5 CCS Scripts to Jump Start Your NetMRI CCS Training

Intro

NetMRI is the world's leading multi-vendor network automation solution. It provides Infoblox Switch Port Manager and Automation Change Manager which gives you the ability to perform change and configuration management as well as compliance enforcement.

What is CCS

CCS is a proprietary scripting language for executing sequences of command-line interface (CLI) commands on NetMRI-supported network devices. This allows you to perform automation of configuration tasks. If you know Cisco IOS, writing CCS scripts is very straightforward. This post presumes some prior knowledge of Cisco IOS or any other CLI interface for devices such as Extreme, Juniper or other vendors supported by NetMRI. Some previous structured programming knowledge will also be helpful.
While CCS is not as powerful or flexible as Perl, the learning curve is not as steep. CCS allows you to quickly develop useful jobs that can run across hundreds of devices in the managed network.

Why Use Scripting?

- Scripts:
  - Automate changes to infrastructure devices
  - Ensure consistent changes
  - Can be scheduled to run at specific times
  - Can be triggered to respond to specific events

- Scripting reduces the risk of errors being made during execution
  - No fat fingering
  - No instant mistakes

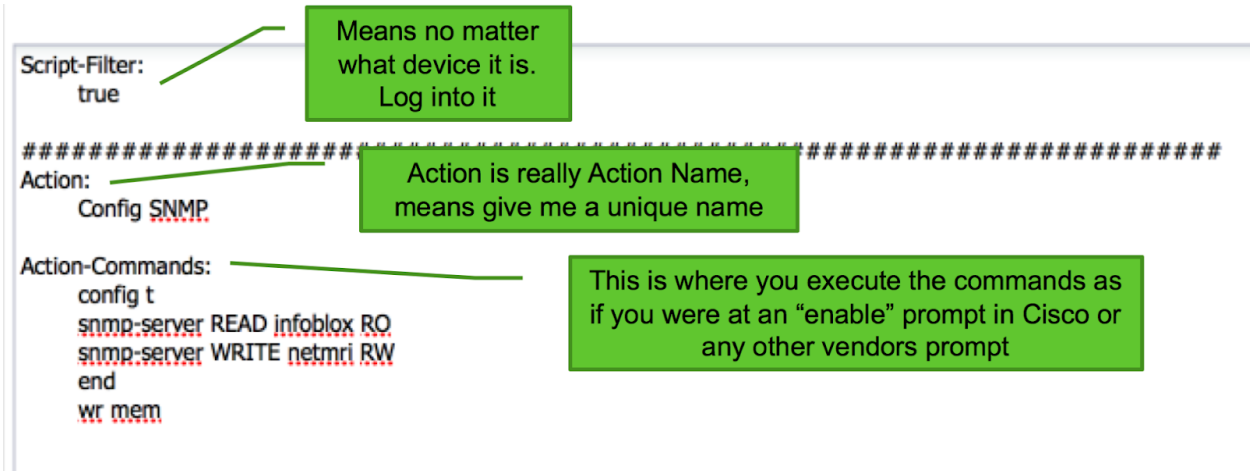
Now let's jump into it

Script 1 – “The Basics”

NetMRI Version – any

To get you familiar with the CCS scripting language in NetMRI, just “The Basics” to get you started.

The anatomy of a CCS script



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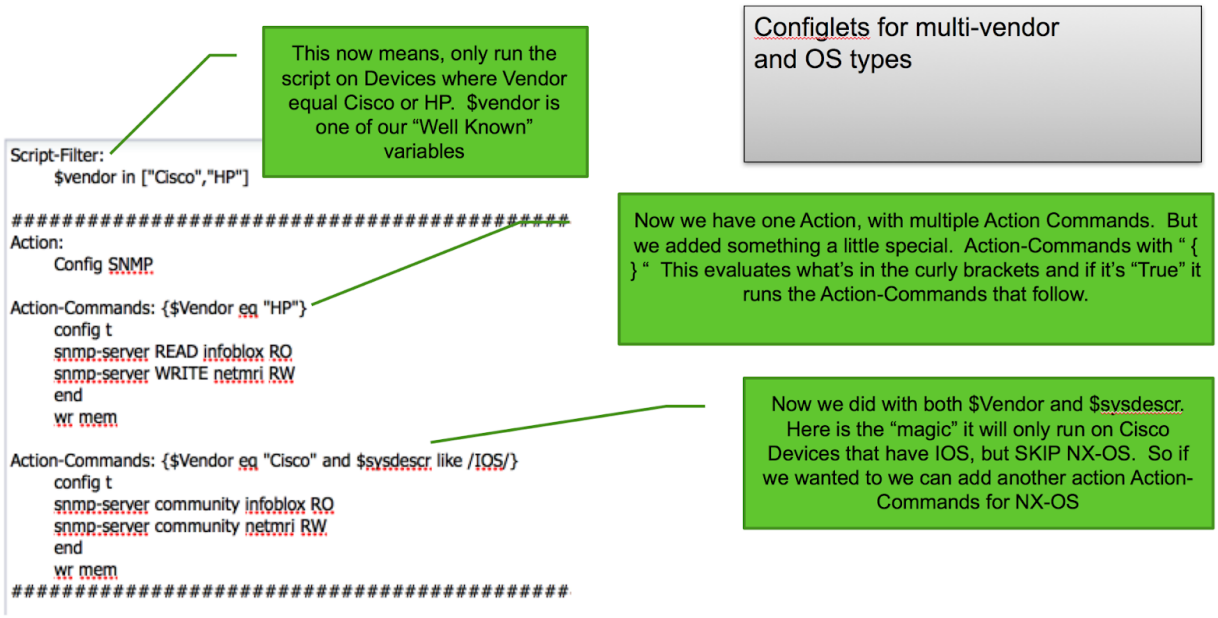
Script 2 – “Multi-Vendor”

NetMRI Version – any

To show the power of NetMRI multi-vendor support for updating SNMP Community strings.



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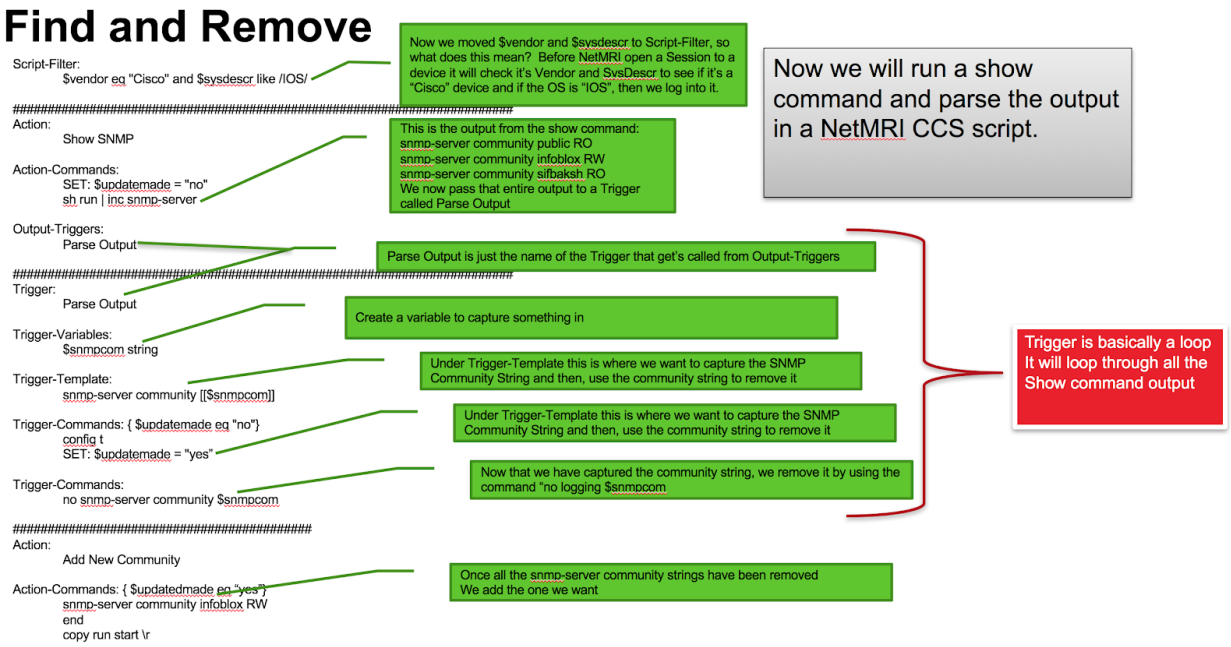
The beauty of this script is that it’s simple but so powerful imagine having one script that can change all the Community Strings on all your L2/L3 devices.

Script 3

Find and Replace

Now say you want to replace all your SNMP Community strings to a new standard, here is an example.



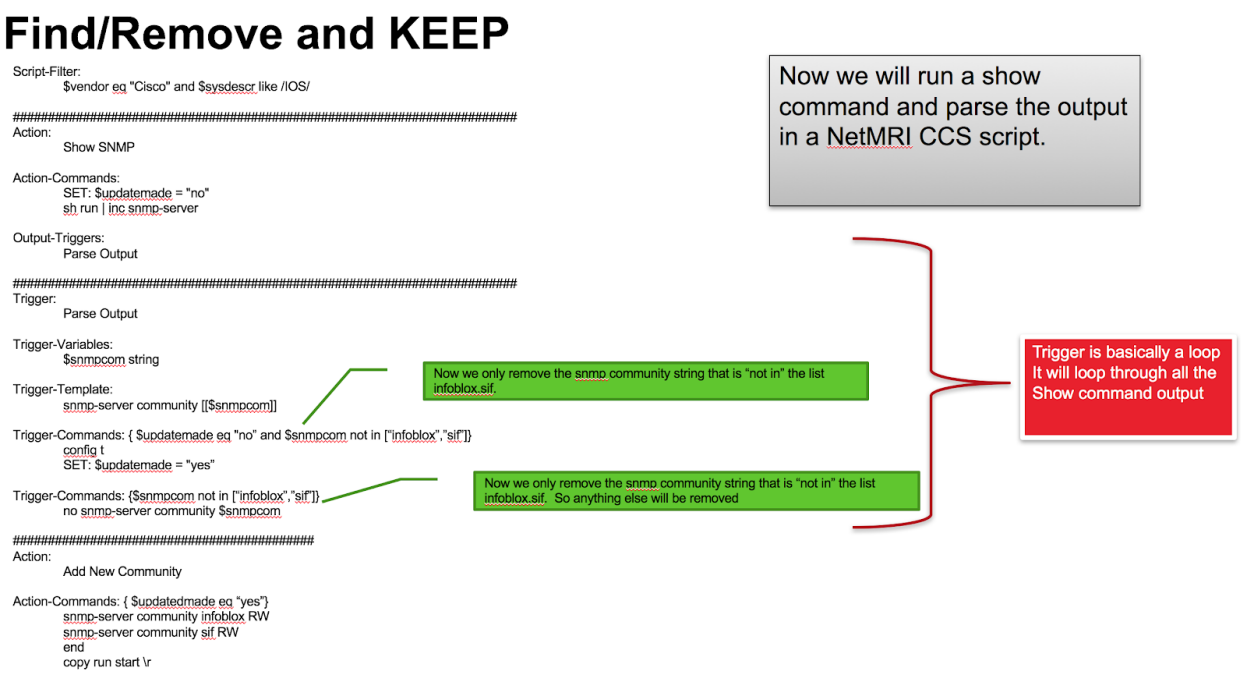
Now you can see the possibility with NetMRI Trigger Commands and yes you can pass one set of Trigger Commands to another.

The table below shows some Trigger Variables examples from the CSS Supplement Guide.

extractPattern	Corresponding Regular Expression
String	/[^\r\n]+/
Word or Id	/\w+/
Int or Integer	/\d+/
Double or Float	/\d+\.\d+/
Datetime	/\d{2,4}-\d{1,2}-\d{1,2} \d{1,2}:\d{1,2}:\d{1,2}/
Phoneno	/\(?\d{3}\)?[-]?\d{3}-\d{4}/
Zipcode	/\d{5}(-\d{4})/
Email	/[\w\.-]+@[\w\.-]+/
Ipaddress	/\d{1,3}\.\d{1,3}\.\d{1,3}\.\d{1,3}/
Regular expression	/Any valid Perl 5 regular expression/

Find, Remove and Keep

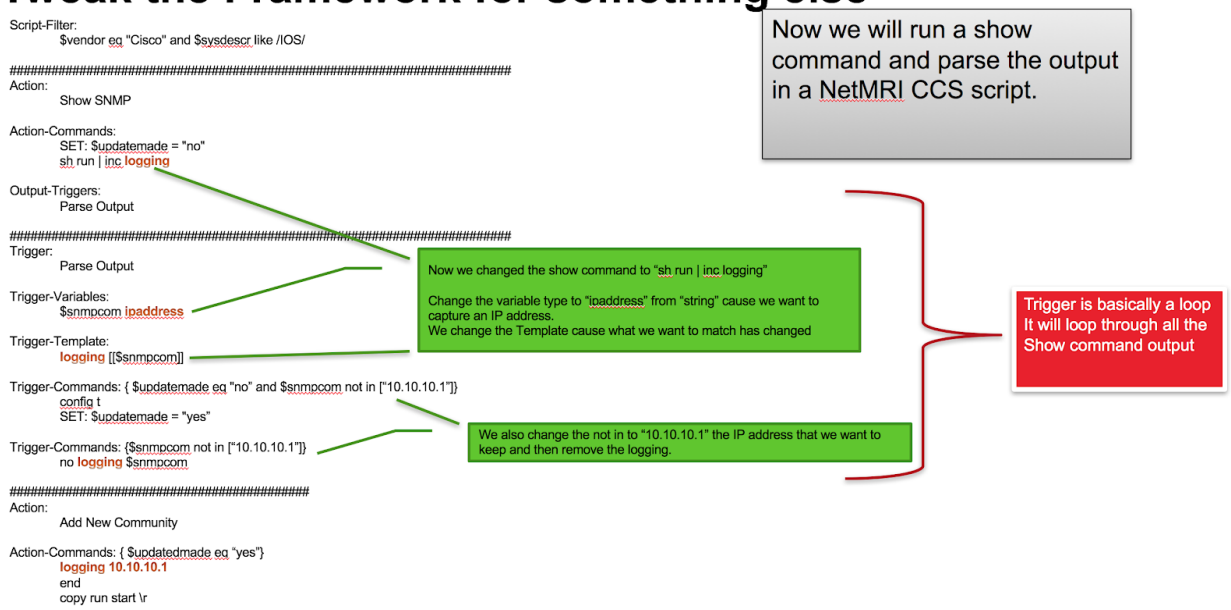
Almost the same as above, you can keep some of the configs that you want.



Now let's take the above script and change a few things, like the show command and the Trigger Template, Trigger Variable and the Trigger Command.

A few changes and a New Script

Tweak the Framework for something else



Yes that's how easy it is to change the script for something else. Now go think about all the possibilities of the other show commands you can run and do something with it.

IP Helper Script

Now we all have IP Helpers or something on each Interface that we would like to find and change. If you are looking at rolling out ISE and something similar to it you will find this script very useful.

IP helper-address Script Explained!