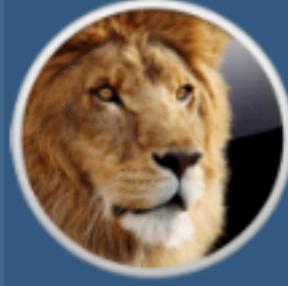
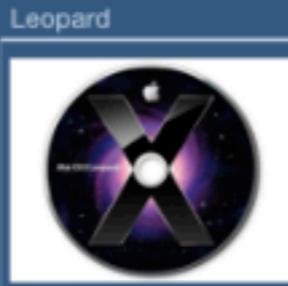


How Lion has changed Mac OS X

Services, features, and capabilities

Justin Rummel
Sr. Project Manager
Qivliq Commercial Group
@justinrummel

Randy Saeks
Network Manager
Northbrook / Glenview School District 30
@rsaeks



1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 OS X Timeline



Rhapsody



Cheetah



Puma



Panther



Jaguar



Tiger



Leopard



Snow Leopard



2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

2014

2015

2016

2017

2018

2019

2020

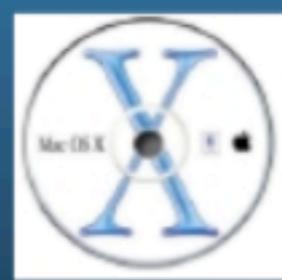
Rhapsody



Cheetah



Puma



Leopard



Leopard



Snow Leopard



Lion



2000

2000

2001

2002

2003

2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

OS X Mavericks



Puma



Panther



Leopard



Snow Leopard



Leopard



Rhapsody



Jaguar



1999

2000

2001

2002

2003

2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

OS X Preview

About This Mac



Mac OS X Server

Version 10.2.8

Memory: 1.38 GB
Processor: 400 MHz PowerPC G4

[More Info...](#)

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Utilities

Back Forward View Computer Home Favorites Applications Search

41 items, 56.89 GB available

- Open Directory Assistant
- Print Center
- Process Viewer
- Server Assistant
- Server Monitor
- Server Settings
- Server Status
- Set SLP Neighborhood
- Stuffit Expander
- Terminal
- Workgroup Manager

The Dock contains the following icons from left to right: Launchpad, Safari, System Preferences, Workgroup Manager, Server Status, Server Settings, Server Monitor, Stuffit Expander, and Trash.

jaguar.justinrummel.net

File & Print General Internet Network

Apple FTP Windows NFS Print

Service Status: 0 Running



Server Status:jaguar.justinrummel.net:Directory Servers

Workgroup Manager Connect Reconnect Disconnect Refresh New Window

Service

Overview Logs

Devices & Services

- jaguar.justinrummel.net
 - AppleFile
 - DHCP-NetBoot
 - Directory Servers**
 - DNS
 - FTP
 - Firewall
 - Mail
 - NFS
 - Print
 - QT Streaming
 - Web
 - Windows

Directory Services are: Not available

Lookup Server (lookupd) is: Not available

NetInfo Server (netinfod) is: Not available

LDAP Server (slapd) is: Not available

Password Server is: Not available

Active Services Only



Workgroup Manager: jaguar.justinrummel.net

Status Sharing Accounts Preferences New Record Delete Connect Disconnect Refresh New Window

Basic Advanced Groups Home Mail Print

Name: Schoun Vegan
 Short Names: schounvegan User ID: 1028
 Password:
 Verify:
 User can administer the server
 administer this directory domain Privileges...

Account Summary
 Location: jaguar.justinrummel.net/NetInfo/root
 Home: /Network/Servers/Jaguar/Users/schounvegan
 Primary Group: (1002)
 Mail: No mail service for this user
 Print: Disabled
 Password: Basic

At: /NetInfo/root Presets: None Revert Save

- Name
- Andre LeLimb
- Avery Day
- Carrie Onn
- Franklin Beans
- Schoun Vegan
- Server Admin
- Simon Wheatgerm



network @ jaguar.justinrummel.net - /

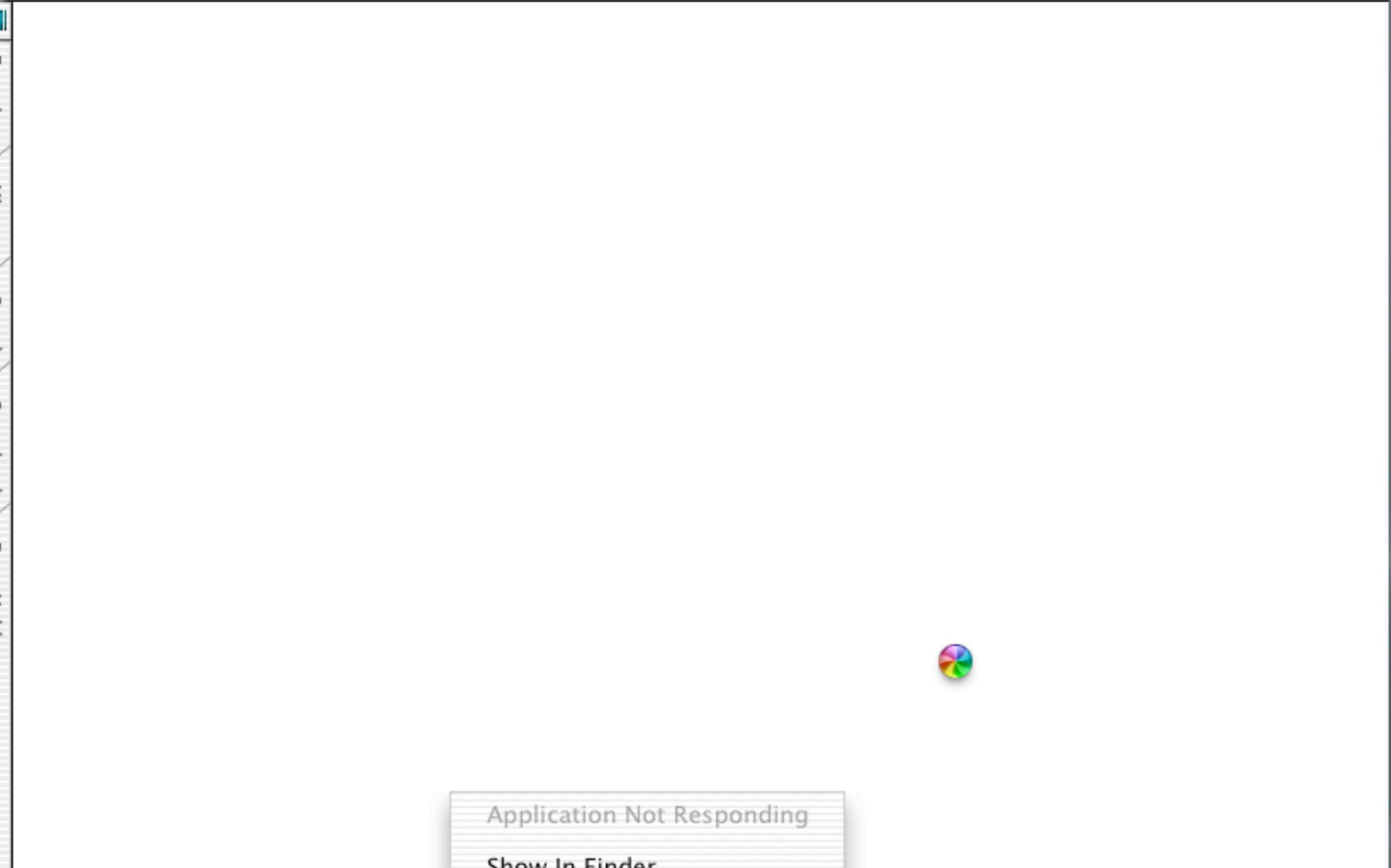
New Duplicate Delete Open Parent Find

/	users	schounvegan
aliases	andrelelimb	
computer_lists	averyday	
computers	franklinbeans	
config	root	
groups	sadmin	
machines	schounvegan	
mounts	simonwheatgerm	
presets_computer_lists	untitled_2	
presets_groups		
presets_users		
printers		
users		

Property	Value(s)
mcx_flags	<?xml version="1.0" encoding="UTF-8"?>
realname	Schoun Vegan
name	schounvegan
_writers_tim_password	schounvegan
home	/Network/Servers/Jaguar/Users/schounvegan
passwd	dsAuthMethodStandard:dsAuthClearText
_writers_passwd	schounvegan
uid	1028
shell	

Click the lock to make changes.





Application Not Responding
Show In Finder
Force Quit





Puma



Panther



Leopard



Snow Leopard



lion



Rhapsody



Jaguar



1999

2000

2001

2002

2003

2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

2014

OS X Preview

osody



Cheetah



Puma



Panther



Leopard



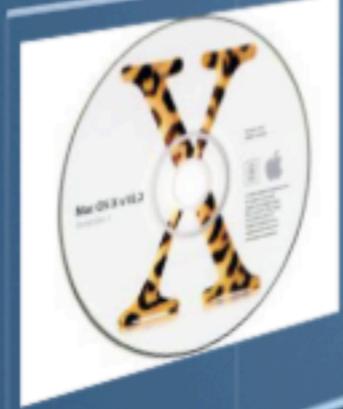
Snow Leopard



Lion



Jaguar



Tiger



2002

2003

2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

OS X Yosemite

About This Mac



Mac OS X Server

Version 10.3.9

[Software Update...](#)

Processor 400 MHz PowerPC G4

Memory 1.38 GB SDRAM

[More Info...](#)

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Server

local disks

- Network
- Panther
- Cheetah
- Puma
- Jaguar
- jbr
- Desktop
- sadmin
- Applications
- Documents
- Movies
- Music
- Pictures

AppleShare IP Migration

Fibre Channel Utility

Macintosh Manager

MySQL Manager

Network Image Utility

QTSS Publisher

RAID Admin

Server Admin

Server Assistant

Server Monitor

Workgroup Manager

11 items, 56.07 GB available

The dock contains the following icons from left to right: Finder, Safari, Apple logo, Server Admin, Workgroup Manager, Server Monitor, Terminal, and Trash.

Server Admin:panther.justinrummel.net:Open Directory

Workgroup Manager Add Server Remove Server Disconnect Refresh New Window

Service

Computers & Services

- panther.justinrummel.net
 - AFP
 - Application Server
 - DHCP
 - DNS
 - Firewall
 - FTP
 - Mail
 - NAT
 - NetBoot
 - NFS
 - Open Directory**
 - Print
 - QuickTime Streaming
 - VPN
 - Web
 - Windows

Open Directory is: Running

Lookup Server (lookupd) is: Running

NetInfo Server (netinfod) is: Running

LDAP Server (slapd) is: Running

Password Server is: Running

KDC is: Running

Overview Logs Settings





Authenticate to Kerberos

 **Finder requires that you type your Kerberos password**

Name:

Realm:

Password:

5.0.1 Copyright 2003 MIT



Workgroup Manager: panther.justinrummel.net

Admin Sharing Accounts Preferences New User Delete Connect Disconnect Refresh New Window

Authenticated as sadmin to directory: /LDAPv3/127.0.0.1

Basic Advanced Groups Home Mail Print Windows

Name contains

Name	ID
Server Admin	501
Schoun Vegan	1002
Andre LeLimb	1003
Simon Wheatgerm	1004
Avery Day	1005
Carrie Onn	1006
Franklin Beans	1007

1 of 7 users selected

Name: Avery Day

User ID: 1005

Short Names: averyday

Password:

Verify:

User can administer the server
 administer this directory domain [Privileges...](#)
 log in

Account Summary

Location: panther.justinrummel.net/LDAPv3/127.0.0.1
Home: /Usersaveryday
Primary Group: (20)
Mail: No mail service for this user
Print Quota: None
Password: Advanced

Presets: None

Revert Save



Workgroup Manager: panther.justinrummel.net

Admin Sharing Accounts Preferences New User Delete Connect Disconnect Refresh New Window

Authenticated as sadmin to directory: /LDAPv3/127.0.0.1

Basic Advanced Groups Home Mail Print Windows Inspector

Filter:

Name	Value
AppleMetaNodeLocation	/LDAPv3/127.0.0.1
▶ AuthenticationAuthority(2)	;ApplePasswordServer;0x3bd4689639876b
FirstName	Avery
GeneratedUID	8C1F157A-C71C-11D5-99F5-000A27E3A
LastName	Day
MCXFlags	<?xml version="1.0" encoding="UTF-8"?>
NFSHomeDirectory	/Usersaveryday
Password	*****
PrimaryGroupID	20
RealName	Avery Day
▶ RecordName(2)	averyday
UniqueID	1005
UserShell	/bin/bash
dsAttrTypeNative:apple-generated	8C1F157A-C71C-11D5-99F5-000A27E3A
dsAttrTypeNative:apple-mcxflags	<?xml version="1.0" encoding="UTF-8"?>

Options... Edit... New Value... New Attribute...

Presets: None Revert Save

1 of 7 users selected

Name contains

Name	ID
Server Admin	501
Schoun Vegan	1002
Andre LeLimb	1003
Simon Wheatgerm	1004
Avery Day	1005
Carrie Onn	1006
Franklin Beans	1007



Workgroup Manager: panther.justinrummel.net

Admin Sharing Accounts Preferences New Record Delete Connect Disconnect Refresh New Window

Authenticated as sadmin to directory: /LDAPv3/127.0.0.1

Name contains
Users

Name	Value
AppleMetaNodeLocation	/LDAPv3/127.0.0.1
▶ AuthenticationAuthority(2)	;ApplePasswordServer;0x3bd4689555d5e9
FirstName	Schoun
GeneratedUID	8B38E4DE-C71C-11D5-99F5-000A27E3A...
LastName	Vegan
MCXFlags	<?xml version="1.0" encoding="UTF-8"?>
NFSHomeDirectory	/Usersschounvegan
Password	*****
PrimaryGroupID	20
RealName	Schoun Vegan
▶ RecordName(2)	schounvegan
UniqueID	1002
UserShell	/bin/bash
dsAttrTypeNative:apple-generated	8B38E4DE-C71C-11D5-99F5-000A27E3A...
dsAttrTypeNative:apple-mcxflags	<?xml version="1.0" encoding="UTF-8"?>

Options... Edit... New Value... New Attribute... Revert Save



Directory Access

Services Authentication Contacts

Enable	Name	Version
<input type="checkbox"/>	Active Directory	1.0.7
<input checked="" type="checkbox"/>	AppleTalk	1.1
<input checked="" type="checkbox"/>	BSD Flat File and NIS	1.1
<input checked="" type="checkbox"/>	LDAPv3	1.6.5
<input type="checkbox"/>	NetInfo	1.6.2
<input checked="" type="checkbox"/>	Rendezvous	1.1.2
<input checked="" type="checkbox"/>	SLP	1.1.3
<input checked="" type="checkbox"/>	SMB	1.1.4

Configure...

Click the lock to prevent further changes. Revert Apply



osody



Cheetah



Puma



Panther



Leopard



Snow Leopard



Lion



Jaguar



Tiger



2002

2003

2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

OS X Yosemite

Puma



Panther



Leopard



Jaguar



Tiger



Snow Leopard



Lion



2002

2003

2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

OS X Timeline



About This Mac



Mac OS X Server

Version 10.4.11

[Software Update...](#)

Processor 400 MHz PowerPC G4

Memory 1.38 GB SDRAM

[More Info...](#)

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Server

12 items, 15.86 GB available

Network	AppleShare IP Migration	Fibre Channel Utility	Gateway Setup Assistant
ServerHD	MySQL Manager	QTSS Publisher	RAID Admin
Desktop	Server Admin	Server Assistant	Server Monitor
sadmin	System Image Utility	Workgroup Manager	Xgrid Admin
Applications			
Documents			
Movies			
Music			
Pictures			





Server Admin:Tiger.local:Open Directory

Workgroup Manager Add Server Remove Server Connect Refresh New Window Start Service

Service

Computers & Services

- Tiger.local
 - AFP
 - Application Server
 - DHCP
 - DNS
 - Firewall
 - FTP
 - iChat
 - Mail
 - NAT
 - NetBoot
 - NFS
 - Open Directory**
 - Print
 - QuickTime Streaming
 - Software Update
 - VPN
 - Web
 - WebObjects
 - Windows
 - Xgrid

General Protocols Policy

Configure: LDAP Settings

Search base: dc=tiger,dc=justinrummel,dc=net

Database: /var/db/openldap/openldap-data

Return a maximum of 11000 search results

Search times out in 1 hours

Enable Secure Sockets Layer (SSL)

Certificate: Custom Configuration

Overview Logs Archive Settings Revert Save





Workgroup Manager: tiger.justinrummel.net

Admin Sharing Network Accounts Preferences New User Delete Connect Disconnect Refresh New Window Search

Authenticated as diradmin to directory: /LDAPv3/127.0.0.1

Basic Advanced Groups Home Mail Print Quota Info Windows Inspector

Name: Franklin Beans

User ID: 1030

Short Names: franklinbeans

Password:

Verify:

User can administer the server
 administer this directory domain [Privileges...](#)
 access account

Account Summary

Location: tiger.justinrummel.net/LDAPv3/127.0.0.1
Home: No Home Directory
Primary Group: staff (20)
Mail: No mail service for this user
Print Quota: None
Password: Open Directory

Presets: None [Revert](#) [Save](#)

1 of 7 users selected

Name	ID
Directory Administr...	1000
Schoun Vegan	1025
Andre LeLimb	1026
Simon Wheatgerm	1027
Avery Day	1028
Carrie Onn	1029
Franklin Beans	1030





Workgroup Manager: tiger.justinrummel.net

Admin Sharing Network Accounts Preferences New Record Delete Connect Disconnect Refresh New Window Search

Authenticated as diradmin to directory: /LDAPv3/127.0.0.1

Name contains
Users

Name	Size	Value
AppleMetaNodeLocation	17 bytes	/LDAPv3/127.0.0.1
▼ AuthenticationAuthority(2)	879 bytes	
	415 bytes	;ApplePasswordServer;
	464 bytes	;Kerberosv5;0x3bcddef926250ddd00
FirstName	6 bytes	Schoun
GeneratedUID	36 bytes	A52905ED-F148-490D-
LastName	5 bytes	Vegan
MCXFlags	245 bytes	<?xml version="1.0" encoding="UTF-
NFSHomeDirectory	2 bytes	99
Password	8 bytes	*****
PrimaryGroupID	2 bytes	20
RealName	12 bytes	Schoun Vegan
▼ RecordName(2)	23 bytes	
	11 bytes	schounvegan
	12 bytes	Schoun Vegan

Options... Edit... New Value... New Attribute... Revert Save





Workgroup Manager: tiger.justinrummel.net

Admin Sharing Network Accounts Preferences New User Delete Connect Disconnect Refresh New Window Search

Authenticated as diradmin to directory: /LDAPv3/127.0.0.1

Basic Advanced Groups Home Mail Print Quota Info Windows Inspector

Filter: Record Size: 1.28 KB

Name	Size	Value
AppleMetaNodeLocation	17 bytes	/LDAPv3/127.0.0.1
▼ AuthenticationAuthority(2)	879 bytes	
	415 bytes	;ApplePasswordServer;
	464 bytes	;Kerberosv5;0x3bcddef926250ddd00
FirstName	6 bytes	Schoun
GeneratedUID	36 bytes	A52905ED-F148-490D-
LastName	5 bytes	Vegan
MCXFlags	245 bytes	<?xml version="1.0" encoding="UTF-
NFSHomeDirectory	2 bytes	99
Password	8 bytes	*****
PrimaryGroupID	2 bytes	20
RealName	12 bytes	Schoun Vegan
▼ RecordName(2)	23 bytes	
	11 bytes	schounvegan
	12 bytes	Schoun Vegan

Options... Edit... New Value... New Attribute...

Presets: None Revert Save

1 of 7 users selected

Name	ID
Directory Administr...	1000
Schoun Vegan	1025
Andre LeLimb	1026
Simon Wheatgerm	1027
Avery Day	1028
Carrie Onn	1029
Franklin Beans	1030



Directory Access

Services Authentication Contacts

Enable	Name	Version
<input type="checkbox"/>	Active Directory	1.5.8
<input type="checkbox"/>	AppleTalk	1.2
<input checked="" type="checkbox"/>	Bonjour	1.2
<input checked="" type="checkbox"/>	BSD Flat File and NIS	1.2.2
<input checked="" type="checkbox"/>	LDAPv3	1.7.4
<input type="checkbox"/>	NetInfo	1.7.4
<input checked="" type="checkbox"/>	SLP	1.3.1
<input checked="" type="checkbox"/>	SMB/CIFS	1.2

Configure...

 Click the lock to prevent further changes. Revert Apply



Puma



Panther



Leopard



Jaguar



Tiger



Snow Leopard



Lion



2002

2003

2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

OS X Timeline

Panther



Tiger



Leopard



Snow Leopard



Lion



2009

2010

2011

2012

2013

OS X Timeline

Server

RAID Admin Server Admin Server Assistant

Server Monitor Server Preferences System Image Utility

Workgroup Manager Xgrid Admin

8 items, 137.44 GB available

DEVICES: Leopard, iDisk

SHARED: odr, JRummel-MBP, Lion, odm, snowleopard, All...

PLACES: Desktop, sadmin, Applications, Documents

SEARCH FOR



Server Preferences

Show All

Accounts

Users

Services

File Sharing

VPN

System

Information

Logs

Graphs

Time Machine

Firewall

Server Preferences can't be used with advanced configurations of Mac OS X Server.

The server you're trying to connect to is running an advanced configuration. Server Preferences only supports standard and workgroup configurations of Mac OS X Server v10.5.

OK



Workgroup Manager: Local

Server Admin Accounts Preferences New User Delete Refresh New Window Search

Viewing directory: /LDAPv3/127.0.0.1. Not authenticated

Name Contains

User Name	UI
Directory Administ...	1000
Schoun Vegan	1002
Andre LeLimb	1003
Simon Wheatgerm	1004
Avery Day	1005
Carrie Onn	1006
Franklin Beans	1007

1 of 7 users selected

Basic Privileges Advanced Groups Home Mail Print Quota Info Windows Inspector

Filter: Record Size: 1.29 KB

Name	Size	Value
AppleMetaNodeLocation	17 bytes	/LDAPv3/127.0.0.1
▶ AuthenticationAuthority(2)	873 bytes	;ApplePasswordServer;
FirstName	6 bytes	Schoun
GeneratedUID	36 bytes	053807E0-A6B7-4DAF-
LastName	5 bytes	Vegan
MCXFlags	243 bytes	<?xml version="1.0"
NFSHomeDirectory	18 bytes	/Users/schounvegan
Password	8 bytes	*****
PrimaryGroupID	2 bytes	20
RealName	12 bytes	Schoun Vegan
▶ RecordName(2)	23 bytes	schounvegan
RecordType	23 bytes	dsRecTypeStandard:Users
UniqueID	4 bytes	1002
UserShell	9 bytes	/bin/bash
dsAttrTypeNative:apple-	36 bytes	053807E0-A6B7-4DAF-
dsAttrTypeNative:apple-	243 bytes	<?xml version="1.0"

Options... View... New Value... New Attribute...

Presets: None Revert Save



Workgroup Manager: Local

Server Admin Accounts Preferences New Record Delete Refresh New Window Search

Viewing directory: /LDAPv3/127.0.0.1. Not authenticated

Name contains
Users

Name	Size	Value
AppleMetaNodeLocation	17 bytes	/LDAPv3/127.0.0.1
▶ AuthenticationAuthority(2)	873 bytes	;ApplePasswordServer;
FirstName	6 bytes	Schoun
GeneratedUID	36 bytes	053807E0-A6B7-4DAF-
LastName	5 bytes	Vegan
MCXFlags	243 bytes	<?xml version="1.0"
NFSHomeDirectory	18 bytes	/Users/schounvegan
Password	8 bytes	*****
PrimaryGroupID	2 bytes	20
RealName	12 bytes	Schoun Vegan
▶ RecordName(2)	23 bytes	schounvegan
RecordType	23 bytes	dsRecTypeStandard:Users
UniqueID	4 bytes	1002
UserShell	9 bytes	/bin/bash
dsAttrTypeNative:apple-	36 bytes	053807E0-A6B7-4DAF-
dsAttrTypeNative:apple-	243 bytes	<?xml version="1.0"

Inspector

Filter: Record Size: 1.29 KB

Options... View... New Value... New Attribute... Revert Save

1 of 9 records selected



Directory Utility

Directory Servers MOUNTS Services Search Policy

Select a service and click the pencil icon to edit settings.

Enable	Name	Version
<input type="checkbox"/>	Active Directory	1.6.5
<input checked="" type="checkbox"/>	BSD Flat File and NIS	2.0
<input checked="" type="checkbox"/>	LDAPv3	3.1
<input checked="" type="checkbox"/>	Local	1.1
<input type="checkbox"/>		

 Click the lock to make changes.  Apply



Panther



Tiger



Leopard



Snow Leopard



Lion



2009

2010

2011

2012

2013

OS X Timeline



Leopard



Snow Leopard



Tiger



2006

2007

2008

2009

2010

2011

2012

2013

OS X Timeline

About This Mac



Mac OS X Server

Version 10.6.8

[Software Update...](#)

Processor 2.4 GHz Intel Core 2 Duo

Memory 2 GB 667 MHz DDR2 SDRAM

Startup Disk MacHD

[More Info...](#)

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Server

9 items, 149.17 GB available

- DEVICES
 - MachD
 - iDisk
- SHARED
 - odr
 - JRummel-MBP
 - leopard
 - Lion
 - odm
 - All...
- PLACES
 - Desktop
 - ladmin
 - Applications
 - Documents
- SEARCH FOR
 - Today

iCal Server Utility Podcast Composer RAID Admin Server Admin
 Server Monitor Server Preferences System Image Utility Workgroup Manager
 Xgrid Admin



Server Admin: snowleopard.local: Open Directory

SERVERS

- Available Servers (4)
 - snowleopard.local
 - NFS
 - Open Directory

Overview Logs Archive Settings

Open Directory is: Open Directory master

LDAP Server is: Running
Password Server is: Running
Kerberos is: Running

LDAP Search Base: dc=snowleopard,dc=justinrummel,dc=net
Kerberos Realm: SNOWLEOPARD.JUSTINRUMMEL.NET

+ . ⚙️ ↻



snowleopard.justinrummel.net

Server Admin Accounts Preferences New Record Delete Refresh New Window Search

Authenticated as diradmin to directory: /LDAPv3/127.0.0.1

Inspector

Name contains

Users

Name	Size	Value
AltSecurityIdentities	52 bytes	Kerberos:simonwheatgerm@SNOWL
AppleMetaNodeLocation	17 bytes	/LDAPv3/127.0.0.1
▶ AuthenticationAuthority(2)	906 bytes	;ApplePasswordServer;
FirstName	5 bytes	Simon
GeneratedUID	36 bytes	F64206DF-86B3-4FB4-99C7-2C31
LastName	9 bytes	Wheatgerm
MCXFlags	181 bytes	<?xml version="1.0"
NFSHomeDirectory	21 bytes	/Users/simonwheatgerm
Password	8 bytes	*****
PrimaryGroupID	2 bytes	20
RealName	15 bytes	Simon Wheatgerm
▶ RecordName(2)	29 bytes	simonwheatgerm
RecordType	23 bytes	dsRecTypeStandard:Users
UniqueID	4 bytes	1004
UserShell	9 bytes	/bin/bash
dsAttrTypeNative:altSecurit	52 bytes	Kerberos:simonwheatgerm@SNOWL

Options... Edit... New Value... New Attribute...

Revert Save

1 of 9 groups selected



snowleopard.justinrummel.net

Server Admin Accounts Preferences New User Delete Refresh New Window Search

Authenticated as diradmin to directory: /LDAPv3/127.0.0.1

Basic Privileges Advanced Groups Home Mail Print Info Windows Inspe

Filter: Record Size: 1.32 KB

Name	Size	Value
AltSecurityIdentities	51 bytes	Kerberos:franklinbeans@SNOWLEOP
AppleMetaNodeLocation	17 bytes	/LDAPv3/127.0.0.1
▶ AuthenticationAuthority(2)	905 bytes	;ApplePasswordServer;
FirstName	8 bytes	Franklin
GeneratedUID	36 bytes	78D11451-1262-47C8-976D-34A
LastName	5 bytes	Beans
MCXFlags	181 bytes	<?xml version="1.0"
NFSHomeDirectory	20 bytes	/Users/franklinbeans
Password	8 bytes	*****
PrimaryGroupID	2 bytes	20
RealName	14 bytes	Franklin Beans
▶ RecordName(2)	27 bytes	franklinbeans
RecordType	23 bytes	dsRecTypeStandard:Users
UniqueID	4 bytes	1007
UserShell	9 bytes	/bin/bash
dsAttrTypeNative:altSecurit	51 bytes	Kerberos:franklinbeans@SNOWLEOP

Options... Edit... New Value... New Attribute...

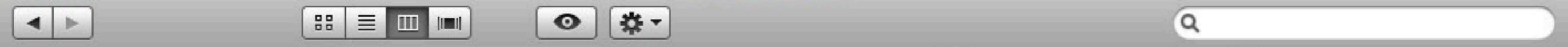
Presets: Users Revert Save

1 of 7 users selected

Name contains

User Name	UID
Directory Administ...	1000
Schoun Vegan	1002
Andre LeLimb	1003
Simon Wheatgerm	1004
Avery Day	1005
Carrie Onn	1006
Franklin Beans	1007





- DEVICES
 - SnowLeopard
 - iDisk
- SHARED
 - odr
 - JRummel-MBP
 - leopard
 - Lion
 - odm
 - All...
- PLACES
 - Desktop
 - ladmin
 - Applications
 - Documents
- SEARCH FOR
 - Today
 - Yesterday
 - Past Week
 - All Images
 - All Movies
 - All Documents

- Library
 - Address Book Plug-Ins
 - Automator
 - BridgeSupport
 - Caches
 - CFMSupport
 - ColorPickers
 - Colors
 - ColorSync
 - Components
 - Compositions
 - CoreServices
 - DirectoryServices
 - Displays
 - DTDs
 - Extensions
 - Filesystems
 - Filters
 - Fonts
 - Frameworks
 - Graphics
 - Image Capture
 - Input Methods
 - Java
 - KerberosPlugins
 - Keyboard Layouts
 - Keychains
 - LaunchAgents
 - LaunchDaemons
 - LoginPlugins
 - Modem Scripts
 - MonitorPanels
 - OpenSSL

- CCacheServer
- Certificate Assistant
- checkfixlist
- CommonC...els.bundle
- CoreLocationAgent
- coreservicesd
- CoreServicesUIAgent
- CoreTypes.bundle
- Database Events
- DefaultDes...Server.jpg
- DictionaryPanel.bundle
- Directory Utility
- DiskImageMounter
- Dock
- DumpPanic
- Encodings
- Expansion Slot Utility
- File Sync
- FileSyncAgent
- Finder
- Firmware Updates
- FixupResourceForks
- Folder Acti...Dispatcher
- Folder Actions Setup
- Front Row
- HelpViewer
- Image Events
- Installer
- Jar Launcher
- Java Web Start
- JavaVersion.plist
- KerberosAgent

Preview:



Name Directory Utility
 Kind Application
 Size 3.4 MB on disk
 Created 5/19/09 2:08 AM
 Modified 5/19/09 2:08 AM
 Last opened 5/19/09 2:08 AM
 Version 2.2

[More info...](#)

1 of 107 selected, 149.17 GB available





Leopard



Snow Leopard



Tiger



2006

2007

2008

2009

2010

2011

2012

2013

OS X Timeline



Snow Leopard



Lion



2008

2009

2010

2011

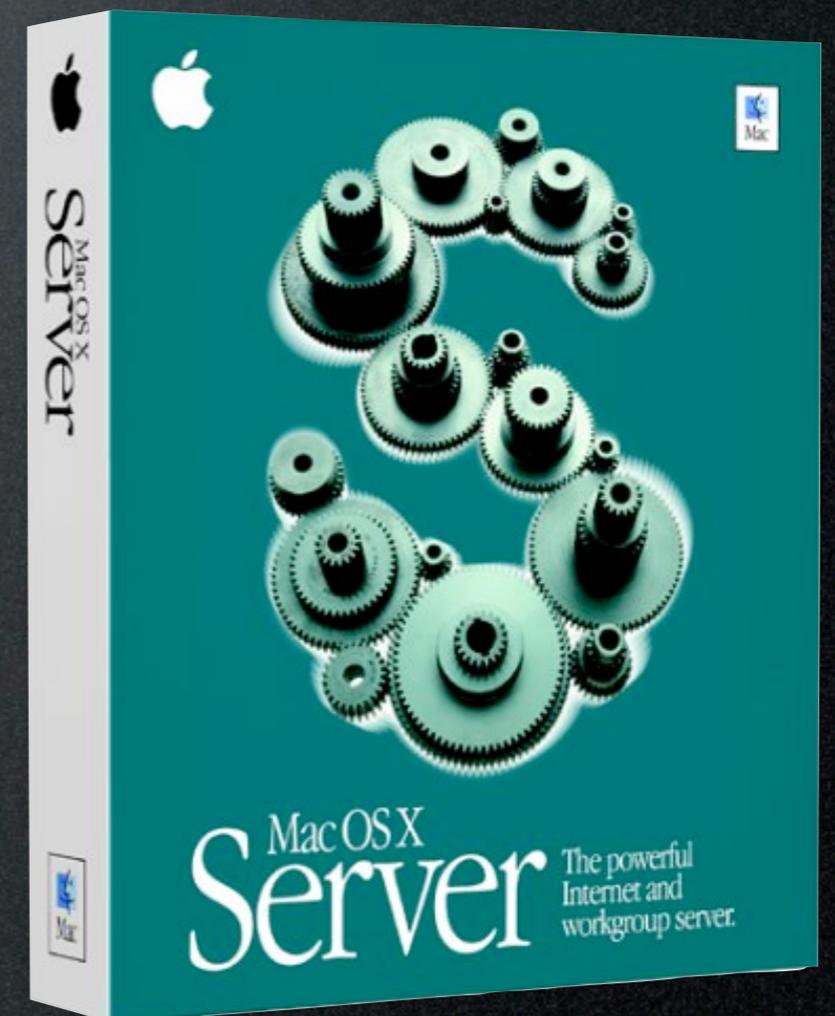
2012

2013

OS X Timeline

Lion Server Overview

- “Install Media”
- Update to 10.7.2
- Pricing
- EULA Changes
- Recovery Partition



EULA

2,B,iii

to install, use and run up to two (2) additional copies or instances of the Apple Software within virtual operating system environments on each Mac Computer you own or control that is already running the Apple Software.

Recovery Partition

- 650MB hidden partition
- Option or Command + R
- Allows for Internet Restore
 - Mid-2011 MacBook Air, Mini & Early 2011 iMac (FW Update)
 - WPA/WPA2, DHCP, Ethernet

Lion & iOS Philosophy

- Shift to focus on “personal devices”
- Stressing ease of service accessibility

Installing Server

- Update / Install
 - Update to 10.6.8
 - Purchase through AppStore
- New Install
 - Prerequisites

Offline Install

- “Show Package Contents” > Contents > SharedSupport > InstallESD.dmg
- Copy Server (AppStore Download)

WGM vs SA vs Server.App

- Server Admin Tools is an additional download
 - DL1457 (10.7.2)

	WGM	SA	Server.App
Configuring Services	Dark Red	Dark Green	Dark Green
Managing Accounts	Olive Green	Dark Red	Dark Green
File Sharing	Dark Red	Dark Red	Dark Green
Network Services	Dark Red	Dark Green	Dark Red
Delegate Administration	Olive Green	Dark Red	Dark Green

Workgroup Manager: Local



Authenticated as diradmin to directory: /LDAPv3/127.0.0.1



Name contains

User Name	UID
Directory Administr...	1000
Randy Saeks	1026
Sandy Rakes	1025

Basic Privileges Advanced Groups Home Info

Name: Randy Saeks

User ID: 1026

Short Names: rsaeks

Password:

Verify:

- User can administer this server
 access account

Workgroup Manager: Local

Server Admin Accounts Preferences New User Delete Refresh New Window Search

Authenticated as diradmin to directory: /LDAPv3/127.0.0.1

Basic Privileges Advanced Groups Home Info

Name: Randy Saeks
User ID: 1026

User Name	UID
Directory Administr...	1000
Randy Saeks	1026
Sandy Rakes	1025

Full Name: Randy Saeks
Email Address:
 Allow user to administer this server
Home Folder: Custom
Groups:

Cancel Done

 **Randy Saeks**
rsaeks

Full Name: Randy Saeks
Email Address:
 Allow user to administer this server
Home Folder: Custom
Groups:

Cancel Done

Workgroup Manager: Local

Server Admin Accounts Preferences New User Delete Refresh New Window Search

Authenticated as diradmin to directory: /LDAPv3/127.0.0.1

Basic Privileges Advanced Groups Home Info

Name: Randy Saeks
User ID: 1026

Full Name: Randy Saeks
Email Address:
 Allow user to administer this server
Home Folder: Custom

User Name	UID
Directory Administr...	1000
Randy Saeks	1026
Sandy Rakes	1025

Basic Privileges Advanced Groups Home Info

Name: Randy Saeks
User ID: 1026

Full Name: Randy Saeks
Email Address:
 Allow user to administer this server
Home Folder: Custom

Basic Privileges Advanced Groups Home Info

Name: Randy Saeks
User ID: 1026
Short Names: rsaeks

Password: Verify:

User can administer this server
 access account

WGM

- Modify U,G,C,CG
- Set / Modify Manageable Items (MCX)
- Edit Address Book Information
- No more Inspector*

Directory Editor

The screenshot shows the Directory Utility application window. The title bar reads "Directory Utility". Below the title bar are three tabs: "Services", "Search Policy", and "Directory Editor". The "Directory Editor" tab is active. The interface shows the following details:

- Viewing: Users (dropdown)
- in node: /LDAPv3/127.0.0.1 (dropdown)
- Authenticated as: diradmin (lock icon)

A search bar is located on the left side of the main pane. Below it is a list of users, with "Sandy Rakes" selected. The main pane displays a table of attributes for the selected user:

Name	Value
AltSecurityIdentities	Kerberos:sandyrakes@LION.TECHRECESS.LOCAL
AppleMetaNodeLocation	/LDAPv3/127.0.0.1
AppleMetaRecordName	uid=sandyrakes,cn=users,dc=lion,dc=techre
AuthenticationAuthority	;ApplePasswordServer;0xf03b1fa2faa811e...
EmailAddress	sandy@techrecess.local
FirstName	Sandy (+)
GeneratedUID	B3E49458-A019-4796-9E5B-B37446DAE615
HomeDirectory	<home_dir> <url>afp://lion.techrecess.loc...
LastName	Rakes
NFSHomeDirectory	/Network/Servers/lion.techrecess.local/Us...
Password	*****
PrimaryGroupID	20
RealName	Sandy Rakes
RecordName	sandyrakes
RecordType	dsRecTypeStandard:Users
UniqueID	1025

Below the table, there are controls for editing the "FirstName" attribute, including a text field containing "Sandy" and a "Data" button. At the bottom of the window, there are buttons for "+", "-", "11 records", "Revert", and "Save".

Directory Editor

The screenshot shows the Directory Utility application window. At the top, there are three tabs: Services, Search Policy, and Directory Editor. Below the tabs, there is a navigation bar with a 'Viewing' dropdown menu set to 'Users', an 'in node' dropdown set to '/LDAPv3/127.0.0.1', and a lock icon with the text 'Authenticated as diradmin'. The main area is divided into two panes. The left pane shows a list of users, with 'Sandy Rakes' selected. The right pane shows a table of attributes for the selected user.

Name	Value
AltSecurityIdentities	Kerberos:sandyrakes@LION.TECHRECESS.LOCAL
AppleMetaNodeLocation	/LDAPv3/127.0.0.1
AppleMetaRecordName	uid=sandyrakes,cn=users,dc=lion,dc=techre
AuthenticationAuthority	;ApplePasswordServer;0xf03b1fa2faa811e...
EmailAddress	sandy@techrecess.local
FirstName	Sandy
GeneratedUID	B3E49458-A019-4796-9E5B-B37446DAE615
HomeDirectory	<home_dir> <url>afp://lion.techrecess.loc...
LastName	Rakes
NFSHomeDirectory	/Network/Servers/lion.techrecess.local/Us...
Password	*****
PrimaryGroupID	20
RealName	Sandy Rakes
RecordName	sandyrakes
RecordType	dsRecTypeStandard:Users
UniqueID	1025

Below the table, there are buttons for '+', '-', 'Text', and 'Data'. The 'Text' button is selected, and the text 'Sandy' is visible in the input field below.

At the bottom of the window, there are buttons for '+', '-', '11 records', 'Revert', and 'Save'.

Directory Editor

Directory Utility

Services Search Policy Directory Editor

Viewing Users in node /LDAPv3/127.0.0.1 Authenticated as diradmin

Name	Value
AltSecurityIdentities	Kerberos:sandyrakes@LION.TECHRECESS.LOCAL
AppleMetaNodeLocation	/LDAPv3/127.0.0.1
AppleMetaRecordName	uid=sandyrakes,cn=users,dc=lion,dc=techre
AuthenticationAuthority	;ApplePasswordServer;0xf03b1fa2faa811e...
EMailAddress	sandy@techrecess.local
FirstName	Sandy
GeneratedUID	B3E49458-A019-4796-9E5B-B37446DAE615
HomeDirectory	<home_dir> <url>afp://lion.techrecess.loc...
LastName	Rakes
NFSHomeDirectory	/Network/Servers/lion.techrecess.local/Us...
Password	*****
PrimaryGroupID	20
RealName	Sandy Rakes
RecordName	sandyrakes
RecordType	dsRecTypeStandard:Users
UniqueID	1025

Sandy

+ - 11 records Revert Save

Directory Editor

Directory Utility

Services Search Policy Directory Editor

Viewing Users in node /LDAPv3/127.0.0.1 Authenticated as diradmin

Name	Value
AltSecurityIdentities	Kerberos:sandyrakes@LION.TECHRECESS.LOCAL
AppleMetaNodeLocation	/LDAPv3/127.0.0.1
AppleMetaRecordName	uid=sandyrakes,cn=users,dc=lion,dc=techre
AuthenticationAuthority	;ApplePasswordServer;0xf03b1fa2faa811e...
EmailAddress	sandy@techrecess.local
FirstName	Sandy
GeneratedUID	B3E49458-A019-4796-9E5B-B37446DAE615
HomeDirectory	<home_dir> <url>afp://lion.techrecess.loc...
LastName	Rakes
NFSHomeDirectory	/Network/Servers/lion.techrecess.local/Us...
Password	*****
PrimaryGroupID	20
RealName	Sandy Rakes
RecordName	sandyrakes
RecordType	dsRecTypeStandard:Users
HomeID	1025

Sandy|

11 records

Revert Save

Directory Editor

Directory Utility

Services Search Policy Directory Editor

Viewing Users in node /LDAPv3/127.0.0.1 Authenticated as diradmin

Name	Value
AltSecurityIdentities	Kerberos:sandyrakes@LION.TECHRECESS.LOCAL
AppleMetaNodeLocation	/LDAPv3/127.0.0.1
AppleMetaRecordName	uid=sandyrakes,cn=users,dc=lion,dc=techre
AuthenticationAuthority	;ApplePasswordServer;0xf03b1fa2faa811e...
EmailAddress	sandy@techrecess.local
FirstName	Sandy
GeneratedUID	B3E49458-A019-4796-9E5B-B37446DAE615
HomeDirectory	<home_dir> <url>afp://lion.techrecess.loc...
LastName	Rakes
NFSHomeDirectory	/Network/Servers/lion.techrecess.local/Us...
Password	*****
PrimaryGroupID	20
RealName	Sandy Rakes
RecordName	sandyrakes
RecordType	dsRecTypeStandard:Users
HomeID	1025

Search

- _krb_anonymous
- _krb_changepw
- _krb_kadmin
- _krb_kerberos
- _krb_krbtgt
- Directory Administrator
- Randy Saeks
- Sandy Rakes
- Serverdot Appuser
- VPN MPPE Key Access User
- Workgroupman Ageruser

+ - Text Data

Sandy|

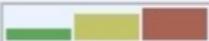
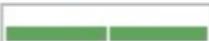
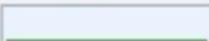
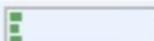
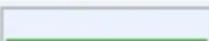
+ - 11 records Revert Save

Server Admin

- “Network Services Admin”
- Setup group and fine-tuned SACLs
- View Multiple Server Stats

Server Admin

- “Network Services Admin”
- Setup group and fine-tuned SACs
- View Multiple Server Stats

Name	OS	CPU	Network	Disk	Uptime	Users
wexserver2.district30.k12.il.us	10.5.8		129.55 KB/...		89 days, 5:30	7
maxserver2.district30.k12.il.us	10.5.8		6.89 KB/sec		35 days, 17:34	17
wexserver.district30.k12.il.us	10.6.8		6.95 KB/sec		45 days, 23:23	17
d30odm.district30.k12.il.us	10.6.8		12.24 KB/sec		7 days, 6:50	0
wixserver2.district30.k12.il.us	10.5.8		32.68 KB/sec		28 days, 0:04	1
wixserver.district30.k12.il.us	10.6.8		119.46 KB/...		92 days, 5:18	14
alerts.district30.k12.il.us	10.6.8		21.3 KB/sec		1 day, 12:18	0
d30svcs.district30.k12.il.us	10.5.8		10.25 KB/sec		65 days, 4:22	0
maxserver.district30.k12.il.us	10.6.8		248.44 KB/...		80 days, 3:59	56

Server.App

- Users
- On / Off Service Control
- File Sharing Options
- AutoMounts
- Services moved here lose GUI config



Server

Lion

Overview Settings Network Storage

Access

- Allow remote login using SSH
- Enable screen sharing and remote management
- Allow remote administration using Server
- Dedicate system resources to server services
- Enable Apple push notifications

SSL Certificate: lion.techrecess.local Edit...

Service Data: Macintosh HD Edit...

Getting log contents for Lion

ACCOUNTS

- Users
- Groups

STATUS

- Alerts
- Logs
- Stats

SERVICES

- Address Book
- File Sharing
- iCal
- iChat
- Mail
- Podcast
- Profile Manager
- Time Machine
- VPN
- Web
- Wiki

HARDWARE

- Lion

Next Steps



Macintosh HD



VMware Share...lders



Screen Shot 2011...8 PM



Server

Lion

Overview Settings Network Storage

Access

- Allow remote login using SSH
- Enable screen sharing and remote management
- Allow remote administration using Server
- Dedicate system resources to server services
- Enable Apple push notifications Edit...

SSL Certificate: lion.techrecess.local Edit...

Service Data: Macintosh HD Edit...

Next Steps Getting log contents for Lion

- Macintosh HD
- VMware Share...lders
- Screen Shot 2011...8 PM



User Creation Oddities

- Local vs. Network User creation
- `AltSecurityIdentities`

Directory Utility

Services Search Policy Directory Editor

Viewing **Users** in node **/LDAPv3/127.0.0.1** Authenticated as diradmin

Name	Value
AltSecurityIdentities	Kerberos:serverdotappuser@LION.TECHRECESS.LOCAL
AppleMetaNodeLocation	/LDAPv3/127.0.0.1
AppleMetaRecordName	uid=serverdotappuser,cn=users,dc=lion,dc=techrecess
▼ AuthenticationAuthority	;ApplePasswordServer;0x0e62ed3400f311e19599000...
	;Kerberosv5;0x0e62ed3400f311e19599000c292442... +
EEmailAddress	serverdotapp@techrecess.local
FirstName	Serverdot
GeneratedUID	462170A3-56D4-425D-AD2D-5DD3EB2316F7
LastName	Appuser
NFSHomeDirectory	/Users/serverdotappuser
Password	*****
PrimaryGroupID	20
RealName	Serverdot Appuser
RecordName	serverdotappuser
RecordType	dsRecTypeStandard:Users
UniqueID	1027

+ - Text Data

```

:Kerberosv5:0x0e62ed3400f311e19599000c292442a3;serverdotappuser@LION.TECHRECESS.LOCAL;LION.TECHRECESS.LOCAL;1024 65537
15209069698302886918692526275993682685487756125241275262150096080917796305925875866
43345342093113199401460082653807471895789639417038680868029327789177613826963949156
73281165301839147231608842611568006220314143123531872176719585705816202594977747103
352185531431929480158001123608576065155471661913841565222289 root@lion.techrecess.local:
192.168.161.100

```

Directory Utility

Services Search Policy Directory Editor

Viewing **Users** in node **/LDAPv3/127.0.0.1** Authenticated as diradmin

- _krb_anonymous
- _krb_changepw
- _krb_kadmin
- _krb_kerberos
- _krb_krbtgt
- Directory Administrator
- Randy Saeks
- Sandy Rakes
- Serverdot Appuser
- VPN MPPE Key Access User
- Workgroupman Ageruser

Name	Value
AltSecurityIdentities	Kerberos:untitled_1@LION.TECHRECESS.LOCAL
AppleMetaNodeLocation	/LDAPv3/127.0.0.1
AppleMetaRecordName	uid=workgroupmanageruser,cn=users,dc=lion,dc=tech
▼ AuthenticationAuthority	;ApplePasswordServer;0x1ef01f1e00f311e19599000c... ;Kerberosv5;0x1ef01f1e00f311e19599000c292442a... +
FirstName	Workgroupman
GeneratedUID	393BF620-7BB4-43B9-A979-B7B20D3133E9
LastName	Ageruser
MCXFlags	<?xml version="1.0" encoding="UTF-8"?>
NFSHomeDirectory	99
Password	*****
PrimaryGroupID	20
RealName	Workgroupman Ageruser
RecordName	workgroupmanageruser
RecordType	dsRecTypeStandard:Users
UniqueID	1028

+ -
Text Data

```

:Kerberosv5;0x1ef01f1e00f311e19599000c292442a3;workgroupmanageruser@LION.TECHRECESS.LOC
AL:LION.TECHRECESS.LOCAL;1024 65537
15209069698302886918692526275993682685487756125241275262150096080917796305925875866
43345342093113199401460082653807471895789639417038680868029327789177613826963949156
73281165301839147231608842611568006220314143123531872176719585705816202594977747103
352185531431929480158001123608576065155471661913841565222289 root@lion.techrecess.local:
192.168.161.100

```

Directory Utility

Services Search Policy Directory Editor

Viewing Users in node /LDAPv3/127.0.0.1 Authenticated as diradmin

Name	Value
AltSecurityIdentities	Kerberos:untitled_1@LION.TECHRECESS.LOCAL
AppleMetaNodeLocation	/LDAPv3/127.0.0.1
AppleMetaRecordName	uid=workgroupmanageruser,cn=users,dc=lion,dc=tech
AuthenticationAuthority	;ApplePasswordServer;0x1ef01f1e00f311e19599000c... ;Kerberosv5;0x1ef01f1e00f311e19599000c292442a... +
FirstName	Workgroupman
GeneratedUID	393BF620-7BB4-43B9-A979-B7B20D3133E9
LastName	Ageruser
MCXFlags	<?xml version="1.0" encoding="UTF-8"?>
NFSHomeDirectory	99
Password	*****
PrimaryGroupID	20
RealName	Workgroupman Ageruser
RecordName	workgroupmanageruser
RecordType	dsRecTypeStandard:Users
UniqueID	1028

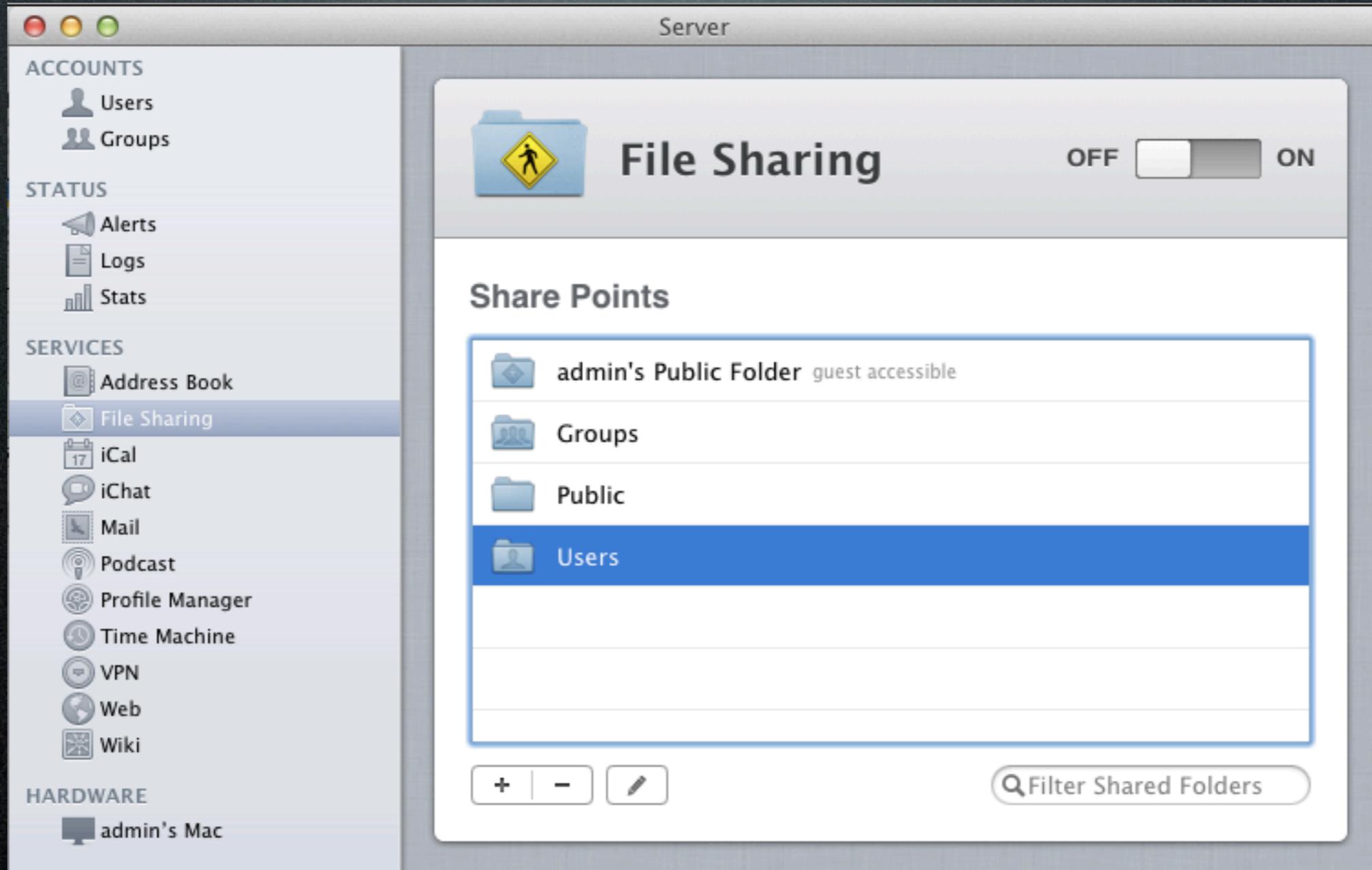
+ - Text Data

```

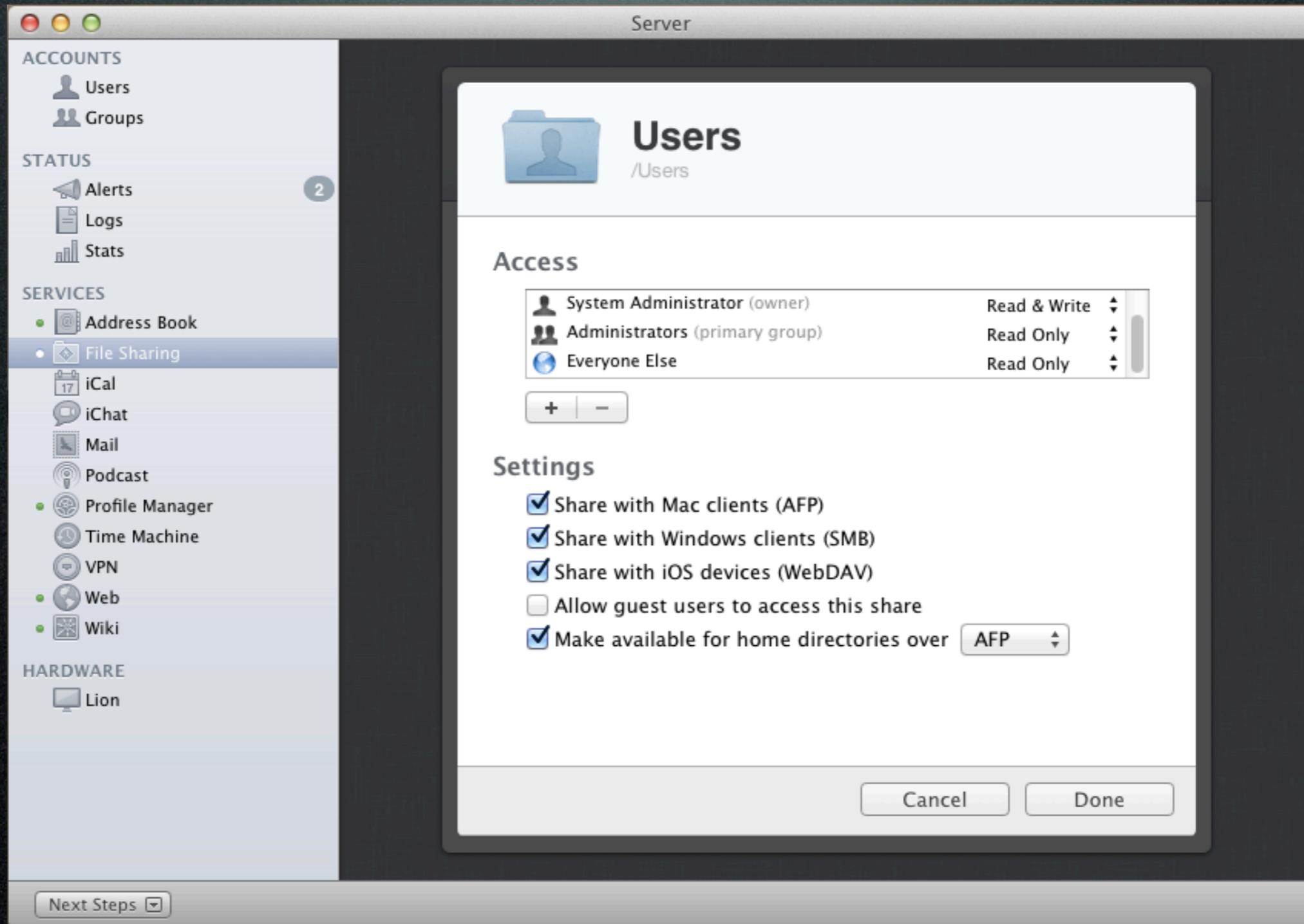
:Kerberosv5;0x1ef01f1e00f311e19599000c292442a3;workgroupmanageruser@LION.TECHRECESS.LOC
AL;LION.TECHRECESS.LOCAL;1024 65537
15209069698302886918692526275993682685487756125241275262150096080917796305925875866
43345342093113199401460082653807471895789639417038680868029327789177613826963949156
73281165301839147231608842611568006220314143123531872176719585705816202594977747103
352185531431929480158001123608576065155471661913841565222289 root@lion.techrecess.local:
192.168.161.100

```

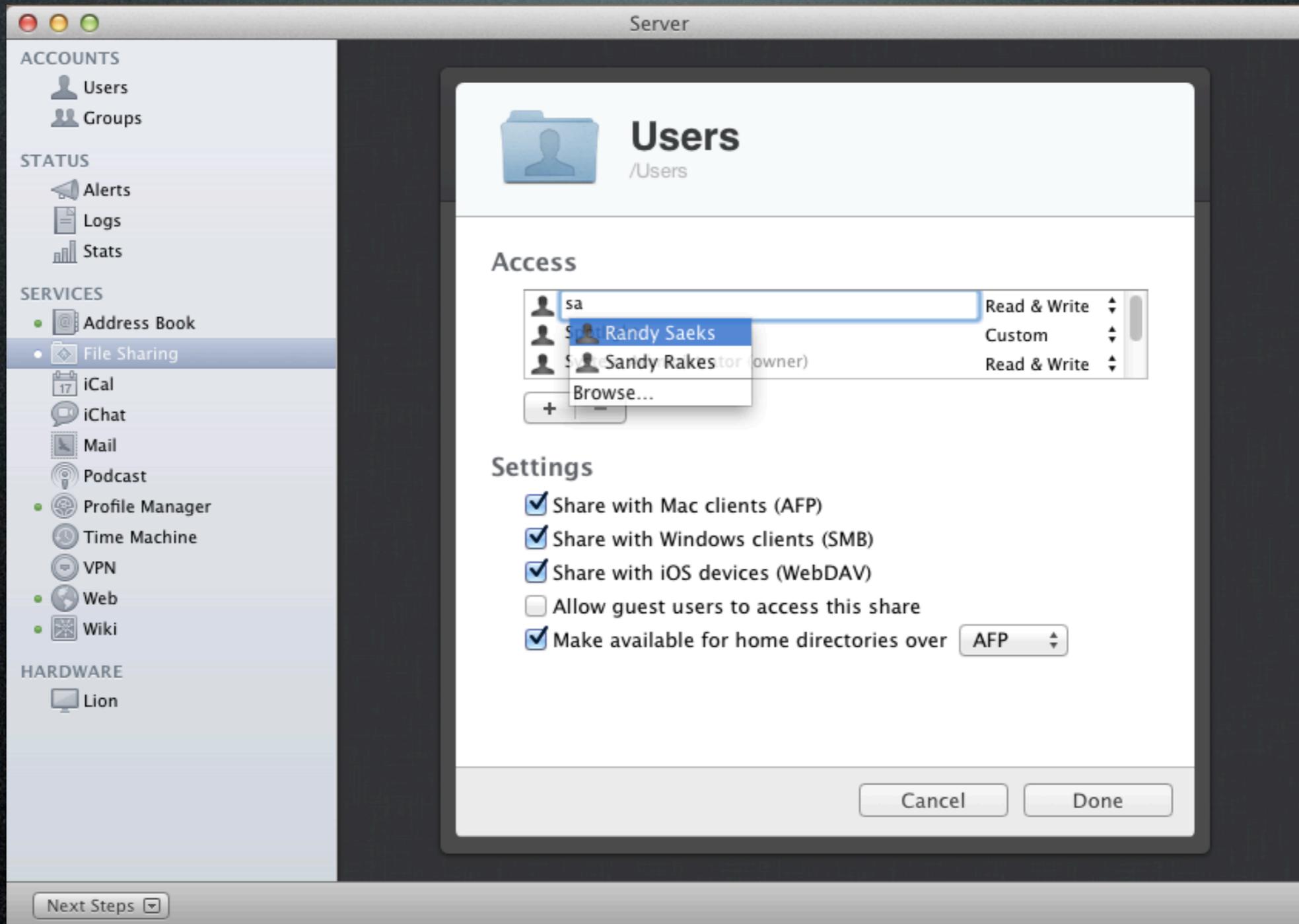
Enabling Services



Sharing Options



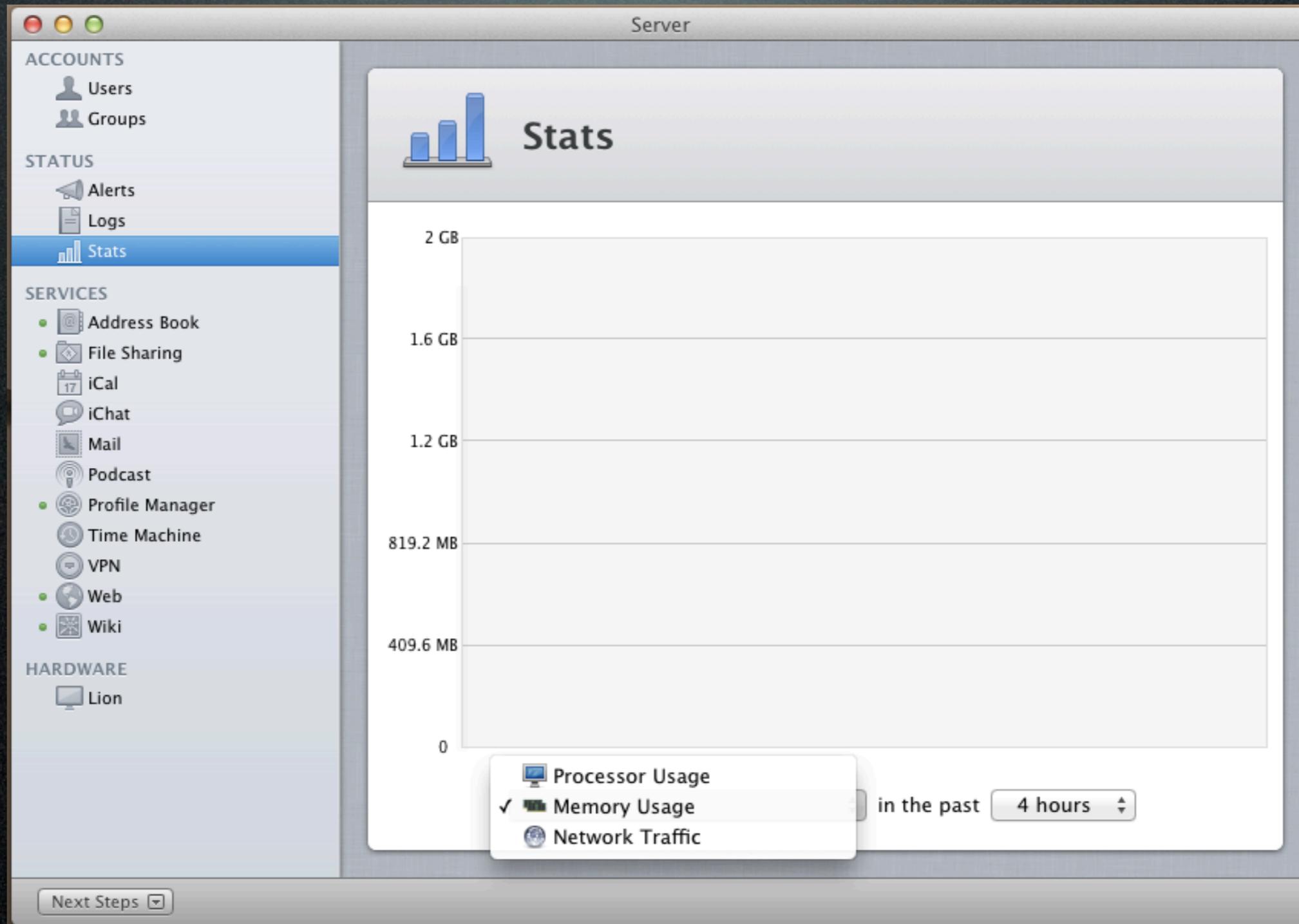
Sharing Options



Lion AFP

- AppleFileServer -v
 - afpserver-580.2
- <http://www.jammed.com/~jwa/hacks/security/asip>
 - AFP3.4,AFP3.3,AFP3.2,AFP3.1,AFPX03
- 3.4??!

Where are connections?



Where are connections?

Name	OS	CPU	Network	Disk	Uptime	Users
lion.techrecess.local	10.7.2		8.0 B/sec		3 days, 22:16	0

Where are connections?

```
lion:~ admin$ sudo serveradmin command afp:command = getConnectedUsers
afp:state = "RUNNING"
afp:usersArray:_array_index:0:lastUseElapsedTime = 3
afp:usersArray:_array_index:0:minsToDisconnect = 0
afp:usersArray:_array_index:0:sessionType = "tcp"
afp:usersArray:_array_index:0:state = 1
afp:usersArray:_array_index:0:serviceType = "afp"
afp:usersArray:_array_index:0:ipAddress = "192.168.161.1"
afp:usersArray:_array_index:0:sessionID = 4
afp:usersArray:_array_index:0:loginElapsedTime = 374
afp:usersArray:_array_index:0:disconnectID = 0
afp:usersArray:_array_index:0:name = "sandyrakes"
afp:usersArray:_array_index:0:flags = 0
afp:timeStamp = "2011-10-20 00:03:58 +0000"
lion:~ admin$
```

Name	OS	CPU	Network	Disk	Uptime	Users
lion.techrecess.local	10.7.2		8.0 B/sec		3 days, 22:16	0

Where are connections?

```
lion:~ admin$ sudo serveradmin command afp:command = getConnectedUsers
afp:state = "RUNNING"
afp:usersArray:_array_index:0:lastUseElapsedTime = 3
afp:usersArray:_array_index:0:minsToDisconnect = 0
afp:usersArray:_array_index:0:sessionType = "tcp"
afp:usersArray:_array_index:0:state = 1
afp:usersArray:_array_index:0:serviceType = "afp"
afp:usersArray:_array_index:0:ipAddress = "192.168.161.1"
afp:usersArray:_array_index:0:sessionID = 4
afp:usersArray:_array_index:0:loginElapsedTime = 374
afp:usersArray:_array_index:0:disconnectID = 0
afp:usersArray:_array_index:0:name = "sandyrakes"
afp:usersArray:_array_index:0:flags = 0
afp:timeStamp = "2011-10-20 00:03:58 +0000"
lion:~ admin$
```

Name	OS	CPU	Network	Disk	Uptime	Users
lion.techrecess.local	10.7.2		8.0 B/sec		3 days, 22:16	0

GUI “Config” Option(s)



GUI Config - Web

- All other web settings are in `httpd.conf`
 - SSI
 - Aliases
 - Server threads, etc

Gotchas

- Each Lion service applies a SACL
- Server.App auto-does this
- WGM does not

Directory Services

- DirectoryServices replaced with opendirectoryd
- OpenDirectory is still here
 - Setup & Monitor in SA
- ActiveDirectory Support

odutil

- OpenDirectory logging
 - odutil set log debug
 - Persistent across reboots
 - odutil set log default
- Files moved to
 - /S/L/OpenDirectory
 - /var/log/opendirectoryd.log

Kerberos

- 10.7 Kerberos is based on Heimdal
- 10.6 and 10.7 kadmind don't talk

Client Management

- “Line in the sand”
 - WGM / MCX for 10.6 and lower
 - Profile Manager (PM) for 10.7 & iOS

Profile Manager Features

- PM instant*
- Ability to enroll devices by the user
- Also means ability to un-enroll
 - Goes back to “personal device” mindset

Profile Manager

- More robust iPCU
- Requires
 - ODM
 - CA signed SSL Certs
 - APNS Ports- 2195, 2196, 5223
 - PM Ports - 80, 443, 1640

Profile Manager

- Create payloads and associate
- Many WGM items are now here
- Upload plist for advanced settings

Profile Manager Guide

- <http://help.apple.com/profilemanager/mac/10.7/>

Profile Manager



Settings for Test Group

5 Payloads Configured – Created 10/23/11 at 5:54 PM

1 Payload Configured

-  **VPN**
Not Configured
-  **Certificate**
Not Configured
-  **SCEP**
Not Configured
-  **Web Clips**
Not Configured
-  **Security & Privacy**
Not Configured
- iOS**
-  **Restrictions**
Not Configured
-  **Subscribed Calendars**
Not Configured

Network Interface

Type of network interface on the device

Wi-Fi

Service Set Identifier (SSID)

Identification of the wireless network to connect to

required

Hidden Network
Enable if target network is not open or broadcasting

Auto Join
Automatically join this wireless network

Proxy Setup

Configures proxy settings to be used with this network

None

Security Type

Wireless network encryption to use when connecting

Any (Personal)

Password

Cancel OK

Profile Manager

The screenshot shows the 'Profile Manager' application window with the 'Options' tab selected. The window has three main tabs: 'Account Creation', 'Account Expiry', and 'Rules'. The 'Options' sub-tab is active, showing the following settings:

- Manage:** Radio buttons for 'Never' (selected), 'Once', and 'Always'.
- Create mobile account when user logs in to network account
- Require confirmation before creating mobile account
 - Show "Don't ask me again" checkbox
- Create home using:**
 - network home and default sync settings
 - local home template

Profile Manager



Settings for Test Group

7 Payloads Configured – Created 10/23/11 at 5:54 PM

APN
Not Configured

Mac OS X

Restrictions
1 Payload Configured

iChat
Not Configured

Login Items
Not Configured

Mobility
1 Payload Configured

Dock
Not Configured

Printing
Not Configured

Parental Controls
Not Configured

Account Creation Account Expiry Rules

Preference Sync Home Sync Options

Sync: at login in background
 at logout manually

Sync Folders
Files in these folders will sync as specified above

- ~/Library
- ~/Documents/Microsoft User Data

+ -

Skip Items
Items matching any of the following will not sync

- Full Path | ⇅ ~/.SymAVQSFile
- Full Path | ⇅ ~/Documents/Microsoft User Data/Entourage Temp
- Full Path | ⇅ ~/Library/Application Support/SyncServices
- Full Path | ⇅ ~/Library/Application Support/MobileSync

Cancel OK

Profile Manager

The image shows a web browser window displaying the Profile Manager interface for a user group named "Test Group". The browser's address bar shows the URL `https://lion.techrecess.local/profilemanager/#/user_group/1D9F9B03-09EA-4D41-80B5`. The browser's search bar contains the text "Google".

The Profile Manager interface is partially visible in the background, showing a sidebar with sections like "LIBRARY" (containing "Device" and "Users"), "ACTIVITY", and "ENROLLMENT". The main content area shows settings for "Settings" (10 Payloads Configured), "Restrictions" (1 Payload Configured), "iChat" (Not Configured), "Login Items" (Not Configured), "Mobility" (1 Payload Configured), "Dock" (1 Payload Configured), and "Printing" (1 Payload Configured).

Overlaid on the Profile Manager is a file selection dialog window titled "Applications". The dialog shows a list of applications in the "FAVORITES" section, including "All My Files", "Applications", "Desktop", "Documents", "Downloads", "Movies", "Music", "Pictures", and "admin". The "Applications" folder is selected, and its contents are listed in the main pane: "Image Capture", "iTunes", "Launchpad", "Mail", "Mission Control", "Photo Booth", "Preview", "QuickTime Player", "Safari", "Server", "Server", "Stickies", "System Preferences", "TextEdit", "Time Machine", and "Utilities". The "Safari" application is highlighted in blue.

To the right of the application list, a preview pane displays a large, black-and-white "Trollface" meme image. Below the image, the following metadata is shown:

Name	Safari
Kind	Application
Size	35.2 MB
Created	May 27, 2011 2:47 PM
Modified	Oct 19, 2011 7:23 AM
Last opened	Oct 19, 2011 7:23 AM
Version	5.1.1

At the bottom of the dialog, there are "Cancel" and "Choose" buttons.

Profile Manager

Profile Manager: User Group: Settings for Test Group

https://lion.techrecess.local/profilemanager/#/user_group/1D9F9B03-09EA-4D41-80B5

Profile Manager

LIBRARY

- Device
- Device
- Users
- Groups

ACTIVITY

- Active
- Compl

ENROLLME

- Enroll

Settings

- Restrictions 1 Payload Co
- iChat Not Configure
- Login Items Not Configure
- Mobility 1 Payload Co
- Dock 1 Payload Configure
- Printing 1 Payload Configure

FAVORITES

- All My Files
- Applications
- Desktop
- Documents
- Downloads
- Movies
- Music
- Pictures
- admin

SHARED

- AirTraffic

CoreServices

- Installer
- InstallerSt...ions.bundle
- Jar Launcher
- Java Web Start
- JavaVersion.plist
- KernelEventAgent.bundle
- KeyboardSetupAssistant
- Language Chooser
- LocationMenu
- logind
- loginwindow
- lonelist
- ManagedClient
- mDNSResponder.bundle
- Memory Slot Utility

ManagedClient

Name	ManagedClient
Kind	Application
Size	11.1 MB
Created	6/24/11 10:14 PM
Modified	10/19/11 7:23 AM
Last opened	10/19/11 7:23 AM
Version	3.1

Cancel Choose

Profile Manager

- Preference manifests don't work
- Loss of "Always, Once, Never"
 - If it is set in PM - it is "Always"
- Leave the Everyone Group alone
- iPCU may open your profiles

Profile Manager & WGM

- PM Settings apply over WGM
- View MCX in System Profiler
- View PM in System Preferences

WGM & PM

The image shows two overlapping macOS System Preferences windows. The background window is 'System Preferences' for a MacBook Air, with the 'Managed Client' pane selected. The 'com.apple.dock' section is expanded, showing a list of settings:

Name	Value
com.apple.desktop	
com.apple.Dictionary	
com.apple.dock	
minimize-to-application-immutable	1
autohide	0
static-apps	()
show-process-indicators-immutable	1
tilesize	64
autohide-immutable	1
mineffect-immutable	1
MCXDockSpecialFolders	(Ad...
launchanim	1
size-immutable	1
magsize-immutable	1
static-only	1
position-immutable	1
magnification	0
magnify-immutable	1
contents-immutable	1
orientation	right
largesize	64

Below this list, the 'com.apple.dock:' section is expanded to show details for the 'minimize-to-application-immutable' setting:

- minimize-to-application-immutable:
- Value: 1
- State: always
- Source: com.apple.dock (User)

The foreground window is the 'Profiles' pane, showing a list of profiles on the left and details for a selected profile on the right. The selected profile is 'Settings for Sandy R...' with 1 setting. The details pane shows the following information:

- Techrecess Verified
- Signed lion.techrecess.local Code Signing... Installed Oct 27, 2011
- Settings Dock Preferences
- DETAILS
- Dock Preferences**
- Description Dock
- Orientation left
- Auto Hide False
- Minimize To Appli... False
- Show Process Indi... False
- Launch Animation True
- Tile Size 64
- Minimize Effect scale

Profile Manager

Profile Manager: Task: Push Settings

https://lion.techrecess.local/profilemanager/#/task/44/

Profile Manager Search Randy Saeks

LIBRARY

- Devices
- Device Groups
- Users
- Groups

ACTIVITY

- Active Tasks
- Completed Tasks

ENROLLMENT PROFILES

- Enrollment Profile

Push Settings
1 succeeded

Push Settings: Settings for Tech...
1 succeeded

Push Settings: Settings for Tech...
1 succeeded

Push Settings: Settings for Tech...
1 succeeded

Push Settings
1 succeeded

Update Info: AirTraffic
Succeeded

Update Info: AirTraffic
Succeeded

Push Settings
1 succeeded

Devices

Sandy Rakes on AirTraffic	Succeeded	10/27/11 at 7:09 PM
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Profile Manager

The screenshot shows a web browser window titled "Profile Manager: Device: AirTraffic" with the URL "https://lion.techrecess.local/profilemanager/#/device/1/". The browser's address bar and search bar are visible. The page header includes the "Profile Manager" logo, a search bar, and the user name "Randy Saeks".

The main content area is divided into three sections:

- LIBRARY:** A sidebar menu with options: Devices, Device Groups, Users, Groups, ACTIVITY (Active Tasks, Completed Tasks), and ENROLLMENT PROFILES (Enrollment Profile).
- Device Summary:** A header for the "AirTraffic" device by "Randy Saeks", with tabs for "Profile", "Activity", and "About".
- Activity Log:** A table listing recent activities for the device.

Activity	Status	Timestamp
Push Settings: Air...	Succeeded	10/27/11 at 7:17 PM
Push Settings: Air...	Succeeded	10/27/11 at 7:17 PM
Push Settings: Air...	Succeeded	10/27/11 at 7:13 PM
Push Settings: Air...	Succeeded	10/27/11 at 7:13 PM
Push Settings: Air...	Succeeded	10/27/11 at 7:05 PM
Push Settings: Air...	Succeeded	10/27/11 at 7:05 PM
Push Settings: Air...	Succeeded	10/27/11 at 7:02 PM
Push Settings: Air...	Succeeded	10/27/11 at 7:02 PM
Push Settings: Air...	Succeeded	10/27/11 at 6:59 PM
Push Settings: Air...	Succeeded	10/27/11 at 6:58 PM
Push Settings: Air...	Succeeded	10/27/11 at 6:58 PM
Update Info: AirTr...	Succeeded	10/27/11 at 6:57 PM
Update Info: AirTr...	Succeeded	10/27/11 at 6:57 PM

At the bottom of the interface, there are zoom controls (+, -) and buttons for "Revert" and "Save".

User info in Profile Manager

The screenshot shows a web browser window titled "Profile Manager: User: Sandy Rakes". The address bar contains the URL `https://lion.techrecess.local/profilemanager/#/user/83E49458-A019-4796-9E5B-B37446DAE615/`. The browser's search bar shows "Google". The page header includes the "Profile Manager" logo, a search bar, and the user name "Randy Saeks".

The main content area is divided into two columns. The left column is a sidebar with the following sections:

- LIBRARY**
 - Devices
 - Device Groups
 - Users**
 - Groups
- ACTIVITY**
 - Active Tasks
 - Completed Tasks
- ENROLLMENT PROFILES**
 - Enrollment Profile

The right column displays the user profile for "Sandy Rakes" (email: `sandy@techrecess.local`). It features a navigation bar with tabs for "Profile", "Devices", "Activity", "About", and "Apps". The "Profile" tab is active, showing the following details:

- General**
 - email: `sandy@techrecess.local`
 - username: `sandyrakes`
- Portal Access**
 - Can Enable Remote Management
- In Groups**
 - Workgroup
 - Atest Group
 - Everyone

At the bottom of the page, there are navigation controls: a "+" and "-" button on the left, a refresh button in the center, and "Revert" and "Save..." buttons on the right.

PM - “My Devices”

My Devices

Devices Profiles

This Mac Remove



Serial Number: C02DW2R5DDR3

Lock

Wipe

Enter a passcode

Re-enter your passcode

This device cannot be unlocked remotely and can only be unlocked using this passcode.

Lock

Logout

Other Services

Services Removed

- Mobile Access
- Push Notification
- Tomcat
- QTSS - Use HTTP Streaming
- Samba* (More in a bit)



NetBoot

- 10.5+ Images are reusable
- Can use other imaging products with more Lion-centric features

FTP

FTP

- Enable by loading launchd item

```
sudo launchctl load -w /System/Library/LaunchDaemons/ftp.plist
```

FTP

- Enable by loading launchd item
- /etc/ftpd.conf

```
sudo launchctl load -w /System/Library/LaunchDaemons/ftp.plist
```

mySQL

- Download from mySQL and get 10.6 (x86, 64-bit)

Postgres

- Included database
 - DON'T TOUCH

Backup & Restore

- `sudo -s PGUSER=_postgres /usr/bin/pg_dumpall > ~/postgresql.dump`
- `/usr/share/devicemgr/backend/wipeDB.sh`
- `sudo -s PGUSER=_postgres /usr/bin/psql -d template1 -f ~/postgresql.dump`

Print Server

- Manage via CUPS Interface
 - <http://localhost:631>
- Does not have samba support
- If you really need a print server ... Use something other than OS X

Windows Support

AD Integration

- 10.6 had AD / OD Golden Triangle
- 10.7 has AD / PM
 - Avoid AD / OD / PM

AD Integration

- 10.6 had AD / OD Golden Triangle
- 10.7 has AD / PM
- Avoid AD / OD / PM

↑
The “Rusty Cluster”?

AD & 10.7 Clients

- Better support of multiple Kerb realms
- Bind clients to AD
- Use PM for Management
- AD + OD AFP Mount :(

Useful Links

- Configuring services for users of Active Directory or third-party LDAP servers
Article HT4851
- Unable to connect to a Mac OS X v10.6 Open Directory Server (Golden Triangle)
Article TS3861

10.7 OD and Windows

- Stick with 10.6 for OS X PDC / BDC
- For 10.7
 - Enable SMB on OS X Server
 - Connect with OD user / password



Snow Leopard



Lion



2008

2009

2010

2011

2012

2013

OS X Timeline

Rhapsody



Cheetah



Puma



Jaguar



Panther



Tiger



Leopard



Snow Leopard



Lion



1999

2000

2001

2002

2003

2004

2005

2006

2007

2008

2009

2010

2011

2012

2013

OS X Timeline