

NETWORKED AT IN THE HIGHER ED ENVIRONMENT

This talk:
staff.washington.edu/danc/Talks

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Outline

- Introductions
- Descriptions
- Common Problems/solutions
- What's Next



Introductions

- ◎ Access Technology Center (ATC) –
University of Washington

- ◎ Audience



UW Computing Environment

- Decentralized management w/ multiple domains
- A few large labs
- Numerous departmental labs
- Unknown total labs (!)







UW INFORMATION TECHNOLOGY

Access Technology
Center

Room 064B

Media Studio

Room 066

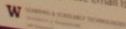
AUTOMATIC
CAUTION
DOOR

ACTIVATE SWITCH
TO OPERATE

The Mary Gates Hall Computing Resource Center
has Officially Closed as of July 1, 2010

For general use computers, please visit:
Odegaard Library 1st and 2nd Floor
Suzzallo Library 1st and Ground Floor
Allen Library 1st and Ground Floor

If you have any questions, please email itshelp@uw.edu







How it works now

- ① Create image
- ② Capture image
- ③ Cast image
- ④ Adjustments

Create System Image

- ① 1 workstation
- ② Operating system w/updates
- ③ Basic productivity software w/updates
 - MS Office, Adobe
 - Other lab-supported
- ④ Stir in AT software

- ⑤ Run and test all programs!

Capture System Image

- ① Use Ghost software to capture
- ① Upload image to server
- ① Create WinPE Boot CDs that point at bit torrent server
 - 20 discs for 125 computer lab

Cast System image

- ◎ Use GhostCast Server
- ◎ Subnet speed matters
 - Slow network: 10 computers=50 MB/minute
 - Fast: 30 computers=260 MB/minute
- ◎ Server location does matter
 - Fewer router hops = faster performance



Recycle Bin

Manage Your Server

Manage Your Server

Server: STARLIGHT

Search Help and Support Center

Symantec GhostCast Server - castit

File View Help

Session Name: Restore Image Create Image

Image File:

Disk Partition

IP Address

Speed (MB/min)	MB Transmitted	Time Elapsed	Connected Clients	0
Percent Complete	MB Remaining	Time Remaining	Failed Clients	0

Reminder

When all clients are connected press 'Send' to start the operation.

Don't show this reminder again

Tools and Updates

- Administrative Tools
- More Tools
- Windows Update
- Computer and Domain Name Information
- Internet Explorer Enhanced Security Configuration

See Also

- Help and Support
- Microsoft TechNet
- Deployment and Resource Kits
- List of Common Administrative Tasks
- Windows Server Communities
- What's New
- Strategic Technology Protection Program

Don't display this page at logon

Bit Torrent for Speed

⦿ Before torrent:

- 10 hrs for 125 computers on fast network, mostly hands-off
- overnight

⦿ After torrent:

- 1 hour per system
- Any time!

bit torrent is fast!

master script <<< - T:\master.bat /MAX
imaging process map (process_map.png) from T:\GILGAMESH_7_15_2011\
> copied
> copied
ing process map minimized...
master3.bat...

to the
WARNI
on yo
XXXXXX
ing in
ing in
ing in
ing in
rst, I
ing all
(s) cop
(s) cop
'll wi
ll crea
m ready
's time
keep seed
Tool fo
ight (C)
on: 6.1.2

µTorrent 2.0.4
File Options Help
<Search Here>

Name	#	Size	Done	Status	Se
Gilgamesh_7-15-2011.wim	*	30.9 GB	100.0%	Seeding	0

General | Trackers | Peers | Pieces | Files | Speed | Logger

Downloaded: 2.955
Availability: 100.0 %

Transfer

Time Elapsed:	25m 20s	Remaining:	1h 40m	Wasted:	767 kB (0 h
Downloaded:	30.9 GB	Uploaded:	11.9 GB	Seeds:	0 of 8 conn
Download Speed:	6.3 kB/s	Upload Speed:	5.9 MB/s (avPeers:		4 of 6 conn

DHT: 336 nodes
D: 6.5 kB/s O: 28.2 kB/s T: U: 5.8 MB/s O: 238.5 kB/

Applying (with verification) progress. 38-11 bits remaining

Key points

- ⦿ Testing of base image is critical!
 - ALL applications, esp TTS
- ⦿ Hardware should match
 - Motherboards, graphics, peripherals, etc
- ⦿ Use DeepFreeze on systems
 - Info in base image seed
 - Remote application

Adjustments

- ⦿ Customize specific machines as needed
- ⦿ Special hardware
 - Trackballs, keyboards, head pointers, scanners, printing, embossing
- ⦿ Special software
 - Hardware-specific or limited licenses
 - Speech input
 - Scanners, other hardware drivers

Common Problems/Solutions

- ⦿ Speech Input
- ⦿ JAWS, ZoomText, FineReader
- ⦿ Others?

JAWS, ZoomText, et al

- Custom/Proprietary licensing

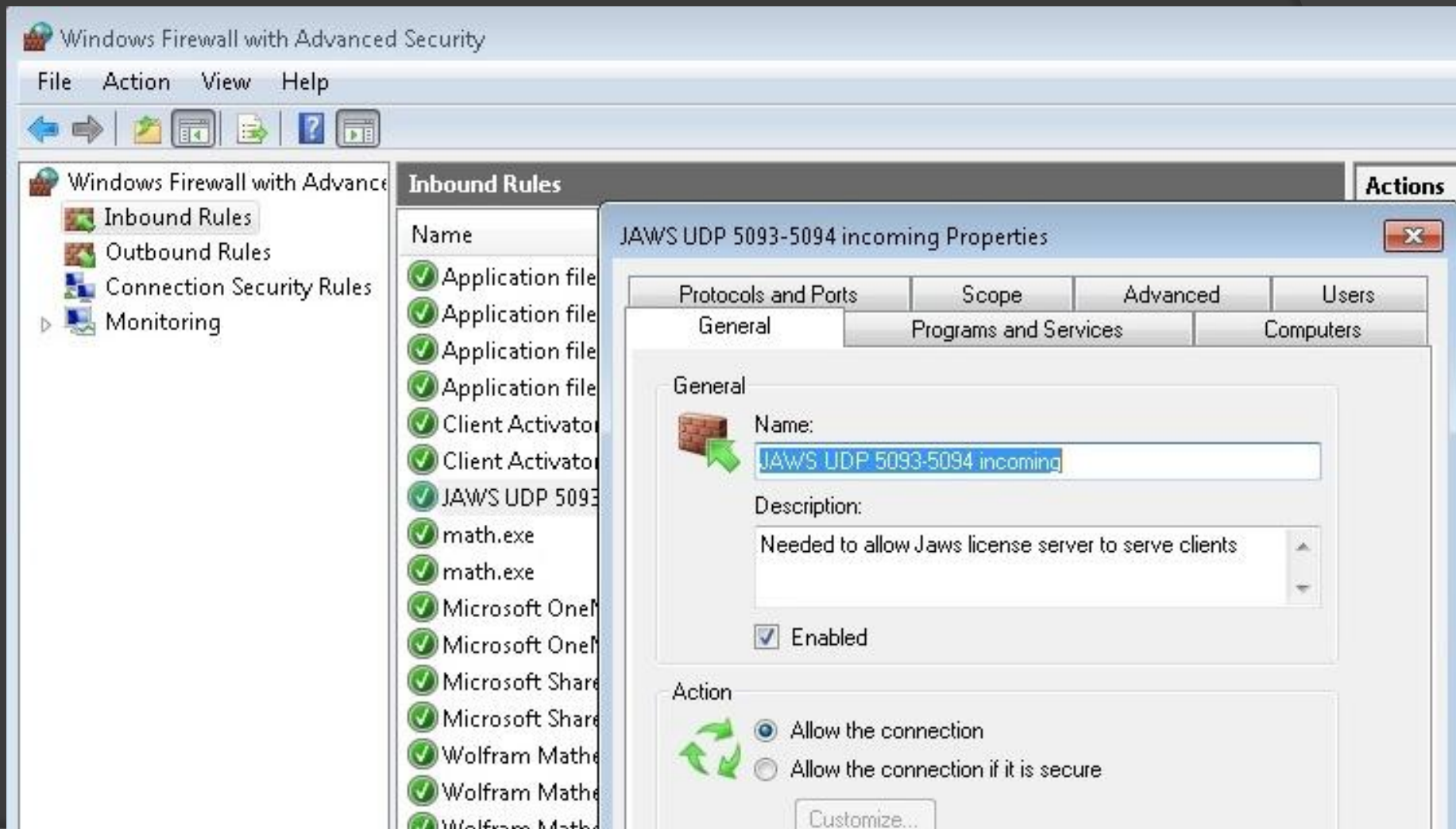
- Server issues

- Who buys?
- Installs?
- Maintains?

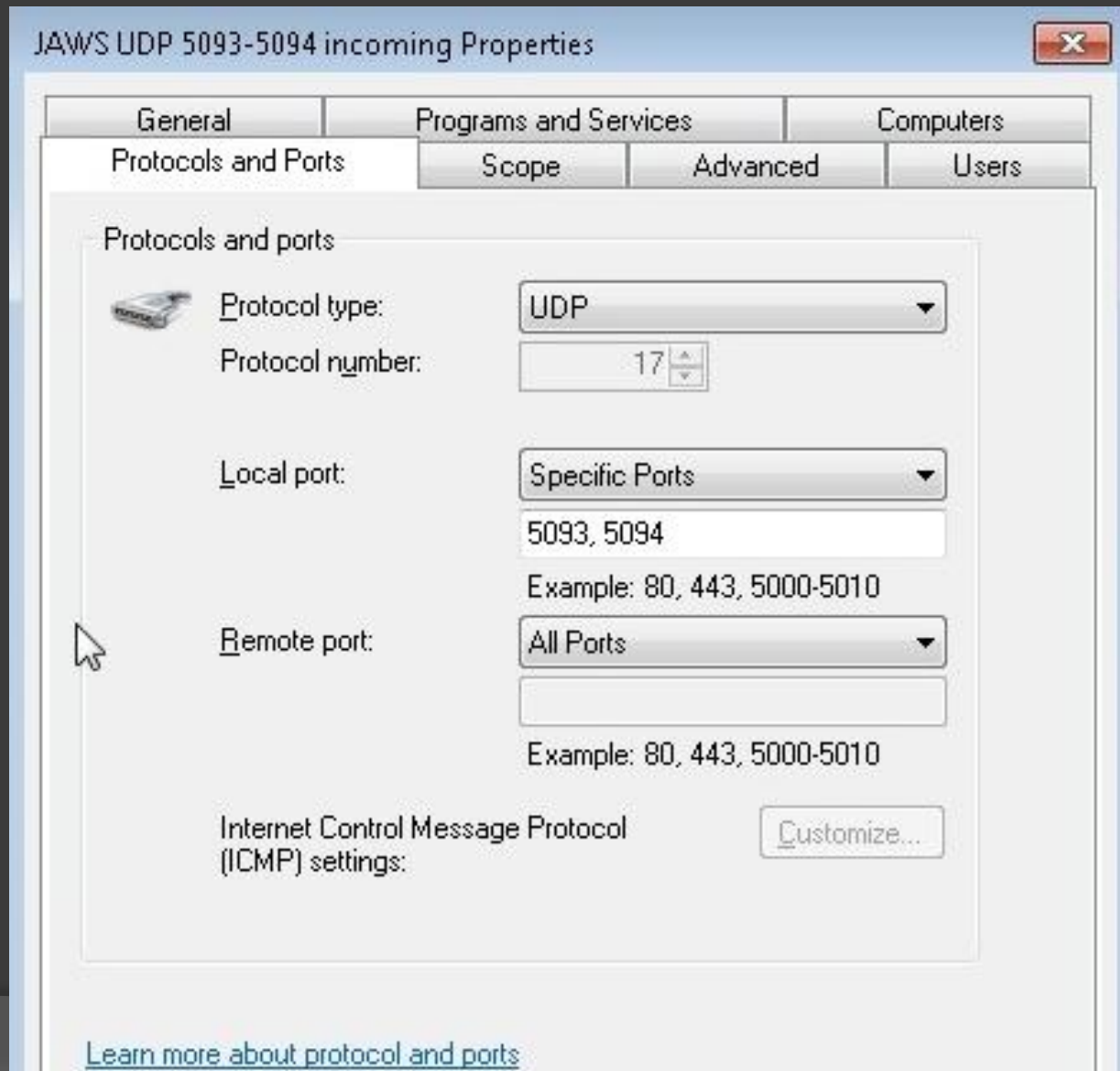
- Use KeyServer if possible



JFW Server and Windows 7



JFW Server and Windows7



ZoomText “server” & Win7

- ⦿ Read-only folder share
- ⦿ Turn on file sharing
- ⦿ Turn on Network Discovery
- ⦿ Turn off password-protected sharing

ZT and Sharing

The screenshot shows the Windows Control Panel window for the Network and Sharing Center. The breadcrumb path is 'Control Panel > Network and Internet > Network and Sharing Center'. The left sidebar contains several links, with 'Change advanced sharing settings' circled in red. The main content area displays network information for 'ATC-SCAN (This computer)', showing a connection to the 'Network' and 'Internet'. Below this, it lists 'View your active networks' with a 'Network' work network. The 'Access type' is 'Internet' and the 'Connections' are 'Local Area Connection'. At the bottom, there are four links for changing networking settings: 'Set up a new connection or network', 'Connect to a network', 'Choose homegroup and sharing options', and 'Troubleshoot problems'.

Control Panel > Network and Internet > Network and Sharing Center

File Edit View Tools Help

Control Panel Home

Change adapter settings

Change advanced sharing settings

View your basic network information and set up connections [See full map](#)

ATC-SCAN (This computer) Network Internet

View your active networks [Connect or disconnect](#)

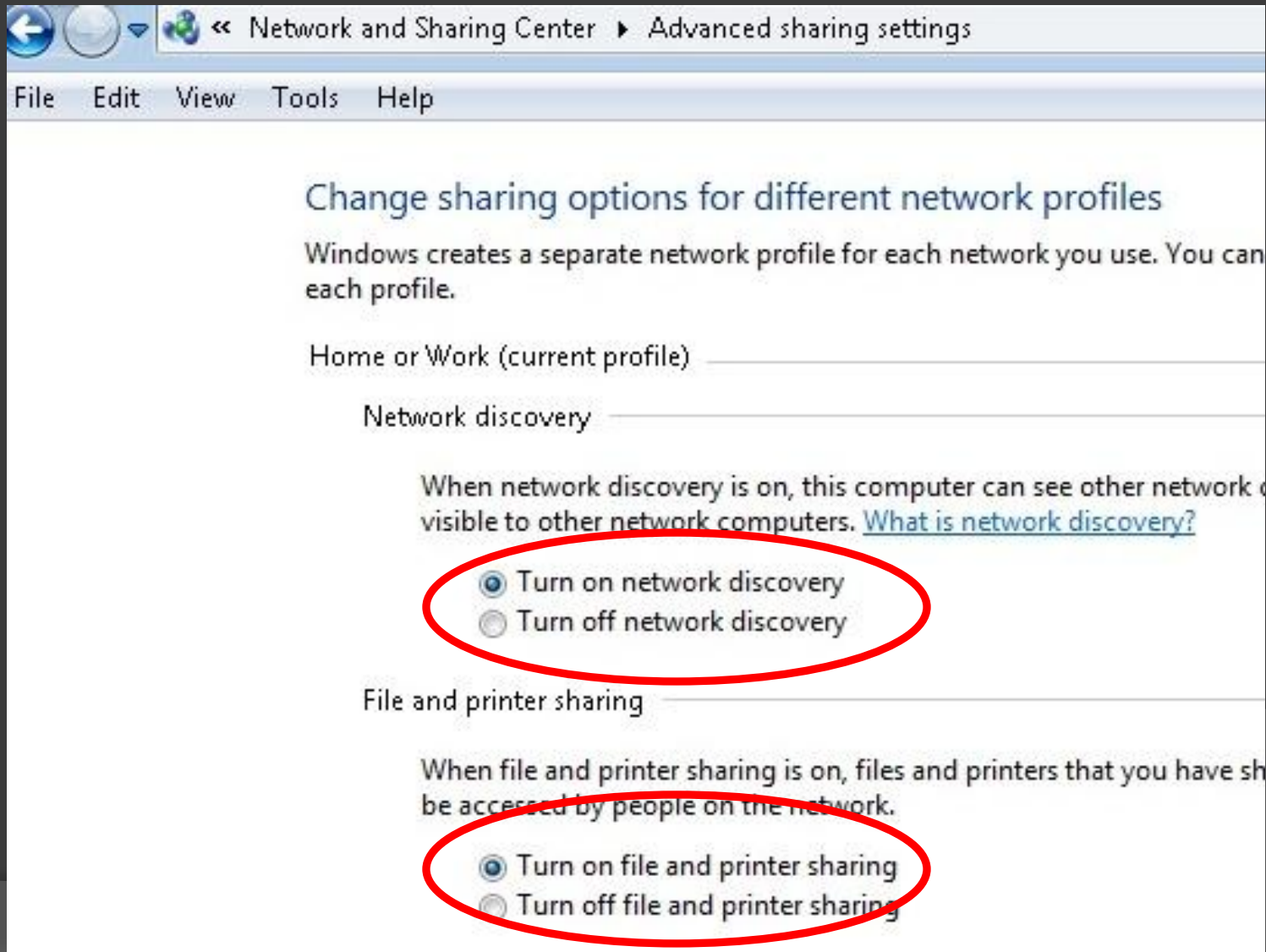
Network
Work network

Access type: Internet
Connections: Local Area Connection

Change your networking settings

- [Set up a new connection or network](#)
Set up a wireless, broadband, dial-up, ad hoc, or VPN connection; or set up a router or access point.
- [Connect to a network](#)
Connect or reconnect to a wireless, wired, dial-up, or VPN network connection.
- [Choose homegroup and sharing options](#)
Access files and printers located on other network computers, or change sharing settings.
- [Troubleshoot problems](#)
Diagnose and repair network problems, or get troubleshooting information.

ZT and Sharing



The image shows a screenshot of the Windows Network and Sharing Center, specifically the 'Advanced sharing settings' page. The window title bar reads '<< Network and Sharing Center >> Advanced sharing settings'. The menu bar includes 'File', 'Edit', 'View', 'Tools', and 'Help'. The main heading is 'Change sharing options for different network profiles'. Below this, it states: 'Windows creates a separate network profile for each network you use. You can change the sharing options for each profile.' The current profile is 'Home or Work (current profile)'. Under the 'Network discovery' section, there is a description: 'When network discovery is on, this computer can see other network computers on the network and be visible to other network computers. [What is network discovery?](#)'. Two radio button options are listed: 'Turn on network discovery' (which is selected and circled in red) and 'Turn off network discovery'. Under the 'File and printer sharing' section, there is a description: 'When file and printer sharing is on, files and printers that you have shared can be accessed by people on the network.' Two radio button options are listed: 'Turn on file and printer sharing' (which is selected and circled in red) and 'Turn off file and printer sharing'.

Network and Sharing Center >> Advanced sharing settings

File Edit View Tools Help

Change sharing options for different network profiles

Windows creates a separate network profile for each network you use. You can change the sharing options for each profile.

Home or Work (current profile)

Network discovery

When network discovery is on, this computer can see other network computers on the network and be visible to other network computers. [What is network discovery?](#)

- Turn on network discovery
- Turn off network discovery

File and printer sharing

When file and printer sharing is on, files and printers that you have shared can be accessed by people on the network.

- Turn on file and printer sharing
- Turn off file and printer sharing

ZT and Sharing

When media streaming is on, people and devices on the network can access videos on this computer. This computer can also find media on the network.

Media streaming is off.

[Choose media streaming options...](#)

File sharing connections

Windows 7 uses 128-bit encryption to help protect file sharing connections. Other devices that support 128-bit encryption and must use 40- or 56-bit encryption.

- Use 128-bit encryption to help protect file sharing connections (recommended)
- Enable file sharing for devices that use 40- or 56-bit encryption

Password protected sharing

When password protected sharing is on, only people who have a user account on this computer can access shared files, printers attached to this computer, and other people access. you must turn off password protected sharing.

- Turn on password protected sharing
- Turn off password protected sharing

HomeGroup connections

Typically, Windows manages the connections to other homegroup computers. If you have the same user accounts and passwords on all of your computers, you can have a single account instead. [Help me decide](#)

- Allow Windows to manage homegroup connections (recommended)

Speech input

- Installed in limited locations
- Create a thawed partition
- Use *junction.exe* to redirect user files
 - Google "junction.exe" to get it
- Backup user files twice a term



What's Next

- ◎ New products
 - Changes in license management?
- ◎ Virtualization / The Cloud

ATIA Higher Education Strand

- Please submit a Higher Ed talk!
- Submissions open in February

What do you do?

Questions? Comments?

Please complete an evaluation form

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www.washington.edu/computing/atl

(http://www.flickr.com/photos/a_mason/37564839/)

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