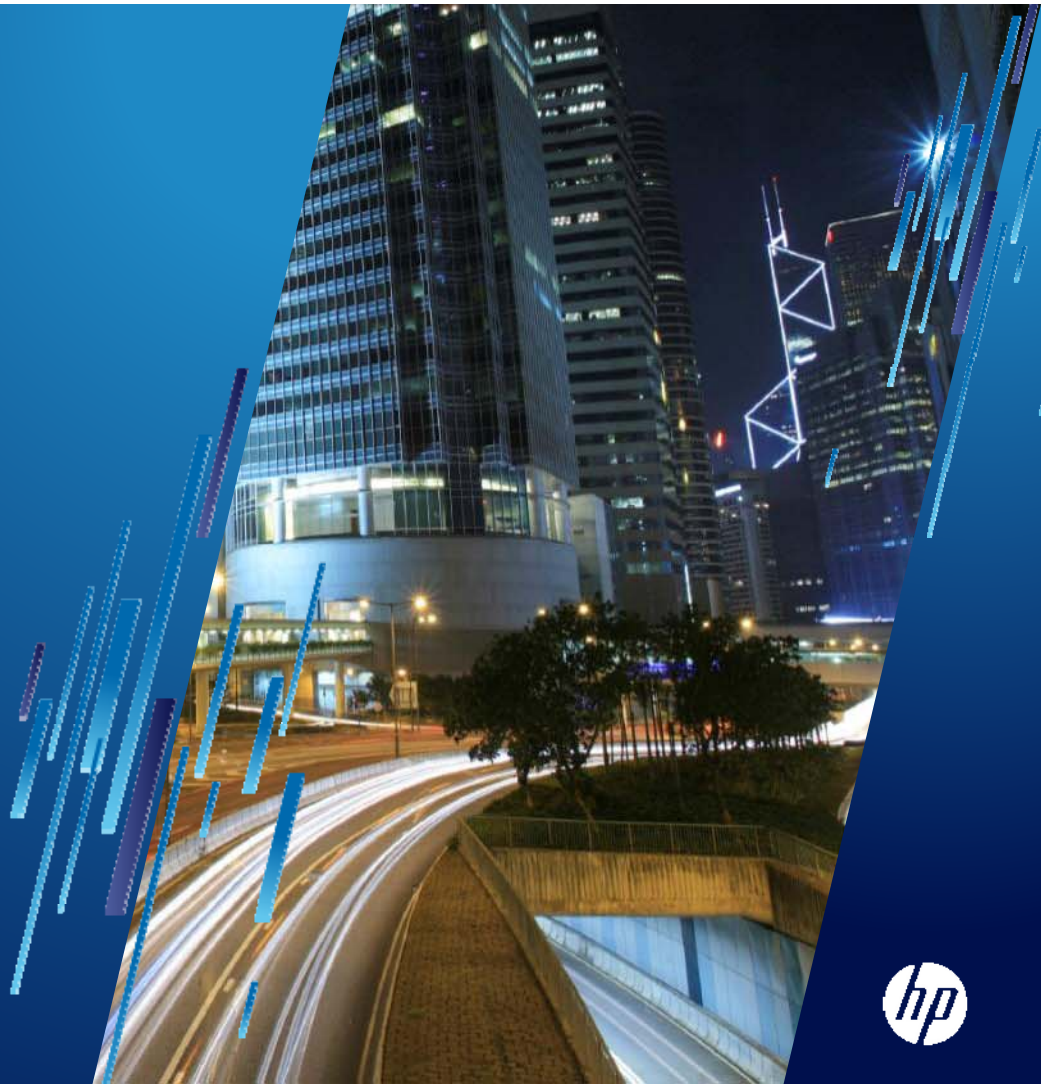
CIFS ON OPENVMS

Tips and Hints



Paul Bakker, Hans Hosang.
Platform Integration Competency Center.

Agenda

1. Advanced Server for OpenVMS
2. Cifs Versions including OpenVMS dependencies
3. Cifs V1.2 new features
4. ODS2 vs ODS5 filenames
5. Characterset configuration
6. Mapping OpenVMS resource identifiers to Windows groups
7. TDB files
8. Test commands
9. Testing configuration
10. Information

Advanced Server for OpenVMS

- New Version: V7.3B eco 1 (includes 21! Patches)
- New ps001 for V7.3B eco 1 to fix oplocking problems with Windows7 and Vista clients.
  - Creating a directory takes 30+ seconds!
- Latest official supported client: Vista! (Windows7 works as client for memberserver not as domain member in AS domain)
- For windows 2008R2 domain: Domain policy needs to be adjusted!
- Contact HP support.

Cifs Versions

- Current Version : V1.2 PS003
- Expected Version V1.2 eco 1 in November 2011 CD release.
- Important patches:
  - Latest OpenVMS patch kits
  - CRTL patchkit for OpenVMS V8.4 (downloaded from ftp.usa.hp.com)
    - Needed for shadow disks
    - Needed for problems of looping smbd processes (locking issue)
  - Kerberos patch. (downloaded from ftp site)
    - Only needed when security = ADS
    - Needed when users are member of many domain groups
    - Needed for W2k8R2 domain

Cifs V1.2 new features.

- Completely rewritten smbconfig
  - Preferable above swat.
    - Tuned for OpenVMS (clusters)
    - Do not mix usage Swat and smbconfig!
  - Split smb.conf in several different files
    - Smb.conf Contains call to all other .conf files and all share definitions
    - Core_smb.conf Name, Role, Winbind, logging and printing parameters, domain controller
    - Generic_smb.conf Wins Server, Character set, Print command
    - <nodename>_specific_smb.conf # of clients, interface
    - Admin_users_smb.conf defines Cifs priviledged users
- Smbmanage (configuration tools for users, groups and shares)

ODS2 vs ODS5 filenames

- On ODS5 one can use extended characters in filenames.
- ODS2 only supports uppercase.

Client	ODS2	ODS5	ODS2 to ODS5 converted filename
één.txt	__C9__C9N.TXT	één.txt	ÉÉN.TXT

To convert files from ODS2 volume to ODS5 naming format:

$ ods2_convert </disable=struct>* __C9__C9N.TXT

* = needed when file is copied to ODS5 from ODS2 source.

Character set configuration (1)

- Default CIFS configuration (smbconfig select ASCII)
  - Client = ASCII and Server = UTF-8

Filename

Client	Server	smbclient or smbstatus
ñöûé.XLS	Ã±Ã¶Ã»Ã©.XLS	C1C6C;C).XLS
____.XLS	ñöûé.XLS	____.XLS (file created by Adv Serv)

- Mark: client displays _ (underscore) when character can not be translated.

Character set configuration (2)

- smbconfig select CP850
  - Dos charset = CP850
  - Unix charset = ISO-8859-1

Filename

Client	Server	smbclient or smbstatus
ñöûé.XLS	ñöûé.XLS	qv{i.XLS
Ã±Ã¶Ã»Ã©.XLS	Ã±Ã¶Ã»Ã©.XLS	C1C6C;C).XLS (file created with defaults)

Character set configuration (3)

- smbconfig select CP850
  - Dos charset = CP850
  - Unix charset = ISO-8859-1
  - Display charset = ISO-8859-1

Filename

Client	Server	smbclient or smbstatus
ñöûé.XLS	ñöûé.XLS	ñöûé.XLS
Ã±Ã¶Ã»Ã©.XLS	Ã±Ã¶Ã»Ã©.XLS	Ã±Ã¶Ã»Ã©.XLS

- Need convert program when move from default to this configuration.

Mapping OpenVMS resource identifiers to Windows groups

- Can only be done using local groups

Mc authorize show/ident hansread

Name	Value	Attribute
HANSREAD	%X80123456	RESOURCE

$ net groupmap add unixgroup=hansread type="L" ntgroup=lhansread

- Creates a local group named lhansread
- Now add members:

$ net groupmap addmem <groupsid> <domain user/group sid>

Use wbinfo –n (--name-to-sid=name) to find <domain user/group sid>

Alternative: smbmanage ->

smbmanage

HP OpenVMS CIFS Server Management Main Menu

Management options:

1 - Manage Shares
2 - Manage Groups
3 - Manage Users
4 - Manage Account Policies

[E] - Exit

Enter CIFS Server management option: 2

smbmanage (2)

HP CIFS Server Group Management Menu

Group Management Options:

1 - List groups
2 - Add group
3 - Remove group
4 - List group members
5 - Add group members
6 - Remove group members

[E] - Exit

Enter group management option: 2

smbmanage (3) create local group

HP CIFS Server Group Account Creation Menu

1. CIFS Server NT group name (*):
2. OpenVMS resource identifier name (*):
3. Group account description:

* = required field

Enter item number or press Enter to accept current values [Done]: 1 2

Group name specifies a 1 to 256 character name for the group to be added. A group name cannot be identical to any other group or user name of the domain or server being administered.

Enter NT groupname: lhansread
Enter group name: hansread
No rid or sid specified, choosing a RID
Got RID 1002

smbmanage(4) add user /group to local group

HP CIFS Server Group Management Menu

Group Management Options:

1 - List groups
2 - Add group
3 - Remove group
4 - List group members
5 - Add group members
6 - Remove group members

[E] - Exit

Enter group management option: 5
Enter group name: lhansread
Enter group member name: amvw2k3\hansread

Added AMVW2K3\hansread to PWOP07\lhansread

smbmanage (5)

- smbmanage uses net groupmap commands.
- Alternative commands: Net rpc groupmap
- Advantage: can be used using names instead of sids
- Disadvantage: restrictions regarding interface limitations (command uses 127.0.0.1 interface)

TDB files (samba$root:[var.locks])

- Permanent files
  - Nt*.tdb
  - Share_info.tdb
  - Account_policy.tdb
  - Winbindd_idmap.tdb *
  - Group_mapping.tdb
  - Secrets.tdb
  - Registry.tdb
  - Passdb.tdb

  Make backup of these files (tdbbackup)

  *** This file is created based on history!**

- Temporary files (may be deleted)
  - Brlock.tdb
  - Browse.dat
  - Connections.tdb
  - Gencache.tdb
  - Locking.tdb
  - Messages.tdb
  - Sessionid.tdb
  - Netsamlogon_cache.tdb
  - Unexpected.tdb
  - Winbindd_cache.tdb

Test commands

- Smbver
- Pipe testparm –d0 –v |search sys$pipe <parameter>
- Smbshow
- Smbstatus
- Nmblookup
- Smbclient
- Net ads/rpc testjoin
- Net rpc info “-U” <domusername>
- Wbinfo

Testing configuration

- To test connectivity to local system use smbclient:

$ smbclient **–d5** - -list \\<servername> ← debug level 5 for command if failures

```
Domain=[AMVW2K3] OS=[OpenVMS] Server=[Samba 3.0.28a]
        Sharename       Type      Comment
        ---------       ----      -------
        kits            Disk
        testods5        Disk
        testods2        Disk
        IPC$            IPC       IPC Service (Samba 3.0.28a running on pwop07 (OpenVMS))
        GUEST           Disk      Users homes share

Domain=[AMVW2K3] OS=[OpenVMS] Server=[Samba 3.0.28a]
        Server               Comment
        ---------            -------
        AMVW2K3DC1
        PWOP07               Samba 3.0.28a running on pwop07 (OpenVMS)

        Workgroup            Master
        ---------            -------
        AMVW2K3              AMVW2K3DC1
```

Testing configuration (2)

- To test user access

  $ smbclient "-U" <username> \\<servername>\<sharename>
  Password:

  Domain=[AMVW2K3] OS=[OpenVMS] Server=[Samba 3.0.28a]
  smb: \> get XPADDR.TRC
  getting file \XPADDR.TRC of size 17173 as XPADDR.TRC (78.7 kb/s) (average 78.7 kb/s)

- Test computer account of Cifs server

  $ net ads/rpc testjoin ← ads: security=ads rpc: security=domain

- Name resolution problems using wins:

$ nmblookup -d0 "-U" 172.17.200.209 "-R" pwopclu
querying pwopclu on 172.17.200.209
172.17.200.174 pwopclu<00>
172.17.200.175 pwopclu<00>

Information

Support group:

Platform Integration Competency Center

Hans Hosang
Henk Sloot
Paul Bakker

FTP site:

ftp.usa.hp.com (15.192.32.78)

Username: pathwork

Password: Support9

THANK YOU