

# AdvOSS Provisioning Engine

**AdvOSS** is an emerging Canadian vendor of technologically advanced solutions that enable any Service Provider to realize all of its needs in aspects of service delivery, management and charging in a fully integrated way. Tens of Tier-1 and Tier-2 Service Providers worldwide depend on AdvOSS for their critical business needs.

## Overview:

AdvOSS Provisioning System is a powerful next generation Provisioning solution for CSPs that enables quick activation of multiple services in an integrated manner across various technology domains.

AdvOSS Provisioning System is modular and flexible, to allow for incorporating provisioning logic specific to any kind of network resource whenever the need arises. It offers exceptional flexibility to CSPs to define and implement their Provisioning workflows using workflow processors such as W3C standard XProc (XML based), Groovy Pipelines (Java based), SCCXML based SDP (Scripting based) and others. AdvOSS Provisioning Engine act as a layer that sits between the Clients and the Network Elements. It receives "Requests" from the Clients and executes them on Network Elements.

Architecture of AdvOSS Provisioning System is based on open APIs and hence can be easily integrated with other B/OSS products to build larger solutions. AdvOSS has a range of B/OSS products in its portfolio with which AdvOSS Provisioning System comes

## Modules:

The AdvOSS Provisioning System is composed of the following modules:

- Base Application Module
- Network Element Admission Control
- Orchestrator/Work Flow Processors
- Bulk Provisioning
- Distributed Transaction Manager
- Replays & Roll back Manager
- Rate Limiting
- Audit Trails / Request Response Logging
- Extra Communication Protocols

## Integration Points:

AdvOSS Provisioning System offers points of integration with the following systems:

- **CRM & Order Management System**

AdvOSS Provisioning System integrates with CRM & Order Management Systems that are responsible for customer creation & management. AdvOSS offers its own CRM System as well with which AdvOSS Provisioning System comes pre-integrated.

- **Self care Portals**

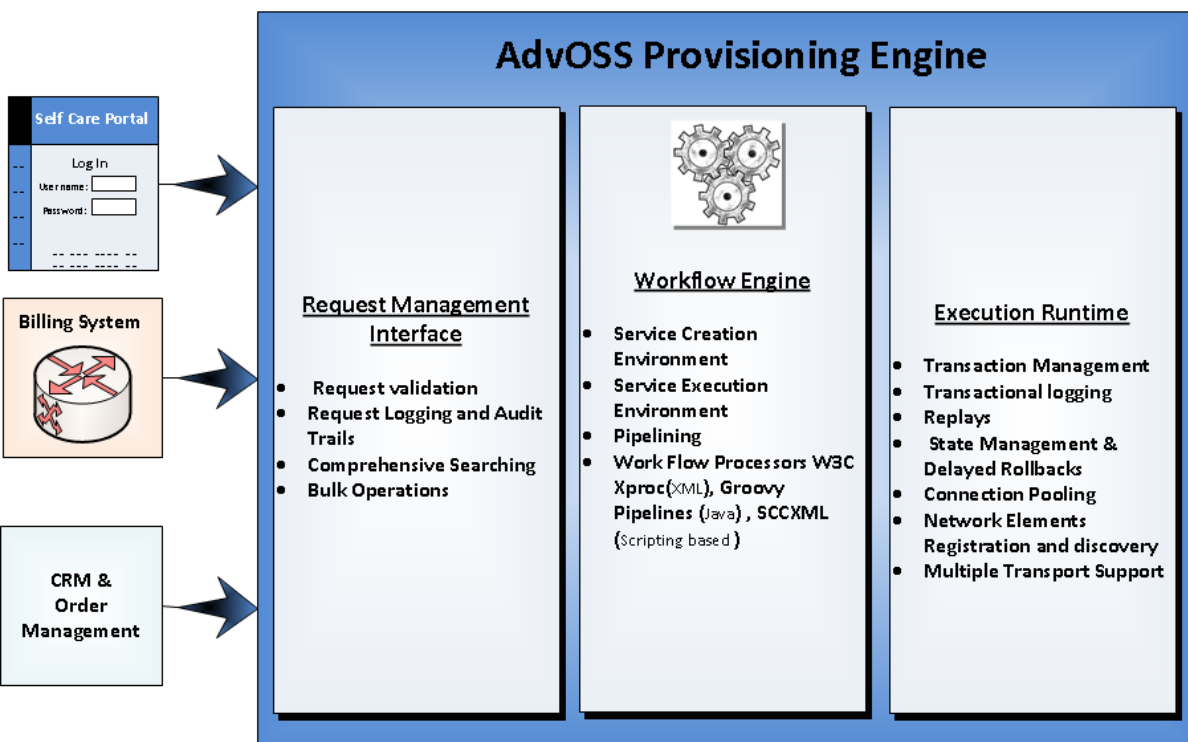
For self provisioning management, AdvOSS Provisioning Engine integrates with any Self care Portal. Self care portal could be end user subscribers, vendors, other b2b partners, franchisees, agents or others.

- **Billing Systems**

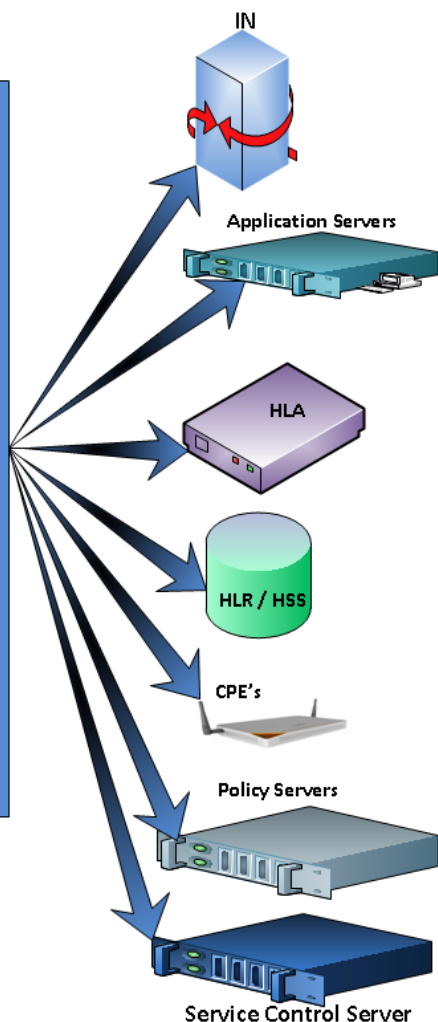
AdvOSS Provisioning System can integrate with Billing Systems that are responsible for billing and revenue management. AdvOSS offers its own fully featured Converged Billing System as well with which AdvOSS Provisioning System comes pre-integrated.

## Software Architecture

### Clients



### Network Elements



## Business Use cases:

- **Multiple Communication Protocols**
  - HTTP REST API (JSON/XML)
  - Socket (JSON/XML)
  - Web Service (SOAP/XML)
- **Client Authentication**
- **Input Request validation**
- **Admission Control (North-bound)**
- **Invoking external Work Flow Processor**

- XProc
- Groovy Pipelines
- SCCXML
- Any third party work flow processor
  
- **Calling south-bound work APIs**
- **Request/Response Logging**
  
- **Bulk Operations**
  - Execution Schemes:
    - Immediate Execution
    - Manual Execution
    - Scheduled Execution
  - Multiple data sources for Provisioning Batch (Bulk Operation) data submission.
    - XML
    - CSV
    - Excel Sheets
    - SQL Query
  - An API URI has to be specified for which batch is being submitted for execution.
  
- **Distributed Transaction Management**
- **Replays and Rollbacks**
  - Request Replays
  - Work Replays
    - Individual Work
    - Per Network Element
  
- **Rate Limiting (South-Bound)**
  
- **Network Element Registration and Discovery**
  
- **Periodic queue polling**
  
- **Scheduled Operations**
  
- **Searching and BI**
  - Provisioning Engine logs each activity (API call) going through it and hence provide Search and BI over detailed attributes list helping track and audit the network traffic.
  - Following Attributes are available for Search and BI:
    - Administrator
    - Client IP Address
    - Timestamps (Received/Executed)
    - Network Element
    - Specific API URI
    - ReturnCode/ReturnString/Status
    - XPath queries over actual Request & Response Data.