About This Guide

This guide helps you to perform tasks such as lifecycle management operations, monitoring, healing and scaling of the VNFs using the ETSI APIs.

Audience

This guide is designed for network administrators responsible for provisioning, configuring, and monitoring VNFs. Cisco Elastic Services Controller (ESC) and its VNFs are deployed in a Virtual Infrastructure Manager (VIM). Currently OpenStack, VMware vCenter, VMware vCloud Director, CSP 2100 / 5000, and Amazon Web Services (AWS) are the supported VIMs. The administrator must be familiar with the VIM layer, vCenter, OpenStack and AWS resources, and the commands used.

Cisco ESC is targeted for Service Providers (SPs) and Large Enterprises. ESC helps SPs reduce cost of operating the networks by providing effective and optimal resource usage. For Large Enterprises, ESC automates provisioning, configuring and monitoring of network functions.

Terms and Definitions

The below table defines the terms used in this guide.

Table 1: Terms and Definitions

Terms	Definitions
AWS	Amazon Web Services (AWS) is a secure cloud services platform, offering compute, database storage, content delivery and other functionalities.
ESC	Elastic Services Controller (ESC) is a Virtual Network Function Manager (VNFM), performing lifecycle management of Virtual Network Functions.
ETSI	European Telecommunications Standards Institute (ETSI) is an independent standardization organization that has been instrumental in developing standards for information and communications technologies (ICT) within Europe.

Terms	Definitions
ETSI Deployment Flavour	A deployment flavour definition contains information about affinity relationships, scaling, min/max VDU instances, and other policies and constraints to be applied to the VNF instance. The deployment flavour defined in the VNF Descriptor (VNFD) must be selected by passing the *flavour_id* attribute in the InstantiateVNFRequest payload during the instantiate VNF LCM operation.
HA	ESC High Availability (HA) is a solution for preventing single points of ESC failure and achieving minimum ESC downtime.
KPI	Key Performance Indicator (KPI) measures performance management. KPIs specify what, how and when parameters are measured. KPI incorporates information about source, definitions, measures, calculations for specific parameters.
MSX	Cisco Managed Services Accelerator (MSX) is a service creation and delivery platform that enables fast deployment of cloud-based networking services for both Enterprises and Service Providers customers.
NFV	Network Function Virtualization (NFV) is the principle of separating network functions from the hardware they run on by using virtual hardware abstraction.
NFVO	NFV Orchestrator (NFVO) is a functional block that manages the Network Service (NS) lifecycle and coordinates the management of NS lifecycle, VNF lifecycle (supported by the VNFM) and NFVI resources (supported by the VIM) to ensure an optimized allocation of the necessary resources and connectivity.
NSO	Cisco Network Services Orchestrator (NSO) is an orchestrator for service activation which supports pure physical networks, hybrid networks (physical and virtual) and NFV use cases.
OpenStack Compute Flavor	Flavors define the compute, memory, and storage capacity of nova computing instances. A flavor is an available hardware configuration for a server. It defines the *size* of a virtual server that can be launched.
Service	A service consists of a single or multiple VNFs.
VDU	The Virtualisation Deployment Unit (VDU) is a construct that can be used in an information model, supporting the description of the deployment and operational behaviour of a subset of a VNF, or the entire VNF if it was not componentized in subsets.
VIM	The Virtualized Infrastructure Manager (VIM) adds a management layer for the data center hardware. Its northbound APIs are consumed by other layers to manage the physical and virtual resources for instantiation, termination, scale in and out procedures, and fault & performance alarms.
VM	A Virtual Machine (VM) is an operating system OS or an application installed on a software, which imitates a dedicated hardware. The end user has the same experience on a virtual machine as they would have on dedicated hardware.
VNF	A Virtual Network Function (VNF) consists of a single or a group of VMs with different software and processes that can be deployed on a Network Function Virtualization (NFV) Infrastructure.

Terms	Definitions
VNFC	A Virtual Network Function Component is (VNFC) a composite part of the VNF, synonymous with a VDU, which could be implemented as a VM or a container.
VNFM	Virtual Network Function Manager (VNFM) manages the life cycle of a VNF.

Related Documentation

The Cisco ESC doc set comprises of the following guides to help you perform installation, configuration; the lifecycle management operations, healing, scaling, monitoring and maintenance of the VNFs using different APIs.

Guide	Information Provided in This Guide
Cisco Elastic Services Controller Release Notes	Includes new features and bugs, known issues.
Cisco Elastic Services Controller Install and Upgrade Guide	Includes procedure for new installation and upgrade scenarios, pre and post installation tasks, and procedure for ESC High Availability (HA) deployment.
Cisco Elastic Services Controller User Guide	Includes lifecycle management operations, monitoring, healing and scaling of the VNFs.
Cisco Elastic Services Controller ETSI NFV MANO User Guide	Includes lifecycle management operations, monitoring, healing and scaling of the VNFs using the ETSI APIs.
Cisco Elastic Services Controller Administration Guide	Includes maintenance, monitoring the health of ESC, and information on system logs generated by ESC.
Cisco Elastic Services Controller NETCONF API Guide	Information on the Cisco Elastic Services Controller NETCONF northbound API, and how to use them.
Cisco Elastic Services Controller ETSI REST API Guide	Includes information on the Cisco Elastic Services Controller ETSI APIs, and how to use them.
Cisco Elastic Services Controller Deployment Attributes	Includes information about deployment attributes used in a deployment datamodel.
Cisco Elastic Services Controller Open Source	Includes informaiton on licenses and notices for open source software used in Cisco Elastic Services Controller.

Obtaining Documentation Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation*, at: http://www.cisco.com/c/en/us/td/docs/general/whatsnew/whatsnew.html.

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