

UCS 3.0 Release Notes



Version 3.0
Revision 11533
Stand: 12. Dezember 2011

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1 Release-Highlights

Mit Univention Corporate Server 3.0 steht das dritte Major Release für Univention Corporate Server (UCS) zur Verfügung. Es umfasst eine Reihe umfangreicher Funktionserweiterungen und -verbesserungen, neue Eigenschaften sowie diverse Detailverbesserungen und Fehlerkorrekturen.

Die wichtige Neuerungen im folgenden:

1.1 Neu entwickelte Univention Management Console

Univention Management Console (UMC) wurde völlig neu entwickelt und ist nun eine Ajax-basierte Webanwendung. Durch weitergehende Integrationen von JavaScript und CSS sowie einem umfangreichen optischen Redesign ergeben sich zahlreiche Usability-Verbesserungen für das webbasierte UCS-Managementsystem. UMC umfasst nun sowohl die Domänenverwaltung (wie z.B. Benutzer oder Gruppen), als auch das Management einzelner Systeme. Die vorher eigenständige Webanwendung Univention Directory Manager wurde dazu in UMC integriert.

1.2 Unterstützung von Active Directory-Diensten mit Samba 4

UCS 3.0 kann nun die Funktionen eines Microsoft Active Directory-Domänencontrollers übernehmen. Dies ermöglicht den Einsatz von AD-Funktionen wie Kerberos-Authentifizierung oder die Verwendung von Gruppenrichtlinien mit Microsoft Windows basierten Clients. Technisch wurde die Active Directory Funktionalität durch Integration von Samba 4 realisiert. Die bisher mit UCS bereit gestellte Version von Samba 3 kann alternativ dazu weiter verwendet werden.

1.3 Aktualisierung auf Debian GNU/Linux 6/Squeeze

UCS 3.0 basiert auf Debian GNU/Linux 6.0.3 (Squeeze). Es werden - mit Ausnahme von Spielen - alle Debian-Pakete für UCS bereitgestellt. Anwender können dadurch auf einen sehr umfangreichen Software-Umfang in UCS zurück greifen. UCS 2.4 basierte auf Debian 5.0 (Lenny) und es wurde nur eine Teilmenge der Debian-Pakete bereitgestellt. UCS verwendet nun OpenJDK statt Sun/Oracle Java als Java-Implementierung.

1.4 Unterstützung für IPv6

Univention Management Console und die integrierten Dienste unterstützen nun die Netzkonfiguration über IPv6.

1 Release-Highlights

1.5 Vereinfachte Installation

Der Univention Installer wurde überarbeitet und in vielen Bereichen vereinfacht. Als Bootloader wird nun Grub 2 verwendet.

1.6 Verbesserte Virtualisierungs-Funktionen

UCS Virtual Machine Manager unterstützt nun das Klonen von virtuellen Maschinen. Außerdem wurde der unterliegende Virtualisierungs-Stack aktualisiert; Xen liegt nun in Version 4.1 vor.

1.7 Performance-Optimierungen im Active Directory Connector

Die Performance des UCS AD Connectors wurde erheblich verbessert. Außerdem wurden zahlreiche Fehlerkorrekturen vorgenommen.

1.8 Überarbeiteter Maildienste-Stack

Die integrierten Mail-Dienste wurden überarbeitet und unterstützen nun auch Mailverteiler- und die Verwaltung von Shared-IMAP-Ordnern. Cyrus wurde auf Version 2.4 aktualisiert und unterstützt über Mail Home Server nun auch die Verteilung auf mehrere E-Mail-Server. Horde 4 wurde als Webmail-Client integriert. Außerdem wird Greylisting und die Abholung von E-Mails über die E-Mailprotokolle POP3 und IMAP unterstützt. Postfix wurde auf Version 2.7.1 aktualisiert.

1.9 Aktualisierte System-Dienste

Die Systemüberwachung mit Nagios wurde auf Nagios 3 aktualisiert. Bind wurde auf Version 9.8.1 aktualisiert. Der ISC DHCP-Server wurde auf Version 4.1.1 aktualisiert. Cups liegt nun in Version 1.4.4 vor. Die Heimdal Kerberos-Suite wurde auf Version 1.4 aktualisiert.

1.10 Verbesserte Einsatzmöglichkeiten für Appliances

UCS bietet nun verbesserte Einsatzmöglichkeiten für Appliances und die Integration von Lösungen von Drittanbietern. UCS 3.0 lässt sich so einfach imagebasiert provisionieren und per Browser konfigurieren. Damit werden von UCS 3.0 beispielsweise nach dem Kopieren oder Klonen und Starten des Images u.a. Netzwerkconfiguration, Rechnername (FQDN), Windows Domänenname, LDAP Basis-DN und weitere Software-Ausstattung abgefragt.

2 Empfohlene Update-Reihenfolge für Umgebungen mit mehr als einem UCS-Server / Update von Systemen mit UCS-Komponenten

Für das Update von UCS-Umgebungen mit mehr als einem UCS-System wird folgende Vorgehensreihenfolge empfohlen. Für UCS-Umgebungen, die weitere UCS-Komponenten wie UCS Thin Client Service (UCS TCS), UCS Desktop Virtualization Services (UCS DVS) oder Univention Corporate Desktop (UCD) einsetzen, sind einige Hinweise zu beachten.

In Umgebungen mit mehr als einem UCS-System muss die Update-Reihenfolge der UCS-Systeme beachtet werden:

Auf dem Domänencontroller Master wird die maßgebliche (authoritative) Version des LDAP-Verzeichnisses vorgehalten, die an alle übrigen LDAP-Server der UCS-Domäne repliziert wird. Da bei Release-Updates Veränderungen an den LDAP-Schemata auftreten können (siehe Kapitel 3.4.1 des Handbuchs [1]) muss der Domänencontroller Master bei einem Release-Update immer als erstes System aktualisiert werden.

Generell ist es empfehlenswert alle UCS-Systeme möglichst in einem Wartungsfenster zu aktualisieren. Wo dies nicht möglich ist, gelten folgenden Einschränkungen, die berücksichtigt werden müssen:

- Vor einem Update auf UCS 3.0 müssen alle Systeme auf 2.4-4 aktualisiert werden. Dies stellt unter anderem die LDAP-Replikation zwischen UCS-Systemen auf Basis von 2.4 und 3.0 weiterhin sicher.
- In einem Mischbetrieb müssen alle UCS 2-Systeme ohne eigenen Verzeichnisdienst (d.h. Member-server, Managed Clients, Mobile Clients, Thin Clients) weiterhin einen UCS 2.4-4 Domänencontroller als LDAP-Server verwendet. Dies kann über die Rechner-Richtlinie **LDAP-Server** oder durch Setzen der Univention Configuration Registry-Variable `ldap/server/name` erfolgen.

Darüberhinaus müssen die Einschränkungen bzgl. Zusatzkomponenten in den folgenden Abschnitten berücksichtigt werden:

2.1 Hinweise zu Umgebungen mit Samba

Wird nur Samba 3 verwendet, sind Mischumgebungen aus UCS 2.4 und UCS 3.0 möglich.

Der Betrieb von Samba 4 wird in einer Mischumgebung aus UCS 2 und UCS 3 nicht unterstützt. Die Migration von Samba 3 auf Samba 4 wird in Kapitel 4.11 beschrieben.

2.2 Hinweise zu Umgebungen mit Univention Corporate Desktop

Ein Domänencontroller Master, der als UCD-Terminalserver dient, kann erst auf UCS 3.0 aktualisiert werden, wenn Univention Corporate Desktop (UCD) 3.2 veröffentlicht ist.

2 Empfohlene Update-Reihenfolge für Umgebungen mit mehr als einem UCS-Server / Update von Systemen mit UCS-Komponenten

Wenn nur UCD-Terminalserver auf Basis von Domänencontroller Backup und Domänencontroller Slave im Einsatz sind, müssen diese auf UCS 2.4-4 aktualisiert werden. Anschließend kann der Domänencontroller Master auf UCS 3.0 aktualisiert werden.

Ein Update von Managed- und Mobile Clients auf UCS 3.0 kann erst durchgeführt werden, sobald Univention Corporate Desktop 3.2 veröffentlicht ist.

2.3 Hinweise zu Thin-Client-Umgebungen

In UCS 2.4 wurden zwei Varianten der Thin-Client-Umgebung bereitgestellt; Univention Thin Client Services mit deutlich erweitertem Funktionsumfang und die Standard-Thin-Client-Komponente aus UCS 2.4 (auch als UCS TCS 2 bezeichnet). UCS 3.0 liefert keine Thin Client-Komponenten mehr aus. Thin Client-Unterstützung und Umgebung werden nur noch separat durch Univention Thin Client Services bereitgestellt. Der Betrieb von Mischumgebungen mit der Thin-Client-Umgebung von TCS 2 und TCS 3 werden nicht unterstützt.

Ist die Thinclient-Umgebung installiert, jedoch nicht in Verwendung, kann diese über das Kommando `apt-get -purge remove univention-thin-client-basesystem` deinstalliert werden.

Ein Domänencontroller Master, der als Thin-Client-Server dient, kann erst auf UCS 3.0 aktualisiert werden, wenn Univention Thin Client Services 3.2 veröffentlicht ist.

Wenn nur Thin-Client-Server auf Basis von Domänencontroller Backup und Domänencontroller Slave im Einsatz sind, müssen diese auf UCS 2.4-4 aktualisiert werden. Anschließend kann der Domänencontroller Master auf UCS 3.0 aktualisiert werden.

2.4 Hinweise zu UCS@school-Umgebungen

Der Einsatz von UCS@school mit UCS 3.0 ist erst mit der Verfügbarkeit von UCS@school 3.0 möglich. Ein Mischbetrieb ist nicht möglich.

2.5 Hinweise zu Umgebungen mit Druckservern

Bei der Verwendung mehrerer UCS-Druckserver wird empfohlen, diese nach Möglichkeit gleichzeitig bzw. zeitnah zu aktualisieren, da sich Anzahl und Name einiger Druckertreiber-Dateien ändern. Nach der Aktualisierung sollten die Druckermodelle der vorhandenen Drucker geprüft und ggf. aktualisiert werden. Sollte es zu einem vorhandenen Drucker kein passendes Druckermodell mehr geben, kann ein solches Modell über die Univention Management Console wieder erzeugt werden. Die Druckertreiber (PPD) aller eingerichteten Drucker werden auf den Druckservern vor dem Update im Verzeichnis `/var/cache/univention-printserver/ppds/ucs2.4/` gespeichert.

Sollen die alten PPD-Dateien beibehalten werden, muss die Univention Configuration Registry-Variable `cups/keep/ppd` vor dem Update auf **true** gesetzt werden.

2.6 Hinweise zu Umgebungen mit UCS Desktop Virtualization Services

Der Einsatz von UCS Desktop Virtualization Services mit UCS 3.0 ist erst mit Verfügbarkeit von UCS DVS 1.1 möglich. Ein Mischbetrieb ist nicht möglich.

2.7 Hinweise zu Umgebungen mit Kolab

Kolab wird ab UCS 3.0 nicht mehr von Univention bereitgestellt, sondern von der Kolab Systems AG.

Ein Domänencontroller Master mit Kolab kann erst auf UCS 3.0 aktualisiert werden, wenn die Pakete der Kolab Systems AG für UCS 3.0 bereitgestellt wurden.

Wenn der Kolab-Groupware-Server auf einem Domänencontroller Slave oder Domänencontroller Backup betrieben wird, kann der Domänencontroller Master auf UCS 3.0 aktualisiert werden. Dazu müssen diese Groupware-Server vorher auf UCS 2.4-4 aktualisiert werden.

Hinweise zur Migration und zur Verfügbarkeit der Pakete finden sich unter <http://kolabsys.com/ucs>.

2.8 Hinweise zu Umgebungen mit anderer Dritt-Software (z.B. Open-Xchange)

Bei der Verwendung von 3rd-Party-Software ist generell **vor** dem Update mit dem Hersteller/Vertriebspartner der Software zu klären, ob diese mit der neuen Version von Univention Corporate Server weiterhin uneingeschränkt einsetzbar ist. UCS 3.0 basiert auf einer neuen Version von Debian (Debian 6.0, Squeeze), in der praktisch alle Bibliotheken und Pakete gegenüber UCS 2.4 aktualisiert sind.

Die Standard-Shell basiert nun auf `dash`. Shell-Skripte von Drittanbietern müssen auf Kompatibilität geprüft werden.

Die Hersteller/Vertriebspartner von auf Univention Corporate Server basierenden Produkten sorgen eigenständig für die Veröffentlichung. Updates müssen daher von dort bezogen werden.

Falls Ihnen von Univention angepasste Paketversionen bereitgestellt wurden, so sollte geprüft werden, ob durch die Aktualisierung angepasste Pakete überschrieben werden — vorzugsweise in einer Testumgebung. Sollten Sie hier Probleme feststellen, so wenden Sie sich bitte an Univention.

2 Empfohlene Update-Reihenfolge für Umgebungen mit mehr als einem UCS-Server / Update von Systemen mit UCS-Komponenten

3 Vorbereitung des Updates

Vor einem Update auf UCS 3.0 muss auf 2.4-4 aktualisiert werden.

Es sollte geprüft werden, ob ausreichend Festplattenplatz verfügbar ist. Eine Standard-Installation benötigt min. 6 GB Speicherplatz. Das Update benötigt je nach Umfang der vorhandenen Installation mindestens 6 GB weiteren Speicherplatz zum Herunterladen und Installieren der Pakete.

Für das Update sollte eine Anmeldung auf den Console mit dem Benutzer **root** durchgeführt und das Update dort gestartet werden.

Eine Remote-Aktualisierung über SSH wird nicht empfohlen, da dies beispielsweise bei Unterbrechung der Netzverbindung zum Abbruch des Update-Vorgangs und zu einer Beeinträchtigung des Systems führen kann. Sollte dennoch eine Aktualisierung über eine Netzverbindung durchgeführt werden, ist sicherzustellen, dass das Update bei Unterbrechung der Netzverbindung trotzdem weiterläuft. Hierfür können beispielsweise die Tools `screen` oder `at` eingesetzt werden, die auf allen Systemrollen installiert sind.

3.1 Herunterfahren/Migration virtueller Maschinen vor dem Update

Virtuelle Maschinen auf UCS-Virtualisierungsservern müssen vor dem Update auf UCS 3.0 vollständig beendet oder auf andere UCS-Virtualisierungsserver migriert werden.

3.2 Prüfung des externen LDAP-Zugriffs

In UCS 3.0 ist der anonymous Bind des LDAP-Verzeichnisses deaktiviert. Wenn externe Applikationen auf UCS-LDAP-Server zugreifen, müssen diese umkonfiguriert werden, so dass mit einem Benutzer und Kennwort zugegriffen wird. Alternativ kann der anonyme Zugriff auch generell oder für ausgewählte Systeme wieder aktiviert werden. Weitere Hinweise finden sich in Kapitel 3.4 des UCS 3.0-Handbuchs [1].

3.3 Entfernte/nicht mehr unterstützte Komponenten/Software/Features

Einige Software-Komponenten sind entfernt worden und werden mit UCS 3.0 nicht mehr mit ausgeliefert:

- Der Bootloader Lilo wird nicht länger unterstützt. Bestehende Installationen mit Lilo müssen unter UCS 2.4 auf Grub umgestellt werden. Das Vorgehen ist unter <http://sdb.univention.de/1072> beschrieben.
- Der Univention Windows Installer wurde entfernt. Alternativ wird die Verwendung einer Softwareverteilung für Microsoft Windows empfohlen.
- Das Backup-Tool **unidump** steht in UCS 3.0 nicht mehr zur Verfügung. Die Verwendung von Bacula wird empfohlen.

3 Vorbereitung des Updates

- Die 2.6.18-, 2.6.26 und 2.6.30-Kernel-Releases aus UCS 2.3 und 2.4 werden nicht mehr unterstützt. Vor dem Update sollte auf dem UCS 2.4-System der 2.6.32-Kernel installiert werden.
- UCS 3.0 verwendet statt Oracle Java (vormals Sun Java) nun die Java-Implementierung OpenJDK. Java-Applikationen, die nicht in UCS mitgeliefert werden, sollten auf Kompatibilität geprüft werden.
- Die Univention-Fax-Pakete werden nicht mehr bereitgestellt. Als Alternative wird eine Dokumentation bereitgestellt, wie mit den Debian-Hylafax-Paketen ein ISDN/Fax-Setup aufgebaut werden kann: http://wiki.univention.de/index.php?title=HylaFAX_setup
- **univention-drbd** wird nicht mehr bereitgestellt. Eine Einrichtung kann weiterhin manuell erfolgen.
- Der UCS Active Directory Connector unterstützt nicht mehr die Synchronisation mit einem Microsoft Windows 2000 Server.
- Der grafisch animierte Bootvorgang wird nun mit der Software Plymouth statt mit USplash bereitgestellt. Angepasste Bootscreens müssen für die Verwendung mit Plymouth umgestellt werden.
- **univention-printer-assignment** wurde aus dem Standard-Umfang von UCS entfernt. Es steht als Addon-Paket aber weiterhin zur Verfügung: http://wiki.univention.de/index.php?title=Printer_Assignment

3.4 Konvertierung benutzerdefinierter Attribute in erweiterte Attribute

Benutzerdefinierte Attribute werden in UCS 3.0 nicht mehr unterstützt. Sie müssen vor dem Update durch äquivalente erweiterte Attribute in UCS 2.4 ersetzt und die benutzerdefinierten Attribute vor dem Update entfernt werden. Die Konvertierung ist im Univention Wiki [2] dokumentiert.

3.5 Ausstehende Errata-Updates

Die folgenden Fehler konnten zum finalen UCS 3.0-Release nicht mehr berücksichtigt werden und werden zeitnah in einem Errata-Update korrigiert. Ggf. sollte eine Aktualisierung zurückgestellt werden, bis die Updates verfügbar sind:

- Die automatische Erkennung von LDAP-Objekten ohne gesetzten **univentionObjectType** funktioniert in einigen Fällen nicht korrekt ([Bug #25409](#)).
- Die Samba 4-Replikation über DRS zwischen einem Domänencontroller Master und einem Domänencontroller Backup funktioniert nicht in Umgebungen, die ausschließlich IPv6 einsetzen ([Bug #25364](#)).
- In DHCP-Host-Einträge ohne eine feste IP-Adresse wird ein überzähliges Semikolon eingefügt ([Bug #25414](#)).
- Mailquota kann aktuell nur eingesetzt werden, wenn für den Mailserver der anonyme LDAP-Zugriff aktiviert wird ([Bug #25419](#)). Weitere Informationen finden sich in Kapitel 3.4.4 des UCS-Handbuchs.

4 Nachbereitung des Updates

Nach dem Update sollte das UCS-System neu gestartet werden.

4.1 Zuweisung der Kerberos-Realm an bestehenden Kerberos-Keys von Benutzern

Auf dem UCS Master sollte das Skript `/usr/share/univention-heimdal/salt_krb5keys` einmalig ausgeführt werden. Dieses Skript sorgt dafür, dass der Kerberos-Realm an den Kerberos-Schlüsseln der Benutzer hinterlegt wird, was notwendig ist, damit nach Umbenennung eines Benutzers die Kerberos-Schlüssel weiterhin als gültig akzeptiert werden.

4.2 Speicherung des UDM-Objekt-Typs im LDAP

Der Typ eines Univention Directory Manager-Objekts wird ab UCS 3.0 mit im LDAP gespeichert. Auf aktualisierten UCS 3.0-Systemen muss für die Umstellung der bestehenden Objekte auf dem Domänencontroller Master einmalig der Befehl `univention-object-type-migrate -a -v` im Verzeichnis `/usr/share/univention-directory-manager-tools` aufgerufen werden.

4.3 Konvertierung von LDAP-Objekten für Shared IMAP Folder

Während des Updates des Domänencontroller Masters werden existierende LDAP-Objekte für Shared Mail Folder in ein neues Format konvertiert. Das neue Format ist abwärtskompatibel mit UCS 2.4-Systemen. Sollten diese LDAP-Objekte nach dem Update des Masters von einem Univention Directory Manager auf Basis von 2.4 modifiziert werden, ist ein erneutes Ausführen des Konvertierungsvorgangs notwendig, um Mailzustellungsprobleme mit UCS 3.0-Mailsystemen zu vermeiden:

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

4.4 Anpassung der Firewall-Konfiguration

Auf Neuinstallationen mit UCS 3.0 erlaubt die Firewall standardmäßig keine eingehenden Verbindungen mehr. Die UCS-Pakete schalten dann die von ihnen benötigten Ports selbstständig frei, beispielsweise öffnet das `univention-samba` Paket alle benötigten Samba-Ports.

Bestehende Regeln aus UCS 2.4 werden bei einem Update nicht automatisch migriert. Die Standard-Paketfilter-Regel verbleibt bei einem Update auf **ACCEPT**. Die Firewall-Einstellungen müssen selbstständig

4 Nachbereitung des Updates

in Univention Configuration Registry angepasst werden. Umfangreiche Firewall-Regeln können in einem separaten Verzeichnis hinterlegt werden. Weitere Informationen finden sich in Kapitel 9.4 des UCS 3.0-Handbuchs [1].

4.5 Übernahme von lokalen Template-Anpassungen für Dansguardian

univention-antivir-web wurde überarbeitet und nach **univention-dansguardian** umbenannt. Die alten Univention Configuration Registry-Templates werden dabei in das Verzeichnis `/etc/univention/templates/removed/dansguardian` verschoben. Eventuelle lokale Anpassungen an den Templates müssen manuell migriert werden.

4.6 Umstellung von IMAP-Ordnern mit ungültigen Zeichen

Unter UCS 2.4 wurden vom Cyrus-IMAP-Server einige Zeichen in Ordner-Namen zugelassen, die in UCS 3.0 nicht mehr zulässig sind. Bei Verwendung von Cyrus 2.2 sind dies folgende Zeichen:

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

Bei Verwendung von Cyrus 2.4 sind dies folgende Zeichen:

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

IMAP-Ordner mit solchen Buchstaben sind nach dem Update weiterhin zugänglich. Die Ordner können aber weder verschoben, noch umbenannt werden. Ein Löschen ist möglich.

Betroffene Ordner können mit dem Skript

```
/usr/share/univention-mail-cyrus/univention-mail-valid-mboxname.py
```

 identifiziert werden. Sie müssen unter einem kompatiblen Namen neu angelegt werden. Nachdem die darin enthaltenen E-Mails verschoben wurden, kann der alte Ordner mit den ungültigen Zeichen im Ordnernamen dann entfernt werden.

4.7 Migration des Bayes-Spam-Trainings auf benutzerbezogene Filter

In UCS-Installationen vor UCS 3.0 wurde das Bayes-Training des Spam-Filters mit einem globalen **spam**-Benutzer umgesetzt. Bei Neuinstallationen werden pro Benutzer-Mailbox die Unterordner **Spam** und **Ham** angelegt und automatisch ausgewertet. Bei aktualisierten Umgebungen müssen diese Ordner manuell angelegt und anschließend die Univention Configuration Registry-Variable `mail/antispam/learndaily` auf **yes** gesetzt werden.

4.8 Migration auf Grub 2

Bei einer Neuinstallation wird vom Univention Installer direkt Grub 2 in den Bootsektor geschrieben.

Bei einem Update bleibt Grub 1 im Master Boot Record (MBR) installiert. Grub 2 richtet einen Eintrag "Chainload into Grub" ein, der dann das eigentliche Grub 2 lädt.

Eine Dokumentation, um auch auf aktualisierten Systemen Grub 2 direkt in den MBR zu schreiben wird später bereitgestellt ([Bug #23544](#)).

4.9 Anpassung der Netzwerk-Optionen

Die Datei `/etc/network/options` wird unter UCS 3.0 nicht mehr ausgewertet. Wenn vorhanden, können die dort gesetzten Einstellungen durch Bearbeiten der Datei `/etc/sysctl.conf` übernommen werden. Für den Wert einer Einstellung von "yes" wird "1" und für "no" wird "0" bei der Übernahme gesetzt.

- Für die Option "spoofprotect" sind jetzt die sysctl-Optionen "net.ipv4.conf.default.rp_filter" und "net.ipv4.conf.all.rp_filter" zuständig.
- Für die Option "ip_forward" ist jetzt die sysctl-Option "net.ipv4.ip_forward" zuständig. Die Weiterleitung von IPv6 wird über die Option "net.ipv6.conf.all.forwarding" konfiguriert.
- Für die Option "syncookies" ist jetzt die sysctl-Option "net.ipv4.tcp_syncookies" zuständig.

Diese Informationen sind auch in `/usr/share/doc/netbase/README.Debian` dokumentiert.

4.10 Einschränkungen im Samba 4-Betrieb

Die aktuell vom Samba-Projekt veröffentlichten Versionen von Samba 4 unterliegen in der Weiterentwicklung noch stärkeren Änderungen als Samba 3. Einige Funktionalitäten stehen daher noch nicht vollständig zur Verfügung:

- Microsoft Windows Domänencontroller dürfen aktuell nicht in eine Samba 4-Domäne gejoint werden.
- Eine selektive Replikation ist mit Samba 4 nicht möglich, da diese durch Active Directory prinzipiell nicht unterstützt wird.
- Datei- und Druckdienste sollten in einer Samba 4-Umgebung durch Verwendung von Memberservern und somit auf Basis von Samba 3 bereitgestellt werden.
- Samba 4 unterstützt aktuell keine Forest-Domänen.
- Samba 4 unterstützt aktuell keine Vertrauensstellungen.

Weitere Hinweise finden sich in Kapitel 8 des UCS-Handbuchs [1].

4.11 Migration einer Samba 3-Umgebung auf Samba 4

Es existieren zwei grundlegende Verfahren zur Migration von Samba 3 auf Samba 4:

- Aufbau einer parallelen Samba 4-Domäne. Beide Domänen verwenden unterschiedliche NetBIOS-Namen und SIDs. Die Clients treten dann schrittweise der Samba 4-Domäne bei.
- Migration aller Systeme innerhalb eines Wartungsfensters.

Beide Verfahren sind im Univention Wiki ausführlich dokumentiert:
http://wiki.univention.de/index.php?title=Update_to_UCS_3.0_Samba_4.

4 Nachbereitung des Updates

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Die Changelogs mit den detaillierten Änderungsinformationen werden ab UCS 3.0 nur noch in Englisch gepflegt.

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/maximumfiles`** 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_ocr_info_file()` and `remove_ocr_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:=@ABCDEFGHIJKLMNPOQRSTUVWXYZ_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 re-created 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/proxiable**
 - **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, kscreen saver, 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](#)).

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Literaturverzeichnis

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