Can You Afford to Lose Your NASA Data?

Understanding ACES Backup Services

ITCD Fast Talk Session

Thursday, March 17, 2016 | 11:00am – 12:30pm

Brought to you by: Code 750 Enterprise Solutions Division
Presented by: End User Services & ACES Teams

Agenda

▪	Introduction	*John Donohue*
▪	Backup Statistics	*Dana Brown*
▪	Temporarily Suspending Backup Service	*Von Jenkins*
▪	Changing ACES Backup Service Level	*Von Jenkins*
▪	Ensuring A Successful Backup	*Von Jenkins*
▪	What Does and Does Not Get Backed Up	*Von Jenkins*
▪	How To…	*Von Jenkins*

- Check for Successful Backup
- Change Backup Day and/or Time
- Perform a Manual Backup
- Modify Your Backup Data Set (Windows/Mac)
- Backing Up Virtual Machines

▪	Key Takeaways	*Von Jenkins*
▪	Q&A	*Dana Brown*

Introduction

It is the responsibility of each user to protect and back up NASA's data.

- Critical data that is not backed up places NASA data at risk

- Backup services ensure that data is both protected and recoverable in the event of data loss or corruption

- There have been instances that users have lost all of their NASA data due to no backup

- There is no specific policy on what tool to use, but if subscribed for ACES backup services, use them, or obtain concurrence from your management to use something else.
  - *Note that if ACES services are not used, the user assumes full responsibility for the NASA data on their computer*
  - *External drives used to store backup data should be encrypted*

- ACES uses Autonomy, a.k.a., Iron Mountain backup software for Windows and Mac; and HP Data Protector for Linux/UNIX

- "Save the Data" Backup Video: https://aces.ndc.nasa.gov/video/LaRC_Save_the_Data.mp4
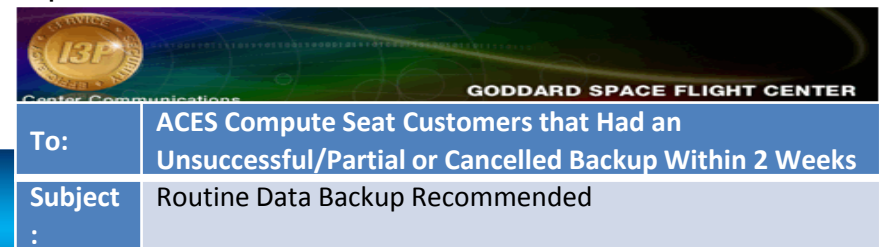
Are You at Risk? Backup Statistics

Approximately 1,740 unsuccessful backups in >7 days reported as of 3/11/16
(31% of total ACES end users subscribed to backups)

Current Backup within Report Period		3,881
No Backup within Report Period		1,740
Has account, not on domain*	168	
Has account, seat offline*	194	
Has account, backup cancelled by User	23	
Has account, initial backup not completed*	78	
No Backup Account*	683	
Has account, system online, Not Backing Up	594	

*At Risk of Losing Data

- Not on the NDC Network 60 consecutive days
- No backup for consecutive 60 days
- Computers that meet the 60/60 (above) rule will have their backup account and data deleted; requires user to open a ticket to activate a new account, and a full backup of their NASA data.
- Sample backup reminder message header from Danielle Yates:

To:	**ACES Compute Seat Customers that Had an Unsuccessful/Partial or Cancelled Backup Within 2 Weeks**
Subject:	Routine Data Backup Recommended

GODDARD SPACE FLIGHT CENTER

Temporarily Suspending Backup Service

- Multiple reasons to suspend service
  - Maternity Leave
  - Long period of time off
  - Extended travel to another Center/non-NASA location
  - Using Loaner equipment
- Open a ticket with the Enterprise Service Desk at esd.nasa.gov, or call ext. 6-3100, and request that your backup services be placed on hold
  - Include Machine Name and asset number
- Open a new ticket to resume backup services

Changing ACES Backup Service Level

- Standard ACES Seats automatically include Backup Services

- Modified seats must subscribe to backup service
  - Ensure ACES backup service is subscribed for your Modified Seat, if needed

- De-subscribe local data backup service if your organization has approved an alternate backup tool/application to use
  - Note: For ACES Standard Seat, de-subscribing the service will convert a Standard to a Modified Seat

Ensuring a Successful ACES Backup

Requirements for Successful Backup

- On the Goddard NDC Network or connected via VPN into Goddard NDC network

- If you receive backup errors, close applications and start backup session again, e.g., Macs and PCs receive backup error messages when Outlook is open

- Backup sessions will not run if system is sleep; must be active or backup session must be restarted

- ACES does not backup external hard drives

Best Practices

★ Backup at least once a week

- Automatic backups scheduled daily

- Kick off a session manually, if necessary

- Maintain default backup schedule to maintain balance of traffic across the network; if absolutely necessary backup schedule can be changed

★ Backup prior to, and following computer refresh or break/fix replacement

★ Check Back-up data set to ensure your NASA data is being backed up by restoring a file or folder to a temporary area on your computer; do not back up personal files (e.g., pictures, music, etc.) as it will slow down back-up service

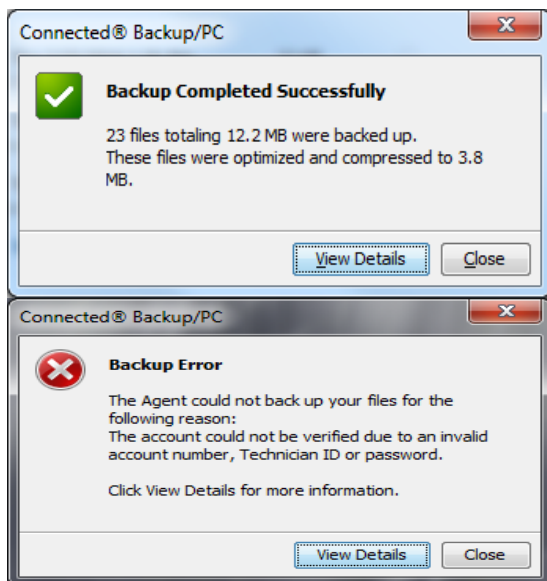★ Submit an ACES ticket if you are having difficulty with backups

Ensuring a Successful ACES Backup (cont'd)

- Whenever a backup session is attempted or completed a pop up message will appear providing status.

- It's important that you read these pop up messages as they may indicate a problem with your backup session that requires attention

Sample Messages:

Windows

Connected® Backup/PC

Backup Completed Successfully

23 files totaling 12.2 MB were backed up.
These files were optimized and compressed to 3.8 MB.

View Details Close

Connected® Backup/PC

Backup Error

The Agent could not back up your files for the following reason:
The account could not be verified due to an invalid account number, Technician ID or password.

Click View Details for more information.

View Details Close

Mac

Connected® Backup for Mac

Backup Completed Successfully

25,441 files totaling 3.35 GB were backed up.
These files were optimized and compressed to 1.1 GB.

View Details Close

Connected® Backup for Mac

Missed Backup

No completely successful backups occurred for more than 9 days.

View Details Close

What Does and Does Not Get Backed Up

- **Default Files –** ACES systems are pre-configured to back up the following files.

- **User Files:**
    - E.g., All MS Office File types, PDFs, Favorites, Bookmarks, Entrust Certificates, User's Desktop, Misc Image files, Financial Files, etc.

- **Caveats:**
    - External drives are not supported and will not be backed up
    - Files in temporary directories (e.g., C:\Temp) will not be backed up
    - Files in a folder where their parent folder was deselected for backup
    - Bottom Line: Ensure files to be backed up are stored under your user profile at a minimum <C:\Users\Your_AUID> or <MacintoshHD\Users\Your_AUID>

- **Exclusions:**
    - ISOs (e.g., Windows-7.iso, would be the image of a Windows 7 installation media)
    - VMDKs (e.g., Linux_1.vmdk, would be a hard drive image for a Virtual Machine called "Linux")
    - Audio/Video files (e.g., mp3, mpg, wmv, mov, mp4)

* Backups should NOT contain personal multimedia files. To exclude particular files from being backed up, create a folder on your computer called "Personal" or "DoNotBackup," for example. Move any personal multimedia or other files/folders to that folder, and then uncheck that folder within the Backup Set

How To…

- Check for Successful Backup

- Change Backup Day and/or Time

- Perform a Manual Backup

- Modify Your Backup Data Set (Win/Mac)

- Backing Up Virtual Machines

How To Check for a Successful Backup

Windows

1. Ensure you are connected to the NASA network.
2. Click the Windows **Start** button.
3. Select **All Programs** > **Autonomy** or **Iron Mountain** > **Connected BackupPC**.
4. The Connected BackupPC Agent window should automatically open on the **Summary** tab. If it doesn't, click on the **Summary** tab along the left side border.
5. Under the **Last Backup** section, the **End time** and **Outcome** of the last backup attempt will be shown.
6. Click **View Details** for details about the most recent backup, including total size of the last backup data, number of files backed up, size of files backed up and a detailed list of all files backed up.
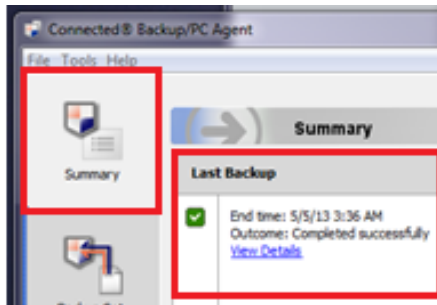
Mac

1. Ensure you are connected to the NASA network.
2. Click **Finder** > **Applications** > **Autonomy** or **Iron Mountain** > **Connected Backup** > double-click **Connected Backup**.
3. The Connected Backup for Mac Agent window should automatically open on the **Summary** tab. If it doesn't, click on the **Summary** tab along the top menu.
4. Under the **Last Backup** section, the outcome status and the **End time** of the last backup attempt will be shown.
5. Click **View Details** for back up details, including total size of data, number of files, size of files, and a detailed list of all files backed up.

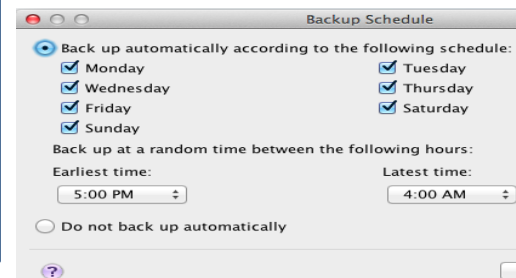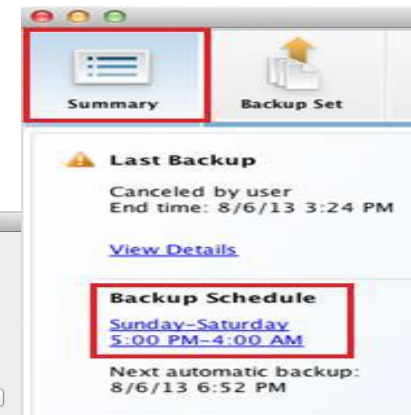# How To Change Your Backup Date/Time

Windows

1. Click the Windows **Start** button.
2. Select **All Programs** > **Autonomy or Iron Mountain** > **Connected BackupPC** to open the Backup Agent.
3. Click the **Summary** tab in the Autonomy window.
4. Click the link in the **Backup Schedule** panel that displays the current schedule.
5. In the Backup Schedule window, it is recommended that you select **Back up files automatically according to a**
6. **schedule**, ensure all days are checked and then set the **Earliest time** and **Latest time** to configure the period of time the automated backup should run.
7. **IMPORTANT:** If **Do not back up automatically** is selected, the only backups that will be attempted are those that you manually initiate
8. Click **OK** to save the settings.
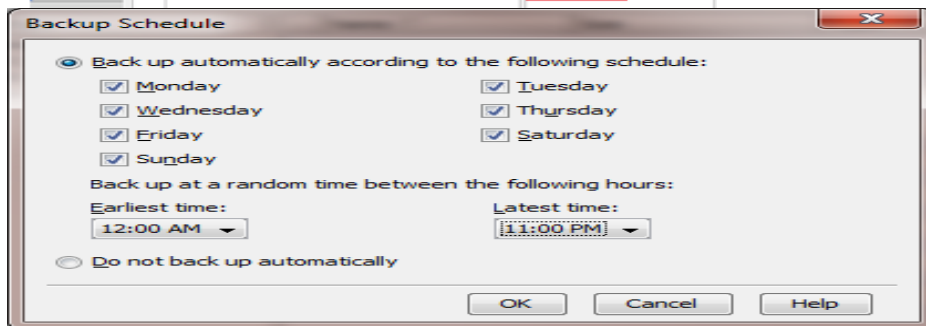
Mac

1. Click the **Finder** icon.
2. Select **Applications** > **Autonomy** or **Iron Mountain** > **Connected Backup** > double-click **Connected Backup** to open the Connected Backup for Mac Agent.
3. Click the **Summary** tab in the Autonomy window.
4. Click the link in the **Backup Schedule** panel that displays the current schedule.
5. In the Backup Schedule window, it is recommended that you select **Back up automatically according to a schedule**, ensure all days are checked and then set the **Earliest time** and **Latest time** to configure the period of time the automated backup should run.
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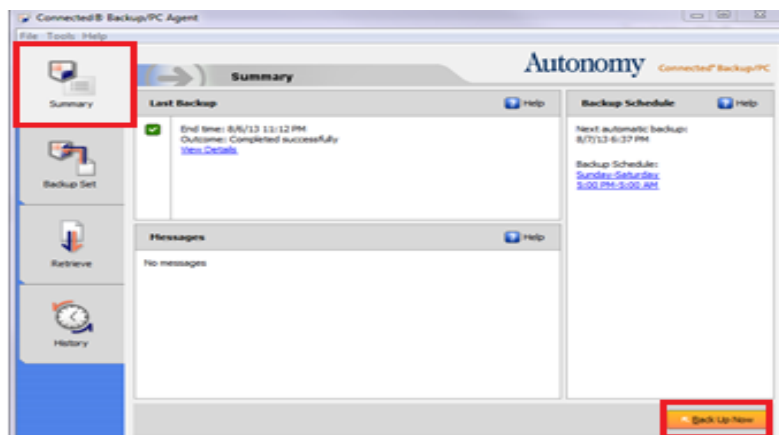7. Click **OK** to save the settings.
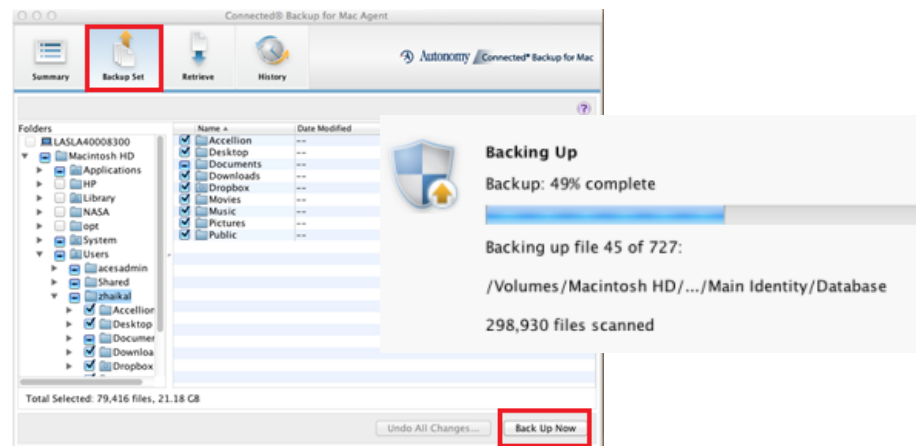
How To Perform A Manual Backup

Windows

1. Click the Windows **Start** button.
2. Select **All Programs** > **Autonomy or Iron Mountain** > **Connected BackupPC**.
3. Click on the **Summary** tab.
4. Click the **Back Up Now** button in the bottom right corner.
5. While the backup is executing, the Backing Up window displays the progress of the operation.
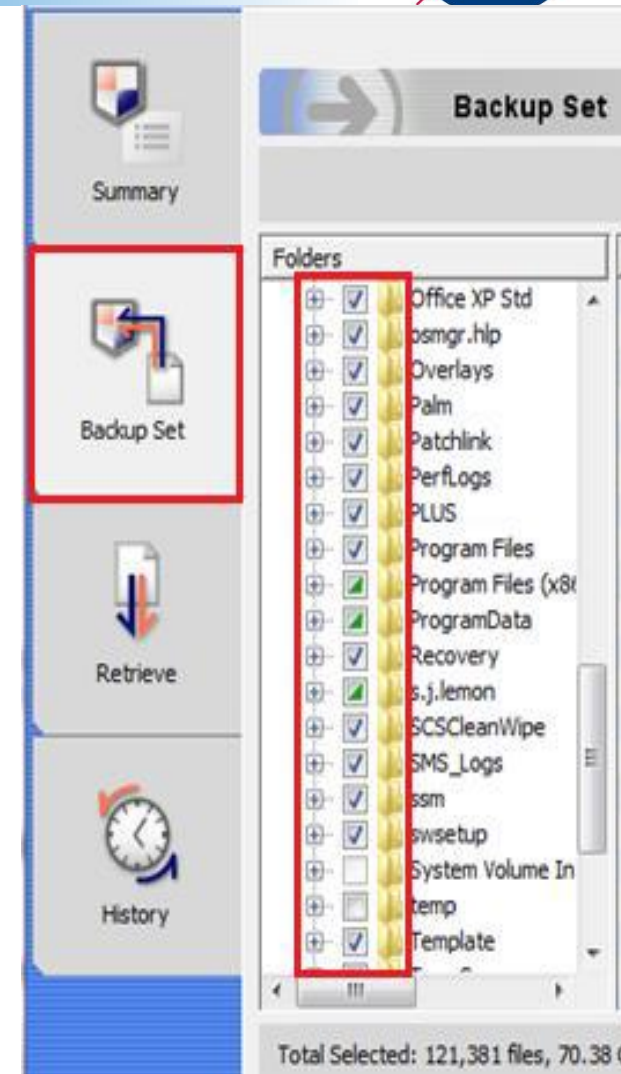

Mac

1. Click the **Finder** icon.
2. Select **Applications** > **Autonomy** or **Iron Mountain** > **Connected Backup** > double-click **Connected Backup** to open the Connected Backup for Mac Agent.
3. Open the **Summary** or **Backup Set** tab.
4. If you choose the **Backup Set** tab, it may take a moment for all files to scan and load. Until complete, the **Backup Now** button in the bottom right corner will be grayed out.
5. Click the **Back Up Now** button in the bottom right corner.
6. While the backup is executing, the Backing Up window displays the progress of the operation.

How To Modify Your Windows Backup Data Set

1. Click the Windows **Start** button.
2. Select **All Programs** > **Autonomy or Iron Mountain** > **Connected BackupPC** to open the Backup Agent.
3. Click the **Backup Set** tab. The Agent scans the files on your computer to determine which folders have been selected for backup. This step can take from several minutes up to an hour for the data to load. While in process, you'll see in the lower left of the backup client window.
4. Click the "**+**" in the **Folders** panel to expand the file structure.
5. A checkbox next to a folder or file name indicates whether or not the item is included in your Backup Set:
   - **A box containing a checkmark:** This item is selected for backup.
   - **An empty box:** This item is not selected for backup.
   - **A box with a triangle in the lower right corner:** Some items in this folder are selected for backup.
6. To view a folder's content, select the folder in the left pane or double-click the folder in the right pane. The right pane displays the folder's content. To locate the backup-set data for your username, click the "**+**" next to the "Users" folder, and then click the "**+**" next to the folder labeled with your AUID. To exclude particular files from being backed up, create a folder on your computer called "Personal" or "DoNotBackup," for example. Move personal multimedia or other files to that folder, and then uncheck that folder within the Backup Set.
7. To select a folder or file for the next backup, click the checkbox next to that item. A green checkmark appears.
8. To remove a folder or file from the next backup, select the checkbox next to that item until the checkbox is cleared. If the checkbox next to a folder or file name is disabled, you cannot change its backup settings.

How To Modify Your Mac Backup Data Set

1. Click the **Finder** icon.

2. Select **Applications** > **Autonomy** or **Iron Mountain** > **Connected Backup**, then double-click **Connected Backup** to open the Connected Backup for Mac Agent.

3. Click the **Backup Set** tab. The Agent scans the files on your computer to determine which folders are selected for backup. It can take from several minutes up to an hour for this step to complete. While in process, you'll see in the lower left of the backup client window.

4. Click the "**+**" in the **Folders** panel to expand the file structure.

5. The checkbox next to a folder or file name indicates whether the item is selected for backup:
   - **A blue box containing a checkmark:** This item is selected for backup.
   - **An empty box:** This item is not selected for backup.
   - **A blue box with a dash:** Some items in this folder are selected for backup.

6. To view a folder's content, select the folder in the left **Folders** pane or double-click the folder in the right pane. The right pane displays the folder's content. To locate the backup-set data for your username, click the "**+**" next to the "Users" folder, and then click the "**+**" next to the folder labeled with your AUID. To exclude particular files from being backed up, create a folder on your computer called "Personal" or "DoNotBackup," for example. Move personal multimedia or other files to that folder, and then uncheck that folder within the Backup Set.

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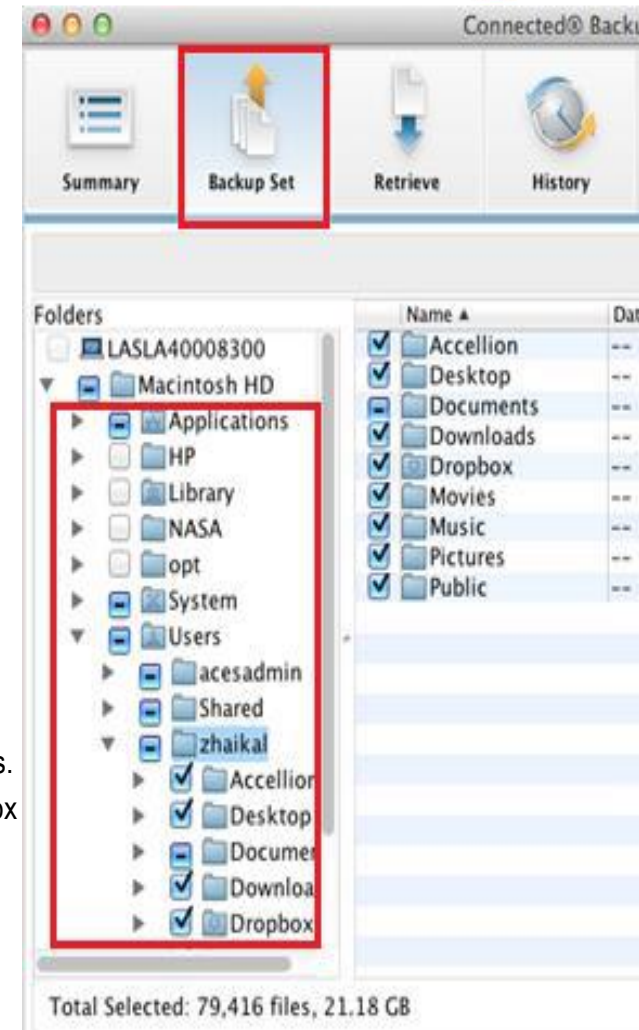
Backing Up Virtual Machines (VMs)

- Not backed up by default, must modify Backup Set for your computer
  - Once included in Backup Set, will backup automatically
  - Limited to less than20GB of data
- If VM is larger than 20GB, contact the Enterprise Service Desk (ESD) and open a ticket to have MIP installed on the VM itself
  - Contents of the VM is backed up but will not back up the .vmdk file or other files that make up the VM
  - Must periodically launch the VM, ensure the backup starts and completes, and then close the VM
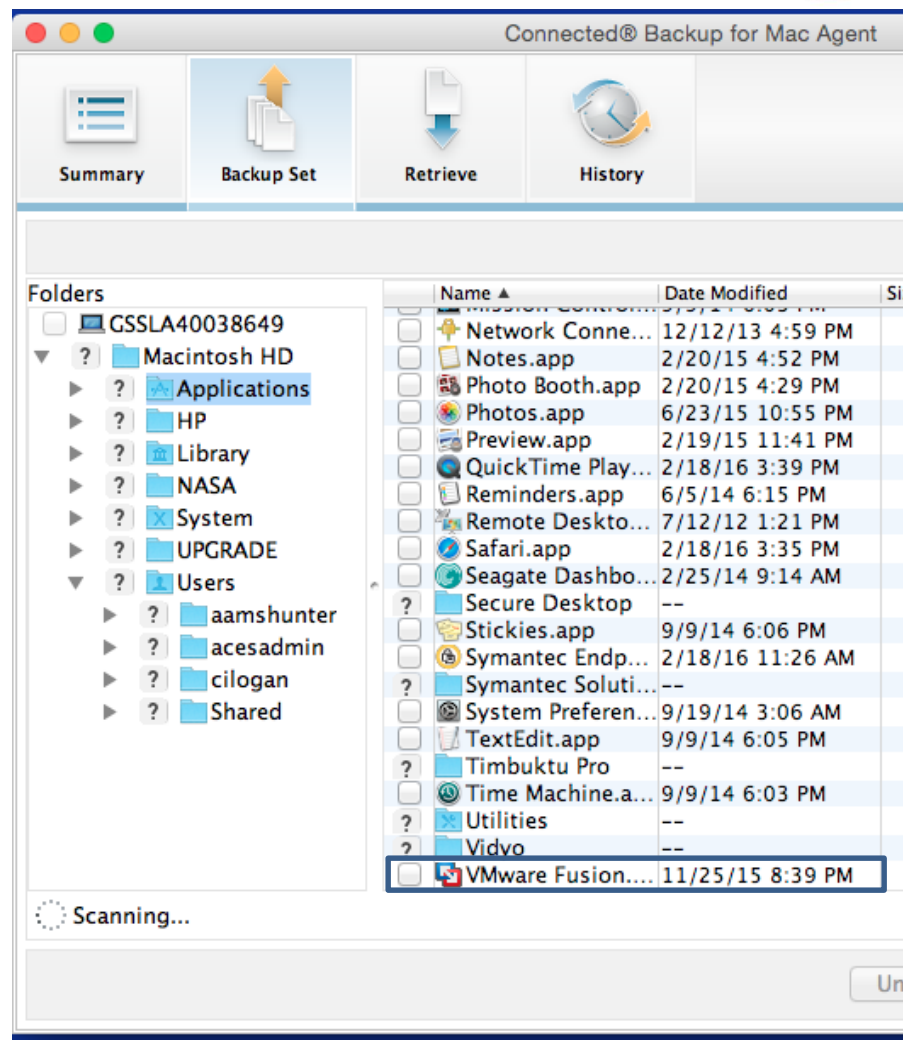
Key Takeaways

- ✓ Remember prerequisites for a successful backup

- ✓ Back up data at least once per week via ACES or other organization approved method

- ✓ Optimize your backup set:
  https://aces.ndc.nasa.gov/documents/TechTip_OptimizeBackupData.pdf

- ✓ Check Backup Data Set to ensure your NASA data is being backed up by restoring a file or folder to a temporary area on your computer

- ✓ Submit an ACES ticket if you are having difficulty with backups

- ✓ For help, contact ACES via ext. 6-3100 or http://esd.nasa.gov

It's your responsibility to protect and backup NASA's data!

Contacts

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- Stella Adesina: stella.n.adesina@nasa.gov, ext. 6-2701

Resources

- ACES Backup Services Webpage: https://aces.ndc.nasa.gov/subnav/backupservices.html
- Windows User Guide: https://aces.ndc.nasa.gov/documents/MIP_User_Guide-PC.pdf
- Mac User Guide: https://aces.ndc.nasa.gov/documents/MIP_User_Guide-Mac.pdf
- FastTalk Webpage: https://itcd.gsfc.nasa.gov/ITCDhome/FT/FastTalks-index.html

Q&A

Thank you for your participation!

Backup Slides

What Gets Backed Up? *Windows*

Default Files – ACES systems are pre-configured to back up the following files:

- Data Files: CSV, WK4, WK3, WK1, WQ1, 123, REP, IML, FPT, GMB, FP, WPS, WDB, WKS, VSD, VSS, VST, VSW, VSC

- Miscellaneous Documents: PDF, RTF, MSG, JSD, WBK

- Email: ACT, Eudora, Outlook Express, Outlook

- Financial Files: MS Money, PeachTree, Quicken, QuickBooks, Turbo Tax, Tax Cut

- Image Files: AI, JPG, JPEG, JFF, JFIF, BMP, GIF, TIF, TIFF, PDD, PSD, PNG, PWP

- MS Office Files: DOCX, DOCM, DOTX, DOTM, XLSX, XLSM, XLTX, XLTM, XLSB, XLAM, PPTX, PPTM, POTX, POTM, PPAM, PPSX, PPSM, ACCDB, ONE, XSN, WPS, MNT, DOC, DOT, XLS, XLA, XLB, XLT, XLW, PPT, PPS, POT, MDB, MDE, MDA, PUB

- Entrust Certificate: CRT

- Profile desktop

- User Profile Favorites

What Gets Backed Up? *Mac*

- Image Files: AI, JPG, JPEG, JFF, JFIF, BMP, GIF, TIF, TIFF, PDD, PSD, PNG, PWP

- MS Office Files: DOCX, DOCM, DOTX, DOTM, XLSX, XLSM, XLTX, XLTM, XLSB, XLAM, PPTX, PPTM, POTX, POTM, PPAM, PPSX, PPSM, ACCDB, ONE, XSN, WPS, MNT, DOC, DOT, XLS, XLA, XLB, XLT, XLW, PPT, PPS, POT, MDB, MDE, MDA, PUB

- Outlook 2011 Database

- Entrust Certificate: CRT

- Miscellaneous Documents: PDF, RTF, MSG

What Does <u>Not</u> Get Backed Up? *Windows*

- CD Files (*.iso)

- Database files (*.mdf, *.ldf)

- Mozilla User Profile

- Downloads

- TMP Folder

- Temp Extension (*.tmp, *.temp)

- Symantec Logs

- VMDK File (*.vmdk files)

- Multimedia1 – Audio: AA, AIF, AIFF, IFO, CDA, MID, MPE, MUS, MP1, MP2, MP3, M4A, M4P, RA, RAM, WAV, WMA

- Multimedia1 – Video: AVI, AVS, MOV, MOVIE, MOOV, MPEG, MPG, QT, QTM, SCM, M4V, MP4, WMV

* Backups should NOT contain personal multimedia files. To exclude particular files from being backed up, create a folder on your computer called "Personal" or "DoNotBackup," for example. Move any personal multimedia or other files to that folder, and then uncheck that folder within the Backup Set

What Does <u>Not</u> Get Backed Up? *Mac*

- VMWare Fusion: VMWAREVM

- Multimedia1 – Audio: AA, AIF, AIFF, IFO, CDA, MID, MPE, MUS, MP1, MP2, MP3, M4A, M4P, RA, RAM, WAV, WMA

- Multimedia1 – Video: AVI, AVS, MOV, MOVIE, MOOV, MPEG, MPG, QT, QTM, SCM, M4V, MP4, WMV

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