



What's New in FreeNAS 9.3

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SCALE, February 21, 2015



What is FreeNAS?

Open source NAS (network attached storage) based on FreeBSD (nanoBSD) and released under a 2-clause BSD license

9.3-STABLE is the latest version



Core Features

Uses OpenZFS, a self-healing file system well suited for storage

Built-in file sharing protocols include Appletalk, NFS, and CIFS

Supports access through FTP/SFTP, SSH, and iSCSI



Core Features

Integration with OpenLDAP, Active Directory, NIS

Automated, secure replication via rsync/ssh

Automated ZFS snapshots and scrubs

Front-ends to cron, sysctls, loader.conf

Reporting graphs, scheduled S.M.A.R.T. tests,
automated alerts, UPS



Core Features

Link aggregation, failover, and VLAN support

DDNS, SNMP, and TFTP support

Control panel to stop/start and view the status of services

Supports OSX Time Machine and Windows Shadow Copies

Core Features



OS is installed on USB stick/CF/SSD and is separate from data on storage disks

Upgrades keep a backup of the old OS, allowing for rollback

Administrative GUI accessed through a web browser; there is a web shell for command line operations

Online Users Guide published with each software release and updated as new features added

So, What's New?

A yellow sticky note is pinned to the dark blue background with two red pushpins at the top center. The note contains the text 'Take a look at What's New!' in a dark blue, sans-serif font.

Take a look
at
What's New!



Boot Environments!

Boot device formatted with ZFS, boot device mirroring support, boot menu which supports multiple boot environments (BEs)

Boot Manager in GUI allows you to create BEs on demand and prune old BEs

New Update Manager automagically creates a new boot environment when updating the system

Revert to a previous version of OS by selecting from boot menu



Boot Manager

System

Information General **Boot** Advanced Email System Dataset Tunables Update CAs Certificates

Create Scrub Boot Status **Boot Volume Condition: HEALTHY**

Automatic scrub interval (in days)

Name	Active	Created
default	On Reboot, Now	2015-02-03 14:05:00 GMT
Initial-Install		2015-02-03 14:07:00 GMT

Rename Delete Clone



Boot Menu

GNU GRUB version 2.02~beta2

```
*FreeNAS (default) - 2015-02-09 02:54
FreeNAS (Initial-Install) - 2015-02-09 02:56
FreeNAS (Wizard-2015-02-10_06:18:23) - 2015-02-10 06:18
```

Use the ↑ and ↓ keys to select which entry is highlighted.
Press enter to boot the selected OS, 'e' to edit the commands
before booting or 'c' for a command-line.

No More Point Releases!



New Update Manager supports tracking of multiple “trains”

As new drivers, features, bug fixes become available for train(s) being tracked, Alert is issued

Administrator decides when to apply signed updates

No longer have to manually download upgrade files and checksums

Update Manager

System

Information General Boot Advanced Email System Dataset Tunables **Update** CAs Certificates

Automatically check for updates

Current Train: FreeNAS-9.3-STABLE (Installed OS) Manual Update

Update Server: <http://update.freenas.org/FreeNAS>

Apply Pending Updates Check Now Verify Install

Pending Updates

Name

FreeNAS-9.3-STABLE ▼

- FreeNAS-9.3-Nightlies
- FreeNAS-9.3-STABLE**
- FreeNAS-10-Nightlies

Train Descriptions

Update Manager

Check Now

[ReleaseNotes](#)

[ChangeLog](#)

Changelog:

- #7176 Fix syntax error in ctl.conf generation
- #7229 Make sure AFP share name is unique
- #7267 Increase prefix length choices for IPv6
- f84e770 Fix multiple ntp vulnerabilities.
- fc0a540 Resolve USB driver identification conflict.
- 52dfc34 Regenerate usb.conf .
- 7c0ec97 Do not count RCTD bit set as an error.

The following packages will be downloaded:

- Upgrade: base-os-9.3-STABLE-0474467-f8ed4e8-663e7c0 -> base-os-9.3-STABLE-23575de-f84e770-663e7c0
- Upgrade: FreeNASUI-9.3-STABLE-0474467-f8ed4e8-663e7c0 -> FreeNASUI-9.3-STABLE-23575de-f84e770-663e7c0

Apply updates after downloading (The system will reboot)

Do you want to continue?

OK Cancel



Configuration Wizard

Starts automatically after new installation, available any time as Wizard in GUI

Can create/import ZFS pool, configure directory services, create shares and their permissions, and configure email address to receive alerts

FreeNAS system can be up and running in minutes; can still use rest of UI to fine-tune initial settings

Configuration Wizard

Wizard X

Pool Name:

Purpose

- Automatic
- VMWare (RAID 10: Good Reliability, Good Performance)
- Backups (RAID Z2: Best Reliability, Less Storage)
- Media (RAID Z1: Less Reliability, More Storage)
- Logs (RAID 0: No Reliability, Max Performance / Storage)

Configuration Wizard

Wizard ✕

Share name:

Purpose

Windows (CIFS) Allow Guest

Mac OS X (AFP) Time Machine

Generic Unix (NFS)

Block Storage (iSCSI) Size:

Name
windows_guest
my_timemachine
nfs_share
iscsi

Configuration Wizard

Wizard [Close]

Console messages:	<input type="checkbox"/> 
Root E-mail:	<input type="text"/> 
From email:	<input type="text" value="root@freenas.local"/> 
Outgoing mail server:	<input type="text"/> 
Port to connect to:	<input type="text" value="25"/> 
TLS/SSL:	<input type="text" value="Plain"/> 
Use SMTP Authentication:	<input type="checkbox"/>
Username:	<input type="text"/> 
Password:	<input type="password"/>
Password confirmation:	<input type="password"/> 



Simplified UI

UI has been organized to make it easier to find configuration settings

Configuration screens only show mandatory or most used options; settings which are optional or intended for advanced usage scenarios are now in Advanced Mode

Tasks section has been added for configuring scheduled tasks



Simplified UI



- Account
- System
- Tasks
- Network
- Storage
- Directory
- Sharing
- Services
- Plugins
- Jails
- Reporting
- Wizard
- Help
- Alert

expand all collapse all

- Account
- System
- Tasks
 - Cron Jobs
 - Init/Shutdown Scripts
 - Rsync Tasks
 - S.M.A.R.T. Tests
- Network
- Storage
- Directory Service
- Sharing
- Services
- Plugins
- Jails
- Reporting
- Wizard
- Display System Processes
- Shell
- Log Out
- Reboot
- Shutdown

System

- Information
- General
- Boot
- Advanced
- Email
- System Dataset
- Tunables
- Update
- CAs
- Certificates

System Information

Hostname	freenas.local	Edit
Build	FreeNAS-9.3-M4-03ca325-x64	
Platform	Intel(R) Core(TM) i5-2520M CPU @ 2.50GHz	
Memory	8166MB	
System Time	Mon Oct 13 10:39:03 PDT 2014	
Uptime	10:39AM up 1 min, 0 users	
Load Average	1.27, 0.54, 0.22	

Certificate Manager



Used to create or import a Certificate Authority

Used to create or import certificates and generate certificate signing requests

Imported/created certificates are automatically added to the drop-down Certificate menus for the services that support SSL/TLS

Certificate Manager

System

Information General Boot Advanced Email System Dataset Tunables Upgrade **CAs** Certificates

Import CA Create Internal CA Create Intermediate CA

Name	Internal	Issuer	Certificates	Distinguished Name	From	Until
No entry has been found						

Certificate Manager

System

Information General Boot Advanced Email System Dataset Tunables Upgrade CAs Certificates

Import Certificate Create Internal Certificate Create Certificate Signing Request

Name	Issuer	Distinguished Name	From	Until
No entry has been found				



WebDAV

Allows authenticated users to browse the contents of the specified volume, dataset, or directory from a web browser

Can specify authentication type, password, port number, and whether or not to use/force encryption



Updated Services

Kernel iSCSI adds support for VMWare VAAI primitives (such as unmap and threshold warning), Microsoft ODX acceleration, and Windows 2012 clustering

Kerberized NFSv4 support

LLDP for Ethernet device discovery

SSSD for multiple directory services support

SNMP now uses Net-SNMP



Miscellaneous

Ability to configure rc.conf variables from GUI

ZFS pool upgrades and growing zvol-based LUNs can now be performed from the GUI

GUI now supports IPv6

Kerberos Realms and Kerberos Keytabs can be configured in the GUI and will be automatically added to the Realm and Keytab drop-down menus for Active Directory and LDAP



Resources

Website: <http://www.freenas.org>

Forums: <http://forums.freenas.org>

Bug tracker: <http://bugs.freenas.org>

Docs: <http://doc.freenas.org/9.3>

IRC: #freenas on Freenode



Questions

Contact:

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URL to Slides:

<http://slideshare.net/dlavigne/scale2015>