

A person wearing a black and white striped shirt is looking down at a document in their hands. They are standing in a server room with rows of server racks visible in the background. The lighting is dim, with some light coming from the server racks.

Introduction to Windows PowerShell™

Level 200

What Will We Cover?

- The Purpose of Windows PowerShell™
- Features and Capabilities of Windows PowerShell
- Windows PowerShell Command Syntax
- Management and Security

Agenda

- Introducing Windows PowerShell
- Using Cmdlets
- Automating Administrative Activities
- Reviewing Security

The Purpose of Windows PowerShell



Features and Capabilities



- More Than 120 Built-In Tools



- Object Pipeline



- .NET Scripting Support

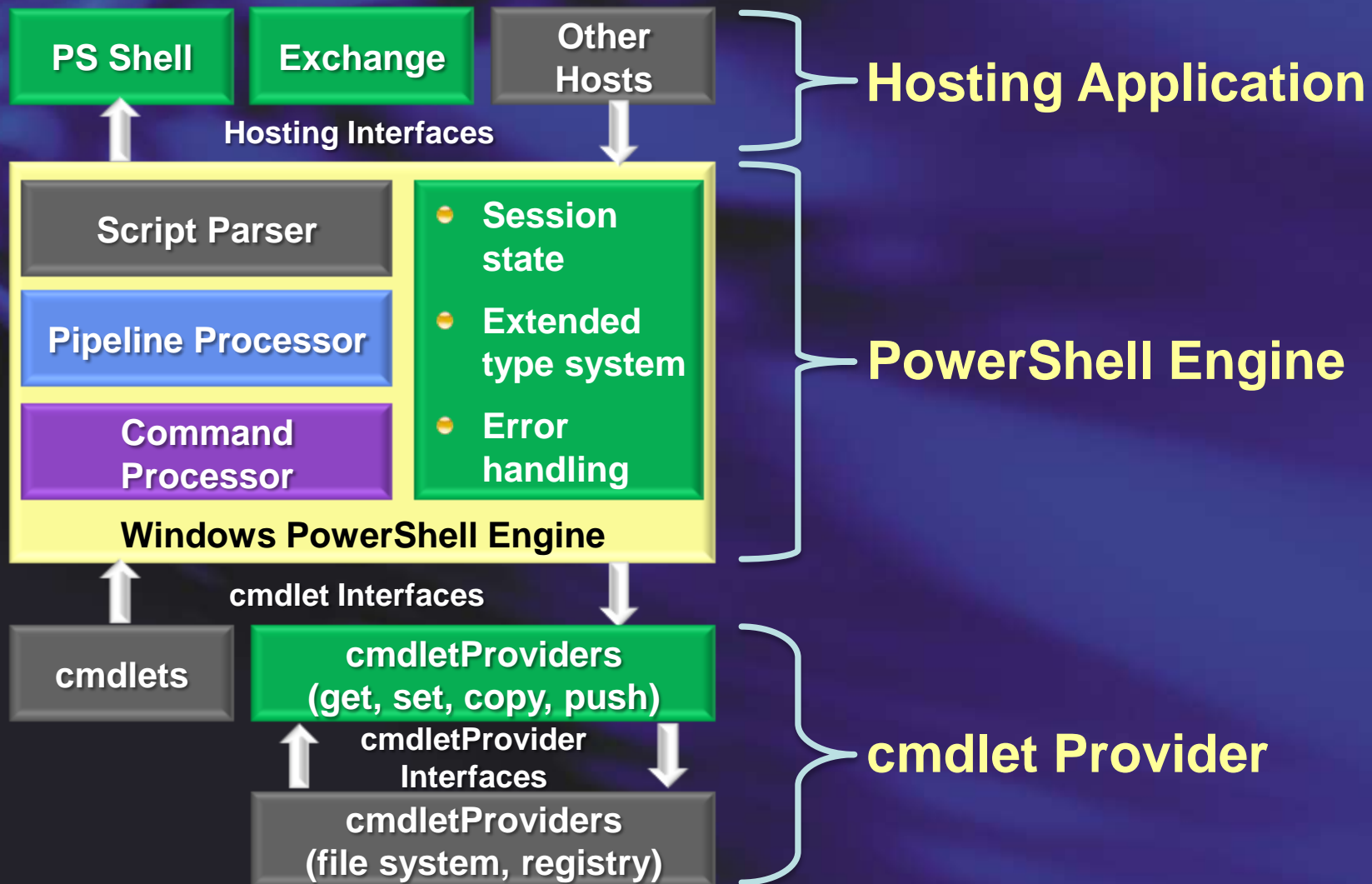


- Compatible with Current Tools



- Leverage Existing Automation and Instrumentation

Windows PowerShell Architecture



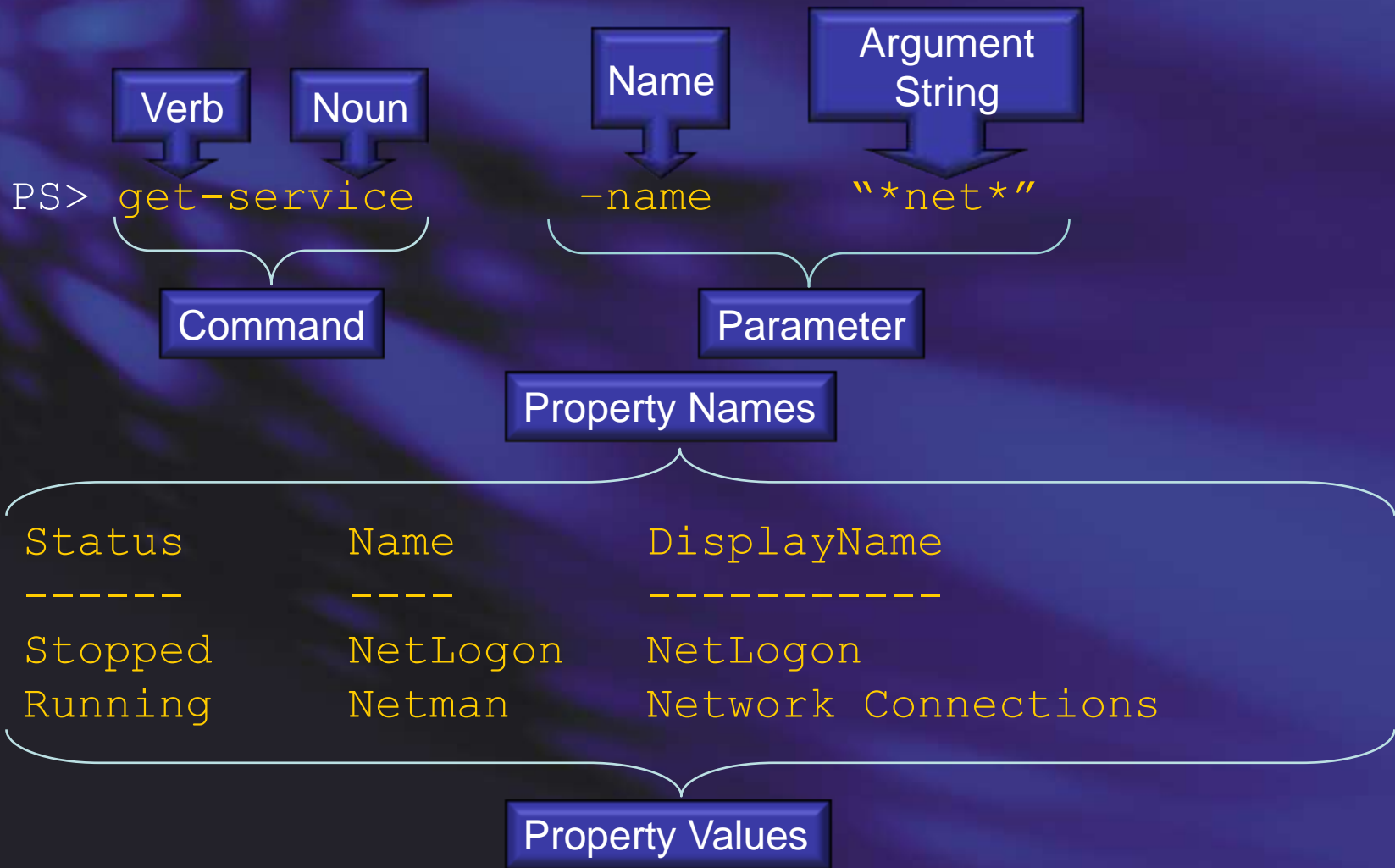
Windows PowerShell V2 Features

- Remoting
- Debugger
- Constrained Runspaces
- Graphical Environment
- Data Language
- Script Internationalization
- Modules and Packages
- Events and Transactions
- Out-GridView
- Split and Join Operators
- Metadata APIs
- Background Jobs

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Windows PowerShell Syntax



Common Cmdlets

Productive cmdlets

- Get-Help
 - Get-Help *Get-Process*
- Get-Command
 - Example
- Get-Member
 - Get-Service | Get-Member
- Restart-Service
 - Restart-Service *IISADMIN*

Utility cmdlets

- Format
 - Get-Service | Format-List
- Sorting
 - Get-Process | Sort-Object -Property CPU
- Redirecting Output
 - Get-Service | Out-File – FilePath C:\temp\services.txt

demonstration

Introducing Windows PowerShell

- Use Help to Get Started
- Use Basic Windows PowerShell Commands
- Format Output

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Windows Server 2008 Management

Installation

- Optional Feature in Windows Server 2008

Activities

- View Event Viewer
 - *(Get_Eventlog -logname system -newest 1000)*
- Stop and Start Services
 - *(Stop_Service iisadmin, Start_Service iisadmin)*
- Monitor Server Processes
 - *(Get-Process winword, Stop-Process winword)*

Windows Vista Management

Installation

- Free download from Microsoft.com

Activities

- File System Navigation
 - *(cd, dir, ls)*
- Registry Navigation
 - *(cd hklm:, dir, Get-ItemProperty)*
- Desktop Settings
 - *(Get-WmiObject win32_service -computer fabrikam)*

demonstration

Using Windows PowerShell

- Work With the Event Log
- Work With Services
- Work With WMI

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Security and Windows PowerShell



Default Execution Policy Is Restricted



Execution Policy Can Be Modified

- `Set-ExecutionPolicy`
- Group Policy

Policy	Effects
Restricted	No scripts
AllSigned	All scripts must be signed
RemoteSigned	Local scripts, remote signed
Unrestricted	Nothing signed

demonstration

Managing PowerShell Security

- **Check Execution Policy**
- **Set Security Policy to Activate Scripts**

Session Summary

- New Command-Line Tool and Language
- Powerful Scripting Capabilities
- Security Improvements

Where to Find More Information

Visit TechNet at: **technet.microsoft.com**

Also check out TechNet Edge:

edge.technet.com

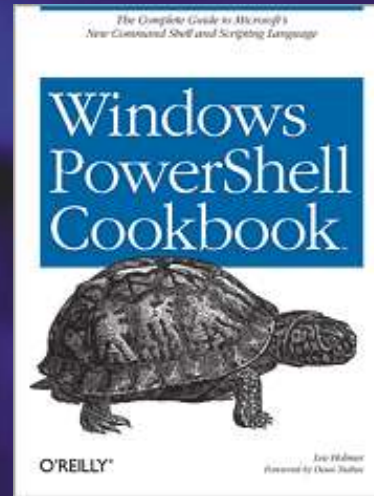
and TechNet Spotlight:

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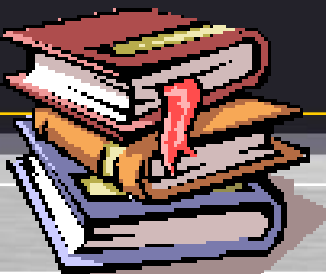
for additional information about this session

Supporting Publications



For more titles, visit:

www.microsoft.com/technet/srv-200



Training Resources

Course ID	Title
50025A	Windows PowerShell for Administrators
6434	Automating Windows Server 2008 Administration with Windows PowerShell

For more training information:

www.microsoft.com/technet/srv-200



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