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# *Advanced Automated Administration with Windows PowerShell 5.1*

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## **Topics:**

Creating advanced functions

- Converting a command into an advanced function
- Creating a script module
- Defining parameter attributes and input validation
- Writing functions that use multiple objects
- Writing functions that accept pipeline input
- Producing complex function output
- Documenting functions by using comment-based Help
- Supporting -WhatIf and -Confirm

Using Microsoft .NET Framework and REST API

- Using .NET Framework in Windows PowerShell
- Using REST API in Windows PowerShell

Writing controller scripts

- Understanding controller scripts
- Writing controller scripts that show a user interface
- Writing controller scripts that produce HTML reports

Handling script errors

- Understanding error handling
- Handling errors in a script
- Handling errors that occur when running a script

Using XML, JSON, and custom-formatted data

- Reading, manipulating, and writing XML-formatted data

- Working with JSON-formatted data
- Reading and manipulating custom-formatted data

Enhancing server management with DSC and JEA

- Understanding Desired State Configuration
- Creating and deploying a DSC configuration
- Implementing Just Enough Administration

Analyzing and debugging scripts

- Debugging in Windows PowerShell
- Analyzing and debugging an existing script

Understanding Windows PowerShell Workflow

- Understanding Windows PowerShell Workflow
- Creating and running a Windows PowerShell workflow