# **Getting started**

Great, you've downloaded the NetYCE VM and welcome to our automation framework.

(It is assumed you've installed the VM and are able to access it using the browser. If not the case, please check out the VM installation guide)

This guide will explain how to start with NetYCE. First we will make sure you can change the necessary settings to communicate to your nodes, adding those after which we will dive into jobs and templates.

The modeling around this has already been done. This is in the Design section of the tool.

# Spreadsheet

In order to manipulate the database of NetYCE easily, a spreadsheet can be used instead of writing API calls yourself. This provides an easy/lazy way to call the API, called the CSV API. A spreadsheet has been created as a template. The next chapters will use the contents of this spreadsheet.

Download:

netyce\_yce\_nodes.xlsx

Download:

#### netyce\_api\_cmdb\_nodes.xlsx

<u>Color coding</u> Orange: Values to use the correct service task (no changes required) Green: Mandatory variables (Make sure they are filled with your variables)

# CSV API

The CSV API can be found at Operate > Service config > CSV API. It is already filled with some explanation and examples on how to use it.

The downloaded spreadsheet already has the correct syntax which can be copied into the text area. There is no need to provide commas or delimiters yourself, this is automatically understood by the tool.

Each line will be an action. You may provide as many lines as desired.

Copy the desired lines into the text form and press next. An overview is given for the lines found and will show which variable has been assigned which value. Press next to continue and adding the information.

NetYCE support (System) of NetYCE					
YCE CSV API com	mmands				
Enter the API comma	ands in csv format in the box below.				
Enter the API comma Auto-detects the field	ands in csv format in the box below. 1-separator (tab,comma,bar,semicolon), do not quote				

But first, let's fill the sheet with information.

### **Changing credentials**

Let us set the username, password and an enable password before we add nodes. These credentials will be used to communicate with the devices.

The credentials are stored in the Domain. Every node that is linked to the Domain will use these credentials.

This spreadsheet can be used to modify the information, but it is also possible to do this in the GUI.

To do so, open Build > Domain, select the YCE domain and change Default\_enable\_secret on the Management tab, Rme\_user and Rme\_passwd on the Users tab.

C Design	Domains
Build	
	Domain Description
Main	YCE YCE
Regions	
Domain	
IPsec GRE	
Servers	
Templates	
Mpls vpns	
OS versions	New Duplicate Delete Import Export Search
Help	
Operate	Domain:     YCE     Domain_name:     YCE       Management     Users     Routing     Custom     Networks
	Snmp_syscontact: info@netyce.com Default_enable_secret:

### Adding nodes

Adding nodes to the NetYCE database is just as easy. Make sure all green columns are filled with your variables and the lines into the CSV API.

#### <u>Nodename</u>

This will be the hostname of the node.

#### <u>Vendor\_type</u>

This will be the vendor of the node, specifically mentioning the family if needed. A few example, which are also shown as comments in the spreadsheet:

- Cisco\_IOS
- Cisco\_XE
- Cisco\_XR
- HP\_C7
- Huawei\_S
- Junos

If you are missing a specific vendor, please let us know and we'll make sure you are able to continue to test/use our product.

<u>mgmtip</u>

Provide the IP that you wish to assign to the node.

## **Deleting nodes**

Deleting any node can be done using the GUI as well as the API. To use it from the GUI, go to Build > Main and select the Client. Either drill down using the Site or select the node directly in the bottom.

**NOTE** Deleting the node only, will not delete the linked Service. While deleting the service will also delete the node. (Recommended) Please delete the service associated with this node.

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C Design	YourLab					
	Client code	Client type	Client name			
Build	lab1	YCE	Demo Client type			
Main	YourLab	YCE				
Regions						
Domain						
IPsec GRE						
Servers						
Templates	New Edit Delete	Graph Search				
Mpls vpns	Search:	×				
OS versions						
Help	Sites VPN					
Operate	Site code	Site type	Address			
	YourLab	LAB	Closet 1			
C Admin						
	New Edit Delete	Graph Search				
	Nadas Caminas					
	Nodes Services					
	Site	Service		# Nodes	Nodes	
	YourLab	R1		1	R1	
	Edit Delete Sea	rch				

Using the API is as easy as pasting the line from the spreadsheet using the desired hostname.

### Jobs

Jobs are short for Command jobs which are used to communicate to one or multiple nodes. Command jobs are available at Operate > Node config > Command jobs.

Here you can type the hostname directly to add it to the list, or use the clientcode to drill down. Make sure that at least one node is added to the list and go to the next page.

Node config:       Command jobs       Basic cmd jobs       Port config       Startup confi         Push Command jobs         NetYCE support (System) of NetYCE         Clients/Sites/Nodes list         items should be separated (comma, space, semicolon, newline)         Add list         Clientcodes         Iabl         YourLab         >>         <         <         <	25/08/10 08:04				5/8
Push Command jobs MeYCE support (System) of NetYCE Clients/Sites/Nodes list items should be separated (comma, space, semicolon, newline) Add list Clientcodes Nabl YourLab Selected Nodes (1) Next	Node config:	Command jobs	Basic cmd jobs	Port config	Startup confi
Clients/Sites/Nodes list items should be separated (comma, space, semicolon, newline) Add list Clientcodes (1) VourLab YourLab VourLab	Push Comn NetYCE support (System) of	nand jobs			
Add list Clientcodes Selected Nodes () R1 VourLab >> <<< Next	Clients/Sites/Nodes li	st			
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Iab1     YourLab     >>     >>     >>     >>     >>     YourLab     >>     >>     >>     >>     >>     >>     >>     YourLab     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>     >>         >>     >>	Add list Clientcodes	Selected	Nodes	(1)	
	lab1 YourLab	× R1		★	Next

Here you'll see the following:

- a list of nodes, which also shows the Vendor and family
- a list of saved jobs
- a commands section
- a scenario section
- the scheduler section

To push a *simple* configuration change, you just have to do the following:

- 1. Select the desired node
- 2. fill the desired command(s) in the commands section
- 3. Schedule the task using a date and time or select now
- 4. press schedule

sh configuratio	on commands to nodes:		
urLab / YourI	.ab [LAB] Closet 1, Cabinet		
		planned / LAB	Cisco_IOS
			Select all
d iob	Default command job	▼ Load	Delete
- ]	Default command job	Save	<b>A b c c c</b>
name client-type	any	ourc	Public
description	Issue parameterized commands to the set	.ected	
	loaded 'Default command job' by 'System'		
imands:	ofiguration lines here		
			Evaluate
ario:			
Descript	tion <node> Command job</node>		
task = (	Command_job		
ŝ			
			change.id
datas	tomorrow V at 5 V 05 V or prov	C000xxx	CXXX
dule:		000000	566A
hedule	-auto-		
	Server	verbose log	

There is no need to worry about if you need to enter the enable or configuration mode or such. This is done for you within our vendor module(s). Of course, the username/password and/or enable password are mandatory to do this. The correct vendor module is chosen based on the information of this specific node as can be seen at the top of the screen.

### Templates

Templates can be used in several ways. A few examples:

- To build a tree of templates to generate the complete configuration
- As part of jobs to be vendor agnostic, simplicity and re-usability

• To parse information that is read from the device using show commands or reading the complete configuration, which than can be used to make decisions for changes

#### A vendor agnostic example explained

Per vendor/family the same template name may exist. This way you may create a 'NTP' template which will hold the configuration lines for each specific vendor/family. By calling the template from the job, using {NTP}, it will find the correct one using the assigned Vendor\_type of the specific node it is executing the job on.

This way you have the capability to send out the same job to multiple nodes of different vendors/families, which will all have the correct change as it was designed.

Templates (YCE) Main templates Sub templates Port templates Vendor Description Template Туре globa sub Cisco XR globa sub HP\_C7 sub global Huawei\_S global sub Junos NTP NTP sub Cisco\_IOS yceSNMP Cisco IOS sub vceVRF sub Cisco IOS New Du Revisions Template Vendor Type Status Revision Remark NTP 2018-10-31 12:30 NTP Cisco IOS sub production **Edit Template Revision** NTP Template Vendor type Cisco\_IOS Template status production Author NetYCE ٧ Revision 2018-10-31 12:30 NTP Remark Template text: 1 ! NTP 2 ntp server <Ntp\_server1> prefer 3 <Ntp server2> ntp server <Ntp server2>

An NTP sub template is provided as an example for Cisco\_IOS

### Template examples

For several vendors the 'global' sub template has been created as an example. It holds information on several possibilities on how to use it and which variables belong to which section. **NOTE:** This is not a limited list.

### Template in jobs

Templates can be called from within jobs or other templates and it looks like this:

{NTP}

where NTP is the template name.

An example has been added to the stored jobs, called 'NTP'.

Node config:	Command jobs	Basic cmd jobs	Port config	Startup config	Node migration	Template usage		
Push Command jobs NetYCE support (System) of NetYCE								
Push configuration	commands to nodes:							
YourLab / YourLab	YourLab / YourLab							
		[LAB] Close	t 1, Cabinet	nlan	med / LAB			
		✓ R1		plan	lited / LAD	Cisco_IOS		
						Select all		
Load job N	ITP				▼ Load	Delete		
Loud job								
name N	TP				Save	Public		
description N	TP example							
description N	aded 'NTP' by 'NetVi	CE support'			/_			
	uucu iiii by iicii	on support						
Commands:								
1 NTP exa 2 {NTP}	ample							
Scenario:								
<pre>1 Description <node> Command_job 2 task = Command_job 3</node></pre>								

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