



Univention Corporate Server

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Produktmanager

univention
be open.

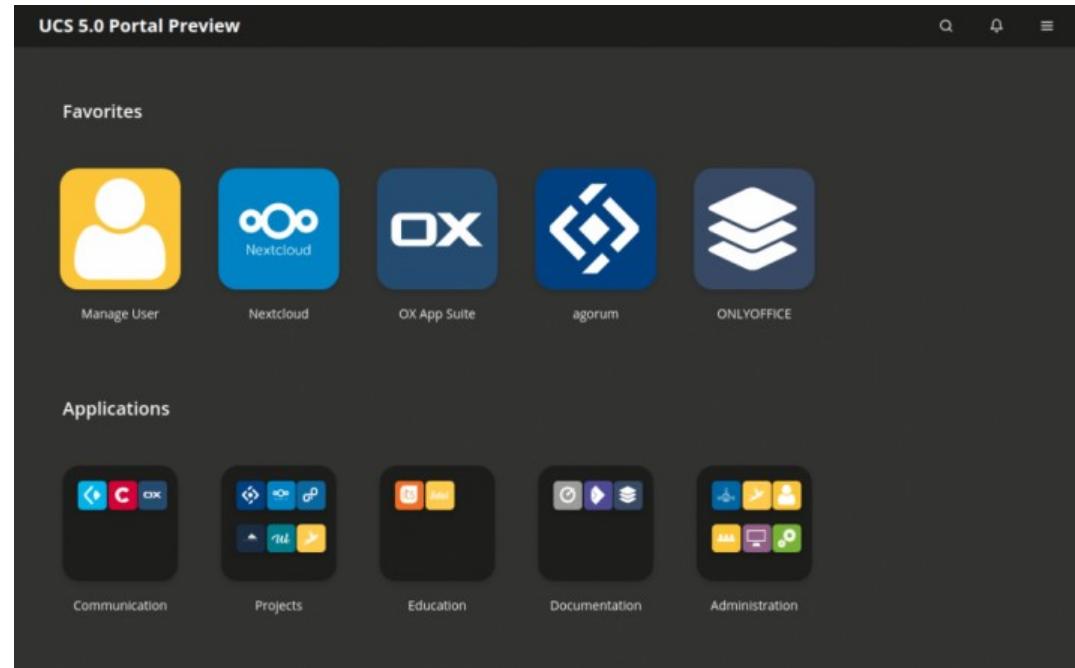
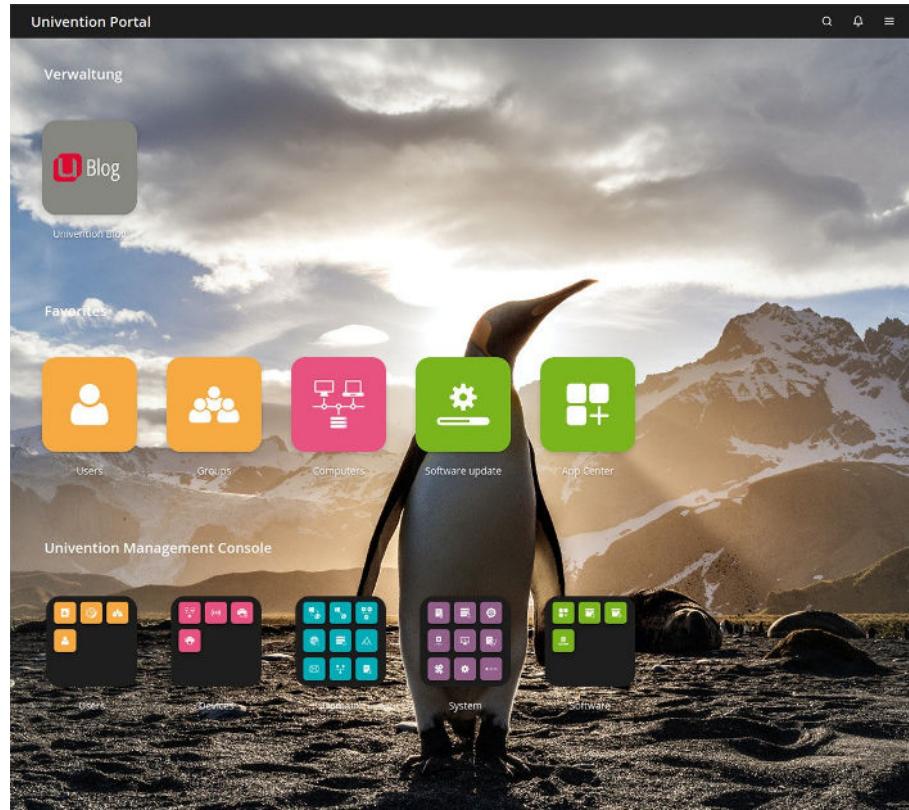
Who is Univention?

- » Software producer of the open-source enterprise distribution
Univention Corporate Server (UCS) and UCS@School: Open platforms for integration and deployment of IT applications
- » Founded in 2002 in Bremen, Germany
 - » further offices in Germany (Berlin & Leipzig) and Seattle, WA (USA)
 - » About 80 employees
 - » Products in use by > 14,000 organizations (10% with subscription)
 - » World-wide partner network (software vendors, cloud service provider, resellers+ VARs)

Univention Corporate Server (UCS)

- » Enterprise server operating system with integrated, directory-based management system
- » Open alternative to Active Directory (AD/DS)
- » Easy to use, central identity management (IDM), identity & access management (IAM)
- » Designed for multi-server scenarios (single-server of course possible)
- » Highly scalable up to several millions of entries
- » Flexible enhancement, including integration into the management system for 3rd party applications (Univention App Center)
- » To be used on-premise, in the cloud or hybrid scenarios

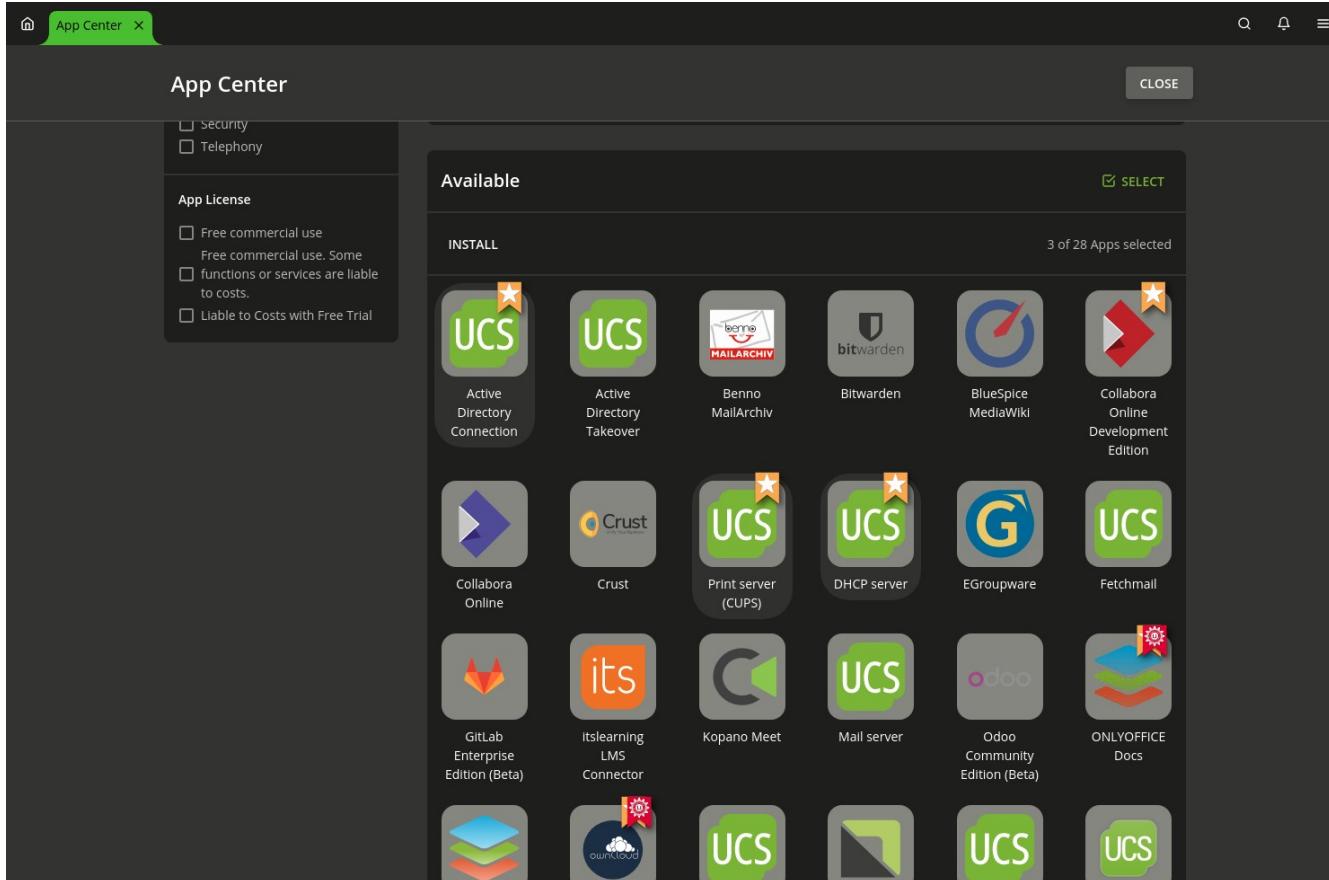
UCS Portal - Beispiele



Univention App Center

- » Marketplace for certified enterprise software and add-ons
- » Single point of administration for many apps through automatic integration into the directory and the management system
- » Apps provided by Univention and 3rd party vendors
 - » different licenses and support terms
- » Integrated into the management system
- » Browseable App Center catalog on the Univention Website

UCS App Center



UCS@school

- » Erweiterung für Univention Corporate Server
- » Ein optimiertes Rechte- und Rollenkonzept für den Einsatz im Bildungsbereich
- » Portal für Administratoren / Anwender
- » Pädagogische Steuerungsfunktionen: Rechner-, Internet- und WLAN-Steuerung, Materialverteilung, Klassenarbeitsmodus, Druckermoderation, Kennwortmanagement, ...
- » Import / Export von Benutzerdaten (Schuljahreswechsel)



Beispiel Schulportal

The screenshot shows the homepage of the Schulportal der Stadt Neumünster. The header features the portal's logo and name. A search bar and navigation icons are in the top right. Below the header, there are two sections: "Applikationen" and "Verwaltung". Each section contains seven icons, each with a logo, name, and URL. The background of the page is a photograph of a church with a green roof and a tall spire against a blue sky with white clouds.

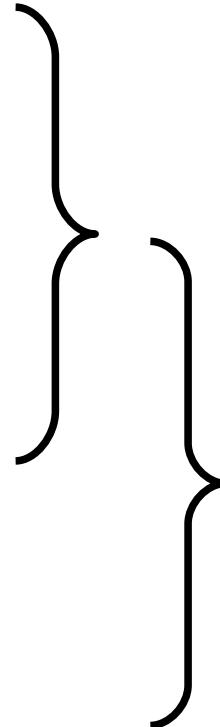
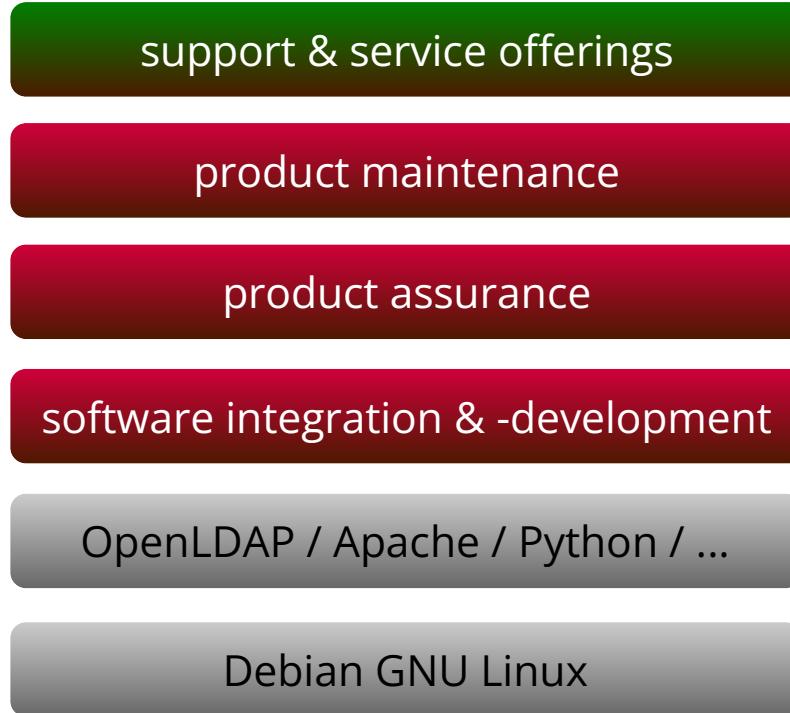
Applikationen

- OX**
Open-Xchange Weboberfläche
app.schule.neumue...
- GeoGebra - Classic**
portal.schule.neumu...
- Nextcloud**
app.schule.neumue...
- dudle**
Termine & Umfragen
portal.schule.neumu...
- Google**
www.google.de
- Tinkercad**
www.tinkercad.com
- UCS @school**
Schulserver
app.schule.neumue...

Verwaltung

- Passwort ändern**
portal.schule.neumu...
- WebUntis**
untis.at
- SH Schleswig-Holstein**
Der echte Norden
sh.edupool.de
- commSy**
Medienportal des IQSH
sh.schulcommsy.de

Open Source Software – our business model



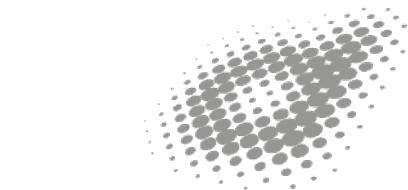
Enterprise Subskriptionen
(Maintenance und Support)

UCS und Open Source Software
=> Univention: GNU AGPLv3
=> Lizenzen von Open-Source-
Projekten

Referenzen Non-EDU



Bundesamt für Strahlenschutz



REWE digital



Deutsches
Forschungszentrum
für Künstliche
Intelligenz GmbH



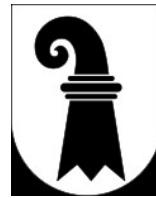
Weitere Referenzen im Bildungsbereich (Auswahl)



Kassel

documenta Stadt

HANNOVER



Landkreis Kassel



FULDA
UNSERE STADT

STADT.
CITY.
VILLE.
BONN.



regio IT

FLENSBURG

Zwischen Himmel und Förd
Mellem himmel og fjord



CHEMNITZ
STADT DER
MODERNE

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Information Sources

www.univention.de

- » Blog, Newsletter
- » Dokumentation: docs.software-univention.de
- » Errata: errata.software-univention.de
- » Downloads: updates.software-univention.de
- » Forum, KB: help.univention.com (wiki.univention.de)
- » Bugtracker: forge.univention.org
- » Sources: github.com/univention
- » social media [Youtube](#), [Twitter](#), ...

Building blocks: Debian GNU/Linux

- » UCS is based on Debian
- » UCS 4.4: Debian 9 (Stretch) -> <https://www.debian.org/releases/stretch/>
- » UCS 5.0: Debian 10 (Buster) -> <https://www.debian.org/releases/buster/>
- » + components from other sources
- » + components developed by Univention

- » Design approach: configure required services during initial setup of the domain or a system

UCS specific building blocks

UMC

- └ single point of web-based administration

UCR

- └ Configuration Abstraction layer

UDM

- └ Domain management
- └ CLI

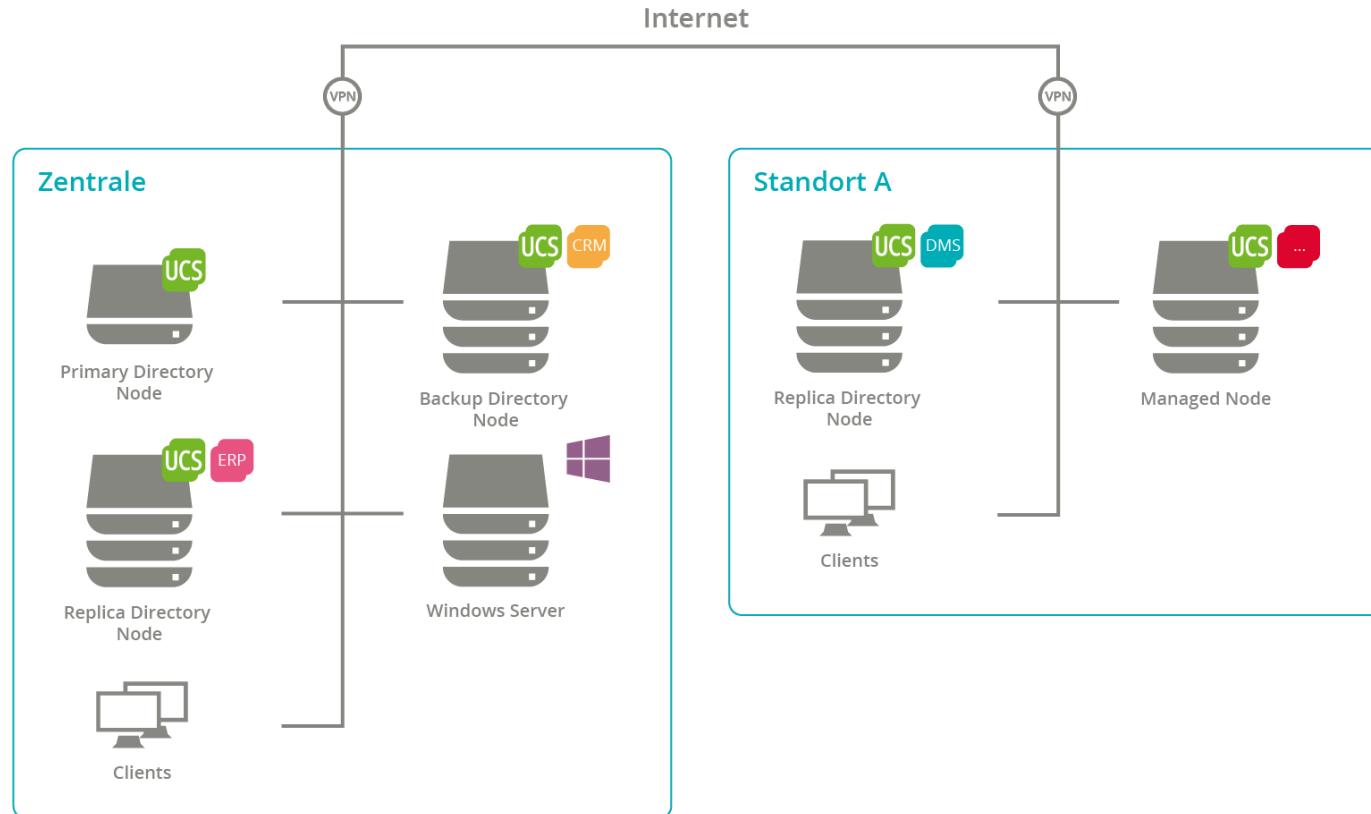
UDN/UDL

- └ Replication of LDAP and Service configuration

UCS

- └ operating system for servers
- └ pre-configured services according chosen system-role

UCS-Domänenkonzept



Building Blocks: the directory / LDAP

- » Lightweight Directory Access Protocol
- » The Lightweight Directory Access Protocol (LDAP /'ɛldæp/) is an open, vendor-neutral, industry standard application protocol for accessing and maintaining distributed directory information services over an Internet Protocol (IP) network.
[\(https://en.wikipedia.org/wiki/Lightweight_Directory_Access_Protocol\)](https://en.wikipedia.org/wiki/Lightweight_Directory_Access_Protocol)
- » OpenLDAP, 389, Microsoft AD/DS, (eDirectory)
- » UCS is using OpenLDAP (<https://www.openldap.org/>)

Building Blocks: the directory / LDAP

- » Service for storage of objects
- » LDAP database has a tree-like structure
 - » identifier type DN (distinguished name)
 - describes location in the tree
 - » Common base (Base-DN)
 - » defined during initial setup, not changeable
 - » used for licensing
 - » Each object can have
 - exactly one superordinate and
 - several subordinate objects

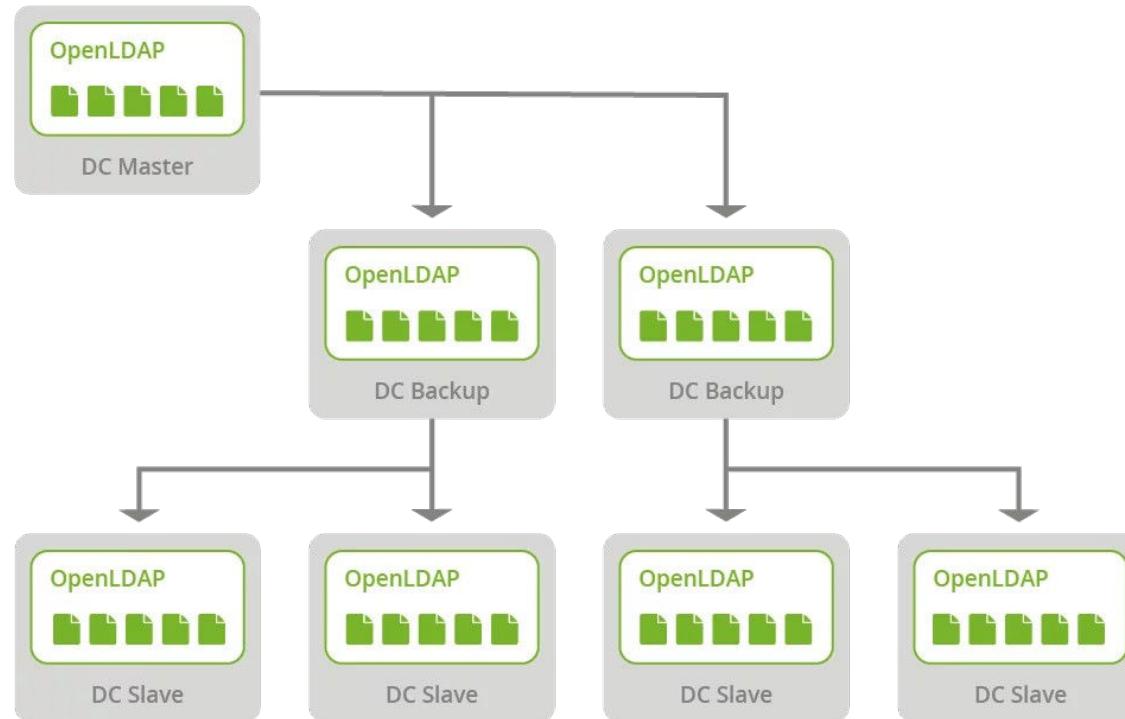
The screenshot shows a software interface for managing an LDAP directory. On the left, there is a tree view of the directory structure under 'intranet(gp40:/)'. The visible nodes include Builtin, computers, dhcp, dns, Domain Controllers, groups, kerberos, mail, nagios, networks, owncloud, policies, printers, samba, shares, System, univention, users, and Virtual Machine Manager. On the right, there is a search bar with 'All types' and a search icon. Below the search bar are buttons for 'PARENT CONTAINER' and 'ADD'. A message indicates '0 LDAP objects of 3 selected.' Below this, a table lists three selected objects:

<input type="checkbox"/>	Name	Type	Path
<input type="checkbox"/>	WIN8	Windows Workstation/Server	intranet(gp40:/computers)
<input type="checkbox"/>	workstation1	Linux	intranet(gp40:/computers)
<input type="checkbox"/>	workstation2	Linux	intranet(gp40:/computers)

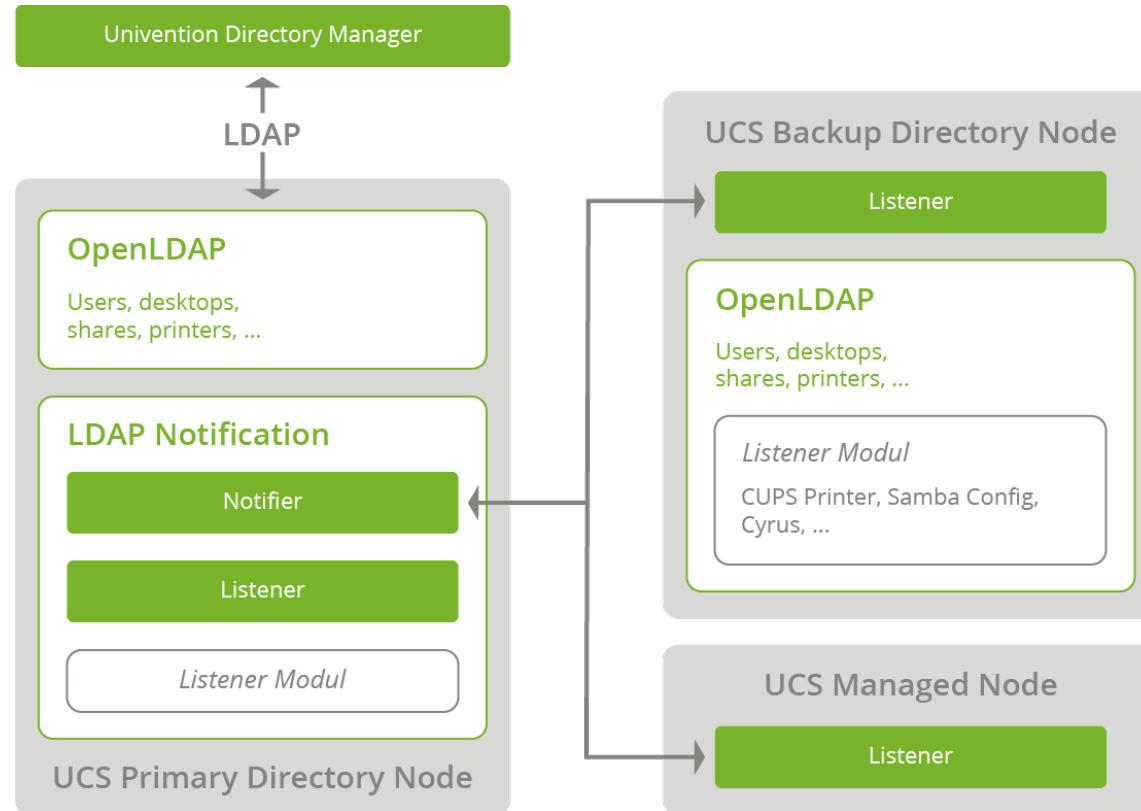
Building Blocks: the directory / LDAP

- » the directory service can be structured with containers (CN) and organizational units (OU)
 - » Simplifies searching for objects
- » Access Control Lists (ACL)
 - » limit access to structures, objects and attributes
- » Replication between directory servers
 - » product specific extension

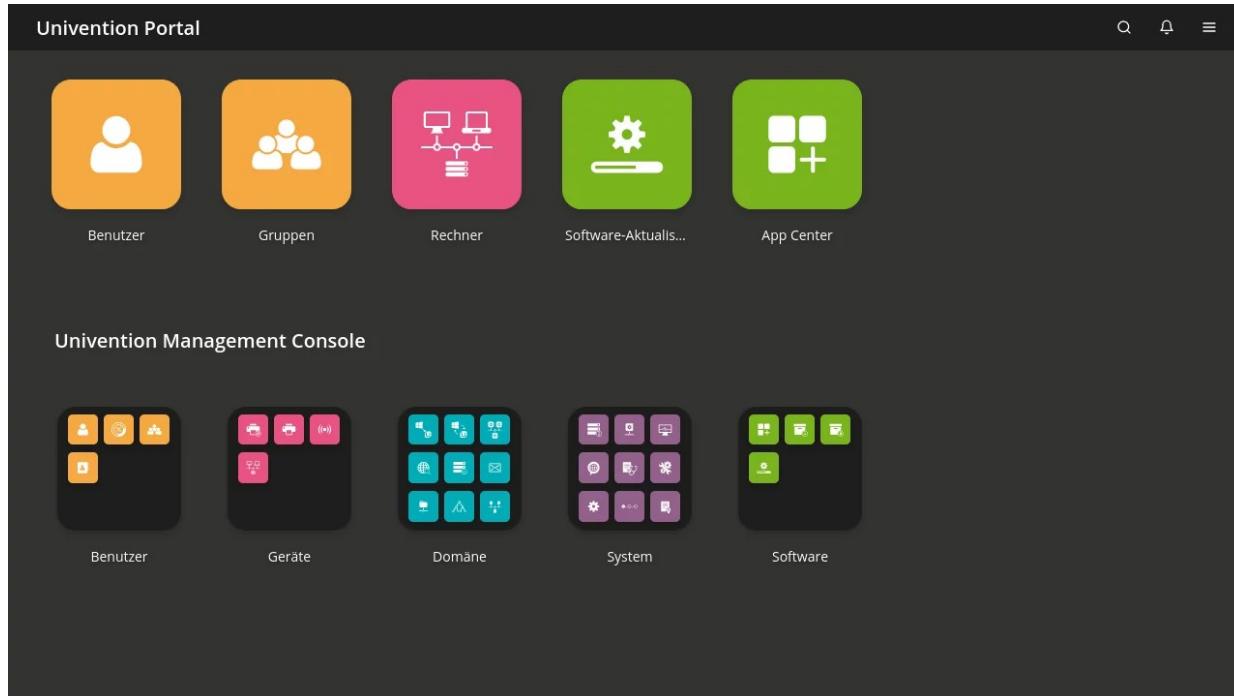
LDAP replication



UDN/UDL - Replication of LDAP and Service configuration

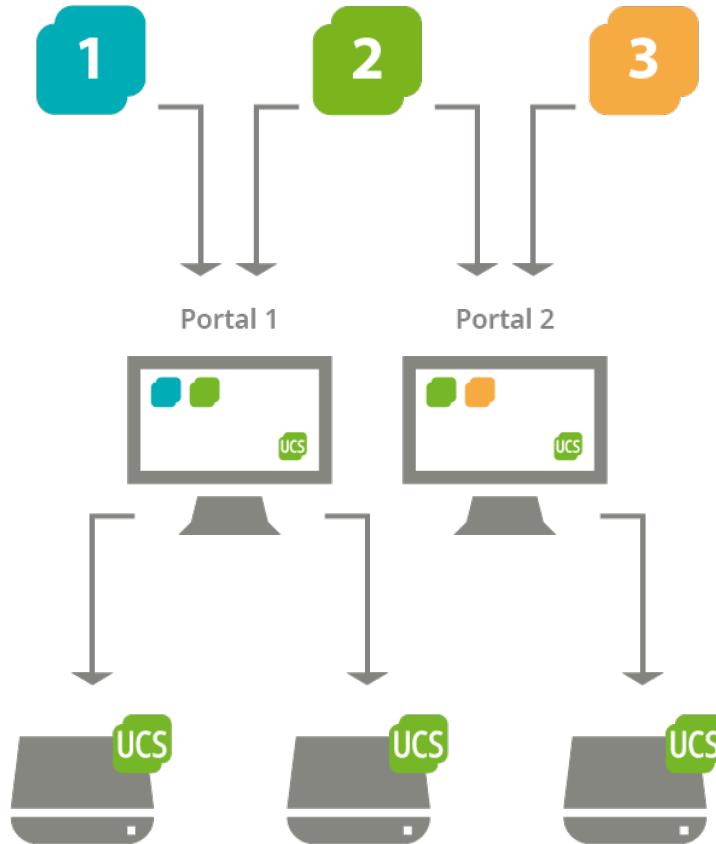


UMC - single point of web-based administration



- » Univention Management Console (UMC) ist die zentrale, webbasierte Administrationsoberfläche für UCS-Domänen.

Schema of the portal concept in UCS



Portals can be independently defined and assigned to UCS systems as start site; a link entry can be displayed on multiple portals.

UCR – Univention Configuration Registry

- » Univention Directory Registry (kurz UCR)
- » Dient zur Verwaltung der lokalen Systemkonfiguration auf UCS Systemen
- » Manuelle Bearbeitung entfällt

The screenshot shows the Univention Configuration Registry (UCR) interface. At the top, there is a header bar with the "Univention Portal" logo and the title "Univention Configuration Re...". Below the header, the main title "Univention Configuration Registry" is displayed. A descriptive text states: "The Univention Configuration Registry (UCR) is the local database for the configuration of UCS systems to access and edit system-wide properties in a unified manner. Caution: Changing UCR variables directly results in the change of the system configuration. Misconfiguration may cause an unusable system!" There are two dropdown menus: "Category" set to "All" and "Search attribute" also set to "All". A search bar with a magnifying glass icon is located to the right of the search input. Below these controls, a table lists various UCR variables. The table has two columns: "Value" (containing variable names like "ad/reset/password", "admin/diary/backend", etc.) and "Value" (containing their corresponding values like "/var/www/", "localhost", etc.). A total count of "0 entries of 1130 selected" is shown at the top right of the table area.

Value	Value
^ UCR variable	
ad/reset/password	
ad/reset/username	
admin/diary/backend	
admin/diary/backend/port	
apache2/allowoverride	
apache2/autostart	yes
apache2/documentroot	/var/www/
apache2/force_https	
apache2/force_https/exclude/http_host/localhost	localhost
apache2/force_https/exclude/request_uri/mod-status	/server-status
apache2/force_https/exclude/request_uri/univention-portal	/univention/get
apache2/hsts	

Danke!