



# opsi Version 4.0.6 Release Notes



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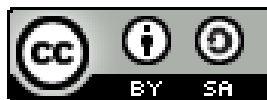
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# Chapter 1

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The parts of opsi that are not open source are still under cofunded development. Information about these parts can be found here: [http://uib.de/en/opsi\\_cofunding/index.html](http://uib.de/en/opsi_cofunding/index.html)

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## Chapter 2

# opsi Support Matrix

This is an overview on which distributions and releases the opsi-server will run:

### 2.1 Opsi - server runs on :

Date: 19.4.2016

Distribution	Opsi 4.0.6	Anmerkung
Debian 8 jessie	✓	
Debian 7 wheezy	✓	
Ubuntu Xenial 16.04 LTS		
Ubuntu Trusty 14.04 LTS	✓	
Ubuntu Precise 12.04 LTS	✓	
RHEL 7	✓	
RHEL 6	✓	
CentOS 7	✓	
CentOS 6	✓	
SLES 12SP1	✓	
SLES 12	✓	
SLES 11SP3	✓	
SLES 11SP4		
openSuse Leap42		
openSuse 13.2	✓	
UCS 4.1	✓	not on Role Member
UCS 4.0	✓	not on Role Member
UCS 3.2	✓	not on Role Member

✓ : Unterstützt ✗ : Nicht unterstützt 🚧 : In Entwicklung ⚠ : Abgekündigt

✓ : Supported ✗ : Unsupported 🚧 : Under development ⚠ : Discontinued

If you are using an OS version which is not contained in the section above, we recommend updating the OS before installing opsi v4.0.6.

## Chapter 3

# Overview of the new features

The Highlights of this Release are:

- Windows 10 Support
- New opsi bootimage
- New opsi-linux netboot products

The opsi Service Release 4.0.6 comes with a whole bunch of new features and improvements. Here is a summary:

- Windows netboot products
  - Windows 10 Products
  - winpe Partition are now formatted with NTFS (on non UEFI Systems). See special chapter: Chapter 9.
- New opsi-bootimage
  - Uses Ubuntu Trusty 14.04 as base
  - Kernel 4.1.0
  - Syslinux 6.0.3 included
  - 32-bit libraries included in 64-bit bootimage

---

### Caution

The new pxelinux.0 does not draw points while loading the bootimage anymore. So you have to wait for the start of the bootimage without visual feedback. CAUTION: The new opsi-linux-bootimage (20150916) comes with Syslinux 6.0.3. It may happen that Syslinux 6.0.3 is not compatible with older hardware. For example it breaks PXE localboot for Dell Optiplex 790 devices.



This package delivers the Syslinux binaries from the last stable opsi-linux-bootimage. To use the old Syslinux binaries move the binaries from the syslinux folder into /tftpboot/linux/ (e.g. /var/lib/tftpboot/linux/ on SLES) This should overwrite the Syslinux 6.0.3 binaries and your PXE boot should use the old Syslinux version.

Please Note: Future opsi-linux-bootimage updates will overwrite the downgraded syslinux version. After installing a new opsi-linux-bootimage version please repeat the above steps.

<http://download.uib.de/opsi4.0/archiv/opsi-linux-bootimage/syslinux/>

---

- opsi-configed:
  - opsi-configed now provides export of data tables as PDF files (or directly to a PDF viewer).



- The hardware inventory page now offers a convenience method for creating an automated PC specific driver integration.  
The byAudit driver path can be created such that the bootimage finds the drivers, and driver files can be copied to the opsi-config-server (if there is a connection to the opsi\_depot share). Finally, an opsi-set-rights command is executed for the driver files
  - The performance is improved by a more direct access to the MySQL backend (if available).
  - The usability of the logging pages is improved: The search starts now from the current cursor position. Search strings are saved in a combo box. Line counting has been introduced.
  - The software inventory page now provides a String search. You can choose if Microsoft Windows updates (kb numbers) are excluded from the view (as now is default).
  - A bug of the license statistics server function has been fixed. Under certain conditions, it had the effect that too less license options available were reported.
- opsi-client-agent:
    - Improved `opsi-deploy-client-agent` script.  
With the improved script also IP addresses can be used for deployment.  
Furthermore `mount` can be used again for copying data.  
The script automatically detects, what kind of address has been provided. Also additional parameters are available to specify the parameter type.
    - New property `depends_on_service`:  
This is a list of services that the opscientd depends upon.  
They must be running before the opscientd can start.  
The default is: `Dhcp, Dnscache`



### Caution

changing this property can result in the opscientd not starting anymore.

---

- New property `setup_after_install`:  
This is a list of opsi products, that are set to `setup` after installation of the opsi-client-agent.
    - `python-opsi`:
  - Many improvements, new features and bugfixes.  
See special chapter: [Chapter 13](#)
    - New optional config: `clientconfig.depot.user` to configure `domain\user` for `pcpatch`  
See special chapter: [Section 10.1](#).
    - `opsi-winst / opsi-script (4.11.5.13)` (from 4.0.5):
  - Files commands for hardlinks, symbolic links, Rename and Move in Files sections
  - For-To Loop
  - Switch / Case Statement
  - New Stringlist function: `removeFromListByContaining`
  - New Stringlist function: `LoadTextFileWithEncoding( <file name> , <encoding>)`
  - New String function `unquote2(<string>,<quote-string>)`
-

- New String function `GetShortWinPathName(<longpath string>)`
- New String function `GetConfidentialProductProperty (<PropertyName>, <DefaultValue>)`
- New boolean function `CompareDotSeparatedNumbers(<str1>, <relationstr>, <str2>)`
- New boolean function `CompareDotSeparatedStrings(<str1>, <relationstr>, <str2>)`
- New statement `UpdateEnvironment`. The call of `UpdateEnvironment` forces Windows to reload the environment variables from the registry (NT6 only).
- Files command `del`: ATTENTION changed behaviour: Similar like it is implemented for the copy command: If a system file is in use, then it can be deleted only after a reboot. The *opsi-winst/opsi-script* default behaviour is therefore that a file in use will be marked for delete after the next reboot, AND the *opsi-winst/opsi-script* reboot flag is set. Setting the copy option `-c` turns the automatic reboot off. Instead normal processing continues, the deleting will be completed only when a reboot is otherwise triggered.
- Upgrade of the SSL libraries to 1.0.2d, update of the SSL protocol to TLS autonegotiation
- See special chapter: Chapter [12](#)
  - Linux netboot products:
- The new generation of Linux netboot products is based on the original installer of the distribution, which is configured by an answer file.
- New generation netboot products are available for: SLES12, openSuse13-2, Ubuntu14-04, Debian7, Debian8, CentOS70, Redhat70
- See also the special linux chapter: Section [11.1](#).

## Chapter 4

# list of packages

### SERVER PACKAGES:

- opsi-depotserver\_4.0.6.4-1
- opsi-linux-support\_1.0-8
- opsi-utils\_4.0.6.8-2
- opsiiconfd\_4.0.6.10-5
- python-opsi\_4.0.6.25-1
- opsi-linux-bootimage\_20150916-2
- opsi-configed\_4.0.6.3.5-2

### OPSI PACKAGES (LOCALBOOT):

- opsi-client-agent\_4.0.6.3-2
- opsi-configed\_4.0.6.3.5-2
- windomain\_1.0-8
- opsi-uefi-netboot\_4.0.5-3
- config-win10\_4.0.6-4.opsi
- opsi-template-with-admin\_4.0.6-1
- opsi-setup-detector\_4.0.6.132-1

### OPSI PACKAGES (NETBOOT):

- win\* 4.0.6.1-2 (including Windows 10 Pakete)
- opsi-clonezilla (4.0.6-1)
- memtest86 5.01-1

### OPSI PACKAGES (OPSI-LINUX):

- centos70\_4.0.6.2-1
- redhat70\_4.0.6.2-1

- debian7-4.0.6-1
- debian8-4.0.6-1
- Ubuntu14-04\_4.0.6-2
- Ubuntu15-04\_4.0.6-2
- opensuse13-2\_4.0.6.2-2
- sles12\_4.0.6.2-2

OPSI PACKAGES(OPSI-LOCAL-IMAGE):

- opsi-local-image-win\* 4.0.6.1-2
- opsi-local-image-capture 4.0.6.1-2

## Chapter 5

# What is still missing (and under progress)

- opsi-client-agent:  
To execute opsi-winst scripts as the current user during logon *User Profile Management*.
- opsi-linux-client-agent:  
A real service, that also provides *push installations*.
- opsi-linux netboot product Fedora22
- opsi-linux 4.0.6 netboot products: uefi support
- opsi-clonezilla: uefi support

## Chapter 6

# Known Bugs / Known Problems

### KNOWN BUGS:

- opsi-configed 4.0.5.8-1 vs opsi 4.0.6 opsi-server:  
Displaying Hardwareinformation and Logfiles fails. Detection of connected opsi service shows "<3.4"
- python-opsi 4.0.6.25: In some environments the log of opsi-script on the client will show a log message like the following during communication with the opsi server:

```
[3] [Okt 07 09:00:34:995] Error: retrieveJSONObject --- opsi service problem ----> {"message": "set([u'opsi-client-agent\\', ...]) is not JSON serializable", "class": "TypeError"}
```

This problem can be solved through the installation of python-opsi 4.0.6.26 or newer. Currently a package with this version can be found in the testing branch: <https://build.opensuse.org/package/show/home:uibmz:opsi:opsi40-testing/python-opsi>

### KNOWN PROBLEMS:

- opsi-configed all versions

The thumb bar in "long" listings is not displayed. This is a bug in Java version 8u60 which we reported to Oracle. It is listed at <https://bugs.openjdk.java.net/browse/JDK-8134829> and should be resolved in 8u71.

- opsi-linux-bootimage 20150916  
Debian 8 Jessie currently has a problem with Syslinux 6.0.3 in combination with the opsi-atftpd. There is an issue with the t-size transfer. It can either be fixed by adding the --no-tsize option in /etc/inetd.conf or /etc/default-atftpd, depending on usage. Another way is to downgrade Syslinux. A downgrade package is available at the standard uib download server. We are aware of this issue and work on a fix.  
<http://download.uib.de/opsi4.0/archiv/opsi-linux-bootimage/syslinux/>
- (Not documented yet)

# Chapter 7

## Discontinuation

### 7.1 Discontinuation: Distributions for opsi-server

This chapter lists distributions that for several reasons are not supported by opsi anymore.

- Univention Corporate Server: the versions 3.0 und 3.1 are discontinued by Univention and are not supported anymore.
- Debian 6 Squeeze
- Ubuntu Lucid 10.04
- OpenSuse 12.3

See also the support matrix: [Chapter 2](#).

### 7.2 Discontinuation clients: Windows versions

With opsi v4.0.6 the netboot packages for

- Windows 8
- Server 2003

are not maintained anymore.

Also in the near future the Update Abos will not support these Windows versions anymore. Please contact us in case of any questions or concerns.

See also the chapter: [Chapter 14](#).

### 7.3 Discontinuation clients: Linux versions

With opsi v4.0.6 the netboot packages for

- openSuse 12.3
- Fedora20
- Ubuntu 10.04 (Lucid)
- Debian 6 (Squeeze)

will not be maintained anymore. Please contact us in case of any questions or concerns.

See also chapter: [Section 11.1](#).

## Chapter 8

# Installation notes

For safety reasons we recommend creating a backup of your backends with `opsi-backup` before updating:

```
opsi-backup create
```

The products contained in this release depend on each other in many cases. Do not try to install just parts of this update.

We recommend to first update the server and then the opsi products.

When upgrading an existing opsi server your package manager may ask you if you want to replace `/etc/opsi/opsi.conf` with a newer version. If this question appears and you did not change the mentioned file you can replace the file with the new one. If you changed the file or are unsure please deny the replacement.

As it was described above, a new version of `/etc/opsi/opsi-product-updater.conf` may be introduced during the update. The new version gives also support for smtpusers with smtppasswords to systems that require this type of authentication.

To make sure that permissions are applied correctly we recommend to run ```opsi-setup --set-rights``` after the installation. Please be aware that the execution of latter can last for many minutes.

### 8.1 Notes for updating opsi-packets

For example Ubuntu / Debian:

```
aptitude update  
aptitude full-upgrade
```

For installing the opsi products:

To install all packets:

```
opsi-product-updater -i -vv
```

To install updates only:

```
opsi-product-updater -vv
```



## Chapter 9

# Tips for using Windows 10

### 9.1 Windows 10 detection

The opsi-winst function `getMsVersionInfo` returns the value 6.3 on Windows 8.1, and returns the value 10.0 on Windows 10. Although, regarding opsi, the system architecture of Windows 10 is basically NT6.

The function `getMsVersionInfo` is of special importance to distinguish NT5 (Windows XP) system architecture from NT6 (Vista and above). The `getMsVersionInfo` return value (like 6.3 or 10.0) at first sight looks like a number, but actually it is a string. So never use string compare functions (like `<` or `=` or `>` or `<=` ...) to evaluate the result of `getMsVersionInfo`, for the string compare functions operate on alphabetic order. In alphabetic order, the string 10.0 is less than 6.0 (for in alphabetic order 1.. comes before 6..).

To evaluate the result of `getMsVersionInfo`, use the new function `CompareDotSeparatedNumbers`:

```
if CompareDotSeparatedNumbers(getMsVersionInfo,"6.0") < "0"
    comment "We are on NT5"
else
    comment "We are on NT6"
endif
```

opsi-winst 4.11.5 and above provides a syntax, which is easier to understand:

```
if CompareDotSeparatedNumbers(getMsVersionInfo, "<", "6.0")
    comment "We are on NT5"
else
    comment "We are on NT6"
endif
```

### 9.2 Windows 10 helper products

To work with Windows 10 (especially for desktops) we recommend the following products:

- classic\_shell:  
[http://download.uib.de/opsi4.0/products/contribute/full-package/classic-shell\\_4.2.1-1.opsi](http://download.uib.de/opsi4.0/products/contribute/full-package/classic-shell_4.2.1-1.opsi)
- config-win10:  
[http://download.uib.de/opsi4.0/products/contribute/full-package/config-win10\\_4.0.6-4.opsi](http://download.uib.de/opsi4.0/products/contribute/full-package/config-win10_4.0.6-4.opsi)  
This package can configure Windows 10 mostly in security and privacy related topics.  
Possible configurations:
  - `boot_to_desktop`: Skip the Windows login screensaver.

- config\_updates: Configure the Microsoft Windows 10 update behaviour with the following configurations:
  - \* AllowPeerToPeer: Your PC connects to Microsoft and also downloads available updates from internet peer-to-peer clients.
  - \* LocalPeerToPeer: Your PC connects to Microsoft and also downloads available updates from your local peer-to-peer clients.
  - \* MicrosoftOnly: With this configuration your PC download updates only from official Microsoft servers.
- disable\_cortana: This property disables the Microsoft Cortana search assistant.
- disable\_customer\_experience: This configures the use of the customer experience program from Microsoft.
- disable\_mrt: This configures the use and download of the Malware Removal Tools (MRT).
- disable\_telemetry: Configure if your PC gathers and sends information to Microsoft.
- force\_login\_Script: Re-run the opsi login script in case something on your PC changed.

# Chapter 10

## Samba4

### 10.1 Remarks to Samba 4

With the stable state of Samba4, the development and maintenance for the Samba3 branch has been discontinued. Therefore most of the common Linux distributions (client and server) now contain Samba4 instead of Samba3. Samba shares are a basic component for the opsi system and there are some opsi relevant differences between Samba3 and Samba4, that are discussed in this chapter.

At first it has to be distinguished, in which operational mode Samba is executed. A special feature of Samba4 is the ability to run a fully-fledged Active Directory compatible domain controller. In this operational mode (which will be called **PDC mode** in the following chapters) there are some restrictions, that had to be adopted from Active Directory for compatibility reasons. Most of the current distributions are equipped with Samba4 in the common share mode, that does not provide the operation of a fully-fledged Active Directory domain. With the exception of the Univention Corporate Server, that has PDC-Mode integrated into their standard packages.

#### 10.1.1 The `/etc/opsi/opsi.conf`: `pcpatch` and `opsifileadmins`

---

**Tip**

the restrictions discussed in this chapter concern the PDC mode of Samba4 only.

---

The classic installation, with the user: `pcpatch` in the group: `pcpatch`, does not work with Samba 4. Samba 4 has defined fundamental restrictions for the Active Directory, such as groups with the same name as a user (which is common in Unix/Linux) are no longer allowed. For this reason, a new configuration file has been introduced: `/etc/opsi/opsi.conf`, that configures the groups for Samba access. To be more specific, for Samba 4 installations the group name `pcpatch` is renamed as `opsifileadmins`. So the user `pcpatch`, who was member of the group `pcpatch` under Samba 3, must now be a member of the group `opsifileadmins`. So, to have access rights for opsi-packages under Samba 3, a user cannot be a member of the group `pcpatch` anymore, but must be a member of the group `opsifileadmins`.

Furthermore, the user `pcpatch` has to be created as a fully-fledged domain user and not as a system user anymore.

These migration steps are performed automatically during opsi installation on a Univention Corporate Server, if the installation process detects Samba4 running in PDC mode.

Besides the UCS installations, currently there are no other default Active Directory configurations. So these steps have to be done manually for any other Samba4 Active Directory domain controller installation. During future updates, the opsi system checks for the required user configuration and does not try to create users, that do already exist.

For any questions please contact opsi support. In case you do not have an opsi support contract, please contact [info\(at\)uib.de](mailto:info(at)uib.de).

## 10.1.2 Share Configuration

---

### Tip

The changes discussed in this chapter are relevant for all operational modes of Samba4.

---

With Samba 3 the default setting was, that every file or directory was executable on the share for the Samba clients. This behaviour changed with Samba 4. Now all files, that shall be executable from the share, must also have the executable bit set on the Unix side.

This results in a basic problem with running opsi. It is not possible to handle this behaviour from the opsi rights management, for it would require fundamental changes of the rights management of opsi, that can't be done with opsi 4.

So for handling this problem with opsi 4.0 there are two ways:

**Option 1:** for the affected shares this behaviour can be suppressed by elevating the share privileges of each member of the `pcpatch` group from the share configuration by setting the following option:

```
admin users = @pcpatch
```

This fix elevates the privileges of the Samba processes and has already been used by opsi for some time for UCS  $\geq 3$  with Samba 4.

opsi installs per default for Samba 4 distributions with `opsi-setup --auto-configure-samba` this option for the `opsi_depot` share. This share is mounted read only, so the safety and security risk can be estimated as low.



### Caution

For all other shares, that are mounted as read/write, it has to be considered, that with this fix the samba process runs with elevated rights. This can be a potential risk. Although there are currently no known exploits for this vulnerability, there might be some in the future.

---

**Option 2:** the following global option can be set in the `smb.conf`:

```
allow general executable = True
```

With this option all shares behave like Samba 3 shares.

To restore the old Samba 3 behaviour for all shares, the setting of this option can be done for every share manually, or alternatively the option can be set globally in the `smb.conf`. This changes the behaviour for all shares, not only for the opsi shares.

The global setting does not work with Univenton Corporate Server, for its Samba 4 installation is configured in a very special way.

## 10.1.3 Access to the shares: `clientconfig.depot.user`

When using Samba 4 it might be necessary to configure the specific domain and user combination to be used for mounting the depot share.

The default configuration is just the user `pcpatch` and nothing as domain. If this fails because the mount defaults to the wrong domain, you should configure the correct domain (in most cases: the hostname of the opsi-server). The config parameter is named: `clientconfig.depot.user`. The value of this config has the syntax: `<domain name>\<user name>` An example config:

```
clientconfig.depot.user =opsiserver\pcpatch
```

specifies, that the opsi depot share is mounted as domain `opsiserver` and user `pcpatch`. You may create such a configuration using the opsi-configed: Server configuration / clientconfig / right mouse button: add standard configuration entry.

You may also use the command line to create this configuration (replace `pcpatch` by the string you need e.g. `opsiserver\pcpatch`):

```
opsi-admin -d method config_createUnicode clientconfig.depot.user "clientconfig.depot.user" pcpatch
```

This system wide configuration may be changed client specific (e.g with the opsi-configed)







































# Chapter 11

## Linux support

### 11.1 opsi Linux Support

#### 11.1.1 Supported as opsi-client: Linux :

(as from \$Date\$)

Distribution	OS-Installation	netboot products	client-agent	opsiclientd
Debian 6 squeeze				
Debian 7 wheezy		debian, debian7		
Debian 8 jessie		debian,debian8		
Ubuntu Lucid 10.04 LTS				
Ubuntu Precise 12.04 LTS		ubuntu		
Ubuntu Trusty 14.04 LTS		ubuntu,ubunt14-04		
Ubuntu Utopic 14.10		ubuntu		
Ubuntu Vivid 15.04		ubuntu,ubunt15-04		
Ubuntu Wily 15.10		ubuntu,ubunt15-10		
Ubuntu Xenial 16.04		ubuntu		
RHEL 6				
RHEL 7		rhel70		
CentOS 6				
CentOS 7		centos70		
Fedora 20				
Fedora 21				
Fedora 22				
Fedora 23				

SLES 11SP3	✓	sles11sp3	✓	✗
SLES 11SP4	🚧		🚧	🚧
SLES 12	✓	sles12	✓	✓
SLES 12.1	✓	sles12sp1	✓	✓
openSUSE 12.3	⚠			
openSuse 13.1 RC2	✓			
openSuse 13.2	✓	opensuse13-2	✓	✓
openSuse Leap 42.1	✓	opensusel42-1	✓	✓
openSuse Tumbleweed	✗		✗	✗
UCS 3.0	✗		✗	✗
UCS 3.2	✗		✗	✗
UCS 4.0	🚧		✓	✓
UCS 4.1	🚧	ucs41	✓	✓

✓ : Supported ✗ : Unsupported 🚧 : Under Development ⚠ : Discontinued

Table 11.1: Linux netboot products and the used installer type

Netbootproduct	Installer	State	Remark
debian	opsi	✓	squeeze - jessie
debian7	distribution	✓	
debian8	distribution	✓	
ubuntu	opsi	✓	precise - xenial
ubuntu14-04	distribution	✓	
ubuntu15-04	distribution	✓	
ubuntu15-10	distribution	✓	
centos70	distribution	✓	
redhat70	distribution	✓	
opensuse13-1	opsi	✓	
opensuse13-2	distribution	✓	
opensusel42-1	distribution	✓	
sles11sp3	opsi	✓	
sles12	distribution	✓	
sles12sp1	distribution	✓	

### 11.1.2 Preconditions for using the opsi Linux Support

Technical precondition is opsi 4.0.5 with following packet versions:

Table 11.2: Required packets

opsi packet	version
opsi-linux-bootimage	>= 20140805-1

The opsi support for Linux is based on a free Open Source component (the netboot products) and a co-funded component (the client-agent).

The opsi-linux-client-agent is a [co-funded opsi extension module](#).

For using the opsi Linux extension module, an activation file is required, which can be acquired by buying the extension module. To obtain a temporary activation file for evaluation, please email to [info@uib.de](mailto:info@uib.de).

For further details on handling extension modules refer to the opsi manual.

### 11.1.3 Introduction

#### A single management tool for Windows and Linux

The objective of the opsi Linux extension module is to provide a homogenous management system for heterogenous environments. The focus is on integrating both worlds into the same management processes and tools

This means, that a Linux installation is triggered the same way as a Windows installation. The Linux opsi-client-agent is based on the same source code as the Windows client and provides (when applicable) the same opscript instruction sets.

#### Independent from Linux distribution

The opsi Linux Support is designed to be independent from any special Linux distribution.

The following distributions are supported:

- Debian
- Ubuntu
- OpenSuse / SLES (Suse Linux Enterprise Server)
- Fedora / RHEL (RedHat Enterprise Linux)
- CentOS

### 11.1.4 Linux netboot products v406 based on the distribution installer

With opsi v405 the installation of Linux targets has been controlled by the netboot product. The opsi v406 Linux netboot products are based on installer of the respective distribution.

This is a fundamental change of the structure and behaviour of these products.

Overview of the changes:

- Like with the unattended Windows installation, the Linux installer is equipped with an answer file to configure the unattended installation.
- The installer of a distribution is not like with Windows an executable program, but is a combination of the distribution kernel and initrd implementation.
- Die system installation including partitioning, LVM, all the basic software etc. is performed by the installers and not by the bootimage anymore.
- For the Suse and RedHat like distributios the installation sources have to be provided by you by putting the DVD as ISO-file on the depot share. This is comparable to the Windows installation, with the difference that the Windows installation files are stored ina a different place and stored as the content of the DVD and not as an ISO file.

- For the Debian like installations the installation sources are taken from the internet. Just the netboot versions of the distribution kernel with the associated initrd are placed on the depot share. These files are small, so they are included in the opsi package.
- For further maintenance of the installation the opsi-linux-client-agent can be installed with the basic installation.

Description of the automated installation process:

1. The opsi-linux-bootimage boots, deletes the partition table and creates a small temporary partition.
2. The opsi-linux-bootimage fetches the initrd for the distribution and unpacks it on the temporary partition.
3. The opsi-linux-bootimage fetches the generic answer file, patches it (personalisation) and moves it to the initrd directory.
4. The opsi-linux-bootimage creates some helper scripts and configuration files (e.g. for installing the opsi-linux-client-agent) and moves them to the initrd directory.
5. The opsi-linux-bootimage packs the patched initrd directory
6. The opsi-linux-bootimage boots the distribution kernel with the patched initrd per kexec.
7. The distribution kernel with the patched initrd performs the unattended installation of the target system and finally installs the opsi-linux-client-agent.

Advantages:

- The installation is done as specified by the distributor, which is of special importance for providing support in the business context.
- The opsi integration of new releases is easier and faster available.
- For Suse and RedHat like distributions the installation is done from installation sources on the opsi-server, and thereby is faster and more stable than installing from internet repositories.

Disadvantages:

- Currently there is no UEFI support available. Die informationen about UEFI gets lost during kexec boot. We hope to fix this with a future bootimage.

#### 11.1.4.1 Providing the installation media on the server

For Suse and RedHat like distributions the installation media are provided by an additional nfs share: `opsi_nfs_share`.

To configure this share, there must be a NFS server installed and configured on the opsi-server:

In opsi v406 stable this is done by the special package `opsi-linux-support`. This package is not installed by default and must be installed manually once, e.g.

```
apt-get install opsi-linux-support
```

The `opsi-linux-support` package performs the following tasks:

- Installation of the applicable nfs-server package on the opsi-server. For Debian, Ubuntu, Suse this is the package: `nfs-kernel-server`. For Centos, Fedora, Redhat it is the package `nfs-utils`.
- The share `opsi_nfs_share` is created and exported:
  - Create directory:  
`mkdir -p /var/lib/opsi/depot/opsi_nfs_share`



- Add the share entry to `/etc/exports`:  
`/var/lib/opsi/depot/opsi_nfs_share *(ro,no_root_squash,insecure,async,subtree_check)`
- Activate the export:  
`exportfs -r`
- Check the successful export:  
`showmount -e localhost`  
 The output should be:  
`Export list for localhost:+ /var/lib/opsi/depot/opsi_nfs_share *`
- The share `opsi_nfs_share` has the following directory structure:  
`opsi_nfs_share/<productId>/<arch>/<dvd>.iso`  
 example:  
`opsi_nfs_share/opensuse13-2/64/openSUSE-13.2-DVD-x86_64.iso`  
 The installation file must have extension `.iso`, the name of the file does not matter. If there a several `.iso` files in the same directory, it is not specified which one to use.
- Copy the installation DVD to the `opsi_nfs_share` and execute:  
`opsi-set-rights /var/lib/opsi/depot/opsi_nfs_share`  
**IMPORTANT:** use the standard installation DVDs of the distribution. Modified installation DVDs might have a different structure and thereby cannot be used in this context.
- If for any reasons the directory `/var/lib/opsi/depot/opsi_nfs_share` cannot be exported by the `opsi-server` per NFS (for instance because the depot share is already a NAS NFS share), so the NFS share to be used can be specified by a server config. Like `clientconfig.opsi_nfs_share=172.16.166.1:/var/lib/opsi/depot/opsi_nfs_share`

The opsi v406 netboot products for Debian and Ubuntu do not get their installation files from an ISO file. They are provided by opsi with the standard netboot kernel and initrd. All further packages are taken from the internet. To relieve the network connection, using an apt-cache might be useful.

See chapter Section [11.1.12](#)

#### 11.1.4.2 Common properties of the opsi v406 Linux netboot products

The following properties are available with all v406 netboot products to configure the Linux installation:

- **askbeforeinst:**  
 Starting an installation has to be confirmed from the client console? (Default=*true*)
- **architecture:**  
 architecture selection, which affects the selection of bootimages and the installation architecture. (Default=*64bit*)
- **language or locale:**  
 Which language / locale is to be installed. (Default=*distribution dependent / de*)
- **console\_keymap:**  
 keyboard layout to be installed. (Default=*distribution dependent / de*)
- **timezone:**  
 Timezone to be installed?. (Default=*Europe/Berlin*)
- **root\_password:**  
 root password. (Default=*linux123*)
- **user\_password:**  
 user password. (Default=*linux123*)
- **online\_repository:**  
 distribution repository for the installation. (Not for SLES) (Default=*distribution dependent*)

- **opsi\_online\_repository:**  
repository of opsi-server packages. (Default=distribution dependent)
- **proxy:**  
Proxystring (if required) as: `http://<ip>:<port>`. (Default="")
- **install\_opsi-client-agent:**  
Install the Linux opsi-client-agent (co-funded project: a module file is required for activation. (Default=*false*)
- **'setup\_after\_install':**  
Which opsi products shall be installed after the installation of the operating system (opsi products set to setup). (Default="")

### 11.1.4.3 The Linux netboot products

==== The products debian7, debian8 and ubuntu14-04

The basic OS installation files are taken from the internet.

This product has the state productive.

This product has the following additional properties:

```

name: encrypt_password
multivalue: False
editable: True
description: Password for disk encryption (only if encrypt_logical_volumes=true)
values: ["linux123 "]
default: ["linux123 "]

name: partition_disk
multivalue: False
editable: True
description: Disk to use first or complete device path
values: ["first ", "/dev/sda", "/dev/sdb "]
default: ["first "]

name: partition_method
multivalue: False
editable: False
description: regular: use the usual partition types for your architecture / lvm: use LVM t
values: ["regular", "lvm", "crypto "]
default: ["lvm "]

name: partition_recipe
multivalue: False
editable: False
description: atomic: all files in one partition / home: separate /home partition / multi:
values: ["atomic", "home", "multi "]
default: ["atomic "]

name: desktop_package
multivalue: True
editable: False
description: Desktop package to install (standard = no desktop)
values: ["ubuntu-desktop", "kubuntu-desktop", "lubuntu-desktop", "xubuntu-desktop", "ubunt
default: ["standard "]

name: language_packs

```

```

multivalue: True
editable: False
description: language packages to install
values: ["ar", "bg", "by", "cf", "de", "dk", "en", "es", "et", "fa", "fi", "fr", "gr", "il", "in", "it", "ja", "ko", "lt", "lv", "nl", "no", "pl", "pt", "ro", "ru", "sk", "sl", "sv", "th", "tr", "uk", "us", "vi", "zh"]
default: ["de"]

```

#### VIDEOS (TIME LAPSE)

- [http://download.uib.de/press-infos/videos/opsi-linux/centos70\\_406\\_1fps.mp4](http://download.uib.de/press-infos/videos/opsi-linux/centos70_406_1fps.mp4)
- [http://download.uib.de/press-infos/videos/opsi-linux/debian8\\_406\\_1fps.mp4](http://download.uib.de/press-infos/videos/opsi-linux/debian8_406_1fps.mp4)
- [http://download.uib.de/press-infos/videos/opsi-linux/ubuntu14-04\\_406\\_1fps.mp4](http://download.uib.de/press-infos/videos/opsi-linux/ubuntu14-04_406_1fps.mp4)

===== The product opensuse13-2

This product has the following additional properties:

```

name: install_unattended
description: If false then do interactive installation
default: True

```

The property:

```

name: networkdevice
multivalue: False
editable: True
description: interface to configure (vbox:enp0s3 / esxi:ens32)
values: ["eno1", "ens1", "ens32", "enp0s1", "enp0s2", "enp0s3"]
default: ["enp0s3"]

```

exists for backward compatibility reasons only and will be ignored by current bootimages ( >= 20150818), for the automated detection of *predictable network interface names* is working with new bootimages.

#### VIDEOS (TIME LAPSE)

- [http://download.uib.de/press-infos/videos/opsi-linux/opensuse13-2\\_406\\_1fps.mp4](http://download.uib.de/press-infos/videos/opsi-linux/opensuse13-2_406_1fps.mp4)

===== The product sles12

This product has the following additional properties:

```

name: productkey
multivalue: False
editable: True
description: email:regcode-sles for suse_register. Is only used if the
host parameter 'license-management.use' is set to false . If it set to True
the license key will be get from the license management module. / La clé de licence pour l
values: ["", "myemail@example.com:xxxxxxxxxxxxxxxx"]
default: [""]

```

```

name: suse_register
description: set to false , if you don't want to register your system online , if you set th
default: True

```

```

name: local_repositories
multivalue: True
editable: True
description: list of local repositories to use. Syntax: "repository description", example

```

```

values: [""]
default: [""]

name: install_unattended
description: If false then do interactive installation
default: True

```

The property:

```

name: networkdevice
multivalue: False
editable: True
description: interface to configure (vbox:enp0s3 / esxi:ens32)
values: ["enol", "ensl", "ens32", "enp0s1", "enp0s2", "enp0s3"]
default: ["enp0s3"]

```

exists for backward compatibility reasons only and will be ignored by current bootimages (  $\geq$  20150818), for the automated detection of *predictable network interface names* is working with new bootimages.

VIDEOS (TIME LAPSE)

- [http://download.uib.de/press-infos/videos/opsi-linux/sles12\\_406\\_1fps.mp4](http://download.uib.de/press-infos/videos/opsi-linux/sles12_406_1fps.mp4)

===== The products redhat70 and centos70

This product has the following additional properties:

```

name: install_unattended
description: If false then do interactive installation
default: True

name: selinux_mode
multivalue: False
editable: False
description: In which mode should SELinux run ?
values: ["enforcing", "permissive", "disabled"]
default: ["permissive"]

name: partition_method
multivalue: False
editable: False
description: plain: Regular partitions with no LVM or Btrfs. / lvm: The LVM partitioning s
values: ["plain", "lvm", "btrfs", "thinp"]
default: ["lvm"]

name: productkey
multivalue: False
editable: True
description: email:regcode for subscription_register. Is only used if the
host parameter 'license-management.use' is set to false . If it set to True
the license key will be get from the license management module. / La clé de licence pour l
values: ["", "myemail@example.com:xxxxxxxxxxxxxxxx"]
default: [""]

name: subscription_register
description: set to false , if you don't want to register your system online , if you set th
default: True

```

## VIDEOS (TIME LAPSE)

- [http://download.uib.de/press-infos/videos/opsi-linux/centos70\\_406\\_1fps.mp4](http://download.uib.de/press-infos/videos/opsi-linux/centos70_406_1fps.mp4)
- [http://download.uib.de/press-infos/videos/opsi-linux/redhat70\\_406\\_1fps.mp4](http://download.uib.de/press-infos/videos/opsi-linux/redhat70_406_1fps.mp4)

### 11.1.5 Linux v405 netboot products without distribution installer

#### Basic OS installation per netboot

For installing Linux on a client, at first the standard opsi-linux-bootimage is booted per netboot. It is the same image as being used for the Windows installation.

The bootimage automatically performs the partitioning and formatting of the hard disc (/ and swap). Next the installation of the basic Linux Operating System is performed (including network and ssh, but without X11). The installation process itself is quite different for the individual distributions, but has in common, that the installation is performed directly from the original distribution packets.

The basic Linux installation can be extended with optional opsi packets, for instance to turn the system into an opsi-Server (a new depotserver for instance).

Also the opsi-client-agent for Linux can be installed, which enables the automated installation and configuration of further software packets.

The opsi-client-agent for Linux is available as a co-funded opsi extension module, the required opsi netboot products for Linux installation are available as free Open Source modules.

Because the base installation is done from the Standard opsi-linux-bootimage, there are some distribution dependent differences, that have to be installed and configured after the first reboot of the installed system. This is for example the SELinux installation of the *RedHat like* or the keyboard configuration of the *Debian like* systems. These after boot installations and patches are done by the standard localboot produkt `l-os-postinst`.

#### 11.1.5.1 Common properties of the v405 Linux netboot products

The following properties for controlling the Linux installation are available with all netboot products:

- **askbeforeinst:**  
confirm start of the new installation on the client? (default=*true*)
- **architecture:**  
architecture selection - affects the selection of the bootimage and the installation architecture. (default=*64bit*)
- **system\_partition\_size:**  
size of the system partition - the size may be given as percent of the harddisk size or as absolute size (G=Gigabyte). If you choose another value than 100%, the remaining rest will be used as `data_partition`. (default=*100%*)
- **swap\_partition\_size:** +size of the swap partition. (default=*2000M*)
- **data\_partition\_create:**  
create a data partition if there is some space left. (true/false) (default=*true*)
- **data\_partition\_preserve:**  
preserve an existing data partition?  
**always** = cancel the installation in case the preservation of an existing partition with the label *data* is not possible with the given partition data.  
**if\_possible** = an existing partition with the label *data* is preserved if possible according to the given partitioning parameters. Otherwise it will be deleted.  
**never** = a new partition table will be created. (default=*never*)
- **language:**  
language / locale to be installed (default=*de*)

- **console\_keymap:**  
keyboard layout to be used (default = distribution dependent / *de*)
- **timezone:**  
time zone to be configured (default=*Europe/Berlin*)
- **root\_password:**  
root password (default=*linux123*)
- **user\_password:**  
user password (default=*linux123*)
- **install\_opsi\_server:**  
install opsi server packages (default=*false*)
- **online\_repository:**  
repository to use for installation - repository of the Linux distribution to be used for installation (not for SLES) (default = distribution dependent)
- **opsi\_online\_repository:**  
repository for opsi-server installation - repository for the opsi-server packets (default = distribution dependent)
- **proxy:**  
proxystring (if required) as: `http://<ip>:<port>` (default="")
- **additional\_packages:**  
additional packets to install. Packet names separated by blanks. (default="")
- **wget\_and\_execute:**  
fetch a file via wget and execute it - URL (http) of a file to be executed at the end of installation. (default="")
- **install\_opsi-client-agent:**  
install the Linux opsi-client-agent (cofunding project: has to be activated by the `/etc/opsi/modules`) (default=*false*)
- **release:**  
(Debian and Ubuntu only)  
which release of the distribution is to be installed? (default = distribution dependent)
- **setup\_after\_install:**  
opsi product(s) to be installed after the OS installation is done (opsi products to be set to *setup*) (default=*l-os-postinst*)

### 11.1.5.2 Netboot products for Linux distributions

===== Ubuntu

The basic installation is performed per debootstrap directly from the network.

This product has the status *productive*.

It is UEFI/GPT compatible (tested for release=*trusty*).

For this product applicable opsi-server packets are available, that can be installed by setting `install_opsi_server=true`.

===== Debian

The basic installation is performed per debootstrap directly from the network.

This product has the status *productive*.

It is UEFI/GPT compatible (tested for release=*wheezy*).

For this product applicable opsi-server packets are available, that can be installed by setting `install_opsi_server=true`.

===== OpenSuse

The basic installation is performed by using the products embedded RPM files. Therefore each release requires a corresponding product.

**OpenSuse 13.1** This product has the status *productive*.

This product is **not** UEFI compatible.

For this product applicable opsi-server packets are available, that can be installed by setting `install_opsi_server=true`.

Known Bugs: At some Hardware (eg. VMWare ESXi) the prediction of the network interface fails and the machine starts with unconfigured network interface.

===== sles11sp3

The basic installation is performed by using the products embedded RPM files. Therefore each release requires a corresponding product.

The `sles11sp3` product contains some RPMs which are not available as Open Source, so we cannot provide this product for public download. But we can provide the packet for our customers at no charge ( → mail to [info@uib.de](mailto:info@uib.de)).

This product has the status *productive*.

For very new releases the opsi-server packets might not be available yet. In this case using the property `install_opsi_server=true` might cause some errors.

This product is **not** UEFI compatible.

This product has additional properties:

- `use_gpt`  
when set to `true`, the hard disc (also in MBR-BIOS mode) will be partitioned as GPT. This requires a boot partition. In case the property `boot_partition_size` is set to 0, nevertheless a boot partition of size 1 GB will be created.
- `boot_partition_size`  
size of the boot partition - in case of 0 no boot partition will be created.
- `kernel_modules`  
blank separated list of additional kernel modules to be loaded (e.g. for special hard disc controller).
- `suse_register`  
In case of `true` the server will be registered online. This requires the email address and the product key (registration key) in form of `email:productkey`. The key is retrieved (depending on the host parameter `license-management.use`) from the license management or from the property `productkey`.  
In case of `false` the property `local_repositories` must contain at least one suitable repository server.
- `productkey`  
email address and registration key in form of `email:productkey` (if no license management used).
- `local_repositories`  
blank separated list of repositories to be integrated per zypper, in form of: "http://myserver.local description"

The property `online_repository` is omitted.

### 11.1.6 opsi-linux-client-agent

The opsi-client-agent for Linux ist part of the co-funding project *Linux Agent*, which is liable to pay costs.

The opsi-client-agent for Windows is based on two components:

1. the service `opsiclientd`
2. the action processor `opsi-winst /opsi-script`

The opsi-client-agent for Linux is based on the Linux port of the Windows client agent.

With the first release of opsi Linux, the Linux port of the `opsiclientd` has not been completed yet, so it is replaced by the `opsiscriptstarter`, which performs the following `opsiclientd` tasks at system start:

- connect to the opsi-server: check whether actions are to be performed
- mount the depot share
- start the action processor
- unmount the depot share
- transfer the logfile to the server

The Linux action processor is named `opsi-script` and is built from the same sources as the Windows `opsi-winst`. So on Linux the same scripting syntax is available as on Windows. All common features, that are not Windows specific, are available, as there are e.g.:

- file handling
- string and stringlist functions
- executing external scripts and programs
- communication with the opsi-Server
- patching config files

Of course Windows specific features (like patching the Windows registry) are not available on Linux, but there are some additional Linux specific functions like e.g.:

- `getLinuxDistroType`
- `getLinuxVersionMap`

Logging of the `opsi-script` is available (like with the `opsi-winst` on Windows).

Linux `opsi-script` is available as a graphical version for working with X-Windows and a noGUI version for systems without graphical user interface.

#### 11.1.6.1 opsi-linux-client-agent: installation paths

As usual on Linux, the linux-opsi-client-agent is spread to several directories:

the binaries:

`/usr/bin/opsi-script` (X11)

`/usr/bin/opsi-script-nogui` (without X11)

`/usr/bin/opsiscriptstarter` (preliminary `opsiclientd` replacement)

auxiliary files:

`usr/bin/winstskin/`

config files:

`/etc/opsi-client-agent/opsiclientd.conf` (configuration of the `opsiscriptstarter/opsiclientd`)

`/etc/opsi-client-agent/opsi-script.conf` (under construction)

logfiles / temporary files:

`/var/log/opsi-client-agent`



### 11.1.7 opsi-linux-client-agent: Known Bugs

Copy a bundle of files via Files section from a smb share may fail according to the Samba version

Workaround: Instead of:

```
[Files_copy_netboot]
copy -s "%scriptPath%/installfiles/*" "$target$/installfiles/"
```

you may use:

```
[ShellInAnIcon_opsi_copy_netboot]
set -x
export PATH=/usr/local/bin:/usr/bin:/bin:/usr/local/sbin:/usr/sbin:/sbin
cd "%scriptPath%"
tar cf - installfiles | ( cd "$target$/installfiles/" ; tar xf - )
```

#### 11.1.7.1 Script examples

For software deployment on Windows clients there can be said: the installation of software itself is as important as the subsequent configuring of the software.

On Linux most packets are available from the distribution repositories. So the installation part is less, but the configuration part stays the same. Also there are applications, that are not available from the standard repositories. In this case special repositories or installation sources have to be added to the system. The important feature is, that all installation and configuration settings can be managed and logged on the opsi-server.

Here are some example snippets for an opsi-linux-client-agent opsi-script:

- exit in case the script detects a non Linux system
- detecting the distribution type (to use `apt-get`, `zypper` or `yum`)
- detecting the Linux version
- installing a packet
- adding a repository

Example: exit in case the script detects a non Linux system:

```
[Actions]
requiredWinstVersion >= "4.11.4.1"
ScriptErrorMessages=off

DefVar $OS$

set $OS$ = GetOS

if not($OS$ = "Linux")
    LogError "Wrong OS: Product: " + $ProductId$ + "is only for Linux"
    isFatalError "Wrong OS"
endif
```

Example: detecting the distribution type:

```
[Actions]
requiredWinstVersion >= "4.11.4.1"
ScriptErrorMessages=off
```

```

DefVar $distrotype$

set $distrotype$ = getLinuxDistroType

if $distrotype$ = 'debian'
    ShellInAnIcon_Upgrade_deb
else
    LogError "Wrong Distro: This Product is for Debian/Ubuntu only"
    isFatalError "Wrong distro"
endif

if not("0" = getLastExitCode)
    Message "failed ShellInAnIcon_Upgrade"
    LogError "failed ShellInAnIcon_Upgrade"
    isFatalError "failed Upgrade"
endif

[ShellInAnIcon_Upgrade_deb]
set -x
export DEBIAN_FRONTEND=noninteractive
apt-get --yes install aptitude
apt-get update
apt-get --yes dist-upgrade
exit $?

```

Example: detecting the Linux version and installing a packet:

```

[Actions]
requiredWinstVersion >= "4.11.4.1"
ScriptErrorMessages=off

DefVar $distCodeName$
DefVar $distroName$
DefVar $distRelease$
DefVar $desktop$

DefStringList $linuxInfo$

set $linuxInfo$ = getLinuxVersionMap
set $distCodeName$ = getValue("Codename", $linuxInfo$)
set $distRelease$ = getValue("Release", $linuxInfo$)
set $distroName$ = getValue("Distributor ID", $linuxInfo$)

set $desktop$ = GetProductProperty("desktop", "kde")

if $distrotype$ = 'suse'
    if $desktop$ = "unity"
        Message " No Unity on SUSE - fallback to KDE ..."
        set $desktop$ = "kde"
    endif ; unity

    if $desktop$ = "kde"
        if ($distroName$ = 'openSUSE project')
            ShellInAnIcon_kde_suse

```

```

        endif
        if ("SUSE LINUX" = $distroName$) and ($distRelease$ = "11")
            ShellInAnIcon_kde_sles11
        endif
        if not("0" = getLastExitCode)
            LogError "failed ShellInAnIcon"
            Message "failed kde"
            isFatalError "failed kde"
        endif
    endif ; kde
endif; suse type

[ShellInAnIcon_kde_suse]
set -x
zypper --no-gpg-checks --non-interactive install patterns-openSUSE-kde4 patterns-openSUSE-
kde4_basis
zypper --no-gpg-checks --non-interactive install splashy-branding-openSUSE
exit $?

[ShellInAnIcon_kde_sles11]
set -x
zypper --no-gpg-checks --non-interactive install --auto-agree-with-licenses -t pattern kde
exit $?

```

Example: adding a repository:

```

[Actions]
requiredWinstVersion >= "4.11.4.1"
ScriptErrorMessages=off

DefVar $distCodeName$
DefVar $distroName$
DefVar $distRelease$
DefVar $desktop$

DefStringList $linuxInfo$

set $linuxInfo$ = getLinuxVersionMap
set $distCodeName$ = getValue("Codename", $linuxInfo$)
set $distRelease$ = getValue("Release", $linuxInfo$)
set $distroName$ = getValue("Distributor ID", $linuxInfo$)

set $desktop$ = GetProductProperty("desktop", "kde")

if $distroName$ = 'Ubuntu'

    if $desktop$ = "cinnamon"
        set $desktopPackage$ = $desktop$
        ShellInAnIcon_ubuntu_cinnamon
        if not("0" = getLastExitCode)
            Message "failed ShellInAnIcon_ubuntu_cinnamon"
            LogError "failed ShellInAnIcon_ubuntu_cinnamon"
            isFatalError "failed cinnamon"
        endif
    endif ; cinnamon
endif; ubuntu

```

```
[ShellInAnIcon_ubuntu_cinnamon]
set -x
export DEBIAN_FRONTEND=noninteractive
# we need to get the add-apt-repository command
apt-get --yes --force-yes install python-software-properties
# the cinnamon repository
add-apt-repository ppa:gwendal-lebihan-dev/cinnamon-stable
apt-get update
apt-get --yes install ubuntu-desktop
exit $?
```

### 11.1.8 Linux localboot products

Here some localboot products that are part of the standard opsi Linux support.

#### 11.1.8.1 l-os-postinst

This product installs and configures those parts of the base installation, that cannot be done from the bootimage in a proper way.

This is for the different distributions:

- Fedora / CentOS:
  - installation of SELinux
- Fedora:
  - installation of SELinux

This product has a dependency to the product *l-system-update* which is executed before running *l-os-postinst*. This product has a high priority, so it is executed before common products.

#### 11.1.8.2 l-desktop

The product *l-desktop* installs a desktop packet on the computer.

The property `desktop` selects the desktop to be installed. Not all of the desktops are available for every distribution. For instance *Unity* is available for Ubuntu only. If the selected desktop is not available, the distribution specific default desktop will be installed. Furthermore the scope of the desktop packets differs according to the distribution and the selected desktop. It can be just the actual desktop software, or might also contain some base products like libreoffice, firefox, PDF Reader etc.

The property `desktop` can have the following values:

- Gnome
  - Default for Debian, Fedora, CentOS, RHEL.
  - Available for all distributions.
- KDE
  - Default für SLES, OpenSuse. Available for all distributions.
- Unity
  - Available for Ubuntu only.

- Cinnamon  
Available for Ubuntu only.
- xfce4  
Available for Ubuntu, Debian, Fedora.
- lxde  
Available for Ubuntu, Debian.

### 11.1.8.3 l-system-update

This product updates the system.

### 11.1.8.4 l-swaudit

Software inventory, based on the packet manager

### 11.1.8.5 l-hwaudit

Hardware inventory.

The hardware inventory currently is based on the Python implemented method as also used by the bootimage. Therefore the packet `python-opsi` from the opsi-repository of the distribution must be installed. So if there is no opsi-repository available for this distribution, the hardware inventory fails.

### 11.1.8.6 l-jedit

Java based editor with syntax highlighting for opsi-script. If Java is missing on the system, it will be installed automatically.

## 11.1.9 Inventory

To create an inventory, the data are collected on the client and sent to the server. The hardware inventory is based on the methods implemented in the bootimage.

The software inventory is based on the data from the packet management of the deployed Linux distribution.

### 11.1.10 UEFI / GPT support

Some of the opsi 4.0.5 Linux netboot products are UEFI/GPT compatible.

The 4.0.6 Linux netboot products are not UEFI/GPT compatible. At the moment they loose their information about the uefi environment at the kexec boot of the distribution kernel. We hope to fix this later.

For details refer to the list of netboot products above or see at the UEFI chapter of the opsi-manual.

### 11.1.11 Roadmap

Linux support is a brand new opsi feature. Therefore not all of the planned features have been implemented yet with the first release.

Planned features to follow are:

- opscientd Linux port
- configurable partitioning

- logical volume management
- patching XML- and JSON files
- patching hierarchical configuration files like dhcpd.conf

### 11.1.12 Proxy for deb packets

Instructions for installation and use of local deb packets:

German:

- [http://wiki.ubuntuusers.de/Lokale\\_Paketquellen/Apt-Cacher-ng](http://wiki.ubuntuusers.de/Lokale_Paketquellen/Apt-Cacher-ng)
- <http://www.gambaru.de/blog/2011/10/26/apt-cacher-ng-ein-proxy-server-fur-debian-und-ubuntu/>

English:

- <https://help.ubuntu.com/community/Apt-Cacher-Server>
- <http://www.distrogeeks.com/install-apt-cacher-ng-ubuntu/>
- <http://manpages.ubuntu.com/manpages/gutsy/man1/apt-cacher.1.html>

## Chapter 12

# opsi-script / opsi-winst 4.11.5

- Upgrade of the SSL libraries to 1.0.2c, update of the SSL protocol to TLS 1.2

### IN FILES SECTIONS:

- **hardlink** <existing file> <new file> // since 4.11.5 [W/L]  
A existing <new file> will be over written.  
**hardlink** works only on filesystems that support hard links like NTFS and standard Linux filesystems.
- **symlink** <existing file> <new file> // since 4.11.5 [W/L]  
A existing <new file> will be over written.  
At Windows is **symlink** only available since NT6 and up !
- **rename** <old filename> <new filename> // since 4.11.5 [W/L]  
**move** <old filename> <new filename> // since 4.11.5 [W/L]  
There is no difference between **rename** and **move**, that are just two names for the same function  
A existing <new file> will be over written.

Windows: <new filename> may be located in a differen directory or volume / disk. In the second case (different volume / disk) the file will be copied and than the original file will be deleted.

If it is not possible to create the target file becaus the file is in use, then it can be overwritten only after a reboot. The *opsi-winst/opsi-script* default behaviour is therefore that a file in use will be marked for overwriting after the next reboot, AND the *opsi-winst/opsi-script* reboot flag is set. Setting the copy option **-c** turns the automatic reboot off. Instead normal processing continues, the copying will be completed only when a reboot is otherwise triggered.

Creating Junctions at Windows is not supported right now.

Linux: <new filename> may be located in a different directory but not in a different filesystem. The Option **-c** will be ignored at Linux.

Example:

```
[Files_link_move]
del "$HomeTestFiles$\files\hardlink.txt"
hardlink "$HomeTestFiles$\files\dummy.txt" "$HomeTestFiles$\files\hardlink.txt"
del "$HomeTestFiles$\files\symlink.txt"
symlink "$HomeTestFiles$\files\dummy.txt" "$HomeTestFiles$\files\symlink.txt"
del "$HomeTestFiles$\files\temp\rename.txt"
del "$HomeTestFiles$\files\temp\move.txt"
copy "$HomeTestFiles$\files\dummy2.txt" "$HomeTestFiles$\files\temp\"
rename "$HomeTestFiles$\files\temp\dummy2.txt" "$HomeTestFiles$\files\temp\rename.txt"
```

```
copy "$HomeTestFiles$\files\dummy2.txt" "$HomeTestFiles$\files\temp\"
move "$HomeTestFiles$\files\temp\dummy2.txt" "$HomeTestFiles$\files\temp\move.txt"
```

- The function `del` and `delete`  
ATTENTION changed behaviour: Similar like it is implemented for the copy command:  
If a system file is in use, then it can be deleted only after a reboot. The *opsi-winst/opsi-script* default behaviour is therefore that a file in use will be marked for delete after the next reboot, AND the *opsi-winst/opsi-script* reboot flag is set. Setting the copy option `-c` turns the automatic reboot off. Instead normal processing continues, the deleting will be completed only when a reboot is otherwise triggered.  
The Option `-c` will be ignored at Linux. .

#### FOR-TO LOOP [W/L]

- Useful for multiple calls of a single command or of a sub-section
- Syntax:

```
for %<temporary string variable>% = <start string> to <end string> do <one statement> //since 4.11.5 [W/L]
```

The temporary variable %<temporary string variable>% must not be declared and is available in the called sub-section as constant.

- Example:

Code from *opsi-winst-test*:

```
message "for to loop"
set $ConstTest$ = "12345"
set $CompValue$ = ""
for %s% = "1" to "5" do sub_iteration_test
if ($ConstTest$ = $CompValue$)
    comment "passed"
else
    set $TestResult$ = "not o.k."
    LogWarning "failed"
endif

[sub_iteration_test]
set $CompValue$ = $CompValue$ + '%s%'
```

produces the log:

```
message for to loop
Set $ConstTest$ = "12345"
The value of the variable "$ConstTest$" is now: "12345"
Set $CompValue$ = ""
The value of the variable "$CompValue$" is now: ""

~~~~~ Looping through: '1', '2', '3', '4', '5'

~~~~~ Start Sub ~~~~~ sub_iteration_test
Set $CompValue$ = $CompValue$ + '1'
The value of the variable "$CompValue$" is now: "1"

~~~~~ End Sub ~~~~~ sub_iteration_test
```



```

~~~~~ Start Sub ~~~~~ sub_iteration_test
Set $CompValue$ = $CompValue$ + '2'
  The value of the variable "$CompValue$" is now: "12"

~~~~~ End Sub ~~~~~ sub_iteration_test

~~~~~ Start Sub ~~~~~ sub_iteration_test
Set $CompValue$ = $CompValue$ + '3'
  The value of the variable "$CompValue$" is now: "123"

~~~~~ End Sub ~~~~~ sub_iteration_test

~~~~~ Start Sub ~~~~~ sub_iteration_test
Set $CompValue$ = $CompValue$ + '4'
  The value of the variable "$CompValue$" is now: "1234"

~~~~~ End Sub ~~~~~ sub_iteration_test

~~~~~ Start Sub ~~~~~ sub_iteration_test
Set $CompValue$ = $CompValue$ + '5'
  The value of the variable "$CompValue$" is now: "12345"

~~~~~ End Sub ~~~~~ sub_iteration_test

~~~~~ End Loop
If
  $ConstTest$ = $CompValue$ <<< result true
  ($ConstTest$ = $CompValue$) <<< result true
Then
  comment: passed
Else
EndIf

```

## SWITCH / CASE STATEMENT [W/L]

- Syntax:

```

Switch <string expression>
  Case <string const>
    <statement(s)>
  EndCase
  [DefaultCase
    <statement(s)>
  EndCase]
EndSwitch

```

- Examples:

Code from opsi-winst-test:

```
set $ConstTest$ = "5"
```

```

Switch $ConstTest$
  Case "1"
    set $CompValue$ = "1"
  EndCase
  Case "2"
    set $CompValue$ = "2"
  EndCase
  Case "3"
    set $CompValue$ = "3"
  EndCase
  Case "4"
    set $CompValue$ = "4"
  EndCase
  Case "5"
    set $CompValue$ = "5"
  EndCase
  Case "6"
    set $CompValue$ = "6"
  EndCase
  Case "7"
    set $CompValue$ = "7"
  EndCase
  DefaultCase
    set $CompValue$ = "notexisting"
  EndCase
EndSwitch
if ($ConstTest$ = $CompValue$)
  comment "passed"
else
  set $TestResult$ = "not o.k."
  LogWarning "failed"
endif

```

```

[Sub_check_exitcode]
comment "Test for installation success via exit code"
set $ExitCode$ = getLastExitCode
; informations to exit codes see
; http://msdn.microsoft.com/en-us/library/aa372835(VS.85).aspx
; http://msdn.microsoft.com/en-us/library/aa368542.aspx
Switch $ExitCode$
  Case "0"
    comment "Looks good: setup program gives exitcode zero"
  EndCase
  Case "1605"
    comment "ERROR_UNKNOWN_PRODUCT 1605"
    comment "This action is only valid for products that are currently installed."
    comment "Uninstall of a not installed product failed - no problem"
  EndCase
  Case "1641"
    comment "looks good: setup program gives exitcode 1641"
    comment "ERROR_SUCCESS_REBOOT_INITIATED 164"
    comment "The installer has initiated a restart."
    comment "This message is indicative of a success."
    ExitWindows /Reboot
  EndCase

```

```

    Case "3010"
        comment "looks good: setup program gives exitcode 3010"
        comment "ERROR_SUCCESS_REBOOT_REQUIRED 3010"
        comment "A restart is required to complete the install."
        comment "This message is indicative of a success."
        ExitWindows /Reboot
    EndCase
    DefaultCase
        logError "Fatal: Setup program gives an unknown exitcode unequal zero: " + $
ExitCode$
        isFatalError "Exit Code: "+ $ExitCode$
    EndCase
EndSwitch

```

#### PARAMETER FOR SECTIONS

- Using ShellBatch, ShellInAnIcon, DosBatch, DosInAnIcon, ExecWith you may now use as parameter not only string constants but also string variables (but no string functions).

Example:

Code from opsi-winst-test:

```

comment "Testing parameters for ShellBatch"
set $ConstTest$ = "Hello world"
set $list$ = getOutputStreamFromSection('DosInAnIcon_with_parameter world')
set $CompValue$ = takeString(2,$list$)
if ($ConstTest$ = $CompValue$)
    comment "ShellBatch parameter passed"
else
    set $TestResult$ = "not o.k."
    LogWarning "ShellBatch parameter failed"
endif

comment "Testing parameters for ShellBatch"
set $ConstTest$ = "Hello world"
set $tmp$ = "world"
set $list$ = getOutputStreamFromSection('DosInAnIcon_with_parameter $tmp$')
set $CompValue$ = takeString(2,$list$)
if ($ConstTest$ = $CompValue$)
    comment "ShellBatch parameter passed"
else
    set $TestResult$ = "not o.k."
    LogWarning "ShellBatch parameter failed"
endif

```

produces the log:

```

comment: Testing parameters for ShellBatch
Set $ConstTest$ = "Hello world"
The value of the variable "$ConstTest$" is now: "Hello world"
Set $list$ = getOutputStreamFromSection('DosInAnIcon_with_parameter world')

DosInAnIcon_with_parameter
c:\opsi.org\tmp\_opsiscript_Kj23Ej02.cmd saved back
Executing "cmd.exe" /C c:\opsi.org\tmp\_opsiscript_Kj23Ej02.cmd world
ExitCode 0

```

```

        output:
        -----

        C:\Windows\system32>echo Hello world
        Hello world

The file: c:\opsi.org\tmp\_opsiscript_Kj23Ej02.cmd has been deleted
retrieving strings from getOutputStreamFromSection [switch to loglevel 7 for debugging]
    (string  0)
    (string  1)C:\Windows\system32>echo Hello world
    (string  2)Hello world

Set  $CompValue$ = takeString(2,$list$)
retrieving strings from $list$ [switch to loglevel 7 for debugging]
    (string  0)
    (string  1)C:\Windows\system32>echo Hello world
    (string  2)Hello world

The value of the variable "$CompValue$" is now: "Hello world"
If
  $ConstTest$ = $CompValue$   <<< result true
  ($ConstTest$ = $CompValue$) <<< result true
Then
  comment: ShellBatch parameter passed
Else
EndIf

comment: Testing parameters for ShellBatch
Set  $ConstTest$ = "Hello world"
The value of the variable "$ConstTest$" is now: "Hello world"
Set  $tmp$ = "world"
The value of the variable "$tmp$" is now: "world"
Set  $list$ = getOutputStreamFromSection('DosInAnIcon_with_parameter $tmp$')

DosInAnIcon_with_parameter
c:\opsi.org\tmp\_opsiscript_Kz50Gi50.cmd saved back
Executing "cmd.exe" /C c:\opsi.org\tmp\_opsiscript_Kz50Gi50.cmd world
ExitCode 0

        output:
        -----

        C:\Windows\system32>echo Hello world
        Hello world

The file: c:\opsi.org\tmp\_opsiscript_Kz50Gi50.cmd has been deleted
retrieving strings from getOutputStreamFromSection [switch to loglevel 7 for debugging]
    (string  0)
    (string  1)C:\Windows\system32>echo Hello world
    (string  2)Hello world

Set  $CompValue$ = takeString(2,$list$)
retrieving strings from $list$ [switch to loglevel 7 for debugging]
    (string  0)
    (string  1)C:\Windows\system32>echo Hello world
    (string  2)Hello world

```

```

The value of the variable "$CompValue$" is now: "Hello world"
If
  $ConstTest$ = $CompValue$ <<< result true
  ($ConstTest$ = $CompValue$) <<< result true
Then
  comment: ShellBatch parameter passed
Else
EndIf

```

## FUNCTIONS AND STATEMENTS

- **UpdateEnvironment** [W]:  
Sends Windows the signal to reload the environment values from the registry. This statement may be called after any process that may have changed the environment (e.g. Registry section or setup program). Even if the program that runs after the opsi-script get the new environment, next process that is started (via DosBatch or Winbatch) from this opsi-script instance will still inherit the old environment.  
To start a subsequent process with the new environment you have to use `winbatch` with the `/RunElevated` parameter. Works only with NT6 and up.

Example:

```

comment "Set Environment Variables and check for it ...."
Registry_add_environment /sysnative
UpdateEnvironment

comment "This will not work because the environment is inherited from the running process"
set $list$ = shellCall('set opsi-script-test')

comment "This will work because this new started process will get a new environment"
winbatch_check_environment /RunElevated
if ("42" = getlastExitCode)
  comment "passed"
else
  comment "failed"
endif

[Registry_add_environment]
openkey [HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Session Manager\Environment]
set "opsi-script-test"="deleteme"

[winbatch_check_environment]
"%system%\cmd.exe" /c "if %opsi-script-test%==deleteme exit 42"

```

- **sleepseconds** [W/L]  
As parameter for the count of seconds you may now use not only string constants but also string variables or string functions.
- **MaximizeWinst** [W/L]  
Sets the *opsi-winst/opsi-script* window to the *maximized* mode
- The search path for `include_insert` and `include_append` is extended by `%ScriptPath%/../lib` and works in the same way now also for external sub-section files.

The search rule is:

<file name> may be:

- A complete path to an existing file. [W/L]
- A existing file in %ScriptPath% [W/L]
- A file in %opsiScriptHelperPath%\lib [W]  
Is equivalent to: %ProgramFiles32Dir%\opsi.org\opsiScriptHelper\lib
- A existing file in %ScriptPath%\..\lib [W/L]
- A existing file in %WinstDir%\lib [W]

The tests for the location of the <file name> are done in the order above. *opsi-winst/opsi-script* uses the first file it finds that has a matching name.

- `getProductPropertyList(<propname>,<default value>)`  
Is available since 4.11.3 with <default value> as string expression.  
Since 4.11.5.6 <default value> may also be a string list expression.
- `LoadTextFileWithEncoding( <file name> , <encoding>)` [W/L]  
reads the file <file name> and generates the string list, that contains all lines of the file. The string will be reencoded from <encoding> to system encoding.
- `removeFromListByContaining(<search string>, <target list>)` [W/L]  
Returns a copy of <target list> where all lines that contains <search string> are removed. The match to <search string> is case insensitiv.
- `removeFromListByContaining(<search list>, <target list>)` [W/L]  
Returns a copy of <target list> where all lines are removed that contains a string out of <search list>. The match to <search list> is case insensitiv.

Examples:

File "%Scriptpath%\test-files\encoding\10lines.txt" is:

```
line 1
line 2
line 3
line 4
line 5
line 6
line 7
line 8
line 9
line 10
```

Code from opsi-winst-test:

```
comment ""
comment "-----"
comment "Testing: "
message "removeFromListByContaining"
set $string1$ = "%Scriptpath%\test-files\encoding\10lines.txt"
set $list1$ = loadTextFileWithEncoding($string1$, "cp1252")
comment "search with string"
comment "search with string constant"
set $ConstTest$ = "9"
set $list2$ = removeFromListByContaining("line 5", $list1$)
set $CompValue$ = count($list2$)
if ($ConstTest$ = $CompValue$)
    comment "passed"
```

```
else
    set $TestResult$ = "not o.k."
    LogWarning "failed"
endif

set $ConstTest$ = "9"
set $list2$ = removeFromListByContaining("LINE 5", $list1$)
comment "the match is case insensitive"
set $CompValue$ = count($list2$)
if ($ConstTest$ = $CompValue$)
    comment "passed"
else
    set $TestResult$ = "not o.k."
    LogWarning "failed"
endif

set $ConstTest$ = "0"
set $list2$ = removeFromListByContaining("line", $list1$)
set $CompValue$ = count($list2$)
if ($ConstTest$ = $CompValue$)
    comment "passed"
else
    set $TestResult$ = "not o.k."
    LogWarning "failed"
endif

set $ConstTest$ = "8"
comment "searchstr 1 will found in 'line 1' and 'line 10'"
set $list2$ = removeFromListByContaining("1", $list1$)
set $CompValue$ = count($list2$)
if ($ConstTest$ = $CompValue$)
    comment "passed"
else
    set $TestResult$ = "not o.k."
    LogWarning "failed"
endif

comment "search with string function"
set $ConstTest$ = "9"
set $list2$ = removeFromListByContaining(trim(" line 5 "), $list1$)
set $CompValue$ = count($list2$)
if ($ConstTest$ = $CompValue$)
    comment "passed"
else
    set $TestResult$ = "not o.k."
    LogWarning "failed"
endif

comment "search with string variable"
set $string1$ = "line 5"
set $ConstTest$ = "9"
set $list2$ = removeFromListByContaining($string1$, $list1$)
set $CompValue$ = count($list2$)
if ($ConstTest$ = $CompValue$)
    comment "passed"
else
```

```

        set $TestResult$ = "not o.k."
        LogWarning "failed"
endif

comment "search with string list"
comment "search with string list variable"
set $list3$ = createStringList ('1', '2', '3', '4', '5')
comment "searchstr 1 will found in 'line 1' and 'line 10'"
set $ConstTest$ = "4"
set $list2$ = removeFromListByContaining($list3$, $list1$)
set $CompValue$ = count($list2$)
if ($ConstTest$ = $CompValue$)
    comment "passed"
else
    set $TestResult$ = "not o.k."
    LogWarning "failed"
endif

comment "search with string list variable"
comment "searchstr 1 will found in 'line 1' and 'line 10'"
set $ConstTest$ = "4"
set $list2$ = removeFromListByContaining(createStringList ('1', '2', '3', '4', '5'), $list1$)
set $CompValue$ = count($list2$)
if ($ConstTest$ = $CompValue$)
    comment "passed"
else
    set $TestResult$ = "not o.k."
    LogWarning "failed"
endif

```

- String function `unquote2(<string>,<quote-string>)` [W/L]  
Acts like `unquote(<string>,<quote-string>)` with the following differences:  
If `<quote-string>` contains only one char, so this char will be used as *start quote char* and *end quote char*. If `<quote-string>` contains two chars, so the first char will be used as *start quote char* and the second char as *end quote char*. Example: a `<quote-string>` like `()` will unquote a string like `(hello)`.  
The function returns the unchanged `<string>` if not (*start quote char* AND *end quote char*) is found.
- Logging in the `silent_install` mode: If `opsi-script /opsi-winst` is started from a `silent_install` event (e.g. to run inventory scripts in the background), so any logs produced in this case will be written to the `opsi-server` in the append mode.
- String function `GetShortWinPathName(<longpath string>)` [W]  
Returns the short path (8.3) from `<longpath string>`. If there is no short path for `<longpath string>`, so you will get an empty string.  
Example: `GetShortWinPathName("C:\Program Files (x86)")` returns `"C:\PROGRA~2"`
- `GetConfidentialProductProperty (<PropertyName>, <DefaultValue>)` //since 4.11.5.2  
like `GetProductProperty` but handles the resulting value as confidential string.  
Useful for getting passwords without logging. see also `SetConfidential`
- Boolean function `CompareDotSeparatedStrings (<str1>,<relation str>,<str2>)` //since 4.11.5.2: [W/L]  
compares two strings of the form `<str>[.<str>[.<str>[.<str>]]]`  
by the `<relation str>` which may be one of `[<,=>,=>,=>]`.  
see also: string function `CompareDotSeparatedStrings (<string1>, <string2>)`
- Boolean function `CompareDotSeparatedNumbers (<str1>,<relation str>,<str2>)` //since 4.11.5.2: [W/L]  
compares two strings of the form `<number>[.<number>[.<number>[.<number>]]]`



by the <relation str> which may be one of [<, <=, =, >=, >].

see also: string function CompareDotSeparatedNumbers(<string1>, <string2>)

Example:

The code:

```

set $string1$ = "1.2.30.4.5"
set $string2$ = "1.20.30.4.5"
if CompareDotSeparatedNumbers($string1$, "<", $string2$)
    comment "passed"
else
    set $TestResult$ = "not o.k."
    LogWarning "failed"
endif
if CompareDotSeparatedNumbers($string1$, "<=", $string2$)
    comment "passed"
else
    set $TestResult$ = "not o.k."
    LogWarning "failed"
endif
if CompareDotSeparatedNumbers($string1$, "=", $string2$)
    comment "passed"
else
    set $TestResult$ = "not o.k."
    LogWarning "failed"
endif
if CompareDotSeparatedNumbers($string1$, "=>", $string2$)
    set $TestResult$ = "not o.k."
    LogWarning "failed"
else
    comment "passed"
endif
if CompareDotSeparatedNumbers($string1$, ">=", $string2$)
    set $TestResult$ = "not o.k."
    LogWarning "failed"
else
    comment "passed"
endif
if CompareDotSeparatedNumbers($string1$, ">", $string2$)
    set $TestResult$ = "not o.k."
    LogWarning "failed"
else
    comment "passed"
endif

```

produce the log:

```

Set $string1$ = "1.2.30.4.5"
  The value of the variable "$string1$" is now: "1.2.30.4.5"
Set $string2$ = "1.20.30.4.5"
  The value of the variable "$string2$" is now: "1.20.30.4.5"

```

```

If
    Checking if "1.2.30.4.5" is "<" than / as "1.20.30.4.5"
    CompareDotSeparatedNumbers($string1$, "<", $string2$) <<< result true
Then
    comment: passed
Else
EndIf
If
    Checking if "1.2.30.4.5" is "<=" than / as "1.20.30.4.5"
    CompareDotSeparatedNumbers($string1$, "<=", $string2$) <<< result true
Then
    comment: passed
Else
EndIf
If
    Checking if "1.2.30.4.5" is "<=" than / as "1.20.30.4.5"
    CompareDotSeparatedNumbers($string1$, "<=", $string2$) <<< result true
Then
    comment: passed
Else
EndIf
If
    Checking if "1.2.30.4.5" is "=" than / as "1.20.30.4.5"
    CompareDotSeparatedNumbers($string1$, "=", $string2$) <<< result false
Then
Else
    comment: passed
EndIf
If
    Checking if "1.2.30.4.5" is ">=" than / as "1.20.30.4.5"
    CompareDotSeparatedNumbers($string1$, ">=", $string2$) <<< result false
Then
Else
    comment: passed
EndIf
If
    Checking if "1.2.30.4.5" is ">=" than / as "1.20.30.4.5"
    CompareDotSeparatedNumbers($string1$, ">=", $string2$) <<< result false
Then
Else
    comment: passed
EndIf
If
    Checking if "1.2.30.4.5" is ">" than / as "1.20.30.4.5"
    CompareDotSeparatedNumbers($string1$, ">", $string2$) <<< result false
Then
Else
    comment: passed
EndIf

```

#### OPSI-LINUX SUPPORT:

- Winbatch sections are now also available at Linux.
- LinkFolder sections are now also available at Linux..  
Possible BaseFolder are: common\_programs,common\_autostart,desktop, autostart  
Subfolder is always "" (empty). The Link Option icon\_index is ignored.

As additional link option we have: `link_categories`. Here you may use the following values, separated and terminated by a semikolon: `AudioVideo`, `Audio`, `Video`, `Development`, `Education`, `Game`, `Graphics`, `Network`, `Office`, `Settings`, `System`, `Utility`

The LinkFolder sections at Linux work with different desktop system (so they work according to the freedesktop.org standards).

- `shellCall` will now give the correct exit code of the called command.  
Technical background: The called command is extended by `` || exit $?`` so that it give the exit code of the called command.

## Chapter 13

# python-opsi 4.0.6.

The Python-library used by opsi has received a lot of improvements and bugfixes.

Functionality used by external scripts have been moved into python-opsi to reduce maintenance efforts and make the functionality usable in other applications.

This process has resulted in the following new modules: `OPSI.Util.Task.Rights` allows setting the rights for opsi on files and directories. `OPSI.Util.Task.UpdateBackend.MySQL` can be used to update the MySQL backend. `OPSI.Util.Task.Samba` can be used to configure Samba for the use with opsi.

The sourcecode of the new modules was improved in many place to be future-proof and more efficient.

The function `OPSI.Types.forceList` is now able to work with tuples and generators. Generators will be consumed during this.

Typechecks inside many methods have been reworked so that not only the baseclasses `dict` and `list` but also their subclasses are recognized.

We improved error messages to be more helpful when creating new objects through the commandline.

The module `OPSI.Util.Task.Certificate` now follows RFC5820 and increases existing serial numbers for certificates. If no serial number is found a random number will be generated. This avoids problems caused by equal serial numbers. This feature gets used e.g. when running `opsi-setup --renew-opsiconfd-cert`.

`OPSI.SharedAlgorithm` now does not rely on evaluating strings anymore because this wasn't used by any official component.

Alongside this change the methods for defining the ordering of products for installation have been overhauled. Creating a circular dependency will result in an error being thrown in any method. In addition to this a logentry will be created for every product dependency that is contrary to any product priority and would lead to unforeseeable results.

Calling `backend_getSharedAlgorithm` will now result in throwing an exception. It will be removed in future versions.

For easier log interpretation many objects now have improved representations.

The method `OPSI.System.Windows.mount` now accepts `dynamic` as a mount target. This makes it possible to let the agent find a free mountpoint for the depot share. To use this feature you need to set the property `clientconfig.depot.drive` of a client to `dynamic`. Adding the property on the opsi configserver can be achieved by running `opsi-setup --init-current-config`. Thanks to Markus Kötter for the initial patch.

Driver integration now handles directories with names ending in an underscore as if they were ending with a dot. This fixes problems regarding filesystem limitations on Windows. As an example if you'd be using the integration of drivers via `byAudit` for computers of a company called `Dilbert Inc.` you now would name the folder `Dilbert Inc_`.

The cleanup of backends through `OPSI.Util.Task.CleanupBackend` has received speed improvements. Mass operations will be split into smaller parts to avoid performance bottlenecks.

Communicating with the webservice currently leads to a HTTP header "content-type" that does not match the real content encoding. It now is possible to activate a RFC 2616 compatible behaviour by creating the file `/etc/opsi/`

`opsi.header.fix.enable` and restarting the service. This makes it easier to communicate with the client through third party applications. Because this new behaviour may lead to communication failures with clients expecting the old behaviour this is disabled by default. The client components provided with this release have been updated so that they can work with both.

The packaging has been overhauled to follow current recommendations and requirements of the various distributions. Users or groups will not be created with an specific ID anymore to avoid conflicts with the IDs being already in use.

- opsi server parts:

There are many improvements and bugfixes.

- The info page for the opsi server now collects information about the amount of methods called and their average running time.
- Changed logrotate configuration file `/etc/logrotate.d/opsiconfd`. This file contains a new configuration regarding `/var/log/opsi/package.log`. The package log was not limited in size before.
- In the MySQL backend all columns referencing the ID of a host are now the same size of 255 characters. Newly created backend automatically receive this size. Old backends have to be adjusted manually through running `opsi-setup --update-mysql`.
- If the connection to the database fails during initialising of the MySQL backend there will be a 5 seconds wait with an additional try to connect to the database.
- The tools `opsi-product-updater`, `opsi-newprod` and `opsi-package-manager` now use the same function to set the rights to avoid inconsistent permissions.
- A patch provided by Antoine Guevara allows to use arbitrary subjects for e-mails sent by `opsi-product-updater`. The subject can be set through the attribute `subject` in the section `notification` in `/etc/opsi/opsi-product-updater.conf`.
- The tool `opsi-admin` gained a new task: `setActionRequestWhereOutdatedWithDependencies`. It has similar behaviour like `setActionRequestWhereOutdated` but also takes any dependencies into account. Thanks for Daniel Koch for providing the patch.
- Running `opsi-admin` in non-interactive mode now will return exitcodes other than 0 if any problems occurred. To keep the previous behaviour where any action would result in an exitcode 0 you must supply `--exit-zero` to the call.






















## Chapter 14

# opsi Support Matrix Windows Clients

The following section is an overview, on which Windows platforms opsi is running as a client.

### 14.1 Supported as opsi-client: Windows :

(as from \$Date\$)

Distribution	Opsi 4.0.5	Remark	Opsi 4.0.6	Remark
Windows 2000				
Windows XP				
Windows 2003				
Windows Vista				
Windows 2008				
Windows 7				
Windows 2008 R2				
Windows 8				
Windows 2012				
Windows 8.1				
Windows 2012 R2				
Windows 10				

 : Supported  : Unsupported  : Under development  : Discontinued

## Chapter 15

# Miscellaneous

### 15.1 Changelogs:

#### 15.1.1 Changelog opsi-configed

opsi-configed (4.0.6.3.5.1-2) TESTING; urgency=medium

- fixed bug when missing swaudit entries
- fixed NPE because of missing filter condition initialization

— roeder <[roeder@uib.de](mailto:roeder@uib.de)> Thu, 17 Sep 2015 10:07:04 +0200

opsi-configed (4.0.6.3.5-1) TESTING; urgency=medium

- logpane improved: search starting with caretPosition
- logpane improved: search strings saved in combobox
- Software page with search functionality
- Software page with option to exclude MS updates from shown software
- licence statistics counting repaired

— roeder <[roeder@uib.de](mailto:roeder@uib.de)> Mon, 31 Aug 2015 10:07:04 +0200

opsi-configed (4.0.6.0.8-1) EXPERIMENTAL; urgency=medium

- WAN config by checkbox

— sucher <[a.sucher@uib.de](mailto:a.sucher@uib.de)> Tue, 31 Mar 2015 12:43:35 +0200

opsi-configed (4.0.6.0.7-1) experimental; urgency=medium

- in case of queriesavedsearch we omit any console output
- with depot properties editing, a depot selection is kept when changing product
- fixed that the connection state was not correctly identified which led to errors in file backend

— roeder <[r.roeder@uib.de](mailto:r.roeder@uib.de)> Fri, 27 Mar 2015 16:30:35 +0100

opsi-configed (4.0.6.0.5-1) experimental; urgency=medium

- removed exception of ReachableUpdate when updating the model
- fix: on host refresh, a host configs refresh is necessary
- configed default logdir for windows move to localappdata dir
- hostparameter editor leaked and reached window handle maximum, fixed by multiton pattern
- on authentication password corection was not observed

— roeder <[r.roeder@uib.de](mailto:r.roeder@uib.de)> Thu, 19 Mar 2015 16:25:46 +0100

### 15.1.2 Changelog opsi-client-agent

opsi-client-agent (4.0.6.3-3) testing; urgency=low

- Integrated emergency fix for opsiclientd\_shutdown\_starter.exe: ignore allow\_reboot property

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Fri, 18 Sep 2015:15:00:00 +0200

opsi-client-agent (4.0.6.3-2) testing; urgency=low

- Integrated emergency fix for opsiclientd\_shutdown\_starter.exe

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Thu, 17 Sep 2015 15:00:00 +0100

opsi-client-agent (4.0.6.3-1) testing; urgency=low

- New version of opsiclientd\_shutdown\_starter.exe (4.0.85) (port from 4.0.5.7-2)
- update to opsi-winst 4.11.5.14
- setup.opsiscript: Set \$INST\_Debug\$ = "off"

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Thu, 10 Sep 2015 15:00:00 +0100

opsi-client-agent (4.0.6.2-1) testing; urgency=low

- Avoid having a cmd window popup on shutdown.
- update to opsi-winst 4.11.5.13 (do 28.8.)
- Using LoadProductProperties to get Productproperties after network connection (do 10.7.)
- new property: setup\_after\_install (do 15.7.) fixes #1613
- update to openssl 1.0.2d
- service\_setup.cmd: better handling of /u ; fixes #503
- 50\_opsi-client-agent.cmd: log goes to c:\opsi.org\log

— Niko Wenselowski <[n.wenselowski@uib.de](mailto:n.wenselowski@uib.de)> Fri, 10 Jul 2015 10:31:25 +0100

opsi-client-agent (4.0.6.1-2) experimental; UNRELEASED; urgency=low

- fix in config.opsiscript: missing variable fo opsiclientd.conf
- Update SSL DLLs from opsi-script to opsiclientd ; references #1491
- integrate openssl to opsi-client-agent directory
- no special uninstall for openssl anymore



- No Environment vars for openssl
- use <http://indy.fulgan.com/SSL/> instead of shining light ssl
- update to openssl 1.0.2c
- Updated opsi-deploy-client-agent (niko)
- OpsILoginBlocker.dll logfile changes (loglevel first) (mm)
- setup.opsiscript: changed Error message on copy failure
- update to opsi-winst 4.11.5.6
- \*.opsiscript: for win10: change all `$INST_NTVersion$ < "6.0"` to CompareDotSeparatedNumbers
- new property: `depends_on_service` : List of services that have to started before opsiclientd

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Tue, 17 Mar 2015 15:00:00 +0100

opsi-client-agent (4.0.6.1-1) experimental; urgency=low

- openssl update to 1.0.1L ; references #1027
- Updated deployment script
- scripts renamed from \*.ins to \*.opsiscript
- scripts: `c:\tmp` replaced by `%opsiTmpDir%` or `%opsiLogDir%`
- scripts: `ALLUSERS=2` replaced by `ALLUSERS=1`
- update to opsi-winst 4.11.5.1 (do)
- cleanup unused files
- get hostname from `%pcname%` ; references #1369
- make `silent_setup.cmd` complete unattend ; references #503
- icon for `softwareOnDemand` ; references #936
- support for multiple `clientconfig.configserver.url` ; patch from <[boris.synak@zobelsoft.de](mailto:boris.synak@zobelsoft.de)> ; references #1237
- set also opsi-winst to installed ; references #1329
- new update script `files\opsi\config.opsiscript / subconfig.opsiscript` for activate `event_on_shutdown` and `Link-Folder_install_softwareOnDemand` ; references #1329
- associate \*.opsiscript files with `winst32.exe` ; references #1045
- start `"%ScriptPath%\custom\custom.opsiscript"` after `sub_write_configuration` ; references #458
- uninstall: fixes for `on_shutdown` registry keys
- postinst: for backward compatibiliy: create a `setup.ins` as hard link

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Mon, 26 Jan 2015 15:00:00 +0100

config-win10 (4.0.6-4) experimental; urgency=low

- Added new property to change windows update behavior

```
-- m.radtke <m.radtke@uib.de> Tue, 15 Sep 2015 14:33:00 + 0200
```

config-win10 (4.0.6-3) experimental; urgency=low

- diverged disable\_telemetry into more properties

```
-- m.radtke <m.radtke@uib.de> Fri, 11 Sep 2015 15:31:00 + 0200
```

config-win10 (4.0.6-2) experimental; urgency=low

- all reg entries change values
- removed disable\_charms property

```
-- m.radtke <m.radtke@uib.de> Fri, 11 Sep 2015 11:10:00 + 0200
```

config-win10 (4.0.6-1) experimental; urgency=low

- added all known windows 10 telemetry registry keys

```
-- m.radtke <m.radtke@uib.de> Thu, 10 Sep 2015 17:06:00 + 0200
```

### 15.1.3 Changelog opsi-script / opsi-winst

opsi-winst/opsi-script (4.11.5.14) stable; urgency=low

- oswebservice: assume opservice version=4 in retrieveJSON\* to avoid access to opsidata which fails if we use local\_opsidata fixes Access Violations in initial opsi-client-agent installation
- ofunc: FuncSaveToFile / SaveToFile: logging content on Loglevel 9 ; references #1679
- ofuncwin: fix broken Shellbatch /showoutput

— Detlef Oertel <d.oertel@uib.de> Thu, 10 Sep 2015:15:00:00 +0200

opsi-winst/opsi-script (4.11.5.13) stable; urgency=low

- do not try to run non existing external sub sections

— Detlef Oertel <d.oertel@uib.de> Thu, 21 Aug 2015:15:00:00 +0200

opsi-winst/opsi-script (4.11.5.12) stable; urgency=low

- Bugfix: osparser: doAktionen: fullfilename not initialized: causes double load of include or sub if searched file is not existing ; fixes #1656
- Bugfix: osparser: Fileexists\*: do not check for existing file with dir/ls if trim(filename)=" fixes: <https://forum.opsi.org/viewtopic.php?f=6&t=7697> (FileExists auf leere Variable gibt wahr zurück)

— Detlef Oertel <d.oertel@uib.de> Thu, 20 Aug 2015:15:00:00 +0200

opsi-winst/opsi-script (4.11.5.11) stable; urgency=low

- Bugfix: (FileExist call) changes (GetLastExitCode Result Value): (because it call execshellCall to detect symlinks correctly): osparser: new parameter for execshellCall: FetchExitCodePublic if false result is on FLastPrivateExitCode if false true is on FLastExitCodeOfExe (GetLastExitCode)

— Detlef Oertel <d.oertel@uib.de> Thu, 13 Aug 2015:15:00:00 +0200

opsi-winst/opsi-script (4.11.5.10) stable; urgency=low

- oswebservice: retrieveJSONObject
- start with (new) correct Mime-type and AcceptEncoding and fall back to old (wrong) parameters
- ofunc: FileCopyWin: more log on file in use
- ofunc: FileCopyWin: fix for Err 32 on setTimeForFile
- ofunc: TuibRegistry.Create(myforce64: boolean; readonly: boolean);
- osparser: GetRegistrystringValue\* works now with readonly registry ; fixes #1647
- osmain: BuildPC: speed up: only ask for changed action request if there was one (uib#2015080710000015)

—Detlef Oertel <d.oertel@uib.de> Tue, 21 Jul 2015:15:00:00 +0200

opsi-winst/opsi-script (4.11.5.9) stable; urgency=low

- osmain: initproduct before run update script: refresh getProductMap
- osmain: but still use setup as lastaction even if was setup+update
- oswebservice: new procedure TOpsi4Data.setActualProductActionRequest

—Detlef Oertel <d.oertel@uib.de> Fri, 17 Jul 2015:15:00:00 +0200

opsi-winst/opsi-script (4.11.5.8) stable; urgency=low

- new statement LoadProductProperties <clientId> <productId> (re-loads productproperty list from Server if possible)
- GetProductpropertyList: do not try to use also local\_opsidata or opsidata
- GetProductproperty: do not try to use also local\_opsidata or opsidata

—Detlef Oertel <d.oertel@uib.de> Thu, 09 Jul 2015:15:00:00 +0200

opsi-winst/opsi-script (4.11.5.7) stable; urgency=low

- GetProductproperty: try / except added

—Detlef Oertel <d.oertel@uib.de> Tue, 07 Jul 2015:15:00:00 +0200

opsi-winst/opsi-script (4.11.5.6) stable; urgency=low

- GetProductpropertyList: also with list as second (default) parameter ; fixes #1602
- GetProductpropertyList: try to use also local\_opsidata, log using default
- GetProductproperty: if empty try to use also local\_opsidata or opsidata, log using default

—Detlef Oertel <d.oertel@uib.de> Thu, 02 Jul 2015:15:00:00 +0200

opsi-winst/opsi-script (4.11.5.5) stable; urgency=low

- upgrade to ssl Libraries 1.0.2c (libeay32.dll, ssleay32.dll); fixes #1586
- ofuncwin2: updateEnvironment: do not try to run updateEnvironment on windows < 6; fixes #1591
- osmain: BuildPC: process product only if we have a original action request wich is still set

—Detlef Oertel <d.oertel@uib.de> Thu, 25 Jun 2015:15:00:00 +0200

opsi-winst/opsi-script (4.11.5.4) stable; urgency=low

- Working with ssl protocol: sslvSSLv23 - auto negotiation

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Tue, 02 Jun 2015:15:00:00 +0200

opsi-winst/opsi-script (4.11.5.3) stable; urgency=low

- (Security Update) oswebservice: use TLS1.2 instead of SSLv3 and fallback down to SSLv3

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Mon, 01 Jun 2015:15:00:00 +0200

opsi-winst/opsi-script (4.11.5.2) stable; urgency=low

- upgrade to ssl Libraries 1.0.2a (libeay32.dll, ssleay32.dll)
- files commands move / rename / hardlink / symlink now work with overwrite; fixes #1435
- if move / rename fails (file is in use) we retry it with MOVEFILE\_DELAY\_UNTIL\_REBOOT So the move will be done at the next reboot. Reboot will be set automatically if not Option -c is set.
- file command del / delete now with option -c and retry to delete on next boot if file in use ; fixes # 788
- osfunc: new function opsiunquotestr2
- new string function unquote2(s1,s2): like unquote but: removes only quotes if they found at start and end s2 may be two chars long. Then the first char is the start mark and the second char is the end mark
- osparser: GetString: new boolean switch requote
- osparser: GetString requote=true: change double quoted ("str") to alternative double quoted ("); references #1284
- new string function: GetShortWinPathName(longpath) ; fixes #581 Windows only Gives short path (8.3) from a long path e.g. GetShortWinPathName("C:\Program Files (x86)") gives "C:\PROGRA~2" In case of Error the result is an empty string
- osfunc: startprocess\_cp: translate windows showWindowFlag to TProcess TShowWindowOptions
- osparser: doRegistryHack\* : fix for not HKCU reg enties in loginscripts; fixes #1538
- oswebservice: more log for "unexpected Result from webservice in retrieveJSONObject, number of lines: 0"
- new string function: GetConfidentialProductProperty : like GetProductProperty but handles the result as confidential string ; fixes #462
- fixes at GetNTVersion for Win10
- new boolean function CompareDotSeparatedNumbers(<str1>,<relation str>,<str2>) <relation str> may be: one of [<,=<,>=>]
- new boolean function CompareDotSeparatedStrings(<str1>,<relation str>,<str2>) <relation str> may be: one of [<,=<,>=>]
- hide non visible processes (SW\_HIDE) like winbatch or shellInAnIcon
- (Security Update) oswebservice: use TLS1.2 instead of SSLv3

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Wed, 01 Apr 2015:15:00:00 +0200

opsi-winst/opsi-script (4.11.5.1) stable; urgency=low

- osparser: commandline := *cmd64.exe /c "reg delete "key\_complet"path" /f*; (fixes #1299)
- port of the changes since 4.11.4.6 to Linux
- osparser: New files commands hardlink, symlink, rename, move

- osfunc: new tuibinstall methods: hardlink, symlink, rename (Linux / Windows ; fixes #1319, #362)
- osparser: execDosBatch: The path to temporary file is only quoted if it contains spaces
- osparser: execDosBatch: Variables are now allowed as Parameters (but no functions) fixes #1312
- osparser: executeWith: Variables are now allowed as Parameters (but no functions)
- osparser: doAktionen: Variables and functions are now allowed as sleepsecond Parameters; fixes #1193
- osparser: %SriptPath%/../lib as additional Path in Search path for includes; fixes #1201
- osparser: searchpath for includes are now works also for sub <file> ; fixes #1201
- New loop statement: for %s% = \$start\$ to \$stop\$ do <statement> ; references #407
  - \$start\$ and \$stop\$ has to be integer strings
  - \$start\$ < \$stop\$ is required
  - in fact a stringlist \$start\$ to \$stop\$ is generated over which we iterate while loop
- osparser: tsLoopForTo for %s% = \$start\$ to \$stop\$ do <statement>
- osparser: activating winbatch for linux ; fixes #1170
- replacing opsi-winst constants by opsi-script
- osparser: produceStringList: New (overloaded) stringlist function (references #1110):
  - removeFromListByContaining(<search string>, <target list>) removes <search string> from <target list>
  - removeFromListByContaining(<search list>, <target list>) removes <search list> from <target list>
  - both functions search case insensitive for a matching substring
- osparser: fix for fileexists\* to detect symlinks
- upgrade to ssl Libraries 1.0.1L (libeay32.dll, ssleay32.dll)
- osmain: GetParameter + StartProgramModes: more try - except : port from 4.11.4.16
- osparser: doOpsIServiceCall: more try - except : port from 4.11.4.16
- osparser: doTextPatchMain: do not use CheckFileExists in SaveToFile ; references #171
- HowToBuild.txt ; fixes #1372
- oswebservice: finishOpsiConf: if runproductlist then Log-Appendmode := true; references #1379
- new Statement: UpdateEnvironment : Triggers Windows to reload Environment from Registry; Win only; references #1364
- new Control Statement: Switch ; references #740
  - osparser: Switch <string expr ; normally variable> Case <string expr; normally const> statments EndCase [Defaultcase statments EndCase] EndSwitch
- LinkFolder for Linux activated: No BaseFolder, No SubFolder, No Iconindex but link\_categories: *AudioVideo, Audio, Video, Development, Education, Game, Graphics, Network, Office, Settings, System, Utility* // from <http://standards.freedesktop.org/menu-spec/menu-spec-1.0.html#category-registry> changes in osparser, osfunclin and new unit oslindesktop
- some more ExpandFilename calls to handle incorrect path delimiter
- oswebservice: sendlog: replace old writeLog by new log\_write method
- New Statement: MaximizeWinst at osparser

- Erweiterte Stinglisten Funktion `getProductPropertyList(<propname>,<default value>)` mit `<default value>` als String oder Stringliste.
- New Functions `LoadTextFileWithEncoding(file,encoding)` `strLoadTextFileWithEncoding(file,encoding)` at `osparser`
- `osencoding`: `LoadFromFileWithEncoding`
- `oswebservice`: `sendlog`: at Linux do not convert logstrings to uft8
- `oslog`: `dependentadd`: more try except
- `osparser`: `sleepseconds (tsSleep)`: more try except and more logging
- `osparser`: `winbatch`: trim targetfilename
- `osparser`: `shellBatch`: Parameter at Linux (wrong bash parameter)
- `osmain`: User Profile Management (`runloginscripts`) is now free
- `osmain`: do not switch opsi-script to setup (even if it is opsi-winst); references # 1437

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Thu, 22 Dec 2014:15:00:00 +0200

opsi-winst/opsi-script (4.11.4.14) stable; urgency=low

- less (only 512 chars) debug output: `oswebservice`: `retrieveJSONObject`: `log ResultLines.Strings[0]` if `Result = nil`
- `oswebservice`: `retrieveJSONObject`: `FillChar(buffer^, 655360, ' ')`; before read to buffer
- 

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Thu, 04 Dec 2014:15:00:00 +0200

opsi-winst/opsi-script (4.11.4.13) stable; urgency=low

- more debug output: `oswebservice`: `retrieveJSONObject`: `log ResultLines.Strings[0]` if `Result = nil`

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Wed, 12 Nov 2014:15:00:00 +0200

opsi-winst/opsi-script (4.11.4.12) stable; urgency=low

- fix: `osmain`: `StartProgramModes`: correct Path to the `opsiclientd.conf` in batch mode
- Loglevel while writing log to Service decreased
- fix: command typo: `ErrorsOccuredSinceMark` is wrong, now also allowed: `ErrorsOccurredSinceMark` fixes #1121
- backup files of log now are `opsi-script.log.x` where x is 0 - 8
- do not run login scripts if user is `opsisetupadmin` fixes #1248

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Fri, 24 Oct 2014:15:00:00 +0200

opsi-winst/opsi-script (4.11.4.11) stable; urgency=low

- new unit: `SystemCriticalU`
- `osmain`: in `StartprogramModes` set `SystemCritical.IsCritical := true`;
- `osmain`: in `BuildPC` set `SystemCritical.IsCritical := true`;
- `osmain`: in `Terminateapp` set `SystemCritical.IsCritical := false`;
- `osmain`: in different execept set `SystemCritical.IsCritical := false`;

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Wed, 09 Oct 2014:15:00:00 +0200

### 15.1.4 Changelog windomain

windomain (1.0-8) stable; urgency=low

- win 10 compatibiliy

```
-- detlef oertel <d.oertel@uib.de> Fri, 28 Aug 2015 17:00:00 +0200
```

windomain (1.0-7) stable; urgency=low

- Setting priority to 20 for an earlier execution.

```
-- Niko Wenselowski <d.oertel@uib.de> Tue, 20 Dec 2013 17:00:13 +0200
```

### 15.1.5 Changelog opsi-uefi-netboot

opsi-uefi-netboot (4.0.5-3) stable; urgency=low

- added always action request (with no reboot) ; idea / patch by M. Salm <[M.Salm@lmz-bw.de](mailto:M.Salm@lmz-bw.de)> 11.03.2015

—detlef oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Thu, 09 Apr 2015 15:00:00 +0200

### 15.1.6 Changelog opsi-template-with-admin

opsi-template-with-admin (4.0.6-1) stable; urgency=low

- extended rebootflag ; fixes #1652
- changed \*.ins to \*.opsiscript
- ScriptErrorMessages=off

—detlef oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Wed, 02 Sep 2015 15:00:00 +0200

### 15.1.7 Changelog opsi-setup-detector

opsi-setup-detector (4.0.6.132-1) stable; urgency=low

- fixes redmine #1702 - also search patch opsi packageBuilderNG

```
-- Miriam Michaelis <m.michaelis@uib.de> Mon, 05 Oct 2015 10:00:00 +0100
```

opsi-setup-detector (4.0.5.131-1) testing; urgency=low

- InstallDir = %ProgramFilesDir%\opsi.org\
- requiredWinstVersion >= "4.11.4.3"
- msiexec option /qb-!
- InstallShield detection less sharp
- fixes redmine #1107 - manual packetBaseDir accepted
- fixes redmine #1303 - %opsiLogDir% (opsi.org\log\opsiSetupDetector.log)

```
-- Miriam Michaelis <m.michaelis@uib.de> Mon, 21 Sep 2015 10:35:00 +0100
```

### 15.1.8 Changelog windows netboot products

windows (4.0.6.1-2) stable; urgency=low

- new unattend.xml for win10
- preinst: delete unchanged unattend.xml from custom
- show\_drivers now offers --help and --version (nw 10.9.)

—Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Tue, 10 Sep 2015:15:00:00 +0200

windows (4.0.6.1-1) stable; urgency=low

- change imagename values and defaults
- update opsisetuplib.py
- nt6.py: hw-inventory use createObjects # fixes #1540
- nt6.py: check for bootmgr.\* now case insensitive
- 99\_cleanup.cmd : switch for 32/64 Bit ; fixes #1488

—Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Tue, 04 Aug 2015:15:00:00 +0200

### 15.1.9 Changelog linux netboot products

**centos70** centos70\_4.0.6.2-1 stable; urgency=low

- changes for nfs mount

—Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Wed, 26 Mar 2015:15:00:00 +0200

centos70\_4.0.6-1 stable; urgency=low

- ported from centos70\_7.0-1 and sles12

—Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Tue, 27 Jan 2015:15:00:00 +0200

centos70\_7.0-1 stable; urgency=low

- ported from centos65\_6.5-3 and Fedora20
- removed property online\_repository
- network configuration with predictable network interface names (may fail on rule 2 (ESXi clients))
- install net-tools
- hpsa support

—Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Wed, 27 Aug 2014:15:00:00 +0200

**debian7** debian7-4.0.6-1 stable; urgency=low

- initial derivated from debian-4.0.5-6 and sles12

—Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Mon, 12 Jan 2015:15:00:00 +0200

**debian8** debian8-4.0.6-1 stable; urgency=low



- initial derivated from debian7-4.0.6-1

—Detlef Oertel <d.oertel@uib.de> Mon, 26 Jan 2015:15:00:00 +0200

**opensuse13-2** opensuse13-2\_4.0.6.2-2 stable; urgency=low

- changes for 4.0.6 bootimage (>= 20150707):
- property for network interface name ignored
- no kexec copy

—Detlef Oertel <d.oertel@uib.de> Mon, 13 Jul 2015:15:00:00 +0200

opensuse13-2\_4.0.6.2-1 stable; urgency=low

- changes for nfs mount
- temporary property for network interface name

—Detlef Oertel <d.oertel@uib.de> Wed, 26 Mar 2015:15:00:00 +0200

opensuse13-2\_4.0.6-1 stable; urgency=low

- initial

—Detlef Oertel <d.oertel@uib.de> Mon, 09 Feb 2015:15:00:00 +0200

**sles12** sles12\_4.0.6.2-2 testing; urgency=low

- more changes for nfs mount: clientconfig.opsi\_nfs\_share
- temporary property for network interface name

—Detlef Oertel <d.oertel@uib.de> Tue, 28 Apr 2015:15:00:00 +0200

sles12\_4.0.6.2-1 testing; urgency=low

- changes for nfs mount

—Detlef Oertel <d.oertel@uib.de> Wed, 26 Mar 2015:15:00:00 +0200

sles12\_4.0.6.1-2 testing; urgency=low

- changes for opsi-linux-client-agent 4.0.6

—Detlef Oertel <d.oertel@uib.de> Wed, 04 Mar 2015:15:00:00 +0200

**redhat70** redhat70\_4.0.6.2-1 stable; urgency=low

- ported from centos70\_4.0.6.2-1

—Detlef Oertel <d.oertel@uib.de> Mon, 27 Apr 2015:15:00:00 +0200

**Ubuntu14-04** Ubuntu14-04\_4.0.6-2 stable; urgency=low

- changes for 4.0.6 bootimage (>= 20150707):
- no kexec copy

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Tue, 14 Jul 2015:15:00:00 +0200  
Ubuntu14-04\_4.0.6-1 stable; urgency=low

- initial derivated from debian7\_4.0.6-1

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Mon, 26 Jan 2015:15:00:00 +0200  
**Ubuntu15-04** Ubuntu15-04\_4.0.6-2 stable; urgency=low

- initial derivated from Ubuntu14-04\_4.0.6-2

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Tue, 14 Jul 2015:15:00:00 +0200

### 15.1.10 Changelog opsi-local-image

opsi-local-image-capture (4.0.6.1-2) stable; urgency=low

- set empty image\_description to "no description given"
- new opsi-winst versions (32/64) 4.11.5.14 (do 10.9.)
- update ssl Libraries (32/64)
- getmsversion fix for win10
- check for exitance of c:\tmp and c:\drv before remove ; fixes #1668
- run chkdsk for drive to capture before capture
- new property opsi\_depot\_rw\_host: If not empty: the host from which we mount the opsi\_depot\_rw share.

— detlef oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Wed, 02 Sep 2015 15:00:00 +0200  
opsi-local-image-capture (4.0.6.1-1) stable; urgency=low

- link opsisetuplib.py from os-products
- update opsisetuplib.py

— detlef oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Tue, 04 Aug 2015 15:00:00 +0200  
windows (4.0.6.1-2) stable; urgency=low

- new unattend.xml for win10
- preinst: delete unchanged unattend.xml from custom
- show\_drivers now offers --help and --version (nw 10.9.)

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Tue, 10 Sep 2015:15:00:00 +0200  
opsi-local-image-win\* (4.0.6.1-1) stable; urgency=low

- change imagename values and defaults
- update opsisetuplib.py
- 99\_cleanup.cmd : switch for 32/64 Bit ; fixes #1488

— Detlef Oertel <[d.oertel@uib.de](mailto:d.oertel@uib.de)> Tue, 04 Aug 2015:15:00:00 +0200

### 15.1.11 Changelog misc netboot products

opsi-clonezilla (4.0.6-1) stable; urgency=low

- 4.0.6 bootimage support
- clonezilla-3.10.11
- partclone-0.2.69
- postinst cleared

—detlef oertel <d.oertel@uib.de> Fri, 24 Jul 2015 16:01:53 +0200

memtest86 (5.01-1) stable; urgency=low

- extracted <http://www.memtest.org/download/5.01/memtest86+-5.01.zip>
- extension .bin has to be removed
- see: [http://www.gtkdb.de/index\\_7\\_2379.html](http://www.gtkdb.de/index_7_2379.html)

—Detlef Oertel <d.oertel@uib.de> Tue, 11 Aug 2015:15:00:00 +0200

### 15.1.12 Changelog python-opsi

python-opsi (4.0.6.25-1) stable; urgency=medium

- added proper sles12 version check

```
-- Mathias Radtke <m.radtke@uib.de> Fri, 02 Oct 2015 11:47:21 +0200
```

python-opsi (4.0.6.24-1) experimental; urgency=medium

- OPSI.Util.Task.Rights: set +x on known executables in /opt/pcbin/install
- OPSI.Util.Task.Rights: disabled the removal of duplicate folders to avoid problems with wrong rights in the depot.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Thu, 01 Oct 2015 17:27:07 +0200
```

python-opsi (4.0.6.23-1) experimental; urgency=medium

- Copy the following methods to 30\_configed.conf: getDomain, getOpsiHWAuditConf, getPossibleMethods\_listOfHashes, getServerIds\_list
- OPSI.Backend.Backend: Reading the default maximum logfile size from /etc/opsi/opsiconfd.conf.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 16 Sep 2015 11:59:33 +0200
```

python-opsi (4.0.6.22-1) experimental; urgency=medium

- log\_read: Removed append-feature for rotated logs.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 15 Sep 2015 14:23:46 +0200
```

python-opsi (4.0.6.21-1) experimental; urgency=medium

- ExtendedConfigBackend: repr now works also with subclasses.
- ConfigDataBackend: log\_write does correctly limit the logsize.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 15 Sep 2015 12:38:36 +0200
```

python-opsi (4.0.6.20-1) experimental; urgency=medium

- OPSI.Service.Worker: header parsing errors are now logged with loglevel 8.
- Re-introduce 30\_configed.conf

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 09 Sep 2015 09:15:14 +0200
```

python-opsi (4.0.6.19-2) experimental; urgency=medium

- Translations updated and translations for es, it & ru added.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Thu, 03 Sep 2015 11:04:01 +0200
```

python-opsi (4.0.6.19-1) experimental; urgency=medium

- OPSI.Backend.JSONRPC: refuse to enable deflate if we are talking to an old version of the service to avoid problems.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Thu, 03 Sep 2015 10:30:30 +0200
```

python-opsi (4.0.6.18-1) experimental; urgency=medium

- OPSI.Backend.BackendManager: showing the used ACL only on log level debug or higher.
- OPSI.SharedAlgorithm: small refactorings regarding iteration of lists
- OPSI.Backend.JSONRPC: more reliable fix for working with deflate against older webservice versions. This works by disabling deflate to ensure proper encoding / decoding.
- OPSI.Backend.JSONRPC: type check via isinstance instead of type.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 02 Sep 2015 16:34:26 +0200
```

python-opsi (4.0.6.17-1) experimental; urgency=medium

- removed cpatureStderr=False fom execute of *lsb-release -i* command

```
-- Mathias Radtke <m.radtke@uib.de> Wed, 02 Sep 2015 11:54:51 +0200
```

python-opsi (4.0.6.16-1) experimental; urgency=medium

- OPSI.Backend.BackendManager: redirected lsb\_release stderr and stdout output to /dev/null

```
-- Mathias Radtke <m.radtke@uib.de> Wed, 02 Sep 2015 09:33:16 +0200
```

python-opsi (4.0.6.15-1) experimental; urgency=medium

- OPSI.Util.Task.Samba: add newline when adding repository.

- RPM: Made the license machine-parseable.
- OPSI.Util.WindowsDrivers: do not fail if Vendor or Model are None.
- Create user / groups without explicit uid / gid.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 25 Aug 2015 11:02:44 +0200
```

python-opsi (4.0.6.14-1) experimental; urgency=medium

```
[ Mathias Radtke ]
* OPSI.System.Posix: removed unneeded captureStderr flag
```

```
[ Anna Sucher ]
* OPSI.Util.Task.Rights: added opsi-deploy-client-agent-default to
  files that are made executable
```

```
[ Niko Wenselowski ]
* JSONRPCBackend: Better handling of JSON-RPC-response from an old service.
```

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 11 Aug 2015 15:27:10 +0200
```

python-opsi (4.0.6.13-1) experimental; urgency=medium

- Provide OPSI.System.Posix.shutdown.
- Added function OPSI.Util.chunk.
- OPSI.Util.Task.CleanupBackend: added chunking on mass-operations.
- OPSI.Util.Task.CleanupBackend: Improving speed of operations.
- OPSI.Backend.Replicator: Speed up membership test for productsOnDepot.
- OPSI.System.Posix.execute now accepts list, set or tuple for ignoreExitCode
- Debian: Remove dependency on python-support.
- OPSI.System.Posix: removed unneeded captureStderr flags from sfdisk calls

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 10 Aug 2015 15:22:38 +0200
```

python-opsi (4.0.6.12-1) experimental; urgency=medium

```
[ Niko Wenselowski ]
* Improving Python 3 compatibility.
* hwaudit: Added translations for COMPUTER_SYSTEM.sku
* tests: rename the domain of test objects from uib.local to test.invalid
* OPSI.Service.Worker.WorkerOpsiJsonRpc: The header handling introduced
  with 4.0.6.8-1 must now be explicitly enabled by creating the file:
  /etc/opsi/opsi.header.fix.enable
  This makes sure that components get the same behaviour as before unless
  an change is done by an administrator.
* 10_opsi.conf: Reintroduce setRights from the now remove 30_configed.conf
* OPSI.Util.HTTP: the functions to decode/encode gzip/deflate now work
  better with unicode input and always return unicode.
* OPSI.Service.Worker.WorkerOpsi: properly decode requests that have their
  content-encoding header set to "deflate".
* log_read now also reads rotated logs.
* OPSI.Util.Task.Rights: chown now correctly sets uid/gid on links.
```

```
[ Mathias Radtke ]
* new module OPSI Util task Samba
* wrote tests for new module
```

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 29 Jul 2015 16:04:38 +0200
```

python-opsi (4.0.6.11-4) experimental; urgency=medium

- Packaging fixes for Debian 8.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 29 Jun 2015 16:23:22 +0200
```

python-opsi (4.0.6.11-3) experimental; urgency=medium

- RPM: do not link removed file.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 29 Jun 2015 16:11:06 +0200
```

python-opsi (4.0.6.11-2) experimental; urgency=medium

- Removing remaining occurrences of 30\_configed.conf.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 29 Jun 2015 16:06:51 +0200
```

python-opsi (4.0.6.11-1) experimental; urgency=medium

- Debian: Moving lintian-overrides into debian/source
- 20\_legacy.conf: Small refactoring of getClients\_listOfHashes
- 20\_legacy.conf: Refactored getLicenseStatistics\_hash
- OPSI.Types: better error message if forceObjectClass fails because of an argument that is missing for the constructor
- OPSI.Types: better error message if forceObjectClass fails because of an invalid type
- 20\_legacy.conf: some small bugfixes.
- OPSI.Object: repr for ConfigState now includes values.
- Moving getProductOrdering from 30\_configed.conf to 10\_opsi.conf.
- Removing 30\_configed.conf.
- Removing the link from etc/opsi/backendManager/extend.d/20\_legacy.conf to etc/opsi/backendManager/extend.d/configed/20\_legacy.conf.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 29 Jun 2015 15:58:47 +0200
```

python-opsi (4.0.6.10-3) experimental; urgency=medium

- Debian: Setting the package format to 1.0
- RPM: creating folder for systemd templates before installation

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 16 Jun 2015 12:27:05 +0200
```

python-opsi (4.0.6.10-2) experimental; urgency=medium

- RPM: supply %prep and %debug\_package
- Remove references to opsi-distutils

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 16 Jun 2015 10:57:43 +0200
```

python-opsi (4.0.6.10-1) experimental; urgency=medium

- Added *repr* for Backend and JSONRPCBackend.
- OPSI.Backend.Replicator: Inserting objects should be a little faster.
- OPSI.Backend: Only do a lookup for returnObjectsOnUpdateAndCreate once per method execution.
- objectToBash, objectToHtml and objectToBeautifiedText now also correctly format subclasses of the lists / dicts.
- 20\_legacy.conf: Speed up `_getProductStates_hash`
- FileBackend: Do not double the mapping list of LocalbootProduct and NetbootProduct.
- FileBackend: allow products having ProductPropertyStates that are the same as the id of a product.
- Some small refactorings to OPSI.Backend.SQL and OPSI.Backend.MySQL.
- Supply new folder `/etc/opsi/systemdTemplates`

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 16 Jun 2015 10:45:21 +0200
```

python-opsi (4.0.6.9-1) experimental; urgency=medium

- OPSI.Util.Task.Rights: reuse an existing depot URL if we found one before.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 10 Jun 2015 10:20:56 +0200
```

python-opsi (4.0.6.8-1) experimental; urgency=low

- 20\_legacy.conf: `createLicenseContract` now returns the complete license contract id instead of just the first character.
- OPSI.Util.File: Avoid bloating `dhcpd.conf` with `%s`
- OPSI.Util.Task.Rights: added `service_setup.sh` to `KNOWN_EXECUTABLES`
- OPSI.Util.Task.Rights: Fix setting rights on `KNOWN_EXECUTABLES` in the depot folder.
- Refactored worker for the interface page.
- OPSI.Backend.File: Convert errors to unicode before logging them.
- 40\_groupActions.conf: create method to rename groups: `updateGroupname`
- *repr* now gives even better results.
- 20\_legacy.conf: new method `setHostInventoryNumber`
- 20\_legacy.conf: refactored `getAndAssignSoftwareLicenseKey`
- `debian/format`: removed
- OPSI.Types: checking for classes is now implemented via `isinstance` and therefore also subclasses will be accepted.

- OPSI.Util.Task.Certificate: Fix certificate creation on Debian 8.
- OPSI.Util.HTTP: Workarround for Python versions that implement PEP0476
- OPSI.Service.Worker.WorkerOpsiJsonRpc: now correctly stating the HTTP header field "content-type" if the content is compressed via deflate or gzip. To stay backwards compatible we return in the old style if the header field "Accept" of the request starts with "gzip-application".
- OPSI.Util.HTTP: new functions deflateEncode, deflateDecode, gzipEncode and gzipDecode
- OPSI.Backend.JSONRPC: various refactorings
- OPSI.Backend.JSONRPC.JSONRPCBackend: correctly handle responses that are compressed via deflate or gzip. To stay backwards compatible it deflates the data if the HTTP header field "content-type" starts with "gzip".
- The users opsiconfd / pcpatch are now added to the file admin group based on the groupname and not on the gid. This avoids adding these users to the wrong group if a group with gid 992 already exists.
- RPM: if a group with gid 992 is already existing add the file admin group without giving a specific gid.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 09 Jun 2015 16:34:33 +0200
```

python-opsi (4.0.6.7-2) experimental; urgency=low

- RHEL / CentOS 7: No indent to avoid confusing rpm.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Fri, 10 Apr 2015 14:23:46 +0200
```

python-opsi (4.0.6.7-1) experimental; urgency=low

- Fix encoding problems in new *repr*.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Fri, 10 Apr 2015 13:40:21 +0200
```

python-opsi (4.0.6.6-1) experimental; urgency=low

- OPSI.Util.Task.Rights: better ignoring of subfolders.
- OPSI.Logger: some small refactorings.
- OPSI.Util.Task.Sudoers: Do not duplicate existing entries.
- OPSI.Logger.logWarnings: only log to the opsi-Logger.
- CentOS / RHEL 7: depend on net-tools for ifconfig.
- Added OPSI.System.Posix.getActiveConsoleSessionId

```
-- Niko Wenselowski <n.wenselowski@uib.de> Fri, 10 Apr 2015 10:31:29 +0200
```

python-opsi (4.0.6.5-1) experimental; urgency=low

- Fix problem when working mit DHCP files.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 31 Mar 2015 11:38:41 +0200
```

python-opsi (4.0.6.4-1) experimental; urgency=low



- OPSI.System.Posix.execute now accepts keyword arguments *shell* and *waitForEnding* to have the same keyword arguments as on Windows.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 30 Mar 2015 15:38:39 +0200
```

python-opsi (4.0.6.3-1) experimental; urgency=low

- OPSI.Util.Task.Rights: avoid duplicate path processing.
- OPSI.Backend.MySQL.ConnectionPool: lower log-level for messages.
- OPSI.Util.Task.Rights.setRights: show what path is given.
- Fix various problems in OPSI.Backend.Replicator.
- OPSI.Util.Task.Sudoers: Retrieve path to *service* from the OS.
- OPSI.Util.Task.Sudoers: Add single entry if missing.
- Small changes in OPSI.Util.File.
- Less wildcard imports.
- Refactoring in OPSI.Util.Task.Rights
- OPSI.Util.Task.Rights will fail without raising an error if chown is not possible.
- OPSI.Backend.BackendManager: refactored reading groups of user to be faster for large environments.
- Many objects now have proper representations.
- OPSI.Util.Task.ConfigureBackend.ConfigurationData: Adding WAN configuration defaults if they are missing.
- New extension 70\_wan.conf for easy disabling/enabling of WAN configuration
- 70\_dynamic\_depot.conf: `getDepotSelectionAlgorithmByNetworkAddress` makes use of `OPSI.Util.ipAddressInNetwork` instead of copying code.
- OPSI.Util.Task.Rights: chown will only supply an uid if euid is 0 to avoid failures.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 30 Mar 2015 11:44:00 +0200
```

python-opsi (4.0.6.2-1) experimental; urgency=low

- OPSI.Backend.MySQL: If connecting to DB fails during creation of the connection pool we wait 5 seconds before retrying to connect.
- OPSI.Logger: Easier and faster check if syslog is present.
- OPSI.Backend.Replicator: small refactorings.
- OPSI.Backend.BackendManager: `_dispatchMethod` creates no more temp. list.
- OPSI.Util.Task.Certificate: do not set the same serial number for every certificate.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 09 Mar 2015 10:56:28 +0100
```

python-opsi (4.0.6.1-1) experimental; urgency=low

- OPSI.Util.Repository: correctly set number of retries for dynamic bandwidth
- setup.py: Exclude test folders.

- objectToBeautifiedText: indent with only four spaces
- OPSI/Object.py overhauled module
- Added OPSI.System.Posix.runCommandInSession to have access to this function not only when running Windows.
- OPSI.Backend.File: Various refactorings, not only to avoid unnecessary creation of temporary objects.
- Backends: speed up option parsing during initialisation.
- Make excessive use of List Comprehensions for faster processing.
- OPSI.Backend.HostControl: Using the timeout-parameter available on httplib.HTTP(S)Connection in RpcThread and ConnectionThread
- Improve speed of configState\_getClientToDepotserver
- OPSI.Backend.SQL: Refactored working with the hardware audit
- Speed up OPSI.Backend.Backend.log\_read
- The size limit of log\_write can now be controlled through opsiconfd.conf and the value of "max log size" in the section "global".
- New module: OPSI.Util.Task.Rights
- OPSI.System.Windows: function "mount" accepts "dynamic" as mountpoint to enable the automatic search for a free mountpoint on the system. Thanks to Markus Kötter for the initial patch!
- OPSI.Util.Task.ConfigureBackend.ConfigurationData: add the possibility to enable the dynamic mountpoint selection.
- OPSI.Backend.SQL: the columns referencing hostId are now of the same size
- New module OPSI.Util.Task.UpdateBackend.MySQL
- OPSI.Util.Task.UpdateBackend.MySQL: Fix too small hostId columns
- OPSI.Backend.SQL: replacing duplicate code
- Removed LDAP schema files and backend configuration.
- OPSI.Backend.SQL: Functions getData and getRawData only allow SELECT
- Making method backend\_getSharedAlgorithm nonfunctional.
- OPSI.SharedAlgorithm: No more working with code-as-text and evaluation of the text to get objects to work with. Now there are only the objects.
- WindowsDrivers: Fallback if directories ends with "." or with whitespace.
- OPSI.Types.forceList is now able to handle sets and generators
- New function OPSI.System.Posix.getDHCPCDRestartCommand
- OPSI.SharedAlgorithm: Raising an error when a circular dependency is detected between products.
- OPSI.System.Posix.getNetworkDeviceConfig is now able to parse output from newer ifconfig versions like on CentOS 7.
- OPSI.Backend.SQLite refactored query creation.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Thu, 05 Feb 2015 09:46:50 +0100
```

####

### 15.1.13 Changelog opsiconfd

opsiconfd (4.0.6.10-7) stable; urgency=medium

- opsiconfd.service: Make sure that /var/run/opsiconfd can be accessed.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 05 Oct 2015 17:27:32 +0200
```

opsiconfd (4.0.6.10-6) stable; urgency=medium

- CentOS / RHEL 7: reference the right service in systemd template.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 05 Oct 2015 16:32:33 +0200
```

opsiconfd (4.0.6.10-5) stable; urgency=medium

- added sles12 fix for smb service name

```
-- Mathias Radtke <raddi@pcmathias.uib.local> Fri, 02 Oct 2015 15:15:28 +0200
```

opsiconfd (4.0.6.10-4) experimental; urgency=medium

- RPM: opsiconfd is member of the file admin group again.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Fri, 02 Oct 2015 10:49:31 +0200
```

opsiconfd (4.0.6.10-3) experimental; urgency=low

- openSuse 13.2: Specify correct service names in systemd unit.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 29 Sep 2015 12:27:11 +0200
```

opsiconfd (4.0.6.10-2) experimental; urgency=medium

- Default logrotate configuration now only rotates package.log and opsiconfd.log.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 15 Sep 2015 14:13:18 +0200
```

opsiconfd (4.0.6.10-1) experimental; urgency=medium

- Adjusting configuration for logrotate.
- opsiconfd: Config *maxLogSize* now is a number
- opsiconfd.conf: change *max log size* to 5MB

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 14 Sep 2015 15:18:36 +0200
```

opsiconfd (4.0.6.9-1) experimental; urgency=medium

- Removed itext-pdf.jar from the configed JNLP template.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 14 Sep 2015 10:24:28 +0200
```

opsiconfd (4.0.6.8-1) experimental; urgency=medium

- Info page: limit the length of average call duration.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Thu, 10 Sep 2015 14:47:00 +0200
```

opsiconfd (4.0.6.7-1) experimental; urgency=medium

- Collect statistics about the average method call duration.
- Info page: show the average call duration next to the most called functions

```
-- Niko Wenselowski <n.wenselowski@uib.de> Thu, 10 Sep 2015 14:11:35 +0200
```

opsiconfd (4.0.6.6-1) experimental; urgency=medium

- Info page: show at what time an encoding error occurred.
- Infos about updated rrd now only are shown with loglevel 8
- opsiconfd.workers: Query decoding now working similar to the one in OPSI.Service.Worker
- CentOS / Red Hat 7: Fix requiring /bin/python instead of /usr/bin/python
- RPM: License is now machine-parseable.
- Create user / groups without explicit uid / gid.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 25 Aug 2015 10:52:46 +0200
```

opsiconfd (4.0.6.5-1) experimental; urgency=medium

- Showing what the actual error was that was experienced when collecting statistics.
- Showing the time of service start on the info page.
- simplify logrotate config.
- Showing uptime of the service on the info page.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 13 Jul 2015 10:37:04 +0200
```

opsiconfd (4.0.6.4-12) experimental; urgency=medium

- Ignore error from pkg-config in postinst.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 17 Jun 2015 10:42:56 +0200
```

opsiconfd (4.0.6.4-11) experimental; urgency=medium

- Correct name of service file.
- More error resistant installation.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 17 Jun 2015 09:43:22 +0200
```

opsiconfd (4.0.6.4-10) experimental; urgency=medium

- Improving the removal of the service files.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 16 Jun 2015 16:54:04 +0200
```

opsiconfd (4.0.6.4-9) experimental; urgency=medium

- RPM: Removing debug package.
- RPM: small fix in postinst-script.
- RPM: removing service file on uninstall
- RPM: require pkgconfig for RedHat family, pkg-config for suse family

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 16 Jun 2015 14:03:08 +0200
```

opsiconfd (4.0.6.4-8) experimental; urgency=medium

- RPM: creating folder for systemd templates before installation

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 16 Jun 2015 13:21:03 +0200
```

opsiconfd (4.0.6.4-7) experimental; urgency=medium

- Debian: lintian-override fix

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 16 Jun 2015 12:09:55 +0200
```

opsiconfd (4.0.6.4-6) experimental; urgency=medium

- Debian: extending lintian-overrides for Debian 8

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 16 Jun 2015 12:02:16 +0200
```

opsiconfd (4.0.6.4-5) experimental; urgency=medium

- Debian: changing package format to 1.0 so Jessie is happy.
- Rewrote the way that the systemd unitfile is integrated.
- Removed references to opsi-distutils.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 15 Jun 2015 14:59:18 +0200
```

opsiconfd (4.0.6.4-4) experimental; urgency=medium

- Debian: Re-introduce dependency for python-support. As opposed to the Debian docs dh-python alone is not sufficient since Debian Squeeze.
- Debian: ignoring lintians not-using-po-debconf.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 15 Jun 2015 14:45:17 +0200
```

opsiconfd (4.0.6.4-3) experimental; urgency=medium

- Debian: Downgrade Standards-Version to 3.9.4
- Debian: Removing the support for python-support in favor of dh\_python2
- Debian: bump minimum required python-version to 2.6.6-3~.
- Debian: specify "Uploader" in control-file.
- Debian: specify "3.0 (native)" as format.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 15 Jun 2015 14:17:54 +0200
```

opsiconfd (4.0.6.4-2) experimental; urgency=medium

- Packaging adjustments to make lintian happy.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 15 Jun 2015 11:30:00 +0200
```

opsiconfd (4.0.6.4-1) experimental; urgency=low

- opsiconfd.conf: Default log-level is 5.
- fix in webstart implementation for configed
- Failed RPDs now get logged as a warning.
- Various small refactorings.
- Supply a unit-file for systemd.
- debian/format: removed file.
- Various small refactorings in opsiconfd.workers

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 15 Jun 2015 11:18:06 +0200
```

opsiconfd (4.0.6.3-1) experimental; urgency=low

- Logrotate config: client logs in opsiclientd require size  $\geq$  5MB
- opsiconfd.conf: Added entry for "max sessions per ip"

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 09 Mar 2015 11:05:01 +0100
```

opsiconfd (4.0.6.2-1) experimental; urgency=low

- Fix HTML table code.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Fri, 30 Jan 2015 10:14:10 +0100
```

opsiconfd (4.0.6.1-1) experimental; urgency=low

- Info page: Show info about 15 most executed RPCs
- Setting +x on /etc/init.d/opsiconfd for openSuse 13.2
- Make it possible to set a limit for the size of logfiles.
- Extending logrotate config to match more logtypes.
- Added logrotate configuration for /var/log/opsi/package.log
- Info page: show total number of calls.
- RPC call statistics are stored in a deque for faster operation

```
-- Niko Wenselowski <n.wenselowski@uib.de> Fri, 30 Jan 2015 09:24:16 +0100
```

####

### 15.1.14 Changelog opsi-utils

opsi-utils (4.0.6.8-2) testing; urgency=medium

- opsi-product-updater.conf: Better explanation for includeProductIds

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 30 Sep 2015 14:34:01 +0200
```

opsi-utils (4.0.6.8-1) testing; urgency=medium

- opsi-admin: do not override `_` from gettext.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Fri, 25 Sep 2015 14:01:04 +0200
```

opsi-utils (4.0.6.7-1) experimental; urgency=medium

- opsi-admin: Fix bug with failed translations.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Fri, 25 Sep 2015 12:31:35 +0200
```

opsi-utils (4.0.6.6-4) experimental; urgency=medium

- Do not forget to add the directory for Danish translation.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Thu, 03 Sep 2015 16:36:04 +0200
```

opsi-utils (4.0.6.6-3) experimental; urgency=medium

- Translations updated and translation for da added.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Thu, 03 Sep 2015 11:20:04 +0200
```

opsi-utils (4.0.6.6-2) experimental; urgency=medium

- Debian: Updated description.
- Debian: add missing install file.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Thu, 13 Aug 2015 15:36:30 +0200
```

opsi-utils (4.0.6.6-1) experimental; urgency=medium

- opsi-admin: setPcpatchPassword fails on empty password.
- opsi-admin: setPcpatchPassword hides password in output.
- Update translation to fix typo.
- opsi-product-updater: Do not delete old logfile.
- opsi-package-manager: Do not delete old logfile.
- Debian: overhauled packaging.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Thu, 13 Aug 2015 15:36:16 +0200
```

opsi-utils (4.0.6.5-2) experimental; urgency=medium

- Packaging fixes for OBS.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 29 Jun 2015 15:50:40 +0200
```

opsi-utils (4.0.6.5-1) experimental; urgency=low

- opsi-convert: Fix problem with conversion between backends.
- opsi-admin: Convert errors to unicode before logging them.
- Updated manpage.
- opsi-convert: fix the possibility to convert between backends where one of the backends is given as the backend address.
- opsi-convert: refactorings and cleanups.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 10 Jun 2015 11:22:40 +0200
```

opsi-utils (4.0.6.4-1) experimental; urgency=low

- opsi-admin: Better handling of non-iterable results in direct access.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 31 Mar 2015 10:29:49 +0200
```

opsi-utils (4.0.6.3-1) experimental; urgency=low

- opsi-product-updater: Only set the rights once on the package directory.
- opsi-package-manager: Better error message if setting a locale fails.
- opsi-newprod: Changed option-parsing to argparse library.
- opsi-newprod: small refactorings.
- opsi-newprod: new option --version
- opsi-newprod: create postinst template again
- opsi-admin: non-interactive mode: Errors during execution will result in an exit code of 1.
- opsi-admin: non-interactive mode: new option --exit-zero that will let the script always exit with 0.
- opsi-admin: non-interactive mode: If errors are detected as the result of a call it will result in an exit code of 2.
- opsi-convert: Overhauled commandline argument parsing.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Fri, 27 Mar 2015 15:57:42 +0100
```

opsi-utils (4.0.6.2-1) experimental; urgency=low

- Fixing call to unreferenced variable.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 09 Mar 2015 16:02:25 +0100
```

opsi-utils (4.0.6.1-5) experimental; urgency=low



- Use correct path for logrotate configs during removal "su".

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 09 Mar 2015 14:05:11 +0100
```

opsi-utils (4.0.6.1-4) experimental; urgency=low

- For .deb-packages we create the logrotate-folder.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 09 Mar 2015 13:51:35 +0100
```

opsi-utils (4.0.6.1-3) experimental; urgency=low

- Do not forget to install the logrotate configs.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 09 Mar 2015 13:09:02 +0100
```

opsi-utils (4.0.6.1-2) experimental; urgency=low

- Fix path to logrotate config on RPM-based machines.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 09 Mar 2015 11:29:55 +0100
```

opsi-utils (4.0.6.1-1) experimental; urgency=low

- opsi-product-updater: Patch by Antione Guevara to make it possible to give a custom subject on notification emails.
- opsi-product-updater, opsi-newprod and opsi-package-manager now use OPSI.Util.Task.Rights.setRights for setting consistent rights.
- Added logrotate configuration vor /var/log/opsi/opsi-backup.log
- Added logrotate configuration vor /var/log/opsi/opsi-product-updater.log
- opsi-admin: Added new task "setActionRequestWhereOutdatedWithDependencies". Thanks to Daniel Koch for the patch!

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 09 Mar 2015 11:12:03 +0100
```

####

### 15.1.15 Changelog opsi-linux-bootimage

opsi-linux-bootimage (20150916-2) stable; urgency=medium

- Lowering the required versions of python-opsi.
- Introducing a dependency to opsiconfd.
- Updated Danish translation.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Fri, 25 Sep 2015 15:19:25 +0200
```

opsi-linux-bootimage (20150916-1) experimental; urgency=medium

- added fix for delayed UI crash on VSphere Clients

```
-- Mathias Radtke <m.radtke@uib.de> Wed, 16 Sep 2015 12:59:40 +0200
```

opsi-linux-bootimage (20150908-1) experimental; urgency=medium

- missing elilo.efi in debian distributions fixed

```
-- Mathias Radtke <m.radtke@uib.de> Tue, 08 Sep 2015 10:57:47 +0200
```

opsi-linux-bootimage (20150907-1) experimental; urgency=medium

- master.py: added fix to only use network adapters with link to an opsi server
- dhclient timeout set to 15 seconds to prevent dhclient to stall system boot for 5 minutes, whenever a network adapter is not connected

```
-- Mathias Radtke <m.radtke@uib.de> Mon, 07 Sep 2015 12:41:14 +0200
```

opsi-linux-bootimage (20150903-1) experimental; urgency=medium

```
[ Niko Wenselowski ]  
* Updated translations.
```

```
[ Mathias Radtke ]  
* updated python-opsi
```

```
-- Mathias Radtke <m.radtke@uib.de> Thu, 03 Sep 2015 11:21:38 +0200
```

opsi-linux-bootimage (20150902-1) experimental; urgency=medium

- added forgotten pxelinux.cfg templates
- removed popping in stderr outputs
- fixed error with missig gcc library

```
-- Mathias Radtke <m.radtke@uib.de> Wed, 02 Sep 2015 13:55:33 +0200
```

opsi-linux-bootimage (20150818-1) experimental; urgency=medium

- Ubuntu 14.04 Trusty
- kernel 4.1.0
- Python-OPSI 4.0.6.14-1
- Syslinux 6.0.3
- Updated packaging.

```
-- Mathias Radtke <m.radtke@uib.de> Wed, 18 Aug 2015 14:26:47 +0200
```

### 15.1.16 Changelog opsi-depotserver

opsi-depotserver (4.0.6.4-1) experimental; urgency=medium

- Removed wildcard imports.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 19 Aug 2015 11:29:42 +0200
```

opsi-depotserver (4.0.6.3-6) experimental; urgency=medium

- Debian: Removing python:depends dependency.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Thu, 13 Aug 2015 11:24:59 +0200
```

opsi-depotserver (4.0.6.3-5) experimental; urgency=medium

- Debian: Creating /home/opsiproducts in postinst

```
-- Niko Wenselowski <n.wenselowski@uib.de> Thu, 13 Aug 2015 11:07:27 +0200
```

opsi-depotserver (4.0.6.3-4) experimental; urgency=medium

- Debian: Added dependency to Python >= 2.6
- Debian: provide debian/install for opsi-depotserver-expert
- Debian: try to fix warnings about invalid changelog entry.
- Debian: postinst: added DEBHELPER token.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 12 Aug 2015 17:20:41 +0200
```

opsi-depotserver (4.0.6.3-3) experimental; urgency=medium

- Debian: Overhauled installation

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 12 Aug 2015 17:16:48 +0200
```

opsi-depotserver (4.0.6.3-2) experimental; urgency=medium

- Debian postinst: do not specify full path to opsi-setup.
- Debian control: requiring Python

```
-- Niko Wenselowski <n.wenselowski@uib.de> Fri, 31 Jul 2015 11:55:17 +0200
```

opsi-depotserver (4.0.6.3-1) experimental; urgency=medium

```
[ Mathias Radtke ]
* refactored configureSamba function in python-opsi
* replaced part of python-setup with new import
```

```
[ Niko Wenselowski ]
* Removed dead code.
```

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 29 Jul 2015 15:28:02 +0200
```

opsi-depotserver (4.0.6.2-1) experimental; urgency=medium

- Fix problem where no password would be obtained during user config.
- Various packaging fixes for Debian 8.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Tue, 16 Jun 2015 14:52:38 +0200
```

opsi-depotserver (4.0.6.1-3) experimental; urgency=low

- Another fix regarding detection of SLES 12.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Fri, 10 Apr 2015 12:48:45 +0200
```

opsi-depotserver (4.0.6.1-2) experimental; urgency=low

- RPM: Improved check for SLES to also work on SLES 12.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Fri, 10 Apr 2015 10:38:54 +0200
```

opsi-depotserver (4.0.6.1-1) experimental; urgency=low

- Using OPSI.Util.Task.UpdateBackend.MySQL
- Using OPSI.Util.Task.Rights.setRights
- Using OPSI.System.Posix.getDHCPRestartCommand
- Making sure /var/log/opsi/userlogin exists after installation

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 04 Feb 2015 17:08:13 +0100
```

####

### 15.1.17 Changelog opsi-atftp

opsi-atftp (0.7.dfsg-5) experimental; urgency=medium

- Working check for SLES 12.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Fri, 02 Oct 2015 11:38:02 +0200
```

####

### 15.1.18 Changelog opsi-atftp

opsipxeconfd (4.0.5.5-1) experimental; urgency=medium

```
[ Niko Wenselowski ]
* Adjusting __version__ of opsipxeconfd script.
* RPM: Making the license machine-parseable.
```

```
[ Mathias Radtke ]
* ajusted suse version check to ensure correct paths for SLES12
```

```
-- Mathias Radtke <m.radtke@uib.de> Fri, 02 Oct 2015 11:49:59 +0200
```

### 15.1.19 Changelog opsi4ucs

opsi4ucs (4.0.6.3-1) experimental; urgency=medium

- Fix exception catching.
- Less wildcard imports

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 19 Aug 2015 11:23:08 +0200
```

opsi4ucs (4.0.6.2-4) experimental; urgency=medium

- Updated ignores.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 29 Jul 2015 16:51:58 +0200
```

opsi4ucs (4.0.6.2-3) experimental; urgency=medium

- Another round of packaging improvements.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 29 Jul 2015 16:45:07 +0200
```

opsi4ucs (4.0.6.2-2) experimental; urgency=medium

- Updated packaging information for Debian 8.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 29 Jul 2015 16:29:16 +0200
```

opsi4ucs (4.0.6.2-1) experimental; urgency=medium

```
[ Mathias Radtke ]
* refactored configureSamba in python-opsi
* replaced configureSamba function in python-setup with import
```

```
[ Niko Wenselowski ]
* Removed unused code.
```

```
-- Niko Wenselowski <n.wenselowski@uib.de> Wed, 29 Jul 2015 15:15:01 +0200
```

opsi4ucs (4.0.6.1-1) experimental; urgency=low

- Using OPSI.Util.Task.UpdateBackend.MySQL
- Using OPSI.Util.Task.Rights.setRights
- Removed LDAP schema files.
- Using OPSI.System.Posix.getDHCPRestartCommand
- Making sure /var/log/opsi/userlogin exists.
- Fix problem where no password would be obtained during user config.

```
-- Niko Wenselowski <n.wenselowski@uib.de> Mon, 02 Feb 2015 16:57:31 +0100
```