

Network trouble shooting for WiPG-series

1. With respect to the unexpected failure in “Mirroring Operation” in some cases, here are few steps which can help you clarify whether there’s something wrong in customer’s environment or not.

Step1: We have to make sure whether the connected PC/Laptop or smart device has already received the proper IP address assigned by our WiPG machine or by the corporate DHCP server in the very beginning.

For example, if our WiPG machine works as a standalone device, its IP address shall be 192.168.100.10 in default so that’s to say the connected PC/Laptop or any smart device shall get the unique IP such as 192.168.100.11~127 from WiPG machine directly through wireless or LAN connection.

If our WiPG machine had been attached to the corporate network, then its IP address should be assigned by the existing DHCP server such as 192.168.X.X then all the connected devices will also receive the same-subnet IP address such as 192.168.X.X from the existing DHCP server through WiPG machine.

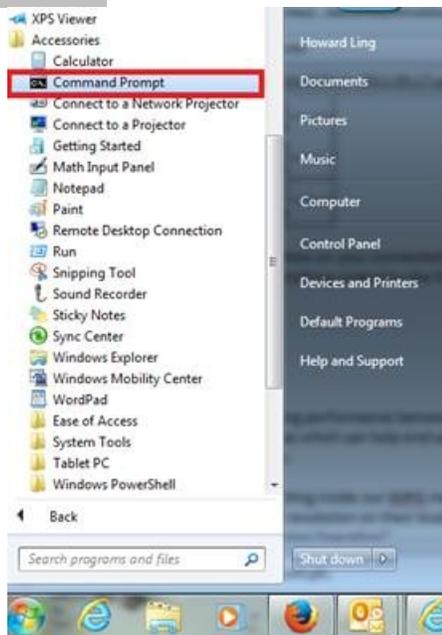
Step2: We have to make sure all the necessary TCP/UDP ports are not blocked by the corporate Firewall or any anti-virus SW running in end user’s PC/Laptop.

TCP Ports	Comman d	443
		3268
		389
	Data	8080
		445
		515
	Audio	1688
	Video	1041
	UoIP	3240 6000

	Activation	8000
UDP Ports	Device Discovery	1047
		1048

Step3: Try to ping the WiPG machine on your own connected PC/Laptop through the “Command Prompt” tool in order to make sure everything related to the first two items above is running well without any concern.

How to start: Start Menu --- > Accessories --- > Command Prompt



How to control:

For **Step1:** Configure your own connected PC/Laptop first.

Type “**ipconfig**” in Command Prompt’s Window.

```
Command Prompt
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\KL_Chang>ipconfig
```

then you can easily find the exact IP address and the connection info. of your own connected PC/Laptop which should be assigned by our WiPG machine or your existing DHCP server shown as follows.
(For this test case, the IP address of this DUT WiPG-1500 is 192.168.100.10 and the connected MacBook Air got the IP address 192.168.100.11 directly assigned by WiPG-1500.)

```
Command Prompt

C:\Users\KL_Chang>ipconfig

Windows IP Configuration

Wireless LAN adapter Wireless Network Connection:

Connection-specific DNS Suffix . : 
Link-local IPv6 Address . . . . . : fe80::3921:2642:86a2:9ceb%14
IPv4 Address. . . . . : 192.168.100.11
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.100.10

Ethernet adapter Local Area Connection:

Connection-specific DNS Suffix . : localdomain
IPv6 Address. . . . . : fd82:2c26:f4e4:0:e06a:7491:579e:4d96
Temporary IPv6 Address. . . . . : fd82:2c26:f4e4:0:3063:6f8:609:1c32
Link-local IPv6 Address . . . . . : fe80::e06a:7491:579e:4d96%11
IPv4 Address. . . . . : 10.211.55.3
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 10.211.55.1

Tunnel adapter isatap.localdomain:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : localdomain

Tunnel adapter Local Area Connection* 9:

Connection-specific DNS Suffix . : 
IPv6 Address. . . . . : 2001:0:9d38:6ab8:34bb:b0ea:c487:6135
Link-local IPv6 Address . . . . . : fe80::34bb:b0ea:c487:6135%13
Default Gateway . . . . . : 

Tunnel adapter isatap.{CD14380B-FD32-40E4-8BF6-4691BA0D2B5D}:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : 

C:\Users\KL_Chang>
```

For Step2: Ping the remote WiPG machine on your own connected PC/Laptop.

Type “ping 192.X.X.X -t” in Command Prompt’s Window.

(192.X.X.X means the WiPG machine’s device IP address)

```
Command Prompt - ping 192.168.100.10 -t

Tunnel adapter Local Area Connection* 9:
    Connection-specific DNS Suffix  . : 
    IPv6 Address . . . . . : 2001:0:9d38:6ab8:34bb:b0ea:c487:6135
    Link-local IPv6 Address . . . . . : fe80::34bb:b0ea:c487:6135%13
    Default Gateway . . . . . : 

Tunnel adapter isatap.{CD14388B-FD32-4AE4-8BF6-4691B80D2B5D}:
    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : 

C:\Users\KL_Chang>ping 192.168.100.10 -t

Pinging 192.168.100.10 with 32 bytes of data:
Reply from 192.168.100.10: bytes=32 time=14ms TTL=64
Reply from 192.168.100.10: bytes=32 time=7ms TTL=64
Reply from 192.168.100.10: bytes=32 time=5ms TTL=64
Reply from 192.168.100.10: bytes=32 time=7ms TTL=64
Reply from 192.168.100.10: bytes=32 time=17ms TTL=64
Reply from 192.168.100.10: bytes=32 time=9ms TTL=64
Reply from 192.168.100.10: bytes=32 time=95ms TTL=64
Reply from 192.168.100.10: bytes=32 time=4ms TTL=64
Reply from 192.168.100.10: bytes=32 time=20ms TTL=64
Reply from 192.168.100.10: bytes=32 time=2ms TTL=64
Reply from 192.168.100.10: bytes=32 time=7ms TTL=64
Reply from 192.168.100.10: bytes=32 time=17ms TTL=64
Reply from 192.168.100.10: bytes=32 time=4ms TTL=64
Reply from 192.168.100.10: bytes=32 time=4ms TTL=64
Reply from 192.168.100.10: bytes=32 time=3ms TTL=64
Reply from 192.168.100.10: bytes=32 time=6ms TTL=64
Reply from 192.168.100.10: bytes=32 time=3ms TTL=64
Reply from 192.168.100.10: bytes=32 time=2ms TTL=64
Reply from 192.168.100.10: bytes=32 time=3ms TTL=64
Reply from 192.168.100.10: bytes=32 time=8ms TTL=64
Reply from 192.168.100.10: bytes=32 time=5ms TTL=64
Reply from 192.168.100.10: bytes=32 time=9ms TTL=64
```

then you can easily find the continuous communication test between WiPG machine and your own connected PC/Laptop. The response time per package shall not be longer than 100ms and you can type “CTRL + C” to stop the test.

```
Command Prompt

Connection-specific DNS Suffix  . : 
C:\Users\KL_Chang>ping 192.168.100.10 -t

Pinging 192.168.100.10 with 32 bytes of data:
Reply from 192.168.100.10: bytes=32 time=14ms TTL=64
Reply from 192.168.100.10: bytes=32 time=7ms TTL=64
Reply from 192.168.100.10: bytes=32 time=5ms TTL=64
Reply from 192.168.100.10: bytes=32 time=7ms TTL=64
Reply from 192.168.100.10: bytes=32 time=17ms TTL=64
Reply from 192.168.100.10: bytes=32 time=9ms TTL=64
Reply from 192.168.100.10: bytes=32 time=95ms TTL=64
Reply from 192.168.100.10: bytes=32 time=4ms TTL=64
Reply from 192.168.100.10: bytes=32 time=20ms TTL=64
Reply from 192.168.100.10: bytes=32 time=2ms TTL=64
Reply from 192.168.100.10: bytes=32 time=7ms TTL=64
Reply from 192.168.100.10: bytes=32 time=17ms TTL=64
Reply from 192.168.100.10: bytes=32 time=3ms TTL=64
Reply from 192.168.100.10: bytes=32 time=4ms TTL=64
Reply from 192.168.100.10: bytes=32 time=3ms TTL=64
Reply from 192.168.100.10: bytes=32 time=6ms TTL=64
Reply from 192.168.100.10: bytes=32 time=3ms TTL=64
Reply from 192.168.100.10: bytes=32 time=4ms TTL=64
Reply from 192.168.100.10: bytes=32 time=3ms TTL=64
Reply from 192.168.100.10: bytes=32 time=2ms TTL=64
Reply from 192.168.100.10: bytes=32 time=3ms TTL=64
Reply from 192.168.100.10: bytes=32 time=8ms TTL=64
Reply from 192.168.100.10: bytes=32 time=5ms TTL=64
Reply from 192.168.100.10: bytes=32 time=9ms TTL=64
Reply from 192.168.100.10: bytes=32 time=2ms TTL=64
Reply from 192.168.100.10: bytes=32 time=5ms TTL=64
Reply from 192.168.100.10: bytes=32 time=23ms TTL=64
Reply from 192.168.100.10: bytes=32 time=19ms TTL=64

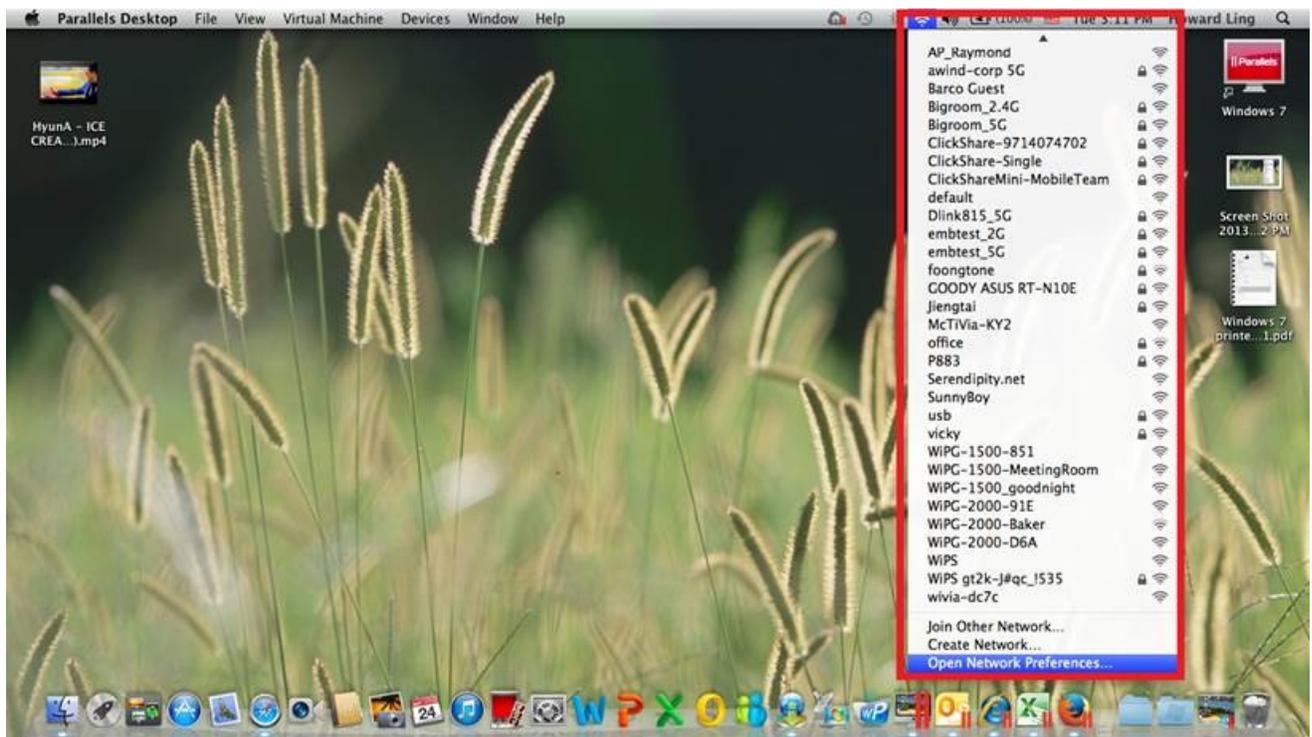
Ping statistics for 192.168.100.10:
    Packets: Sent = 29, Received = 29, Lost = 0 (0% loss)
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 95ms, Average = 10ms
Control-C
^C
C:\Users\KL_Chang>
```

As mentioned above, the average response time shall be far less than 100ms and there shall have no package lost during the test in healthy condition.

2. With respect to the poor mirroring performance between WiPG machine and the connected PC/Laptop in some cases, here are few ideas which can help end users get the higher mirroring performance in their environment for your reference.

Idea 1: Adjust the resolution setting inside our WiPG machine to 720P or WXGA; besides, have the projecting PC/Laptop go with the same set resolution on their local screen since the higher resolution means the heavier traffic during the “Mirroring Operation”.

Idea 2: If there are too many wireless Aps around the WiPG machines as shown in the screenshot below, we have to consider adjusting the channel setting from “Auto” to some specific less-use channels such as Channel 1 or Channel 11 through WiPG machine’s “Admin.” Page.



Idea 3: Run the “Command Prompt” and ping the WiPG machine on your own connected PC/Laptop again in order to verify whether your environment is too noisy for the wireless connection or not. If the average response time is very close to or longer than 100ms, it means the situated environment is not good for the Mirroring Operation through wireless and we have to ask end users to wire the WiPG machine to their corporate AP which shall go with the stronger antenna gain and powerful anti-interference design then end users can make the “Mirroring Operation” on our WiPG machine through their corporate AP because all of them still works in the same subnet.

3. About the maximum connection number on WiPG machine

In theory, WiPG machine can support the maximum connection number up to 128 users since our DOP products are the standard IP-based design but in order to secure the higher mirroring performance, we would strongly recommend limiting the maximum connection number to 64 users since the “Mirroring Operation” is our main focus instead of the internet access.

Note: To wire the WiPG machine to the corporate AP would be also a good way out for this frequent-ask from customers.

4. About the maximum supportive number on our Web-Slide feature

Actually, our web-slide feature is a very useful and innovative design, however, this special feature is a very complicated design based on the limited wireless bandwidth; therefore, in order to increase the maximum supportive number on this feature, we would strongly recommend wiring the WiPG machine to corporate AP if possible.

5. About the “Virtual Desktop” support on MAC

Actually, now both WiPG-1500 and WiPG-1000 (with new FW V1.2.0.0 inside) can support the “Virtual Desktop” feature for MAC users but they have to install the SVS driver into their MAC OS 10.7 and above beforehand.