What is CDPA Part 1 - DO00721-W-2400

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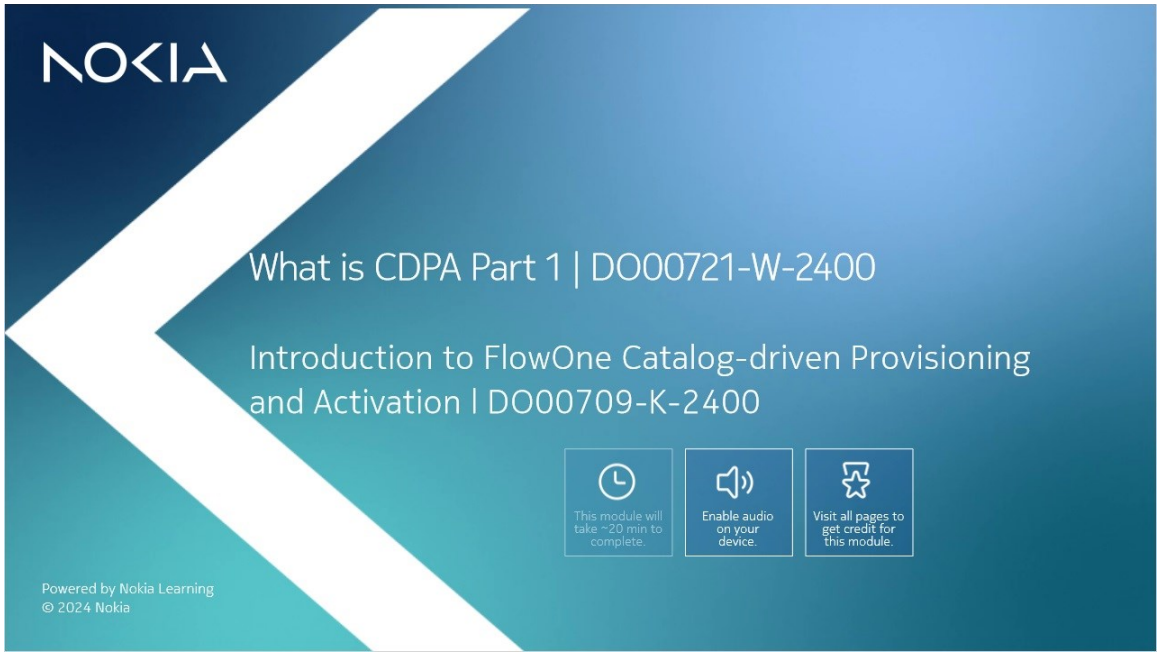
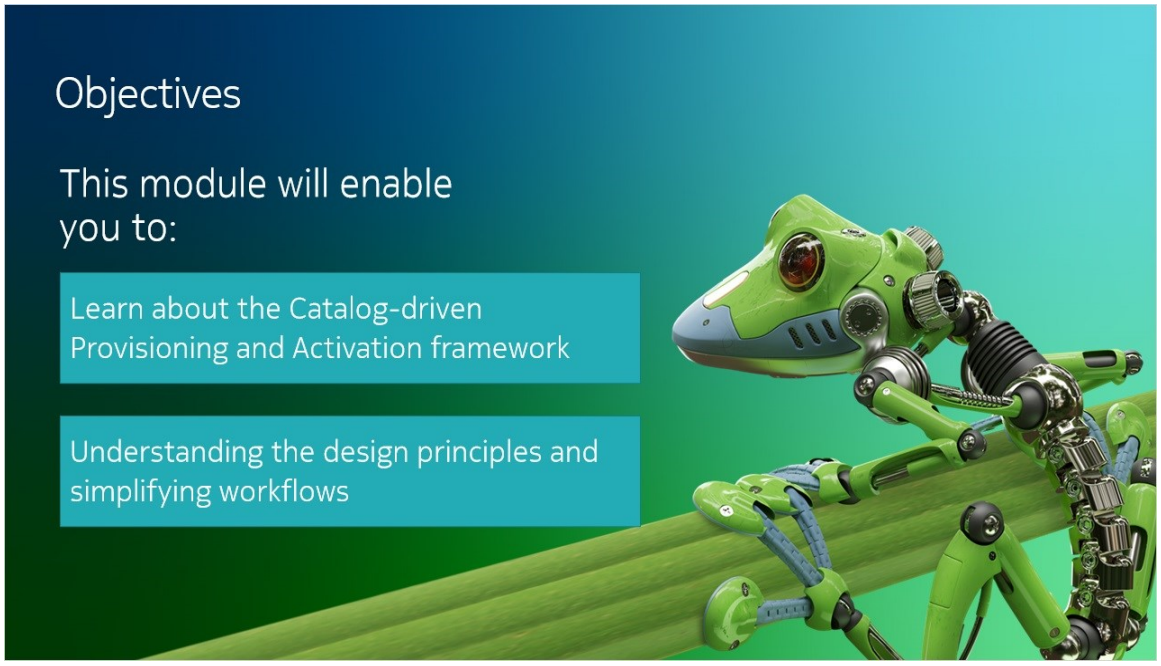
1 Welcome



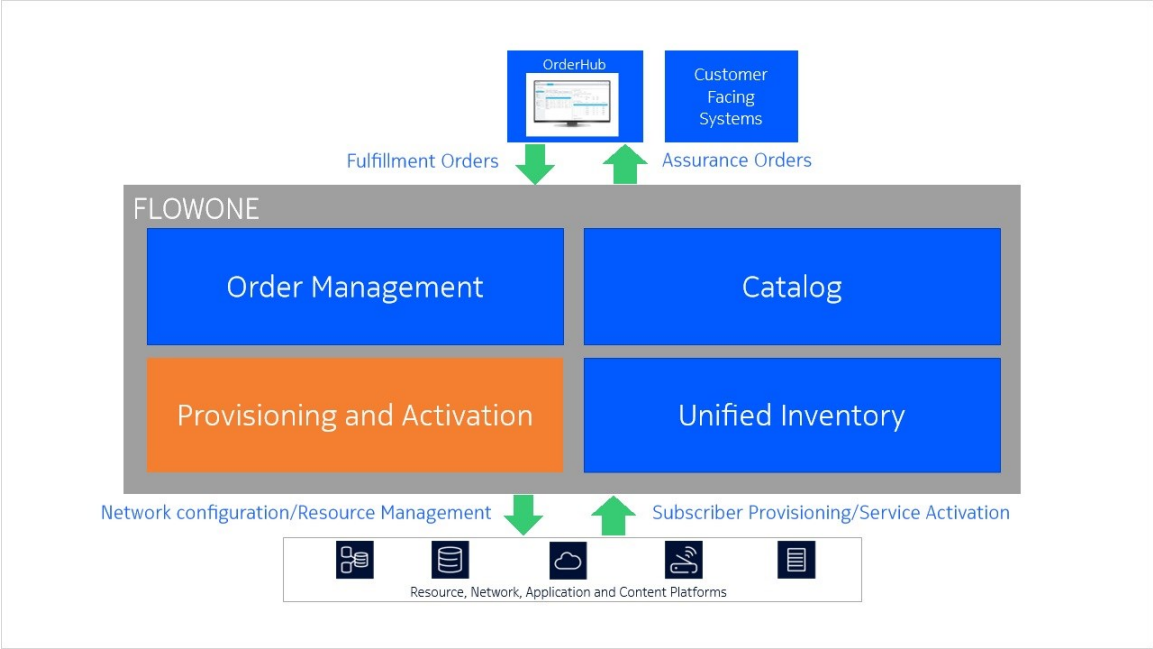
Welcome to the What is Catalog-drive Provisioning and Activation eLearning module.

1.1 Objectives



In this module, we will briefly go through the overview of a Catalog-driven Provisioning and Activation framework, design principles, and the benefits of the Catalog-driven architecture. We will also look at an example CDPA use case to guide you through the principles of the Catalog-driven approach.

1.2 Main components



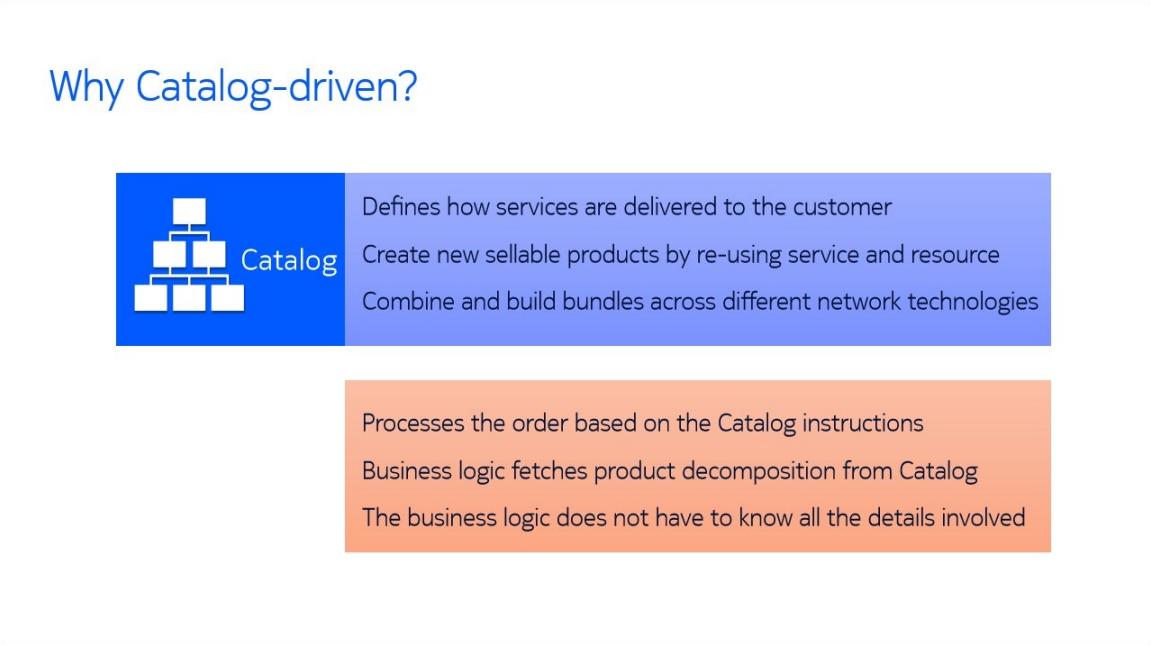
To get to know Catalog-driven Provisioning and Activation, let's look at the big picture first. This is the FlowOne Fulfillment product suite, and it provides a single system for several different fulfillment processes that offer various services to customer-facing systems. Inside FlowOne Fulfillment are different product components, each of which offers specific services and play certain roles in different Fulfillment processes and services.

Now, the Catalog-driven Provisioning and Activation or CDPA is a subset of the FlowOne product suite. The Provisioning and Activation or P&A provides the platform and mechanisms for connecting to other systems, including the components of FlowOne Fulfillment. Another vital role of P&A is to provide automated execution of orders through specific workflows that are related to how that order needs to be processed. Any workflow can request a product decomposition from Catalog, thereby getting detailed instructions on how to process the order. Provisioning and Activation allows for many different workflows to be active at the same time, permitting the system to process different types of orders simultaneously.

While Catalog is part of the FlowOne Fulfillment solution and seamlessly integrated with Provisioning and Activation, with Catalog, the product management of a service provider can create products and services across different technologies and networks. The FlowOne Catalog provides a centralized view of the service provider's offering, and it also provides

tools for product life-cycle management. Both product experts and technical personnel can use the user interface. Meanwhile, Catalog provides visibility of the deliverable products and how they are broken down into smaller components. This building-block approach allows the user to create new products from existing elements without needing to make updates to the workflows in Provisioning and Activation.

1.3 Why Catalog-driven?

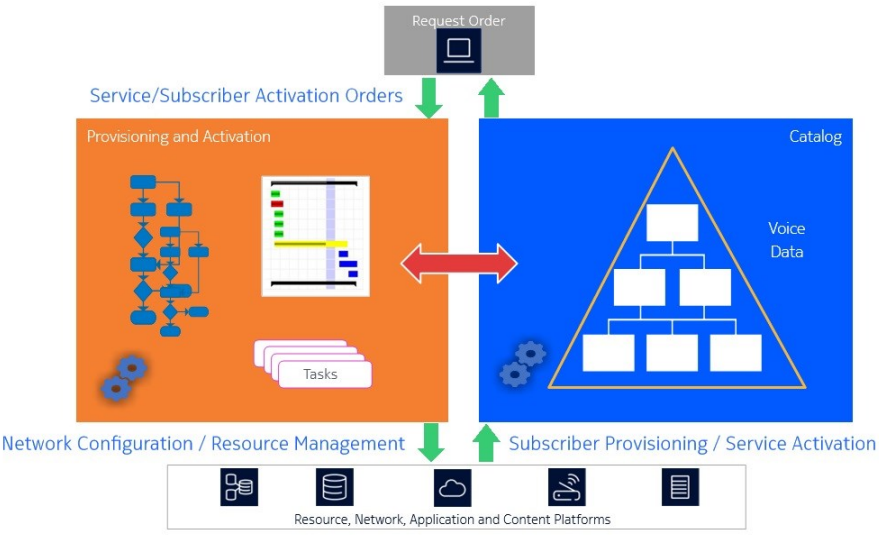


Catalog-driven Provisioning and Activation (CDPA) is a solution for subscriber provisioning and services activation, where the service definition is stored in a Technical catalog. FlowOne CDPA consists of the Provisioning and Activation, and Catalog components of FlowOne.

Service Catalog defines how services are delivered to the customer, for example, what are the steps and the order in which they must be done, to activate a mobile subscription in the network. At the same time, the Provisioning and Activation process the request or order based on the Catalog instructions.

The Service designer can create a new, sellable product by re-using service and resource components in Catalog, while the business logic or workflow fetches product decomposition from Catalog. Also, in Catalog, you can combine and build bundles across different network technologies to meet tailored customer demands. The Catalog provides better visibility in which the process currently supports products and services. The product lifecycle management becomes more manageable as every change does not require changing the business logic or workflow. Provisioning and Activation reads the information from Catalog and works accordingly, and the workflow does not have to contain all the details involved in service activation.

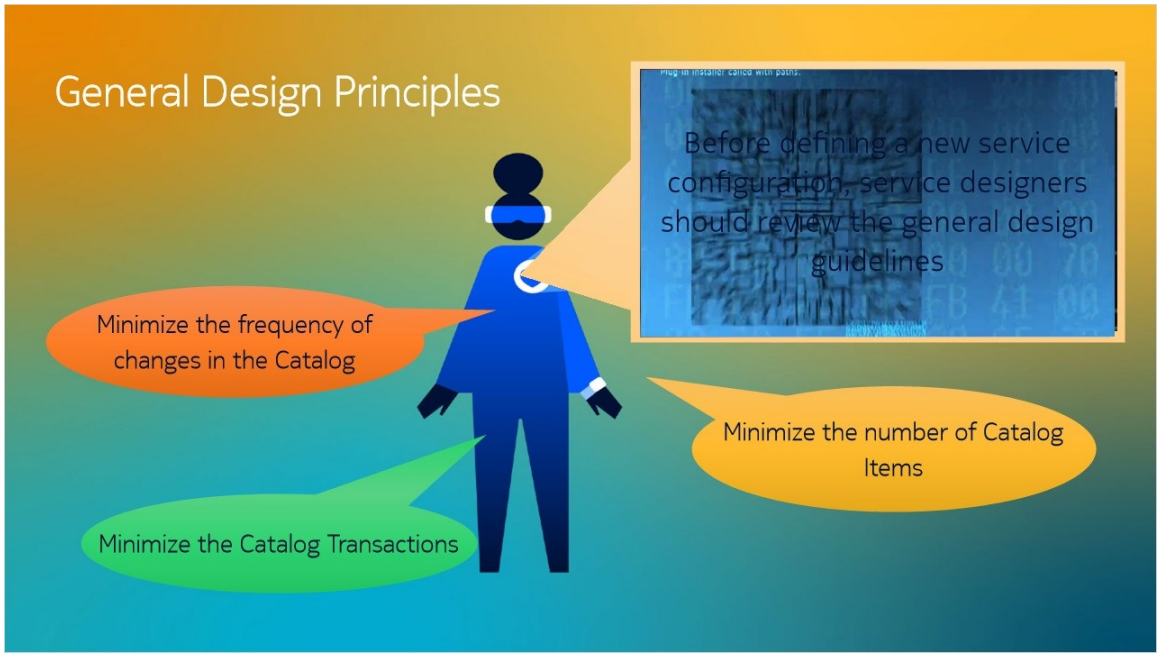
1.4 How does CDPA work?



How does CDPA work? Let's have a look at an example provisioning and activation service delivery request with a catalog-driven approach., FlowOne P&A allows the rapid creation of new services and adjustments to existing services. As for storing the subscriber related data, the unified inventory or UIV can be integrated as well, which provides several models for storing different types of inventories. With this example, for provisioning and activation, to deliver an order, it is a prerequisite to have the related services modelled in catalog. When FlowOne P&A receives a request, it picks up the services specified.

After the catalog call, the returned decomposition will be in the form of tasks that are sent to the corresponding network elements. Provisioning and activation provides the flow design, and manages the execution of tasks that perform subscriber provisioning and service activation in network systems and devices. By using this approach, it is easy to model and orchestrate new services through FlowOne catalog. Also, it will be easy for the user to see the task decomposition in the request details of the Provisioning and Activation UI, and understand the delivery flow for that request.

1.5 General Design Principles



Here are the general design principles for Catalog service designers.

In the past, the provisioning systems used to be composed of workflows with the hard-coded product and service-related logic. With FlowOne Catalog, you can separate the workflows, keeping them in Provisioning and Activation, and have the service definitions in Catalog. The right balance between Provisioning and Activation and Catalog needs to be carefully defined, to avoid redundancy and mistakenly on putting everything into Catalog only.

In the Catalog service configuration, if abused, can drive as much complexity as a hard-coded flow, and without having the flexibility of a hard-coded flow. Thus, before defining a new service configuration, service designers may want to check the general design guidelines:

Service designers should minimize the frequency of changes in the Catalog. As an example, service designers should not put in the Catalog any item or parameter that is related to commercial offerings. For example, thresholds or caps (“400 minutes included”), and validity periods (April promo). Also, service designers should not put in the Catalog any item or parameter that is added with the frequency of Commercial releases, for example, items containing the identifiers of IN counters, thresholds, etc.

Service designers should keep the number of Catalog items as small as possible. Service designers should model reusable Catalog items and avoid copying and pasting Items just for modifying a single value (for example, the ID of an IN counter or a threshold). Service

designers should model the commercial products directly, and service designers must identify the generalized CFSs and model those in Catalog.

Service designers should minimize Catalog Transactions. How can the service designers achieve this? Service designers should define a set of generic request types that can manage a large part of the request types received by customer-facing systems.

1.6 Catalog Concepts

CFS
Customer Facing Service

RFS
Resource Facing Service

Remote Items
Technical Service
Technical Library
Work Order

Selection Group
Must be embedded into another product or service

Now, let's go through the basic Catalog concepts.

FlowOne Catalog provides a holistic view of the service provider's whole technical product portfolio. Service providers can define Customer Facing Service (CFS) and Resource Facing Service (RFS) of products.

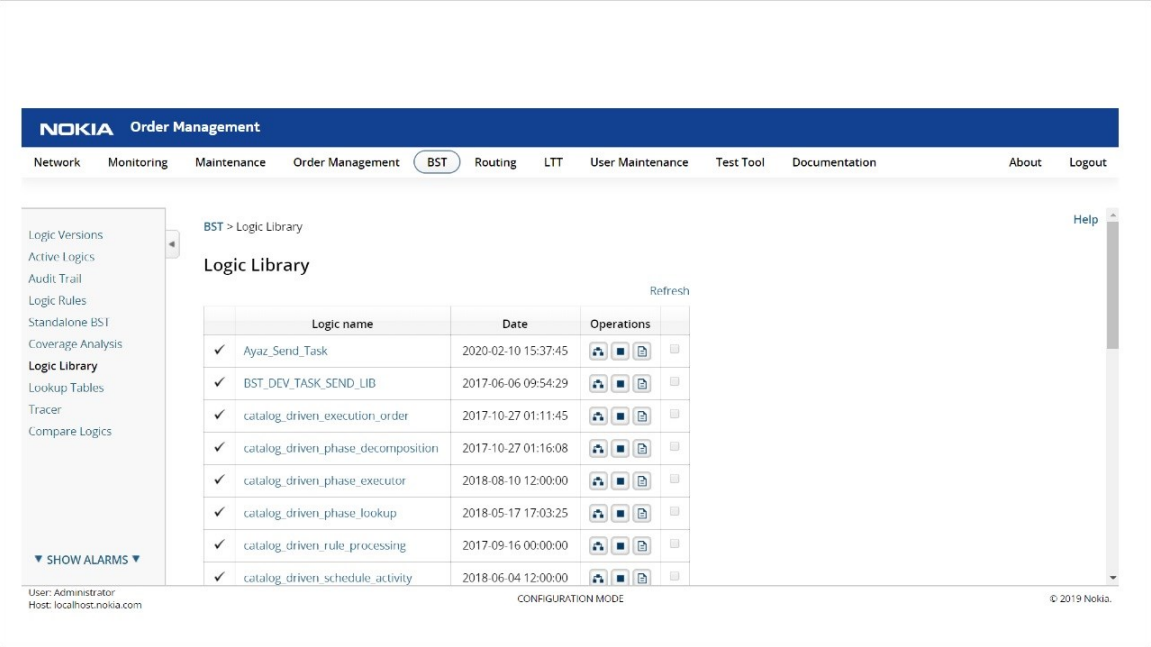
Catalog items refer to services like RFS and CFS. What is the difference between these two? The Resource Facing Services (RFS) are items that represent the technical view of a service, while Customer Facing Services (CFS) are items that represent the service from a customer perspective. A CFS defines an abstraction of how one or more RFSs are arranged into a logical service and its properties. Resource Facing Services represent the characteristics of a network-level service, that a network element fulfills in the network layer. A CFS describes the top-layer item in Catalog, and a CFS can contain one or more CFSs and RFSs. The Commercial Product, also known as Product or Bundle, is made up of one or more CFSs.

A Catalog Remote Item can be either a Technical Service (TS), a Technical Library (TL), or Work Order (WO). A Technical Service is a specification of a network-level capability with attributes that define a network-driven service. In short, they are the functions of actions that configure the services in the network.

A Catalog selection group is a container for a group of items, one of which is dynamically selected and executed at runtime. Selection Groups can be used like any regular Item, but must be embedded into another product or service item. The benefit is that a Selection

group will dynamically trigger a different outcome based on inbound parameters and configured rule conditions.

1.7 Simplifying the workflow



How does FlowOne CDPA simplify the business flows?

Provisioning and Activation is responsible for the automation of all necessary network and service activations, including resource provisioning and activation, service activation, and inventory updates against networks and external systems. While the Catalog provides a holistic view across the service provider's whole technical product portfolio, service providers can define Customer Facing Services (CFSs) and Resource Facing Services (RFSs) of the products. Now that we know each role in CDPA, we have to note that Catalog is very flexible, so that the service configuration can be handled easily.

How about simplifying the workflows? First, we have to design the service structure in Catalog. Then the provisioning logic or workflow must "bridge the gap" between what we receive in the service request or orders, and what we have to send to Catalog to return the decomposition back to Provisioning and Activation.

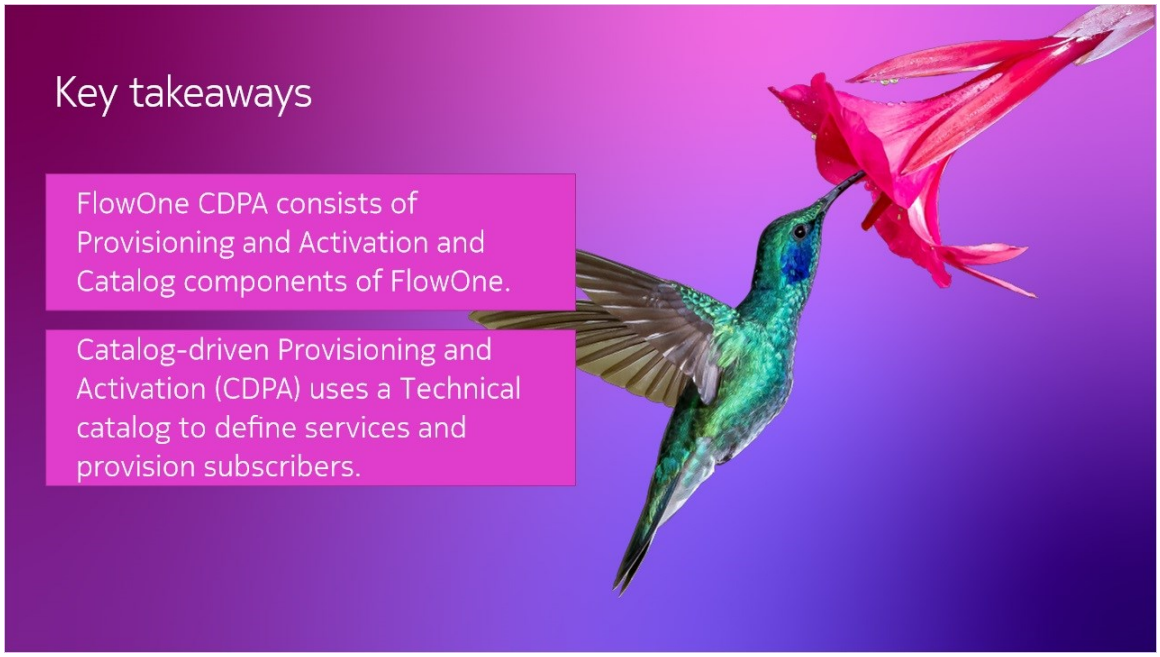
Where is workflow created and maintained? Provisioning logic or workflow is managed in the Business Service Tool page in the Provisioning and Activation UI. Furthermore, Business Service Tool enables complex request/order processing based on provisioning logic, for example, splitting one request into multiple tasks, that are executed in one or more network elements.

Now that we know BST handles the provisioning logic or workflow, it is fundamental for obtaining a good Catalog design. Moreover, the workflow is typically not the same for all the

service requests or orders. To manage different business workflows flexibly, it is suggested to use the Logic Library.

What is the logic library? The logic library contains workflows that can be used by other workflows. These workflows in the library are workflows that perform common functions, and a library logic can be used by more than one workflow and in other library logics. More importantly, these library logics are used to divide logic into smaller, more functional entities that provide better support to customer's operating environments. And these are also created, maintained, and viewed with Business Service Tool (BST) Logic Editor.

1.8 Key takeaways



Our key takeaways are as follows:

FlowOne CDPA consists of the Provisioning and Activation, and Catalog components of FlowOne.

Catalog-driven Provisioning and Activation (CDPA) is a solution for subscriber provisioning and service activation where the service definition is stored in a technical catalog.

1.9 Thank you

This concludes the What is Catalog-driven Provisioning and Activation eLearning module.