

# OpenVMS Update & OpenVMS Common Internet File System based on SAMBA

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# HP OpenVMS CIFS - Introduction

- Based on Samba
  - Open Source/Free Software suite that provides file and print services to SMB/CIFS clients.
    - SMB/CIFS clients: i.e., Windows clients
  - Freely available under the GNU General Public License.
  - Ships with most UNIX and LINUX distributions
    - HP-UX CIFS/9000 server is Samba based
    - Well known, well documented – Books are published on Samba
  - Championed by HP
    - HP employees are a key part of Samba development
    - Samba team is excited to add OpenVMS support
  - Large community fixing bugs and adding features
    - 20 active participants world wide; 10-12 doing active checkins
- See <http://www.samba.org>

# HP OpenVMS CIFS – Introduction...

- Why the need:
  - Updates to ASV source code no longer available (MS & AT&T)
  - Newer releases from Microsoft (might) break Advanced Server (ASV)
  - Keep pace with new technology - implementing Active Directory, LDAP, new file systems etc.
  - Larger investments required to continue to support ASV and maintain pace with MS deliveries
  - Intention is to replace ASV with HP OpenVMS CIFS

# HP OpenVMS CIFS Introduction...

- Product Schedule
  - “Evaluation” Versions based on Samba V3.0.10 w/ Basic Samba functionality
    - Integrity - March 2006 & Alpha - May 2006
    - “Updated evaluation” kit released in October 2006
  - Production Version based on Samba V3.0.24
    - External Field Test – Q2 2007
    - EFT2 Update – end September (Friday 9/28)
      - Bugfixes and migration utility updates
    - Alpha/Integrity release – Q3 2007 (scheduled end of October)
      - Initial OpenVMS production release supported by HP
      - Includes WindBindD, LDAP password backend, SWAT
      - Performance improvements
- Release future production versions based on Samba V4.X
  - No schedule yet from Samba.org

# OpenVMS Production Version Support

- Advanced Server
  - V7.3-2 OpenVMS Alpha
  - V8.2 OpenVMS Alpha
  - V8.3 OpenVMS Alpha
  - OpenVMS “next”
- CIFS
  - V8.2-1 OpenVMS I64
  - V8.3 OpenVMS I64
  - V8.3-1H1 OpenVMS I64 (Nov 2007)
  - V8.2 OpenVMS Alpha
  - V8.3 OpenVMS Alpha
  - OpenVMS “next”

# HP OpenVMS CIFS Features

- File and Directory Services
  - Group Support
  - Supports different VMS File formats
  - File Access Auditing
  - Oplock support
- File & Directory Access Control
  - POSIX ACL support for files and directories
- File System Support
  - ODS-2 and ODS-5 File System support
  - NFS & DFS mounted disk file support

# HP OpenVMS CIFS Features

- Printer Services
  - Printer driver uploading/ downloading
  - Adding/deleting printers
  - Printer VMS queue support
  - DCPS Printing support
  - NT style, "Raw", "Text", "PS mode"
- Security
  - Support for POSIX ACLs
  - Support for Kerberos
  - Levels of authorization (user, share, password, domain)

# HP OpenVMS CIFS Features

- Network Browser Services
- Utilities
  - SMBControl, SMBStatus, PdbEdit, SMBClient
  - TDBBackup, TDBTool, TDBDump
  - TestParm, NMBLookup
  - ASV to HP OpenVMS CIFS migration utility
  - SWAT (Samba Web Administration Tool)
- Windows Client support
  - Windows 2000 & Later clients

# HP OpenVMS CIFS Features

- Interoperability
  - with Active Directory
  - with NT4 domain
- Domain Support
  - As Member Server in
    - Windows 2000, 2003, NT server as Primary Domain Controller
    - Advanced Server for VMS (Alpha) as Primary Domain Controller
  - As PDC
  - Trust Relationship support
- Transport Layer Support
  - TCP/IP support

# HP OpenVMS CIFS Features

- Dynamic Configuration File ( SMB.CONF) – 60s refresh
  - No need to restart HP OpenVMS CIFS server
- Authentication and Authorization
- External authentication support
- Name Resolution
- Multiple user through same connection using Terminal services
- Advanced cluster support
  - Access files from different nodes
  - Support Cluster Alias and failover as is supported by TCP/IP
  - Support Load Balancing as is supported by TCP/IP
- International character set support
- No license for HP OpenVMS CIFS Integrity – part of FOE, EOE and MCOE
- No license HP OpenVMS CIFS Alpha

# HP OpenVMS CIFS – Comparison with ASV

- Installation and Configuration
- HP OpenVMS CIFS
  - Support for INCLUDE parameter
    - Helps to work differently for different clients and shares.
  - Read configuration file every 60s or on new connection
    - Changes are dynamic
  - License not required
  - Consolidate Multiple servers into One. NetBIOS ALIAS parameter
  - Host user needs to be created (will be automated) for creating a user account
- ASV
  - Provides a configuration utility which guides the administrator through setup.

# HP OpenVMS CIFS – Comparison with ASV

- Windows Integration
- HP OpenVMS CIFS
  - Can join Active Directory Domain as Native Member
  - Can function as Microsoft DFS Server
  - Provides OpLocks on share level basis
  - Support for Level1 and Level2 Oplocks
- ASV
  - Can function as PDC for Windows NT BDC or a BDC for Windows NT PDC
  - Support for Level1 Oplocks

# HP OpenVMS CIFS – Comparison with ASV

- Protocol Support
- HP OpenVMS CIFS
  - Support for Kerberos
  - Support for LDAP
  - Supports TCP/IP
- ASV
  - Supports TCP/IP, DECnet, NetBEUI

# HP OpenVMS CIFS – Comparison with ASV

- Security
- HP OpenVMS CIFS
  - Allows access based on IP addresses or Network Interfaces
  - Can force file to be owned by a specific user or group regardless of who creates it
- ASV
  - Allows users to take ownership of files stored on ASV

# HP OpenVMS CIFS – Comparison with ASV

- Management Interface
- HP OpenVMS CIFS
  - Utilities
    - SWAT Utility
    - SMBClient, SMBControl, SMBstatus...
  - NET command. Equivalent to Windows command.
- ASV
  - Admin Utility
  - RegUtil

# HP OpenVMS CIFS – Comparison with ASV

- Tools and Utilities
- HP OpenVMS CIFS
  - SMBClient – Lists the shares
  - Better Logging/Debug options
- ASV
  - Ability to monitor client and server activity - pwmonitor

# CIFS Information and Feedback

- CIFS home page located at [http://h71000.www7.hp.com/network/CIFS\\_for\\_Samba.html](http://h71000.www7.hp.com/network/CIFS_for_Samba.html)
- Feedback/support hot link button located at bottom of CIFS web page.
  - If you have any issues preventing production use of CIFS on Alpha/Integrity
  - Tell me today!
- Business Manager – Shay Johnson
- Program Manager/Technical leader - Gaitan D'Antoni
  - Email: [Gaitan.dantoni@hp.com](mailto:Gaitan.dantoni@hp.com)
  - Telephone: 603-884-0594

# Q & A