Replacement of Compute Server UCS C240 M4 - vEPC

Contents

Introduction
Background Information
Abbreviations
Workflow of the MoP
Prerequisites
Backup
Identify the VMs Hosted in the Compute Node
Graceful Power Off
Case 1. Compute Node Hosts only SF VM
Migrate SF Card to Standby State
Shutdown SF VM from ESC
Remove the Compute Node from Nova Aggregate List
Case 2. Compute Node Hosts CF/ESC/EM/UAS
Migrate CF Card to Standby State
Shutdown CF and EM VM from ESC
Migrate ESC to Standby Mode

Remove the Compute Node from Nova Aggregate List
Compute Node Deletion
Delete Compute Node from the Service List
Delete Neutron Agents
Delete from the Ironic Database
Delete from Overcloud
Install the New Compute Node
Add the New Compute Node to the Overcloud
Post Server Replacement Settings
Restore the VMs
Case 1. Compute Node Hosts only SF VM
Addition to Nova Aggregate List
SF VM Recovery from ESC
Case 2. Compute Node Hosts CF, ESC, EM and UAS
Addition to Nova Aggregate List
Recovery of UAS VM
Recovery of ESC VM
Handle ESC Recovery Failure
Auto-Deploy Configuration Update
Enabling Syslogs
Related Information

Introduction

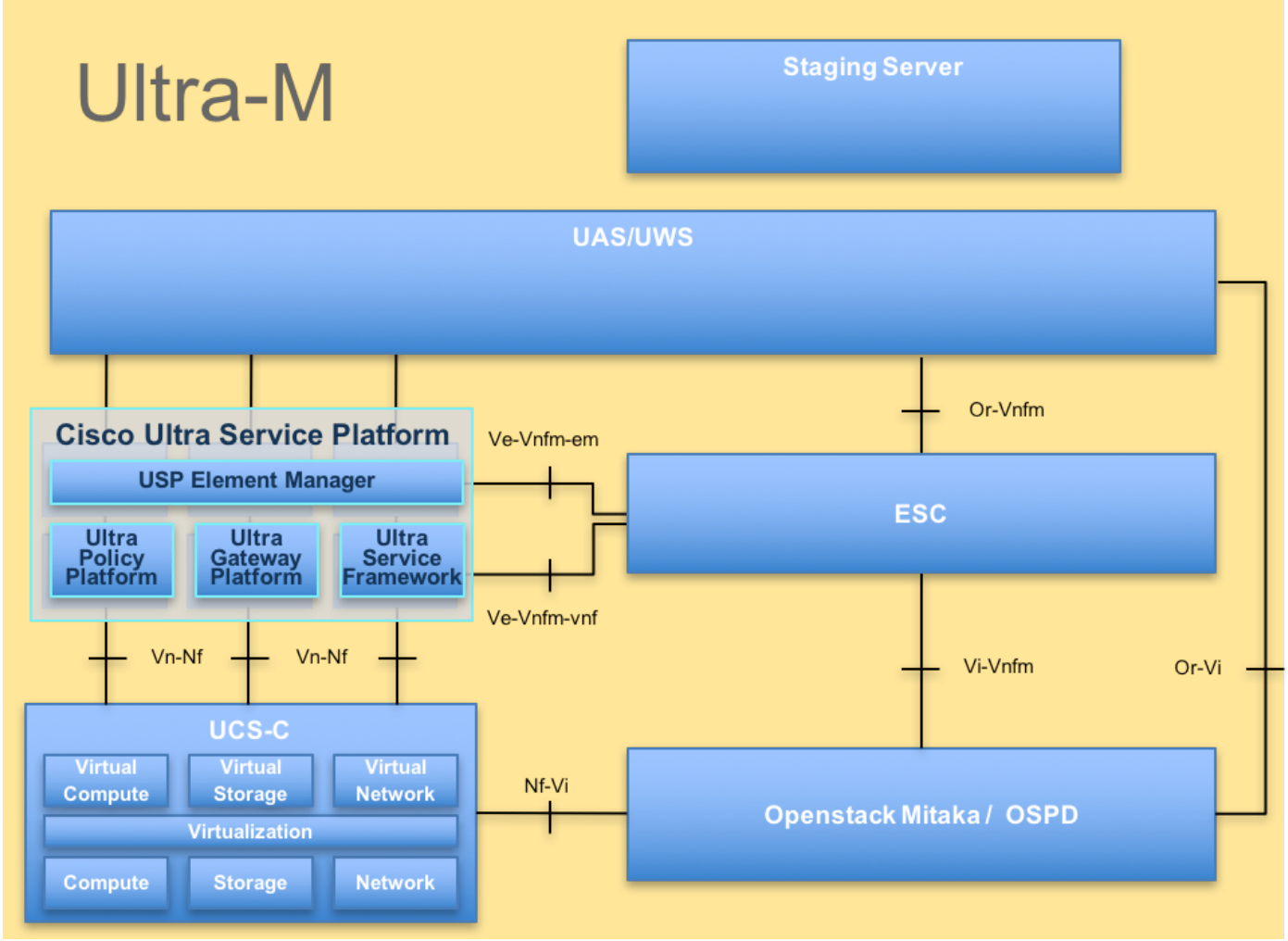
This document describes the steps required to replace a faulty compute server in an Ultra-M setup that hosts StarOS Virtual Network Functions (VNFs).

Background Information

Ultra-M is a pre-packaged and validated virtualized mobile packet core solution designed to simplify the deployment of VNFs. OpenStack is the Virtualized Infrastructure Manager (VIM) for Ultra-M and consists of these node types:

- Compute
- Object Storage Disk - Compute (OSD - Compute)
- Controller
- OpenStack Platform - Director (OSPD)

The high-level architecture of Ultra-M and the components involved are depicted in this image:



UltraM Architecture

This document is intended for the Cisco personnel familiar with Cisco Ultra-M platform and it details the steps required to be carried out at OpenStack and StarOS VNF level at the time of the Compute Server Replacement.

Note: Ultra M 5.1.x release is considered in order to define the procedures in this document.

Abbreviations

VNF	Virtual Network Function
CF	Control Function
SF	Service Function
ESC	Elastic Service Controller
MOP	Method of Procedure
OSD	Object Storage Disks
HDD	Hard Disk Drive
SSD	Solid State Drive
VIM	Virtual Infrastructure Manager
VM	Virtual Machine
EM	Element Manager
UAS	Ultra Automation Services
UUID	Universally Unique IDentifier

Workflow of the MoP