Microsoft 365 - advanced automation and SharePoint migration

Course code: GOC223

This five-day advanced course builds on the fundamentals of SharePoint administration and deepens engineering skills in Microsoft 365/SharePoint Online automation, scripting (PowerShell + Microsoft Graph), migration preparation and execution, lifecycle provisioning and management, governance enforcement, management visibility, and Azure integration. We emphasize resilience, security, and repeatability.

Who is the course for?

Migration and automation engineers

Advanced M365/SharePoint Online administrators

DevOps / platform engineers for governance

Consultants designing scalable provisioning and migration frameworks

Assumed entry knowledge

Knowledge within the scope of the courses listed in the **Previous courses** and **Related courses**

sections PowerShell basics

Experience with SharePoint Online administration

Azure basics (resource groups, identities)

Knowledge of JSON &REST is an advantage

Experience with ShareGate or migration tools is an advantage

Course outline

Engineering environment, VS Code and Copilot

- VS Code for automation: workspace, tasks, formatting, debugging

- Git basics, repository hygiene, PR and code review

- GitHub Copilot responsibly: prompting, security guidelines, acceptance criteria

- Lab: Repo initialization, scaffolding, linting &tests

Automation strategy &tool map

- PowerShell vs Graph vs PnP vs REST

- App registration &identity strategy

- Least privilege security posture

- Lab: App registration &baseline permissions

PowerShell in depth

- Modules: PnP.PowerShell, Microsoft.Graph, SPO Management Shell

- Authentication: interactive, device code, certificate, managed identity

- Lab: Unified connect wrapper &logging scaffolding

Microsoft Graph — engineering basics

- Batching, delta, throttling control

- Error classification and retry strategies

- Lab: Resilient ingest &Graph paging

Staging environments: DEV, TEST, PROD

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- Tenant/environment roles and secure deployment of changes

- Comparing environments, sites, lists, items; drift detection

- Baseline and diff automation

- Lab: Diff &baseline report script

Migration composition

- Pre-migration checks and planning

- Parallelization, wave planning, cutover tactics

- Large lists, versions, throttling, search delays

- Lab: Wave plan &throttle-aware execution

Provisioning automation patterns

- PnP provisioning vs Orchestrary catalog (overview)

- Web requests and metadata capture

- Lab: Dynamic PnP provisioning artifact

Orchestration integration &custom scripts (simulation)

- Request center and workspace template lifecycle

- Hooks: pre-provision, post-provision, compliance checks

- Integration with PnP.PowerShell / Microsoft Graph

- Governance artifacts: owner attestation, sensitivity, sprawl

- Lab: Script integration design (PnP simulation)

Lifecycle &compliance enforcement

- Scripts for retention and sensitivity

- Governance sharing and drift detection

- Lab: Compliance drift report + remediation

Azure integration patterns

- Logic Apps vs Functions vs Runbooks

- Event/webhook subscription, change notifications

- Lab: Functions for change notifications (skeleton)

SIEM integration via Azure Blob

- Logging strategy: schema, PII minimization, retention

- Pipeline: app › Blob › Event Grid › Function › SIEM

- Cost and reliability (batching, retry, dead-letter)

- KQL basics for validation and dashboards

- Lab: Blueprint ingest and transform skeleton

Microsoft Clarity — configuration

- Project setup: roles, retention, privacy

- Creation of tracking code and governance

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- Injection into SPO: SPFx App Customizer, tenant-wide, opt-out strategy

- Compliance: consent/cookie banner, regional data

- Lab: Rollout plan + App Customizer injection (simulation)

SPFx basics &App Catalog

- Dev setup (Node LTS, Yeoman, gulp) and project structure

- Generation of HelloWorld webpart and key files

- Build/package .sppkg

- App Catalog (tenant vs site), upload, deploy, trust

- Adding webpart to modern page; versioning &update

- Lab: HelloWorld deploy via App Catalog

Security hardening &least privilege

- Minimizing scope, Conditional Access impact

- Secret rotation &transition to cert-based auth

- Lab: Hardening app registration &scope adjustment

Performance, costs &capstone

- API efficiency (batching, selective projection)

- Logging costs, asynchronous fan-out patterns

- Capstone

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