op5 installation preparation guide

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Author	**Christian Nilsson / Professional services**

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Purpose

This document will guide you through the initial preparations and will enable you to do an efficient installation of op5 Monitor Enterprise.

Overall process outlined

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*** Note: op5 appliance only.**

1 op5 preparations

The following steps described below are performed by op5 before the installation.

1.1 op5 prepare/order the server

op5 prepare/order the server purchased by the customer (op5 appliance only).

1.2 op5 prepare/order modem and sensor/probes

op5 prepare/order the optional hardware (modem, probes, etc) purchased by the customer.

1.3 Booking of installation days

op5 contacts the customer and schedules a date for installation.

1.4 Support account creation

op5 create an account to the op5 service & support portal, www.op5.com/support.

1.5 License file creation

op5 creates a license file for the software purchased by the customer.

2 Deliveries to the customer

The following deliveries are sent out from op5 to the customer before the op5 installation.

2.1 Information email

An information email will be sent including information about:

1. **Login details to the op5 service & support portal (www.op5.com/support)**
   This will give you access to all protected areas, such as software downloads, upgrades /updates, feature requests etc.

2. **Link to the customer data sheet**
   To be able to do an efficient installation of op5 Monitor op5 want you to fill in a customer data sheet containing information about your hosts (servers, switches, routers), contact information, etc.

3. **Link to this document**

2.2 Appliance server delivery

The appliance server(s) will be delivered directly to the customer before the installation.

2.3 Modem and sensor/probes delivery

Optional hardware, such as GSM/GPRS modem and the environment sensor/probes, etc will be delivered to the customer before the installation.

- The GSM/GPRS modem is used for sending SMS notifications
- Environment sensor, probes, etc are used for monitoring temperature, humidity, etc.

2.4 License file delivery

A license file will be sent to the customer by email before the installation. With the license file installed, you have access to the repositories which enables you to update the op5 software.

3 Customer preparations

3.1 Sending the customer data sheet back to op5

To be able to do an efficient installation of op5 Monitor we need you to fill in a customer data sheet. Enter information about your 'hosts' in this document. Hosts are the devices, servers, switches, routers and whatever else that you will monitor. Please fill in this form and send it to op5 at least 3 days before the installation.

3.2 Preparing the server

3.2.1 Rack mounting

The op5 appliance servers are designed to be rack mounted (1U).
Size: 77,2 cm D x 42,6 cm B x 4,26 cm H
Power cord: IEC/IMB-plug (IEC-C13)

3.2.2 Connecting Network Cables

The op5 appliance servers have 2 network interfaces. Connect the server to your switch using new CAT5 or CAT6 cables. The network interfaces will be called **eth0** and **eth1** in the operating system and when running the configuration application setup.

3.2.3 Connecting Monitor and Keyboard

A monitor and a USB keyboard are necessary. No mouse is needed.
After the initial system installation and network configuration, the monitor and keyboard will be used only for emergency administration. Normal administration is performed via the web interface, or via SSH.

3.3 Preparing for SMS notifications

Note: This applies only if you have ordered a GSM modem for op5 Monitor SMS notifications.

3.3.1 Acquiring a SIM card

You need to acquire a SIM card from your GSM provider of choice (not USIM/3g).
Also test your SIM card in the server room to make sure that radio waves are not blocked out.
Note: Remember to write down you PIN-code, so it's available during the installation.

3.3.2 Connecting the GSM modem

1. Insert the SIM card.
2. Connect the antenna and use the magnet on the bottom of it to attach it to a metal surface. Standard cable length is 2,5 meter. Longer cables are available, if needed - please contact op5.
3. Connect the modem to the serial port on the back of the server
4. Connect the power supply. (Power cord: CEE-7/7 ("European wall socket plug"))

3.4 Installing Agents

Agents are normally installed on all monitored servers and computers. It is recommended to install the agents before installing the op5 software.

3.4.1 op5 Monitor and Statistics

In order to get internal information such as CPU usage, disk usage, memory usage or perform local tests, a software agent has to be installed.

Platform	Software agent	Note
Windows	NSClient++	
UNIX, Linux and Macintosh	NRPE	The source code can also be downloaded for compilation if no precompiled package is available for your UNIX/Linux distribution.
Novell	MRTGEXT	

The software agents and installation instructions can be downloaded from www.op5.com/support.

3.4.2 op5 LogServer Extension

op5 LogServer Extension uses the syslog protocol which is a standard that most systems support natively.

Platform	Software agent	Note / Description
Windows	Syslog agent	Syslog agent converts the Windows Event logs to syslog format and send the data to the syslog server. It can also read plain text log files. The Syslog agent and installation instructions can be downloaded from www.op5.com/support.
UNIX, Linux and Macintosh	Syslogd ksyslogd syslog-ng rsyslog	Syslogd is standard in most UNIX systems. No download or installation is necessary. On UNIX systems, the syslog configuration is normally done in the file /etc/syslogd.conf. Read `man syslogd.conf` for the specifics regarding your system.
Network devices	[no software agent]	Many systems, including switches and printers, can forward their logs to your op5 LogServer. This is normally done via the configuration interface for that system, where you enter the IP-address or hostname for the op5 LogServer.

3.5 Adjusting Firewalls

Important: To be able to install and update op5 products, the server needs access to op5 repositories at http://repos.op5.com**.**

3.5.1 Traffic to/from the op5 server

Traffic type	Direction	Port(s)	Description
op5 operators/users	Inbound	80/tcp – http 443/tcp – https	To access the op5 web gui.
op5 system administrator	Inbound	80/tcp – http 443/tcp – https 22/tcp – SSH	To access the op5 web gui, also to remote control the op5 server by SSH.
NRPE	Inbound	5666/tcp	Necessary for op5 Monitor to access the agent on op5 LogServer
NTP	Outbound	123/udp	For access to your NTP server (time synchronization)
Email	Outbound	25/tcp - SMTP	Necessary for sending emails from the op5 products. (notifications, reports etc)
DNS	Outbound	53/udp	For access to your DNS server.
Internet	Outbound	80/tcp – http	To be able to install and update op5 products, the server needs access to op5 repositories at http://repos.op5.com

3.5.2 Specifics for op5 Monitor

Traffic type	Direction	Port(s)	Description
SNMP traps (optional)	Inbound	162/udp	To receive SNMP traps.
NSClient++	Outbound	1248/tcp 5666/tcp	To access the agents on the monitored Windows servers
NSClient++ (spare)	Outbound	12480/tcp	If for example MS Exchange servers already are using 1248/tcp
NRPE	Outbound	5666/tcp	To access the agents on the monitored UNIX/Linux servers
SNMP	Outbound	161/udp	For SNMP queries
PING	Outbound	ICMP	To be able to determine if a host is alive

Note: If you plan to monitor network based services, such as databases, email, web pages, etc – you also need to allow this in your firewall (Port 80/443 for webpages etc). Otherwise no tests that require connecting to a port and sending test data will be possible

3.5.3 Specifics for op5 Peer and Poller Extensions

Traffic type	Direction	Port(s)	Description
SSH	Inbound / Outbound	22/tcp	Control commands between merlin daemons are sent by using SSH.
Merlin	Inbound / Outbound	15551/tcp	So that merlin daemons can communicate between each other.

Note: Port 15551 needs to be allowed between all peers and pollers. Configuration and commands are sent using SSH.

3.5.4 Specifics for op5 LogServer Extension

Traffic type	Direction	Port(s)	Description
Syslog	Inbound	514/udp 514/tcp	For syslog traffic to the op5 LogServer.

3.6 Monitoring network devices using SNMP

Monitoring using SNMP is mainly used for equipment such as printers, switches, routers and other appliances. It is also used to gather network usage statistics in general. Sometime, you might need to enable SNMP manually and set the SNMP read community. The procedure for this can normally be found in the manufacturers manual.
A MIB is normally required to monitor manufacturer specific parameters, such as voltage or temperature. Please contact the manufacturer to receive the MIB before the installation of the op5 products.

4 Installation guidelines

4.1 op5 appliance extension and other op5 software

Note: Applicable if the customer purchased op5 appliance extension and hardware.
Installation of op5 system and products are normally performed by an op5 consultant, but can also be done in advance. All guides, manuals and software can be downloaded from www.op5.com/support, for example:

Guide/Manual	Description
Quick install guide	Installation guide for the op5 system and software components.
op5 System manual	Detailed information about the op5 system and how to configure the network settings. **Important note: For security reasons, do not forget to set a new root password.**
op5 Monitor manual	Product manual
LogServer Extension	Product manual

4.2 Operating system and op5 software

Note: Applicable if the customer uses their own hardware and operating system. Installation of the operating system should be performed by the customer, and the op5 products are normally installed by an op5 consultant. All guides, manuals and software can be downloaded from www.op5.com/support, for example:

Guide/Manual	Description
Software install guide	Installation guide for the operating system. For a list of supported operating systems, see www.op5.com/support > Technical information > Technical requirements.
op5 Monitor manual	Product manual
op5 Statistics manual	Product manual
op5 LogServer manual	Product manual

- Manuals and guides can be downloaded without a support account.
- Software downloads are password protected. Login details can be found in the information email from op5.

4.3 More information

The following can also be found at www.op5.com/support:

- Manuals & Guides
- How-to
- FAQ
- Mailing Lists
- Roadmaps / Changelogs
- Event information
- Bugs and Features online
- Forum
- Community projects

op5 Professional Services

We provide a range of services that aim to help you to further boost the benefits of a full scale monitoring solution. Our team of highly skilled software engineers with several years experience of implementing monitoring solutions are committed to ensure that your business requirements are met.

For more information visit http://www.op5.com/network-monitoring/services/

op5 Training

op5 offers basic and advanced training courses for op5 Monitor. These scheduled courses take place in Stockholm; however, if a group from the same company wish to attend, we can also provide courses at your site. Training can of course be tailored to suit your specific requirements.

For more information, see www.op5.com/network-monitoring/services/training/.

op5 Contact information

op5 Support

E-mail	support@op5.com
Phone	+46-(0)31-352 56 50

General Enquiries

E-mail	info@op5.com
Phone	+46-(0)8-58 83 01 00