Inventec

Getting Started Guide

December, 2017

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Purpose

This getting started guide provides steps necessary (as shown below) to initially bring up the Inventec switches for configuration.

1. Login to the switch via console port "CON"
2. Bring up Inventec Network Operating System "INOS"
3. Login to "INOS"
4. Enter privileged mode and execute CLI command to show management IP address
5. Login to the switch via management port "MGMT"
6. Enter configuration mode and perform an simple configuration as an example to show how it works
7. Assign static IP address to the management port
8. Bare metal switch preinstalled with ONIE

For additional installation and configuration information for the Inventec switches, see the Inventec switch documentations: INOS Administration Guide and INOS CLI Command Reference.

Before you start

Refer to the switch User Manual "Appendix A" to make sure the switch is properly positioned on desktop or rack mounted. DHCP is enabled by default to acquire IP address on the network. To get access to the IP address information by console, configure the terminal server or terminal-emulation program to use the following settings:

Baud rate: 115200 bps
Data bits: 8
Parity: none
Stop bit: 1
Flow control: none

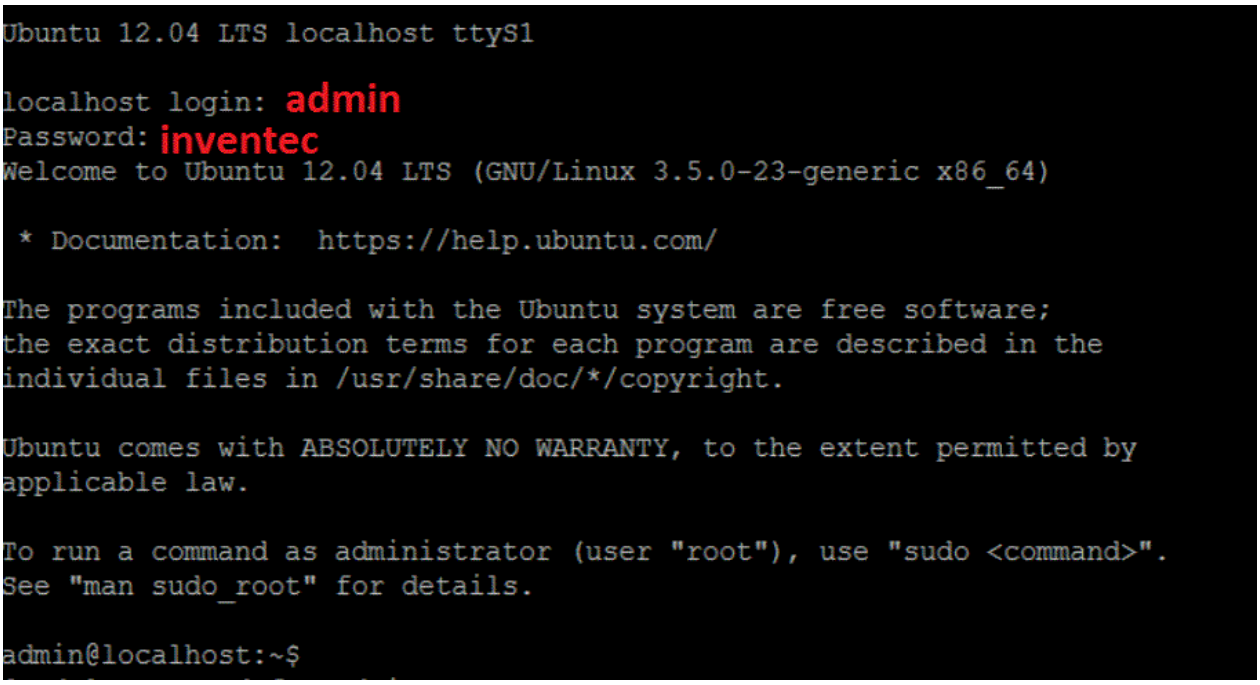
Please note: This getting started guide shows how to access the switch by console, then by management port using IP address acquired by DHCP.

To configure static IP address on management port to access the switch. Please refer to Step 7. "Assign static IP address to the management port."

Now connect a console cable from terminal server to the console port "CON" at the back of the switch.

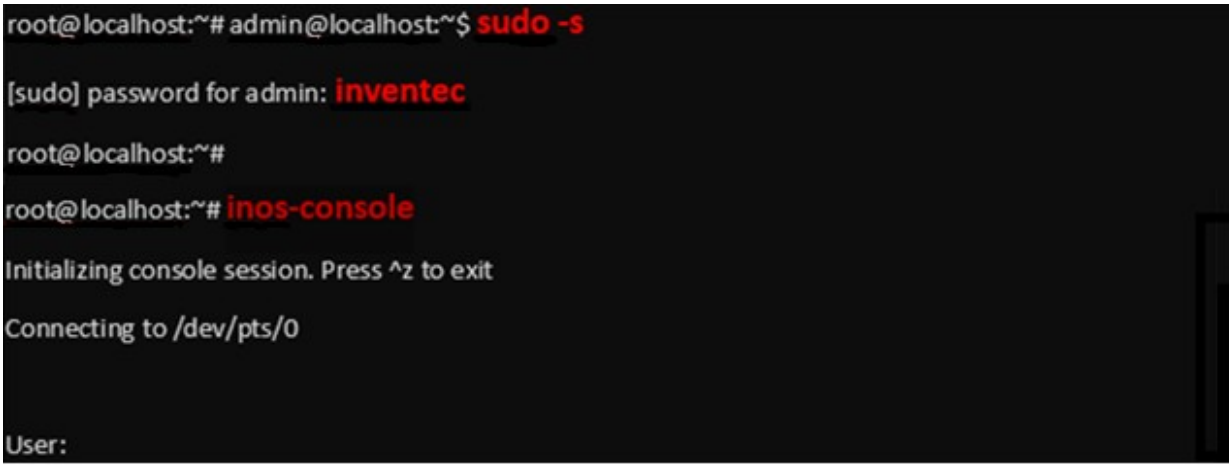
1. Login to the switch via console port “CON”

To login to the switch. Please note, the first stop is the “Inventec Linux”. In which INOS is running as an application in the background. Use admin/inventec for login and password as shown below to login to Inventec Linux.



2. Bring up Network Operating System INOS

Next we need to bring up INOS. In order to do so, the root access is required. On command prompt, type “sudo –s” and insert the default password “inventec” to change user login from “admin” to “root”. The command prompt will be changed from “admin@localhost” to “root@localhost”.
Type “inos-console” to bring up INOS to exit current login and a new user login prompt will show up.



3. Login to INOS

To login to INOS, type “admin” for User. Please note, there is no password for this. Press “Enter” key to bypass password query. When “(localhost)>” prompt is shown, system is ready for use.



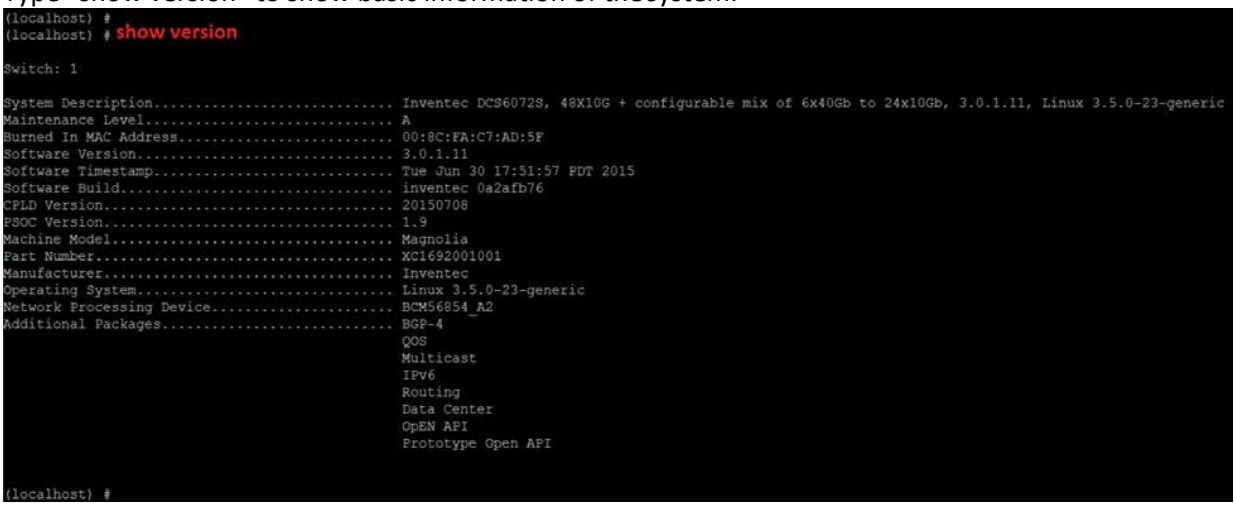
4. Enter privileged mode and execute CLI command to show management IP address

In order to execute CLI command, command prompt needs to be on privileged mode.
Type “enable” to enter privileged mode. The command prompt sign should change from “>” to “#”.



Let’s try some basic CLI commands:

Type “show version” to show basic information of the system.



Type “show serviceport” to show management IP address. Record the IP address. You will be using the IP address to login to the switch.

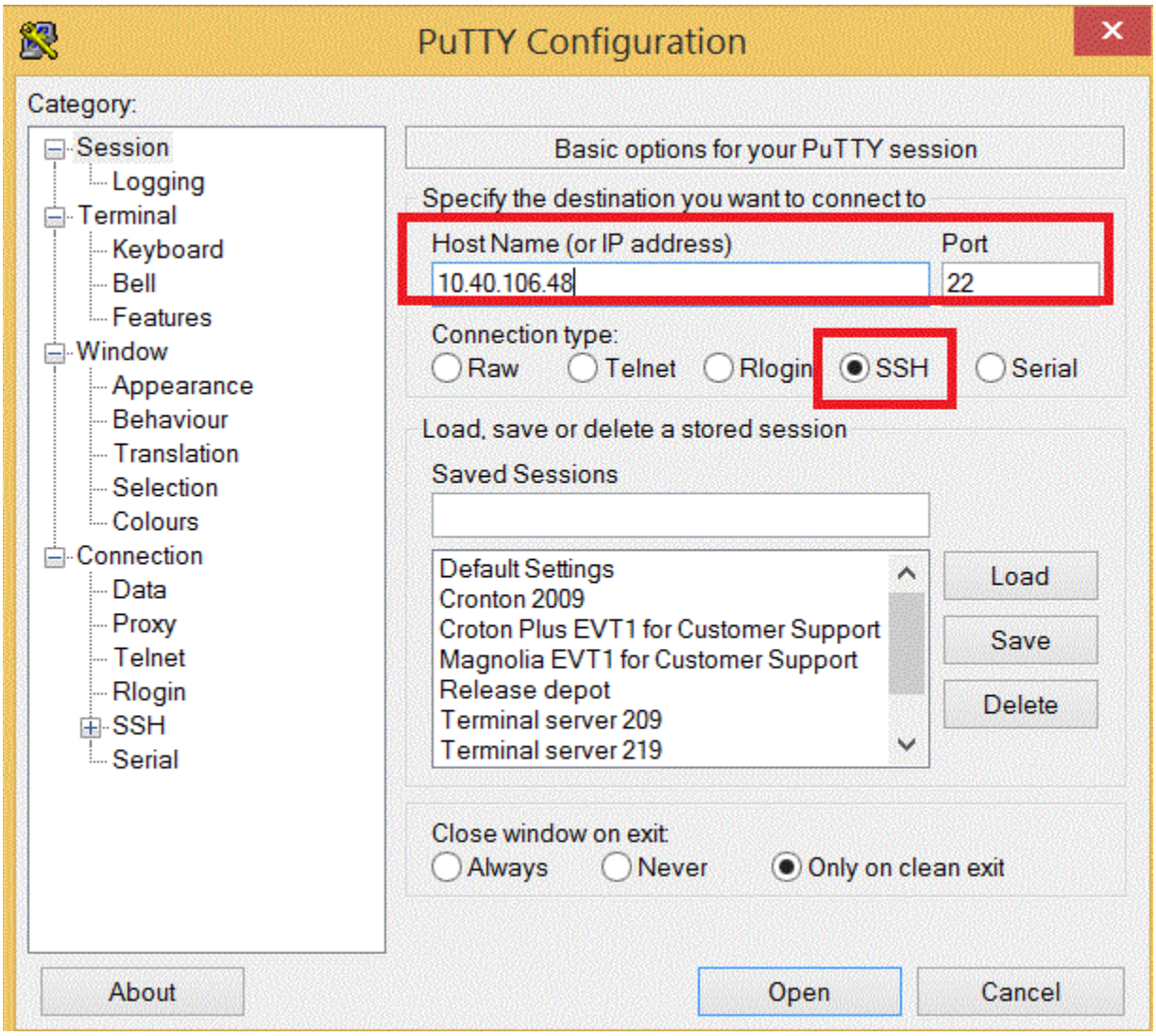
```
(localhost) #show serviceport

Interface Status.............................. Up
IP Address.................................... 10.40.106.48
Subnet Mask................................... 255.255.255.0
Default Gateway............................... 10.40.106.1
IPv6 Prefix is ............................... fe80::28c:faff:fec7:ad60/64
Configured IPv4 Protocol...................... DHCP
Burned In MAC Address......................... 00:8C:FA:C7:AD:60
```

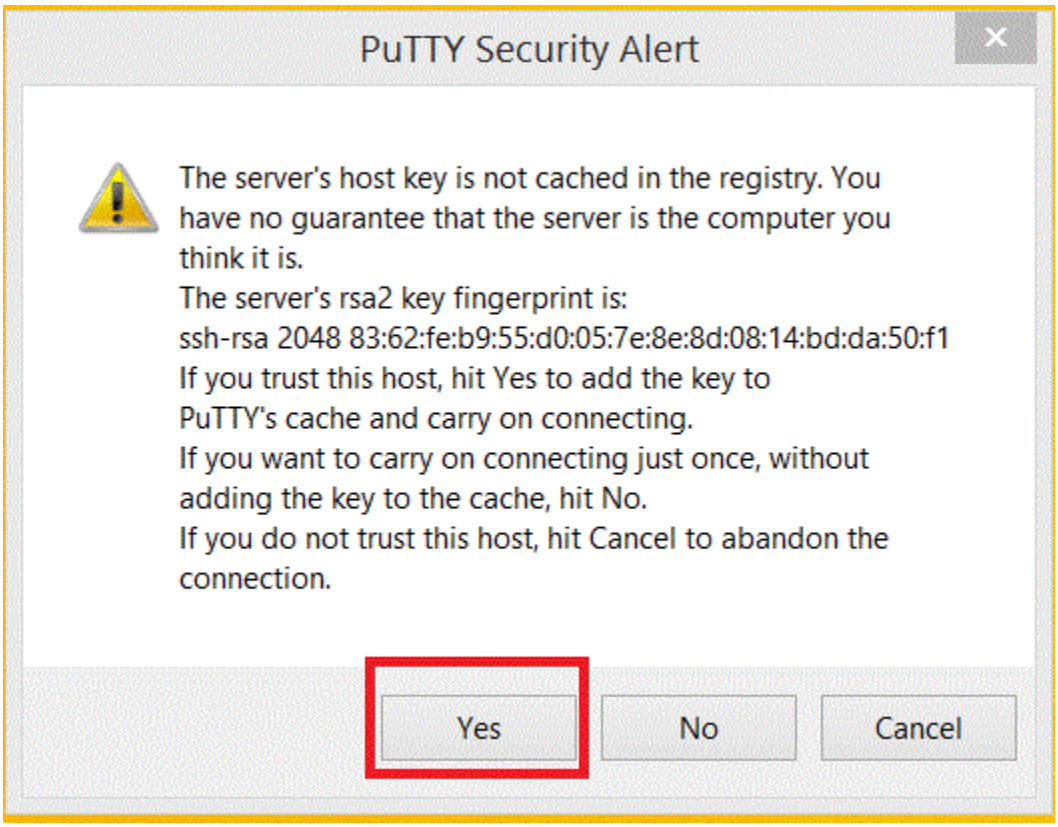
5. Login to the switch via management port “MGMT”

Connect an Ethernet cable from management port “MGMT” at the back of the switch to network.

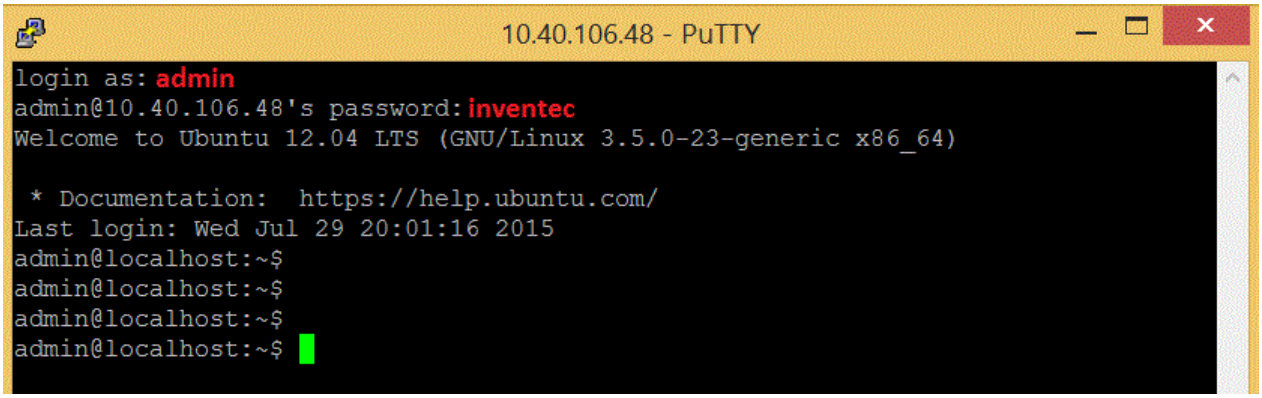
Launch a terminal emulator program such as “PuTTY”. Use “SSH” to connect to the management IP address with port 22, as shown below. Select “Open” to continue.



First time login it will show the warning that “the server’s host key is not cached in the registry. ……”. Press “YES” to continue.



On login prompt, enter “admin” and “inventec” for user and password to login to “inventec Linux” as the same shown previously.



Type “sudo –s” and enter password “inventec” to change user from “admin” to “root”.

```
admin@localhost:~$
admin@localhost:~$ sudo -s
[sudo] password for admin: inventec
root@localhost:~#
```

Type “inos-cli” to bring up INOS. Please note, this command is not the same as the one (“inos-console”) used in the console login shown previously.

Next it will show “Initializing console session. Press ^Z to exit”. Press “Enter” key to continue.

```
root@localhost:~#

root@localhost:~# inos-cli


Initializing console session. Press ^z to exit.

(localhost) #
```

6. Enter configuration mode and perform a simple configuration as an example to show how it works

Now you can change the command prompt from “localhost” to any name by typing “hostname <new name>”. For example, below shows how to change command prompt name from “localhost” to “host123”.

```
(localhost) >

(localhost) >en


(localhost) #hostname host123


(host123) #
```

Next let’s do a basic configuration to turn on a port. Type the configuration below.
Note the “config” command opens an editor to allow configuration. The “end” command exits the configuration mode. Below example shows how to enable port 1 of the switch.

```
(host123) # configure

(host123) (Config)#interface 0/1

(host123) (Interface 0/1)#no shutdown

(host123) (Interface 0/1)#end

(host123) #
```

To verify the configuration. Type the show command as shown below.
The output shows port 1 is configured to be enabled.

```
(host123) #show running-config interface 0/1


!Current Configuration:

!

interface  0/1

no shutdown
```

7. Assign static IP address to the management port

To configure static IP address on management port to access the switch built with embedded platform, please refer to INOS Administration Guide, Section 2: Getting Started with Switch Configuration/"Configuring Service Port Information". If you do not see the serviceport IP configuration commands, chances are you are working with a switch that's built with x86 base platform, so please move on to the below paragraph.

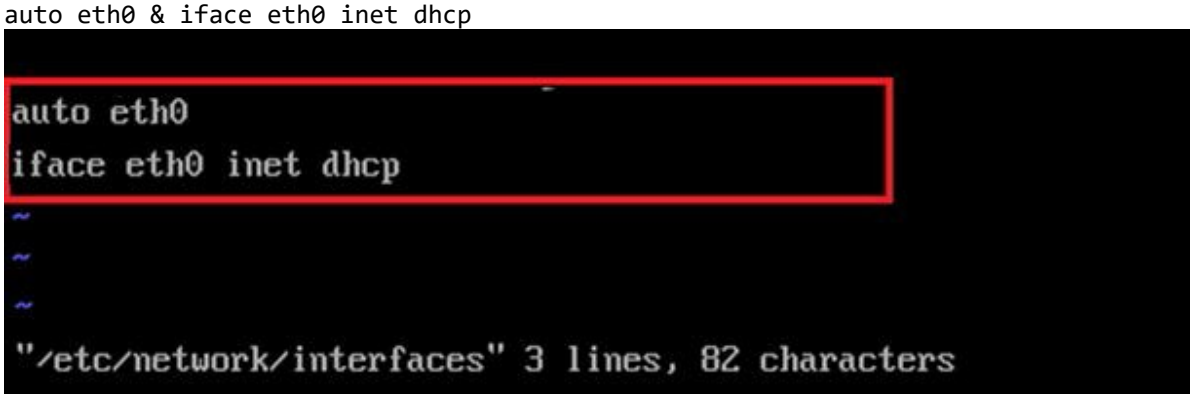
To configure static IP address on management port to access the switch built with x86 based platform, please use the following steps to configure static IP address for eth0 port in Linux environment:

Steps to make the ip address of a system as static

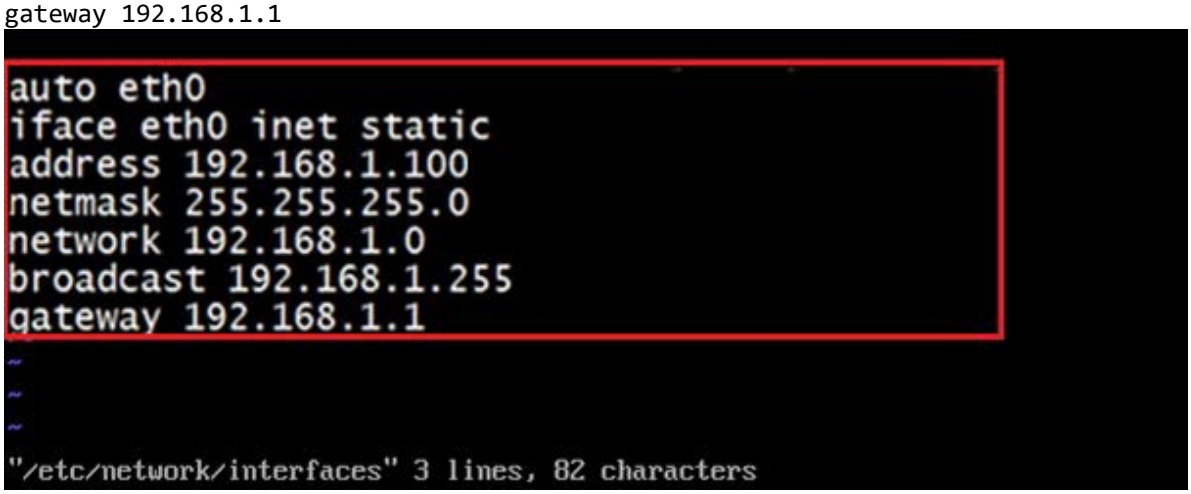
1. Make backup copy of the interface file (cp interfaces interfaces.bak)
2. Open interface file (sudo vi /etc/network/interfaces)

```
root@localhost:~# cp /etc/network/interfaces /etc/network/interfaces.bak
root@localhost:~#
root@localhost:~#
root@localhost:~#
root@localhost:~# sudo vi /etc/network/interfaces
```

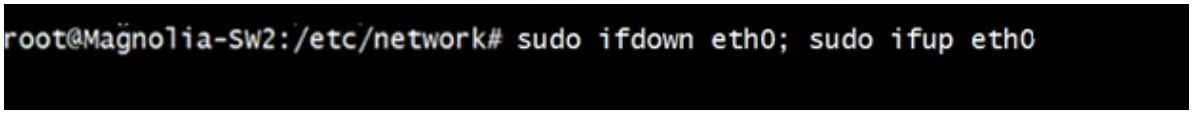
3. Look for
   `auto eth0 & iface eth0 inet dhcp`



4. Replace the above commands with
   ```
   auto eth0
   iface eth0 inet static
   address 192.168.1.100(Enter desired ip here)
   netmask 255.255.255.0
   network 192.168.1.0
   broadcast 192.168.1.255
   gateway 192.168.1.1
   ```



5. Then exit the editor (press ESC and ":", type "x"), and enter below
   `sudo ifdown eth0; sudo ifup eth0`



8. Bare metal switch preinstalled with ONIE

For systems shipped as bare metal switches, Inventec provides the ONIE installer through which the supported vendor's NOS can be installed. The following example shows the steps to install Pica's OS image from the ONIE prompt using an external USB.

1. First, copy the image to the USB formatted with FAT32, then plug the USB to the switch.
2. Apply the below steps from ONIE prompt to mount the USB and install the image:

3. mkdir /diag
   mount /dev/sdb1 /diag
   cd /diag

4. ls –l ← verify the image is there.
5. onie-nos-install <Image>

```
login as: root
ONIE:~ #
ONIE:~ #
ONIE:~ # mkdir /diag
ONIE:~ # mount /dev/sdb1 /diag
ONIE:~ # cd /diag
ONIE:/diag #
ONIE:/diag # ls -l
-rwxr-xr-x    1 root     0       173517985 Jun  1 15:25 picos-2.7.1.bin
ONIE:~ #
ONIE:/diag # onie-nos-install picos-2.7.1.bin
Verifying image checksum ... OK.
Preparing image archive ... OK.
Installation start. If you use usb disk to install nos, please remeber to
pull out the usb disk after installation success, and before machine restart.
ONIE installation will overwrite the configuration file of existing system.
It is recommended to follow the upgrade procedure to upgrade the system.
Press any key to stop the installation...
10 9 8 7 6 5 4 3 2 1 ...
checking installer name...
…
…
Installing for i386-pc platform.
Installation finished. No error reported.
cp grub.cfg ok
System installs successfully, exit now
If you are using usb disk to install os, please plug out the usb disk in 10 seconds
```

After installation the switch boots up with PicOS v2.7.1

```
XorPlus login: admin
Password:pica8
You are required to change your password immediately (root enforced)
Changing password for admin.
(current) UNIX password:
Enter new UNIX password:
Retype new UNIX password:

admin@XorPlus$version
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==================================
Hardware Model              : dcs7032q28
Linux System Version/Revision : 2.7.1/2b0a576
Linux System Released Date    : 05/18/2016
L2/L3 Version/Revision        : 2.7.1/2b0a576
L2/L3 Released Date           : 05/18/2016
OVS/OF Version/Revision       : 2.7.1/2b0a576
OVS/OF Released Date          : 05/18/2016

admin@XorPlus$
```