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# Network requirements

## Firewall settings

Tani supports both ip variants - the older one with addresses as 192.168.1.1, and the newer ip v6 protocol as fda8:2f8b:87c:1::1

### The Tani software uses the following server ports

- Connection between the configuration software and the OPC or PLC Engine core: UDP and TCP port 2468
- OPC UA TCP port 4840
- Auto discovery: UDP port 5353
- OpcPipe: Often TCP port 4444
- MQTT: TCP port 1883
- Web server: TCP or UDP port 80, 443
- BACnet: UDP port 47808

### The Tani software can use the following ports

- Connection between the configuration software and the OPC or PLC Engine core: UDP and TCP port 2468. Client and server
- OPC UA: Depending on the configuration. Often TCP 4840. Client and server
- Modbus TCP: Often TCP or UDP port 502
- Siemens: TCP port 102
- Rockwell: TCP port 44818
- BACnet: UDP port 47808. Client and server
- Mitsubishi: Often TCP port 5002
- MySql: TCP port 3306
- MsSql: Often TCP port 1433
- PostGres: TCP port 5432
- KNX: TCP or UDP port 3671
- NTP: UDP port 123. Mostly this is configured on embedded devices
- Web browser: TCP or UDP port 80, 443, 8443. In conjunction with web sockets often 8080, 8081, 8082
- Email: TCP 25, 143, 587, 465, 993, 2525
- Profinet: This does not use ports, it is a raw protocol directly on Ethernet
- Osi/H1: This does not use ports, the Ethernet length field with number values under 1500 defines this protocol

All of this are the default ports. With the only exception of Siemens port 102 the user can change all of this ports. The user can configure raw connections using any port.

If OSI/H1 is installed and licensed this will use OSI frames on the network.

If the station search driver is installed this will use Profinet frames on the network.

### Network ports for each process

- Graphical configuration client: UDP port 2468 as server and client, TCP port 2468 as client
- ConfigurationServer: UDP port 2468 as server and client, TCP port 2468 as server
- LicenseServer: TCP port 2470 as server
- PlcEngine: Depending on the user configuration.

### Internal communication between the Tani software parts

UNIX sockets (Linux), Named pipes (Windows)