

REMOVE-Upgrading from WSO2 Enterprise Service Bus

This page walks you through the process of upgrading to WSO2 Enterprise Integrator (WSO2 EI) 6.1.1 from WSO2 Enterprise Service Bus (WSO2 ESB) 5.0.0.



If you are upgrading from a version older than ESB 5.0.0, you should first upgrade to ESB 5.0.0 and then upgrade to WSO2 EI 6.1.1.



From WSO2 ESB 5.0.0 onwards, it does not support processing any mediators added after the send mediator in a given sequence because it may lead to erroneous behaviors when the message stream is consumed by the send mediator in passthrough scenarios. Therefore, if you have sequences with mediators after the send mediator, you need to change those sequences to have the send mediator inside a clone mediator, thereby, it will clone the message and process it separately. For example, see below.

```
<clone sequential="true">
  <target>
    <sequence>
      <send>
        <endpoint key="ABC"/>
      </send>
    </sequence>
  </target>
  <target>
    <sequence>
      <switch xmlns:ns="http://org.apache.synapse/xsd" source="get-
property('XYZ')">
        <case regex="CASE1 ">
          <log level="custom">
            <property name="#### CASE ####" value="IN CASE1"/>
          </log>
          <sequence key="TEST.PQR "/>
            <drop/>
          </sequence>
        </case>
        <default>
          <log level="custom">
            <property name="#### DEFAULT ####" value="IN
DEFAULT"/>
          </log>
          <drop/>
        </default>
      </switch>
    </sequence>
  </target>
</clone>
```



- For information on the default ports in WSO2 EI profiles, see [Default ports of WSO2 EI](#).
- The distribution folder structure has changed from ESB 5.0.0 to WSO2 EI 6.1.1. The changes in the folder structure for directory locations are as follows:

Enterprise Service Bus 5.0.0	Enterprise Integrator 6.1.1
<ESB_HOME>/repository/conf	<EI_HOME>/conf
<ESB_HOME>/repository/conf/axis2	<EI_HOME>/conf/axis2
<ESB_HOME>/repository/conf/datasources	<EI_HOME>/conf/datasources
<ESB_HOME>/repository/components/dropins	<EI_HOME>/dropins
<ESB_HOME>/repository/components/extension /extensions	<EI_HOME>/extensions
<ESB_HOME>/repository/components/lib	<EI_HOME>/lib
<ESB_HOME>/repository/component/patches	<EI_HOME>/patches
<ESB_HOME>/repository/components/plugins	<EI_HOME>/wso2/components /plugins

See the following topics for instructions:

- [Upgrading the database](#)
- [Migrating the configurations](#)
 - [Migrating configuration for the Integration profile](#)
 - [Migrating configurations of ESB Analytics to WSO2 EI Analytics](#)
- [Migrating artifacts](#)
- [Migrating tenant artifacts](#)

Upgrading the database

In WSO2 EI 6.1.1, you can use the same [databases](#) that you used for WSO2 ESB 5.0.0. Therefore, you can simply restore the backup of the existing databases to use with WSO2 EI 6.1.1.

Migrating the configurations



Configurations should not be copied directly between servers.

Migrating configuration for the Integration profile

Follow the steps give below to migrate the configurations from WSO2 ESB 5.0.0 to the Integration profile of WSO2 EI 6.1.1.

1. Copy the database connector JAR files stored in the <ESB_HOME>/repository/components/lib directory to the <EI_HOME>/lib directory.
2. Copy the keystores and truststores used in the WSO2 ESB 5.0.0 from the <ESB_HOME>/repository/resources/security directory to the <ESB_HOME>/repository/resources/security directory in WSO2 EI 6.1.1.
3. Update the configuration files:

- a. Update the configuration files with information of the migrated keystores and truststores. See [Configuring Keystores in WSO2 products](#) for more information.
- b. Go to the `<EI_HOME>/conf/datasources` directory and update the Carbon datasource configuration in the `master-datasources.xml` file with the details of the Carbon database.
- c. Go to the `<EI_HOME>/conf` directory and update the datasource references in the `user-mgt.xml` and `registry.xml` files to match the updated configurations in the `master-datasources.xml` file.
4. If you have secondary user stores created for WSO2 ESB 5.0.0, you need to copy the 'userstore' folder in the `<ESB_HOME>/repository/deployment/server/` directory to the `<EI_HOME>/repository/deployment/server/` directory in WSO2 EI 6.1.1.
5. If there are any third-party libraries used with WSO2 ESB 5.0.0 that you want to migrate, copy the relevant libraries to WSO2 EI 6.1.1:
 - If you have used JMS libraries, JDBC libraries, etc., copy the files from the `<ESB_HOME>/repository/components/lib` directory to `<EI_HOME>/lib` directory.
 - If you have used OSGi bundles such as SVN kit etc., copy the contents of the `<ESB_HOME>/repository/components/dropins` directory to `<EI_HOME>/dropins` directory.
6. Check for any other configurations that were done for WSO2 ESB 5.0.0 based on your solution, and update the configurations in WSO2 EI 6.1.1 accordingly. For example, configurations related to external user stores, caching, mounting, transports, etc.



Note

The following files have changed from ESB 5.0.0 to EI 6.1.1:

- axis2.xml
- axis2_nhttp.xml
- axis2_pt.xml
- tenant-axis2.xml
- cache.xml
- config-validation.xml
- logging-bridge.properties
- osgi-debug.option
- cloud-services-desc.xml
- authenticators.xml
- ciper-tool.properties
- catalina-server.xml
- carbon.xml
- identity.xml
- nhttp.properties
- passthru-http.properties
- synapse.properties
- synapse-handlers.xml
- user-mgt.xml
- jndi.properties



Do not copy and paste the configuration files as there are some changes from ESB 5.0.0 to EI 6.1.1. You need to update the configuration files based on the usage.

Migrating configurations of ESB Analytics to WSO2 EI Analytics



Note that the following migration is necessary only if ESB Analytics was used in your previous installation.

Follow the steps given below.

1. Copy the database connector JAR files stored in the <ESB_ANALYTICS_HOME>/repository/components/lib directory of WSO2 ESB Analytics 5.0.0 to the <EI_HOME>/wso2/analytics/repository/components/lib directory of the Analytics profile in WSO2 EI 6.1.1.
2. Copy the keystores and truststores used in WSO2 ESB Analytics 5.0.0 from the <ESB_ANALYTICS_HOME>/repository/resources/security directory of WSO2 ESB Analytics 5.0.0 to the <EI_HOME>/wso2/analytics/repository/resources/security directory in WSO2 EI 6.1.1.
3. Update the configuration files.
 - a. Update the configuration files with information of the migrated keystores and truststores. See [Configuring Keystores in WSO2 products](#) for more information.
 - b. Go to the <EI_HOME>/wso2/analytics/conf/datasources directory and update the Carbon datasource configuration in the master-datasources.xml file with the details of the Carbon database.
 - c. Go to the <EI_HOME>/wso2/analytics/conf/datasources directory and update the datasource configuration in the analytics-datasources.xml file with the details of the Analytics-specific databases.
 - d. Go to the <EI_HOME>/wso2/analytics/conf directory and update the datasource references in the user-mgt.xml and registry.xml files to match the updated configurations in the master-datasources.xml file.
 - e. Go to the <EI_HOME>/wso2/analytics/conf/analytics/ directory and update the rdbms-config.xml file according to the configurations in the same file of your previous Analytics installation.
 - f. Go to the <EI_HOME>/wso2/analytics/conf/data-bridge directory in WSO2 EI 6.1.1 and update the configuration files according to the configurations in the previous installation.
 - g. Go to the <EI_HOME>/wso2/analytics/conf directory and update the event-processor.xml file according to the configurations in the previous installation.



If you enable the HA mode for ESB Analytics by setting the <mode name="HA" enable="true"> property in the event-processor.xml file, state persistence is enabled by default. If there is no real-time use case that requires any state information after starting the cluster, you should disable event persistence by setting the persistence attribute to false in the same file as shown below.


```
<persistence enable="false">
  <persistenceIntervalInMinutes>15</persistenceIntervalInMinutes>
  <persisterSchedulerPoolSize>10</persisterSchedulerPoolSize>
  <persister class="org.wso2.carbon.event.processor.core.internal.
persistence.FileSystemPersistenceStore">
    <property key="persistenceLocation">cep_persistence<
/property>
  </persister>
</persistence>
```


4. If you have secondary user stores created for WSO2 ESB Analytics 5.0.0, you need to copy the 'userstore' folder in the <ESB_ANALYTICS_HOME>/repository/deployment/server/ directory to the <EI_ANALYTICS_HOME>/wso2/analytics/repository/deployment/server/ directory in WSO2 EI 6.1.1.
5. Check for any other configurations that were done for WSO2 ESB Analytics 5.0.0 based on your solution and update the configurations in WSO2 EI 6.1.1 accordingly. For example, configurations related to external user stores, caching, mounting, transports etc.

Migrating artifacts

You should manually deploy the Composite Application Archive (CAR) files that you have in WSO2 ESB 5.0.0 to WSO2 EI 6.1.1. If you have a mediator packed in a CAR, all the artifacts using that mediator should also be included in the same CAR. See [Deploying Composite Applications in the Server](#) in the WSO2 administration guide for further details.

- To migrate deployment artifacts including message flow configurations, copy the required Synapse artifacts from the `<ESB_HOME>/repository/deployment/server/synapse-configs/default` directory of WSO2 ESB 5.0.0 to WSO2 EI 6.1.1.
- To migrate any connector artifacts:
 - Create a folder named `synapse-libs` in the `<PRODUCT_HOME>/repository/deployment/server/synapse-configs/default/` directory of WSO2 EI 6.1.1, and copy the JARs from the directory by the same name in WSO2 ESB 5.0.0. Note that this directory will not exist in your ESB distribution if no connectors are used.
 - Copy the JARs from the `<PRODUCT_HOME>/repository/deployment/server/synapse-configs/default/imports` directory in WSO2 ESB 5.0.0 to the same directory in WSO2 EI 6.1.1.
- If you have custom artifacts created in the `<ESB_HOME>/repository/deployment/server/` directory of WSO2 ESB 5.0.0, copy them to the same directory in WSO2 EI 6.1.1.


 If you have created a messages store in your configuration and configured the provider path as `repository/conf/jndi.properties` in your ESB 5.0.0 instance, this needs to be updated with the `jndi.properties` file path in EI 6.1.1. To do this, edit the message store artifact so that the provider path is configured as `conf/jndi.properties`.

 The `org.wso2.caching.digest.REQUESTHASHGenerator` interface, which is supported by WSO2 ESB 4.8.1 is not supported by later versions. Therefore, change the artifacts to use the `org.wso2.carbon.mediator.cache.digest.DOMHASHGenerator` as the hash generator when migrating artifacts related to the Cache mediator from WSO2 ESB 4.8.1 to a later version.

Migrating tenant artifacts

If multitenancy is used,

- Copy the tenant artifacts of ESB from the `<ESB_HOME>/repository/tenants` directory to the `<EI_HOME>/repository/tenants` directory of EI 6.1.1.

 You may not be able to access the tenant domain after migrating to EI 6.1.1. To fix this issue, change the tenant's main sequence located in `<EI_HOME>/repository/tenants/1/synapse-configs/default/sequences/main.xml` as below:

```
<sequence xmlns="http://ws.apache.org/ns/synapse" name="main">
  <in>
    <log/>
  </in>
  <out>
    <send/>
  </out>
</sequence>
```

- If you are migrating ESB Analytics to the Analytics profile of WSO2 EI, copy the `<ESB_ANALYTICS_HOME>/repository/tenants` directory to the `<EI_HOME>/wso2/analytics/repository/tenants` directory of WSO2 EI 6.1.1.