CIFS ON OPENVMS

Tips and Hints

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Agenda

1. Advanced Server for OpenVMS
2. Cifs Versions including OpenVMS dependencies
3. Cifs V1.2 new features
4. ODS2 vs ODS5 filenames
5. Character set 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.

<table>
<thead>
<tr>
<th>Client</th>
<th>ODS2</th>
<th>ODS5</th>
<th>ODS2 to ODS5 converted filename</th>
</tr>
</thead>
<tbody>
<tr>
<td>één.txt</td>
<td>__C9__C9N.TXT</td>
<td>één.txt</td>
<td>ÉÉN.TXT</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Client</th>
<th>Server</th>
<th>smbclient or smbstatus</th>
</tr>
</thead>
<tbody>
<tr>
<td>ñöûé.XLS</td>
<td>Ñ±Ñ¶Ñ”Ñ©.XLS</td>
<td>C1C6C;C).XLS</td>
</tr>
<tr>
<td>___.XLS</td>
<td>ñöûé.XLS</td>
<td>_____.XLS (file created by Adv Serv)</td>
</tr>
</tbody>
</table>

- 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

<table>
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<tr>
<th>Client</th>
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</thead>
<tbody>
<tr>
<td>ñöûé.XLS</td>
<td>ñöûé.XLS</td>
<td>qv{i.XLS</td>
</tr>
<tr>
<td>Ñ±Ñ¶Ñ»ñ©.XLS</td>
<td>Ñ±Ñ¶Ñ»ñ©.XLS</td>
<td>C1C6C;C).XLS (file created with defaults)</td>
</tr>
</tbody>
</table>
Character set configuration (3)

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

Filename

<table>
<thead>
<tr>
<th>Client</th>
<th>Server</th>
<th>smbclient or smbstatus</th>
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<tbody>
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</tr>
<tr>
<td>Ñ±Ñ¶Ñ»Ñ©.XLS</td>
<td>Ñ±Ñ¶Ñ»Ñ©.XLS</td>
<td>Ñ±Ñ¶Ñ»Ñ©.XLS</td>
</tr>
</tbody>
</table>

• 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

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>HANSREAD</td>
<td>%X80123456</td>
<td>RESOURCE</td>
</tr>
</tbody>
</table>

$ 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 ->
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\hansread
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 (tdbbbackup)

* 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 -l <servername>  \ debug level 5 for command if failures
```

---

**Domain=**[AMVW2K3]  **OS=**[OpenVMS]  **Server=**[Samba 3.0.28a]

<table>
<thead>
<tr>
<th>Sharename</th>
<th>Type</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>kits</td>
<td>Disk</td>
<td></td>
</tr>
<tr>
<td>testods5</td>
<td>Disk</td>
<td></td>
</tr>
<tr>
<td>testods2</td>
<td>Disk</td>
<td></td>
</tr>
<tr>
<td>IPC$</td>
<td>IPC</td>
<td>IPC Service (Samba 3.0.28a running on pwop07 (OpenVMS))</td>
</tr>
<tr>
<td>GUEST</td>
<td>Disk</td>
<td>Users homes share</td>
</tr>
</tbody>
</table>

---

**Domain=**[AMVW2K3]  **OS=**[OpenVMS]  **Server=**[Samba 3.0.28a]

<table>
<thead>
<tr>
<th>Server</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMVW2K3DC1</td>
<td></td>
</tr>
<tr>
<td>PWOP07</td>
<td>Samba 3.0.28a running on pwop07 (OpenVMS)</td>
</tr>
</tbody>
</table>

---

**Workgroup**

<table>
<thead>
<tr>
<th>Workgroup</th>
<th>Master</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMVW2K3</td>
<td>AMVW2K3DC1</td>
</tr>
</tbody>
</table>
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