



Cloud Provision Widget is a simple web-based widget for demonstrating the Infoblox Cloud Automation plug-ins functionality as well as WAPI functionality. The widget has been designed for service delivery via HTTP File Distribution from the Grid you wish to leverage to demonstrate the concept.

Version 1.31 of the Cloud Provision Widget contains the following new features:

- Ability to specify the Grid Master or Cloud Platform Member IP address to run the WAPI calls against
- Support for the 'default' Network View
- Improved return error messaging

The Cloud Provision Widget also contains the following features:

- Ability to specify a hostname, IP address, and the following Cloud Specific Extensible Attributes: (*Network View, DNS Zone, Tenant ID, CMP Type, VM ID, VM Name*)
- Sample Attribute values and hostname are pre-filled
- Ability to leverage the 'next available IP' function from a specified network
- Create a "pseudo VM" host record and associated Cloud Tenant and VM attributes which become visible in the GM GUI
- Delete any of the "pseudo VMs" created in the same widget session

**Cloud Provision Widget**

Connection settings

Server: 192.168.1.15

Unique Values

Hostname: linux-10

IPv4 Address: func:nextavailableip:10.10.10.0/24,cpview

Can also try an IP address

Optional Customization

Network View: cpview

DNS Zone: cloud.zone

Tenant ID: QA

CMP Type: OpenStack

VM ID: VM-ID-10

VM Name: linux-10

Log

Base URL = https://192.168.1.15/wapi/v2.0/

Create VM



## Setup

NIOS Requirements:

- NIOS 7.0.2 or later
- CNA license enabled on Grid Master

A Network View, Network, and DNS Zone must all be available in the NIOS database for the provisioning to align. The widget inputs can be deviated from so long as the corresponding Network View, Network, and Zone have been created. The default inputs are listed in the setup steps below:

- Enable the CNA license on the Grid Master or verify already enabled
- Create a new Network View for the Cloud environment (default name: cpview)
- Create a new Network in the above created Network View (default: 10.10.10.0/24)
- Create an Authoritative Zone in the above created Network View (default: cloud.zone)
- Create a new user/admin account and associate it with the cloud-api-only Group. This specific Group is created after the CNA license is enabled and is required to update the cloud associated extensible attributes via the API or any of the plug-ins.
- Add at a minimal the permissions shown below to the cloud-api-only Group:

The screenshot shows the 'Permissions' configuration page in the Infoblox GUI. At the top, there are tabs for 'Admins', 'Groups', 'Roles', 'Permissions', 'Authentication Policy', and 'SNMPv3 Users'. A 'Create New Permission' dialog is open, showing a list of groups: 'Reporting', 'admin-group', 'cloud-api-only' (highlighted), and 'ipam-only'. Below the dialog, the 'cloud-api-only Permissions' section is visible, featuring a 'Quick Filter' set to 'All Configured Permissions' and 'All Permission Types'. A table lists the following permissions:

Group/Role	Permission Type	Resource	Resource Type	Permission
cloud-api-only	DNS Permissions/DHCP Permission...	All Hosts	Host	RW
cloud-api-only	DHCP Permissions/DNS Permission...	All IPv4 Host Addresses	IPv4 Host address	RW
cloud-api-only	DHCP Permissions/DNS Permission...	All IPv6 Host Addresses	IPv6 Host address	RW
cloud-api-only	DHCP Permissions/IPAM Permissions	All IPv6 Networks	IPv6 Network	RW
cloud-api-only	DHCP Permissions/IPAM Permissions	All IPv4 Networks	IPv4 Network	RW
cloud-api-only	DHCP Permissions/IPAM Permissions	All Network Views	Network view	RW
cloud-api-only	Cloud Permissions	All Tenants	Tenant	RW

- Enable HTTP File Distribution on the Grid Master appliance
- Upload cp\_v1.31.gz to file distribution with the 'extract files after upload' option enabled
  - This will create a /snapins/cp/ path and load the cp.html page along with corresponding files into the cp directory



- Not required but suggested, in order for a network to correlate with the Cloud tab it must have Cloud attributes associated. These must be added via the WAPI. The following curl command examples can be leveraged to accomplish this step. The ability to add a “Cloud” network may be incorporated into a future widget.

1. Get the object reference for the network:

```
curl -k -u cloudapiuser:password -X GET https://gmip/wapi/v2.0/network
```

```
{
  "_ref": "network/ZG5zLm5ldHdvcmskMTAuMTAuMTAuMC8yNC8x:10.10.10.0/24/cpview",
  "network": "10.10.10.0/24",
  "network_view": "cpview"
}
```

2. Update the network with the extensible attributes that match the Tenant ID:

```
curl -H "Content-Type: application/json" -k1 -u cloudaiuser:password -X PUT
https://gmip/wapi/v2.0/network/ZG5zLm5ldHdvcmskMTAuMTAuMTAuMC8yNC8x -d '{"extattrs":
{"Tenant ID":{"value": "QA"}, "CMP Type":{"value": "OpenStack"}, "Cloud API
Owned":{"value": "True"}}}'
```

## Demonstrate

To demonstrate with the Cloud Provision Widget leverage the following actions:

- Open a browser tab to <https://gmip/snapins/cp/cp.html>
- Accept the default GM IP or specify a Cloud Platform Member IP to run the widget’s WAPI calls against
- Leverage the default values or enter new appropriate values for the “pseudo VM”
- Click the ‘Create VM’ button to create the “pseudo VM” and associated Host/attribute data
  - Multiple “pseudo VMs” can be created by changing the Hostname and attributes
  - All created Hosts in the session are then displayed in the lower panel
- Select all or a single created “pseudo VM” and click ‘Delete VM’ to delete the Host and associated data



**Cloud Provision Widget**

**Connection settings**

Server:

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**Unique Values**

Hostname:

IPv4 Address:

Can also try an IP address

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**Optional Customization**

Network View:

DNS Zone:

Tenant ID:

CMP Type:

VM ID:

VM Name:

**Log**

Base URL = https://192.168.1.15/wapi/v2.0/  
 Added record: 10.10.10.1  
 Added record: 10.10.10.2

[Create VM](#)

#	Ref	View	Zone	Host	IP	Tenant ID	CMP Type	VM ID	VM Name
<input type="checkbox"/>	record:hostZG5zLmhvc3QkLjMuem9uZS5jbG91ZC5saW51eC0xMA:linux-10.cloud.zone/default.cpview	default.cpview	cloud.zone	linux-10	10.10.10.1	QA	OpenStack	VM-ID-10	linux-10
<input type="checkbox"/>	record:hostZG5zLmhvc3QkLjMuem9uZS5jbG91ZC5saW51eC0xMQ:linux-11.cloud.zone/default.cpview	default.cpview	cloud.zone	linux-11	10.10.10.2	QA	OpenStack	VM-ID-10	linux-11

[Delete VM](#)

### Sample Demo Workflow

- Describe the functionality of the Cloud plug-ins
- Show the Infoblox IPAM GUI with Cloud tab details and associated network and DNS zone
- Click the "Create VM" button on the cp.html page from another browser tab or window
- Show the created host and associated Cloud details in the Infoblox IPAM GUI
- Click the "Delete VM" from the cp.html page
- Show the cleanup that had occurred in the Infoblox IPAM GUI