Ensemble SaaS MANO

Simplify deployments and speed time to revenue

Benefits

For service providers

- Go from "decide" to "deploy" in weeks
- Eliminates upfront server and cloud costs of self-hosting
- Affords secure and seamless integration to OSS/BSS workflows

For enterprises

- Reduces team size needed to launch and operate edge cloud deployments
- Fast transition from using legacy networking appliances to running functions on COTS servers
- Centrally manage and dynamically control resources and connectivity for network functions at remote sites

Overview

Enterprises and service providers need to improve the speed, scale and cost-efficiency of uCPE deployments. Ensemble SaaS MANO provides users with a low cost of entry and a pay-as-you-grow commercial model. It offers ease of use, operational simplicity and the ability to quickly turn up virtual services.

The SaaS MANO architecture supports rollout of secure virtualized services at scale across a global footprint. Ensemble SaaS MANO enables customers to make major savings on operational expenditure and offers the opportunity to establish new business before investing in uCPE management infrastructure.

Leveraging our zero-touch deployment automation, SaaS MANO accelerates the process of uCPE deployments to ensure faster time to revenue for communication service providers (CSP) and enterprise customers. With its advanced service designer GUI, CSPs and enterprises can quickly design and deploy new services, unlocking new revenue streams. Because it requires less staffing, Ensemble SaaS MANO empowers more customers to seize the advantages of uCPE.

Automation

User Interface

Ensemble SaaS MANO

Ensemble Cloudlet

Multi-node Clouds

Ensemble Connector

uCPE
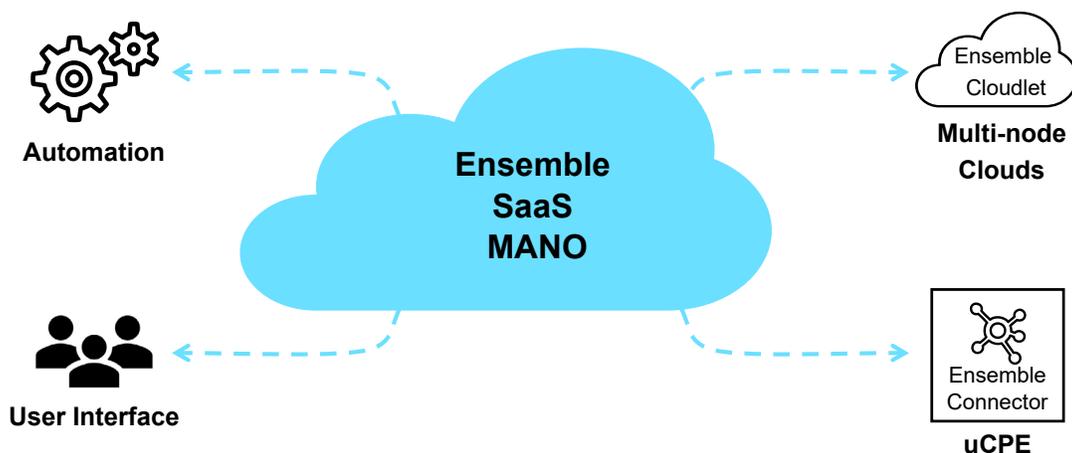
Ensemble SaaS MANO

High-level benefits

General
- Advanced management of virtualized services and edge cloud infrastructure
- Provides a turnkey MANO solution

Ensemble Virtualization Director
- Single pane of glass view for managing service operations
- Supports end-to-end ZTP, infrastructure site management, troubleshooting and third-party orchestrators.
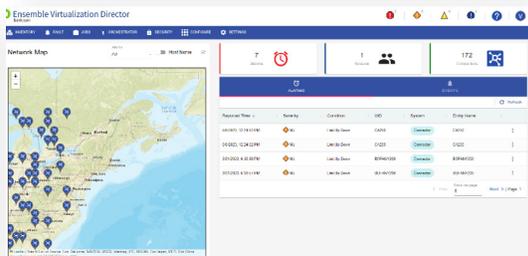
Ensemble Orchestrator
- End-to-end cloud resource and network service lifecycle management
- Scalable platform for the management of VNF lifecycles
- Also integrates with third-party VNF managers - supporting application level ZTP+

### Simplify deployment of uCPE solutions
- Leverage public hosted MANO instances
- Simplify fulfillment process and pre-deployment engineering activities
- SaaS MANO ready for live services one day after receipt of order
- Zero touch provisioning
- Standard VNF onboarding toolkit
- Service designer UI / APIs
- Monitor and troubleshoot NFVI hardware, platform, VNF aspects
- Manage platform upgrades and system recovery
- Open APIs for third-party management systems
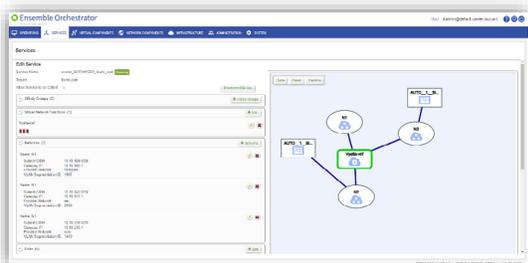- Dynamic service edits and service visualization
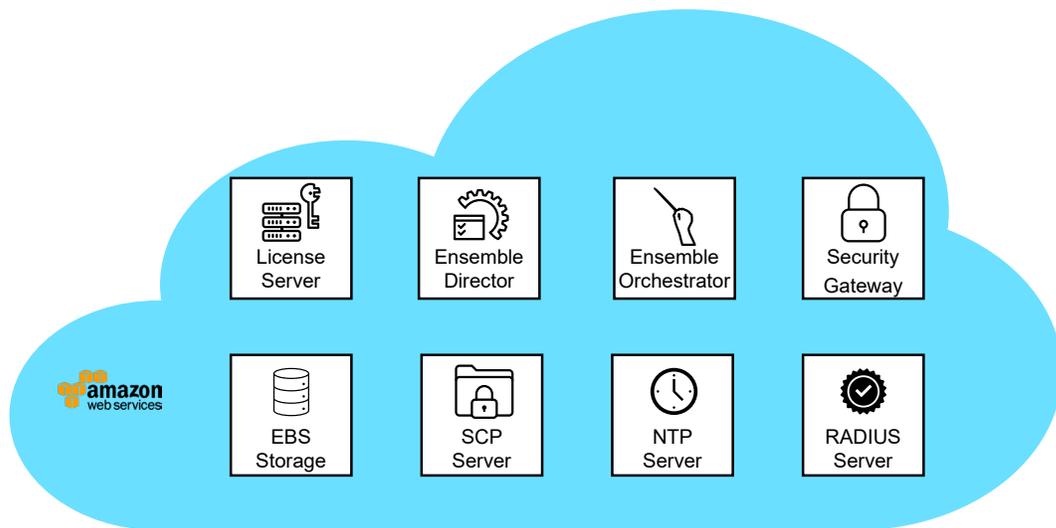
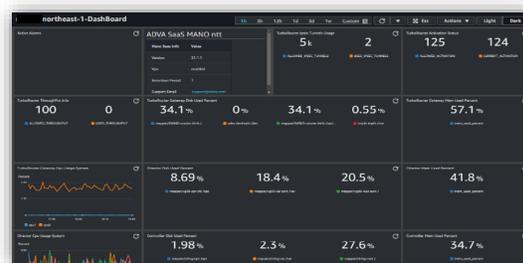Ensemble SaaS MANO Infrastructure

Director
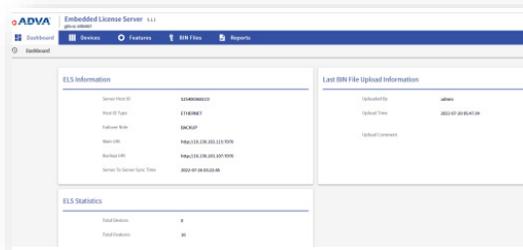
License Server

Orchestrator

Dashboards

Customer User Interfaces

Ensemble SaaS MANO

Product specifications

Security

- Secured user access to SaaS MANO supports SAML authentication
- Connector management tunnels to SaaS MANO secured via IPsec
- Publicly registered x509 certificate
  - User access to the UI of MANO components are authenticated via public X.509 certificates. These certificates are generated from a public third-party certificate authority
  - Connector management access to the security gateway and MANO are authenticated via X.509 self-signed certificates

Latency

- Customer may specify AWS region where MANO is hosted

Service assurance

- 24x7 monitoring and management of the SaaS MANO resources
- For individual compute nodes, the uptime SLA is 99.5% per month
- Monitor MANO infrastructure VM status and connectivity, and provide on call TAC support for any MANO functional or performance issues
  - Taking corrective action on any operational or performance issues of MANO VM components
  - Setup and monitoring of periodic backup of MANO component data which will be backed up daily and a minimum of the most recent seven (7) days of backup will be retained
  - In case of an outage, provide restoration of MANO components and operational data
  - Ensure that CUSTOMER service levels per the agreed upon SLA are maintained on MANO availability

Platform maintenance

- Includes managed MANO upgrades and patch deployments
- Routine database backups for disaster recovery

Service offerings

- Tier 1 service includes hosting of the Ensemble MANO software applications, 24x7 monitoring and support for all operational aspects of the MANO infrastructure
- Tier 2 service expands on the Tier 1 deliverables and includes uCPE site turn-up and monitoring

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