

Accelerate application development with platform engineering

Brief

"NTT DATA is committed to improving technology with Platform Engineering solutions and is proud to partner with Red Hat to provide a comprehensive Internal Developer Platform through our accelerator, KNOT. With the platform, organizations can accelerate time-to-value and improve the developer experience."

Vicente Peirotén Alvarez,
Head of Digital
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Brief: Discover how a digital architecture for platform engineering can increase the speed of application delivery and maximize developer productivity, while ensuring security and governance.

NTT DATA helps organizations facing application delivery challenges to standardize and accelerate automated application delivery through an Internal Developer Platform.

Addressing technology complexity in application development

Traditionally, developers have been responsible for finding or building tools that deliver applications quickly. However, as organizations grow, supporting users and scaling effectively gets more complex and fragmented.

To address this, many organizations are turning to platform engineering, a software development discipline that focuses on improving productivity, application cycle time, and speed to market.

Improving developer productivity with a digital architecture

Platform engineering aims to better align developers with operations by increasing collaboration and automation. It addresses development teams' challenges by providing common, reusable tools and capabilities through an internal developer platform (IDP).

NTT DATA designed its KNOT solution to accelerate customers' implementation of the platform engineering concept. It offers a curated set of tools, resources, capabilities, and processes that are adaptable to customer needs, and readily available for various teams to access through a self-service model. It does this via a set of building blocks focused on adding value in a structured way:

- **Code management practices and tools** improve the software development process for higher quality and faster delivery through the effective management of development frameworks, dependencies, and development environments.
- **Application lifecycle management (ALM)** facilitates the management of the CI/CD process for applications and libraries, including key phases such as continuous integration, continuous delivery, testing, quality assurance, and security.
- **Infrastructure as code (IaC)** provides automated and code-driven management of all infrastructure services related to applications.
- **Collaboration** management facilitates communication and cooperation between team members during product development.
- **Product observability** shows how applications are performing in real time and provides insights based on logs, metrics, and traces for monitoring, troubleshooting, and optimization purposes.

An adaptable, flexible, and integrated platform

Deployed on Red Hat® OpenShift® Container Platform and integrated with key developer tools such as Red Hat Developer Hub, KNOT consists of 3 main layers:

1. **Internal developer portal (IDP):** Contains all the elements users interact with, customized to adapt to different roles.
2. **Orchestrator:** Manages and orchestrates the business logic, based on GitOps philosophy. It interacts with the IDP and the capabilities layers.
3. **Capabilities:** Includes deployment tools and a catalog of available preconfigured resources, such as pipelines and infrastructure blueprints.

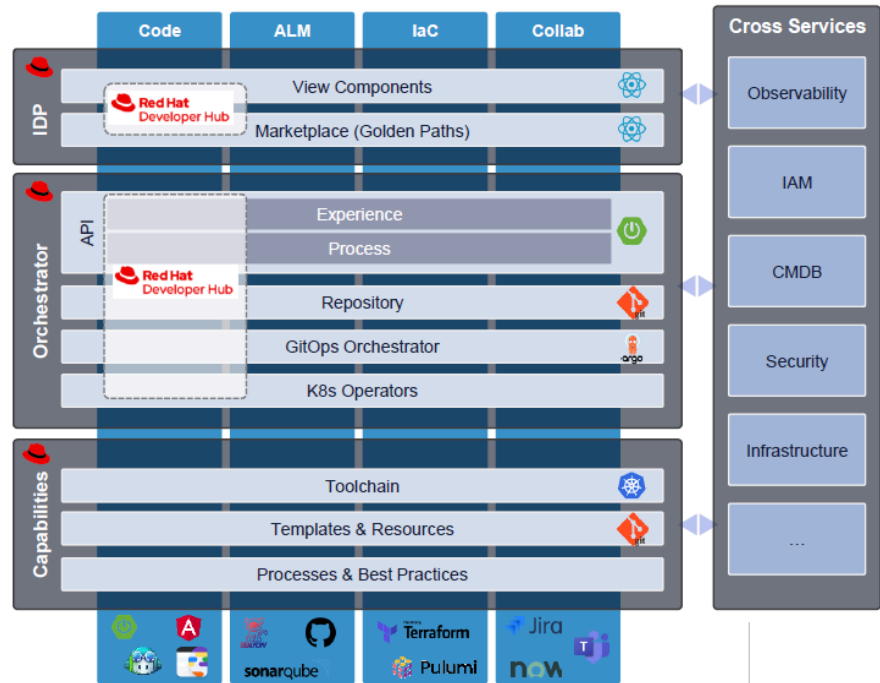


Figure 1: The 3 layers of NTT DATA's KNOT platform.

The benefits of standardizing the application development lifecycle

KNOT provides organizations with a standardized, reliable platform that increases the speed of application delivery, maximizes productivity, and improves the security of the entire application lifecycle.

Align developers and operations with platform engineering

KNOT from NTT DATA can reduce the administrative tasks that hamper developer productivity and create bottlenecks in the application lifecycle. Discover how it can provide tools catered to the needs of your developers and your organization, plus a robust governance framework for maintaining control over resources, security, and compliance:

- [Watch the how to support developers with platform engineering video.](#)
- Learn more about [platform engineering](#) and [internal developer platforms](#).
- [Contact the team.](#)



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