

Backup and restore an Samba AD DC

From SambaWiki

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Introducion

The content of this document is adjusted to samba 4.x.

This is a tutorial about backup and restore of samba in hope that it will be usefull. But it comes WITHOUT ANY WARRANTY!

Until this line is removed, consider this document as a DRAFT, that may contain faults or is missing something!

General

WARNING, if you run more than one DC: Never restore a DC from backup, if at least one other DC is still running! You'll corrupt the directory as the replication meta data get out of sync!

Simply join the new machine as a DC again. Everything will be sycronized from the other running DC(s) - except SysVol replication, what isn't implemented yet.

If the whole domain is broken on all DCs, you should post on the samba-technical (mailto:samba-technical@lists.samba.org) mailing list on <http://lists.samba.org> to discuss the best way to fix this.

How LDB and TDB files can be backed-up/restored

If plan to modify the 'samba_backup' script or create an own solution, you'll find here some usefull information:

- Whilst you must never copy a running database, you can backup *.ldb & *.tdb files online with 'tdbbackup'
- Files created by tdbbackup, are full abd normal TDB files. tdbbackup does the extraction safely.
- Backups of *.ldb files can be just renamed (remove the *.bak) to their old name to restore.

About the samba_backup script

Samba provides a very basic backup shell script for it's databases (source4/scripting/bin/samba_backup in the source tarball). This requires that your whole samba installation is on one place (like /usr/local/samba/). If you have used configure options to store pieces of samba in different locations, you can adjust the script or use it as a base to write your own script.

Because this script is very basic at the moment, there are some things to know, if you plan to use it unchanged:

- The script doesn't backup extended ACLs. This results in that you'll lose the permissions e. g. on the SysVol share. If you have a tar version that supports the --xattrs option (see the tar manpage), you should add this option to all 'tar' commands inside the script. This enables tar to keep extended ACLs in the archives.

Backup

The backup script of samba isn't installed, when you run 'make install'. It's recommended that you copy it from the sources directory (source4/scripting/bin/samba_backup) to your system, like /usr/sbin, and set secure permissions:

```
# cp ../source4/scripting/bin/samba_backup /usr/sbin
# chown root:root /usr/sbin/samba_backup
# chmod 750 /usr/sbin/samba_backup
```

Adust the following variables inside the script to your needs:

```
FROMWHERE=/usr/local/samba
WHERE=/usr/local/backups
DAYS=90
```

Create the destination folder, you have configured in the \$WHERE variable and set permissions:

```
# mkdir /usr/local/backups
# chmod 750 /usr/local/backups
```

Start the backup script for a first test:

```
# /usr/sbin/samba_backup
```

If the script exits without an error, you should find three files in the destination folder:

- etc.{Timestamp}.tar.bz2
- samba4_private.{Timestamp}.tar.bz2
- sysvol.{Timestamp}.tar.bz2

If your test backup succeeded, you should add a cron-job for daily backup:

```
# crontab -e
```

Add the following line to backup daily at 2am:

```
0 2 * * * /usr/sbin/samba_backup
```

Restore

The following restore guide assumes, that you backed-up your databases with the 'samba_backup' script. If you have your own script, adjust the steps.

Very important notes:

- **Never do a restore and a version change at once! Always restore on a system that uses the same Samba version than the one you created the backup on!**
- **Restore on a system with the same IP and Hostname. Otherwise you'll run into Kerberos and DNS issues.**
- **Recommended: Restore on the same OS than where you created the backup.**

The most important thing in a restore situation is to bring your system back to a running state. Do changes later, if everything is up and tested. Never together with a restore!

If your whole system is broken, you have first to setup the whole machine like described in the HowTos (Active Directory Controller or Domain Member).

Remove the folders, that we will restore (samba must not be running!):

```
# rm -rf /usr/local/samba/etc
# rm -rf /usr/local/samba/private
# rm -rf /usr/local/samba/var/locks/sysvol
```

Now unpack your latest working backup files to their old location:

```
# cd /usr/local/backups
# tar -jxf etc.{Timestamp}.tar.bz2 -C /usr/local/samba/
# tar -jxf samba4_private.{Timestamp}.tar.bz2 -C /usr/local/samba/
# tar -jxf sysvol.{Timestamp}.tar.bz2 -C /usr/local/samba/
```

Rename *.ldb.bak files in the 'private' directory back to *.ldb. With GNU find and Bash this can be done at once by:

```
# find /usr/local/samba/private/ -type f -name '*.ldb.bak' -print0 | while read -d $'\0' f ; do mv "$f" "${f%.bak}" ;
```

If your backup doesn't contain extended ACLs (see section About the samba_backup script, you have to run:

```
# samba-tool ntACL sysvolreset
```

If you use Bind as DNS backend, you have to fix the hardlinks for the DNS databases:

```
# samba_upgradedns --dns-backend=BIND9_DLZ
```

See DNS Backend BIND - New added DNS entries are not resolvable.

Now you can start samba and test if your restore was successful.

Hint: It is of course possible to restore single databases out of your backups, if you know which one is broken. But make sure, that some databases may be linked to others. So be careful that you don't get an inconsistent system! If you are unsure if your broken database relies on others, you should ask on the samba-technical (mailto:samba-technical@lists.samba.org) mailing list on <http://lists.samba.org>

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