NIC Demo Script

Overview

The purpose of the demo script is to add an additional layer of abstraction between defining intents or mappings and generating the REST calls to implement them on the OpenDaylight controller. Users can use the script to enter desired intents or mappings in a more human-readable format. The script will then generate the appropriate REST calls to make these intents and mappings a reality. Additionally, intents and mappings can be declared in files prior to running the script, which allows intents and mappings to be imported automatically without the user having to repeatedly type them in.

Using the Script

1) Download the script repository:

git clone https://github.com/topherws/odl-nic-demo

2) Navigate to the script directory

cd odl-nic-demo

3) Ensure IP address is correct by opening nic_api.py in a text editor and changing address

address = <ip_addr>

<ip_addr> = The IP address that the controller is running on (localhost by default)

4) Begin execution by typing

python nic_demo.py

5) If mappings.nic or intents.nic file(s) are present in the script directory, the script will ask if you want to import declarations from those files.

5a) Type y to import declarations
5b) Type n to not import declarations

6) To interact with the script type one of the following commands into the nic> prompt and hit enter.

Variables in <> are required, variables in [] are optional.

map: create a new mapping

map <epg> to <domain> [uid]

<epg> : The endpoint group (name) for the mapping
<domain> : The domain (i.e. IP or MAC address) being mapped
[uid] : Optional uid for the mapping (will be generated if not specified)

intent: create a new intent

intent <epg1> to <epg2> <action> [uid]

<epg1> : The source (from) endpoint group (name)

<epg2> : The destination (to) endpoint group (name)

<action> : The action for the intent (allow, block, or log)

[uid] : Optional id for the mapping (will be generated if not specified)

print: print the current mappings or intents

print <objects>

<objects> : The objects to be printed (mappings or intents)

delete: delete the current mappings or intents

delete <objects>

<objects> : The objects to be deleted (mappings or intents)

help: print out usage information for the script (will print if an invalid command is given)

help

exit: exit the script (quit and shutdown will also work)

exit

Using the .nic Files

To use the mappings.nic and intents.nic files, enter a new valid mapping or intent command and save it to the correct file (mappings in mappings.nic, intents in intents.nic). Each command should be on a separate line.

Example mappings.nic file:

Engg to 172.16.0.1
Mktg to DE-E6-83-46-E2-71
Finance to 172.16.0.4
Server to 172.16.0.10

Example intents.nic file:

Engg to Mktg allow
Server to Finance block
Server to Engg log