



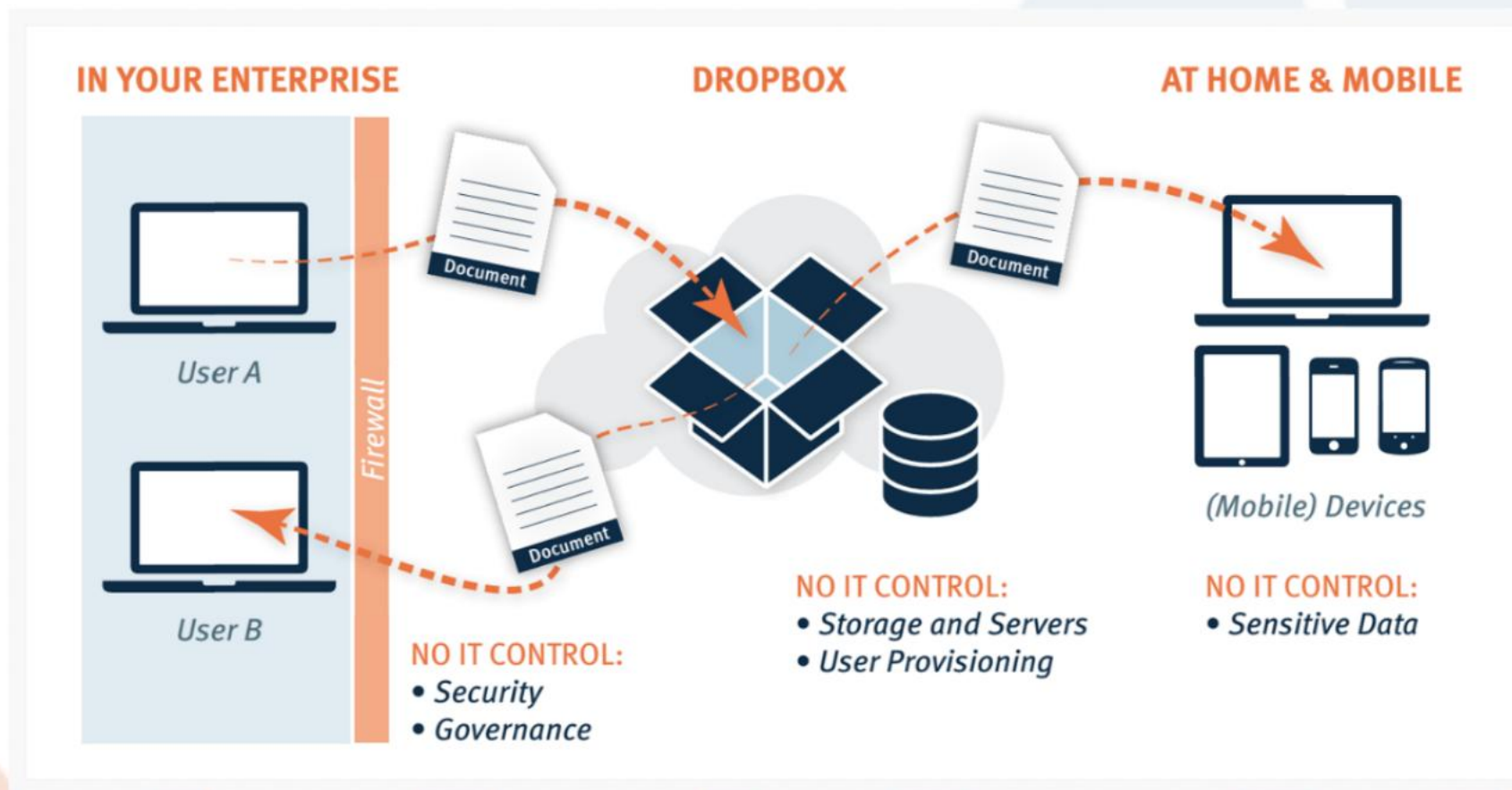
ownCloud

The logo features a stylized cloud composed of several overlapping circles in shades of blue and grey. Below the cloud, the word 'own' is written in orange and 'Cloud' in blue. The background includes a large, faint orange 'own' watermark and a light blue circular graphic on the right side.

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CUC 2014

Oblak - osjetljivi podaci izvan kontrole

- korisnici koriste oblak za dijeljenje osjetljivih podataka između sebe, poslovnih partnera i klijenata
- podaci se nalaze na njihovim osobnim računalima i uređajima, u oblaku, tj. na vanjskim poslužiteljima
- IT služba nema nikakvu kontrolu



Još gore? Privatni podaci izvan kontrole



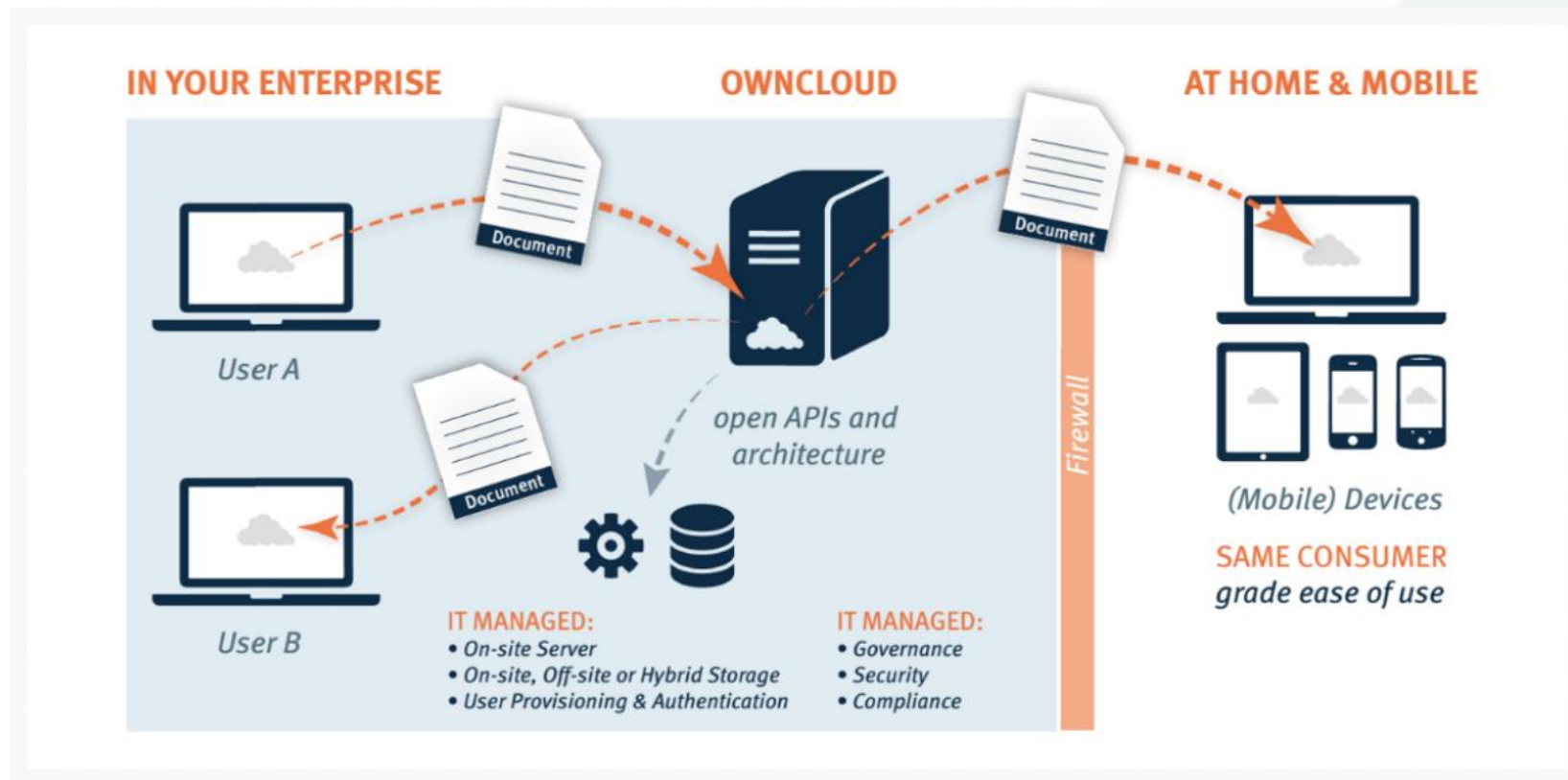
"Nobody understands the cloud, it's a f***ing mystery!"



iCloud ?

ownCloud

- *storage* na vlastitim poslužiteljima u vlastitom podatkovnom centru
- vlastita kontrola od strane pouzdanih administratora
- pridržavanje vlastite sigurnosne politike
- kontrola korisnika
- logiranje
- proširenje pomoću skupa API-ja

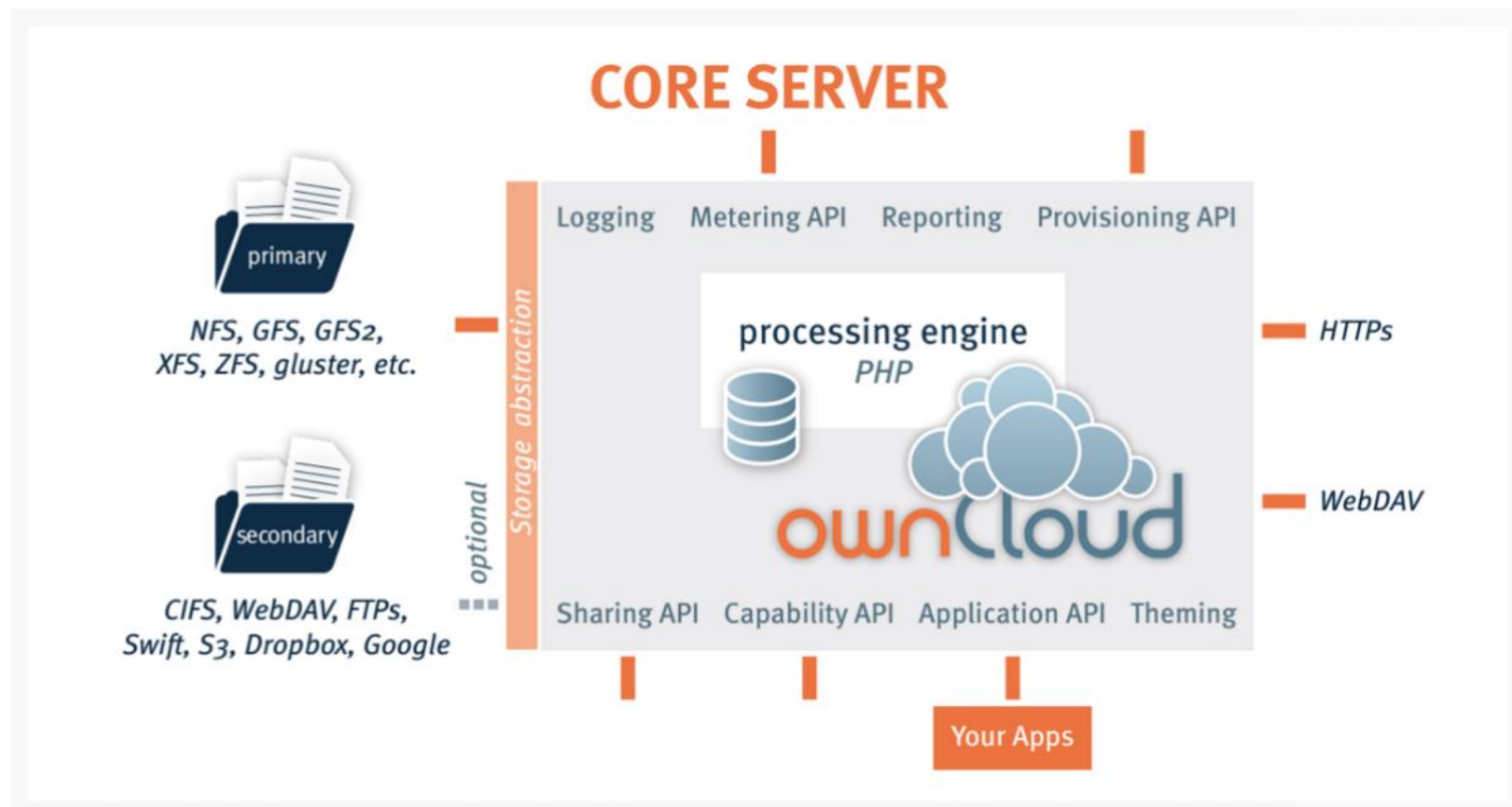


ownCloud



ownCloud

- web aplikacija (php, IIS ili Apache)
- baza podataka (Oracle, MySQL, PostgreSQL)
- *storage*: lokalno, NFS, CIFS, XFS, ZFS, ...
- opcija - udaljeni *storage*: FTP, WebDAV, GoogleDrive, Dropbox ...
- *server-to-server* (od verzije 7)



ownCloud server

- Linux (preporučeno)
- Windows 7 i Windows Server 2008 (osnovni skup sinkronizacije i dijeljenja, SQL Server nije podržan)
- gotove virtualne mašine optimizirane za SUSE, Ubuntu i Amahi
- RaspberryPi (Arch Linux), QNAP NAS i OpenWRT
- paket za Debian Wheezy (*backports* repozitorij)
- MAC OS X nije podržan

Web sučelje

The screenshot displays the ownCloud web interface in a browser window. The address bar shows the URL `owncloud.com/owncloud/index.php/apps/files?dir=%2F`. The interface includes a navigation sidebar on the left with categories like "All files", "Shared with you", "Shared with others", "Shared by link", and "Deleted files". The main content area shows a file browser view with a table of files and folders. The table has columns for "Name", "Size", and "Modified".

Name	Size	Modified
as	0 kB	8 hours ago
documents	23 kB	13 hours ago
music	3.6 MB	13 hours ago
photos	663 kB	13 hours ago
ownCloudUserManual.pdf	1.5 MB	13 hours ago
4 folders and 1 file		5.8 MB

Upravljanje korisnicima

- grupe
- administratori
- kvote

Login Name	Password	Groups	Create			
Username	Full Name	Password	Groups	Group Admin	Quota	Storag
F firecracker	firecracker	●●●●●●●●	redgroup, 3group, all-us... ▼	Group Admin ▼	10 GB ▼	/var/w
L layla	layla	●●●●●●●●	redgroup ▼	Group Admin ▼	5 GB ▼	/var/w
S stashcat	stashcat	●●●●●●●●	admin, redgroup, 3grou... ▼	Group Admin ▼	Default ▼	/var/w
T terry	terry	●●●●●●●●	redgroup ▼	redgroup ▼	Default ▼	/var/w

LDAP autentikacija

- zapis tj. "korisnik" u LDAP-u za potrebe autentikacije aplikacija - *bind* korisnik
- ne pripada osobi pa nema attribute *objectClass=hrEduPerson* i *uid*
- onemogućena prijava putem AOSI web sučelja

datoteka *add_user.ldif*:

```
dn: cn=owncloud,dc=ustanova,dc=hr
objectClass: person
objectClass: organizationalPerson
objectClass: inetOrgPerson
cn: owncloud
sn: owncloud
userPassword: {CRYPT}kriptirana_lozinka
```

```
#ldapadd -f add_user.ldif -cvx -D cn=admin,dc=ustanova,dc=hr -W
```

LDAP autentikacija

- *access* lista za *bind* korisnika u datoteci

```
/etc/ldap/slapd.d/cn=config/olcDatabase={1}hdb.ldif
```

datoteka *mod_user.ldif*:

changetype: modify

replace: olcLimits

olcLimits: {0}dn.base="cn=hreduadmin,dc=ustanova,dc=hr" size=unlimited

olcLimits: {1}dn.base="cn=owncloud,dc=ustanova,dc=hr" size=unlimited

olcLimits: {2}users size=50

olcLimits: {3}anonymous size=10

```
#ldapmodify -Y EXTERNAL -H ldapi:/// -f mod_user.ldif
```

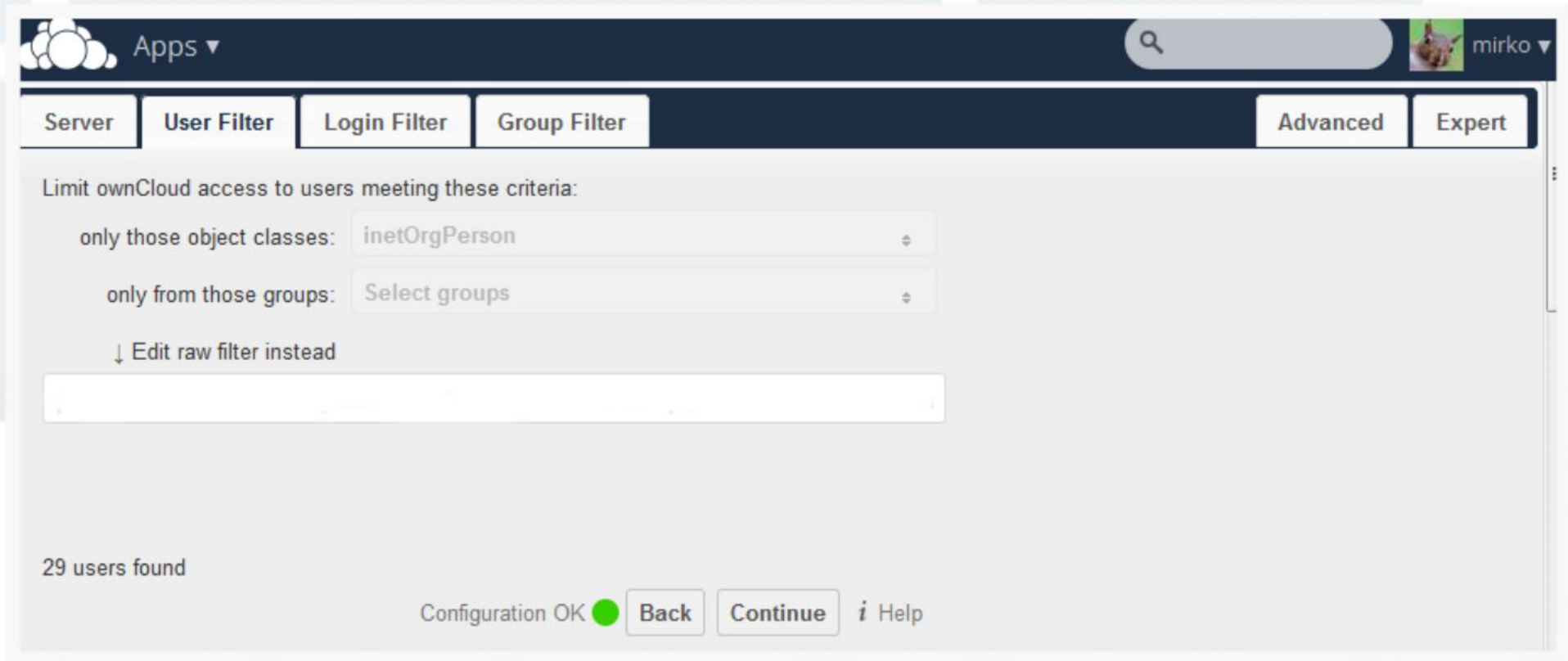
LDAP autentikacija

The screenshot shows a web-based configuration interface for LDAP authentication. At the top, there is a navigation bar with 'Apps' and a search icon. Below this, there are tabs for 'Server', 'User Filter', 'Login Filter', 'Group Filter', 'Advanced', and 'Expert'. The 'Server' tab is currently selected. The configuration form includes the following elements:

- A dropdown menu labeled '1. Server:' with a 'Delete Configuration' button next to it.
- A text input field containing 'posluzitelj.ustanova.hr' and a port number '389' in a separate field.
- A text input field containing the LDAP base DN: 'cn=owndcloud,dc=ustanova.dc=hr'.
- A password field represented by a series of dots.
- A text input field containing the LDAP search filter: 'dc=ustanova,dc=hr'.

At the bottom of the form, there is a status indicator 'Configuration OK' with a green dot, a 'Continue' button, and a link to 'Help'.

LDAP autentikacija

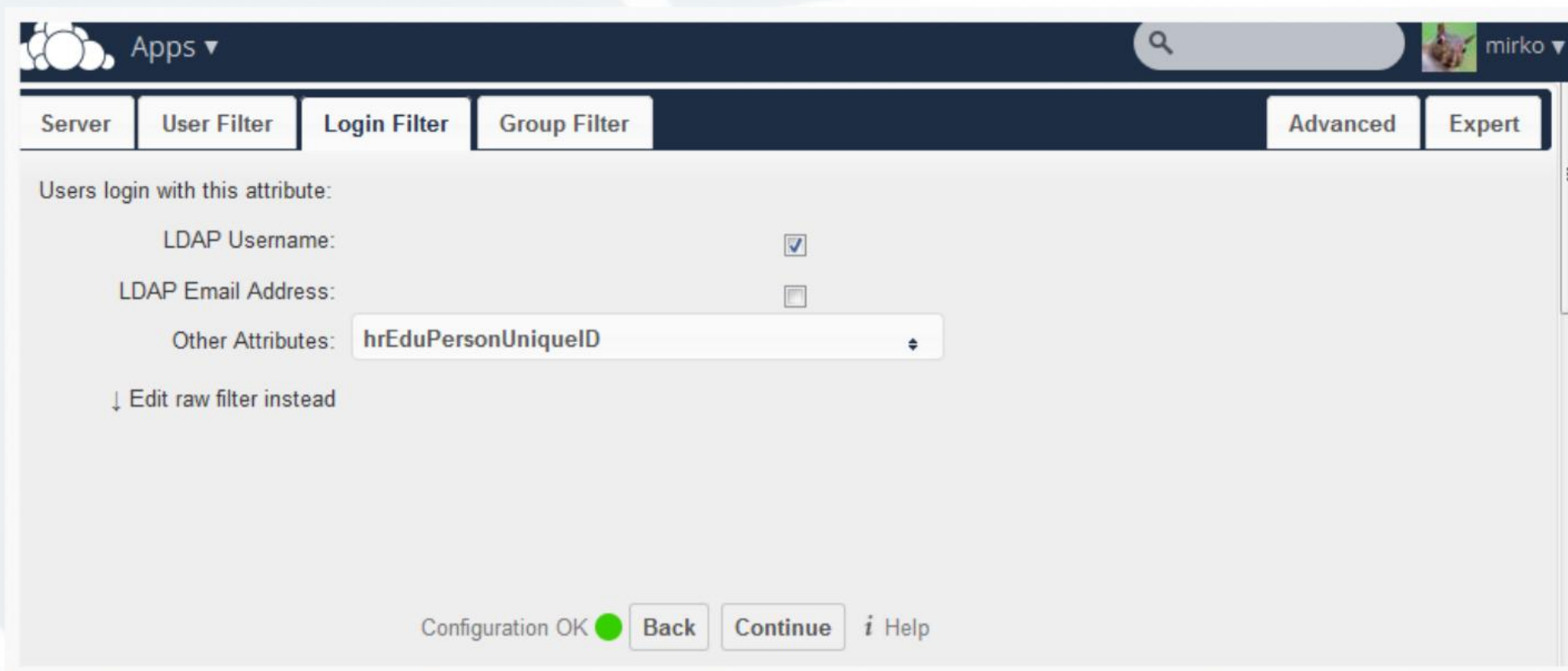


The screenshot shows a web-based configuration interface for LDAP authentication. At the top, there is a navigation bar with 'Apps' and a search bar. Below the navigation bar, there are tabs for 'Server', 'User Filter', 'Login Filter', and 'Group Filter'. The 'User Filter' tab is selected. The main content area is titled 'Limit ownCloud access to users meeting these criteria:'. It contains two dropdown menus: 'only those object classes:' with the value 'inetOrgPerson' and 'only from those groups:' with the value 'Select groups'. Below these is a link '↓ Edit raw filter instead' and a text input field. At the bottom of the form, it says '29 users found' and 'Configuration OK' with a green dot. There are also 'Back', 'Continue', and 'Help' buttons.

raw filter:

`(&(hrEduPersonAffiliation=djelatnik)(hrEduPersonGroupMember=ownCloud))`

LDAP autentikacija



The screenshot shows a web application interface for configuring LDAP authentication. At the top, there is a navigation bar with a logo, the text "Apps", a search bar, and a user profile for "mirko". Below the navigation bar, there are several tabs: "Server", "User Filter", "Login Filter", "Group Filter", "Advanced", and "Expert". The "User Filter" tab is currently selected. The main content area is titled "Users login with this attribute:" and contains three rows of configuration options:

- "LDAP Username:" with a checked checkbox
- "LDAP Email Address:" with an unchecked checkbox
- "Other Attributes:" with a dropdown menu showing "hrEduPersonUniqueID" and a downward arrow.

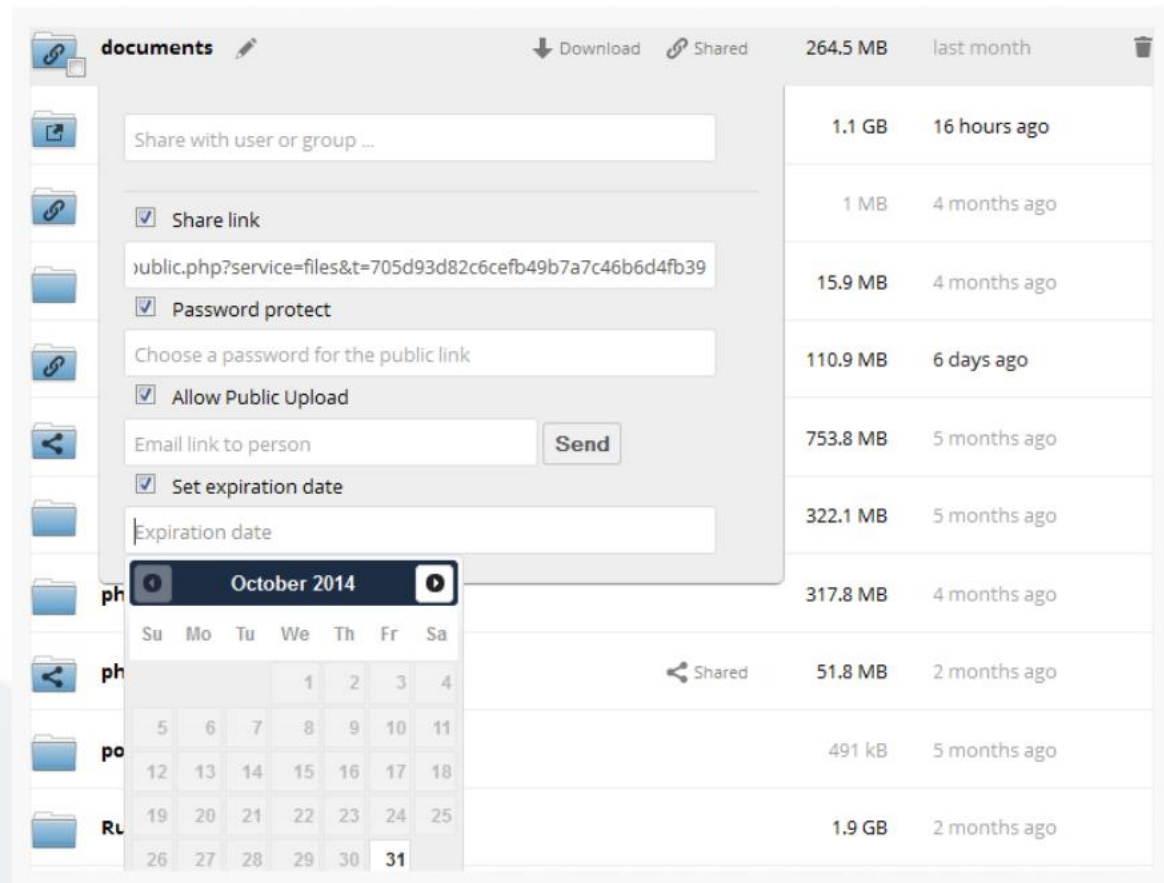
Below these options, there is a link that says "↓ Edit raw filter instead". At the bottom of the configuration area, there is a status indicator "Configuration OK" with a green dot, followed by "Back", "Continue", and "i Help" buttons.

Server-side enkripcija

- *encryption-app*
- enkripcija svih datoteka na ownCloud poslužitelji
- enkripcija svih datoteka na udaljenom storage-u
- dekripcija pomoću korisničke lozinke
- *server-wide*
- kriptira se sadržaj datoteka, ne i nazivi datoteka/direktorija

Dijeljenje

- direktorija i/ili datoteka
- s korisnicima i/ili grupama unutar ownClouda
- s drugim korisnicima
 - link
 - lozinka
 - datum isteka
 - obavijest mailom
- javni *upload* u direktorij



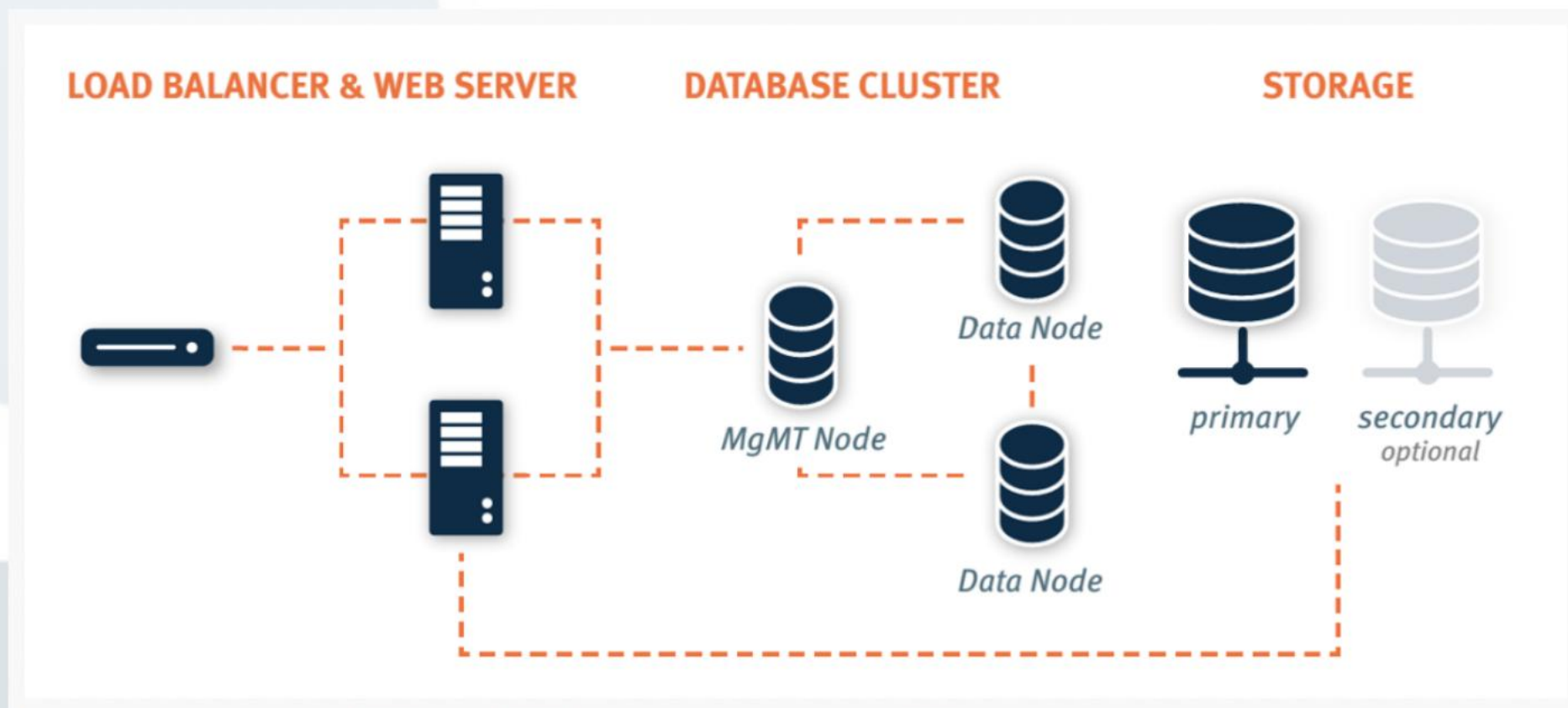
Pristup ownCloudu

- web sučelje (*https* kao preporučena opcija)
- *desktop* klijent (Windows, Linux, MAC OS X) - jedan dijeljeni direktorij na računalu, automatska sinhronizacija
- android *app* (0,99\$)
- iOS *app* (0,99\$)
- WebDAV

Ostalo

- *versioning*
- *undelete*
- suradnički *online* rad na *rich-text* dokumentima
- kalendar (CalDAV)
- foto galerija
- kontakti (CardDav)
- *photo/video viewer*
- *pdf viewer*
- OpenDocument *viewer* (.odt, .ods, .odp)
- *music streaming*
- pregled vlastitih aktivnosti
- integracija antivirusne zaštite
- obavijesti o promjenama dijeljenih stvari
- *app store*

Napredniji ownCloud





ownCloud server

- Instalacijski vodič
- Konfiguracija servera (PHP, MySQL, JavaScript)
- Konfiguracija servera (LDAP, Samba, etc.)
- Konfiguracija servera (SMB, FTP, etc.)
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Još gore? Privatni podaci izvan kontrole



Oblik - osjetljivi podaci izvan kontrole

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Server-side enkripcija

- Server-side enkripcija
- Server-side enkripcija
- Server-side enkripcija

Pristup ownCloudu

- Pristup ownCloudu
- Pristup ownCloudu
- Pristup ownCloudu

Upravljanje korisnicima

Ime	Ime korisnika	Ime korisnika	Ime korisnika
1	admin	admin	admin
2	user	user	user
3	user	user	user



Ostalo

- Ostalo
- Ostalo
- Ostalo

LDAP autentikacija

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Pitanja? mirko@oss.unist.hr
Hvala na pažnji!