

MICROSOFT FOUNDRY

THE A-TO-Z GUIDE TO BUILDING AND
GOVERNING ENTERPRISE AI AGENTS



JANNIK REINHARD

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Microsoft Foundry

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Jannik Reinhard

About the Book

AI has changed very quickly. We started with chatbots, then copilots, and now agents can plan, use tools, and complete parts of a real workflow. Microsoft Foundry is the platform Microsoft provides to build and operate these solutions.

In this book I explain Microsoft Foundry from A to Z. We start with the platform and create the first resource. Then I show you how to choose and deploy models, call them from code, use your own data, build agents, add tools, work with several agents, and fine tune a model.

Governance is an important part of the book. In my daily work I see that a demo is easy. Production is the difficult part. Identity, networking, guardrails, evaluation, cost, ownership, and operations decide whether an agent can be used in a real company. I explain these topics with practical examples and not only with theory.

You will find exact portal paths, runnable code, notes about limitations, and screenshots or clear screenshot placeholders. I checked the technical content against Microsoft's public documentation on July 16, 2026. Foundry changes fast. Please check current availability, prices, limits, and retirement dates before you make a production decision.

You do not need deep Azure knowledge to start. Basic Azure experience helps, but the book is also written for developers, architects, IT administrators, and decision makers who want to understand how the complete system works.

About the Author



Jannik Reinhard is a Microsoft MVP for Security and Intune and for AI Platform and Foundry. Today he is Head of AI and Co-Founder/Lead at Epic Fusion Germany GmbH. His focus is Microsoft Foundry, AI agents, Microsoft Intune, Azure automation, security, and cloud architecture.

Before joining Epic Fusion, Jannik worked at BASF as a Lead Architect / Technical Lead. In this role, he led technical teams and developed AI solutions for a global enterprise with 120,000 users. He was already working on enterprise AI before the current AI hype. He started testing GPT 3 directly after its release and was one of the early Azure OpenAI customers. Since then, he has tested new models and platform features as soon as they became available. This experience also taught him to check what still works when a demo becomes a production service.

Jannik holds 25 Microsoft certifications and is still an active Microsoft Certified Trainer (MCT). He maintains many public repositories, contributes to open source, blogs at **jannikreinhard.com**, and speaks at conferences around the world. His goal is to use agents to scale people and processes and to help companies become Frontier Firms in which people and agents can work together in a responsible way.

How to Read This Book

This book is one continuous journey, and the chapters build on each other. If you are new to Microsoft Foundry, I recommend reading from the beginning: Part I explains the platform and gets your first resource, models, and code running. Part II builds real solutions on top: your data, your first agent, tools, multi-agent systems, fine-tuning, and multimodal AI. Part III is a dedicated, transparent sponsor section reserved for the book's launch partner. Part IV is the heart of the technical book: securing and governing everything you built, from RBAC and networking to guardrails, evaluations, the Foundry Control Plane, and Microsoft Agent 365. Part V takes you to production, publishes your agents to Microsoft 365, and looks at the edge.

If you already work with Foundry, you can jump directly into a chapter. Every chapter tells you at the start what it covers, and cross-references point you to the chapter where a neighboring topic is explained, so nothing is explained twice. Appendix G contains practical worksheets for the use-case contract, architecture decisions, tool readiness, evaluation releases, incidents, and monthly service reviews. Use them while you build; they turn the chapter guidance into evidence your team can review.

Wherever you see a dashed screenshot frame, this is where a portal screenshot belongs. The caption below each frame describes exactly what to capture, so the screenshots can be taken against the live portal. All click paths were written against the portal state in mid-2026. These frames are intentionally retained and must be replaced before the final production release.

Hint: You do not need to read the code blocks to follow the book. They are there for the moment you want to build it yourself. All samples use Python unless stated otherwise.

The code

Every listing in this book is on GitHub as a file you can run:

<https://github.com/JayRHa/foundry-book-code>



The repository is organized by chapter, so the folder `ch08-first-agent` holds what you read in Chapter 8. A listing on a page can lean on the prose around it — this book explains what the project endpoint is a page before the listing uses it — while a file cannot, so each file there adds the few lines of setup that the page resolves in words, and leaves the rest exactly as printed. Each one starts by telling you which chapter it belongs to and which two environment variables it needs.

You will also find a handful of examples there that are not in this book. They came out of writing it: a script that probes the REST surfaces and shows you why the same endpoint wants `api-version` on one path and refuses it on another, one that prints what each Foundry role really grants instead of what its name suggests, and one that tells you which resources in a resource group are billing you while you sleep. Every one of them was run against a real project before it was published.

A second repository holds the companion Teams tab from Chapter 20 — a personal tab that chats with your Foundry agents and keeps the tool calls and citations visible rather than hidden:

<https://github.com/JayRHa/foundry-agent-tab>



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Microsoft Foundry: The A-to-Z Guide to Building and Governing Enterprise AI Agents

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Note: Microsoft Foundry evolves quickly. All information, prices, limits, API statuses, and retirement dates in this book reflect the state verified on July 16, 2026 and can change. Where features were in preview at the time of verification, this is called out in the text. The official Microsoft sources used for technical verification are listed in Appendix F.

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contents and assumes no responsibility for errors or omissions. The scripts, code samples, and configuration steps are provided for educational purposes; always test them in a non-production environment before use. In no event shall the author be liable for any loss, damage, data loss, service disruption, or other liability arising from the use of, or reliance on, the contents of this book. Verify current details in the official documentation before making any production decision.

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