CSV, JSON and XML (Oh My!)

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PowerShell Sensei

The issue

- You have a PowerShell script or tool
- It might consume data from an external source
  - Maybe you get to determine the external source
- It might need to persist data to some type of storage
- What are the right decisions?
- How do you make them?

Options

- Plain text
- CSV
- XML
- JSON
- Database

Text

Pro

- Easy to create
- Easy to transport
- Easy to secure
- Works well cross-platform
- Embraces the PowerShell paradigm*

Con

- Text parsing might be required
- May not scale well
- Encoding may be an issue
- Counters the PowerShell paradigm

CSV

Pro

- Easy to implement

- Delimiter options

- Native application support

Con

- Property type not preserved

- Not good for hierarchical needs

- May not scale well

- Hard to update

- No native search options

XML*

Pro

- Relatively easy to implement
- Widely accepted format
- Clixml great for PowerShell
- Capture rich data
- Searchable

Con

- Fragile
- May require special skills
- Larger file sizes
- More difficult to update

JSON

Pro

- Widely adopted
- Potentially smaller file sizes
- Text based

Con

- May not preserve type
- Fragile
- Difficult to update

Database

Pro

- Best performance for large data
- Leverage existing infrastructure
- Easiest to update
- Most professional

Con

- Dependencies
- Requires special development skills
- Potential cross-platform challenges
- Larger footprint

DEMO

- Download:
- https://github.com/jdhitsolutions/psdatafiles

Decision points

How much data needs to be managed?

Who will be using your tool?

What are their expectations?

Reading vs Writing

How will persisted data be consumed?

Best Practices

- All about the object
  - Don't hard code file choices
  - Let PowerShell do its thing
- Performance matters
- Consider your target audience or platform
- Don't be afraid to change course
- Databases best for long term, persistent storage that needs updating

Demo code:
https://github.com/jdhitsolutions/psdatafiles

Thank You

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