

Deployment Guide for NSS AD[™]

Open Enterprise Server 2015

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Novell.

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Contents

About This Guide	5
1 Overview of NSS AD	7
1.1 Introduction to NSS AD	7
1.2 Features and Functionality	8
1.2.1 Unified Authorization Model	8
1.2.2 Unified File Experience System	8
1.2.3 Understanding the Differences in OES and OES 2015	8
1.3 Benefits of NSS AD	9
2 Planning for NSS AD	11
2.1 Hardware Requirements	11
2.2 Software Requirements	11
2.3 Planning for NSS AD Setups	11
2.3.1 Planning for eDir,AD,IDM scenario	11
2.3.2 Planning for AD	11
2.3.3 Planning for eDir and AD scenarios	12
2.3.4 Upgrade and Migrate Considerations	12
2.3.5 Cluster Preparations	12
3 Installing and Configuring NSS AD	13
3.1 Installing NSS with AD	13
4 Administrative Tasks	15
4.1 Storage Administration	15
4.2 Rights Management	15
4.2.1 Rights Management Utility	15
4.2.2 ACL Mapping Tool	15
4.3 User Management	15
4.3.1 AD User Management	16
4.3.2 NIT	16
4.4 Auditing	16
4.5 Backup and Antivirus	16
4.6 License Checker Tool	16
5 Troubleshooting	17

About This Guide

This documentation describes how to use Novell Storage Services File System (NSS) to manage pools, volumes, and software RAIDs on a Novell Open Enterprise Server (OES) 11 Support Pack 2 (SP2) Server.

- ♦ [Chapter 1, “Overview of NSS AD,” on page 7](#)
- ♦ [Chapter 2, “Planning for NSS AD,” on page 11](#)
- ♦ [Chapter 3, “Installing and Configuring NSS AD,” on page 13](#)
- ♦ [Chapter 4, “Administrative Tasks,” on page 15](#)
- ♦ [Chapter 5, “Troubleshooting,” on page 17](#)

Audience

This guide is intended for network administrators. It is intended for security administrators or anyone who is using NSS storage objects and is responsible for the security of the system.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comment feature at the bottom of each page of the online documentation.

Documentation Updates

The latest version of this *NSS File System Administration Guide for Linux* is available on the [OES documentation website](#).

Additional Documentation

For information about planning and implementing storage solutions in Novell Open Enterprise Server 11, see the following:

- ♦ [OES 11 SP2: Storage and File Services Overview](#) describes typical requirements for system storage, and identifies the various storage products and services in Novell Open Enterprise Server 11 that address those requirements.

For more information about services referenced in this guide, see the following:

- ♦ The [OES 11 SP2: Novell Distributed File Services Administration Guide for Linux](#) describes how to configure and manage DFS services for NSS volumes.
- ♦ The [OES 11 SP2: Dynamic Storage Technology Administration Guide](#) describes how to configure NSS volumes as shadow volumes by using Dynamic Storage Technology.
- ♦ Novell Archive and Version Services provides interval-based archiving for user data. See the [OES 11 SP2: Novell Archive and Version Services Administration Guide](#).
- ♦ The [OES 11 SP2: File Systems Management Guide](#) describes the Novell trustee model and how to configure file system trustees, trustee rights, and attributes for NSS volumes.

- ♦ The *OES 11 SP2: NCP Server for Linux Administration Guide* describes how to manage NCP connections for NSS volumes.
- ♦ The *OES 11 SP2: Novell Linux User Management Administration Guide* describes how to Linux-enable users.
- ♦ The *NDK: Virtual File Services* (http://www.novell.com/developer/ndk/virtual_file_services.html) describes the software APIs for creating software applications and scripts to manage NSS volumes and services on Linux and NetWare.
- ♦ The *NDK: Novell Storage Architecture Component (Media Manager and NWPA)* (http://www.novell.com/developer/ndk/storage_architecture_components_%28media_manager_and_nwpa%29.html) describes software APIs for creating storage-related applications.
- ♦ *Novell Storage Services Error Codes* (<http://www.novell.com/documentation/nwec/nwec/data/al3s3ui.html>)
- ♦ The *SLES 11: Storage Administration Guide* (http://www.suse.com/documentation/sles11/stor_admin/?page=/documentation/sles11/stor_admin/data/bookinfo.html) describes storage services such as the Logical Volume Manager (LVM), UUIDs, Linux multipath I/O for devices; and Linux software RAID 0, 1, 5, 6, and 10.
- ♦ *Logical Volume Management for Linux* documentation (<http://sourceware.org/lvm2/>).

1 Overview of NSS AD

This section describes benefits and key features of NSS AD.

- ♦ [Section 1.1, “Introduction to NSS AD,” on page 7](#)
- ♦ [Section 1.2, “Features and Functionality,” on page 8](#)
- ♦ [Section 1.3, “Benefits of NSS AD,” on page 9](#)

1.1 Introduction to NSS AD

This section describes about the current implementation and the new implementation i.e. Before Vs After Scenario. This section describes different aspects of the implementation such as File Access, Administration in a Before Vs After Scenario. For eg:

Current Implementation

File Access:

- ♦ Windows can use CIFS and map or use Windows Client via NCP
- ♦ Mac use AFP or CIFS to map the network drives

Administration:

- ♦ Access (giving rights and permissions) mostly using Novell Client. iMan also has the capability
- ♦ Volume creation etc. using nssmu or iman

New Implementation

File Access: Win world users (whoever is going through AD) can access only windows servers. Now we are creating a bridge between eDir and AD. We are enabling NSS file system also to accept AD users. NCP and AFP cannot be used. Only CIFS can be used. With CIFS, from a Win workstation, a Win user who is authenticated to AD can directly come and access OES NSS volume. Earlier this was not possible. From a windows client you could access earlier also but you needed to log in to eDirectory. Now, you can log in to AD but still access NSS volumes.

Administration: Using rights management tool/ACL tool.

1.2 Features and Functionality

This section describes the various features and functionality of NSS AD.

- ◆ [Section 1.2.1, “Unified Authorization Model,” on page 8](#)
- ◆ [Section 1.2.2, “Unified File Experience System,” on page 8](#)
- ◆ [Section 1.2.3, “Understanding the Differences in OES and OES 2015,” on page 8](#)

1.2.1 Unified Authorization Model

As per new architecture, one copy of ACLs shared between CIFS and NSS (This is for both eDir and AD users) and it is maintained in NSS. But NCP still has a diff copy.

The way NSS and NCP work is going to be the same. For example, if trustee changes are triggered using imanager, it actually triggers it using NSS and NSS will send an event to update NCP. If it is triggered thru novell client, then NCP server gets notified first, it would update its copy and notify NSS. So, interactions between NCP and NSS did not undergo any change.

How will this benefit the customer in terms of out of sync issues etc.

1.2.2 Unified File Experience System

NIT provides UID mgmt. It is an identity broker for both edir and AD. If a UID does not exist in the directory sources it would generate it. NIT serves two purposes:

- ◆ There are multiple pieces of identity for a single user object (UID, SID, GUID, DN). It would provide an interface where you can get a mapping ie. u can go with one piece of info and get the other piece of info.
- ◆ U also need a UID for the actual authorization to work.

How is IDS/NIT going to help the customer?

From a management standpoint users don't have to worry about LUM-enabling for the eDir world cause the NIT piece will transparently take care of it. Users will see a consistent exp of CIFS access. They don't have to know or worry about LUM.

NIT Manpages

Brief about NIT and the need for it.

1.2.3 Understanding the Differences in OES and OES 2015

The table below explains the different aspects of your implementation in the existing network and how it differs in the new implementation scenario:

Table 1-1 *Features and Functionality*

Features	Current Implementation	New Implementation
File Access	CIFS, AFP	CIFS

Features	Current Implementation	New Implementation

1.3 Benefits of NSS AD

NSS AD provides the following benefits:

- ♦ This will make OES very secure
- ♦ More reliability
- ♦ Will Reduce the administrative complexity
- ♦ Kerberos-based authentication.

2 Planning for NSS AD

Use the information in this section to plan your NSS AD deployment.

- ♦ [Section 2.1, “Hardware Requirements,” on page 11](#)
- ♦ [Section 2.2, “Software Requirements,” on page 11](#)
- ♦ [Section 2.3, “Planning for NSS AD Setups,” on page 11](#)

2.1 Hardware Requirements

This section describes the hardware requirements that your system must meet

2.2 Software Requirements

This section describes the software requirements for installing and configuring NSS AD.
eDir versions etc.

2.3 Planning for NSS AD Setups

Describes the planning required for NSS AD setups.

- ♦ [Section 2.3.1, “Planning for eDir,AD,IDM scenario,” on page 11](#)
- ♦ [Section 2.3.2, “Planning for AD,” on page 11](#)
- ♦ [Section 2.3.3, “Planning for eDir and AD scenarios,” on page 12](#)
- ♦ [Section 2.3.4, “Upgrade and Migrate Considerations,” on page 12](#)
- ♦ [Section 2.3.5, “Cluster Preparations,” on page 12](#)

2.3.1 Planning for eDir,AD,IDM scenario

eDir IDM AD, we could have common name to be the primary key for synchronization between eDir and AD. Common name would be used to create a user there and it is also used to sync. You can also use UID, SAM account and so on.

2.3.2 Planning for AD

- a)Kerberos, DNS settings, OES server should be part of the same DNS server as that of AD
- b)What is the impact of ADC and PDC.

2.3.3 Planning for eDir and AD scenarios

Describes what is needed in an eDir and AD scenario.

2.3.4 Upgrade and Migrate Considerations

a)clients supported (NCL, Windows Client should anything be done on the client side?)

b)preparation work: schema extension, certificated related.

c)planning the media upgrade

d)NIT UID range mapping

2.3.5 Cluster Preparations

Describes what is needed in a cluster setup.

3 Installing and Configuring NSS AD

This section describes how to install and configure NSS with AD.

3.1 Installing NSS with AD

<link to NSS guide>

4 Administrative Tasks

This section identifies the various tools for managing the Novell Storage Services file system. Storage administration still needs imanager but for file access we no longer need iManager.

- ♦ [Section 4.1, “Storage Administration,” on page 15](#)
- ♦ [Section 4.2, “Rights Management,” on page 15](#)
- ♦ [Section 4.3, “User Management,” on page 15](#)
- ♦ [Section 4.4, “Auditing,” on page 16](#)
- ♦ [Section 4.5, “Backup and Antivirus,” on page 16](#)
- ♦ [Section 4.6, “License Checker Tool,” on page 16](#)

4.1 Storage Administration

4.2 Rights Management

Describes tools used for rights management aspects.

- ♦ [Section 4.2.1, “Rights Management Utility,” on page 15](#)
- ♦ [Section 4.2.2, “ACL Mapping Tool,” on page 15](#)

4.2.1 Rights Management Utility

About rights management utility with links to NSS guide.

4.2.2 ACL Mapping Tool

About ACL mapping tool with links to NSS guide

4.3 User Management

Describes user management aspects.

- ♦ [Section 4.3.1, “AD User Management,” on page 16](#)
- ♦ [Section 4.3.2, “NIT,” on page 16](#)

4.3.1 AD User Management

About AD user management using MMC with links to microsoft documentation.

4.3.2 NIT

Brief about NIT with link to manpages in NSS guide.

4.4 Auditing

How to audit the servers.

4.5 Backup and Antivirus

About backup and antivirus.

4.6 License Checker Tool

How to use the license tool if it is part of OES.

5 Troubleshooting

This section describes some issues you might experience using Novell Storage Services (NSS) with AD and provides suggestions for resolving or avoiding them.

For additional troubleshooting information, see the [Novell Support Web site \(http://support.novell.com\)](http://support.novell.com).

