TROUBLESHOOTING INTERNAL AND EXTERNAL WHEN THE NETWORK IS DOWN INCLUDING THE INTERNET AND PRINTER.

Network Admin

Document Control

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1	Adding	Dexter	28/2/18
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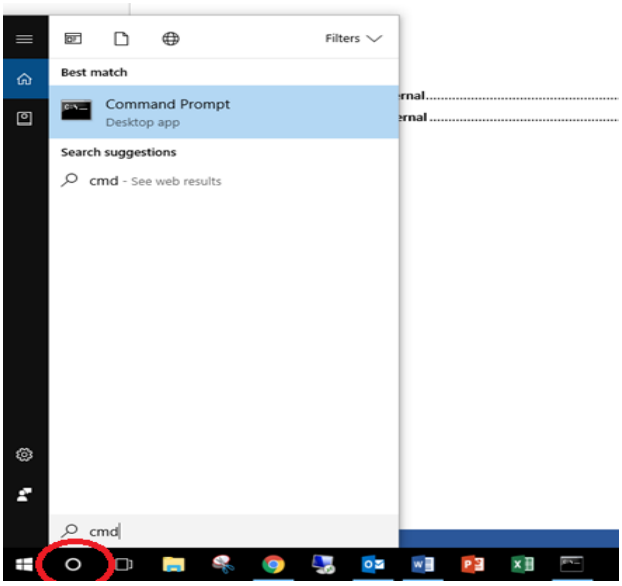
Contents

1.0 Troubleshooting for Internal 3
1.1 Troubleshooting the Internal connection 3
1.2 Troubleshooting the Printer (TOSHIBA 3555 BW) 4
1.2.1 Troubleshooting the Printer connection 4
1.2.2 Troubleshooting the Printer (For paper jam) 5
1.2.3 Troubleshooting the Printer (For replace printer ink) 7
1.2.4 Troubleshooting the Printer (For setting up colour or black and white before printing) 10
1.5 Troubleshooting the Email Server 12
1.6 Troubleshooting the Switch connection 14
2.0 Troubleshooting for External 15
2.1 Troubleshooting the Internet connection 15
3.0 Appendix 16

1.0 Troubleshooting for Internal

1.1 Troubleshooting the Internal connection

1. To check the internal connection, go to command prompt or search cmd on the circle.



2. Type ping 192.168.10.0. When it the message say Request timeout that means the internet is down in internal. When the message say Reply from 192.168.20.100 >>> TTL=255 that means the connections for internal is back online. Repeat step one and step two for 192.168.20.0 (Media section), 192.168.0.0 (Infrastructure) and 192.168.10.0 (School Team). A Table for DHCP scoops address show in Figure 1.0.

```
C:\Users\IT>ping 192.168.10.0

Pinging 192.168.10.0 with 32 bytes of data:
Reply from 192.168.20.100: bytes=32 time<1ms TTL=255
Reply from 192.168.20.100: bytes=32 time=1ms TTL=255
```

```
PS C:\Users\PanAdmin> netsh
netsh>dhcp
netsh dhcp>server
netsh dhcp server>show scope

=============================================================================
 Scope Address   - Subnet Mask     - State         - Scope Name          -  Comment
=============================================================================

 192.168.0.0     - 255.255.255.0  -Active         -Infrastructure        -PAN Scope
 192.168.2.0     - 255.255.255.0  -Active         -WiFi Network          -WiFi Network
 192.168.10.0    - 255.255.255.0  -Active         -M9 Room Network       -M9 Room Networ
 192.168.20.0    - 255.255.255.0  -Active         -MediaRoom Network     -MediaRoom Netw

 Total No. of Scopes = 4
Command completed successfully.
netsh dhcp server>_
```

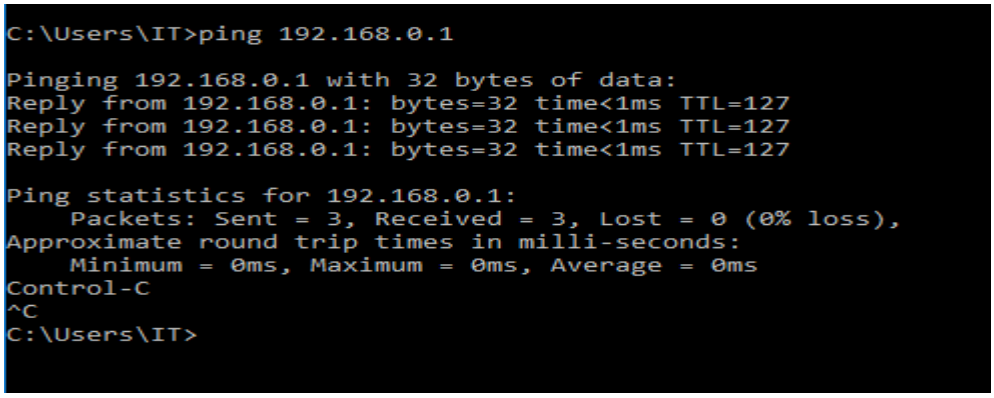
Figure 1.0 (show the list of the name of the type of IP address that belong to)

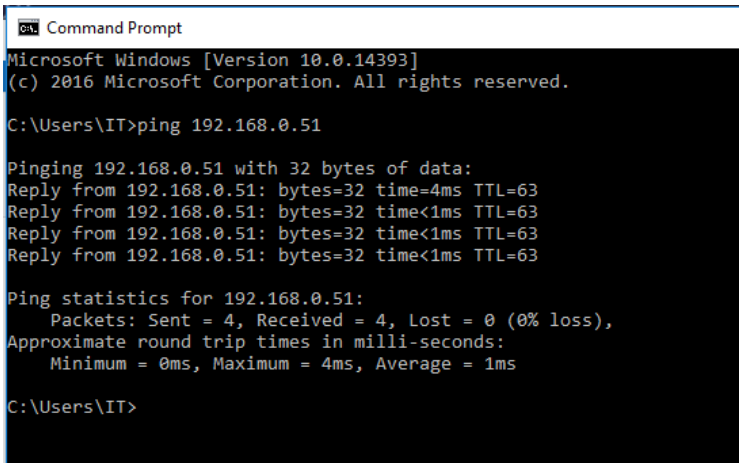
1.2 Troubleshooting the Printer (TOSHIBA 3555 BW)

1.2.1 Troubleshooting the Printer connection

1. To check for the Printer Connection ping 192.168.0.1 or 192.168.0.51. The 192.168.0.1 is IP address of the Exchange Server which contains the Printer devices. See Appendix in Server rack (**Rack two**) diagram and Network diagram for 192.168.0.51 (Printer for TOSHIBA 3555 BW).

2. Type ping 192.168.0.1. When it the message say Request timeout that means the printer server is down. When the message say Reply from 192.168.0.1 >>> TTL=127 that means the printer server is back online. Repeat Step two for 192.168.0.51.





1.2.2 Troubleshooting the Printer (For paper jam)

1. To resolve the Printer jam, check there is a loose paper left out at the back side of the printer (From A to D).

Figure 2 (A)

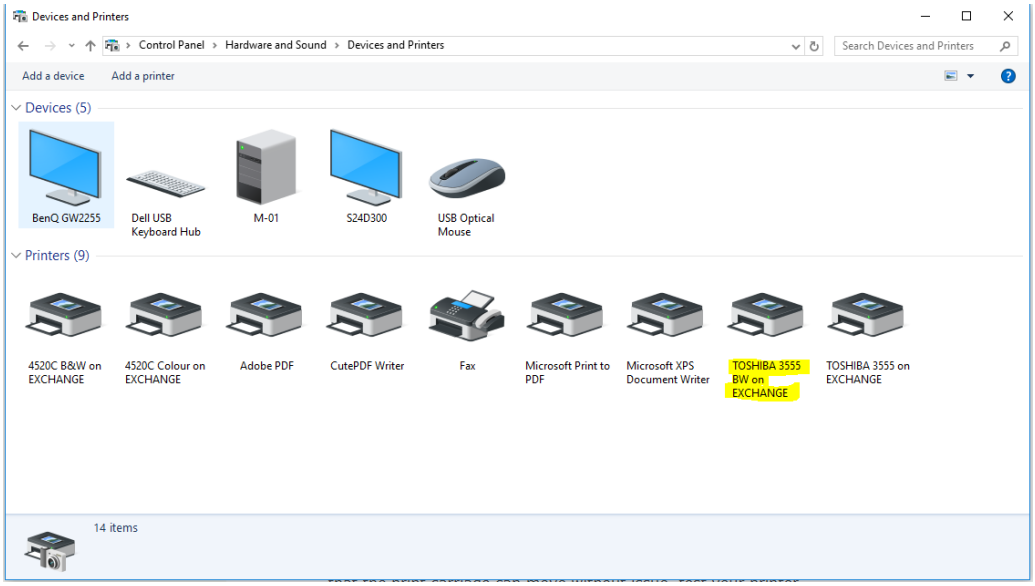
Figure 2 (B)

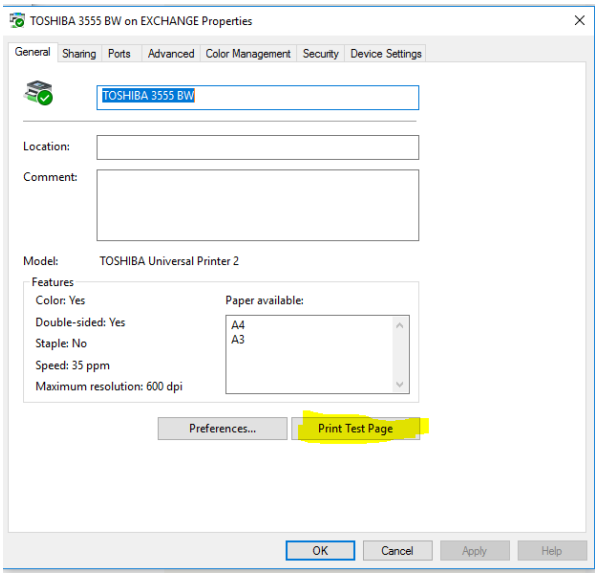
Figure 2 (D)

Figure 2 (C)

2. Remove stuck paper one sheet at a time slowly. Don't force it!

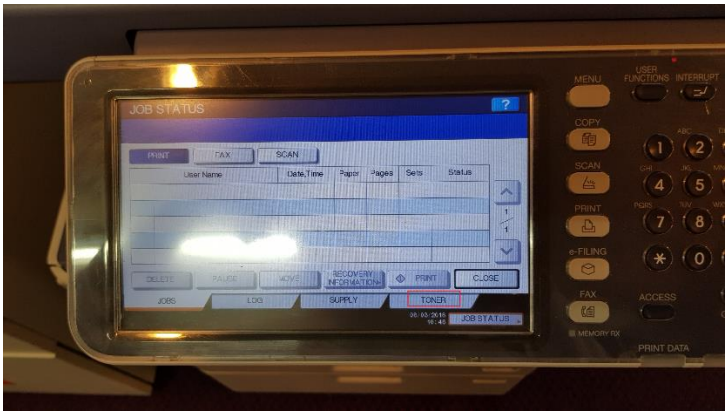
3. Check for any remaining bits of paper. Once it eliminated the printer jam, cleared away any remaining bits of paper, and ensured that the print carriage can able to print it smoothly without issue, test your printer by print a test page above here. Right click and go to Printer properties and click **Print test page**. It should able to print a document at the end.

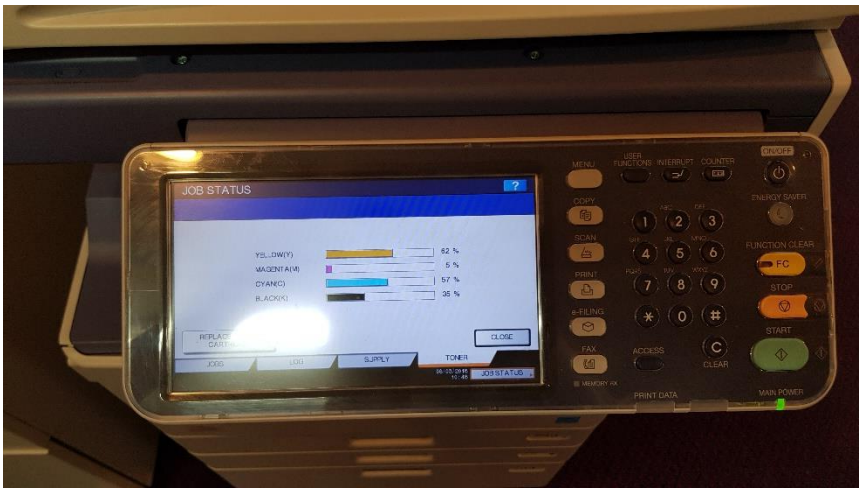




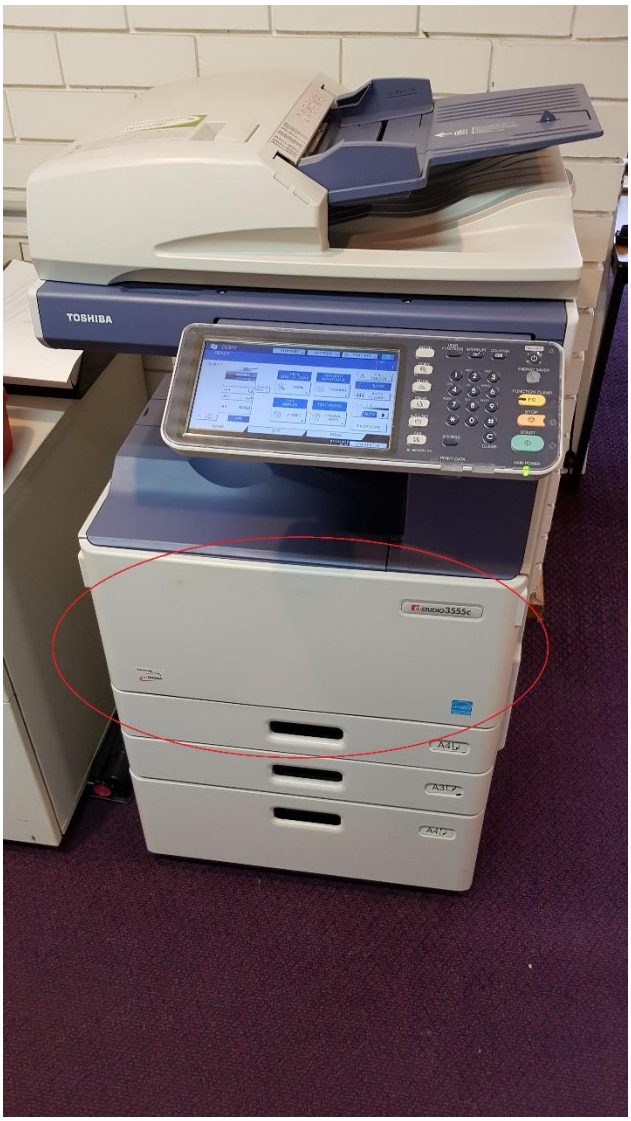
1.2.3 Troubleshooting the Printer (For replace printer ink)

1. When the GUI interface message say “A toner cartridge is nearly empty Do you want to replace the cartridge at this time” that means the toner or printer ink must be replace.
2. To check how much the ink left. Go to the Job Status > Toner. You will see how much ink left in four categories. If you see less that 5% that means it needs to be replace. See https://www.manualslib.com/manual/834473/Toshiba-E-Studio-2555c.html?page=58#manual (pg 58-60) for details.





3. To replace the toner cartridge open the front cover of the printer.

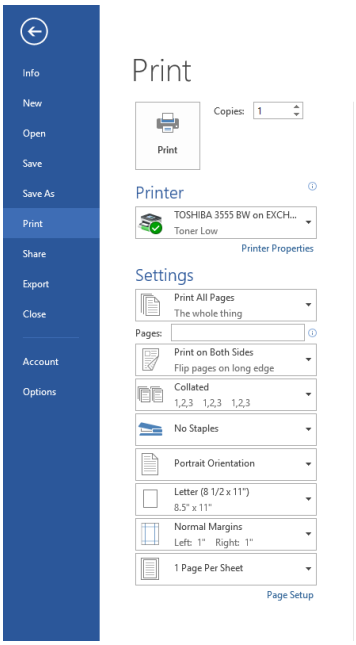


4. Next replace the previous ink to the new one. Note the ink toner has to be same model for the **TOSHIBA 3555 BW** for the Yellow (T-FC50D-Y), Magenta (T-FC50D-M), Cyan (T-FC50D-C) and Black (T-FC50D-K). Remove the seal straight out the direction of the arrow and insert new toner into the toner slot and close the front cover. See https://www.youtube.com/watch?v=JrJU51HaOvI for more details on how to replace the new toner.

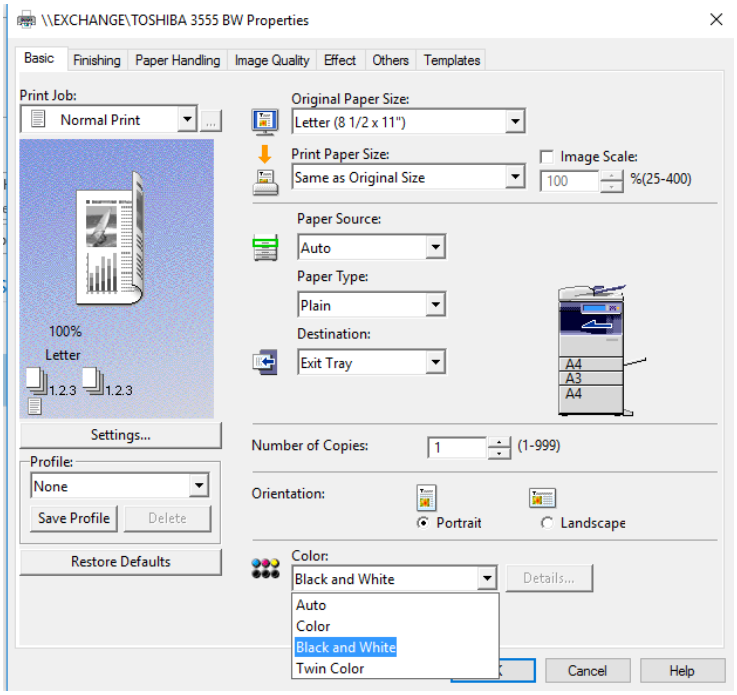
5. After that replace the ink and it should see the Toner status from Step two, meaning that the toner is full and ready to print the new document.

1.2.4 Troubleshooting the Printer (For setting up colour or black and white before printing)

6. Sometimes Printer needs to set up for black and white instead of printing in either auto or color because it will might ask the passcode to print a document for you. To prevent it or bypass the passcode. Go to File > Print > Printer Properties



7. Change the settings from auto to Black and white from the Color. Click Ok to close.



8. When you print the document it should bypass the passcode.

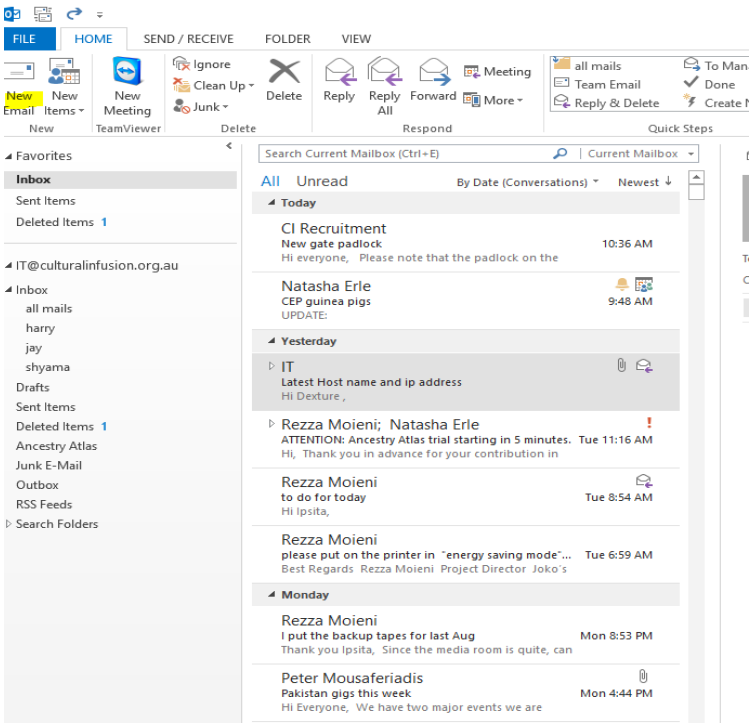
1.5 Troubleshooting the Email Server

3. To check for the Email Server or Exchange server ping 192.168.0.1 or mail.paninternational.com.au. The 192.168.0.1 is IP address of the Exchange Server. See Appendix in Server rack (**Rack two**) diagrams.

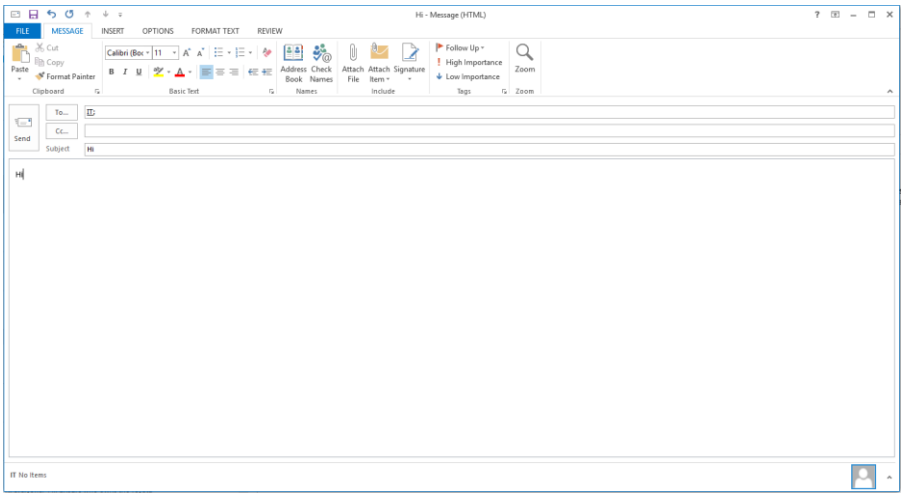
4. Type ping 192.168.0.1. When it the message say Request timeout that means the email server is down. When the message say Reply from 192.168.0.1 >>> TTL=127 that means the Email server is back online.

```
C:\Users\IT>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:
Reply from 192.168.0.1: bytes=32 time<1ms TTL=127
Reply from 192.168.0.1: bytes=32 time<1ms TTL=127
Reply from 192.168.0.1: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.0.1:
    Packets: Sent = 3, Received = 3, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
Control-C
^C
C:\Users\IT>
```

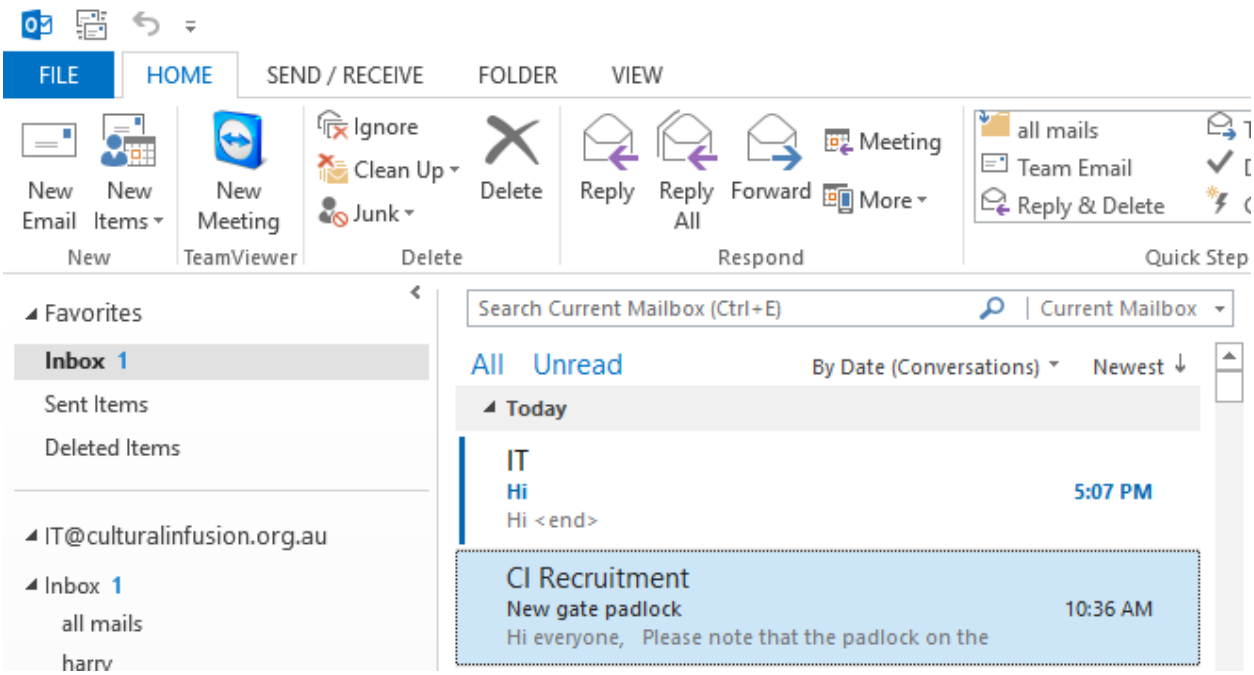
5. Once it the ping is successful go to the Microsoft Outlook and Click New Email.



6. Try sending email by yourself as testing to see whether it was working sending and recviecing. It fill it out as a example. Click send and it should be recived mail from the mail server.



7. When it was recived it meaning that the mail server connection is working.



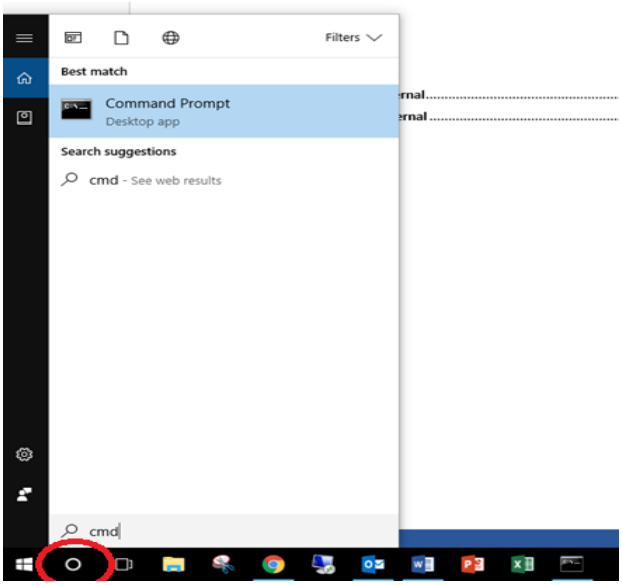
1.6 Troubleshooting the Switch connection

There are four switches from the server that are needing to ping using the command prompt. These are:

- DSW0 - Cisco Catlyst 2950G-48 192.168.0.100
- DSW1 - Cisco Catlyst 2950G-48 192.168.0.101
- ASW0 - Cisco Catlyst 2950G-48 192.168.0.102
- ASW1 - Cisco Catlyst 2950G-48 192.168.0.103

A Server rack (**Rack two**) diagrams are shown in Appendix section.

1. To check the ping for the switch connection, go to command prompt or search cmd on the circle.



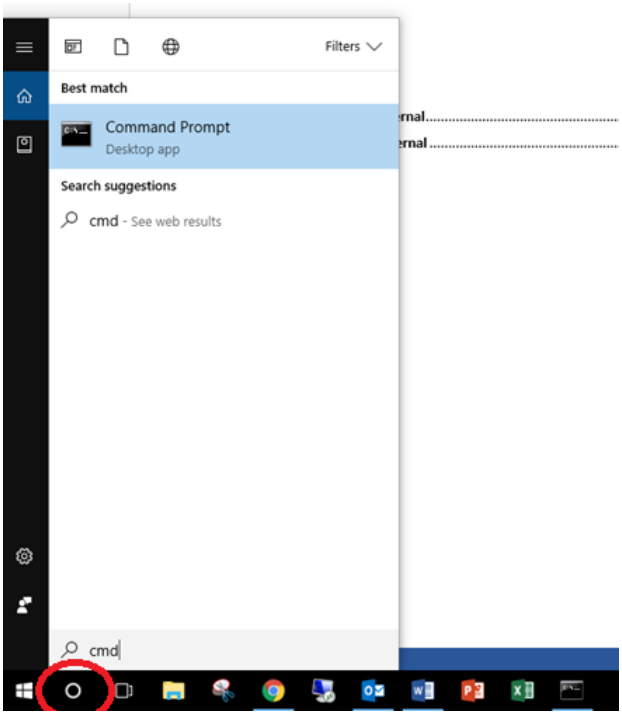
2. Type ping 192.168.0.100. When it the message say Request timeout that means the internet is down in external. When the message say Reply from 192.168.0.100 >>> TTL=255 that means the internet for external is back online. Repeat Step one and Step two for 192.168.0.101-103.

```
C:\Users\IT>ping 192.168.0.100

Pinging 192.168.0.100 with 32 bytes of data:
Reply from 192.168.0.100: bytes=32 time<1ms TTL=255
Reply from 192.168.0.100: bytes=32 time<1ms TTL=255
Reply from 192.168.0.100: bytes=32 time<1ms TTL=255
Reply from 192.168.0.100: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.0.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

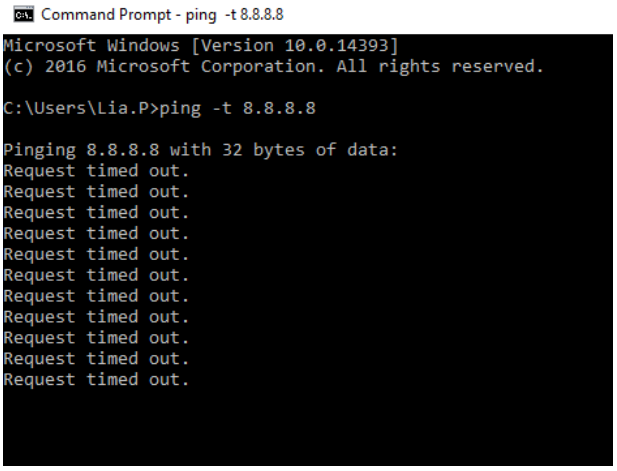
2.0 Troubleshooting for External

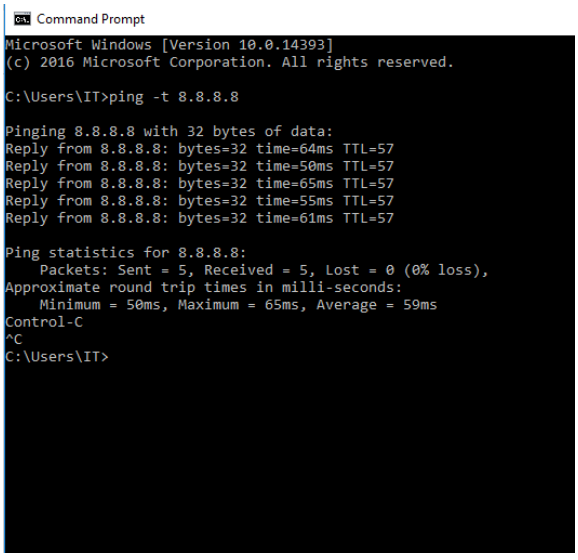
2.1 Troubleshooting the Internet connection

1. To check the network connections go to command prompt or search cmd on the circle



2. Type ping –t 8.8.8.8. The 8.8.8.8 is a Google Public DNS. When it the message say Request timeout that means the internet is down in external. When the message say Reply from 8.8.8.8 >>> TTL=57 that means the internet for external is back online.





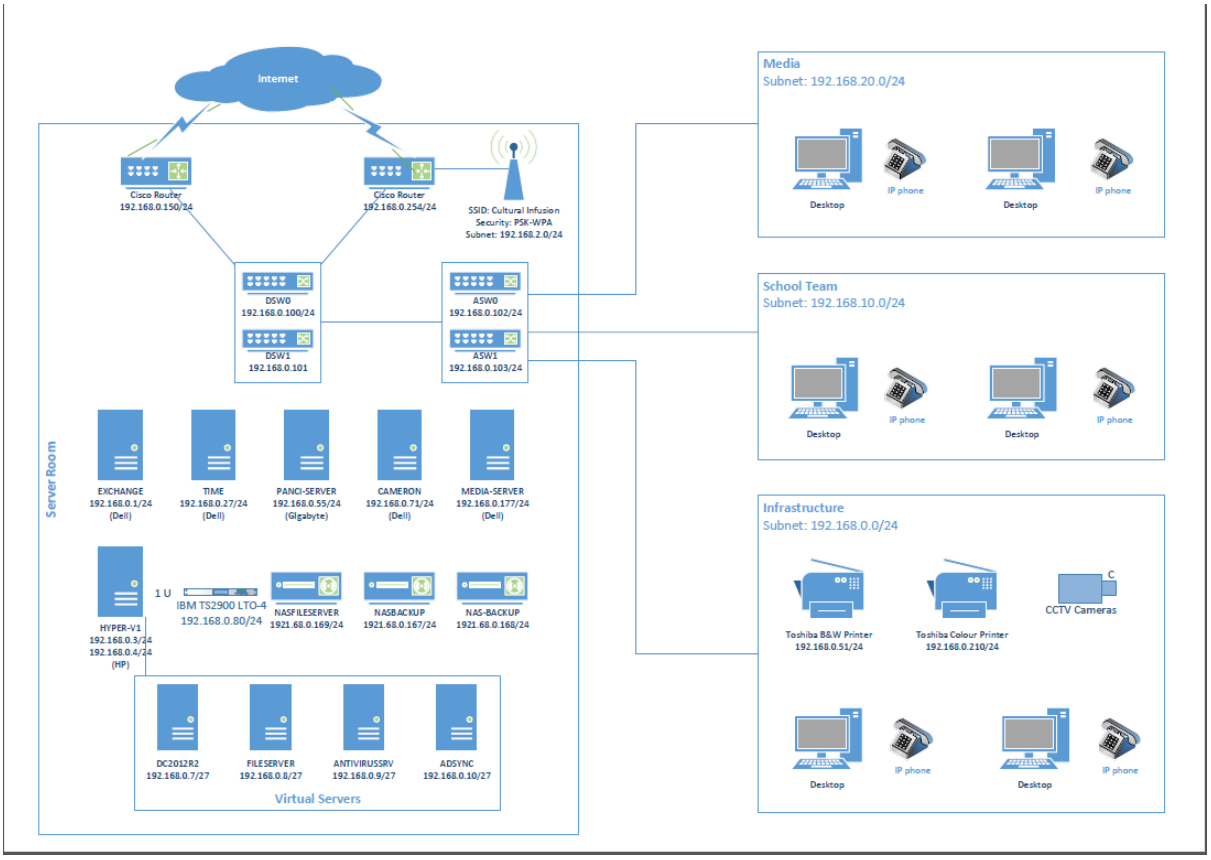
3.0 Appendix

IT Infrastructures for Cultural Infusion

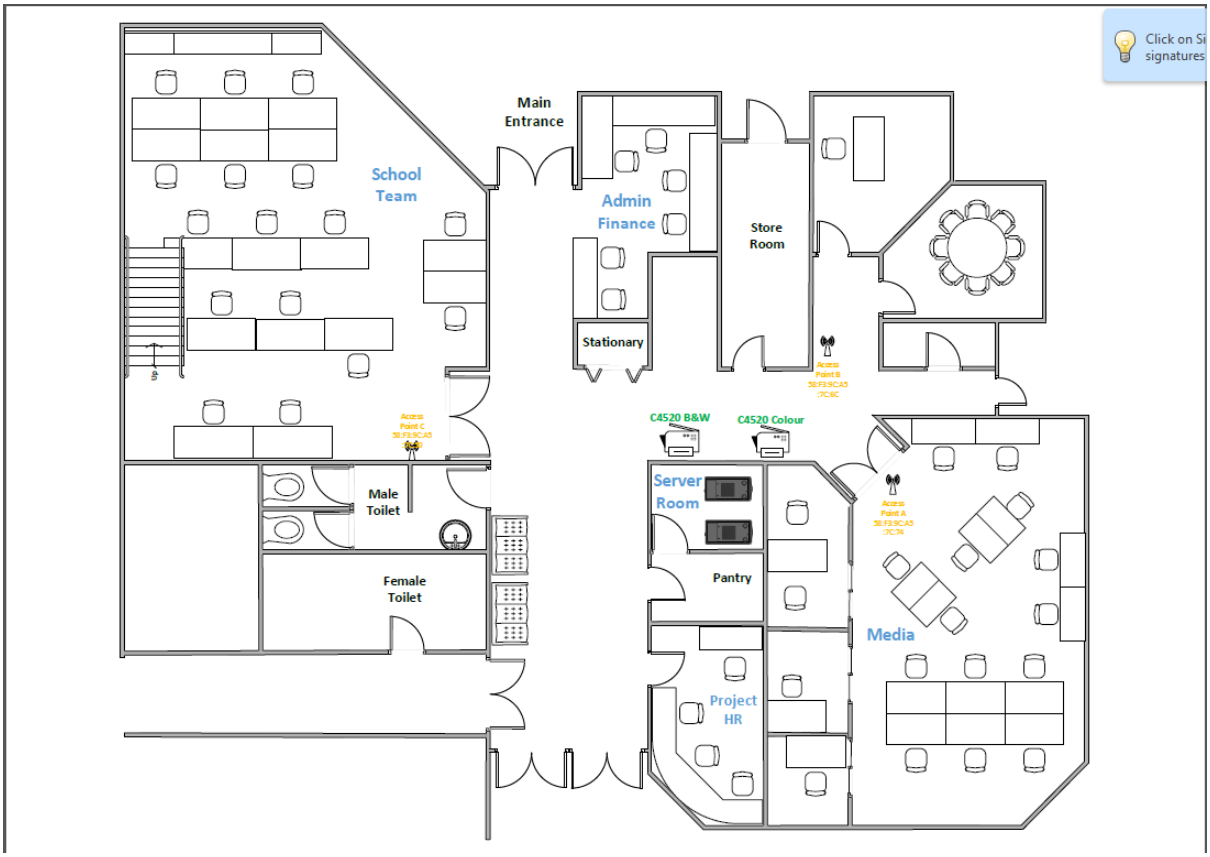
Files located I:\05-Documentation\Server and Network\

- **CI-Network diagram-160921.pdf**
- **Floor Layout-160928.pdf**
- **Server room-Rack layout.pdf**

Network Diagram

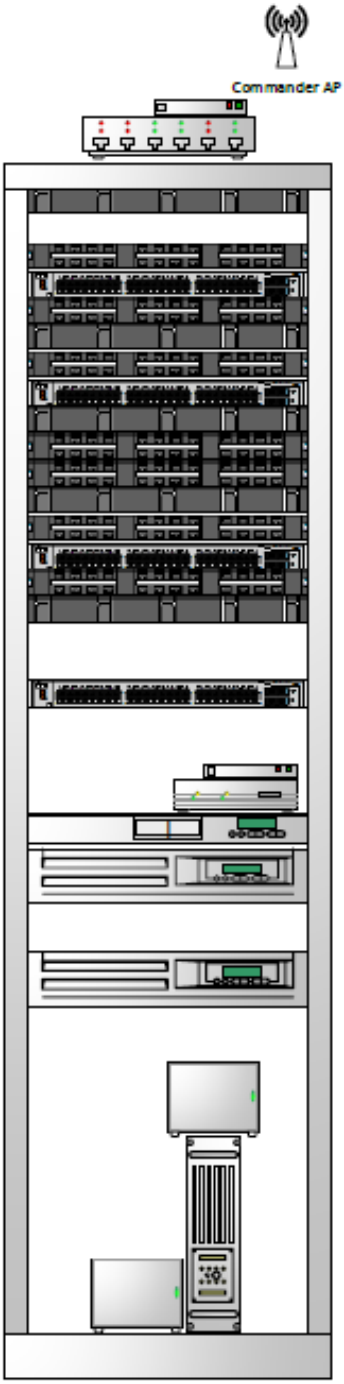


Floor plan

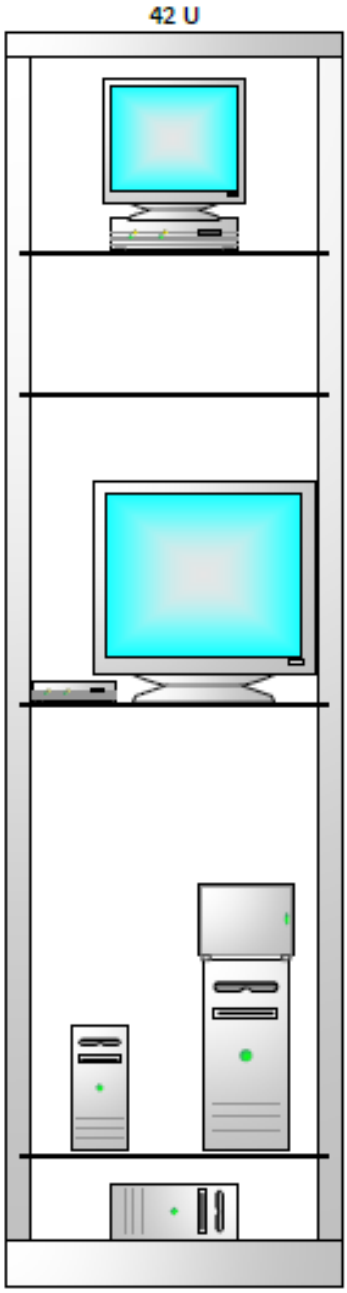

Main Entrance
School Team
Admin Finance
Store Room
Stationary
C4520 B&W
C4520 Colour
Server Room
Pantry
Male Toilet
Female Toilet
Media
Project HR

Server rack

Rack 1



Rack 2



CCTV

KVM

NAS BACKUP – QNAP – 192.168.0.167

PANCI-SERVER – Assembled – 192.168.0.55

MEDIA-SERVER – Assembled – 192.168.0.177

TIME – Dell Desktop – 192.168.0.27