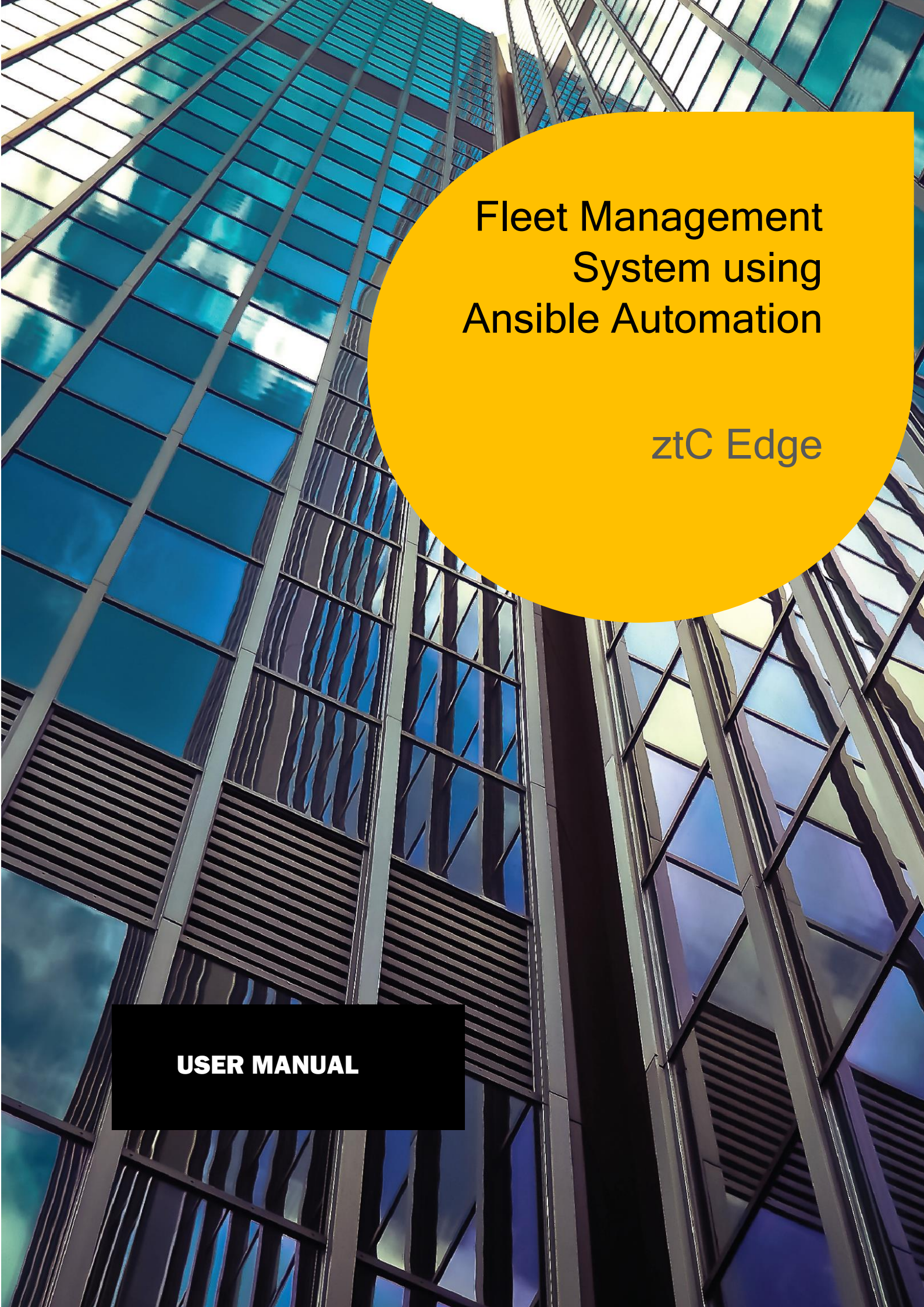


Fleet Management System using Ansible Automation

ztC Edge

USER MANUAL

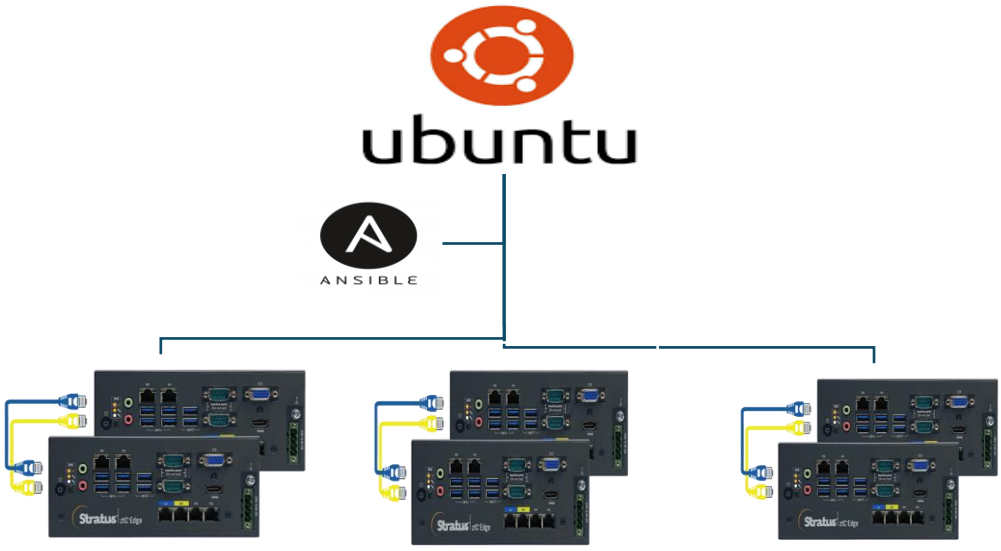
Introduction

When a user has multiple Stratus ztC Edge devices in their environment, it is impossible to monitor and manage them simultaneously and the user need to access the individual device/clusters to perform operations the system.

Customers need a single infrastructure, which enables them to control numerous Stratus ztC Edge clusters and perform desired operations.

With the help of **Ansible Automation** architecture the customers can monitor and manage the devices/clusters on any operating system with minimum resources.

The user will have to specify the ztC Edge cluster address they will be working on and are allowed to perform operations using the available API calls.



System Requirements

- An Ubuntu 22.04 LTS operating system with Ansible installed.

- Make sure that python or python3 packages are also installed in the Ubuntu operating system.

- A stable network connection with ztC Edge installed and running successfully in the network.

- Access to the ztC Edge devices and their REST APIs in the network.

- Cluster IP Address, Username and Password (admin access) to all the available ztC Edge in the network.

- Download and store all the Python scripts and Ansible Playbooks from the GIT repository (ztC repository), into a single directory and access them using the command line/terminal.

Installation Instructions

To Install ansible follow the procedure below:

You need sudo rights to run commands in the terminal.

NOTE: The following approach (Pulling of PPA package) is not suitable for Ansible installation on a virtual machine running on ztC Edge due to the internal network restrictions.

To overcome this, the installation can be done by importing Ansible Debian package and unpacking manually. (Unpacking .tar package on VM)

1. Verify sudo privileges and update system packages

```
sudo apt upgrade -y
```

2. Add Ansible PPA (Personal Package Archive)

```
sudo apt-add-repository ppa: ansible/ansible
```

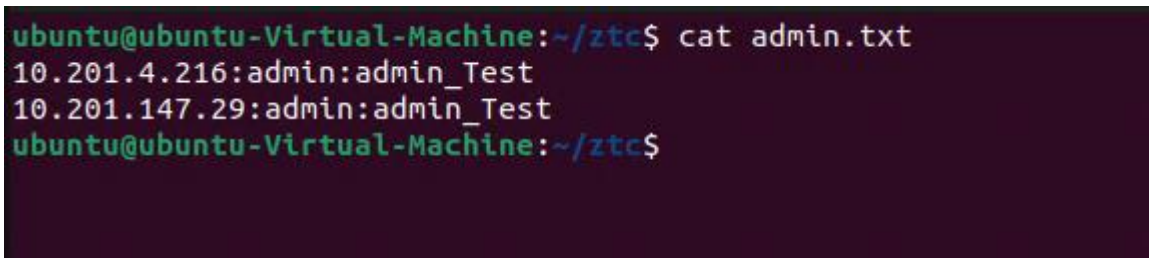
3. Install Ansible and verify the installation

```
sudo apt install ansible
ansible --version
```

User Interface Overview

Once all the installations are complete, access the directory containing all the scripts and playbooks using command line.

1. Create a file with all the cluster IP, username, password and save it in following format and as admin.txt.

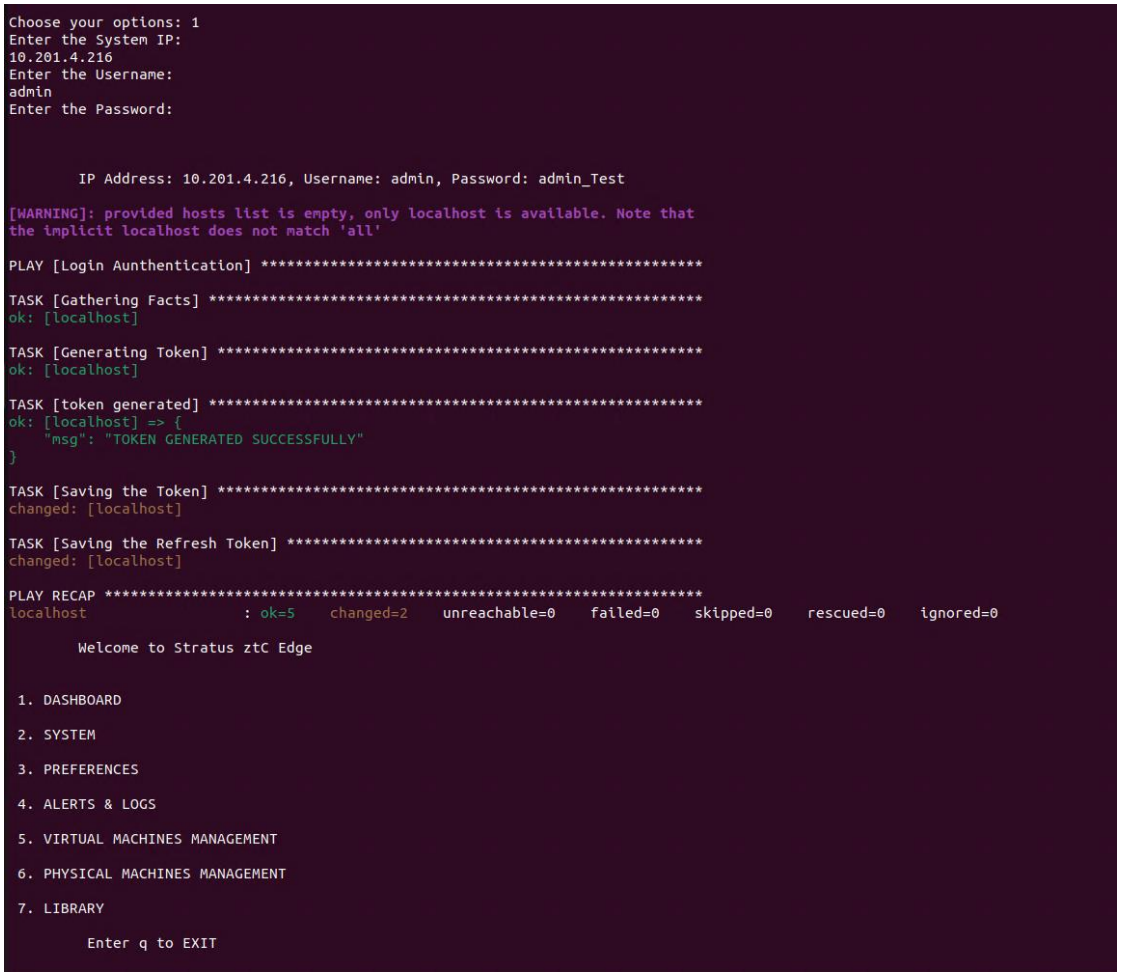


2. To execute the master script, use the following command

```
python3 ztc.py
```

3. Once the command is successfully executed, it should take you to the TUI to choose between Single (1) and Multiple (2) clusters.

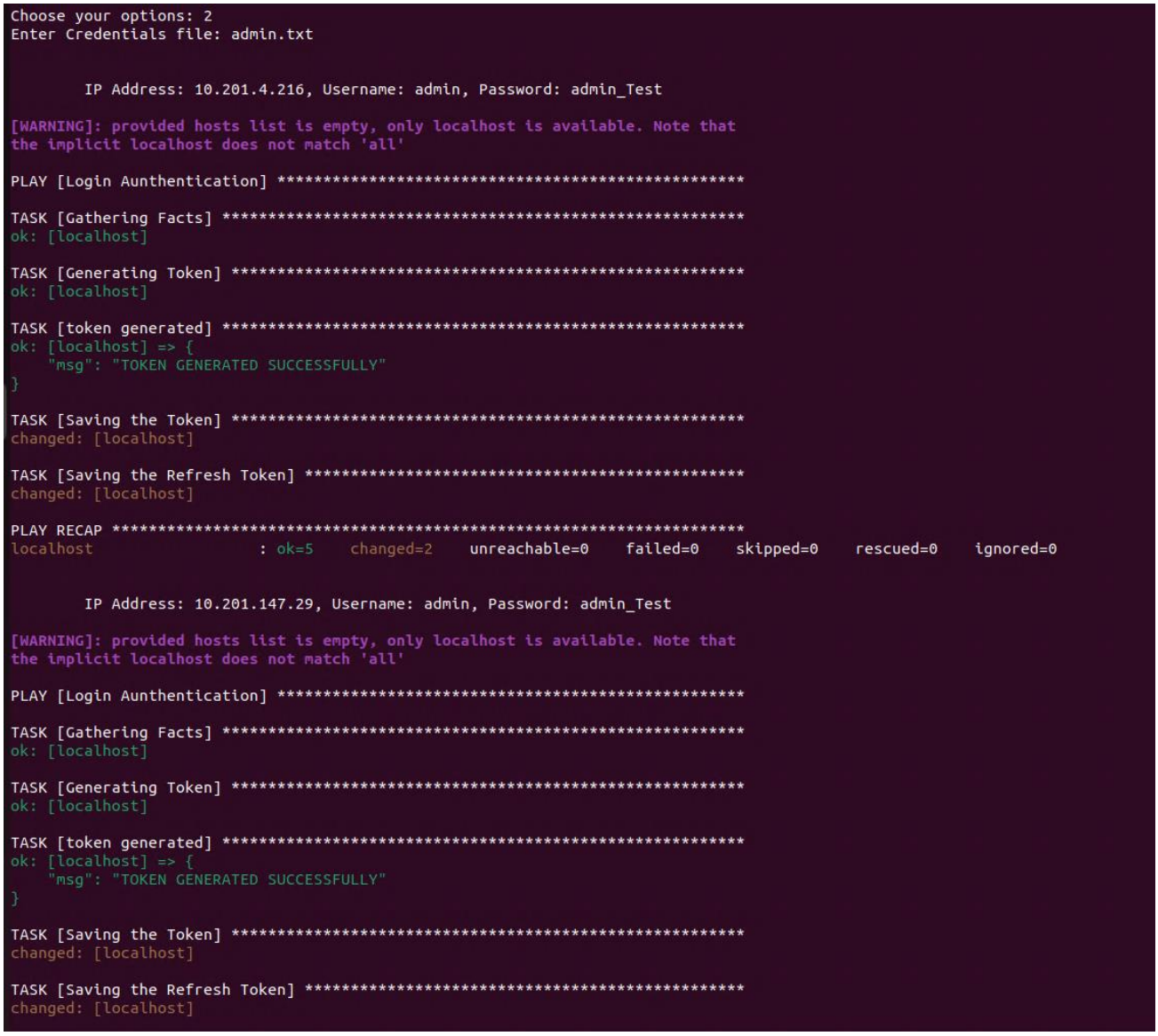
4. If you choose Single cluster management, the flow is shown below for Node Stats.



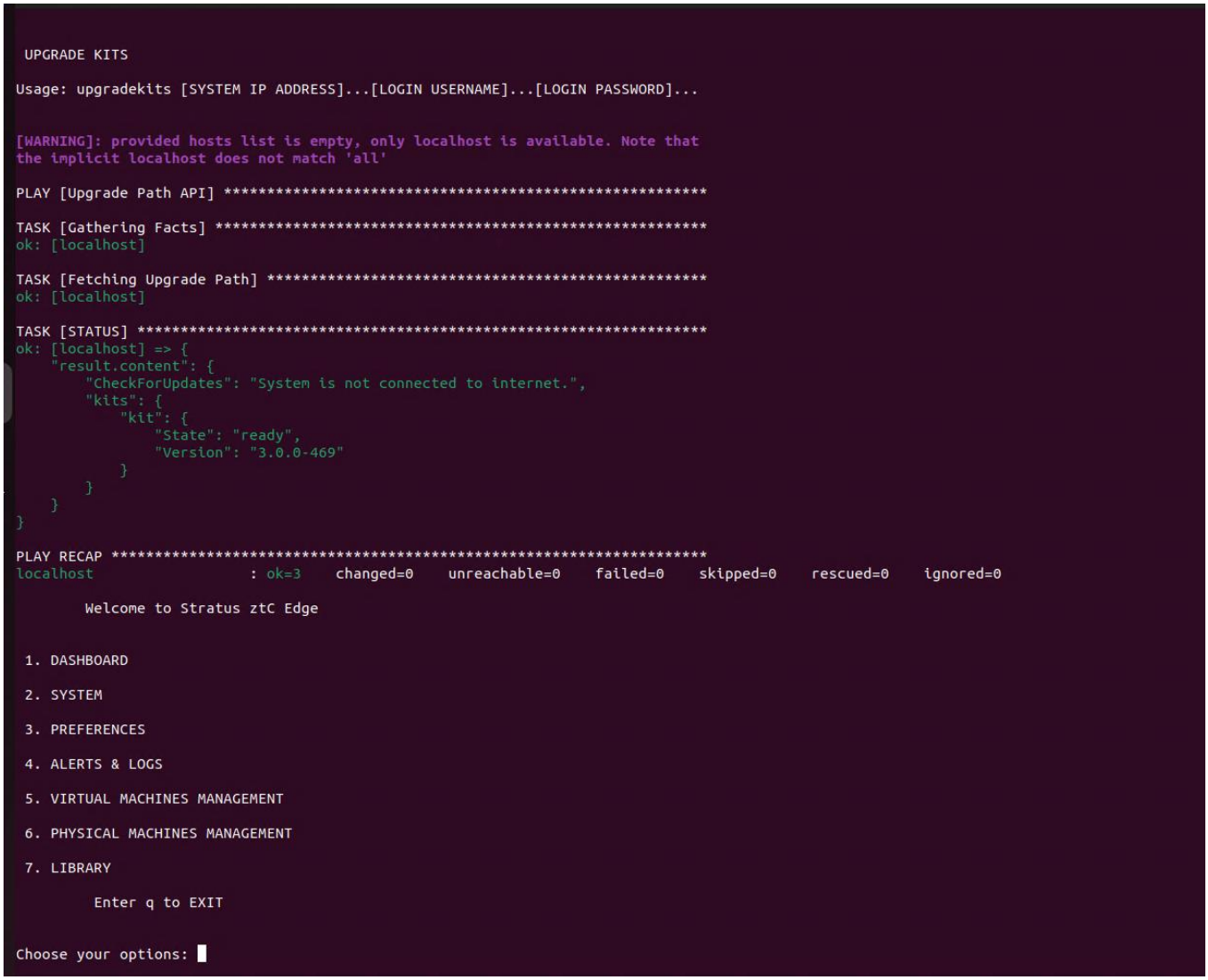
```
1. NODE STATS
Usage: nodestats [SYSTEM IP ADDRESS]...[LOGIN USERNAME]...[LOGIN PASSWORD]...

2. CLUSTER STATS
Usage: clusterstats [SYSTEM IP ADDRESS]...[LOGIN USERNAME]...[LOGIN PASSWORD]...

 Enter the choice: 1
[WARNING]: provided hosts list is empty, only localhost is available. Note that
the implicit localhost does not match 'all'

PLAY [Node Stats API] ***************************************************

TASK [Gathering Facts] **************************************************
ok: [localhost]

TASK [Fetching Node Stats] **********************************************
ok: [localhost]

TASK [STATUS] ***********************************************************
ok: [localhost] => {
    "result.content": {
        "node-level": {
            "node": [
                {
                    "cpu-utilization": 35.04,
                    "disk": {
                        "disk-name": "Logical Disk - 0",
                        "disk-read": 21606.4,
                        "disk-write": 144855.05
                    },
                    "memory-utilization": 4.63,
                    "network": [
                        {
                            "network-name": "P2",
                            "network-recieve": 84720.16,
                            "network-transmit": 787.2
                        },
                        {
                            "network-name": "A1",
                            "network-recieve": 393.6,
                            "network-transmit": 393.6
                        },
                        {
                            "network-name": "A2",
                            "network-recieve": 433176.97,
                            "network-transmit": 64033.92
                        },
                        {
                            "network-name": "P1",
                            "network-recieve": 83470.4,
                            "network-transmit": 4070.24
                        }
                    ],
                    "node-name": "node1"
```

Trash

5. If you choose Multiple Cluster Management, the flow is shown below.



```
        Welcome to Stratus ztC Edge


 1. DASHBOARD

 2. SYSTEM

 3. PREFERENCES

 4. ALERTS & LOGS

 5. VIRTUAL MACHINES MANAGEMENT

 6. PHYSICAL MACHINES MANAGEMENT
Ubuntu Software
 7. LIBRARY

         Enter q to EXIT


Choose your options: 7


        IP Address: 10.201.4.216, Username: admin, Password: admin_Test


 UPGRADE KITS

Usage: upgradekits [SYSTEM IP ADDRESS]...[LOGIN USERNAME]...[LOGIN PASSWORD]...


[WARNING]: provided hosts list is empty, only localhost is available. Note that
the implicit localhost does not match 'all'

PLAY [Upgrade Path API] ****************************************************

TASK [Gathering Facts] *****************************************************
ok: [localhost]

TASK [Fetching Upgrade Path] ***********************************************
ok: [localhost]

TASK [STATUS] **************************************************************
ok: [localhost] => {
    "result.content": {
        "CheckForUpdates": "System is not connected to internet.",
        "kits": {
            "kit": {
                "State": "ready",
                "Version": "3.0.0-467"
            }
        }
    }
}

PLAY RECAP *****************************************************************
```


UPGRADE KITS
Usage: upgradekits [SYSTEM IP ADDRESS]...[LOGIN USERNAME]...[LOGIN PASSWORD]...
[WARNING]: provided hosts list is empty, only localhost is available. Note that
the implicit localhost does not match 'all'
PLAY [Upgrade Path API] **
TASK [Gathering Facts] ***
ok: [localhost]
TASK [Fetching Upgrade Path] ***
ok: [localhost]
TASK [STATUS] **
ok: [localhost] => {
"result.content": {
"CheckForUpdates": "System is not connected to internet.",
"kits": {
"kit": {
"State": "ready",
"Version": "3.0.0-469"
}
}
}
}
PLAY RECAP ***
localhost : ok=3 changed=0 unreachable=0 failed=0 skipped=0 rescued=0 ignored=0
Welcome to Stratus ztC Edge
1. DASHBOARD
2. SYSTEM
3. PREFERENCES
4. ALERTS & LOGS
5. VIRTUAL MACHINES MANAGEMENT
6. PHYSICAL MACHINES MANAGEMENT
7. LIBRARY
Enter q to EXIT
Choose your options:

6. When quit(q) is chosen, Logout API is executed on all the clusters and the tokens are invalidated.