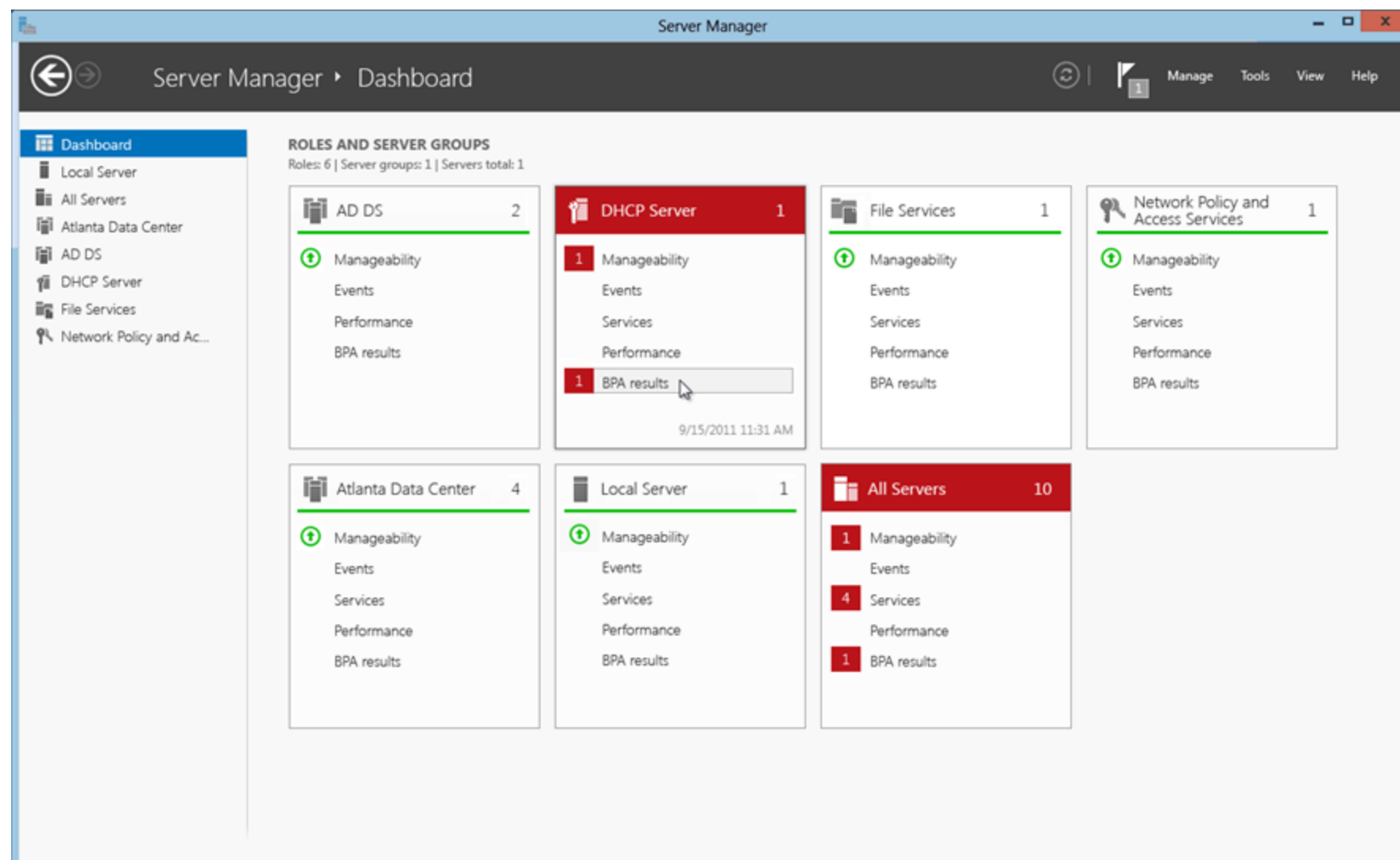


# Server Manager

The Windows 8 Server Manager is a reimagined console for remote management of multiple servers and roles.



Server Manager simplifies the management of multiple remote servers and their installed OS roles by reducing the number of context switches within common workflows; adding centralized, quick monitoring; and providing effective troubleshooting.

The focus of our user experience investment in this release was to deliver a new, modern experience for Windows Server that is both fresh and familiar to IT Professionals.

The new version of Server Manager exemplifies this design direction, bringing a principled approach to design that embraces the Metro style being adopted across Microsoft.

# Experience Principles

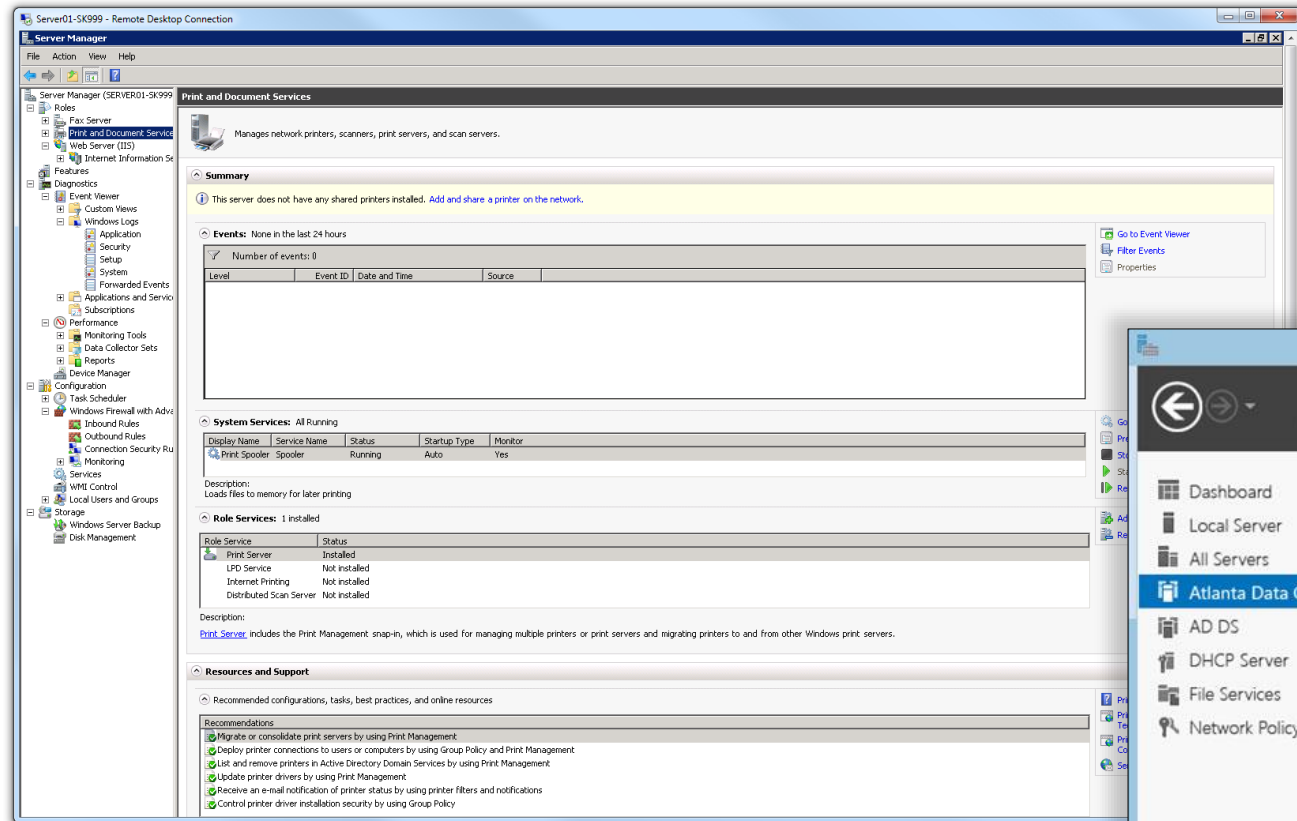
Server Manager was designed to reflect our core values.

- ✓ Pride in craftsmanship
- ✓ Be fast and fluid
- ✓ Authentically digital
- ✓ Do more with less
- ✓ Win as one

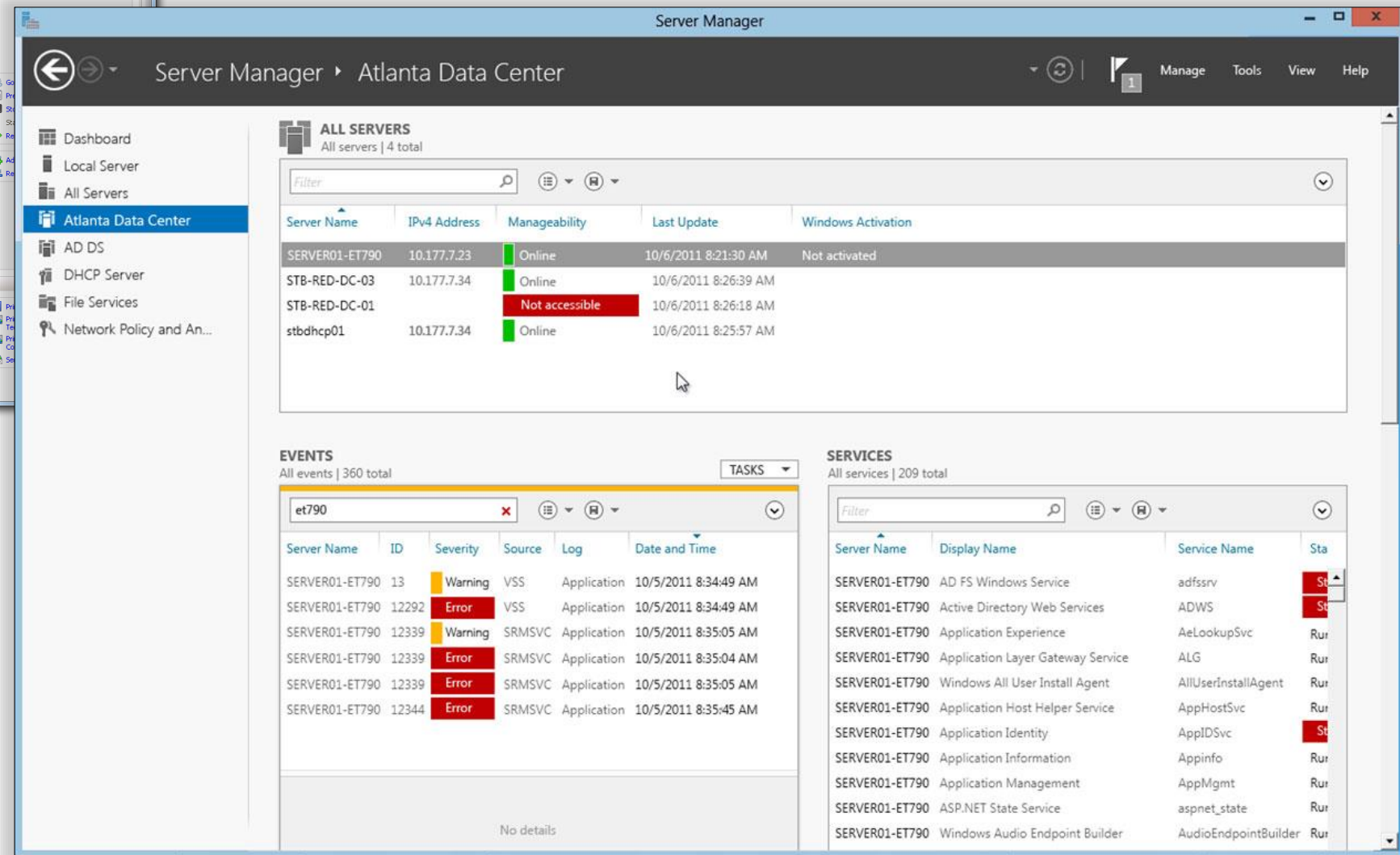
# Visual Evolution

Fresh yet familiar. The new Server Manager clearly resembles its predecessor.

Server Manager's lineage is immediately clear and recognizable, which instills a sense of confidence for existing users. It also provides the right context for this release as an evolution.



Windows Server 2008



Windows Server 8

# Design Process

## Design Research

### Our users and their roles



IT Architects



IT Developers



IT People Managers



System Administrators



Application Administrators



Computer and Mobile Device Administrators



Service Administrators



Cloud Brokers

### Meet Michelle, an IT manager Michelle manages a team responsible for servers and desktops in the company.

"A control thing. More than anything else, I want to make sure that I have the health of the systems I want my team to do all the tasks."

"We have to work stupid... 60-70 hours a week. You can do the bulk of them in your own time. I'm very positive! You are still able to get your kids good night..."

#### Key Things to Remember

- Michelle is an IT manager. She has a team of 10 people.
  - Her team consists of:
    - Two people are DBAs
    - Two people are responsible for network
    - Two people are network engineers
    - 1 security administrator
    - 1 Unix administrator
  - Michelle says "My team manages a lot of servers. All running Windows Server 2008 R2."
  - Michelle thinks she would need a lot of help to manage a team of 10 people.
  - Because Michelle is a senior member of the team, she has a lot of experience.
- #### Key Things to Remember
- The company provides support and training for applications and network components.
  - After a recent merger, the company has a lot of new users.

# Design Process

## Design Research



Managers



System Administrators



Administrators



Cloud Brokers

### Meet Michelle, an IT manager Michelle manages a team responsible for all the Windows servers and desktops in the company

"A control thing. More than anything, if I am responsible for the health of the systems I want a member of the team to do all the tasks."

"We have to work stupid... 60-70 hours a week, when you can do the bulk of them in your pajamas - that's very positive! You are still able to do laundry, kiss the kids good night..."



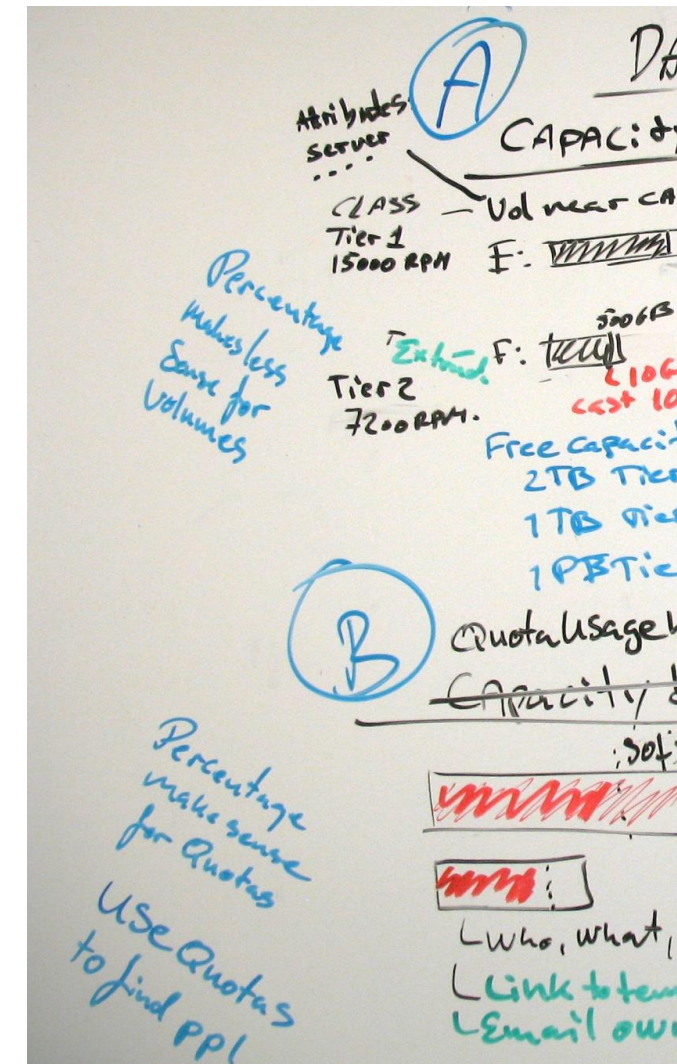
#### Key Things to Remember About Michelle

- Michelle is an IT manager. She has been working at her company for 19 years.
- Her team consists of:
  - Two people are DBAs
  - Two people are responsible for HP 3000
  - Two people are network engineers
  - 1 security administrator
  - 1 Unix administrator

- Michelle says "My team manages all the windows servers and desktops. We also do phone support and video support". Her team manages 150 servers. All running Windows Server 2003.
- Michelle thinks she would need a lobotomy in order to agree to delegate tasks to end-users.
- Because Michelle is a senior member of the team she doesn't provision servers anymore.

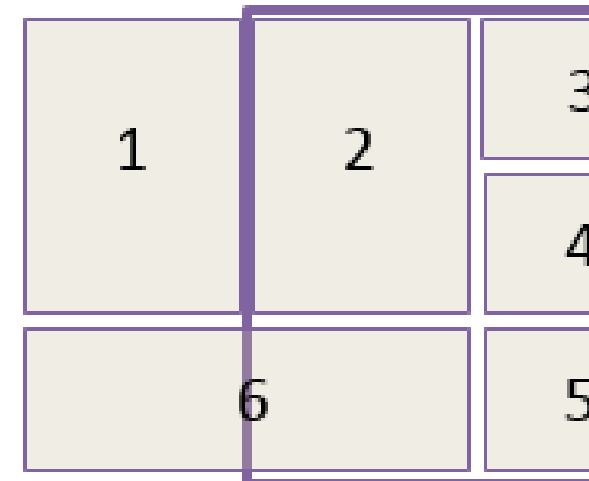
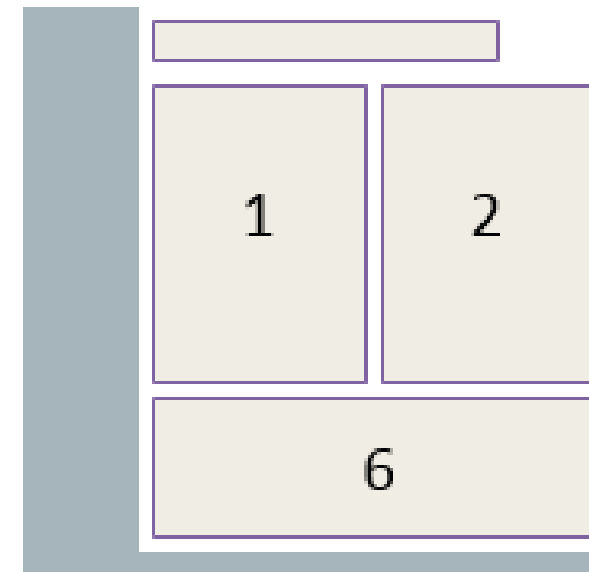
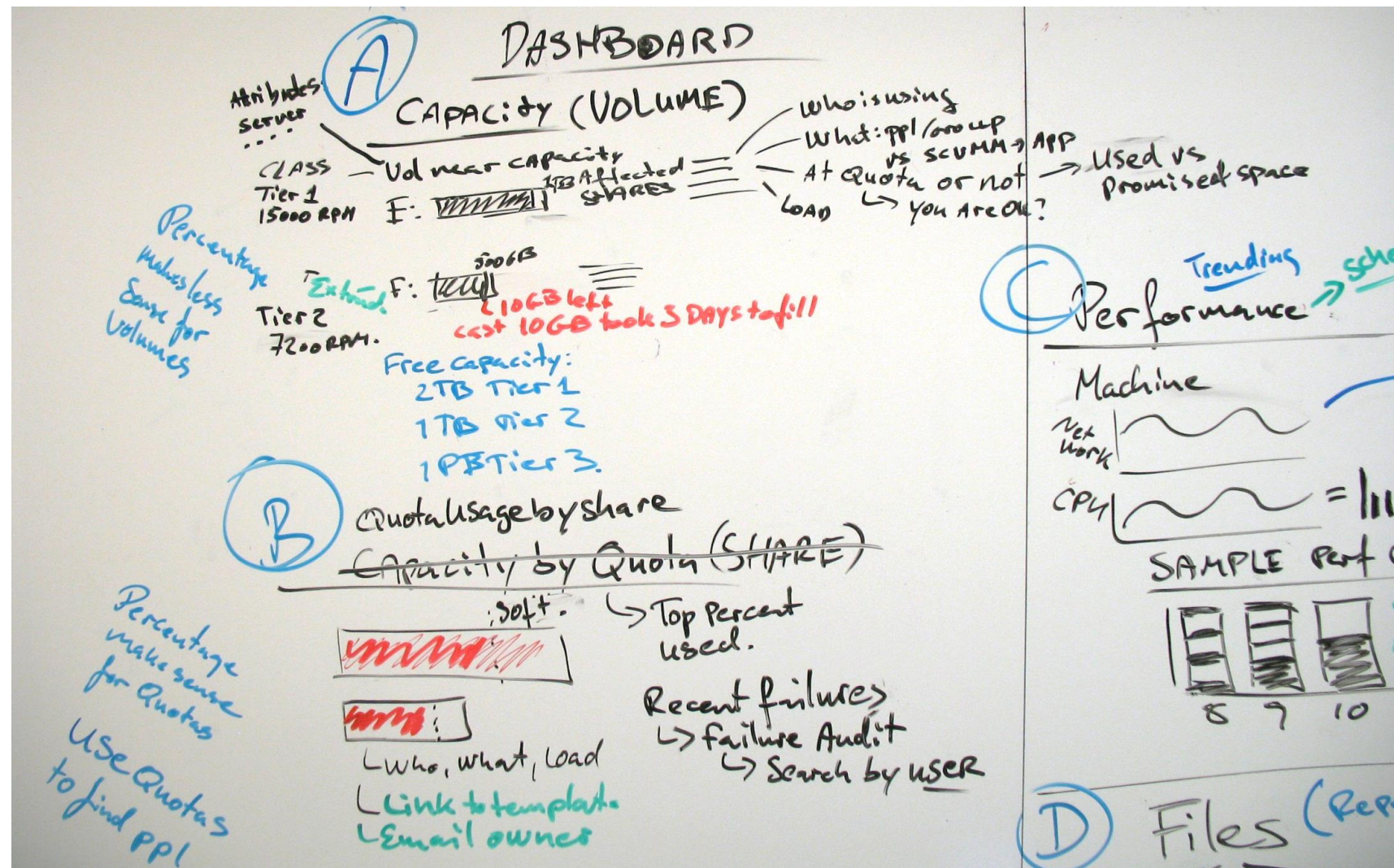
#### Key Things to Remember About Michelle's Company

- The company provides support and applications for 34 colleges around Washington State. Each college has their own IT staff but some applications and network components are shared among the colleges.
- After a recent merger, the company now employees 140 people in 2 locations. The bulk of their servers resides in one location.



# Design Process

White boarding



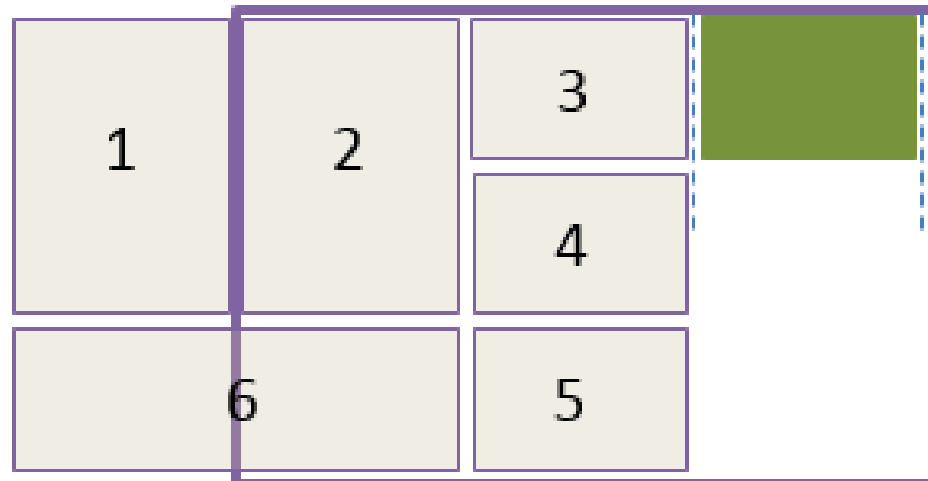
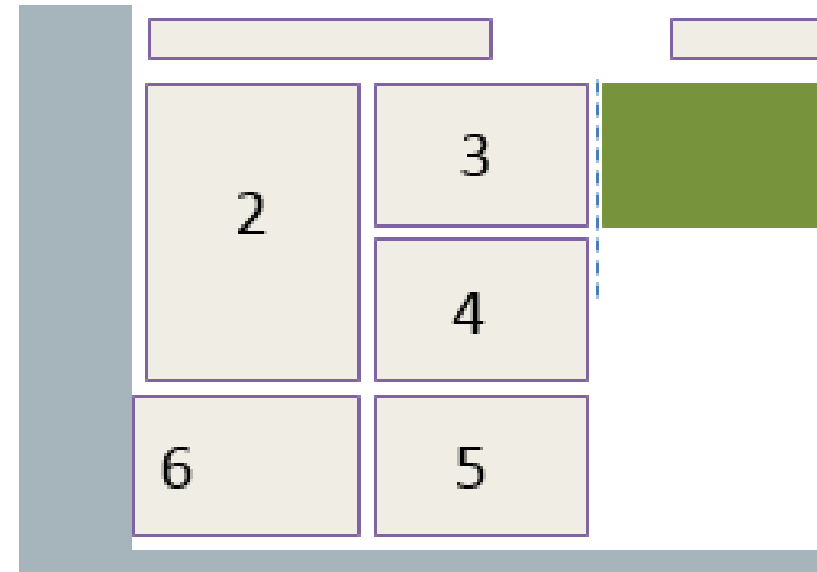
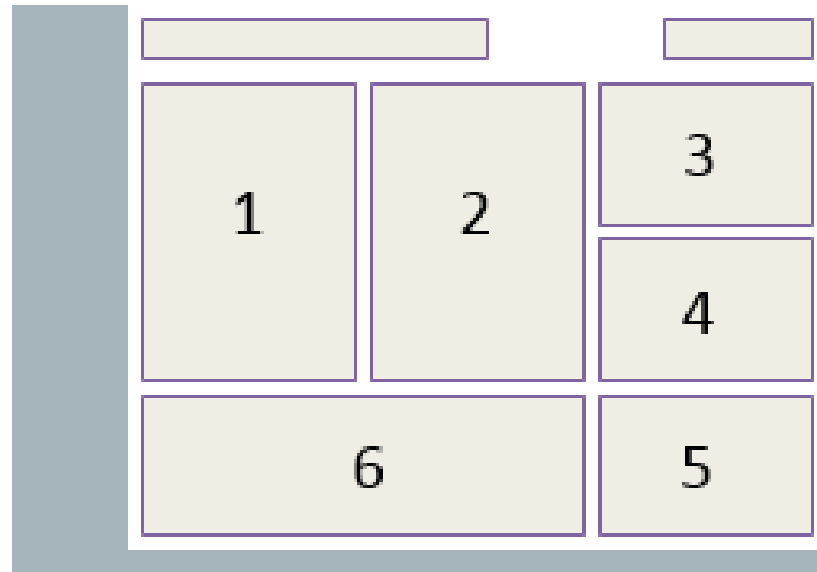
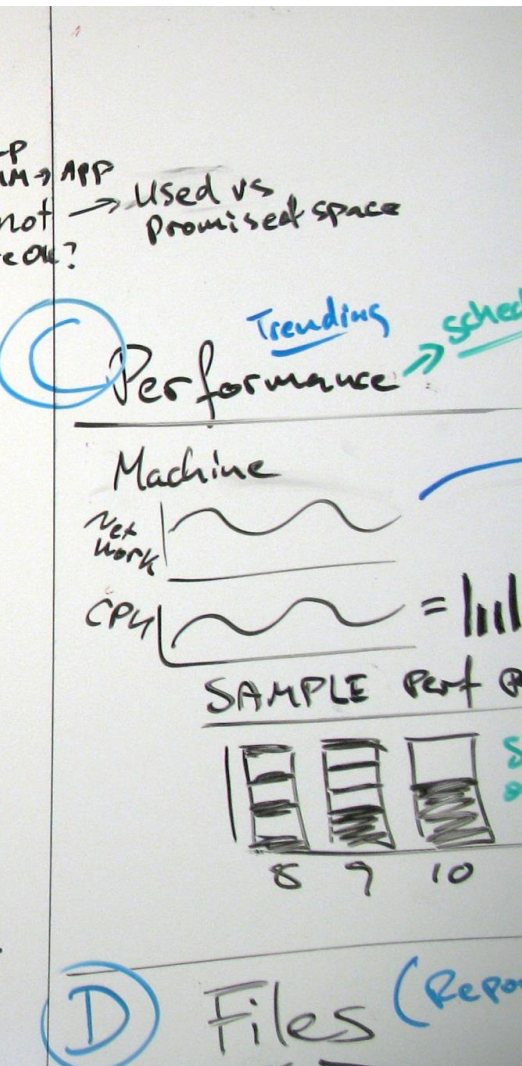
port and video support". Her team managers 150

college has their own IT staff but some

r servers resides in one location.

# Design Process

Alternative approaches







# Design Process

Low fidelity wireframes



Home -> Shares

HOME

SHARES

Name	Local Path	Protocol	Free Space
Share 1	C:\windows	SMB	
Share 2	C:\windows	SMB	
Share 3	C:\windows	SMB	
Share 4	C:\windows	SMB	
Share 5	C:\windows	SMB	
Share 6	C:\windows	SMB	
Share 7	C:\windows	SMB	
share 8	C:\windows	SMB	
share 9	C:\windows	SMB	
Share 10	C:\windows	SMB	
Share 11	C:\windows	SMB	
Share 12	C:\windows	SMB	
Share 7	C:\windows	SMB	
share 8	C:\windows	SMB	
share 9	C:\windows	SMB	
Share 10	C:\windows	SMB	
Share 11	C:\windows	SMB	
Share 12	C:\windows	SMB	
Share 7	C:\windows	SMB	
share 8	C:\windows	SMB	
share 9	C:\windows	SMB	
Share 10	C:\windows	SMB	
Share 11	C:\windows	SMB	
Share 12	C:\windows	SMB	
Share 7	C:\windows	SMB	
share 8	C:\windows	SMB	
share 9	C:\windows	SMB	
Share 10	C:\windows	SMB	
Share 11	C:\windows	SMB	
Share 12	C:\windows	SMB	
Share 7	C:\windows	SMB	
share 8	C:\windows	SMB	
share 9	C:\windows	SMB	
Share 10	C:\windows	SMB	
Share 11	C:\windows	SMB	
Share 12	C:\windows	SMB	
Share 7	C:\windows	SMB	
share 8	C:\windows	SMB	
share 9	C:\windows	SMB	

DETAILS

Share 4  
Share Path: [WKGUPTA-FS2\Share4](#)  
Path: C:\Users\administrators\Desktop\Share4  
User Limit: Maximum Allowed  
Access Based Enumeration: Disabled  
Offline Settings: Selected files and programs available offline

RELATED OBJECTS

Quota  
39.1 GB  
26% used  
Soft Quota  
No Template

Volume  
(C:) Capacity 39.0 GB  
Type: Local Disk  
Used Space 7.73 GB  
Free Space 31.3 GB

Screens  
Block:  
Compressed files  
Executable files  
Image Files  
Office Files  
Screening Type:  
Active Screening.  
Do not allow users to save unauthorized files.  
[Go To Screens Overview >](#)

Reports  
Reports to Generate:  
Duplicate Files  
File Screening Audit  
Files by Files Group  
Files by Owner  
Large Files  
Least Recently Accessed Files  
Quota Usage  
Report Formats:  
... [more>](#)  
[Go To Reports Overview >](#)

File

FILE SERVICES

GRAPHICA  
Total 23 Servers  
RAID Type:  
Disk Type:

Overview  
Servers  
Pools  
Volumes  
Shares  
Quotas  
Screens  
Classification  
iSCSI LUNs  
Reporting

FILES  
Total 10 Reports

Total number of Files (by Size)

>10 MB 1-2 MB  
2-10 MB <1 MB

See HTML version ->

# Design Process

Visual Refresh

CA ?

Capacity 39.0 GB  
Type: Local Disk

Used Space  
7.73 GB

Free Space  
31.3 GB

Generate:  
Files  
File Screen Audit  
File Group  
User

Most Recently Accessed Files

more>

Overview >

File SERVICES

GRAPHICAL  
Total 23 Servers

RAID Type: Disk Type:

FS-Server1 Details  
Total Errors: 6  
Critical Errors: 1  
Error information: Blah, Blah, Blah

Shared Disk Cluster  
Total Space: 39.1 GB  
Free Space: 23.3 GB  
Total Shares: 35

GOBR2  
Details

CAPACITY  
Top Capacity Usage (Showing 10/25)

Volume	Server	%Used	Free Space	Estimated Time (to be filled)
C:\Mount1	FS-Server4	256MB	256MB	20 Days
C:\Mount2	FS-Server4	740MB	740MB	1.15 TB
D:	FS-Server3	1GB	1GB	74 Days
F:	FS-Server2	1.15GB	1.15GB	20 days left
D:	FS-Server2	2.85GB	2.85GB	982 Days
G:	FS-Server1	56MB	56MB	Never
Q:	FS-Server4	1.96GB	1.96GB	
D:	FS-Server8	11.36GB	11.36GB	
D:	FS-Server6	1.15TB	1.15TB	
E:	FS-Server2	23GB	23GB	

Go To Volumes overview->

FILES  
Total 10 Reports

Total number of Files (by Size)

FilesbySize Report  
Duplicate Files  
File Screen Audit  
Files by File Group  
Files by Owner  
Files by Property  
Large Files  
Least Recently Accessed Files  
Most Recently Accessed Files  
Quota Usage

See HTML version ->

ENVIRONMENT SUMMARY  
Server (Showing 12/12)

Server	Disks	Free Space	User Connections	Clustered
FS-Server 1	2	26GB	25	No
FS-Server2	4	28GB	18	No
FS-Server3	1	39GB	6	No
FS-server41-Clust	5	780GB	15	Yes
FS-Server42-Clust	21	22GB	2	Yes
FS-Server5	2	76GB	0	No
FS-Server6	4	25GB	18	No
FS-Server7-Clust	3	83GB	19	Yes
FS-Server8-Clust	8	720GB	22	Yes
FS-Server9	12	25GB	56	No
FS-Server14	4	250MB	6	No
FS-Server36	6	1.5TB	34	No

FILE OVERVIEW

OVERVIEW  
MANAGE  
STORAGE POOLS  
VOLUMES  
SHARES  
ISCSI VIRTUAL DL

FILE SERVERS  
Entire Network | 23 total

Name	Status	Event
SERVER-001	online	10
SERVER-002	online	23
SERVER-003-WEST	Online - war...	
SERVER-004	online	
SERVER-005	online	
SERVER-006-north	online	
SERVER-007	OFFLINE	
SERVER-008-west	online	12
SERVER-009-NORTHWEST	online	
SERVER-010	online	
SERVER-011	online	

SERVICES  
All events | 25 total

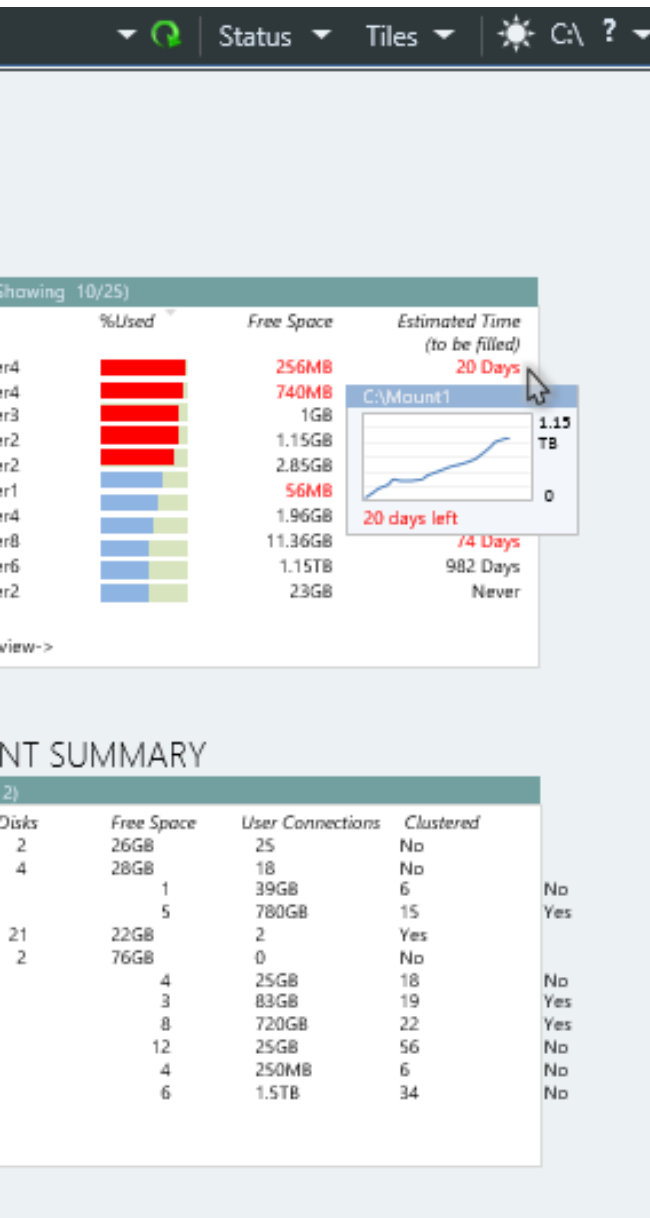
Name	ID	Level
CRITICAL (2)		
SERVER-001-WST	1038	Critical
SERVER-002-WEST	4297	Critical
ERROR (3)		
SERVER-003-WEST	3209	Error
SERVER-003-WEST	3209	Error

BPA  
All types | 20 total

Name	Type	Title
SERVER-001-WST	Warning	The Co
SERVER-002-WEST	Warning	The Co
SERVER-0023-WEST	Warning	The Co

# Design Process

Visual Refresh #2



## DISK SUMMARY

Disks	Free Space	User Connections	Clustered
2	26GB	25	No
4	28GB	18	No
	1	39GB	6
	5	780GB	15
21	22GB	2	Yes
2	76GB	0	No
	4	25GB	18
	3	83GB	19
	8	720GB	22
	12	25GB	56
	4	250MB	6
	6	1.5TB	34

FILE OVERVIEW

OVERVIEW MANAGE STORAGE POOLS VOLUMES SHARES ISCSI VIRTUAL DL

### FILE SERVERS

Entire Network | 23 total

Name	Status	Events	Services	IP Address	Operating System	Description
SERVER-001	online	1038	16	192.168.1.1	Windows Server 8	DELL OPTIPLEX GA6 MULTICORE
SERVER-002	online	2397	17	192.168.1.1	Windows Server 8	DELL OPTIPLEX GA6 MULTICORE
SERVER-003-WEST	Online - war...	13	11	192.168.1.1	Windows Server 8	DELL OPTIPLEX GA6 MULTICORE
SERVER-004	online	11	13	192.168.1.1	Windows Server 8	DELL OPTIPLEX GA6 MULTICORE
SERVER-005	online	13	12	192.168.1.1	Windows Server 8	DELL OPTIPLEX GA6 MULTICORE
SERVER-006-north	online	16	12	192.168.1.1	Windows Server 8	DELL OPTIPLEX GA6 MULTICORE
SERVER-007	OFFLINE	0	0	192.168.1.1	Windows Server 8	DELL OPTIPLEX GA6 MULTICORE
SERVER-008-west	online	1239	13	192.168.1.1	Windows Server 2008 R2	DELL OPTIPLEX GA6 MULTICORE
SERVER-009-NORTHWEST	online	23	15	192.168.1.1	Windows Server 2008 R2	DELL OPTIPLEX GA6 MULTICORE
SERVER-010	online	10	14	192.168.1.1	Windows Server 8	DELL OPTIPLEX GA6 MULTICORE
SERVER-011	online	12	12	192.168.1.1	Windows Server 8	DELL OPTIPLEX GA6 MULTICORE

### SERVICES

All events | 25 total

Name	ID	Level	Source	Log	In last 24h
CRITICAL (2)					
SERVER-001-WST	1038	Critical	kernel	System	5
SERVER-002-WEST	4297	Critical	netlogon	Network	6
ERROR (3)					
SERVER-003-WEST	3209	Error	SQLupdater	Application	2
SERVER-003-WEST	3209	Error	netlogon	Network	3

### BPA

All types | 20 total

Name	Type	Title	Category
SERVER-001-WST	Warning	The Control Publication I...	Configuration
SERVER-002-WEST	Warning	The Control Publication I...	Configuration
SERVER-0023-WEST	Warning	The Control Publication I...	Configuration

### EVENTS

Filtered | 3 of 13 total

Name	Display Name	Status	Start
SERVER-001	PerfMon	STOPPED	Auto
SERVER-002	AD PerfMon	Running	Auto
SERVER-003-WEST	IIS PerfMon	Running	Auto

### PERFORMANCE

Over threshold in last 24 hours | 5 incidents total

Name	Type	In last 24h	First	Last
SERVER-001-WST	CPU	5	10:36 am	4:14 pm

Server Manager Dashboard

Dashboard

- Local Server
- All Servers
- Atlanta Data Center
- AD DS
- DHCP Server
- File Services
- Network Policy and Ac...

WELCOME TO SERVER MA

QUICK START

WHAT'S NEW

LEARN MORE

ROLES AND SERVER GROU

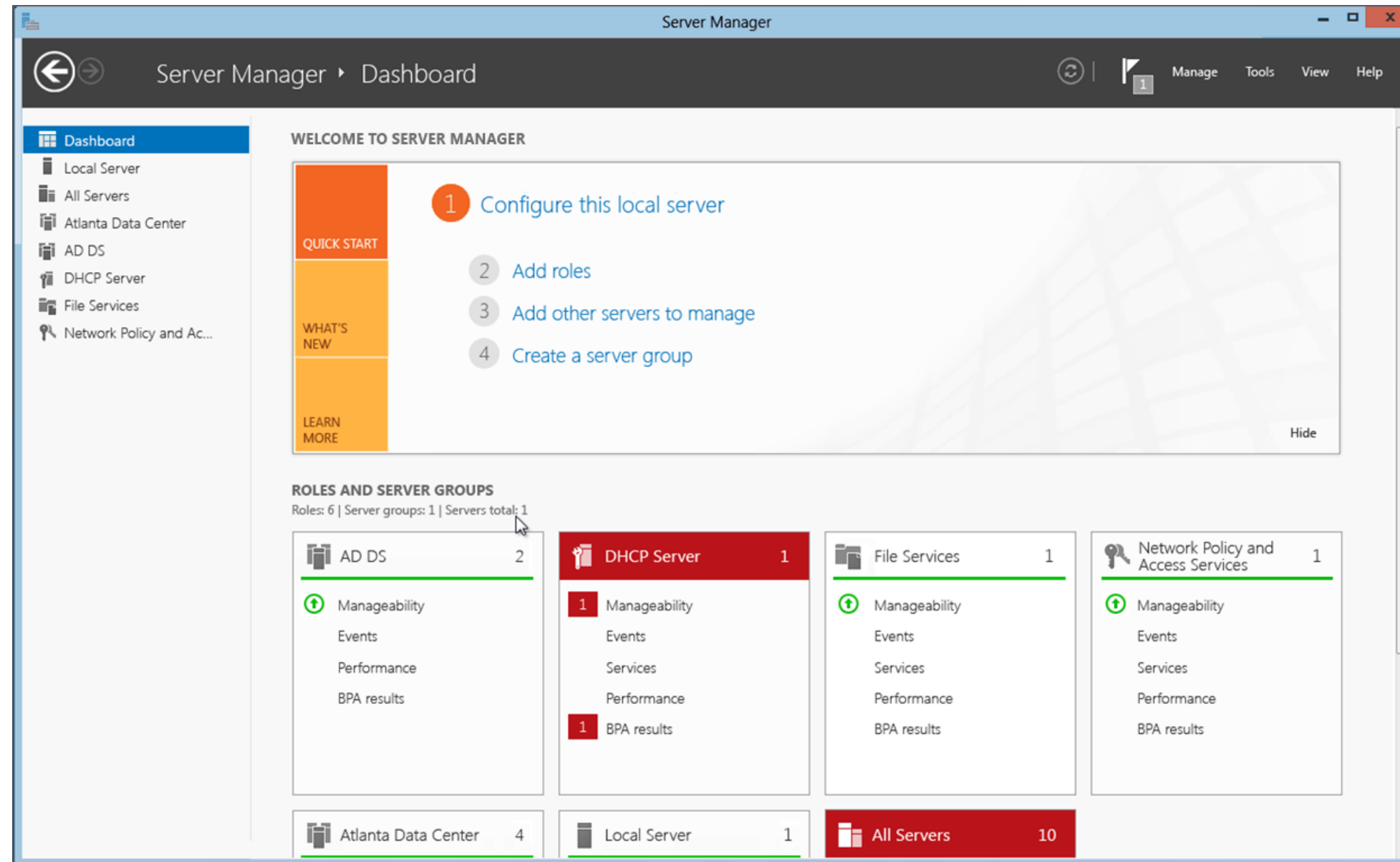
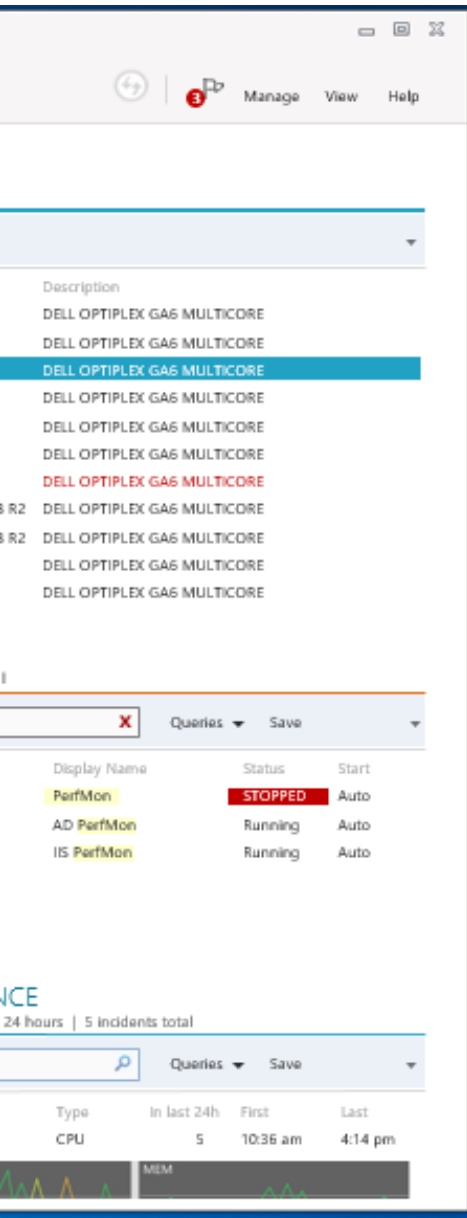
Roles: 6 | Server groups: 1 | Server

- AD DS
- Manageability
  - Events
  - Performance
  - BPA results

Atlanta Data Center

# Design Process

Final Designs



The screenshot displays the Windows Server Manager interface. At the top, the title bar reads 'Server Manager' with standard window controls. Below the title bar is a navigation bar with a back arrow, the text 'Server Manager > Dashboard', and a 'Manage' button with a notification badge showing '1'. To the right of the navigation bar are 'Tools', 'View', and 'Help' menus.

The main content area is divided into two primary sections:

- WELCOME TO SERVER MANAGER:** This section features a 'QUICK START' sidebar on the left with three items: 'QUICK START' (orange), 'WHAT'S NEW' (yellow), and 'LEARN MORE' (yellow). The main area contains a numbered list of four steps: 1. 'Configure this local server', 2. 'Add roles', 3. 'Add other servers to manage', and 4. 'Create a server group'. A 'Hide' button is located in the bottom right corner of this section.
- ROLES AND SERVER GROUPS:** This section provides a summary of installed roles and server groups. It starts with a summary line: 'Roles: 6 | Server groups: 1 | Servers total: 1'. Below this are several tiles, each representing a role or server group. Each tile includes an icon, a title, a count, and a list of associated features.

Role / Server Group	Count	Features
AD DS	2	Manageability, Events, Performance, BPA results
DHCP Server	1	Manageability, Events, Services, Performance, BPA results
File Services	1	Manageability, Events, Services, Performance, BPA results
Network Policy and Access Services	1	Manageability, Events, Services, Performance, BPA results
Atlanta Data Center	4	
Local Server	1	
All Servers	10	

# Roles – File Services

# File Services

Centralized management of File Server and Storage components.

The screenshot displays the Windows Server 8 File Services console. The main window is titled "Server Manager" and shows the "File Services > Volumes" view. The left-hand navigation pane includes "Servers", "Pools", "Volumes", "Shares", and "iSCSI Virtual Disks".

The "VOLUMES" section shows a table of all volumes (22 total). The table columns are Volume, Provisioning, Redundancy, % Used, Capacity, Free Space, and Optimization. The data is as follows:

Volume	Provisioning	Redundancy	% Used	Capacity	Free Space	Optimization
<b>FS-SERVER1 (4)</b>						
C:\	Thin	Simple	30%	39.1 GB	200 GB	30%
D:\	Thin	Mirror	20%	6 TB	200 GB	20%
E:\	Thin	Simple	20%	39.1 GB	200 GB	OFF
F:\	Fixed	Parity	20%	39.1 GB	200 GB	20%
<b>FS-SERVER2 (2)</b>						
C:\Mount1	Thin	Simple	28%	39.1 GB	200 GB	28%
C:\Mount2	Thin	Parity	35%	39.1 GB	200 GB	35%

Below the volumes table, there are two other sections:

- SHARES**: All Shares | 18 total. A table showing share names and local paths:
 

Name	Local Path	Used Space
Share1	C:\Share1	10 GB
Share10	C:\Share10	10 GB
Share11	C:\Share11	10 GB
Share2	C:\Share2	10 GB
Share3	C:\Share3	10 GB
- STORAGE POOL**: Volume C:\ on FS-Server1. Pool A details:
  - Total Physical Capacity: 1 TB
  - 52% Used
  - 402 MB Used Space
  - 740 MB Available Space
  - 1.24 GB Provisioned Space
  - Subsystem: EMC\_Name1
  - Servers: FS-Server1
  - Volumes: (FS-SERVER1) F:\

File Services enables users to easily pivot between key components of file server without the need to move to a separate tool.

Bringing management of key aspects of the file server, including storage management, into a single console takes the on-box experience closer to the experience of managing a file server appliance.

Server Manager

Server Manager ▶ File Services ▶ Volumes

Manage Tools View Help

**VOLUMES**  
All Volumes | 22 total

Volume	Provisioning	Redundancy	% Used	Capacity	Free Space	Optimization
FS-SERVER1 (4)						
C:\	Thin	Simple		39.1 GB	200 GB	30%
D:\	Thin	Mirror		6 TB	200 GB	20%
E:\	Thin	Simple		39.1 GB	200 GB	OFF
F:\	Fixed	Parity		39.1 GB	200 GB	20%
FS-SERVER2 (2)						
C:\Mount1	Thin	Simple		39.1 GB	200 GB	28%
C:\Mount2	Thin	Parity		39.1 GB	200 GB	35%

Last Refreshed on 8/3/2011 4:25 PM

**SHARES**  
All Shares | 18 total

Name	Local Path	Used Space
Share1	C:\Share1	10 GB
Share10	C:\Share10	10 GB
Share11	C:\Share11	10 GB
Share2	C:\Share2	10 GB
Share3	C:\Share3	10 GB

[Go to Shares>](#)

**STORAGE POOL**  
Volume C:\ on FS-Server1

**Pool A**  
Total Physical Capacity: 1 TB

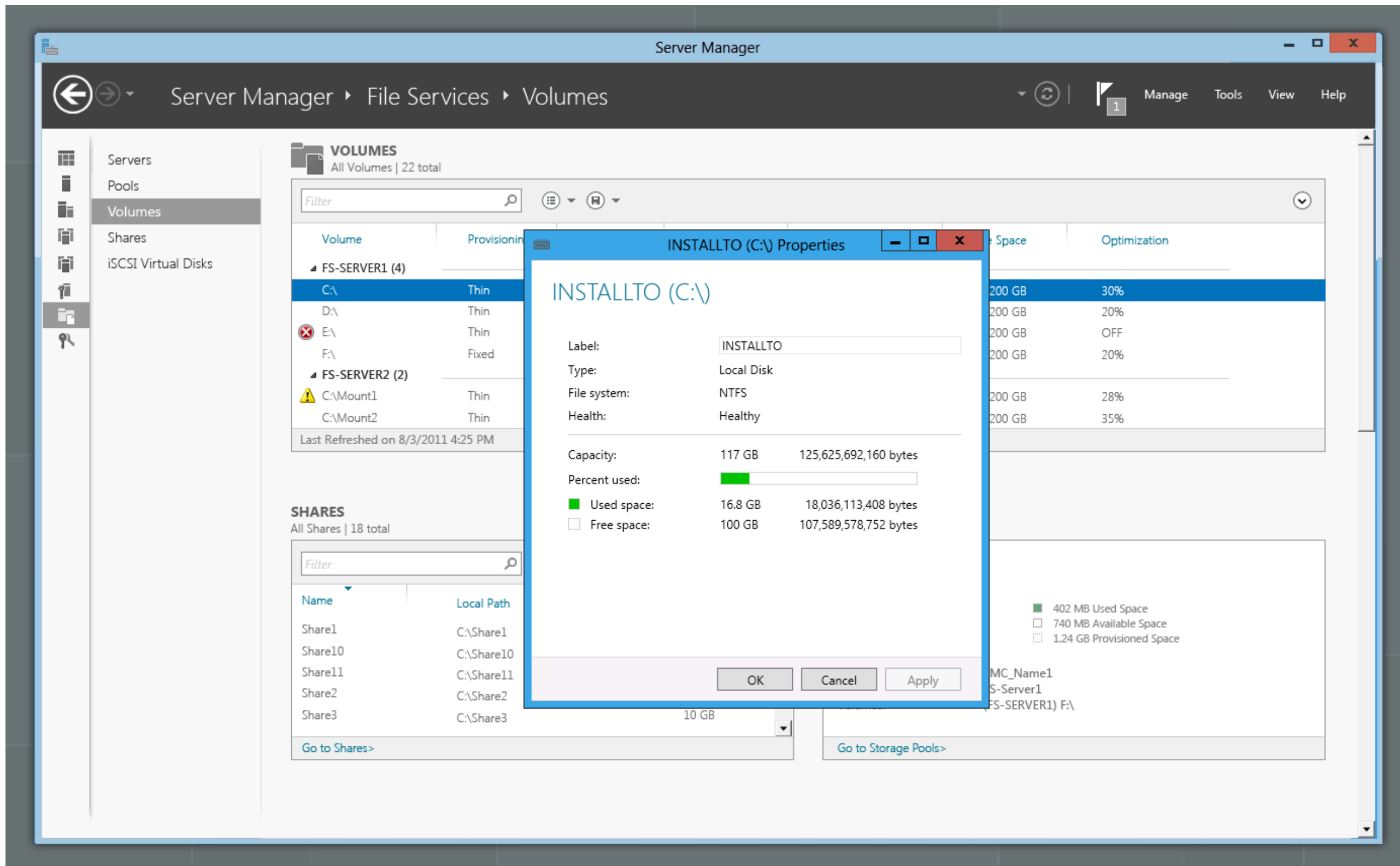
52% Used

- 402 MB Used Space
- 740 MB Available Space
- 1.24 GB Provisioned Space

Subsystem: EMC\_Name1  
Servers: FS-Server1  
Volumes: (FS-SERVER1) F:\

[Go to Storage Pools>](#)





The screenshot displays the Windows Server 8 Server Manager interface. The main window is titled "Server Manager" and shows the "File Services" > "Volumes" path. A "New Share Wizard" dialog box is open, titled "New Share Wizard". The wizard is currently on the "Share Location" step, which asks to "Select the server and path for this share".

The "Server:" section contains a table with the following data:

Server Name	Status	Cluster Role	Owner Node
FSE2E-01	Online	Not Clustered	

The "Share location:" section has two options:

- Select by volume:

This option is selected and leads to a table of available volumes:

Volume	Free Space	Capacity	File System
C:	100 GB	117 GB	NTFS
D:	8.88 GB	10.0 GB	NTFS
P:	1.40 GB	1.95 GB	NTFS
R:	2.31 GB	2.44 GB	ReFS

Below the volume table, there is a note: "The shared folder will be a new folder in the \Shares directory on the selected volume".

The second option is:

- Type a custom path:

This option is not selected and includes a text input field and a "Browse..." button.

At the bottom of the wizard, there are four buttons: "< Previous", "Next >", "Create", and "Cancel".

# Bar Charts

Using visualizations to provide at-a-glance views.

Thin	Simple		39.1 GB
Thin	Mirror		6 TB
Thin	Simple		39.1 GB
Fixed	Parity		39.1 GB
Thin	Simple		39.1 GB
Thin	Parity		39.1 GB

File Services utilizes bar charts in list views and related tiles to show storage usage. Charts rely on the familiar green, yellow, and red colors to show normal, warning and error states.

Charts provide immediate insights instead of presenting users with complex datasets. In a list view, the user can easily compare usage of different volumes at a glance and identify the ones that require immediate attention.

## STORAGE POOL

Volume C:\ on FS-Server1

### Pool A

Total Physical Capacity: 1 TB

52% Used



402 MB Used Space

740 MB Available Space

1.24 GB Provisioned Space

Subsystem: EMC\_Name1  
Servers: FS-Server1  
Volumes: (FS-SERVER1) F:\

[Go to Storage Pools>](#)

# Tile details

Navigation links and refresh time stamp provide additional functionality.

**VOLUME**  
restrictedShare on FSE2E-01

**INSTALLTO (C:)**  
Capacity: 117 GB

14.4% Used  
16.8 GB Used Space  
100 GB Free Space

[Go to Volumes Overview >](#)

Shares page

Child tiles in File services use a navigation link at the bottom of the tile to help people navigate between pages while retaining context.

As an example, on the *Shares* page the user can click the navigation link in the Volumes child tile to navigate to the *Volumes* page.

The selection in the Shares page is retained across the navigation to help orient the user on the landing page. This way, the user never loses context while moving from one page to another.

Parent tiles show a refresh timestamp at the bottom to indicate the last time a page was updated with data.

**VOLUMES**  
All volumes | 6 total

Volume	Status	Provisioning	Capacity	Free Space	Deduplication Ra
Q:		Unknown	1.95 GB	1.95 GB	
R:		Unknown	2.44 GB	2.31 GB	
D:		Unknown	10.0 GB	8.88 GB	67%
<b>C:</b>		Unknown	117 GB	100 GB	
P:		Unknown	1.95 GB	1.40 GB	0%
O:		Unknown	1.95 GB	1.95 GB	

Last refreshed on 6:12:11 PM Tuesday, January 24, 2012

Volumes page

SRV08\_VOL02 (D:) — Segoe UI Regular, 11 pt #6e6e6e

Total Capacity: 1.1 TB

87% Used — Segoe UI Light, 9 pt #6e6e6e

9.11 GB Used Space — Segoe UI Regular, 8 pt #6e6e6e

1.89 GB Available Space — Segoe UI Regular, 8 pt #6e6e6e

Data Optimization: ON — Segoe UI Light, 9 pt #6e6e6e

Disk Space Savings: 300 GB — Segoe UI Regular, 9 pt #6e6e6e

Disk Optimization rate: 32% — Segoe UI Regular, 9 pt #6e6e6e

Go to Volumes> — hyperlink states

## hyperlink states

- Segoe UI, 9 pt #007394 — [Go To Volumes>](#) rest
- Segoe UI, Underline 9 pt #21a1c4 — [Go To Volumes>](#) hover
- Segoe UI, Underline 9 pt #007394 — [Go To Volumes>](#) pressed