

System Administration

IT4GIS
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Today's Topics

- Users
- Privileges and shares
- User groups
- Other Topics:
 - Mapped drives
 - ROI
 - TCO
 - Data retention and deletion
- Think “Enterprise”

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Users

- Local
- Remote
- Account profiles
 - Guest
 - Administrator
 - Others



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Privileges and Shares

- Privileges
- Rights
- Permissions and Sharing permissions



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User Groups

- Administrators
- Guest
- Others:
 - User
 - Power User
 - Backup Operator, etc.

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User “Needs”

- What is the user’s functional need?
- What is the user’s level of “sophistication” or “computer literacy”.
- What is the user’s job description.
- *Do not confuse rank with authority*

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Assigning Privileges and Permissions

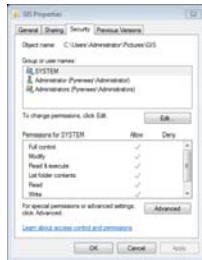
- Based on these considerations, add the user to the appropriate user group(s). This gives them *Privileges*
 - Basic = User
 - Advanced = Power User
 - Basic + Temporary = User + Guest
- Apply *Permissions* to their workspace
 - Administrator always has full control
 - The user (owner) always has full control
 - *Everyone* has read access only (if any)

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Sharing Resources

- Files and folders
- Devices
- Important for ArcGIS Geoprocessing Servers



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Ownership

- Who (one account) ultimately owns a file or folder
- Administrators can take ownership

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Security

- We have talked about **data integrity** when we discussed *servers*
- We now need to discuss **data security** in detail as it is an important topic in *system administration*



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Data Security

- Why is it important?
 - Aside from ethical reasons
 - There are compelling legal reasons
<https://gov.idaho.gov/mediacenter/execorders/eo15/7.15.15%20Cybers%20security%20Taskforce.pdf>

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Professional Hints and Tips

- Create passwords that are:
 - Strong, Unique, Random
 - Do not use the same username/password combo more than once
- Visit <http://www.passwordmeter.com/>

What did you learn?

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Primary Target...

- Personal information
- So, how can we secure the desktop?
 - Disable anonymous log in
 - Use **Firewalls**
 - What is a firewall?
 - Employ Intrusion Prevention/ Intrusion Detection software/ hardware at the LAN
(AKA **IP-ID** or **IDS** [Intrusion detection systems])



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Professional Hints and Tips

- Administrators should consider increasing **authentication** requirements
 - What is authentication?
 - Proving your credentials that then give you access to the system and network, where you have privileges and permissions

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Authentication

- Single factor
- Two factor
- Three factor



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Questions & Other Topics

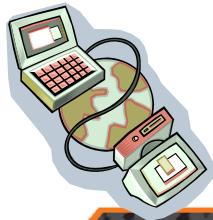


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Mapped Drives

- Remote drives
- Same as “Connect to Folder” with ArcGIS



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ROI

- Return on investment



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Policies

- Writing and seeking approval for administration policies or procedures
 - Data retention and deletion
 - Data sharing

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Considerations

- Once you decide what must be kept, you must still consider:
 - Format of data in archive
 - Archiving media
 - Archiving frequency
 - Task delegation
- In Idaho, Geospatial Data are listed as perpetual records

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Thinking Enterprise

- What is meant by the term "Enterprise"



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An Enterprise...

- Is Amorphous
- Shrinks and swells with the scope of the question, problem, or task
- Works toward a "goal" as a group
- Is connected

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GIS and the Enterprise

- GIS is *part* of the enterprise
 - Tends to be a technical resource
 - Information supplier
 - Analyzer
 - Integrator
- GIS is *NOT*
 - THE enterprise
 - THE decision maker

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A GIS Manager Must

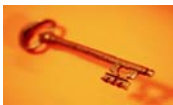


- Keep the “goal” of the enterprise in mind
- Communicate the benefits and capabilities of GIS to decision makers
- Understand GIS, networks, servers, system administration, ROI, TCO, and

–People

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Key Concepts

- We have explored several important GIS and IT topics
 - New terms of significance- Enterprise, ROI, and TCO
- *Keep these in mind throughout the semester along with effectiveness*

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Your Assignment

- Complete the exercise
- Review the GIS TRcC *Data Retention and Deletion Procedures* and *Data Sharing* documents
- Prepare for the first exam (mid-term)
- Grad students... proposal due Friday

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Questions?



Get ready for the 2-minute write

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Preparation

EXAM ONE

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