



SAMBA

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Venue: Polokwane
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Overview

- **Background**
- **What Exactly is Samba?**
- **Why Deploy Samba?**
- **Management and Administration**
- **Questions and Answers**



Background

- Samba is an Open Source suite and have been around since 1992
- At first ,Samba only offered the possibility to use file and print services via SMB/CIFS
- Samba suite enables the interoperability of Linux/Unix-based systems with services and protocols used and developed by Microsoft
- The release of Samba Version 4 in December 2012 come with the implementation of Active Directory Services
- Since this development ,Samba cannot only join as members of an Active Directory Domain but can also take the Role of a Domain Controller
- Client Systems such as Windows or Macs can now join an Active Directory Domain powered by Samba by the same mechanism used on a Microsoft Windows Active Directory domain



What Exactly is Samba

- Samba Active Directory manages and logically stores information about networks resources, users, groups as well as application data.
- Samba Active Directory is made up of 3 Core Components namely DNS, Kerberos and LDAP directory services
- Samba Active Directory provides both Authentication and Authorization for your network.



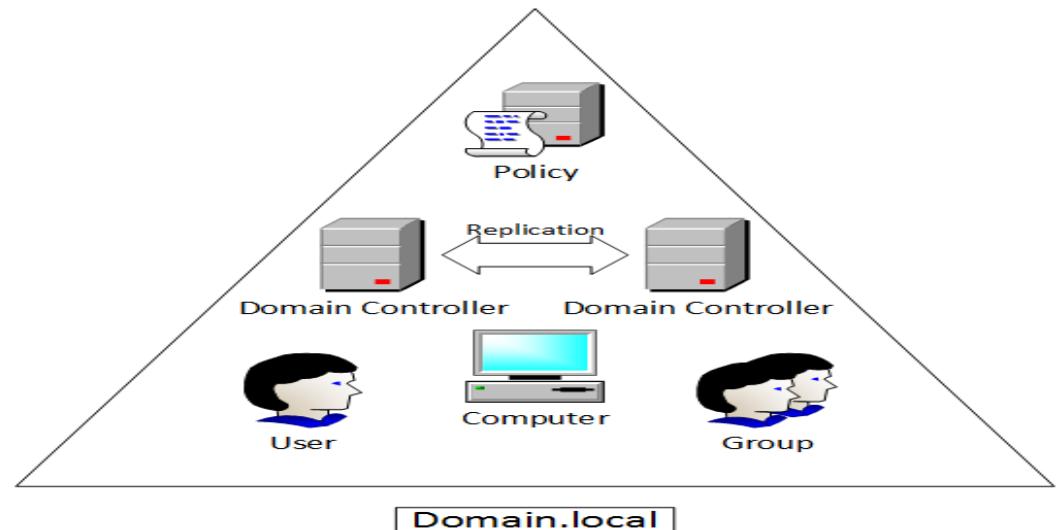
Why Deploy Samba Active Directory

- Centralized directory
- Scalability
- Samba Active Directory integrates security by authenticating logons and controlling access to network resources.
- IT can also provide a platform for Single Sign On(SS) to compatible applications with Samba Active Directory



Management and Administration of Samba Domain

- Samba comes with a tool named samba-tool that can be used to do Administration on Samba Active Directory
- The Samba based Active Directory Domain can also be managed by Microsoft Management Console i.e Samba Internal DNS, Group Policy and Domain Administration as depicted below.



```
[root@LCXDC01 ~]# /usr/local/samba/bin/samba-tool help
Usage: samba-tool <subcommand>

Main samba administration tool.

Options:
  -h, --help          show this help message and exit

Version Options:
  -V, --version      Display version number

Available subcommands:
  dbcheck           - Check local AD database for errors.
  delegation        - Delegation management.
  dns               - Domain Name Service (DNS) management.
  domain           - Domain management.
  drs               - Directory Replication Services (DRS) management.
  dsacl            - DS ACLs manipulation.
  fsmo             - Flexible Single Master Operations (FSMO) roles management.
  gpo              - Group Policy Object (GPO) management.
  group            - Group management.
  ldapcmp          - Compare two ldap databases.
  ntacl            - NT ACLs manipulation.
  processes        - List processes (to aid debugging on systems without setproctitle
).
  rodc             - Read-Only Domain Controller (RODC) management.
  sites            - Sites management.
  spn              - Service Principal Name (SPN) management.
  testparm        - Syntax check the configuration file.
  time             - Retrieve the time on a server.
  user             - User management.
```



- Console Root
 - Active Directory Users and Computers [lcxdc01.lcx.co.za]
 - Saved Queries
 - lcx.co.za
 - Users
 - Computers
 - Builtin
 - Domain Controllers
 - ForeignSecurityPrincipals
 - HeadOffice
 - Namakgale
 - Mahwelereng
 - DNS
 - 192.168.1.30
 - Forward Lookup Zones
 - lcx.co.za
 - _msdcs.lcx.co.za
 - Reverse Lookup Zones
 - Conditional Forwarders
 - Group Policy Management
 - Forest: lcx.co.za
 - Domains
 - lcx.co.za
 - Default Domain Policy
 - Domain Controllers
 - HeadOffice
 - Mahwelereng
 - Namakgale
 - Group Policy Objects

Name	Type	DC T
LCXDC01	Computer	

LCXDC01 Properties

General | Operating System | Member Of | Delegation | Location | Managed By

Name:

Version:

Service pack:

OK Cancel Apply Help



Active Directory Users and Computers [lxc01.lcx.co.za]

- > Saved Queries
- ▼ lcx.co.za
 - > Users
 - > Computers
 - > Builtin
 - > Domain Controllers
 - > ForeignSecurityPrincipals
 - ▼ HeadOffice
 - Users**
 - > Servers
 - > Computers
 - > Namakgale
 - > Mahwelereng

Name	Type	Description
Meshack Maja	User	
Mapula Motau	User	
Seipati Mokoena	User	
Nicholas Yiangou	User	
Rocky Selepe	User	
Lesiba Maraba	User	
Nndwa Humbe	User	
Maite Baiao	User	



Active Directory Users and Computers [lxc01.lcx.co.za]

- > Saved Queries
- ▼ lcx.co.za
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 - > Computers
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 - > ForeignSecurityPrincipals
 - ▼ HeadOffice
 - Users
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Name	Type	Description
MAJAMHPLPT	Computer	
SEIPATIASUS	Computer	
SELEPEPC	Computer	
THULANIX	Computer	



DNS
192.168.1.30
Forward Lookup Zones
lcx.co.za
_sites
_tcp
_udp
DomainDnsZones
ForestDnsZones
_msdcs.lcx.co.za
Reverse Lookup Zones
Conditional Forwarders

Name	Type	Data	Timestamp
_sites			
_tcp			
_udp			
DomainDnsZones			
ForestDnsZones			
(same as parent folder)	Start of Authority (SOA)	[13], lcxdc01.lcx.co.za., ho...	9/12/2017 12:00:00 PM
(same as parent folder)	Name Server (NS)	lcxdc01.lcx.co.za.	static
(same as parent folder)	Host (A)	192.168.1.30	static
bigin01	Host (A)	192.168.1.131	9/5/2017 9:00:00 AM
bigin02	Host (A)	192.168.1.60	9/5/2017 9:00:00 AM
bigin03	Host (A)	192.168.1.55	9/5/2017 9:00:00 AM
bigin04	Host (A)	192.168.1.74	9/5/2017 9:00:00 AM
bigin05	Host (A)	192.168.1.106	9/5/2017 9:00:00 AM
lcxcloud	Host (A)	192.168.1.20	9/12/2017 12:00:00 PM
lcxdc01	Host (A)	192.168.1.30	static
LCXWinSrv01	Host (A)	192.168.1.102	static
mail	Host (A)	192.168.1.25	9/11/2017 3:00:00 PM
mail	Mail Exchanger (MX)	[10] orchid.lcx.co.za.	9/11/2017 3:00:00 PM
MajaMHPLpt	Host (A)	192.168.1.130	static
orchid	Host (A)	192.168.1.25	8/29/2017 3:00:00 PM
orchid	Mail Exchanger (MX)	[10] orchid.lcx.co.za.	8/29/2017 3:00:00 PM
seipatiasus	Host (A)	192.168.1.77	static
Selepepc	Host (A)	192.168.1.127	static
thulaniX	Host (A)	192.168.1.117	static



- Group Policy Management
 - Forest: lcx.co.za
 - Domains
 - lcx.co.za
 - Default Domain Policy
 - Domain Controllers
 - Default Domain Controllers Policy
 - HeadOffice
 - Computers
 - Servers
 - Users
 - Mahwelereng
 - Namakgale
 - Group Policy Objects
 - WMI Filters
 - Starter GPOs
 - Sites
 - Group Policy Modeling
 - Group Policy Results

Default Domain Policy

Scope **Details** Settings Delegation

Links

Display links in this location:

The following sites, domains, and OUs are linked to this GPO:

Location	Enforced	Link Enabled	Path
lcx.co.za	No	Yes	lcx.co.za

Security Filtering

The settings in this GPO can only apply to the following groups, users, and computers:

- Name
 - Authenticated Users

WMI Filtering

This GPO is linked to the following WMI filter:

Conclusion

The Samba Project is a continuous project looking at new enhancements and improving Samba namely on this features:

- Sysvol replication
- Cross-forest Trusts
- Support for Windows Server 2016

Benefits of Using Samba

- Software Available
- No License Cost or Royalty Payments
- Can Co-Exist with Microsoft Windows AD





<https://www.facebook.com/LimpopoCon>

<https://www.facebook.com/OpenConnexion>



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<http://openconnexion.co.za/>