

# PI 3.2. Creation of User Defined CLI Template with Single Line and Multiple Line Command

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## Introduction

This document describes how to create user defined CLI templates with single line and multiple line commands.

## Prerequisites

### Requirements

Cisco recommends that you have knowledge of these topics:

- Prime Infrastructure (PI)
- Template Features
- CLI Commands

### Components Used

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

- PI 3.2.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

## Configure

## Single Command Example

### Deletion of User from the Device

- To create a user name in the device.

**Note:** In this example, username inniti will be deleted.

```
BGL14-1.S.04-2900-1#show running-config | i username
username cisco privilege 15 password 0 cisco
username jkadmin privilege 15 secret 9 $9$XOCmcxGJyySQhk$v.mz/x5WKDKzpXrGb6k8to5Q5YFinNWfb3c5V5Xqmjo
username jkprime privilege 15 secret 9 $9$9IKexQCpUzUJK.$U2j/h4s8LpDFhwh59SJZm18Gb/cBNQT3SqFPLPCPupA
username inniti privilege 15 password 7 151B05020D3E22
BGL14-1.S.04-2900-1#
```

- Go to **Configuration > Features & Technologies > My Templates > CLI Templates**

Create a template with multi-command:

Example from User Guide

Adding Multi-line Commands

To enter multi-line commands in the CLI Content area, use the this syntax:

<MLTCMD>First Line of Multiline Command

Second Line of Multiline Command

.....

.....

Last Line of Multiline Command</MLTCMD>

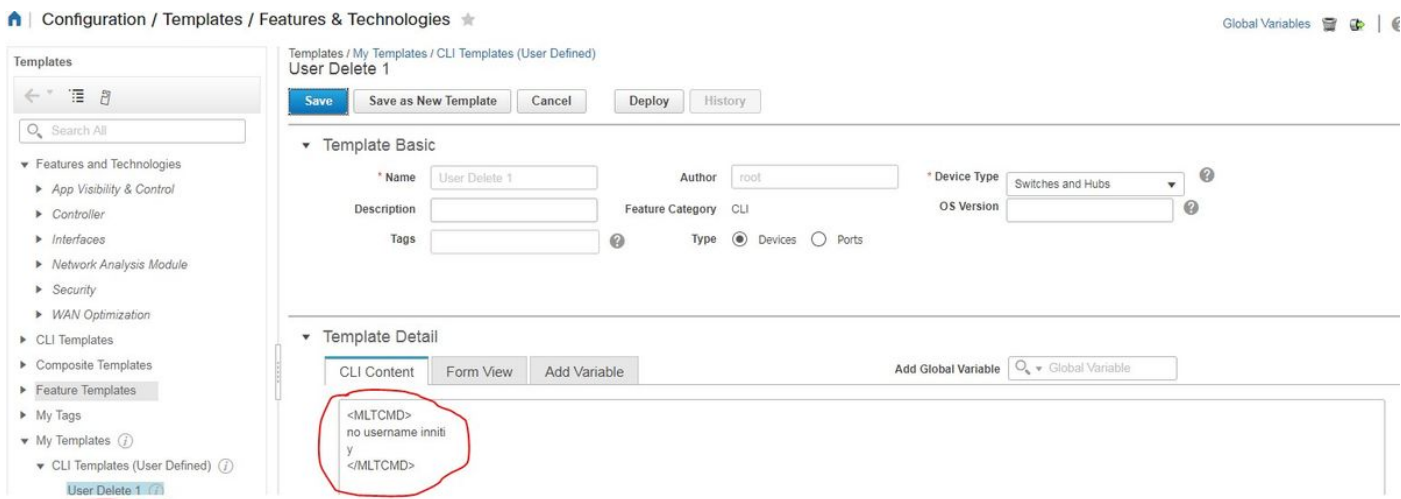
Image 2

<MLTCMD>

no username inniti

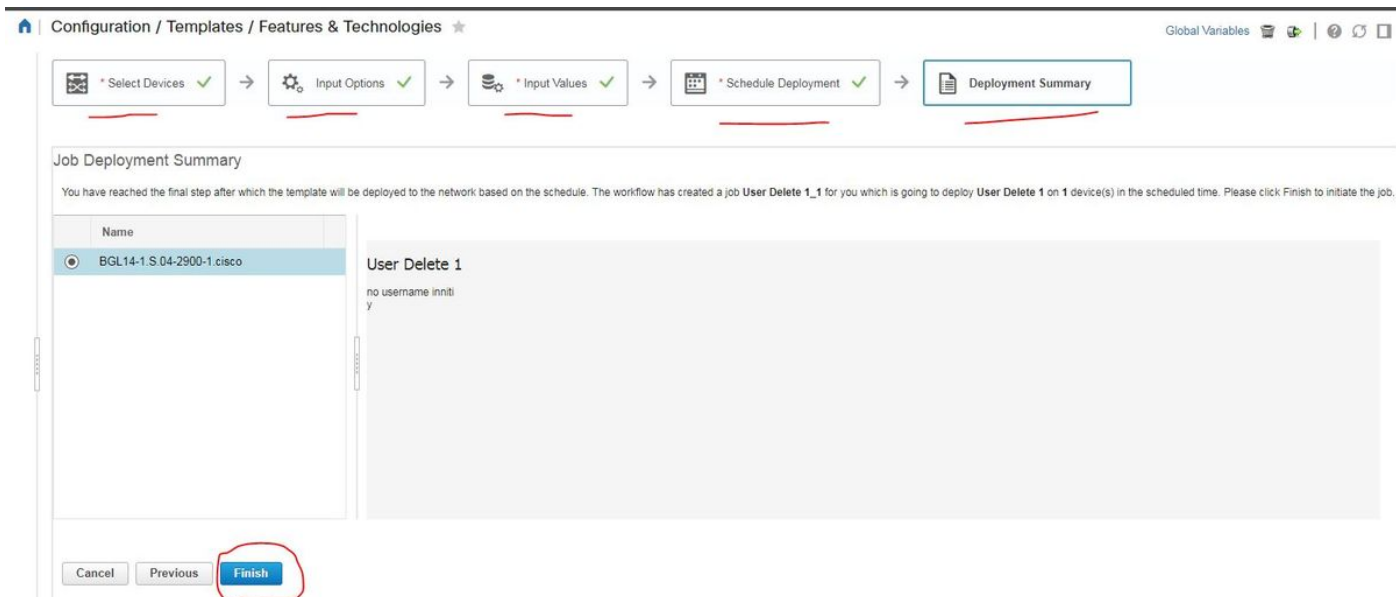
y

</MLTCMD>

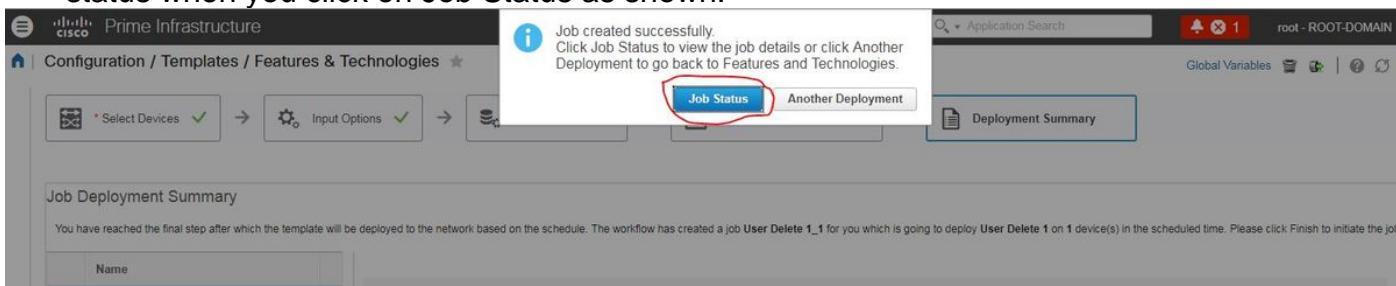


- Deploy the template.

**Note:** Select the device and re-check the template accordingly.



- Once you deploy, a Job that corresponds will run in the Background and you can check its status when you click on Job Status as shown:



## Verify

- Check the Status in PI as well as in Device:

On PI:

Administration / Dashboards / Job Dashboard / User Delete 1\_1

'Recurrence' None  
'Description' N/A

Showing latest 5 Job instances [Show All](#) Total 1

Run ID	Status	Duration(hh:mm:ss)	Start Time	Completion Time
12907003	Success	00:00:01	2017-07-25 15:05	2017-07-25 15:05

Job summary Successful deployment on 1 device(s).

Job Results for User Delete 1 Total 1

Device	Status	Transcript
10.106.68.57	Success	configlet.no username innitiy response.terminal width 0config tno username innitiy

On Device:

Username inniti is deleted.

```
BGL14-1.S.04-2900-1#show running-config | include username
username cisco privilege 15 password 0 cisco
username jkadmin privilege 15 secret 9 $9$XOCmcxGJyySQhk$v.mz/x5WKDKzpXrGb6k8to5Q5YFinNWfb3c5V5Xqmjo
username jkprime privilege 15 secret 9 $9$9IKexQCpUzUJK.$U2j/h4s8LpDFhwh59SjZm18Gb/cBNQT3SqFPLPCPupA
BGL14-1.S.04-2900-1#
```

Go to **Configuration > Features & Technologies > My Templates > CLI Templates**

- **Create one Template with Interactive Commands**

Example from user guide

Adding Interactive Commands

An interactive command contains the input that must be entered following the execution of a command.

To enter an interactive command in the CLI Content area, use the following syntax:

```
CLI Command<IQ>interactive question 1<R>command response 1 <IQ>interactive question 2<R>command response 2
```

where <IQ> and <R> tag are case-sensitive and must be entered as uppercase

**In the example:**

```
#INTERACTIVE
```

```
no username inniti<IQ>confirm<R>y
```

```
#ENDS_INTERACTIVE
```

The screenshot shows the configuration page for a CLI template named "User Delete-3". The left sidebar shows a tree view of templates, with "User Delete-3" selected. The main area is divided into "Template Basic" and "Template Detail" sections. In the "Template Basic" section, the name is "User Delete-3", author is "root", device type is "Switches and Hubs", feature category is "CLI", and type is "Devices". In the "Template Detail" section, the CLI content is shown as: `#INTERACTIVE  
no username inniti<IQ>confirm<R>y  
#ENDS_INTERACTIVE]`. This content is circled in red.

- Deploy the template.

## Verify




- Check the status in PI as well as Device:

The screenshot shows the Job Dashboard for "User Delete-3\_1". It displays a table of job instances with columns for Run ID, Status, Duration, and Start Time. The first job instance (Run ID: 12907250) has a status of "Success" and a duration of 00:00:02. Below the table, there is a "Job Results for User Delete-3" section with a table showing the device status and transcript. The transcript shows the successful execution of the CLI commands: `configlet:  
#INTERACTIVE  
no username inniticonfirmy  
#ENDS_INTERACTIVE  
response:  
terminal width 0  
config t  
no username inniti  
BGL14-1.S.04-2900-1#config t  
Enter configuration commands, one per line. End with CNTL/Z.  
BGL14-1.S.04-2900-1(config)#no username innitino username inniti  
BGL14-1.S.04-2900-1(config)#]`

**Note:** For Interactive commands, it is observed that in few examples 'Interactive Question' when copied completely does not run properly. In such a case, you just need to type the last word. For example, when you keep complete sentence it will fail. **#INTERACTIVE no username inniti <IQ>This operation will remove all username related configurations with same name. Do you want to continue? [confirm]<R>Y #ENDS\_INTERACTIVE.**

The screenshot shows the configuration page for a CLI template named "User Delete". The left sidebar shows a tree view of templates, with "User Delete" selected. The main area is divided into "Template Basic" and "Template Detail" sections. In the "Template Basic" section, the name is "User Delete", author is "root", device type is "Switches and Hubs", feature category is "CLI", and type is "Devices". In the "Template Detail" section, the CLI content is shown as: `#INTERACTIVE  
no username inniti <IQ>This operation will remove all username related configurations with same name.Do you want to continue? [confirm]<R>Y  
#ENDS_INTERACTIVE`

'Recurrence' None  
'Description' N/A


Showing latest 5 Job instances [Show All](#) Total 1   

Run ID	Status	Duration(hh:mm:ss)	Start Time	Completion Time
12907429	<span style="color: red;">✘</span> Failure	00:04:56	2017-07-25 15:22	2017-07-25 15:27

Job summary Failed deployment on 1 device(s).

Job Results for User Delete

Device	Status	Transcript
10.106.68.57	<span style="color: red;">✘</span> Failed	Error : Connection timed out while executing the command Current output : This operation will remove all username related configurations with same name.Do you want to continue? [confirm] Current expects : (BGL14-1.S.[0.30]BGL14-1.S.04-2900-1)[*]+#s*z BGL14-1.S.04-2900-1#s*z This operation will remove all username related configurations with same name.Do you want to continue? [confirm]

Total 1 

## Multiple Commands Example

### Crypto Key Generation on Switch

- How the command looks on device when ran:

```
BGL14-1.S.04-2900-1(config)#crypto key generate rsa
```

```
% You already have RSA keys defined named BGL14-1.S.04-2900-1.cisco.
```

```
% Do you really want to replace them? [yes/no]: yes
```

Choose the size of the key modulus in the range of 360 to 4096 for your General Purpose Keys. Choosing a key modulus greater than 512 may take a few minutes.

```
How many bits in the modulus [512]: 512
```

```
% Generating 512 bit RSA keys, keys will be non-exportable...
```

```
[OK] (elapsed time was 1 seconds)
```

```
BGL14-1.S.04-2900-1(config)#crypto key generate rsa
% You already have RSA keys defined named BGL14-1.S.04-2900-1.cisco.
% Do you really want to replace them? [yes/no]: yes
Choose the size of the key modulus in the range of 360 to 4096 for your
General Purpose Keys. Choosing a key modulus greater than 512 may take
a few minutes.
```

```
How many bits in the modulus [512]: 2048
```

- Use of Multi-Commands:

```
<MLTCMD>
```

```
crypto key generate rsa
```

```
yes
```

```
2048
```

```
</MLTCMD>
```

Templates / My Templates / CLI Templates (User Defined)  
crypto

Save Save as New Template Cancel Deploy History

**Template Basic**

Name: crypto Author: user Device Type: Switches and Hubs  
 Description: Feature Category: CLI OS Version:  
 Tags: Type:  Device  Pure

**Template Detail**

CLI Content Form View Add Variable Add Global Variable Global Variables

```

->BGL14-1#
crypto key generate rsa
yes
2048
->BGL14-1#
  
```

- Deploy the template.

## Verify

- Final status in PI and on device:

**Administration / Dashboards / Job Dashboard / crypto\_1**

Job Summary: Successful deployment on 1 device(s).

Run ID	Status	Duration(hh:mm:ss)	Start Time
12912919	<span style="color: green;">Success</span>	00:00:16	2017-07-25 15:42

Job Results for crypto

Device	Status	Transcript
10.106.68.57	Success	configlet:crypto key generate rsayes2048 response:terminal width

```

configlet:
crypto key generate rsa
yes
2048
response:
terminal width 0
config t
crypto key generate rsa
yes
2048
BGL14-1 S.04-2900-1#config t
Enter configuration commands, one per line. End with CNTL/Z.
BGL14-1 S.04-2900-1(config)#crypto key generate rsa
% You already have RSA keys defined named BGL14-1.S.04-2900-1.cisco.
% Do you really want to replace them? [yes/no]: yes
Choose the size of the key modulus in the range of 360 to 4096 for your
General Purpose Keys. Choosing a key modulus greater than 512 may take
a few minutes.
How many bits in the modulus [512]: 2048
% Generating 2048 bit RSA keys, keys will be non-exportable...
[OK] (elapsed time was 15 seconds)
BGL14-1 S.04-2900-1(config)#>
  
```

```

BGL14-1.S.04-2900-1#show crypto key mypub rsa
% Key pair was generated at: 17:41:17 UTC May 2 2001
Key name: TP-self-signed-4280444032
Key type: RSA KEYS
Storage Device: private-config
Usage: General Purpose Key
Key is not exportable. Redundancy enabled.
  
```

- Use of Interactive Command:

```
#INTERACTIVE
```

```
crypto key generate rsa<IQ>yes/no<R>yes<IQ>512<R>2048
```

```
#ENDS_INTERACTIVE
```

[Save](#) [Save as New Template](#) [Cancel](#) [Deploy](#) [History](#)

▼ Template Basic

\* Name  Author  \* Device Type Description  Feature Category  OS Version Tags  Devices  Ports

▼ Template Detail

[CLI Content](#) [Form View](#) [Add Variable](#)

Add Global Variable

```
#INTERACTIVE
crypto key generate rsa<IQ>yes/no<R>yes<IQ>512<R>2048
#ENDS_INTERACTIVE
```

- Deploy template.

### Verify

- Final status in PI:

The screenshot shows the Cisco Prime Infrastructure interface. The breadcrumb navigation is 'Administration / Dashboards / Job Dashboard / crypto1\_1'. The job details show a successful deployment on 1 device(s) with a duration of 00:00:21. A transcript window is open, displaying the following output:

```
configlet:
#INTERACTIVE
crypto key generate rsayes/noyes5122048
#ENDS_INTERACTIVE
response:
terminal width 0
config t
crypto key generate rsa
BGL14-1.S.04-2900-1(config)#config t
Enter configuration commands, one per line. End with CNTL/Z.
BGL14-1.S.04-2900-1(config)#crypto key generate rsacrypto key generate rsa
% Generating 2048 bit RSA keys. Keys will be non-exportable...
[OK] (elapsed time was 19 seconds)
BGL14-1.S.04-2900-1(config)#>
```

## Troubleshoot

There is currently no specific troubleshooting information available for this configuration.