Intelligent Automation for Cloud Sample Extension for Integration with Cisco Prime Network Registrar IPAM

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Contents

Introduction

This document provides a sample extension for integration of Cisco Prime Network Registrar" IPAM as an external IP address management system for networks identified as type *External* in Cisco Intelligent Automation for Cloud.

Before You Begin

Requirements

Note: This document contains programming examples. All sample code is provided by Cisco for illustrative purposes as a foundation upon which to extend. These examples have not been thoroughly tested under all conditions. Sample code should be copied and modified appropriately before use in a production environment.

Ensure that you meet these requirements before you attempt this configuration:

- Valid login credentials for Cisco Process Orchestrator with permission to edit processes
- Valid login credentials for the Cisco Prime Network Registrar IPAM software that Cisco Process Orchestrator uses

Components Used

The information in this document is based on these hardware and software versions:

- Cisco Intelligent Automation for Cloud 3.1.1 (any edition)
- Cisco Process Orchestrator 2.3.5
- Cisco Prime Network Registrar IPAM 8.0 or later

Conventions

For more information on document conventions, refer to Cisco Technical Tips Conventions.

Installation

1. On the Cisco Process Orchestrator server, create a Web Target.
2. Enter http://<*Cisco Prime Network Registrar IPAM Server*>:8080/inc−ws/services in the base url field.
3. Select new runtime user and create new runtime user using the credentials for logging into Cisco Prime Network Registrar
4. Import the Cisco Intelligent Automation for Cloud Extension Samples tap.

Configuration

Complete the steps in this section in order to configure the features described in this document:

1. Set the Cisco Prime Network Registrar IPAM Global Variables
2. Add Cisco Prime Network Registrar IPAM Extension: Get CPNR IP
3. Add Cisco Prime Network Registrar IPAM Extension: Return CPNR IP

Set the Cisco Prime Network Registrar IPAM Global Variables

Set these global variables defined for Cisco Prime Network Registrar IPAM:

• Cisco Prime IPAM Target Name

Note: Set the value of this variable to the display name of the web target created for Cisco Prime Network Registrar IPAM.

Add Extension: Get CPNR IP

1. Copy the process **Extension: Get CPNR IP.** Renaming the copy something locally significant is recommended.
2. Edit the **Get IP Address >> User Defined** workflow.
3. Add the copy of **Extension: Get CPNR IP** process to the workflow.
4. On the Inputs tab, add the values listed in this table:

Variable Name	Value
Domain	[Process.Target.Properties.Cloud.Service.Server.General.Domain]
VLAN Instance	[Process.Variables.Input.VLAN Instance]
VLAN Instance DNS Server	[Process.Variables.Input.VLAN Instance DNS Server]
VLAN Instance Gateway	[Process.Variables.Input.VLANInstanceGateway]

VLAN Instance Netmask	[Process.Variables.Input.VLAN Instance Netmask]
device Type	Server
hostname	[Process.Target.Properties.Cloud.Service.Server.General.Name].[Process.Target.Properties.Cloud
Container	This value represents the container name holding the IP address block in Cisco Prime Network Re environment, this value can be hardcoded. In multi container environment, you will need to create dynamically.

This image provides an example of the configuration:

5. Add the **Set Multiple Variables** activity to the workflow.
6. On the Variables tab, add the values listed in this table:

Variable Name	Value
Process.Variables.Output.IP Address	[Workflow.Extension:Get CPNR IP.IP Address]
Process.Variables.Output.Gateway	[Workflow.Extension:Get CPNR IP.IP Gateway]
Process.Variables.Output.Netmask	[Workflow.Extension:Get CPNR IP.IP Netmask]
Process.Variables.Output.DNS Server	[Workflow.Extension:Get CPNR IP.IP DNS Server]
Process.Variables.Output.VLAN Object Reference	[Workflow.Extension:Get CPNR IP.IP VLAN Object Reference]
Process.Variables.Output.Service Item Record Name	[Workflow.Extension:Get CPNR IP.IP Address Record Name]

This image provides an example of the configuration:

7. Once this procedure is complete, the workflow should appear as shown in this image:

8. Save the Process and exit.

Add Extension: Return CPNR IP

1. Copy the process **Extension: Return CPNR IP.** Renaming the copy something locally significant is recommended.
2. Edit the **Return IP Address >> User Defined** workflow.
3. Add the copy of **Extension: Return CPNR IP** process to the workflow
4. On the Inputs tab, add the values listed in this table:

Variable Name	Value
IP Address	[Process.Variable.Input.IP Address]

VLAN Instance	[Process.Variables.Input.VLAN Instance]
Container	This value represents the container name holding the IP address block in Cisco Prime Network Registrar IPAM. In single container environment, this value can be hardcoded. In multi container environment, you will need to create logic which derives this data dynamically.
Device Type	Server

This image provides an example of the configuration.

5. Once this procedure is complete, the workflow should appear as shown in this image:

6. Save the Process and exit.

Related Information

- **Technical Support & Documentation – Cisco Systems**