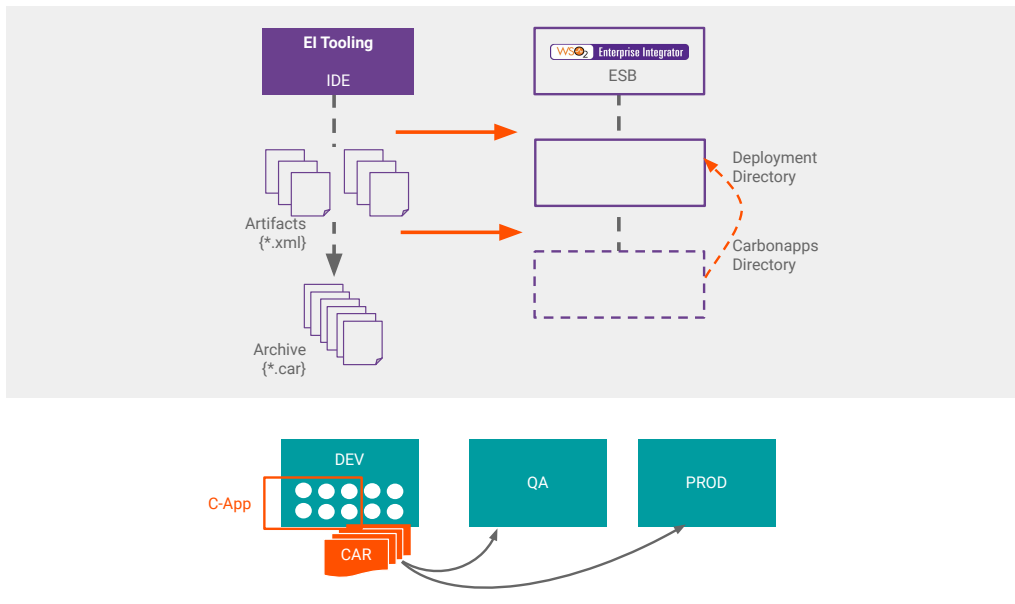# WSO2 Product Administration

WSO2 Training

Module 4 - Deployable Artifacts

Artifacts Deployment

Most corporations have their own flavor of release management process (i.e. Change control). What most share in common is a 3-tier (sometimes 4) environment with Development, Staging/QA and Production.
When moving among these environments , we may require the same set of artifacts to be deployed.

WSO2 artifacts are mostly file system based.
These could be files or archive files such as synapse configurations, data services, BPMNs, tool boxes or stream definitions.
These artifacts are written based on declarative programming using XML.
WSO2 platform supports deployment of artifacts during runtime as well.
Since these artifacts are files system based, devOps tools can be used effectively for the deployment of the same in an independent manner.

The recommendation for ESB artifact deployment is via CAR or Composite Application Archive files.
WSO2 Developer Studio provides the tooling support for this.
Using WSO2 Developer studio you can create individual artifacts and pack them into a single or multiple CAR files as required and deploy on a prefered server instance.
This speeds up and makes the artifact deployment process hassle-free and efficient.

Packaging Artifacts and Deployment

1. Create a Composite Application (C-App)
   C-App is a collection of artifacts (i.e. endpoints, mediators) which can be deployed on a Carbon instance to easily port your web services solutions from one environment to another

2. Export C-App to an CAR file
   A Composite Application aRchive (CAR) file contains the collection of artifacts included in your C-App

3. Deploy it to your target Carbon server
   The CAR file can be moved to any other environment for importing/uploading

Follow steps at Working with WSO2 Integration Studio

WSO2

The first step during artifact deployment via WSO2 Developer studio is to create a Composite Application (C-App)

This is a a collection of individual artifacts such as proxy services, sequences, REST APIs packaged together.

The next step is to export this C-App as a CAR (Composite Application Archive) file, which is a single file that can be easily deployed on a carbon instance.

Finally, you can deploy it on the target carbon server. WSO2 servers allow uploading and removing CAR files as intended.

When a CAR file is deployed it'll be stored in the Carbon_Home/repository/deployment/server/carbonapps/ directory of the product distribution.

Carbon Application (C-App)
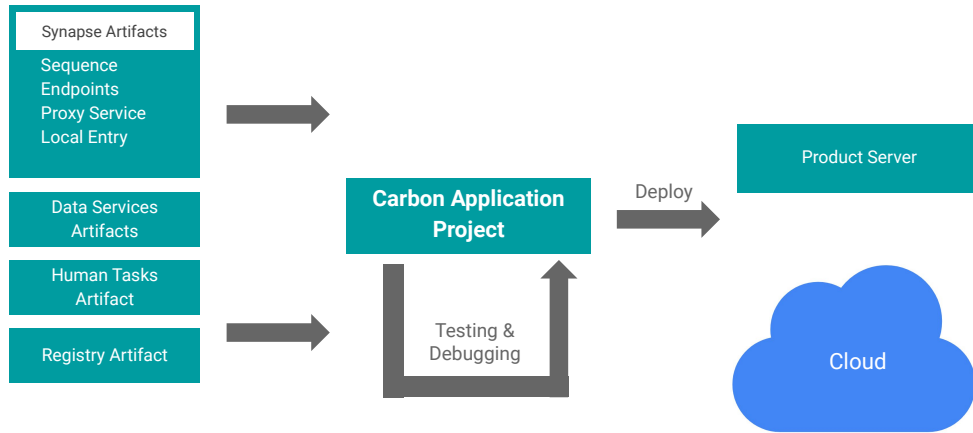
As explained earlier CApps consists of synapse configurations , axis2 services , BPMN files etc.
These CApps can be tested, debugged and deployed on different Carbon Servers or on Cloud.

Server Roles

- You can specify a Server Role for each artifact in the C-App. A server role is a parameter that is declared in the file mentioned below, of all WSO2 products.

  <PRODUCT_HOME>/repository/conf/carbon.xml

- Although a C-App can have a collection of different artifacts, the runtime that you choose to deploy it in deploys only the artifacts that match its serverRole property

THANK YOU

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