

UCS 3.0 Release Notes



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1 Release highlights

With Univention Corporate Server 3.0, the third major release for Univention Corporate Server (UCS) is now available. It provides many new features, improvements and bugfixes.

The most important innovations are:

1.1 Redeveloped Univention Management Console

Univention Management Console (UMC) has been completely redeveloped and is now an Ajax-based web application. The comprehensive integration of JavaScript and CSS as well as extensive optical redesigning have resulted in numerous usability improvements for the web-based UCS management system. UMC now covers both the domain management (e.g., users or groups) and the management of individual systems. The previously autonomous web application Univention Directory Manager has been integrated in UMC for this purpose.

1.2 Support of Active Directory services with Samba 4

UCS 3.0 can now provide the functions of a Microsoft Active Directory (AD) domain controller. This allows the use of AD functions such as Kerberos authentication or the use of group policies with Microsoft Windows-based clients. Technically, the Active Directory functions are realised via the integration of Samba 4. It is also possible to continue using the version of Samba previously provided with UCS, Samba 3.

1.3 Update to Debian GNU/Linux 6/Squeeze

UCS 3.0 is based on Debian GNU/Linux 6.0.3 (Squeeze). With the exception of games, all Debian packages are now provided for UCS. This provides users with access to a wealth of software in UCS. UCS 2.4 was based on Debian 5.0 (Lenny) and only provided a selection of the Debian packages. UCS now uses OpenJDK instead of Sun/Oracle Java as the Java implementation.

1.4 Support for IPv6

Univention Management Console and the integrated services now support network configuration via IPv6.

1.5 Simplified installation

Univention Installer has been overhauled and simplified. Grub 2 is now used as the boot loader.

1 Release highlights

1.6 Improved virtualization functions

UCS Virtual Machine Manager now supports the cloning of virtual machines. In addition, the underlying virtualization stack has been updated; Xen is now available in Version 4.1.

1.7 Performance optimisations in the Active Directory connector

The performance of the UCS AD connector has been considerably improved. In addition, numerous error corrections have been integrated.

1.8 Revised mail services stack

The integrated mail services have been revised and now also support mailing lists and the management of shared IMAP folders. Cyrus has been updated to version 2.4 and now also supports distribution over multiple e-mail servers via mail home servers. Horde 4 has been integrated as the webmail client. In addition, grey listing and the retrieval of e-mails via the e-mail protocols POP3 and IMAP are also supported. Postfix has been updated to version 2.7.1.

1.9 Updated system services

The system monitoring solution Nagios has been updated to version 3.2.1. Bind has been updated to version 9.8.1. The ISC DHCP server was updated to version 4.1.1. Cups is now provided in version 1.4.4. The Heimdal Kerberos suite was updated to version 1.4

1.10 Improvements for appliances

UCS now offers improved application possibilities for appliances and the integration of solutions from third party vendors. UCS 3.0 can thus easily be provided image-based and configured per browser. For example, in this way, following copying or cloning and starting the image, UCS 3.0 requests among other things the network configuration, host name (FQDN), Windows domain name, LDAP base DN and other software configurations.

2 Recommended update order for environments with more than one UCS server / Updating systems with UCS components

The following order is recommended for UCS environments with more than one UCS system. The following information must be observed for UCS environments employing additional UCS components such as UCS Thin Client Service (UCS TCS), UCS Desktop Virtualization Services (UCS DVS) or Univention Corporate Desktop (UCD).

In environments with more than one UCS system, the update order of the UCS systems must be borne in mind:

The authoritative version of the LDAP directory service is maintained on the master domain controller and replicated on all the remaining LDAP servers of the UCS domain. As changes to the LDAP schemes can occur during release updates (see Chapter 3.4.1 of the UCS manual [1]), the master domain controller must always be the first system to be updated during a release update.

It is generally advisable to update all UCS systems in one maintenance window whenever possible. When this is not possible, the following restrictions apply and must be taken into account:

- Before an update to UCS 3.0, all systems must be updated to 2.4-4. This ensures among other things the LDAP replication between UCS systems based on 2.4 and 3.0.
- In mixed operation, all UCS 2 systems without a directory service (e.g., member servers, managed clients, mobile clients, thin clients) must continue to use a UCS 2.4-4 domain controller as the LDAP server. This can be performed via the **LDAP server** computer policy or by setting the Univention Configuration Registry variable `ldap/server/name`.

In addition, the restrictions concerning additional components in the following sections must be taken into account:

2.1 Information on environments with Samba

If only Samba 3 is used, mixed environments containing UCS 2.4 and UCS 3.0 are possible.

The operation of Samba 4 is not supported in a mixed environment containing UCS 2 and UCS 3. The migration of Samba 3 to Samba 4 is described in Chapter 4.11.

2.2 Information on environments with Univention Corporate Desktop

A master domain controller which acts as a UCD terminal server can only be updated to UCS 3.0 once Univention Corporate Desktop (UCD) 3.2 has been published.

2 Recommended update order for environments with more than one UCS server / Updating systems with UCS components

If only UCD terminal servers based on backup domain controller and slave domain controller are in use, they must be updated to UCS 2.4-4. The master domain controller can then be updated to UCS 3.0.

The update of managed and mobile clients to UCS 3.0 can only be performed once Univention Corporate Desktop 3.2 has been published.

2.3 Information on thin client environments

Two versions of the thin client environment are provided in UCS 2.4; Univention Thin Client Services with a considerably expanded scope of functions and the standard thin client components of UCS 2.4 (also referred to as UCS TCS 2). UCS 3.0 does not include any thin client components. Thin client support and environment are now only provided separately via Univention Thin Client Services. The operation of mixed environments with the thin client environment of TCS 2 and TCS 3 is not supported.

If the thin client environment is installed, but not in use, it can be deinstalled with the command `apt-get -purge remove univention-thin-client-basesystem`.

A master domain controller acting as a thin client server can only be updated to UCS 3.0 once Univention Thin Client Services 3.2 has been published.

If only thin client servers based on backup domain controller and slave domain controller are in use, they must be updated to UCS 2.4-4. The master domain controller can then be updated to UCS 3.0.

2.4 Information on UCS@school environments

Use of UCS@school with UCS 3.0 is only possible when UCS@school 3.0 is available. Mixed operation is not possible.

2.5 Information on environments with print servers

When multiple UCS print servers are in use, we recommend updating them all at the same time or as soon as possible as the names of some printer driver files change. Following the update, the printer models of the printers should be checked and updated if necessary. Should there no longer be a corresponding printer model for a printer, the model can be created again via the Univention Management Console. The printer drivers (PPD) for all the printers are saved on the print servers in the `/var/cache/univention-printserver/ppds/ucs2.4/` directory prior to the update.

If you want to retain the older PPD files, the Univention Configuration Registry variable `cups/keep/ppd` must be set to **true** prior to the update.

2.6 Information on environments with UCS Desktop Virtualization Services

Use of UCS Desktop Virtualization Services with UCS 3.0 is only possible when UCS DVS 1.1 is available. Mixed operation is not possible.

2.7 Information on environments with Kolab

Kolab is no longer provided by Univention as of UCS 3.0. It is now available from Kolab Systems AG.

A master domain controller with Kolab can only be updated to UCS 3.0 once the packages from Kolab Systems AG for UCS 3.0 have been provided.

If the Kolab groupware server is operated on a slave domain controller or backup domain controller, the master domain controller can be updated to UCS 3.0. To do so, these groupware servers must firstly be updated to UCS 2.4-4.

Information on the migration and availability of the packages can be found at <http://kolabsys.com/ucs>.

2.8 Information on environments with other third-party software (e.g., Open-Xchange)

When using third-party software it should generally be clarified with the manufacturer/reseller **before** the update whether it can still be used without restrictions with the latest version of Univention Corporate Server. UCS 3.0 is based on a new version of Debian (Debian 6.0, Squeeze), in which practically all libraries and packages have been updated in comparison with UCS 2.4.

The standard shell is now based on `dash`. Shell scripts from third-party manufacturers must be checked for compatibility.

The manufacturers/resellers of products based on Univention Corporate Server are responsible for the publication themselves. Updates must thus be procured from them.

If you were provided with modified package versions by Univention, you must check whether the update will overwrite the coordinated packages - preferably in a test environment. If you identify any problems here, please contact Univention.

2 Recommended update order for environments with more than one UCS server / Updating systems with UCS components

3 Preparation of update

Before an update to UCS 3.0, all systems must be updated to 2.4-4.

It must be checked whether sufficient disk space is available. A standard installation requires a minimum of 6 GB of memory. Depending on the scope of the existing installation, the update will require at least another 6 GB of memory for the downloading and installation of the packages.

For the update, a login should be performed on the console with the **root** user and then the update started there.

Remote updating via SSH is not recommended as this may result in the update procedure being cancelled if the network connection is interrupted, for example, and this can affect the system. If updating should occur over a network connection nevertheless, it must be verified that the update continues despite disconnection from the network. This can be done, for example, using the tools `screen` and `at`, which are installed on all system roles.

3.1 Shutdown/migration of virtual machines prior to the update

Virtual machines on UCS virtualization servers must be shut down or migrated to another UCS virtualization server before the update to UCS 3.0.

3.2 External LDAP access

In UCS 3.0, the anonymous bind of the LDAP directory is deactivated. If external applications access UCS LDAP servers, they must be reconfigured so that authenticated access is performed with username and password. Alternatively, the anonymous access can also be reactivated generally or for selected systems. Further information can be found in Chapter 3.4 of the UCS 3.0 manual [1].

3.3 Removed/no-longer-supported components/software/features

Some software components have been removed and are no longer provided with UCS 3.0:

- The bootloader Lilo is no longer supported. Existing installations with Lilo must be transferred to Grub in UCS 2.4. This procedure is described at <http://sdb.univention.de/1072>.
- The Univention Windows Installer has been removed. We recommend the use of a software deployment solution for Microsoft Windows.
- The backup tool **unidump** is no longer available in UCS 3.0. We recommend the use of Bacula.
- The 2.6.18, 2.6.26 and 2.6.30 kernel packages from UCS 2.3 and 2.4 are no longer supported. The 2.6.32 kernel should be installed on the UCS 2.4 system prior to the update.

3 Preparation of update

- UCS 3.0 now employs the Java implementation OpenJDK instead of Oracle Java (formerly Sun Java). Java applications which are not supplied in UCS should be checked for compatibility.
- The Univention fax packages are no longer provided. As an alternative, documentation is provided explaining how an ISDN/fax setup can be created with the Debian Hylafax packages: http://wiki.univention.de/index.php?title=HylaFAX_setup
- **univention-drbd** is no longer provided. It is still possible to perform the setup manually.
- The UCS Active Directory connector no longer supports synchronisation with a Microsoft Windows 2000 server.
- The graphically animated boot process is now provided with the software Plymouth instead of with USplash. Adjusted boot screens must be switched to the use of Plymouth.
- **univention-printer-assignment** has been removed from UCS's standard scope. It is still available as an add-on package: http://wiki.univention.de/index.php?title=Printer_Assignment

3.4 Conversion of user-defined attributes to extended attributes

Custom attributes are no longer supported in UCS 3.0. They must be replaced with the equivalent extended attributes in UCS 2.4 prior to the update and the custom attributes removed prior to the update. The conversion is documented in the Univention Wiki [2].

3.5 Upcoming errata updates

The following bugs could not be considered for the final UCS 3.0 release. They will be fixed in errata updates in a timely manner. If necessary, the update should be postponed until the updates are available.

- The automatic detection of LDAP objects without an **univentionObjectType** does not work correctly in all cases (Bug #25409).
- The Samba 4 replication using DRS between a master domain controller and a backup domain controller does not work in IPv6-only environments (Bug #25364).
- DHCP host records without a fixed IP address contain a gratuitous semicolon (Bug #25414).
- Mail quota can currently only be used if anonymous access to the LDAP server is granted (Bug #25419). Further information can be found in Chapter 3.4.4 of the UCS manual.

4 Postprocessing of the update

Following the update, the UCS system needs to be restarted.

4.1 Assignment of the Kerberos realm to existing Kerberos keys of users

The `/usr/share/univention-heimdal/salt_krb5keys` script needs to be run once on the UCS master. This script ensures that the Kerberos realm is added to the users' Kerberos keys, which is necessary to ensure that the Kerberos keys are still accepted as valid if a user is renamed.

4.2 Mapping of the UDM object type in the LDAP

The type of an Univention Directory Manager object is saved in the LDAP as of UCS 3.0. On updated UCS 3.0 systems, the command `univention-object-type-migrate -a -v` must be run in the `/usr/share/univention-directory-manager-tools` directory on the master domain controller for the migration of the existing objects.

4.3 Conversion of LDAP objects for shared IMAP folders

During the update of the master domain controller, existing LDAP objects for shared mail folders are converted to a new format. The new format is backward-compatible with UCS 2.4 systems. Should these LDAP objects be modified by an Univention Directory Manager based on 2.4 after the updating of the master, the conversion procedure must be performed again to avoid mail delivery problems with UCS 3.0 mail systems:

```
cd /usr/share/univention-ldap/  
./convert_univentionMailSharedFolderDeliveryAddress.py
```

4.4 Adaptation of the firewall configuration

On new installations with UCS 3.0, the firewall does not allow any incoming connections in the standard setting. The UCS packages then open the ports they require. For example, the `univention-samba` package opens all the required Samba ports.

Existing rules from UCS 2.4 are not automatically migrated during the update. The standard package filter rule remains as **ACCEPT** in an update. The firewall settings must of course be adjusted in Univention Configuration Registry. Complex firewall rules can be saved in a separate configuration directory. Further information can be found in Chapter 9.4 of the UCS 3.0 manual [1].

4 Postprocessing of the update

4.5 Adoption of local template adjustments for Dansguardian

univention-antivir-web have been revised and renamed as **univention-dansguardian**. The old Univention Configuration Registry templates are moved to the `/etc/univention/templates/removed/dansguardian` directory. Any local adjustment to the templates must be migrated manually.

4.6 Migration of IMAP folders with invalid characters

In UCS 2.4, some characters were permitted in the folder name by the Cyrus IMAP server which are no longer permissible in UCS 3.0. These are the following characters when using Cyrus 2.2:

```
% ( ) * ; < > ? [ ] ^ ` { | }
```

These are the following characters when using Cyrus 2.4:

```
% ( ) * ; < > ? [ ] ^ ` { | } # $ ' "
```

IMAP folders with the invalid letters are still accessible following the update. However, the folders can neither be moved nor renamed. Deletion is possible.

Affected folders can be identified with the script

```
/usr/share/univention-mail-cyrus/univention-mail-valid-mboxname.py. They must be recreated with a compatible name. Once the e-mails saved in the folder have been migrated, the old folder with the invalid characters in its name can be deleted.
```

4.7 Migration of the Bayes spam filter training to user-specific filters

In UCS installations prior to UCS 3.0, the Bayes training of the spam filter was realised with a global **spam** user. In new installations, the subfolders **Spam** and **Ham** are created and automatically evaluated for each user mailbox. In updated environments, these folders must be created manually and then the Univention Configuration Registry variable `mail/antispam/learndaily` set to **yes**.

4.8 Migration to Grub 2

In a new installation, the Univention Installer writes Grub 2 in the boot sector directly.

In an update, Grub 1 remains installed in the master boot record (MBR). Grub 2 sets up a “Chainload into Grub” entry, which then loads the actual Grub 2.

Documentation explaining how to write Grub 2 directly in the MBR on updated systems will be provided at a later date ([Bug #23544](#)).

4.9 Adapting the network options

The file `/etc/network/options` will no longer be evaluated in UCS 3.0. If present, the settings set there can be adopted by editing the file `/etc/sysctl.conf`. During the adoption, “1” is set when the value of a setting is “yes” and “0” is set for “no”.

- The sysctl options “net.ipv4.conf.default.rp_filter” and “net.ipv4.conf.all.rp_filter” are now responsible for the “spoofprotect” option.
- The sysctl option “net.ipv4.ip_forward” is now responsible for the “ip_forward” option. The forwarding of IPv6 is configured via the “net.ipv6.conf.all.forwarding” option.
- The sysctl option “net.ipv4.tcp_syncookies” is now responsible for the “syncookies” option.

This information is also documented in `/usr/share/doc/netbase/README.Debian`.

4.10 Restrictions in Samba 4 operation

The versions of Samba 4 currently published by the Samba project are undergoing more intensive changes in their further development than Samba 3. For this reason, some functions are not yet completely available:

- Microsoft Windows domain controllers cannot be joined in a Samba 4 domain currently.
- Selective replication is not possible with Samba 4 as this is not supported by Active Directory in principle.
- File and print services should be provided in a Samba 4 environment via the use of member servers and thus on the basis of Samba 3.
- Samba 4 does not currently support forest domains.
- Samba 4 does not currently support trust relationships.

Further information can be found in Chapter 8 of the UCS manual [1].

4.11 Migration of a Samba 3 environment to Samba 4

There are two basic procedures for migrating Samba 3 to Samba 4:

- Setup of a parallel Samba 4 domain. Both domains use different NetBIOS names and SIDs. The clients then join the Samba 4 step by step.
- Migration of all systems within one maintenance window.

Both procedures are documented in detail in the Univention Wiki:
http://wiki.univention.de/index.php?title=Update_to_UCS_3.0_Samba_4.

4 Postprocessing of the update

5 Changelog

5.1 General

- The underlying Debian version has been updated to Debian Squeeze 6.0.3 ([Bug #21107](#), [Bug #23512](#)).
- UCS 3.0 does yet not use dependency-based boot sequence ordering (which is enabled in Debian by default). It will be enabled in a later update ([Bug #22507](#)).
- `dpkg-vendor` has been patched to emit **Univention** as vendor string and **Debian** as parent distribution ([Bug #22563](#)).
- All Univention packages have been adapted to Debhelper 7, minimised `debian/rules` files using `dh` ([Bug #21476](#)) and to Python 2.6 ([Bug #22433](#), [Bug #22160](#), [Bug #22439](#), [Bug #22525](#), [Bug #22576](#), [Bug #22520](#), [Bug #22515](#), [Bug #22431](#)).
- In UCS 3.0 the default shell (`/bin/sh`) refers to `/bin/dash`. All Univention packages have been adapted. ([Bug #22557](#)).
- A new archive signing key is provided for the UCS 3.x release series ([Bug #23926](#)):

```
pub 1024D/2CBDA4B0 2011-10-05 [expires: 2018-10-03]
uid                               Univention Corporate Server 3.x Archive Key <packages@univention.de>
sub 4096g/3527517F 2011-10-05 [expires: 2018-10-03]
```

- UCS now uses **secure apt** to validate the package origin. At this point `secure apt` is not yet available for local repositories. Archive validation can be disabled using the Univention Configuration Registry variable `update/secure_apt` ([Bug #9475](#)).
- The Debian archive keys are no longer shipped to prevent accidental installation of Debian binary packages ([Bug #24228](#)).
- References to obsoleted packages from earlier UCS releases (e.g. `univention-admin`) have been removed ([Bug #9698](#)).
- UCS now uses OpenJDK instead of Sun Java to run Java programs ([Bug #24040](#)).
- The base Univention Configuration Registry templates and base configuration files have been moved to a separate source and binary package **univention-base-files** (they were formerly part of the **univention-config-registry** package) ([Bug #22586](#)).
- UCS 3.0 no longer supports custom attributes in the Univention Directory Manager. These custom attributes must be updated to extended attributes prior to the upgrade ¹ ([Bug #23191](#)).
- The packages **univention-drbd** and **unidump** have been removed ([Bug #10749](#), [Bug #22574](#)).

¹http://wiki.univention.de/index.php?title=Update_Customon_Attributes_to_Extended_Attributes

5.2 Univention Installer

- The interactive installation with Univention Installer has been simplified:
 - The SSL settings dialogue has been removed. During installation of the master domain controller an initial SSL root certificate will be created automatically, which can be changed via Univention Management Console after successful installation ([Bug #22846](#), [Bug #22847](#)).
 - The software selection has been reduced and adjusted to UCS 3.0 ([Bug #23594](#)).
 - Support for virtual interfaces in the network settings has been removed. Such settings are still available in profile-based installations. ([Bug #22872](#)).
 - Improved and simplified selections for language, key mapping and timezone were added ([Bug #22869](#)). The profile-based installation still supports the settings of the old modules.
 - The modules **Packet filter**, **Boot loader** and **Modules** have been removed from the installer ([Bug #22869](#)). The profile based installation still supports the settings of these removed modules.
 - After completing the interactive part of Univention Installer a progress dialogue will now be displayed. The detailed installation log messages will be redirected to tty6 ([Bug #3796](#)).
- The system roles **Managed Client** and **Mobile Client** have been removed. For those system roles a separate installation DVD will be released with UCD 3.2 ([Bug #23156](#)).
- English translations have been updated ([Bug #23204](#)).
- The logfile of the initial debootstrap is now stored in `/var/log/univention/debootstrap.log.gz` ([Bug #23283](#)).
- As one of the last installation steps it is now possible to perform an automatic (online) update. Depending on the system role and the join status, available errata and patch level updates will be installed ([Bug #23284](#)).
- IPv6 support has been added ([Bug #22872](#)).
- The screen resolution has been increased. The layout of existing Univention Installer modules has been adapted to new resolution ([Bug #23120](#), [Bug #22870](#)).
- The autopartitioning process now suggests a 300 MB partition for `/boot` ([Bug #23957](#)) and sets the boot flag for this partition ([Bug #22768](#)).
- The default encoding is now utf-8 ([Bug #22489](#)).
- The installer DVD uses **grub2** as the boot loader ([Bug #22707](#)).
- Several new consistency checks have been added. Warning messages are now issued in the following cases:
 - If the fully qualified domain name does not contain at least two dots ([Bug #23334](#)).
 - If a device contains no valid partition table or a GUID partition table ([Bug #22312](#)).
 - If no partition has been flagged as bootable ([Bug #19226](#)).
- The filesystem **ext4** has been added to the list of valid filesystems for the `/boot` partition ([Bug #24013](#)).
- The hardware clock will now be set in UTC ([Bug #23924](#)).
- By pressing F3 in the system role module the execution of join scripts may be disabled for the master domain controller.

- Block devices detected as CD-ROMs or other read-only block devices are now ignored in the partitioning dialogue ([Bug #21988](#)).

5.2.1 Profile-based installation

- Installation profiles must now be encoded as UTF-8 ([Bug #23750](#)).
- A logic error has been removed, so during installation only flagged partitions get formatted. Other partitions will be left untouched ([Bug #23491](#)).
- The new profile variable **call_master_joinscripts=false** prevents the execution of join scripts ([Bug #24270](#)) on the master domain controller.
- The new profile variable **create_partitiontable** has been introduced to specify devices that will get a new (empty) MSDOS partition table during installation. Multiple device names can be specified as space"-separated list. Existing data on these devices will be lost ([Bug #24629](#)).
- The profile variable **bootloader_device** is no longer supported. Please use the profile variable **bootloader_record** instead ([Bug #24516](#)).

5.3 Upgrade provisions (preup and postup scripts)

- The update scripts **preup.sh** and **postup.sh** have been adjusted to UCS 3.0 ([Bug #24175](#), [Bug #24556](#)).
- The updater prevents an actualisation if one of the packages **univention-fax-common**, **univention-fax-server** or **univention-fax-client** is installed. These packages are no longer supported in UCS 3.0 and must be removed in order to update the system ([Bug #24619](#)).
- The dpkg package status check has been adjusted in **preup.sh** ([Bug #23302](#)).
- The information whether a reboot is required, will be set directly in `postup.sh` ([Bug #24133](#)).
- The `preup.sh` now blocks the update to UCS 3.0 if an old kernel version is used. The kernel version 2.6.32 is required for the update ([Bug #25067](#)). It also checks the local UCS version and blocks the update if the version is lower than UCS 2.4-4 ([Bug #25088](#)).
- After the update, the obsolete packages **kcontrol**, **usplash**, **univention-usplash-theme** and **libusplash0** will be removed, including configuration files ([Bug #22997](#)).
- The updater aborts the update, if the packages **lilo** and/or **univention-lilo** are installed. An update with the boot manager **lilo** is not supported ([Bug #23063](#)).
- The update will be aborted if the UCS thinclient environment is installed ([Bug #22878](#)).

5.4 Basic system services

5.4.1 Boot loader

- The boot loader has been updated from Grub 1 to Grub 2. On newly installed systems, Grub 2 is chosen automatically. On updated systems, Grub 1 is initially started and chainloads into Grub 2. If

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that works successfully, Grub can be installed directly into the MBR later by running the command `upgrade-from-grub-legacy`.

Some Univention Configuration Registry variables no longer apply to Grub 2: `grub/root`, `grub/boot` and `grub/groot` are no longer needed, since Grub parses partition and filesystem data on its own. These variables are kept for posterity, but no longer sourced in any templates. The memory test options are offered unconditionally and are no longer configured through the UCR variable `grub/memtest86`.

The configuration of Grub 2 is two-fold: `/boot/grub/grub.cfg` is the central config file, which is being combined from central setting in `/etc/default/grub` and the output of scripts below `/etc/grub.d`. ([Bug #22115](#)).

- The boot loader Lilo is no longer supported. Existing installations need to be migrated in UCS 2.4. The procedure is documented in <http://sdb.univention.de/1072>. UCR variables for lilo are being removed during the update.
- The bootplash screen is now displayed using Plymouth ([Bug #22117](#)).
- The Grub design was adapted to UCS 3.0 ([Bug #23405](#)).

5.4.2 Linux kernel and firmware packages

- The 2.6.32 kernel package has been updated to the latest revision of the Debian Squeeze kernel (2.6.32-38). This update provides better hardware support and many bugfixes ([Bug #22868](#), [Bug #20655](#)).
- The kernel meta packages ([Bug #22155](#), [Bug #22440](#)) and their package descriptions ([Bug #16161](#)) have been updated. Obsolete meta packages have been removed ([Bug #16537](#), [Bug #16581](#)).
- The dependencies on firmware packages have been updated ([Bug #21321](#)).
- The firmware packages for ipw2x00 wireless cards and for the ivtv multimedia card have been removed, since they require interactive confirmation of the end user license agreement ([Bug #22508](#)). They can still be installed manually with `dpkg -i`.

5.4.3 Univention Configuration Registry

Nightly backups of the current Univention Configuration Registry data are now written to `/var/univention-backup/`. The backup can be disabled by setting the Univention Configuration Registry variable `ucr/backup/enabled` to **no**. Additionally every single variable change will be logged to `/var/log/univention/config-registry.repllog`. Setting the Univention Configuration Registry variable `ucr/repllog/enabled=no` disables the replication logfile. The replication logfile will be rotated weekly. To change rotation settings, change the UCR variables `logrotate/ucr-repllog/*` ([Bug #3515](#)).

5.4.3.1 Changes to templates and modules

- Univention Configuration Registry now manages the state of template files internally. Previously each package diverted the files in its preinst script itself. This is now handled automatically when the corresponding `.info` file is registered ([Bug #22668](#)).

- `.info` files for templates now also support specifying additional UCR variable names in `subfile-` entries, which removes and obsoletes the requirement to name all variables in the `multifile-` entry (Bug #15422).
- Multifile templates are now removed, when the last subfile providing content is unregistered or all multifile declarations are unregistered (Bug #17913).
- Python code in templates is now assumed to be encoded with UTF-8 (Bug #22428). On new installations Univention Configuration Registry will enable strict encoding enforcement and thus not accept non-UTF-8 input. This can be enabled manually by setting Univention Configuration Registry variable `ucr/encoding/strict=true`. For updated systems no change is made (Bug #18006).
- A remaining `/etc/univention/templates/info/univention-baseconfig.info` from old UCS installations is moved to `/etc/univention/templates/removed/` on upgrade (Bug #22524).

5.4.3.2 Internal changes

- Several memory leaks and implementation details in the C library have been fixed (Bug #22495).
- During package removal `.info` files are moved to `/etc/univention/templates/removed/` in addition to being unregistered (Bug #21263).
- The persistent cache is now correctly used (Bug #22609).
- The handler `locale.py` has been renamed to `set_locale.py` (Bug #23328).
- An error in the deprecation warning for `univention-baseconfig` has been fixed (Bug #23807).
- Univention Configuration Registry now tries to decode input using the current locale setting, if it can not be decoded using UTF-8 (Bug #23753).

5.4.4 Network interface configuration

- IPv6 addresses can be set for each physical network interface (e.g. `eth0`).

Virtual network interface names (e.g. `eth0:0`), as used for multiple IPv4 addresses per interface, are not supported. Instead one can use the freely chosen address identifier to set multiple addresses.

Example:

```
ucr set interfaces/eth0/ipv6/default/address=2001:db8:723::192:168:0:3
ucr set interfaces/eth0/ipv6/default/prefix=64
ucr set interfaces/eth0/ipv6/ftp/address=2001:db8:a6ae::21
ucr set interfaces/eth0/ipv6/ftp/prefix=64
ucr set interfaces/eth0/ipv6/www/address=2001:db8:a6ae::80
ucr set interfaces/eth0/ipv6/www/prefix=64
```

The identifier **default** denotes the first address of that interface. It is used when only one interface is required for something (for example: DNS records)

If a network interface should not use router advertisements (RA) from the neighbour discovery protocol (NDP) to configure an IPv6 address and gateway, that behaviour can be disabled for each network interface by setting the Univention Configuration Registry variable `interfaces/ethX/ipv6/acceptRA` to **false**.

The default behaviour has not been changed (Bug #22871).

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- In `/etc/hosts` IPv6 entries will be created automatically for every IPv6 address that has been set manually for a local interface. These entries can be overridden by setting UCR variables ([Bug #24194](#)):

```
ucr set interfaces/eth0/ipv6/default/hosts='myhost.example.com myhost
special1'
```

5.4.5 Univention System Setup

- As of UCS 3.0 **Univention System Setup** is part of Univention Management Console. If the startup of **Univention System Setup** during boot phase has been enabled, the graphical frontend will start automatically and load **Univention System Setup** ([Bug #23869](#)). If the graphical frontend is not installed or could not be started, a reduced version of the old textmode **Univention System Setup** will be shown. This version only provides a password and a network module to change basic settings required for remote access ([Bug #23870](#)).
- Due to the new web-based frontend of Univention System Setup the `univention-system-setup*` commands have been removed ([Bug #23134](#)).
- The IP address is now changed correctly when using ports in `/etc/bin/univention.conf.d/*` ([Bug #21374](#)).
- No newlines are written into machine and LDAP credentials anymore ([Bug #14186](#)).
- Domain name changes, where the domain name is extended, are now handled correctly ([Bug #23371](#)).
- When changing the domain name, the Kerberos realm is also changed ([Bug #22214](#)).
- Several fixes and updates for UCS 3.0. This includes no longer setting the wrong netmask on the default network object when changing the IP address of the master ([Bug #23993](#)).
- IPv6 is now supported ([Bug #23997](#)).
- On base systems it no longer tried to copy the SSL certificates from the master domain controller ([Bug #23993](#)).
- Some LDAP schemas are kept if the relevant package has been removed on the master domain controller ([Bug #24763](#)).

5.4.6 Univention Firewall

- The firewall framework has been improved with UCS 3.0. On new installations incoming traffic will be blocked by default. Each installed software package is able to open required its ports. Additional ports can be configured via UCR variables. Custom firewall settings from UCS 2.4 will not get migrated automatically to new firewall framework. If a 2.4 system gets updated, the default policy will not change, i.e. the default policy remains **ACCEPT**. Detailed information about setting custom firewall rules can be found in the UCS manual ([Bug #23577](#)).

5.5 Domain services

5.5.1 OpenLDAP

- By default OpenLDAP will now listen to the ports 389 and 7389. The old Univention Configuration Registry variable `ldap/port` has been replaced with **`slapd/port`** and **`ldap/server/port`**. All UCS packages have been adapted to the new port configuration. Once Samba 4 is installed, Samba 4 will listen to port 389 and OpenLDAP will only listen to port 7389 ([Bug #20026](#), [Bug #23711](#)).
- OpenLDAP has been updated to version 2.4.23-7.2 ([Bug #22468](#), [Bug #17158](#), [Bug #22879](#)).
- `univention-ldap-backup` now uses `slapcat` instead of `ldapsearch` for creating the LDAP backup ([Bug #20215](#)).
- The idle timeout of the LDAP server is set to 360 seconds ([Bug #17706](#)). The default for **`ldap/max-openfiles`** is now set to 8192 ([Bug #21640](#)). An automatic adjustment of these settings during the update is not performed.
- The backend database check has been improved in the init script of the LDAP server ([Bug #21705](#)).
- Trailing newlines in machine and LDAP credentials are removed now, allowing e.g. the use with `ldapsearch -y` ([Bug #14186](#)).
- A new overlay module (**`k5pwd`**) has been added to OpenLDAP. This overlay module allows to set the attribute **`userPassword`** to **`{K5KEY}`**. In this case the OpenLDAP server will authenticate against the Kerberos server if a simple bind was executed. This replaces the **`LANMAN`** option for the **`userPassword`**. ([Bug #15062](#)).
- By default the OpenLDAP backend bdb options **`set_lk_max_objects`**, **`set_lk_max_locks`** and **`set_lk_max_lockers`** will be set to **`9000`** in `/var/lib/univention-ldap/ldap/DB_CONFIG` ([Bug #24791](#)).

5.5.2 LDAP ACL changes

- To enhance the confidentiality of the data stored in the OpenLDAP directory, anonymous LDAP searches can now be disabled. This is the default for new installations of UCS 3.0, while updated systems retain the old behaviour. This restriction can be controlled by means of four new Univention Configuration Registry variables: ([Bug #17519](#))
 - Anonymous read access is enabled or disabled by the Univention Configuration Registry variable `ldap/acl/read/anonymous`, setting it to **`no`** disables anonymous LDAP searches.
 - If `ldap/acl/read/anonymous` is set to **`no`**, the two Univention Configuration Registry variables `nssldap/auth` and `pamldap/auth` should be set to **`yes`** to allow authenticated LDAP reads by the `nscd` and by the authentication module `pam_ldap`. In this case the OpenLDAP server as well as the `nscd` need to be restarted for the changes to take effect.
 - In case individual systems need anonymous read access, it can be enabled specifically for them by setting their IPs in the Univention Configuration Registry variable `ldap/acl/read/ips`.
- The ACLs for the user **`uid=root`** have been removed. New write access ACLs have been added for **`cn=admin`** and **`uid=Administrator`** ([Bug #22879](#)).

5.5.3 LDAP schema changes

- The **entryCSN** attribute now uses the microsecond resolution, as recommended by the OpenLDAP developers ([Bug #17159](#)). This new format is incompatible with OpenLDAP versions shipped prior to UCS 2.4-0 ([Bug #18927](#), [Bug #18126](#)).
- A new attribute **univentionSamba4SID** has been added to the object classes **sambaSID** and **sambaGroupMapping**. This attribute will be used in particular in Samba 3 to Samba 4 migration scenarios ([Bug #24164](#) and [Bug #24225](#)). The Univention S4 Connector writes to this new attribute instead of the usual **sambaSID** attribute if the Univention Configuration Registry variable `connector/s4/mapping/sid` is set to **false**. A migration script is provided to replace the **sambaSID** values by the values stored in **univentionSamba4SID** ([Bug #24246](#)). Please consult the migration guides before using this script.
- All Kolab related LDAP schemas have been moved from package **univention-ldap-config** to a new package **univention-legacy-kolab-schema**. This package should only be installed on UCS domain-controller systems. During (de-)installation of **univention-legacy-kolab-schema** the LDAP indices will be updated automatically, by adding or removing kolab attributes to LDAP indices list. To avoid this, the Univention Configuration Registry variable `ldap/index/autorebuild` should be set to **false** ([Bug #23436](#), [Bug #23483](#)).
- Some of the mail LDAP object classes and LDAP attributes have been renamed. Custom applications that rely on these objectclasses/attributes may have to be changed ([Bug #23483](#)).
- New attributes have been added to the `license.schema` ([Bug #24339](#)).
- The LDAP attribute **univentionMailSharedFolderDeliveryAddress** of shared folder LDAP objects now provides a delivery mail address assembled of lowercase characters. To convert existing entries to lowercase the script `/usr/share/univention-ldap/convert_univentionMailSharedFolderDeliveryAddress.py` can be called ([Bug #24503](#)).
- The package **univention-ldap-server** now recommends the installation of **univention-virtual-machine-manager-schema** ([Bug #22722](#)).
- Due to an OID collision between the LDAP attribute **univentionShareHost** and the LDAP object-class **univentionUserTemplate** the OID of the objectclass **univentionUserTemplate** has been changed to **1.3.6.1.4.1.10176.1001.12.2.1** ([Bug #24421](#)).
- An LDAP object class **univentionObject** has been added to store the UDM object type in the attribute **univentionObjectType** of each object ([Bug #23111](#)). A script to add the attributes to an old directory has been added ([Bug #23114](#)).

5.5.4 Listener/Notifier domain replication

- On a slave domain controller systems the replication is now stopped if a `failed.ldif` file exists ([Bug #22867](#)).
- Listener and notifier are restarted during the initial join ([Bug #23826](#)) and updates ([Bug #24473](#)).
- Various memory leaks have been fixed in Univention Directory Listener ([Bug #24166](#)).
- IPv6 support has been added to notifier and listener. By default the listener uses IPv6 and IPv4 addresses. To limit the listener to a single protocol, set `listener/network/protocol` to **ipv4** or **ipv6** ([Bug #24284](#)).

5.5.5 Domain joins of UCS systems

- The join can now be performed if network interfaces other than **eth0** are present ([Bug #10825](#)).
- The user Administrator and the default network will now be created as part of the ldap server join script ([Bug #24074](#)).
- The ping check has been updated to work with IPv6 ([Bug #24475](#)).
- The system services **Mail**, **Print**, **Samba 3**, **NFS**, **DNS**, **DHCP**, **LDAP** now add a corresponding service entry to the computer object when installed ([Bug #2136](#)).

5.6 Univention Management Console

5.6.1 Univention Management Console web interface

- The web interface has been reimplemented from scratch. Existing modules have been ported to the new layout ([Bug #22624](#)).
- The server overview page has been updated to fit the new Univention Management Console design ([Bug #23188](#)).

5.6.2 Univention Management Console server

- A bug was fixed in the handling of the UMC protocol when multiple responses have to be parsed in short succession ([Bug #24393](#)).
- The machine account is now used for reading the permission of a user (policies) from the LDAP directory ([Bug #23182](#)).
- A new generation of the UMC server has been implemented. The API for UMC modules has been changed. Details can be found at http://wiki.univention.de/index.php?title=UCS_3.0_Univention_Management_Console ([Bug #22460](#)).

5.6.3 Univention Directory Manager modules

- Several syntax classes of the Univention Directory Manager have been changed. A subset of these modifications are incompatible to the UCS 2.4 API ([Bug #23780](#), [Bug #23673](#), [Bug #23329](#), [Bug #23689](#)).
- To increase the performance of the Univention Directory Manager the internal storage of the UDM objects was adapted. To update existing objects the script `/usr/share/univention-directory-manager-tools/univention-object-type-migrate` can be used. This is done automatically during the update on the master domain controller if exactly one domain controller host exists. Otherwise the script must be called manually on the master domain controller: `/usr/share/univention-directory-manager-tools/univention-object-type-migrate -a -v` ([Bug #23167](#))

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- The API of the constructor for the UDM module classes has been changed for optimization reasons [3] (Bug #22879).
- **univentionObjectType** identifies the UDM module that should be used to load an LDAP object (Bug #23155).
- Since Kolab is no longer provided by Univention, all Univention Directory Manager modules containing Kolab related properties have been updated: Kolab related properties have been removed and new properties for the reworked mail stack have been introduced (Bug #22873, Bug #23998).
- The Univention Directory Manager modules do now support IPv6 configuration (Bug #15687, Bug #16577).
- The directory for syntax extensions changed. They will be read from now on from `/usr/lib/pymodules/python2.6/univention/admin/syntax.d/`. Python modules should be installed via **python-support** mechanism into `/usr/share/pyshared/univention/admin/syntax.d/` (Bug #24056).
- The attributes **domainPassword** and **mailRelay** have been removed from the module **container/dc** (Bug #24404, Bug #24693).

5.6.3.1 User/template module

- Salts are now used in Kerberos key generation (Bug #22212).
- **python-smbpasswd** is now used instead of **univention-smbencrypt** for generating samba NTLM hashes (Bug #21870 and Bug #23017).
- The Univention Configuration Registry variable `password/hashing/method` has been added to configure the password hashing method of passwords stored in the LDAP directory (Bug #23763).
- If an username or a computername is changed the **krb5PrincipalName** will be changed too (Bug #22213).
- The function **set_uid_umlauts** has been removed (Bug #23975).
- The attribute **displayName** has been added. The attribute **GECOS** has been removed from the Web interface (Bug #21157).
- The organisation attribute has been limited to 64 characters (Bug #19937).
- The existing functions for user templates (**:lower**, **:upper**) have been extended with the functions **:umlaut**, **:umlauts**, **:strip**, and **:trim**. By specifying a pattern without variable name, its function is can now be applied to the whole string (e.g., **<:lower>**). Additionally, default property values for UDM modules are now based on template patterns, as well (Bug #23192, Bug #22884).

5.6.3.2 DNS module

- The filter used to identify host and service records has been fixed (Bug #7813).
- IP addresses can now be set on forward zones (Bug #23554).
- A dot is appended to the nameserver entry in a SOA forward record even if the value is an IP address. Otherwise the invalid value will break DNS replication (Bug #23945).

5.6.3.3 Computers module

- A new module **computers/domaincontroller_windows** has been added. This module can be used to create Windows DC accounts ([Bug #23477](#)).
- The module **computers/windows** has been adjusted to the other computer objects. That means some values were changed. For example **primaryGroup** must be used for the name of the primary group instead of **machineAccountGroup** ([Bug #23476](#)).
- If the Samba 4 connector is installed in the domain, UDM won't generate the SID for newly created users and computers. The new SID must be created by Samba 4 and will be synced back. The old behaviour can be configured by setting the Univention Configuration Registry variable `directory/manager/samba3/legacy` to **yes** ([Bug #22862](#), [Bug #24134](#)).

5.6.3.4 Shares module

- The long and short description for soft and hard limits of share quotas has been improved ([Bug #23686](#)).

5.6.3.5 Containers and organisational units

- **cn** and **ou** objects can now be renamed ([Bug #10696](#)).
- A OU can no longer be created as child object of a container. The previous behavior can be activated by setting the Univention Configuration Registry variable `directory/manager/child/cn/ou` to **yes** ([Bug #23473](#)).

5.6.3.6 Extended attributes

- The option **overwritePosition** of the extended attributes has been modified. In UCS 3.0 this option contains the name of the attribute to overwrite instead of the position of the attribute. Additionally a group name can be specified for positioning ([Bug #23988](#)).
- The flag **addEmptyValue** has been moved from the UDM module **settings/extended_attribute** to the UDM module **settings/syntax**. Manually created extended attributes will not get converted during update and have to be checked ([Bug #24245](#)).

5.6.4 Univention Directory Manager command line interface

- A problem when displaying non-ASCII characters has been fixed ([Bug #23475](#)).

5.7 Software deployment

- Univention Windows Installer has been removed ([Bug #17625](#)).

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5.7.1 Repository handling

- The package **univention-debmirror** and the tool **univention-repository-create** have been improved ([Bug #23831](#)).
- A traceback in error message handling has been fixed that induced a cryptic error message in sources.list files ([Bug #23754](#)).
- The repository structure has changed; the sub directory `extern` is no longer used ([Bug #23986](#)).
- Authentication for packages is now enabled by default for new installations and can be enabled manually after upgrade by calling `/usr/share/univention-updater/apt-secure`. The package **univention-archive-key** provides the public key, which is automatically added to `/etc/apt/trusted.gpg` using `apt-key`. The corresponding secret key is used by Univention to create the detached signature files `Release.gpg` for each `Release` file, which reference the `Packages` file. These include the MD5/SHA1/SHA256 hashes of all packages ([Bug #24172](#)).
- The server **updates.software-univention.de** will be used as default online repository server ([Bug #23121](#)).

5.7.2 Software deployment modules of Univention Management Console

- A logic error has been fixed that could lead to “access denied” messages ([Bug #25104](#)).

5.7.3 Software deployment command line tools

- `univention-install` now provides bash completion ([Bug #19487](#)).
- The tools `univention-updater`, `univention-actualise` and `univention-errata-update` have been moved to `/usr/share/univention-updater`. To update UCS on the command line the tool `univention-upgrade` should be used ([Bug #23453](#)).
- `univention-security-update` has been renamed to **univention-errata-update**. Hotfixes and security changes are now only released in the form of errata updates ([Bug #23453](#), [Bug #18693](#)).

5.7.4 Software monitor

- The database is now created with the database template **template0** to avoid encoding problems with **template1** ([Bug #22592](#)).
- A problem when calling subprocesses from **univention-pkgdb** has been corrected ([Bug #24092](#)).
- If changing the password for the **univention-pkgdb** user fails, the old password is kept in the secret file ([Bug #24570](#)).
- A `pg_hba.conf` config template for postgresql 8.4 was added ([Bug #23343](#)).

5.8 Univention Library

- The library **univentionlicense** now uses the library **univentionpolicy** for LDAP connections ([Bug #23179](#)).
- The init function of the library **univention-debug** now returns the file descriptor to the log file ([Bug #22552](#)).
- The time stamps created by the library **univention-debug** in log files are more accurate now (milliseconds) ([Bug #22855](#)).
- The library **univention-debug** was extended with a few more logging categories ([Bug #22496](#)).
- New LDAP shell functions have been added to **univention-lib** to simplify commonly used LDAP requests like conversion of user UID to user DN ([Bug #19975](#)).
- The functions `remove_ucr_info_file()` and `remove_ucr_template()` have been added to allow the removal of obsolete UCR templates and UCR info files ([Bug #22611](#)).
- Service entries for host objects can now be added by a simple shell function ([Bug #21265](#)).
- The UDM CLI server can now be stopped by calling the new shell function `stop_udm_cli_server` ([Bug #21578](#)).
- The shell functions **call_joinscript** and **call_joinscript_on_dcmaster** now handle the execution of join scripts and can be used e.g. in `postinst` scripts ([Bug #21579](#)).
- To prevent simultaneous execution of Python scripts or simultaneous access to critical resources, the new Python functions **get_lock** and **release_lock** are provided ([Bug #19972](#)).
- The functions **create_logfile** und **create_logfile_if_missing** have been added to **univention-lib**. They can be used to create files with specific permissions ([Bug #22011](#)).
- The module **policy_result.py** has been moved to **univention-policy-tools** ([Bug #22521](#)).
- The new shell function **is_domain_controller** checks weather the host is domain controller or not ([Bug #22456](#)).
- A new Python module to change the password for a user has been added ([Bug #22108](#)):

```
import univention.lib.password
univention.lib.password.change('Administrator', 'SeCrEt12345')
```

- **SmartLDAPObject** is no longer part of **python-ldap**. It has also been removed from **python-univention** ([Bug #17588](#)).
- The shell functions of **univention-lib** are now POSIX-sh compatible ([Bug #22491](#)).
- New shell functions have been added to determine the default network configuration ([Bug #10825](#)).

5.9 System services

5.9.1 DHCP

- The ISC DHCP server was updated to 4.1.1, which also supports IPv6. The LDAP integration was reworked to support additional features. Special handling for Sun Ray thin clients clients was dropped ([Bug #22112](#)).

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5.9.2 DNS

- The packages **univention-bind** and **univention-bind-proxy** have been integrated into one new package named **univention-bind**. The DNS server (bind9) can now be started and stopped via **/etc/init.d/bind9** (Bug #23358).
- `univention-dsncedit` now uses the Univention Directory Manager module **txt_record** to create a TXT DNS record (Bug #23772).
- Bind will be configured on a Samba 4 server to use the Samba 4 backend. The backend can be configured via the Univention Configuration Registry variable `dns/backend`, possible values are **samba4**, **ldap** and **none** (Bug #23168).
- For reading the DNS informations from the LDAP directory the machine account is now used (Bug #23176).
- The priority of the internal DNS service records, such as **_ldap._tcp**, will be changed from 0 to 100 at the end of the UCS 3.0 update (Bug #24088).
- The local conffiles `/etc/bind/local.conf`, `/etc/bind/local.conf.proxy` and `/etc/bind/local.conf.samba4` are now provided (Bug #24557).
- Bind has been adapted to the idle timeout of the OpenLDAP server (Bug #25138).
- Bind will now listen by default on IPv6 interfaces. This may be disabled by Univention Configuration Registry variable `dns/ipv6=no` (Bug #15304).
- Bind will now use localhost (127.0.0.1) as OpenLDAP server (Bug #25333).

5.9.3 Cyrus

- The Cyrus IMAP server no longer supports these ASCII characters:
`% () * ; < > ? [] ^ ` { | } # $ '`
 in IMAP folder names. The list of valid ASCII characters was reduced to:
`, -. 0123456789 : = @ ABCDEFGHIJKLMNOPQRSTUVWXYZ _ abcdefghijklmnopqrstuvwxyz ~`
 IMAP folder names with invalid characters cannot be renamed or moved and the creation of sub-folders in those folders ist not possible, but the folders and their content are still accessible (IMAP folder names with non ASCII characters, e.g., German umlauts, are internally encoded to a list of valid characters by the Cyrus IMAP server). For conversion of invalid IMAP folder names (a) create a new folder, (b) move the content of the folder with the invalid name to the new folder and (c) delete the folder. (Bug #23813)
- The default of the Univention Configuration Registry variable `mail/cyrus/mailbox/rename` changed to **yes**. New installations of **univention-mail-cyrus** will use the new default. The UCR variable will not change automatically during update (Bug #24883).
- The Cyrus listener module can now handle renaming of user objects without causing mail loss (Bug #24482).
- **cyrus-imapd-2.2** was updated to the version 2.2.13-19. Th default imap server for new installations is now **cyrus-imapd-2.4** version 2.4.9-1. For updates from UCS 2.4 **cyrus-imapd-2.2** is still the default IMAP server (Bug #22874). Documentation for updating from Cyrus 2.2 to Cyrus 2.4 will be provided later.
- The obsolete init script **/etc/init.d/cyrus21** has been removed (Bug #18227).

- **univention-mail-cyrus** has been revised ([Bug #23560](#)).
- The pam module **pam_univentionmailcyrus.so** now uses the host DN for LDAP authentication ([Bug #23487](#)).
- As of UCS 3.0 the default sieve port changed to 4190. This port can be specified via the Univention Configuration Registry variable `mail/cyrus/sieve/port`. After changing the variable Cyrus has to be restarted and the firewall has to be reconfigured. UCS 2.4 installations will keep the old default port (2000) during update ([Bug #24390](#)).
- The cyrus murder configuration has been simplified ([Bug #22875](#)).
- New Univention Configuration Registry variables have been introduced to specify filenames for SSL certificate and the SSL key file that will be used by Postfix and Cyrus to establish SSL connections ([Bug #21867](#)):
 - **mail/postfix/ssl/certificate**
 - **mail/postfix/ssl/key**
 - **mail/cyrus/ssl/certificate**
 - **mail/cyrus/ssl/key**
- The default for the Univention Configuration Registry variable `mail/cyrus/userlogfiles` changed to **no**. This affects only new installations ([Bug #24325](#)).

5.9.4 Postfix

- The Postfix configuration has been revised ([Bug #22369](#)).
- The package **univention-mail-postfix-forward** has been merged into the existing package **univention-mail-postfix**. Thus **univention-mail-postfix** provides a basic mailstack. An advanced mailstack is provided by the package **univention-mail-server** ([Bug #10527](#)).
- The Univention Configuration Registry variable `mail/relay`, that has been set by the domain-wide mail relay setting in UDM, will not be used anymore. It's value will be migrated to the Univention Configuration Registry variable `mail/relayhost` if `mail/relayhost` is unset. To distribute mail relay settings across the UCS domain, please create a UCR policy and set `mail/relayhost` ([Bug #10527](#)).
- **transport_maps** is no longer part of **mydestination** ([Bug #18536](#)).
- **mydestination** does no longer contain **\$myhostname.\$mydomain**, instead **\$myhostname** has been added. Mails to `systemmail@hostname` should now be delivered correctly ([Bug #10386](#)).
- The configuration for the SASL daemon is now provided by the package **univention-sasl**. All existing, SASL-related Univention Configuration Registry variables won't get changed ([Bug #23565](#)).
- The Univention Configuration Registry variable `mail/postfix/smtp/hostlookup` has been added to control DNS lookup sources and lookup order ([Bug #22319](#)).
- The evaluation of the Univention Configuration Registry variable `mail/hosteddomains` in the UCR template of `/etc/postfix/transport` has been removed.
- `/etc/postfix/transport` will now be created by an UCR multfile template.
- A custom SSL certificate for Postfix can now be defined via the UCR variables `mail/postfix/ssl/certificate` and `mail/postfix/ssl/key` ([Bug #21867](#)).

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- The new Postfix configuration changes the handling of Postfix option **relay_domains**. This option is by default unset and can be overridden by the Univention Configuration Registry variable `mail/postfix/relay/domains`.
- The definition of LDAP lookup tables has been split out into separate files with different file permissions since these files contain a password for authenticated LDAP access. During regular password change of local machine account, Postfix will be stopped and these LDAP lookup files will get recreated via UCR ([Bug #23362](#)).
- Several unused entries in the Postfix configuration option **mydestination** have been removed.
- Virtual tables will be activated if the package **univention-mail-server** gets installed. The virtual tables are deactivated in the basic mail stack by default. This setting can be overridden by setting the Univention Configuration Registry variable `mail/postfix/virtual/enabled` to **yes** resp. **no**.
- The new mail stack adds support for defining custom lookup lists for virtual mailbox maps/domains and virtual alias maps/domains: `mail/postfix/virtual/alias/domains`, `mail/postfix/virtual/alias/maps`, `mail/postfix/virtual/mailbox/domains` and `mail/postfix/virtual/mailbox/maps`
- The virtual transport uses by default **lmtp:127.0.0.1:2003** and can be changed via the Univention Configuration Registry variable `mail/postfix/virtual/transport`.
- By default Postfix will only listen on IPv4 interfaces. Please ensure a working IPv6 environment before activating Postfix IPv6 support to prevent unnecessary delays in mail delivery. To enable IPv6 the Univention Configuration Registry variable `mail/postfix/inet/protocols` has to be changed. Valid values are: **all**, **ipv4** (default), **ipv6** and **ipv4, ipv6**.
- The Univention Configuration Registry variable `mail/postfix/inet/interfaces` may contain a list of IP addresses Postfix will listen on. The basic mail stack uses only **127.0.0.1** whereas **all** is used by the advanced mail stack.
- The new package **univention-mail-canonical-maps** activates canonical maps (sender and recipient) and installs additional user configuration elements in Univention Directory Manager ([Bug #23900](#)).

5.9.5 Spam detection and countermeasures

- In UCS 2.x there has been a global user called **spam** with its own mailbox. Mails, redirected to this user, have been learned regularly as spam mails. Starting with UCS 3.0 this user is not created any longer. Instead each (new) user has two folders (**Spam** and **Ham**) within its mailbox that can be used for learning abusive (Spam) or regular (Ham) mails. During the update to UCS 3.0 these folders will not be created automatically. The user (or administrator) has to create them manually. Additionally the Univention Configuration Registry variable `mail/antispam/learndaily` has to be set to **yes**, to enable daily learning ([Bug #23824](#)). `mail/antispam/globalfolder` has been removed ([Bug #23824](#)).
- The installation default of the Univention Configuration Registry variable `mail/antispam/learndaily` has been set to **yes**. During update this variable will not change automatically ([Bug #24006](#)).

- In UCS 3.0 the mail stack now supports greylisting. To enable greylisting the package **univention-postgrey** has to be installed on the mailing system. Detailed information about the configuration of **univention-postgrey** is available in the UCS manual ([Bug #23775](#)).

5.9.6 Other changes

- Kolab is no longer provided by Univention ([Bug #23483](#), [Bug #23526](#)):
- In UCS 2.4 the fetchmail integration allowed only a subset of ASCII as valid characters for passwords. As of UCS 3.0 the set of valid characters has been increased to UTF-8 ([Bug #19446](#)).
- The fetchmail integration now supports encrypted connections for fetching mails. Also it is possible, to keep old mails on server after fetching them ([Bug #12573](#), [Bug #20791](#)).
- The command `mail` is part of the package **bsd-mailx** and will be installed automatically with advanced mail stack. If the command is required with basic mail stack, the package **bsd-mailx** has to be installed manually ([Bug #23815](#)).
- The new package **univention-horde4** has been introduced ([Bug #23854](#), [Bug #24079](#), [Bug #23933](#), [Bug #23935](#), [Bug #22151](#)). It provides a webmail client based on Horde 4 with standard services such as mail filter (sieve frontend), address book and a mail client. The webmail client can be configured through Univention Configuration Registry.

5.9.7 Printing services

- **univention-printserver** installs new printer model PPDs. To avoid deleting of the old, existing PPDs set the Univention Configuration Registry variable `cups/keep/ppds` to **true** ([Bug #22584](#)).
- The package **univention-printer-assignment** has been removed ([Bug #23941](#)).
- **pykota** was updated to version 1.26 ([Bug #22149](#)).

5.9.8 Kerberos

- Heimdal has been updated to 1.4 ([Bug #22108](#)).
- By default the **kdc** option is not set any longer explicitly in `krb5.conf`. If this option is needed, the Univention Configuration Registry variable `kerberos/kdc` can be used to specify KDC hosts. On domain controllers that run Samba 4, `/etc/krb5.keytab` will be managed by Samba 4, thus containing keys extracted from the Samba 4 directory. On domain controllers that run Samba 4, the **kadmin** tool will continue to use the OpenLDAP backend. In this case **samba-tool** might be a better choice ([Bug #22600](#)).
- New UCR variables have been added to configure Kerberos ([Bug #14957](#), [Bug #14974](#)):
 - **kerberos/domain_realms**
 - **kerberos/defaults/dns_lookup_realm**
 - **kerberos/defaults/dns_lookup_kdc**
 - **kerberos/defaults/forwardable**
 - **kerberos/defaults/proxiabile**
 - **kerberos/defaults/kdc_timesync**

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– *kerberos/defaults/debug*

- The file `kadmind.acl` can now be configured via the Univention Configuration Registry variable `kerberos/adminusers` ([Bug #19021](#)).
- The Kerberos password server can now be set via the Univention Configuration Registry variable `kerberos/kpasswdserver` ([Bug #20614](#)).
- To increase the compatibility between Samba 4 Kerberos servers and OpenLDAP based Kerberos servers, the encryption type **`des3-cbc-md5`** will no longer be added by default. This behaviour can be configured via the Univention Configuration Registry variable `password/krb5/enctype/des3-cbc-md5` ([Bug #21213](#)).
- In a Samba 4 setup only domain controllers with Samba 4 will be registered as Kerberos KDC in DNS ([Bug #24753](#)).

5.9.9 Proxy services

- Squid has been updated to version 3 ([Bug #22576](#), [Bug #23611](#)). The LDAP-based group authentication no longer supports authentication for local system groups.
- The join script is now initiated through the join script library ([Bug #19737](#)).
- The registered Univention Configuration Registry variables in the Dansguardian package have been updated ([Bug #13934](#), [Bug #14389](#), [Bug #18198](#), [Bug #18202](#)).
- The Dansguardian package is now named **`univention-dansguardian`**. During upgrade the old template files are moved to `/etc/univention/templates/removed/dansguardian`. Eventual local changes to the templates need to be merged manually ([Bug #22576](#)).
- If Dansguardian is used as content/virus scanner by Squid, the Squid port (default 3128) becomes 3129. Dansguardian then uses port 3128 and redirects all requests to Squid on port 3129. By default the port 3129 is blocked by the **`univention-firewall`**, but can be enabled with the following command ([Bug #23577](#)):

```
ucr set \  
security/packetfilter/package/univention-squid/tcp/3129/all='ACCEPT' \  
security/packetfilter/package/univention-squid/tcp/3129/all/en='HTTP proxy'
```

5.9.10 Apache

- Apache will now listen on every interface on port 443 for SSL connections ([Bug #24258](#)) and has been corrected to work with the loopback interface ([Bug #17128](#)).

5.9.11 Nagios

- Nagios has been updated to Nagios 3 ([Bug #14594](#)).
- **`univention-nagios-group-access`** has been replaced by the new PAM configuration scheme. The PAM service name is **`nagios`**. ([Bug #14594](#)).
- Nagios notification e-mails for hosts without a description do not have a duplicate “Host” in the the subject anymore ([Bug #22087](#)).

- The Nagios wizard in UMC has been removed ([Bug #23253](#)).
- The Nagios service `UNIVENTION_LDAP` does not support authenticated bind, which is required if anonymous bind is deactivated. Thus the new Nagios service `UNIVENTION_LDAP_AUTH` has been created to use authenticated bind. Every host will be switched from `UNIVENTION_LDAP` to `UNIVENTION_LDAP_AUTH` when it is upgraded to UCS 3.0 ([Bug #23180](#)). The Nagios service `UNIVENTION_LDAP_AUTH` has also been modified to use the correct port to contact slapd ([Bug #23541](#)).
- Two new service checks (**`UNIVENTION_LOAD`** and **`UNIVENTION_SWAP`**) have been added. They will check systems CPU utilisation and the current usage of swap space. By default they will be activated for all Nagios clients during installation. Depending on the update order of UCS systems, these service checks may have to be activated manually in Univention Directory Manager ([Bug #15610](#), [Bug #15612](#)).
- The creation of Univention-related default Nagios service checks has been transferred to a new package **`univention-nagios-common`**. As from now these checks will be created in join scripts of **`univention-nagios-server`** and **`univention-nagios-client`** ([Bug #23424](#)).
- The service check **`UNIVENTION_SMTP2`** was added and replaces the old check **`UNIVENTION_SMTP`** ([Bug #23891](#)).
- The service check **`UNIVENTION_KPASSWDD`** is no longer by default enabled on DC master and DC backup ([Bug #24405](#)).
- The NRPE init script stops the NRPE daemon now with the option **`--retry 3`** ([Bug #24378](#)).
- A deadlock in the listener module for the Nagios server was fixed ([Bug #24560](#)).
- A Nagios check for the AD Connector service was added ([Bug #14739](#)).
- The join scripts of the additional Univention Nagios plugins are now running at an earlier stage ([Bug #24252](#)).
- Univention System Setup does not remove **`univention-nagios-client`** when removing **`Network monitoring (Nagios)`**, it can be removed manually if required ([Bug #24763](#)).

5.9.12 Other services

- The PAM configuration scheme has changed. Access to each service (`chfn`, `chsh`, `cron`, `ftp`, `gdm`, `kcheckpass`, `kde`, `kscreensaver`, `login`, `other`, `passwd`, `ppp`, `rlogin`, `rsh`, `screen`, `sshd`, `su`, `sudo`, ...) can be restricted with the Univention Configuration Registry variable `auth/SERVICE/restrict=yes` and permitted with the Univention Configuration Registry variable `auth/SERVICE/group/GROUPNAME=yes` and the Univention Configuration Registry variable `auth/SERVICE/user/USERNAME=yes`. Additional information can be found with the command **`ucr search auth/`**. Access to the `sshd` on domaincontroller hosts is now restricted to root and administrators ([Bug #20138](#)).
- By default **`univention-nfs`** sets the `RPCMOUNTDOPTS` option **`-g`** to avoid problems with POSIX ACLs on NFS shares ([Bug #3172](#)).
- The logging daemon **`sysklogd`** has been replaced by the Debian default logging daemon **`rsyslog`** ([Bug #23143](#)).
- The new defaults for NSCD caches are 6007 for the hosts and `passwd` cache and 56003 for the group cache, the default for `max-db-size` is now 62914560 ([Bug #21358](#)).

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- The package **univention-nfs-server-ha** has been removed ([Bug #23273](#)).
- The default for the `shared_buffers` option for postgresql 8.4 is now 24M ([Bug #23343](#)).
- The new Univention Configuration Registry variable `ssl/host/extensions` from **univention-ssl** allows to define a shell script file to generate host specific certificate extensions. This shell script must define a function named `createHostExtensionsFile` (which gets the host's FQDN as parameter) and must return the name of a file with the certificate extensions. An example script can be found at `/usr/share/doc/univention-ssl/extensions-example.sh` ([Bug #24187](#)).
- The URL `SERVER_NAME/statistik/` (statistics about the system load from **univention-maintenance**) is now a protected. Only the user Administrator has access ([Bug #22513](#)).
- The server password rotation can now enabled or disabled with the Univention Configuration Registry variable `server/password/change` ([Bug #21213](#)).
- The Logrotate configuration for the UCS log files was changed. Every log file has now its own Logrotate configuration and can be configured separately (see `ucr search logrotate` for more information, [Bug #18002](#)).

5.10 Virtualisation

5.10.1 libvirt

- On failed resumes the saved state is no longer unconditionally deleted ([Bug #22021](#)).

5.10.2 Univention Virtual Machine Manager

- A reference to the Virtual Machine profile used for defining the VM can now be stored in LDAP ([Bug #24558](#)).
- Virtual instances can not be renamed anymore ([Bug #24711](#)).
- The UVMM protocol version was increased to 2.0 because of incompatible API changes ([Bug #23931](#)).

5.10.3 Xen

- Xen was updated to version 4.1.2. Support for Xen 4.1 was back-ported to **libvirt** ([Bug #18357](#)).
- Names for virtual Xen instances may just consists of letters, digits and the following special characters (no white spaces): `_!~:~+` ([Bug #24871](#)).

5.11 Univention Corporate Desktop

- The desktop packages from UCD 3.1 were integrated into UCS 3.0-0 ([Bug #22432](#)).
- By default KDE, Firefox, Flash and Okular will be installed if the desktop environment is selected during installation ([Bug #23585](#)).

- The Univention Configuration Registry variable `xorg/autodetect` is now always set to **true** to automatically configure the Xorg ([Bug #19035](#)).
- The possibility to shutdown the server at the Graphical Display Manager (GDM) has been disabled for new installations. This behaviour can be configured via the Univention Configuration Registry variable `gdm/menu/system` ([Bug #23640](#)).
- The GDM layout and the default desktop have been adapted to UCS 3.0 ([Bug #23422](#), [Bug #22882](#)).
- Firefox has been updated to version 7.0.1 ([Bug #22116](#)). The superfluous dependency on `xulrunner-1.9.1` has been removed ([Bug #22860](#)).
- Flash has been updated to **11.1.102.55** ([Bug #24817](#)).

5.12 Services for Windows

5.12.1 Samba

- Univention Corporate Server now offers the Samba 4 directory service ([Bug #22559](#), [Bug #23360](#)).
- The following groups will be created during the update to UCS 3.0 with well-known SIDs to be compatible with Active Directory: **Authenticated Users**, **World Authority**, **Everyone**, **Null Authority** and **Nobody** ([Bug #24288](#)).
- For synchronisation between OpenLDAP and Samba 4 a new Univention S4 Connector has been added. The Univention S4 Connector is based on the Univention Active Directory Connector ([Bug #22861](#), [Bug #23357](#)).
- To offer file and print services in the Samba 4 configuration of Univention Corporate Server, an updated version of the **smbd** process from the Samba 3 code base is used ([Bug #22865](#)).
- To offer network browsing services in the Samba 4 configuration of Univention Corporate Server, an updated version of the **nmbd** process from the Samba 3 code base is used ([Bug #24191](#)).
- Since replication of the SYSVOL share is not implemented yet in Samba 4, a Cron-based synchronisation mechanism is set up for SYSVOL and netlogon. A basic NTACL is set on the SYSVOL directory to restrict write access to Domain Admins. Currently this uses the `xattr` emulation provided by Samba 4. In the future, this may be replaced by native `xattr` support of the underlying filesystem (e.g. the `user_xattr` option of `ext3`). ([Bug #23570](#)).
- A member server with Samba 3 joins now either into a Samba 4 domain (AD) or into a Samba 3 domain (NT). The determination is done automatically. To overwrite it the Univention Configuration Registry variable `samba/domain/security` can be set to **ads** (AD domain) or **domain** (NT domain) ([Bug #23999](#)).
- The package **samba4wins** has been updated to 1.0.8 ([Bug #22676](#)).

5.12.2 Univention Active Directory Connector

- Support for Active Directory from Windows 2000 has been removed ([Bug #21486](#)).
- The incorrect setting of the **userAccountControl** flag was fixed ([Bug #23153](#)).
- Tracebacks are now written to the normal `connector.log` instead of `connector-tracebacks.log` ([Bug #13047](#)).

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- The debug output of the AD Connector has been revised. The recommended debug level is now 2 ([Bug #20971](#)).
- The mapping function **`object_memberships_sync_from_ucs`** has been removed from the **`post_con_modify_functions`** list. This improves the sync performance ([Bug #18619](#)).
- Objects will be synced only once in a sync step ([Bug #18619](#), [Bug #23734](#)).
- The UCS LDAP server can now be configured via the UCR variables **`connector/ldap/server`** and **`connector/ldap/port`**. These options should only be configured when the connector runs in read mode. By default the domain controller master will be used ([Bug #18136](#)).
- The user `krbtgt` has been added to the ignore list ([Bug #20516](#)).
- Extended attributes can now be used in the mapping ([Bug #20599](#)).
- The connector now checks the mapping if the properties are defined ([Bug #21001](#)).
- The group mapping has been improved in terms of performance ([Bug #21010](#)).
- The connector no longer uses the function **`set_uid_umlauts`** from the `users` module. The Univention Configuration Registry variable `directory/manager/web/modules/users/user/properties/username/syntax` will now be considered ([Bug #21032](#)).
- The tool **`prepare-new-instance`** now replaces all old variables in the mapping file ([Bug #22057](#)).
- It is now possible to use `univention-connector-list-rejected` and `univention-adsearch` if no certificate is configured and **`connector/ad/ldap/ssl`** is set to **`no`** ([Bug #23580](#)).
- Users with the attribute **`userCertificate`** are now synchronised correctly ([Bug #23612](#)).
- The search in Active Directory has been changed to use page controls. This improves the initial sync performance ([Bug #23734](#)).
- The tool `prepare-new-instance` has been adapted to UCS 3.0 ([Bug #23814](#)).
- The AD host certificate will no longer be re-created if it already exists during the package upgrade ([Bug #23969](#)).
- The AD connector download page has been modified to fit the new Univention Management Console design ([Bug #23188](#)). A MIME type has been added for `cert.pem` and `private.key` ([Bug #23378](#)).
- The following attributes will now synchronised by default ([Bug #20601](#)):
 - `sambaWorkstations`
 - `telephoneNumber`
 - `homePhone`
 - `mobilePhone`
 - `pager`
 - `displayName`
- If an attribute is to be deleted in UCS, the attribute will be deleted in AD too ([Bug #8604](#)).
- The package **`univention-ad-connector-exchange`** will now create extended attributes instead of custom attributes ([Bug #24881](#)).

- The descriptions of the Univention Configuration Registry variables have been revamped ([Bug #22829](#)).
- The new groups **World Authority**, **Everyone**, **Null Authority**, **Nobody** and **Authenticated Users** will be ignored ([Bug #24288](#)).
- The syntax for the username will be changed to **uid_umlauts** during the AD Connector installation. This syntax allows uppercase usernames ([Bug #24941](#)).
- The AD Connector will now save the state of the last sync ID when one sync block is finished ([Bug #25037](#)).

5.13 Other changes

- New example packages have been added to the UCS 3 source repository ([Bug #21476](#)).
- The new test tool **ucslint** has been added. It checks UCS source packages during build time to prevent common mistakes ([Bug #22092](#)).
- The Remote Desktop Protocol client **rdesktop** was updated to version 1.7.0 ([Bug #22285](#)).
- The package **python-notifier** was updated to version 0.9.0-2 ([Bug #22790](#)).
- The tool **univention-policy-result** now supports reading of password files with the new parameter **-y** ([Bug #23178](#)).
- Packages for the open source terminal server solution x2go are provided ([Bug #22150](#)).
- **server_password_change** now executes hook scripts in `/usr/lib/univention-server/server_password_change` ([Bug #23362](#)).
- The package **apcupsd** was added to the maintained repository ([Bug #23764](#)).
- The package **lynx** (source package **lynx-cur**) is not longer in the maintained repository ([Bug #24371](#)).
- Files in `/etc/init.d/` ending on `.debian` are now ignored by **insserv** ([Bug #22566](#)).
- The package **libuid1** now uses the switch **-system** for **useradd** and **groupadd** ([Bug #21520](#)).
- Single cron jobs defined by UCR can now be disabled by setting the Univention Configuration Registry variable `cron/IDENTIFIER/disabled=yes`. To disable all UCR cron jobs set the Univention Configuration Registry variable `cron/ucrdisabled=yes` ([Bug #23118](#)).
- The package **postgresql-common** now depends on **locales** to prevent update errors ([Bug #24553](#)).

5 Changelog

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