Next Level PowerShell
for IT Automation

dash.
training

An in-depth exploration of advanced PowerShell topics, including module development, advanced scripting techniques, and integration with other technologies. This course teaches advanced techniques using examples of real-world IT problems, ensuring attendees gain practical job-ready skills. No slides, many demos, many hands-on exercises.

Overview:

- **Duration:** 3 days
- **Teaching format:** online or on-site, best for groups of up to 8 participants
- **Target Audience:** system administrators and operators needing to automate IT processes
- **Prerequisites:** completion of the Microsoft Official Curriculum AZ-040 or similar knowledge

Goals:

- Master PowerShell best practices for script design, testing, and publishing
- Work with REST APIs, .NET classes, and cloud services
- Build production-ready reusable functions and modules
- Automate real-world IT tasks

Deliverables:

Training delivery includes preparation of hosting environment for hands-on labs, one per each attendee. Attendees also receive access to sample code, a list of reference resources, and transcript of code written in class. Classes are not recorded.

Pricing terms:

Training delivery is priced based on group size and includes trainer fee, courseware, hosting for the hands-on labs. Some customizations may incur an additional development charge. Travel expenses are billed as agreed before commencement of contract.

Course outline:

Chapter 1: Scripting for Automation
- Writing robust scripts with parameters
- Using control of flow in scripts
- Understanding errors and error handling
- Logging best practices

Chapter 2: Testing & Validation
- Introduction to the Pester testing framework
- Writing unit tests for functions
- Using mocks to simulate environments

Chapter 3: Using .NET Classes
- Accessing static and instantiated .NET classes
- Enhancing scripts with .NET libraries

Chapter 4: Credential Management
- Handling credentials and secrets storage
- Using Azure Key Vault for secrets management
- Encrypting and decrypting data

Chapter 5: Using REST APIs
- Making API calls with Invoke-RestMethod
- Handling API authentication
- Parsing JSON responses effectively

Chapter 6: Best Practices & Optimization
- Using PSReadLine for script formatting
- Debugging scripts and modules
- Running PowerShell Best Practices Analyzer
- Optimizing performance

Chapter 7: Module Development & Publishing
- Writing custom modules and manifests
- Writing documentation for modules
- Publishing modules to a repository

Customization:

Topics listed can be modified to suit the needs of the attendees or class hours. Additional topics may be added, provided available development time.

About the trainer
Paul "Dash" Wojcicki-Jarocki

With over two decades of experience in the Microsoft ecosystem, Paul is a trainer and consultant specializing in cloud infrastructure, automation, and deployment. Paul has designed and built solutions for enterprises across EMEA, often for the public and military sectors. As a Microsoft Certified Trainer, he delivers bespoke training, and has presented at industry-leading events (Microsoft Ignite, PowerShell+DevOps Global Summit, MCT Summit).