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SETTING UP A SERVER CABINET IN A BEER PRODUCTION

A server cabinet is a critical component of IT infrastructure in a production setting, ensuring reliable equipment operation, optimizing space, and supporting the stability of technological processes.

Although each configuration depends on the project, a Montelektro server cabinet usually consists of the following equipment:

- 2x **UPS (Uninterruptible Power Supply)**;
- 1x **ATS switch**;
- 2x **ESXi hosts**;
- 1x **Synology NAS server**;
- 1x **Network switch**;
- 1x **Secomea Site Manager (remote access)**.

Additional equipment is placed in control rooms and consists of Thin Client PCs equipped with two monitors, a keyboard, and a mouse for each Thin Client.

Most of the equipment is delivered in boxes separately from the cabinet (except for the Secomea Site Manager, which is pre-installed inside the cabinet).

Before starting the assembly of the cabinet, the factory must lay the power cable to the final location of the cabinet, as well as ethernet cables to the places where the thin clients will be placed, and one ethernet cable to the PLC (Programmable Logic Controller).

The first step after placing the cabinet in its final location is to install the **UPS (uninterruptible power supply)**. The UPS is inserted into the tray that is already located at the bottom of the cabinet. After unscrewing 8 screws (2 on each side for each UPS), UPS2 is inserted first, and UPS1 on top. After installation, the screws are screwed back, the batteries are connected, and the front cover is installed (Figure 1).

The next step is to install the **ATS switch**. It is placed above UPS1 and secured with 4 screws. Before tightening the screws, the ethernet cable must be pulled out of the front of the ATS.

Next, the **ESXi hosts** are installed (first SRV2, then SRV1 - the labels are on the back of the ESXi). The trays are pre-installed in the cabinet. The inner part of the tray is disconnected, fixed to the side panels of the host and pushed in until a characteristic click. Then the host is installed in the outer part of the tray, pushed in until a click, and then the cable lever is connected (Figure 2).



Fig. 1 – UPS battery connected



Fig. 2 – ESXi with inner part of the tray connected

The ESXi host can be pulled forward by lowering the latches on both sides and gently pulling the device towards you (Figure 3).

Next, the **NAS server** is installed. The screws are removed from the NAS, the server is inserted into the tray and secured with screws (Figure 4).



Fig. 3 – ESXi pulled forward



Fig. 4 – NAS in final position

The last piece of equipment to be installed is the **Network switch**. The switch is installed by unscrewing the screws from the cabinet, placing the switch in place, and tightening the screws back in.

After the equipment is installed, all the cables that are already installed in the cabinet are connected, starting from the bottom. The cables are labeled, and the electrical diagrams and photos of the cabinet from the office help determine which cable should be connected to which port. The electrician at the site connects the power cable to the junction box at the back of the cabinet. After connecting the power, the UPS and NAS server are turned on, and other devices start up automatically.

Following the physical installation of the server cabinet, server configuration is performed, which includes setting up ESXi hosts, the NAS server, and network parameters to ensure integration with SCADA and ERP systems in the brewery production environment. (Figure 5).

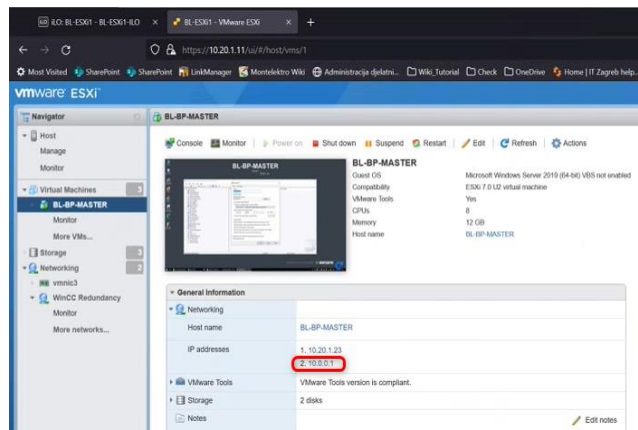


Fig. 5 – IP address of virtual machine by connecting to ESXi

A server cabinet in production is an indispensable element for ensuring reliable operation of IT infrastructure. It not only protects equipment, but also provides uninterrupted power supply and supports automation of production processes. Such cabinets are widely used to support automation systems, platform management (SCADA, ERP) and data collection from sensors and IoT devices. The installation process, as demonstrated by the example of the Montelektro cabinet, requires careful preparation, cooperation of several specialists and strict adherence to instructions. Proper installation of a server cabinet guarantees the stability and efficiency of industrial systems.

References

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