Microsoft

Closing Announcements

Learning Recap

Commands	Objects	Pipeline Basics	Functions
Help	Scripts	Types	Advanced Pipelines
Arrays	Hash Tables	Modules	Remoting Basics

Flow Control

Continued Learning

IT Management

- Remoting review
- Advanced Remoting Features
- WMI/CIM/COM objects
- Regular Expressions (REGEX)
- Jobs (background work and schedules)
- Package Management
  - hosting private module gallery
- Intro to JEA and JIT Security
- Scopes review
- Intro to Desired State Configuration (DSC)

Tool Building

- Advanced Functions (cmdlets)
- Parameter validation and pipelines
- Custom Classes (Data Types)
- Error Handling
- Debugging
- GIT (source/version control)
- Runspaces (multithreading)
- WPF GUIs

Profiles

Profiles
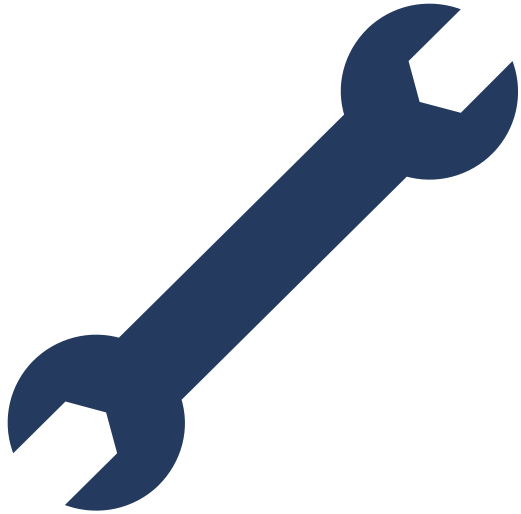
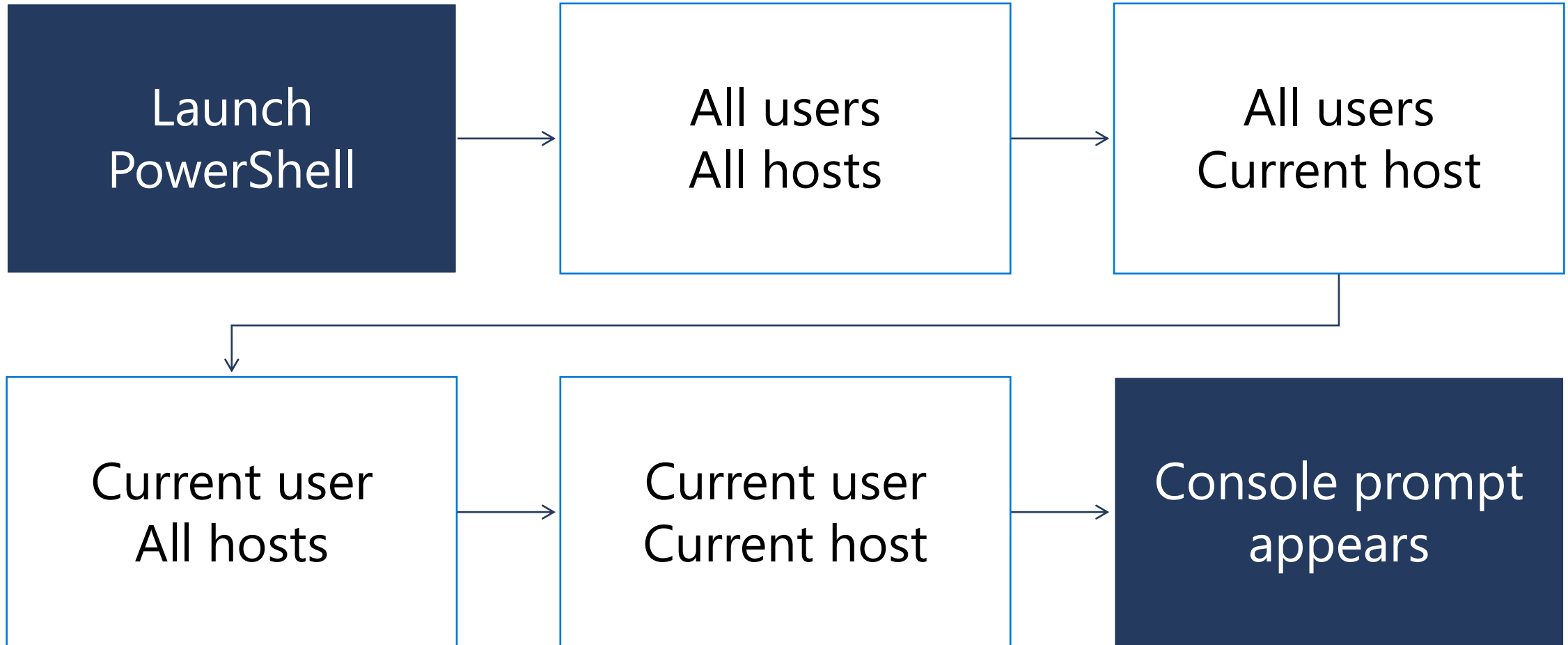Used to **customize** the environment

- Create functions, aliases, drives, etc.
- Load modules/scripts

Scripts are **dot sourced** automatically on **launch**

- Loads all code from the script into the global scope
- 4 separate scripts

Profiles - Workflow

Profiles - Locations

- Files don't exist by default; they need to be **created**
- Current User, All Hosts is most **common**

```
PS> $Profile | FL * -Force
```

All Users	C:\Windows**System32**\WindowsPowerShell\v1.0
Current User	C:**Documents**\WindowsPowerShell\
All Hosts	Profile.ps1
Current Host	Microsoft.PowerShell**ISE**_profile.ps1 OR Microsoft.PowerShell_profile.ps1

- **Shortcuts** to edit in ISE or VSCode

```
PS>  ISE   $Profile.CurrentUserAllHosts
PS>  Code  $Profile.CurrentUserAllHosts
```

Profiles – Loading Tools

- Load **modules** with Import-Module
- Load toolbox **scripts** via dot sourcing

```
$now = Get-Date -Format 'dddd-hhmmtt'
Start-Transcript "C:\transcripts\PS-Transcript-$now.txt"

#Loading external tools
. \\MS\ScriptLibrary\TeamProfile.ps1
. C:\Documents\MyScripts\Toolbox1.ps1
Import-Module PromptHelper
Import-Module C:\Documents\MyTools\CustomModule.psm1
```

- Recommended to check for tools first

```
If(Test-Path \\MS\ScriptLibrary\TeamProfile.ps1)
{
    . \\MS\ScriptLibrary\TeamProfile.ps1
}
Else {Write-Warning "TeamProfile.ps1 unavailable"}
```

Demonstration

Profiles

Regular Expressions (REGEX)

Regular Expressions (RegEx)

Pattern used to match text

- Much more granular than windows wildcards
- Word Characters
- Numbers
- White Space
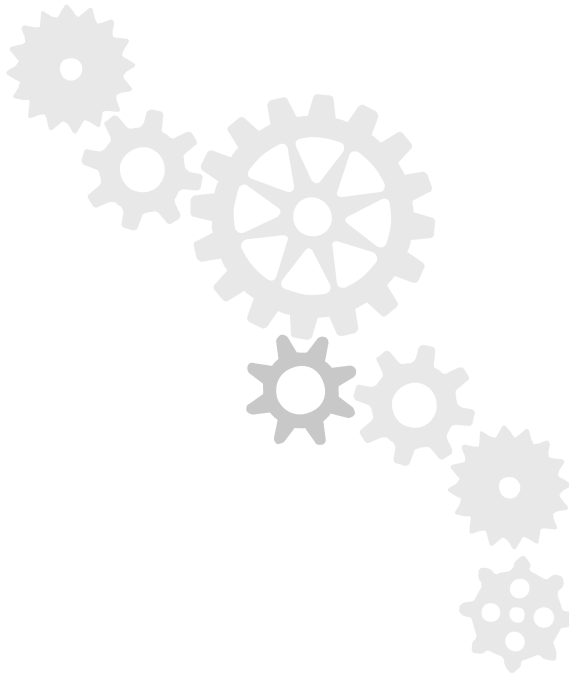- Special characters or alternate language characters

Main uses:

- Validate data in advanced functions
- Search and extract data from logs/files/text

Commonly used with

- -Match comparison operator
- [Regex] static members
- -Split operator
- Select-String cmdlet

WRT Survey

Show survey steps here

Questions?

Lab 13:
Final Lab

90 minutes