Securing and Automating Your Fabric Real-Time Intelligence Assets

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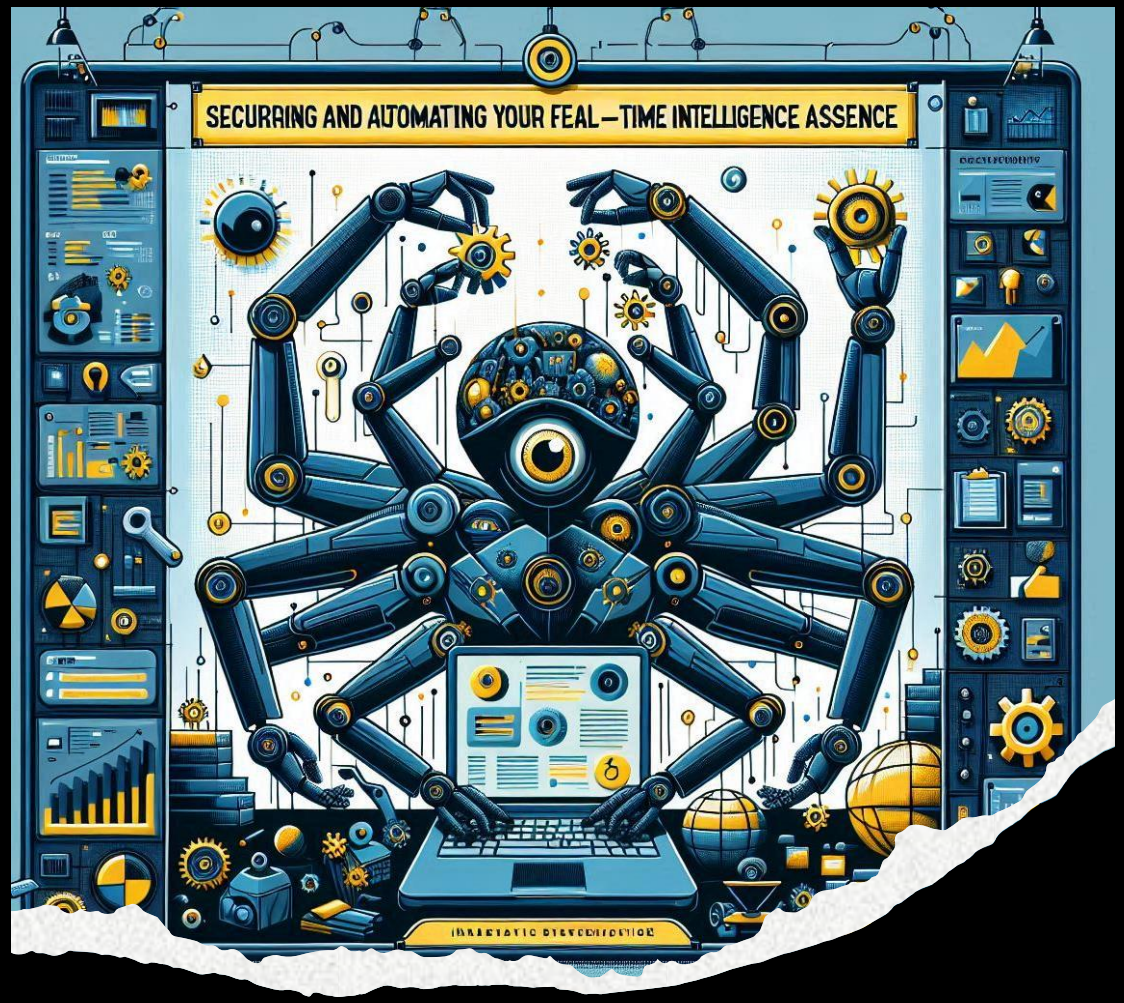


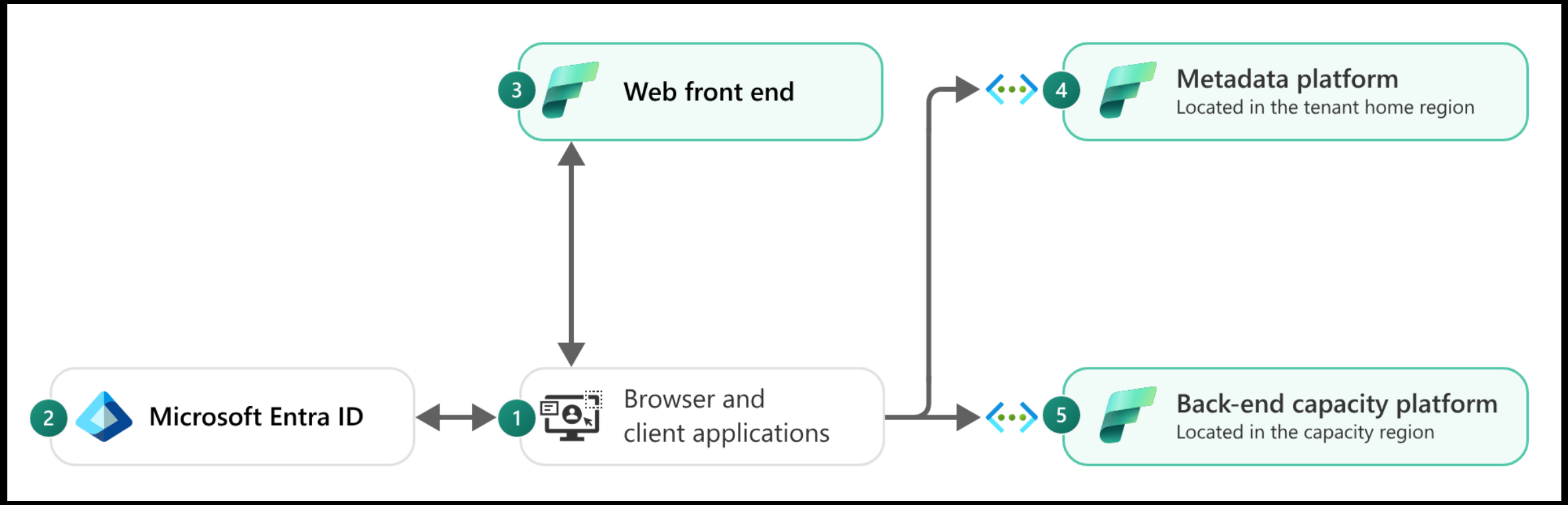
Agenda

- Security
- What can I automate?
- Automation with IaC
- Automation with Powershell

Security

- Authentication
- Networking
- Permission model
- **Compute engine**

Fabric Security architecture



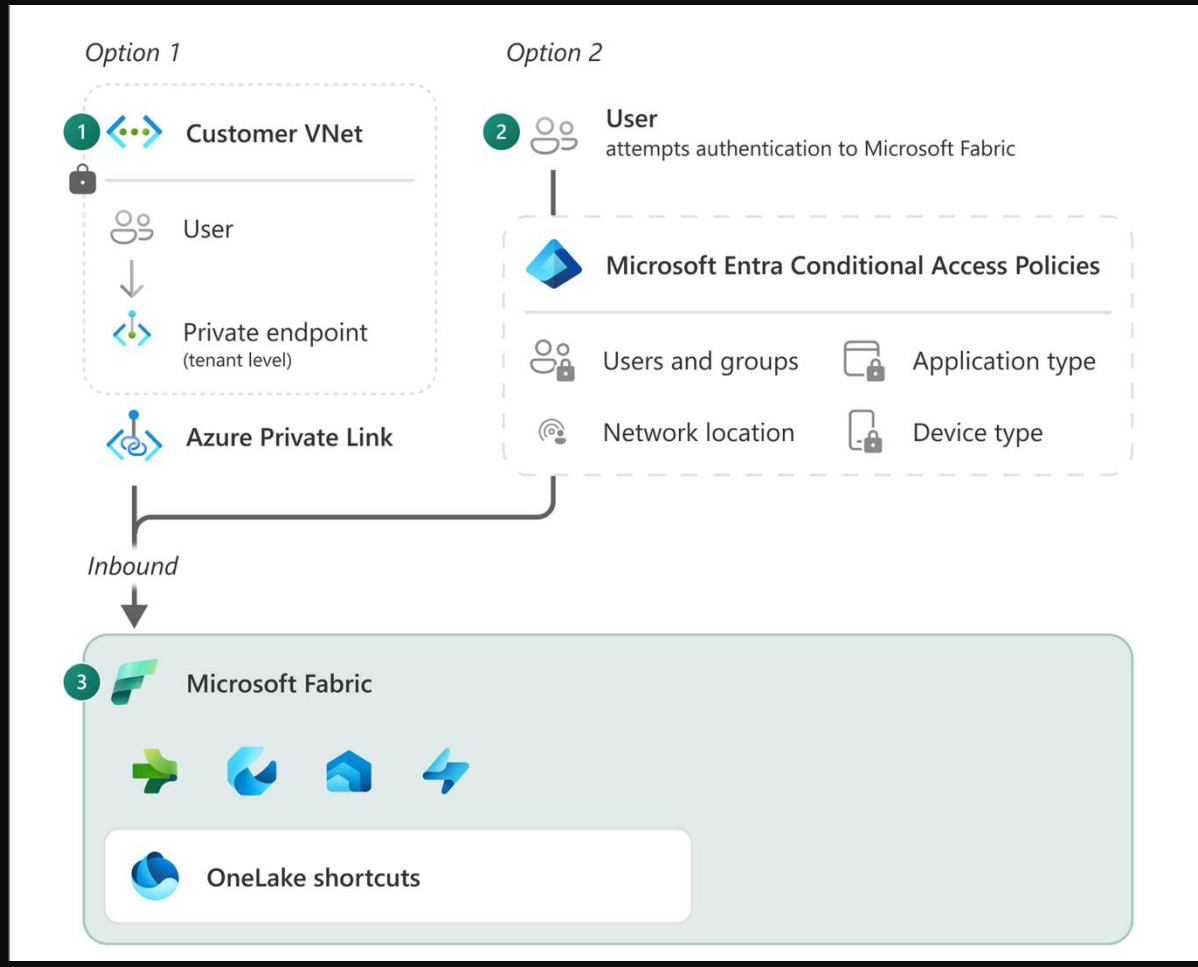
Authentication

- Handled by Entra ID (AAD)
- Security groups
- SSO with user name (e-mail)

Networking

Inbound

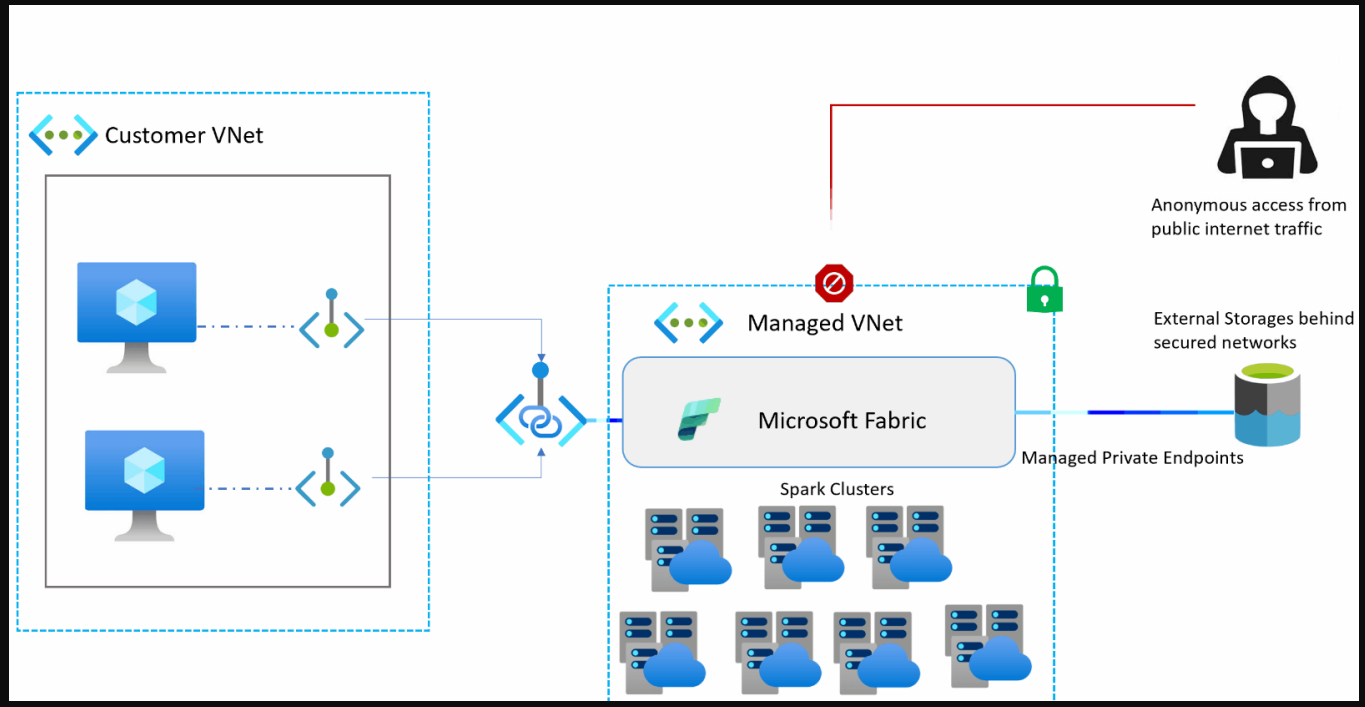
- Private link
- Conditonal Access (Entra)
- On-prem Data Gateways



Networking

Outbound

- Trusted Workspace Access
- Managed VNETs
- Managed Private Endpoints
  - Only for Eventstreams
  - Only to Event Hubs and IoT Hubs



Permission Model

- Workspace level
  - Admin
  - Member
  - Contributor
  - Viewer

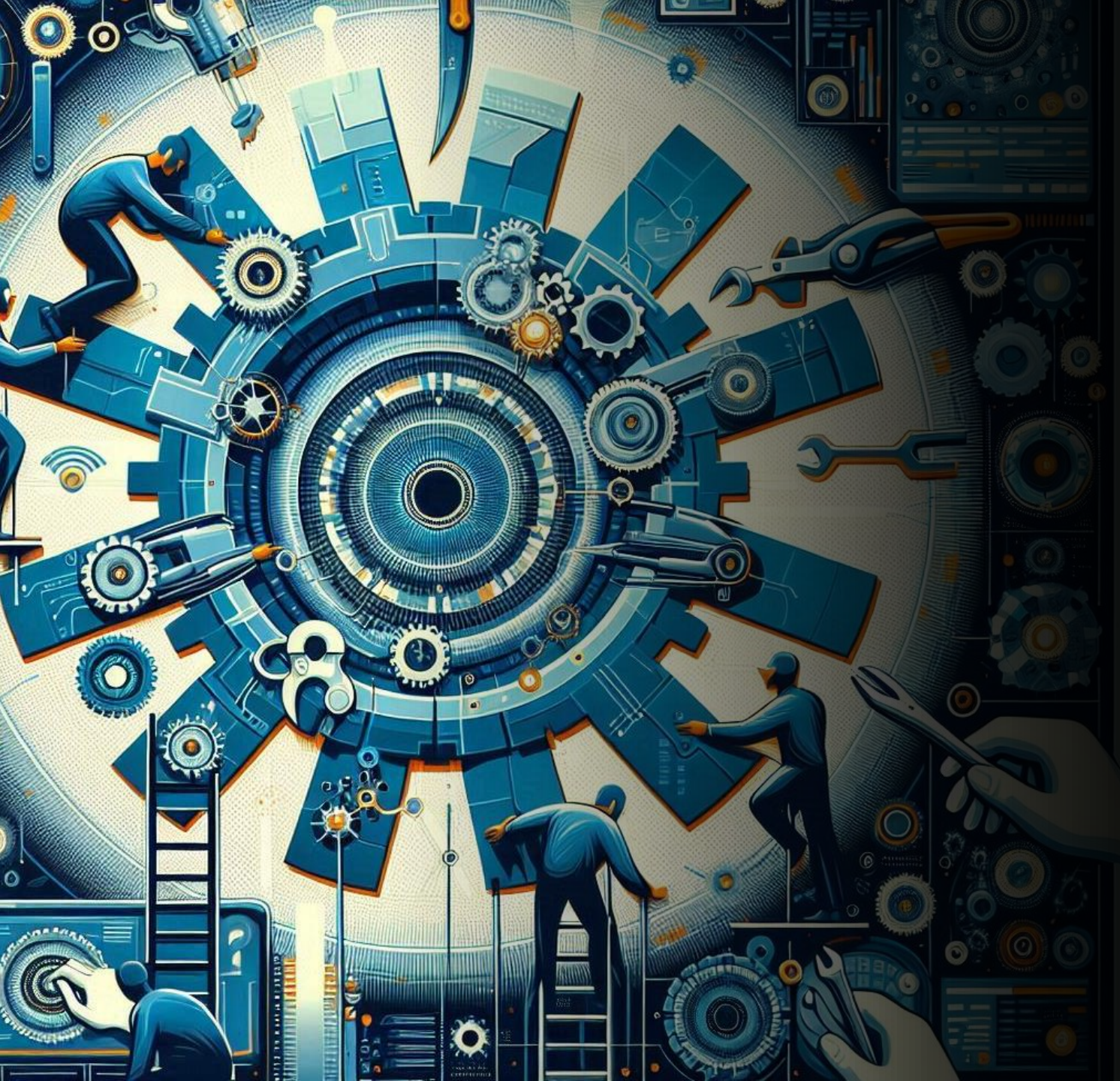
- Workspace Identity

Permission Model

- Item level
  - Admin
  - User
  - Viewer
  - Unrestricted viewer
  - Ingestor
  - Monitor

Compute Engine (RTI)

- KQL
  - User and application authentication
  - RBAC authorization
  - Object permissions
  - Restricted View
  - Row level security

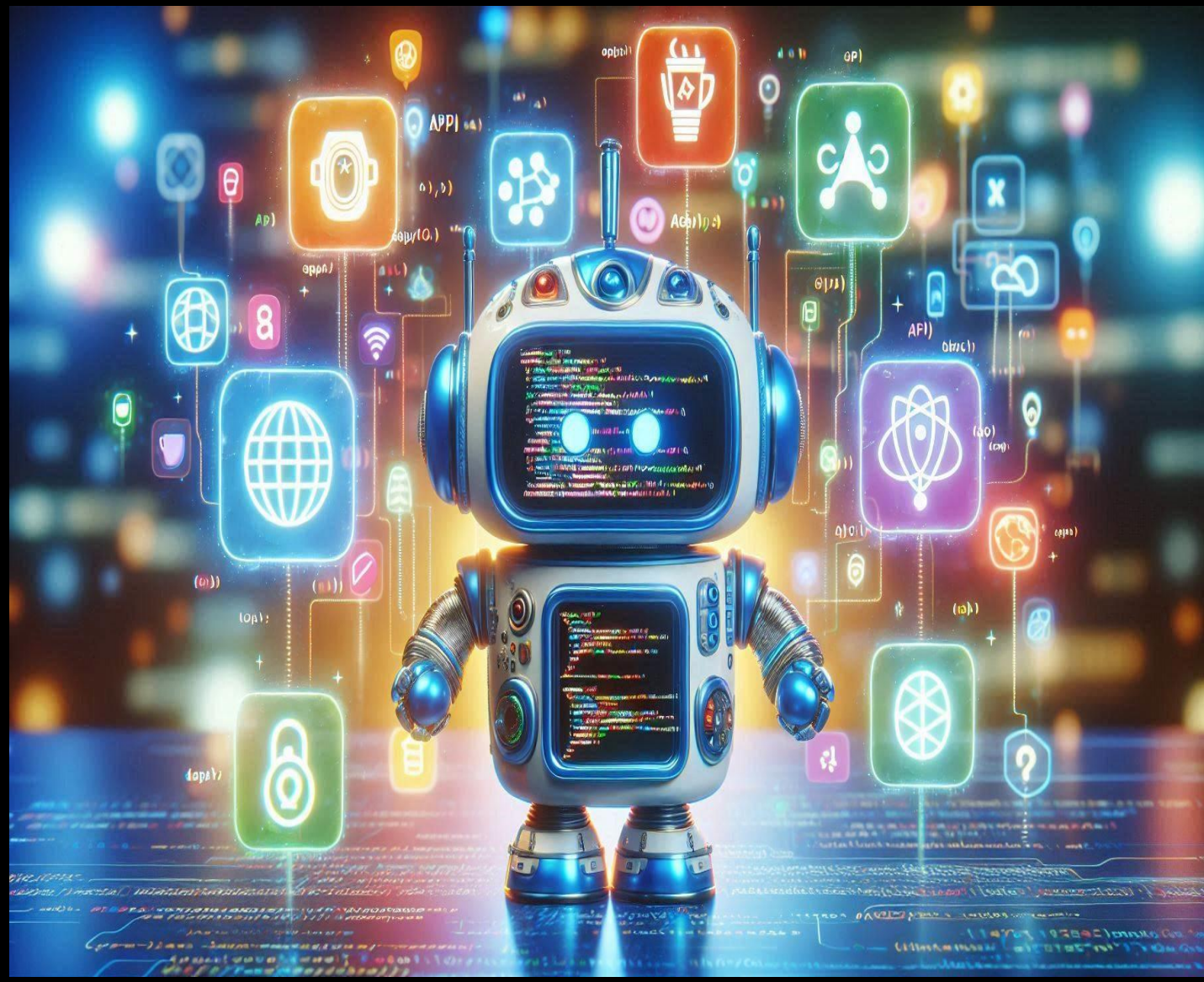


Automation

- The core component: APIs
- Infrastructure as Code (IaC)
- Powershell

The core

- Fabric Rest API supports
  - Eventhouse
  - KQL Database
  - KQL Queryset
  - Eventstreams
  - Dashboards
- C# SDK
- Azure Devops and Github



Infrastructure as Code

- Terraform
  - New provider announced in preview in september
  - Desired State Configuration
  - Uses the Rest APIs
  - End to End Terraform of Azure environment possible
  - Not all Fabric resources support Service Principals

Infrastructure as Code

- So what about Bicep?

- Bicep generates ARM
- Does not work with Fabric APIs
- Probably never will

Powershell

- Declarative approach
- No official Powershell module yet
- Use the Rest APIs and regular az-modules
- Powerful scripting language

RTI – Powershell module

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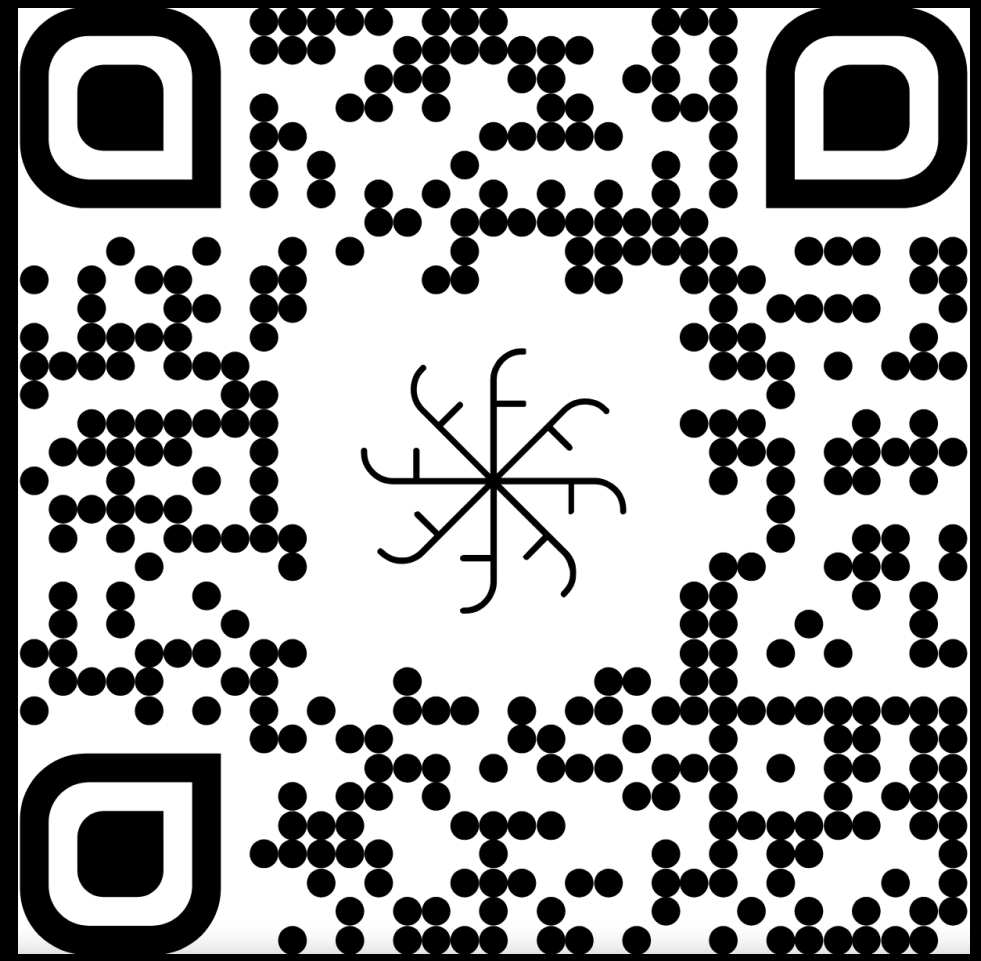
GitHub

Chronic volunteer

Co-organizer – DataSaturday Oslo
President – MDPUG Oslo
Frequent voulenteer in general

When not geeking out over new tech

Teaching coeliacs how to bake gluten free
Baking
Hiking
Gardening



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