LANforge-CLI API Cookbook

The LANforge-CLI API Cookbook provides a series of detailed examples of how to craft testing scripts for unattended/automated operation. Each example intends to give the reader a runnable test script and a better understanding of how to use the LANforge-CLI API.

Please read the summary information on this page before reading the chapters listed below.

LANforge-CLI Detailed Cookbook Examples

Scripting Basics

1. Introduction
2. Operating LANforge scripts from Windows
3. LANforge Entity ID
4. Generic Endpoint Scripts

CLI Concepts

5. Changing Station POST_IFUP Script with the CLI API
6. Scripting Attenuation with CSV data
7. Station CLI Operations

Perl Scripts

8. Monitor and Reset Ports with the portmod Script
9. Cross Connects and Endpoints Tutorial
10. Creating Connections with the FIREmod Script
11. Operating Endpoint Hunt Scripts with the CLI
12. Generating WiFi Traffic with the Associate Script
13. Changing Station WiFi SSID with the CLI API
14. Chamber View: Automated tests with script
15. Control a chamber with the if_chamber.pl Script

JSON

16. Querying the LANforge GUI for JSON Data
17. Querying the LANforge JSON API using Python
18. Managing WANlinks using JSON and Python

Places to Run CLI Commands

You do not need to operate scripts directly from the LANforge server, and this allows you to code scripts in your
preferred text editing environment. Likewise, you do not need to run a copy of LANforge Server on your desktop. Scripts will create a plain-text connection to the LANforge server you specify.

Windows Desktop

You can install a copy of the LANforge Server on your windows desktop (without a license) so that you have access to the Perl scripting libraries. Edit scripts and run them from your C:\Program Files\LANforge-Server\scripts directory.

Linux Desktop

You can copy the LANforge scripts folder directly from your LANforge server to your Documents directory with scp.

SSH or VNC connection to LANforge Server

Using vncviewer, rdesktop or ssh are all fine options to connect to the LANforge server to write and operate scripts. The LANforge server comes with a basic Linux desktop and you can use emacs, vim, pluma, or gedit text editors installed by default. When editing scripts on the LANforge server itself, be careful to back up your work before you upgrade LANforge. The LANforge install process will over-write scripts of the same name in the scripts directory.

Requirements for Scripts

Your desktop (or other computer) running CLI scripts needs to have a reliable (wired) connection to the management port of your LANforge server. If you are engaging in long running tests, you might consider running the scripts from the LANforge manager itself if your desktop machine needs to be powered off.

Script Libraries

CLI scripts are written using Perl. They require the libraries in /home/lanforge/scripts/LANforge. Users may write scripts in other programming languages, such as python, but in that case, they will not be able to take direct advantage of the Perl scripts included in LANforge.

On Windows

LANforge is more fully featured on Linux, but basic support exists on Windows as well.

You can run CLI scripts from any Windows desktop as long as you have Perl installed. You can use ActiveState Perl or Perl from the Cygwin project. We also highly suggest installing PuTTY ssh client to access your LANforge server.

On Linux/OS X

Most Linux distributions come with and ssh client and Perl already installed.

LANforge Server Requirements

The following examples will create test scenarios that work on LANforge Linux systems running the LANforge software with the LANforge kernel and a sufficient license. If you are running LANforge server using another Linux kernel, you may not be able to operate some of the examples. (Features like Armageddon, operation of WiFi-AC
Before Starting LANforge-CLI Traffic Generation

Before attempting the examples below, ensure that you have successfully followed these software installation guides:

- LANforge-GUI Installation
- LANforge Server Installation

If you have any questions or suggestions, email support@candela.com.

It is also recommended that you back up your current running LANforge Server database so that you may safely return to your current operating state.

For instance:

```
su - root
cd /home/lanforge
tar -cvzf my_db_backup.tar.gz DB
```

* All cookbook examples in one page. Good for printing.

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