Open Source Client-Management-System opsi

For Windows, Linux and MacOS clients based on Linux servers

opsi

Concept Open Source

In large PC networks automated and non-interactive software installation is an important factor for standardization, maintainability, and cost-saving. In most cases using adequate tools is accompanied by extensive license fees.

The cost of this may be reduced by using an open source tool like opsi. All core components of opsi are open source software (AGPLv3 licensed), providing added security of investment. Additional to the free core of opsi, fee-based extensions and services like support and maintenance, consulting, and training are available.

As the developer and maintainer of opsi, uib gmbh is your partner and service provider.

Automatic Software Deployment

In order to deploy software from an opsi server, you just need the opsi-client-agent service to be installed on a client PC. This can even be done remotely. After that, the PC is integrated in the opsi system and can be managed from the administrator console via a GUI application or by a CLI. All current Windows operating systems, many Linux distributions, and now additionally, MacOS are supported.
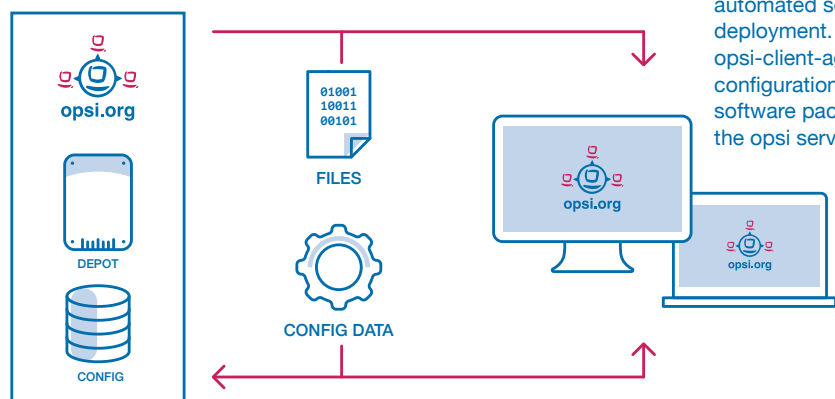

Figure 1: Using the automated software deployment. The opsi-client-agent gets configuration data and software packages from the opsi server

The software deployment runs

- according to the configuration, on client boot, when initiated from the server, and/or when a network connection (e.g. VPN) is established
- remotely controlled by the server
- without user interaction

With the automated software deployment of opsi, it is possible to deploy

- commercial off-the-shelf software,
- custom software,
- software updates,
- software configuration,
- Microsoft hot-fixes,
- administrative scripts

The opsi-client-agent

The opsi-client-agent checks the configuration information if software should be installed, uninstalled, or updated on the respective client PC. By default, this takes place on every boot, and before the user logs in.

If an action request is recognized by the opsi-client-agent, the script-driven installation program **opsi-script** starts.

The scripts to be interpreted and the software packages to be installed are stored on a network share. During the installation, there is no need nor chance for the user to participate in the process.

opsi-script

The opsi-script program supports different ways of automated software installation:

- Silent or unattended setup: An existing program is set to non-interactive mode (via command line parameters for example)

- A completely script-based setup where the opsi-script program manages all installation tasks directly by specific commands.

- A Microsoft Installer based setup where the (customized) MSI-packages will be invoked by the installer service.

- Automated installation with the original setup program and prerecorded answers (using for example free tools like AutoIt or AutoHotkey).

In practice, usually a combination of these methods is used.

Automatic OS Installation

An operating system installation starts with a PXE boot. An opsi boot image is loaded to prepare the custom installation. Which operating system should be installed is controlled via the opsi management interface. The current versions of Windows in 32Bit and 64Bit and the respective servers, as well as various Linux distributions, are supported. The installation is based on a standard unattended setup with the original setup program where custom data was introduced. Thus, the hardware detection and driver selection of the setup program is used but no user interaction takes place.

The integration of updated Windows drivers is vastly automated in opsi.

As an alternative to a package-based operating system installation, opsi also offers an image-based installation.

opsi Management Interface

For managing the software distribution a management interface is used, the **opsi-configuration-editor**. It provides:

- centralized client management also for distributed locations,

- individual configuration of clients as well as combined configurations of client collections

- maintenance of server settings for clients and products

- management of client and product groups, extensive selecting and filtering tools

- tabular exports for external reports

Transparent, Flexible Data Backends

The opsi management interface and all other tools communicate via HTTPS with the opsi web service. For this web service, it is possible to set where configuration data should be stored (at the moment, either in text files or in MySQL database tables).

Additionally, the opsi depot server provides secured file shares (software depots), in which the software packages are protected from unauthorized access.

The passwords to grant access from the clients are transferred encrypted so that only the client-agent and the opsi admins can access the packages.

Hard- and Software Inventory

opsi provides an automated hard- and software inventory, either regularly or on demand, as a base for planning and support tasks.

The opsi management interface comprises detailed hardware data of clients, allows client selection by certain hardware criteria, as well tabular overviews of the client's hard- and software configuration.

This data may then be used by other products like a CMDB.

opsi Extensions

opsi's core functionality is open source and license-free. Fee-based components extend opsi's functionality. Their sale also contributes to the maintenance and continuous development process of opsi's free components.
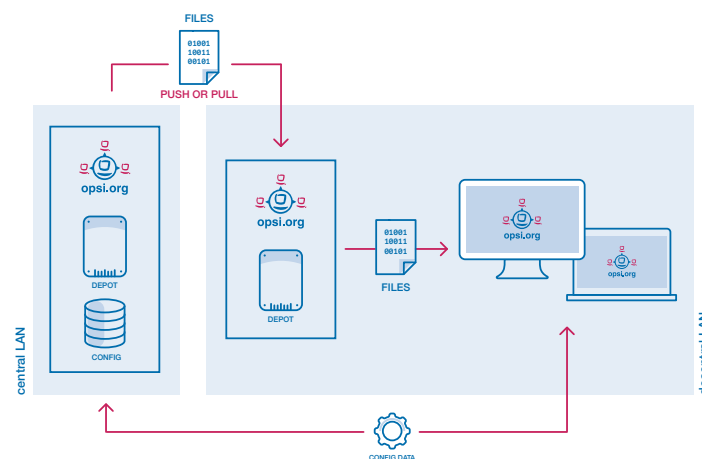

Figure 2: Support of multiple locations. The opsi-client-agent gets software packages from the opsi depot server.

TESTING OPSI

3 steps to install opsi:
(https://opsi.org/try-opsi)

1. Download the opsi ‚Getting Started' manual. There you will find the detailed instructions for installing opsi.

2. Download the current version of the opsi server as a virtual machine for VMWare/VirtualBox.
   There you will find a complete opsi server as a compacted virtual machine. The instructions for launching can be found in the 'Getting Started' manual.

3. For questions during the evaluation of opsi you can find help in the support forum found at https://forum.opsi.org.