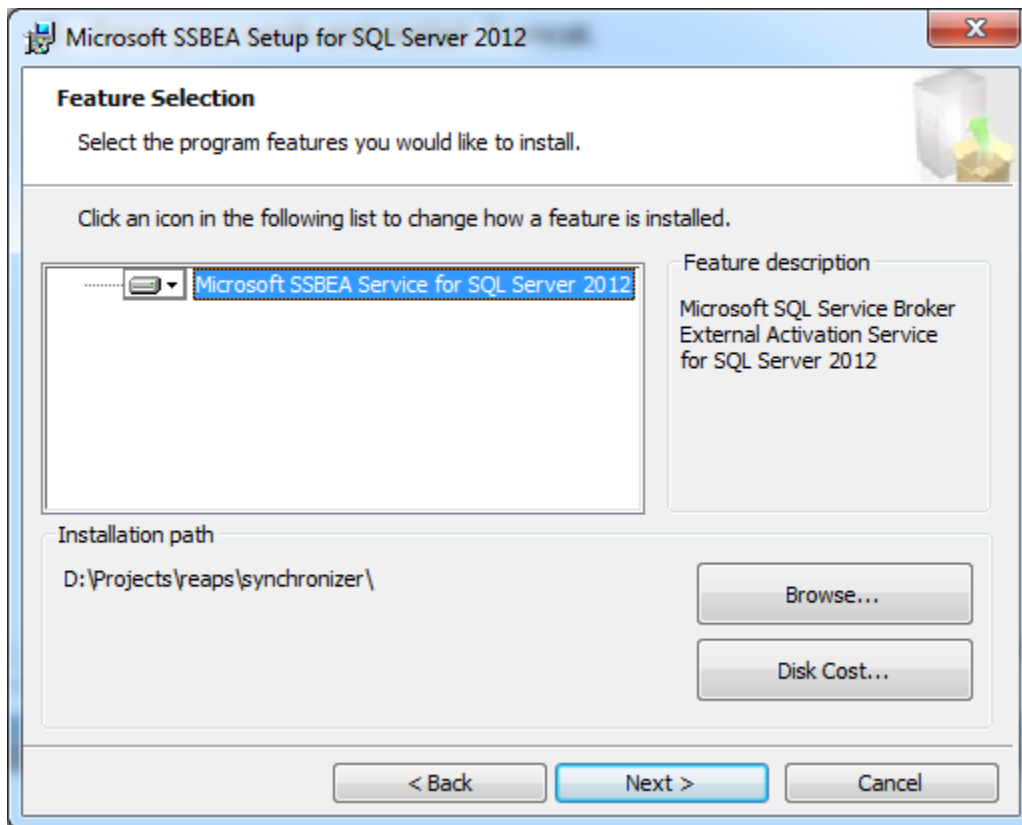
This to be done in WEB Server

Check Ramco.ReapSearch.Util.dll available under ..\virtualworks\iis\bin folder and replace the dll with unzipped reaps_utils.zip dll file to bin folder

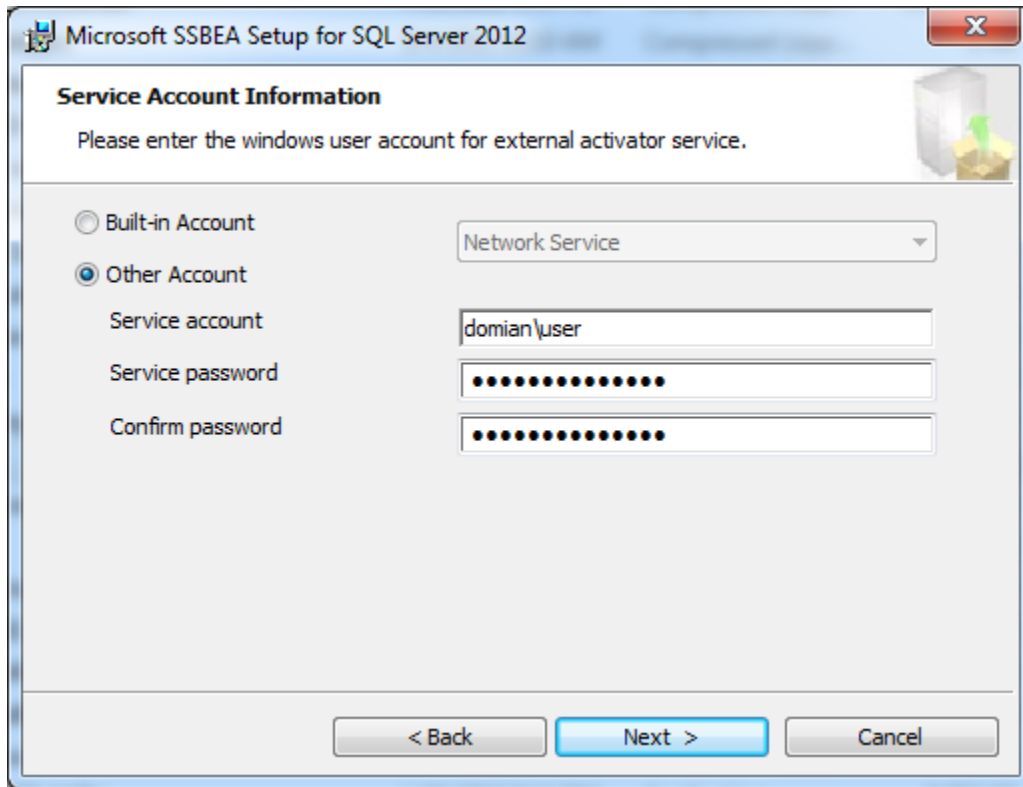
Synchronization Agent Installation

Step1 : Installation of External Service Broker

- a) Go to <reaps home>\synchronizer folder
- b) Run Service Broker External Activator installation file which is downloaded based on "Prepare for installation" steps and follow the steps for installation,
 - i. Select the directory for installation as **reaps home** \synchronizer



- ii. Specify the network domain and user details



Note: In case the External Service Broker running on the Same server as SQL server, local windows user can be used instead of domain user

Step 2 : Configuration of External Service Broker

- a) The server administrator on the AVNAPPDB server provisions a SQL Server login for the External Service Broker Service Account

Note: check the login using SSMS and Integrated security mode

- b) Granting Required Permission to the External Service Broker Service Account

Connect to AVNAPPDB and Execute the following commands

Note : Replace “[my_domain\my_username]” with domain user accounts which is used for install the External Service Broker.


```

USE master
GO

-- create a sql-login for the same named service account from windows
CREATE LOGIN [my_domain\my_username] FROM WINDOWS
GO

-- switch to the notification database
USE AVNAPPDB
GO

-- allow CONNECT to the notification database
GRANT CONNECT TO [my_domain\my_username]
GO

-- allow RECEIVE from the notification service queue
GRANT RECEIVE ON EXTERNAL_ACTIVATION TO [my_domain\my_username]
GO

-- allow VIEW DEFINITION right on the notification service
GRANT VIEW DEFINITION ON SERVICE:: EXTERNAL_ACTIVATION_SERVICE TO
[my_domain\my_username]
GO

-- allow REFERENCES right on the notification queue schema
GRANT REFERENCES ON SCHEMA::dbo TO [my_domain\my_username]
GO

-- Grant receive permissions to the user who has been configured in the reapsconfig file for
accessing the service broker queue. This step required only if the user is is not a dbo
GRANT RECEIVE ON [dbo].[REAPS_DB_JOB_SYNCH_MESSAGES] to [readuser]

```

- c) Configure External Application For processing the messages
 - i. Open the EA Config file located in reaps\synchronizer\External Activator\Config\ EAService.xml

Modify the highlighted parts of the default configuration file

```

<?xml version="1.0" encoding="utf-8"?>
<Activator xmlns="http://schemas.microsoft.com/sqlserver/2008/10/servicebroker/externalactivator"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

  xsi:schemaLocation="http://schemas.microsoft.com/sqlserver/2008/10/servicebroker/externalactivat
or EAServiceConfig.xsd"
  >
  <NotificationServiceList>
    <NotificationService name="EXTERNAL_ACTIVATION_SERVICE" id="100" enabled="true">
      <Description>Notification service for Reaps</Description>
      <ConnectionString>

```

```

    <!-- All connection string parameters except User Id and Password should be specified here -
->
    <Unencrypted>server=Specify RM Server Name;database=AVNAPPDB;Application
Name=External Activator;Integrated Security=true; Timeout=300</Unencrypted>
    </ConnectionString>
    </NotificationService>
    </NotificationServiceList>
    <ApplicationServiceList>
    <ApplicationService name="REAPSSYNCHAPP" enabled="true">
    <OnNotification>
    <ServerName>LP2196\LP2196SQL2012</ServerName>
    <DatabaseName>AVNAPPDB</DatabaseName>
    <SchemaName>dbo</SchemaName>
    <QueueName>REAPS_DB_JOB_SYNCH_MESSAGES</QueueName>
    </OnNotification>
    <LaunchInfo>
    <ImagePath>reaps home \synchronizer\REAPSSYNCHAPP.exe</ImagePath>
    <CmdLineArgs></CmdLineArgs>
    <WorkDir>D:\Projects\reaps\synchronizer</WorkDir>
    </LaunchInfo>
    <Concurrency min="1" max="1" />
    </ApplicationService>
    </ApplicationServiceList>
    <LogSettings>
    <LogFilter>
    </LogFilter>
    </LogSettings>
    </Activator>

```

Note: to enable the trace, logsettings section to be modified as per the following format, use for debugging and disable in production after required data collection

```

<LogSettings>
  <LogFilter>
    <TraceFlag>All Levels</TraceFlag>
    <TraceFlag>All Modules</TraceFlag>
    <TraceFlag>All Entities</TraceFlag>
    <TraceFlag>Verbose</TraceFlag>
  </LogFilter>
</LogSettings>

```

- d) Change the “Service Broker External Activator” service startup type to Automatic and start the service.

Search Index Synchronization

The default installation would have the full data import scripts and part of Installing Reaps Configurator Database Scripts step of the installation. In case of the

Manual Mode

1. Open the browser and execute the following URL, by replacing the server name with the server on which the solr has been installed

http://SolrServerName:8095/solr/parameters/dataimport?command=full-import&clean=false&entity=LOOKUP_SEARCH_URL_DETAILS&commit=true

Check the status of the Import completion by executing the following URL

<http://SolrServerName:8095/solr/parameters/dataimport?command=status>

The response should show `<str name="status">idle</str>` as and when the import completed

2. Execute the following statement in the AVNAPPDB and note the Entity_codes returned by the query

```
select ENTITY_CODE from reaps.REAPS_ENTITY_DETAILS
where ENTITY_SOLR_INSTANCE ='core01'
```

3. Execute the following URL by replacing the server name with the server on which the solr has been installed and Entity_code with the values returned by the previous query. Ensure that the solr server core status shows idle before running the import.

Note: Only one Full Import Can run at a time, Based on the data volumes, it could take few mins

http://SolrServerName:8095/solr/core01/dataimport?command=full-import&clean=false&entity=ENTITY_CODE&commit=true

Check the status of the Import completion by executing the following URL

<http://SolrServerName:8095/solr/core01/dataimport?command=status>

The response should show `<str name="status">idle</str>` as and when the import completed

Quick Search Configuration

1. Go To Solr Admin page.
<http://<solrservername>:8095/solr>

1.1 Click Core Admin

- Select parameters and Click Reload to refresh the schema changes, if successfully loaded the Reload button changes to Green
- Select core01 and Click Reload to refresh the schema changes, if successfully loaded the Reload button changes to Green

1.2 Click Parameters in the left pane, it would expand and show dataimport, Click data import

- Click Commit and Optimize Check Boxes
- Select LOOKUP_SEARCH_URL_DETAILS, Click Execute Import
- Select REAPS_DOCUMENT_EVENT_SERACHID_MAPPING, Click Execute Import

1.3 Click core01 in the left pane, it would expand and show dataimport, Click data import

- Click Commit and Optimize Check Boxes
- Select fw_admin_Role_Activity_vw, Click Execute Import

Enabling Smart Search & Quick Search in Application

Following parameter should be switched to true in ..\VirtualWorks\IIS\ExtUi\ApplicationSetting.js for enabling custom list. Default behavior is OFF. Add the following line next to clockFormat setting. Search for clockformat string to locate the line in which the setting to be added.

```
customListEnabled = true;
enableActivitySearch = true;
```

Reaps Alert configuration

1. Go to databasescripts\Alert folder under the root of the release folder

Edit the REAPS_DB_JOB_SYNCH_MESSAGES_COUNT_ALERT.sql with following changes and compile in AVNAPPDB

1. @recipients - provide your email id
2. @copy_recipients - optional.
3. @profile_name - provide your database mail profile name

Compile the modified stored procedure in AVNAPPDB

2. Configure Job for alert.

Create a new job called "Reaps_Alert" to configure the alert and schedule to run on every 1 hour.

```
Use AVNAPPDB
GO
Exec REAPS_DB_JOB_SYNCH_MESSAGES_COUNT_ALERT 60
```

Note

Parameter value 60 is equal to 1 hour, later we can increase or decrease the time limit

Test the Smart Search

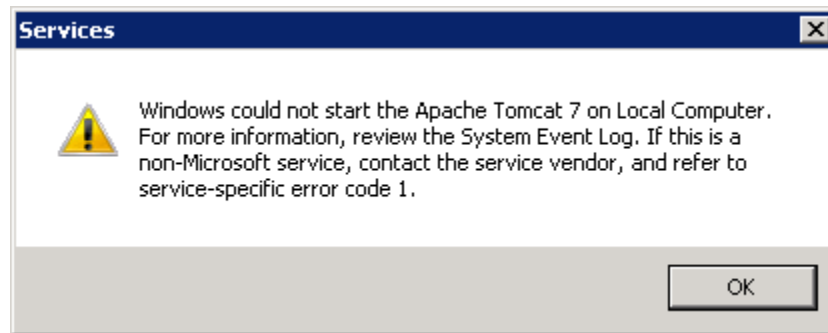
Go to any screen where smart search enabled and check whether the smart search working or not.

Troubleshooting

1. On running service.bat file for installing the tomcat6, it throws error CATALINA_HOME environment variable not set

Resolution: Check the service.bat is getting run from the bin folder in the command prompt.

2. On Starting the Apache Tomcat in Windows Service Panel, Given error



Resolution: Go To tomcat \logs and check the logs for possible reasons

3. Launch of Solr Home Page gives the following error

SolrCore Initialization Failures

- **collection1:** java.io.IOException:java.io.IOException: Can't find resource 'solrconfig.xml' in classpath or 'E:\Program Files (x86)\reaps\solr\solr\collection1\conf/', cwd=E:\Program Files (x86)\reaps\tomcat7\bin

Please check your logs for more information

Resolution:

Edit \tomcat6\webapps\solr\WEB-INF\web.xml with exact path of the solr home and restart the tomcat6 service

<!-- edited by Ramco -->

```
<env-entry>

<env-entry-name>solr/home</env-entry-name>

<env-entry-value>E:\Program Files (x86)\reaps\solr\solr</env-entry-value>

<env-entry-type>java.lang.String</env-entry-type>

</env-entry>

<!-- end of editing-->
```

4. Service Broker Throws Error

ERROR = 90, Internal exceptions have occurred when External Activator is receiving event notifications.

Inner Exception:

System.Data.SqlClient.SqlException: Cannot find the object "EXTERNAL_ACTIVATION" because it does not exist or you do not have permissions.

```
at System.Data.SqlClient.SqlConnection.OnError(SqlException exception, Boolean
breakConnection)
at System.Data.SqlClient.TdsParser.ThrowExceptionAndWarning(TdsParserStateObject
stateObj)
at System.Data.SqlClient.TdsParser.Run(RunBehavior runBehavior, SqlCommand cmdHandler,
SqlDataReader dataStream, BulkCopySimpleResultSet bulkCopyHandler, TdsParserStateObject
stateObj)
at System.Data.SqlClient.SqlDataReader.ConsumeMetaData()
at System.Data.SqlClient.SqlDataReader.get_MetaData()
at System.Data.SqlClient.SqlCommand.FinishExecuteReader(SqlDataReader ds, RunBehavior
runBehavior, String resetOptionsString)
at System.Data.SqlClient.SqlCommand.RunExecuteReaderTds(CommandBehavior
cmdBehavior, RunBehavior runBehavior, Boolean returnStream, Boolean async)
at System.Data.SqlClient.SqlCommand.RunExecuteReader(CommandBehavior cmdBehavior,
RunBehavior runBehavior, Boolean returnStream, String method, DbAsyncResult result)
at System.Data.SqlClient.SqlCommand.RunExecuteReader(CommandBehavior cmdBehavior,
RunBehavior runBehavior, Boolean returnStream, String method)
at System.Data.SqlClient.SqlCommand.ExecuteReader(CommandBehavior behavior, String
method)
at System.Data.SqlClient.SqlCommand.ExecuteReader()
at ExternalActivator.QueueReader.Run()
at ExternalActivator.NotificationService.Start(IConfigurationManager configMgr)
```

Status - Closed

Resolution: Check EXTERNAL_ACTIVATION RECEIVE Permissions given or not.
Provide the receive permissions using the following command

```
GRANT RECEIVE ON EXTERNAL_ACTIVATION TO [my_domain\my_username]
```

5. Data Synch App Error in the Event Viewer

Application: REAPSSYNCHAPP.exe

Framework Version: v4.0.30319

Description: The process was terminated due to an unhandled exception.

Exception Info: System.Security.SecurityException

Stack:

```
at System.Diagnostics.EventLog.FindSourceRegistration(System.String, System.String, Boolean, Boolean)
at System.Diagnostics.EventLog.SourceExists(System.String, System.String, Boolean)
at System.Diagnostics.EventLog.SourceExists(System.String, System.String)
at REAPSSYNCHAPP.DataSynch.Main()
```

Status: Resolved

Resolution: Check whether REAPS_DB_JOB_SYNCH_MESSAGES service broker queue is Disabled

6. Service Broker Failed to Start and Eventviewer shows the following error

Windows detected your registry file is still in use by other applications or services. The file will be unloaded now. The applications or services that hold your registry file may not function properly afterwards.

DETAIL -

15 user registry handles leaked from \Registry\User\S-1-5-21-3898698733-2977308511-2520183092-1012:

Process 1820 (\Device\HarddiskVolume3\Program Files (x86)\Service Broker\External Activator\Bin\ssbeas.exe) has opened key \REGISTRY\USER\S-1-5-21-3898698733-2977308511-2520183092-1012

Process 1820 (\Device\HarddiskVolume3\Program Files (x86)\Service Broker\External Activator\Bin\ssbeas.exe) has opened key \REGISTRY\USER\S-1-5-21-3898698733-2977308511-2520183092-1012

Process 1820 (\Device\HarddiskVolume3\Program Files (x86)\Service Broker\External Activator\Bin\ssbeas.exe) has opened key \REGISTRY\USER\S-1-5-21-3898698733-2977308511-2520183092-1012

Process 1820 (\Device\HarddiskVolume3\Program Files (x86)\Service Broker\External Activator\Bin\ssbeas.exe) has opened key \REGISTRY\USER\S-1-5-21-3898698733-2977308511-2520183092-1012

Process 1820 (\Device\HarddiskVolume3\Program Files (x86)\Service Broker\External Activator\Bin\ssbeas.exe) has opened key \REGISTRY\USER\S-1-5-21-3898698733-2977308511-2520183092-1012

Process 1820 (\Device\HarddiskVolume3\Program Files (x86)\Service Broker\External Activator\Bin\ssbeas.exe) has opened key \REGISTRY\USER\S-1-5-21-3898698733-2977308511-2520183092-1012\Software\Microsoft\SystemCertificates\TrustedPeople

Process 1820 (\Device\HarddiskVolume3\Program Files (x86)\Service Broker\External Activator\Bin\ssbeas.exe) has opened key \REGISTRY\USER\S-1-5-21-3898698733-2977308511-2520183092-1012\Software\Microsoft\Windows\CurrentVersion\Explorer

Process 1820 (\Device\HarddiskVolume3\Program Files (x86)\Service Broker\External Activator\Bin\ssbeas.exe) has opened key \REGISTRY\USER\S-1-5-21-3898698733-2977308511-2520183092-1012\Software\Policies\Microsoft\SystemCertificates

Process 1820 (\Device\HarddiskVolume3\Program Files (x86)\Service Broker\External Activator\Bin\ssbeas.exe) has opened key \REGISTRY\USER\S-1-5-21-3898698733-2977308511-2520183092-1012\Software\Microsoft\SystemCertificates\Root

Process 1820 (\Device\HarddiskVolume3\Program Files (x86)\Service Broker\External Activator\Bin\ssbeas.exe) has opened key \REGISTRY\USER\S-1-5-21-3898698733-2977308511-2520183092-1012\Software\Microsoft\SystemCertificates\My

Process 1820 (\Device\HarddiskVolume3\Program Files (x86)\Service Broker\External Activator\Bin\ssbeas.exe) has opened key \REGISTRY\USER\S-1-5-21-3898698733-2977308511-2520183092-1012\Software\Microsoft\SystemCertificates\CA
 Process 1820 (\Device\HarddiskVolume3\Program Files (x86)\Service Broker\External Activator\Bin\ssbeas.exe) has opened key \REGISTRY\USER\S-1-5-21-3898698733-2977308511-2520183092-1012\Software\Microsoft\SystemCertificates\SmartCardRoot
 Process 1820 (\Device\HarddiskVolume3\Program Files (x86)\Service Broker\External Activator\Bin\ssbeas.exe) has opened key \REGISTRY\USER\S-1-5-21-3898698733-2977308511-2520183092-1012\Control Panel\International
 Process 1820 (\Device\HarddiskVolume3\Program Files (x86)\Service Broker\External Activator\Bin\ssbeas.exe) has opened key \REGISTRY\USER\S-1-5-21-3898698733-2977308511-2520183092-1012\Software\Microsoft\SystemCertificates\Disallowed
 Process 1820 (\Device\HarddiskVolume3\Program Files (x86)\Service Broker\External Activator\Bin\ssbeas.exe) has opened key \REGISTRY\USER\S-1-5-21-3898698733-2977308511-2520183092-1012\Software\Microsoft\SystemCertificates\trust

Status – Resolved

WorkAround – Check the version of SSBEA version. Take Backup of EASERVICE.XML file from ..\Service Broker\External Activator\Config patch and uninstall the service broker and reinstall and copy back the config file

7. Service Broker – Synch Agent throws error

Cannot find the object "REAPS_DB_JOB_SYNCH_MESSAGES" because it does not exist or you do not have permissions.

Status : Closed

Resolution: Check Grant Receive permissions provided to the user accessing the queue

Use the Following Example to provide Receive Permissions to readuser

```
GRANT RECEIVE ON REAPS_DB_JOB_SYNCH_MESSAGES to readuser
```

8. Service Broker – service EATrace.log shows

ERROR = 31, The notification service EXTERNAL_ACTIVATION_SERVICE does not exist or External Activator service does not have the permission to access it.

Resolution: Check Grant [GRANT VIEW DEFINITION ON SERVICE::EXTERNAL_ACTIVATION_SERVICE TO \[my_domain\my_username\]](#) is provided or not, if not provided, execute Grant statement with correct domain and user name which is used to connect the External application to database

9. Service Broker – service EATrace.log shows

EXCEPTION ERROR = 32, No enabled application monitor is on behalf of queue [RAMCOBL354].[AVNAPPDB].[dbo].[REAPS_DB_JOB_SYNCH_MESSAGES].

Resolution: Check the EAService.Config file entries in the notification section. The data is case sensitive. Correct the EAService.Config file and restart the service

<OnNotification>

<ServerName>RAMCOBL354</ServerName>

<DatabaseName>AVNAPPDB</DatabaseName>

<SchemaName>dbo</SchemaName>

<QueueName>REAPS_DB_JOB_SYNCH_MESSAGES</QueueName>

</OnNotification>

10. Service Broker External Activator is not automatically called for newly created or modified records.

Resolution: Execute the below queries against AVNAPPDB and verify following 6 records are available in the table.

```
select * from sys.dm_broker_queue_monitors m with (nolock)
join sys.service_queues q with (nolock) on m.queue_id = q.object_id
```

Rep_QUEUE
REAPS_DB_JOB_SYNCH_RESPONSES
MPTTrCom_QUEUE
ScheduledJobQueue
AUTORO_QUEUE
REAPS_DB_JOB_SYNCH_MESSAGES

If any record missed in that list, execute the appropriate event from

databasescripts\Reaps Setup\02-reaps_service_broker_setup.sql

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