

Connecting Turck PLC to Kepware Server

There is **no physical connection between the Turck PLC and PC at the Smart Manufacturing Lab**. Both PLC and PC is connected in a network at BVM server and requires proper connection to establish connection.

1. Ensure PLC is connected to the server.

1. Open **Command Prompt (cmd)**.

2. We will send a **small packet to check connection between PLC and Server**.

```
Command Prompt
Microsoft Windows [Version 10.0.19045.4780]
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Z:\>ping 10.10.14.93

Pinging 10.10.14.93 with 32 bytes of data:
Reply from 10.10.14.93: bytes=32 time<1ms TTL=64
Reply from 10.10.14.93: bytes=32 time<1ms TTL=64
Reply from 10.10.14.93: bytes=32 time<1ms TTL=64
Reply from 10.10.14.93: bytes=32 time<1ms TTL=64

Ping statistics for 10.10.14.93:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

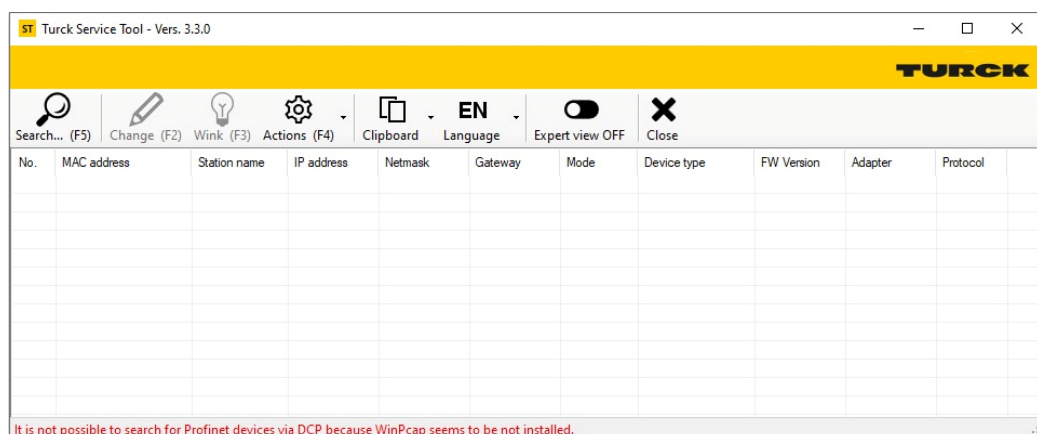
Z:\>_
```

3. Enter command **<ping 10.10.14.93>**

This is the IP address of Turck PLC. In case it shows, **Request Timed Out**, you need to ensure the following.

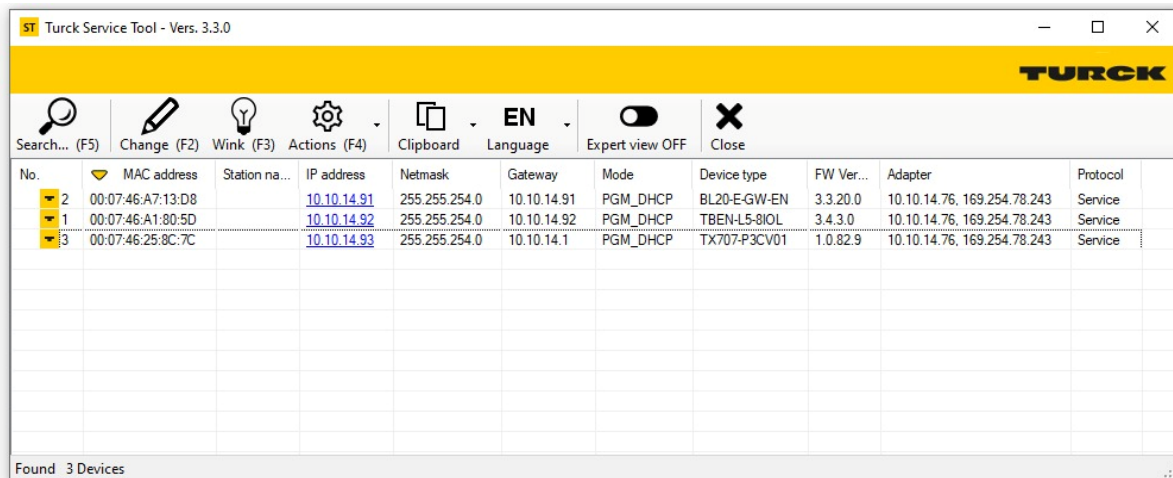
2. Turck Service Tool

1. Open **Turck Service tool** on the PC.



2.It will show empty on Startup.

3.Click on **Search(F5)** to show the PLC.



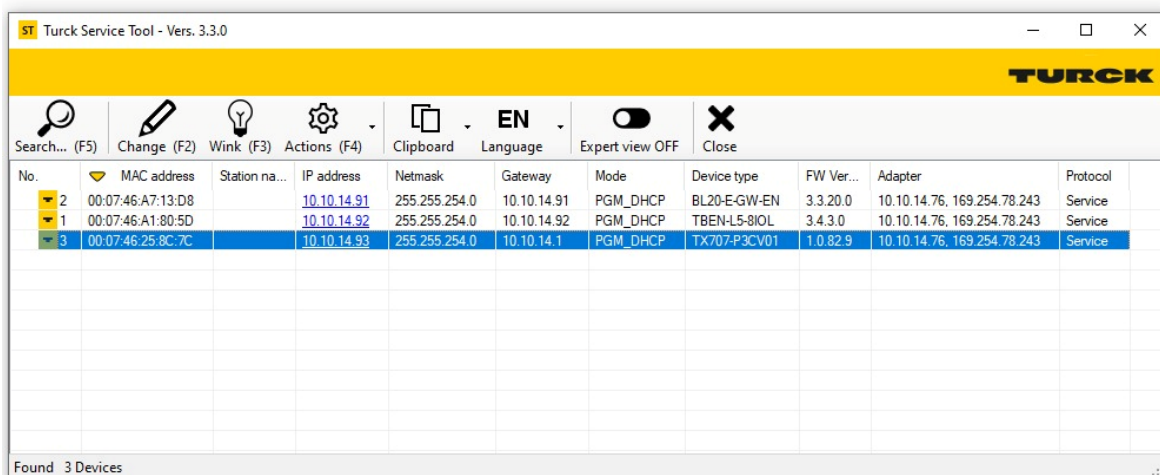
The screenshot shows the 'Turck Service Tool - Vers. 3.3.0' window. The interface includes a toolbar with icons for Search (F5), Change (F2), Wink (F3), Actions (F4), Clipboard, Language (set to EN), Expert view (OFF), and Close. Below the toolbar is a table with the following columns: No., MAC address, Station na..., IP address, Netmask, Gateway, Mode, Device type, FW Ver..., Adapter, and Protocol. Three devices are listed:

No.	MAC address	Station na...	IP address	Netmask	Gateway	Mode	Device type	FW Ver...	Adapter	Protocol
2	00:07:46:A7:13:D8		10.10.14.91	255.255.254.0	10.10.14.91	PGM_DHCP	BL20-E-GW-EN	3.3.20.0	10.10.14.76, 169.254.78.243	Service
1	00:07:46:A1:80:5D		10.10.14.92	255.255.254.0	10.10.14.92	PGM_DHCP	TBEN-L5-8IOL	3.4.3.0	10.10.14.76, 169.254.78.243	Service
3	00:07:46:25:8C:7C		10.10.14.93	255.255.254.0	10.10.14.1	PGM_DHCP	TX707-P3CV01	1.0.82.9	10.10.14.76, 169.254.78.243	Service

At the bottom of the window, it says 'Found 3 Devices'.

4. Ensure that the details are exactly like the one mentioned here. Note that the **Gateway IP** needs to be strictly **10.10.14.1**. It connects all the PC and the PLC to our Server.

5. In case it is altered or do not match the IP as shown, Select the **Turck PLC**.



This screenshot is similar to the previous one, but the third device (No. 3) is now selected, indicated by a blue highlight. The 'Gateway' column for this device shows '10.10.14.1'.

No.	MAC address	Station na...	IP address	Netmask	Gateway	Mode	Device type	FW Ver...	Adapter	Protocol
2	00:07:46:A7:13:D8		10.10.14.91	255.255.254.0	10.10.14.91	PGM_DHCP	BL20-E-GW-EN	3.3.20.0	10.10.14.76, 169.254.78.243	Service
1	00:07:46:A1:80:5D		10.10.14.92	255.255.254.0	10.10.14.92	PGM_DHCP	TBEN-L5-8IOL	3.4.3.0	10.10.14.76, 169.254.78.243	Service
3	00:07:46:25:8C:7C		10.10.14.93	255.255.254.0	10.10.14.1	PGM_DHCP	TX707-P3CV01	1.0.82.9	10.10.14.76, 169.254.78.243	Service

Found 3 Devices

6. Select the change option.

7. Select Gateway, and set it to **10.10.14.1**

In case PLC address is unknown, **boot up PLC to check the IP address on HMI**. It shows for a short time so make sure to note it down.

Connecting Smart Manufacturing PC to Server PC

1.The **Smart Manufacturing Lab PC** is not equipped with Kepware server.

2.We need to connect to **Server PC** using **Xen Connect**.

Connection using Xen connect

1. Open **Xen Connect**

2. Add a **Server**

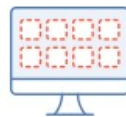
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 Add New Server

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×

Enter the host name or IP address of the server you want to add and your user login credentials for that server.

Server:

User login credentials

Username:

Password:

Add

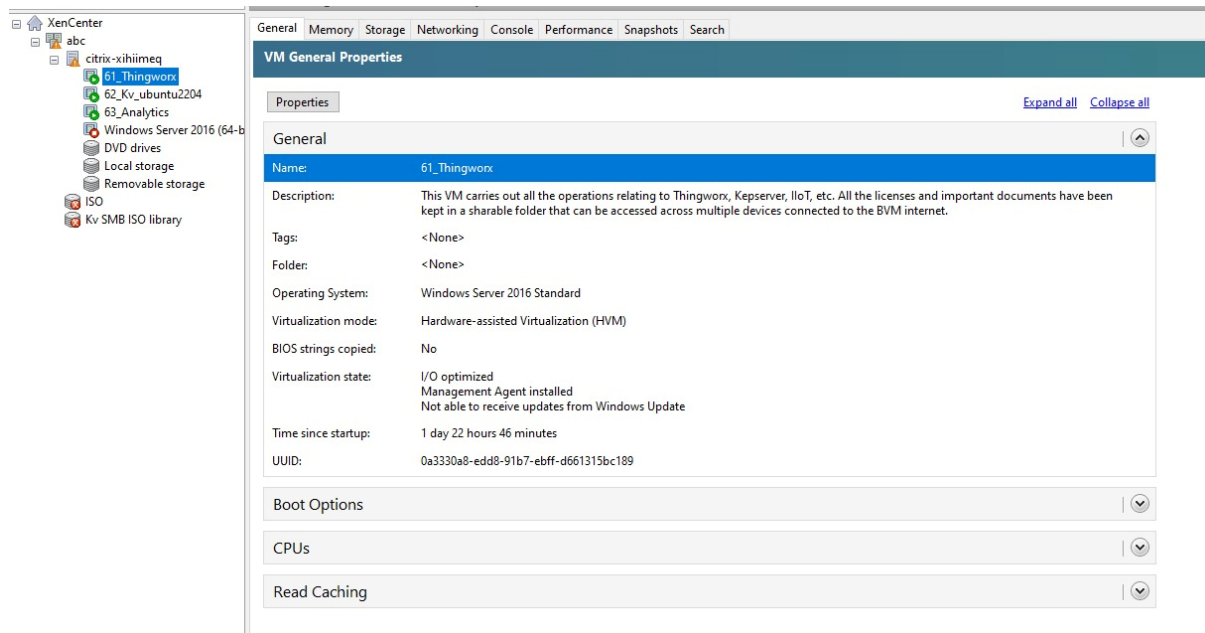
Cancel

Server: 10.10.8.60

Username: root

Password: hcme@deptt_1234

3. This window should open.



4. Select **Thingworx** from the **Xen Centre Tree**.

5.Go to **Console**.

6.Accept **Remote connection** to the PC.

7. In case of credentials:

Username: Administrator

Password: Smart@bvm_1234

8.You are now logged in to server PC having keppure server.

9. Follow “**Thingworx Connectivity**” document for further process.