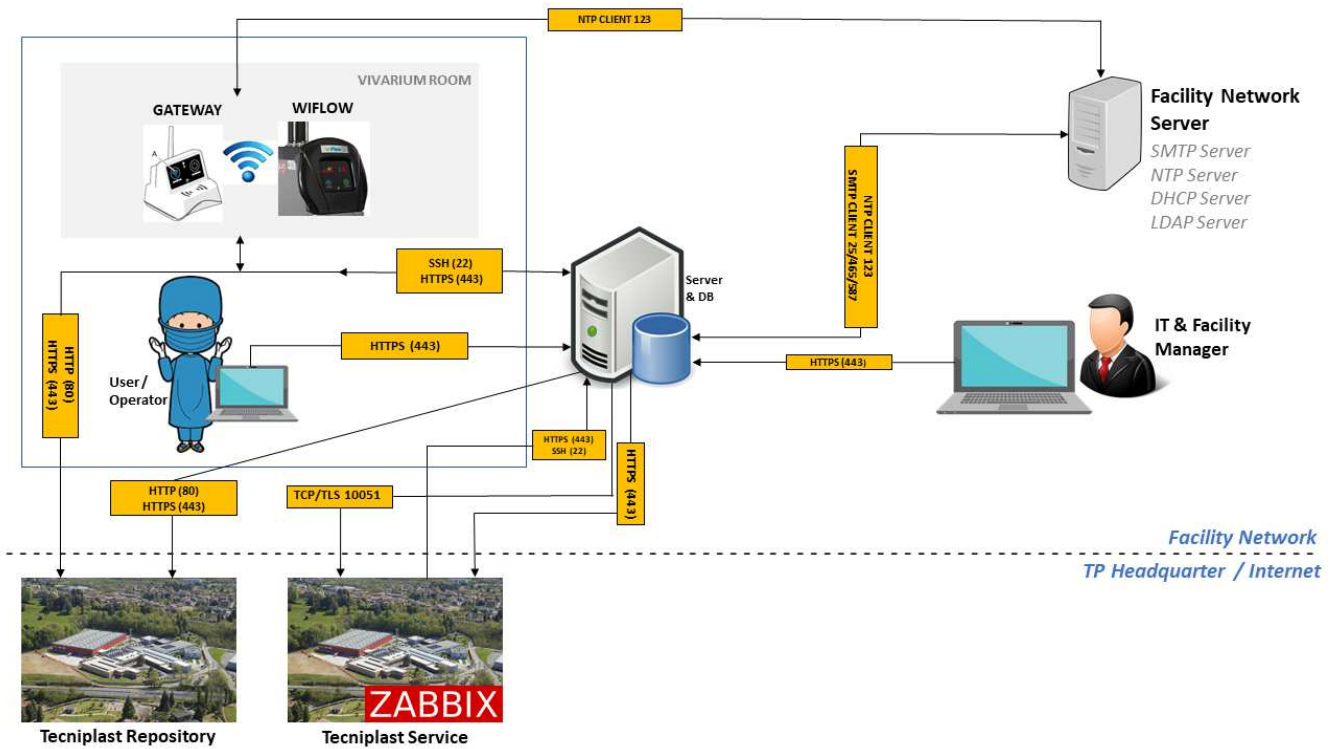


**INSTALLATION
REQUIREMENTS**



GUARDIAN
THE WAY TO REMOTE CONTROL

❖ GUARDIAN NETWORK DIAGRAM



*****CRITICAL*****

GUARDIAN Server must be reachable remotely from Tecniplast Service team in order to perform remote installation and service of the entire GUARDIAN Server Applications. In case this is not possible, specific and necessary quotations for travels and accommodations must be invoiced.



❖ GUARDIAN NETWORK COMMUNICATION

GUARDIAN SERVER:

- ❖ Inbound from local network (GUARDIAN services, network services)
 - 443 (GUARDIAN web application)
 - 123 (NTP, from Guardian Units if none NTP server is provided)
 - 10051 (TCP TLS) (monitoring Tecniplast application)
- ❖ Outbound to local network (GUARDIAN services, network services)
 - 123(NTP), 53 (DNS), 25/465/587 (SMTP)
 - 22 (SSH to Guardian Units and for support/maintenance purpose)
 - 3000 (GUARDIAN One2One protocol)
 - 10050 (TCP TLS) (monitoring Tecniplast application)
- ❖ Outbound to internet
 - 80 (HTTP), 443(HTTPS) (for SW update)
 - 10051 (TCP TLS) – Tecniplast Monitoring System

GUARDIAN UNITS (Gateways & Wiflows)

- ❖ Inbound from local network (GUARDIAN services, network services)
 - 22 (SSH for support/maintenance purpose from GUARDIAN Server)
 - 3000 (GUARDIAN One2One protocol)
- ❖ Outbound to local network (GUARDIAN services, network services)
 - 123(NTP), 53 (DNS)
 - 443 (to GUARDIAN server)
- ❖ Outbound to internet
 - 80 (HTTP), 443(HTTPS) (for SW update)



❖ END-USER REQUIREMENTS

- Allowing outbound access to the Guardian server on port 443 (HTTPS)
- Operating System
 - Windows 7 or Above
 - Linux
- Browser requirements
 - Google Chrome 40 or above
 - Mozilla Firefox 3.7
 - Safari

❖ REQUESTED HARDWARE SPECIFICATION

	MINIMUM HARDWARE SPECIFICATIONS (from 1 – 20 units)	RECOMMENDED HARDWARE SPECIFICATIONS (less than 100 units)	RECOMMENDED HARDWARE SPECIFICATIONS (more than 100 units)
N° CPU'S	2	4	8
RAM MEMORY	8 GB	16 GB	32 GB
HDDs (mountpoint)*	First HD 50 GB (Operating System) /var /dvc 150GB	First HD 50 GB (Operating System) /var/dvc/ 300 GB	First HD 50 GB (Operating System) /var/dvc/1TB
NETWORK CARD	1 Ethernet Card 1 Gbps	1 Ethernet card 1Gbps	1 Ethernet card 1 Gbps or higher
OS**	Linux – Centos 7 Minimal	Linux – Centos 7 Minimal	Linux – Centos 7 Minimal

* HDD dimension calculator = Data record (300 bytes) * Daily rate * Retention days * Number of units
Daily rate by default = 72 per day (every 20 minutes)

Retention days = 10 years

**System is also compatible with REDHAT, but customer needs to provide subscriptions to REDHAT repositories.

Data Backup:

Tecniplast performs a daily backup of the DB in the Server machine (virtual or physical).

Customer is responsible for the backup of the entire machine.



❖ TERMINOLOGY

GUARDIAN SERVER

Physical or Virtual Machine where are installed all the applications to run the system.

Server will be provided by the user following the specified requirements.

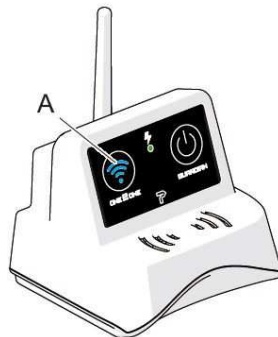
The GUARDIAN web applications for the users (Facility Manager and Operator applications) run on the GUARDIAN Server that must be accessible by the users themselves.

GATEWAY

Physical Machine that is placed usually over the Tecniplast Air Handling Unit.

The GATEWAY is to be assembled on TECNIPLAST Air Handling Units, thus enabling the Air Handling Unit to be remotely controlled:

The GATEWAY must be connected to the GUARDIAN Server and so it must be in the user's intranet.



INSTALLATION REQUIREMENTS



GUARDIAN
THE WAY TO REMOTE CONTROL

WIFLOW

Physical Machine that is designed to be controlled through a server-based application (optional) which allows to remotely control all the Air Handling Units connected to the network
The WIFLOW must be connected to the GUARDIAN Server and so it must be in the user's intranet.



USER DEVICE / END USER POINT

In order to access to the GUARDIAN web application, the user needs a device with a web browser.

Requirements for the browser are listed in the above section.

The user's device needs to reach the GUARDIAN Server.

