

Azure App. Modernization



1. SK C&C

- Top cloud services from managed cloud expert group
- Differentiated technology to drive the customer cloud journey

For the first time in Korea, it has obtained both the CSP Top 2 MS Azure and AWS Managed Service Provider (MSP) certification, providing the best service to the rapidly changing cloud environment as MS Azure Expert MSP and an AWS Migration Competency partner.

From cloud design and deployment to migration, operations, security controls, and optimization, we are committed to delivering the best cloud technology services under the supervision of a group of cloud experts 24 hours a day, 365 days a year.

From cloud transformation to efficient cloud operating environments, reliable operation of all IT resources, and cloud-based application implementation technology, you have the integrated technology and know-how your business needs.

Building a reliable cloud with years of IT business know-how and consulting expertise optimized for your business – provides transition services. We build and manage your container and Kubernetes with Kubernetes and Modernization technologies, which are key technologies for reducing costs and achieving work efficiency through Cloud, and also provide systematic consulting to help you become competent.

We've proven our technical superiority by earning technical certification named Advanced Specialization in AKS and Top Partner award in area of Azure Digital & App Innovation

It also provides systematic consulting so that customers can have their own capabilities. You can effectively improve your customers' work efficiency with cloud operational capabilities validated as a global Cloud Solution Provider (CSP) partner.

Microsoft Partner
Azure Expert MSP



We provide optimized and efficient solution for Digital Transformation

2. Azure App Modernization (Why App Modernization?)

Azure App Modernization

- Azure App Modernization Definition

- Application modernization is the process of updating an organization's existing apps to a cloud-first model—sometimes called legacy modernization.
- If an organization uses on-premises apps, modernization may involve migrating those apps to a public, private, or hybrid cloud. Commonly modernized apps and data include: Java apps, Linux web apps, SQL databases, Opensource databases

- Why Azure App Modernization

- App modernization on Microsoft Azure provides several key benefits.
 - 1) **scalability** by leveraging the cloud's elastic resources, enabling applications to handle increased workloads without upfront infrastructure investments.
 - 2) **cost-effective**, as Azure's pay-as-you-go model allows for optimized resource allocation, scaling based on demand, and reduced infrastructure costs.
 - 3) **enhanced performance** by leveraging Azure's global network of data centers, reducing latency and providing features like CDNs and load balancers.
 - 4) **enhanced security** through built-in controls, compliance certifications, threat detection, and data encryption capabilities.
 - 5) **promotes agility and innovation** by embracing modern technologies such as containers, serverless computing, AI, and IoT, enabling rapid feature delivery and staying competitive.
 - 6) **Azure's support for hybrid scenarios and seamless integration with DevOps tools** facilitating gradual migration processes.



2. Azure App Modernization (Why App Modernization?)

Azure App Modernization

- Why SK C&C

- Provide the best technology service as certified cloud partner(Azure Expert MSP, Advanced Specialization, Top Partner Award in Azure Digital & App.innovation)
- Have a lot of successful customer stories with experience in a variety of industries (Finance, Telecom, Manufacture, Commerce and etc.)
- Execute Optimized deployment and integration management for on-premises operations and cloud deployments.
- Delivery one body Project for operation and construction of infrastructure as a single operator.

- Why SK C&C for Azure App Modernization

App. Modernization Platform

- Tools for building and managing container service automation
- Backend technologies for MSA support
- Technologies of API Management

MSA Coaching Program (AMF)

- DDD-based biz/data modeling
- Architecture pattern-based development coaching
- Acquisition of platform and development skills

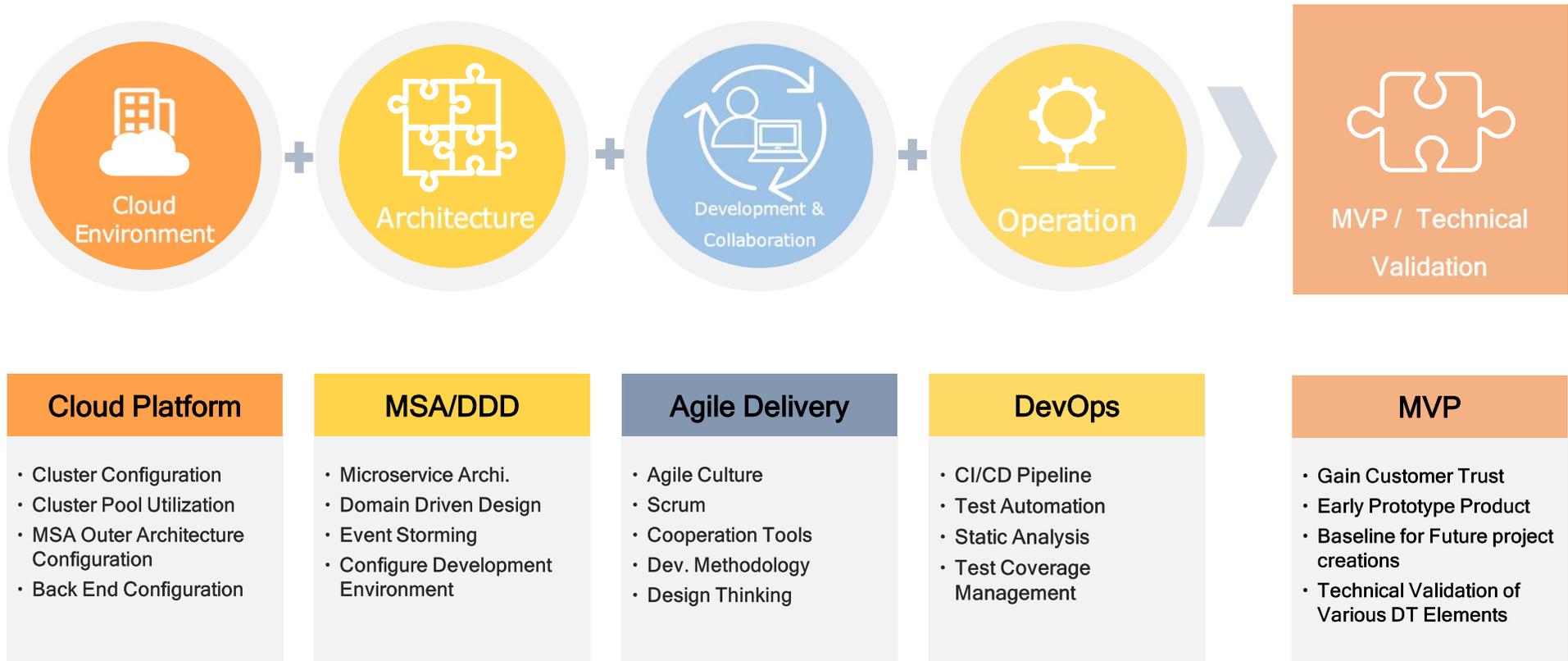
Operation Modernization

- Container-based operations tools
- Rapid response scheme

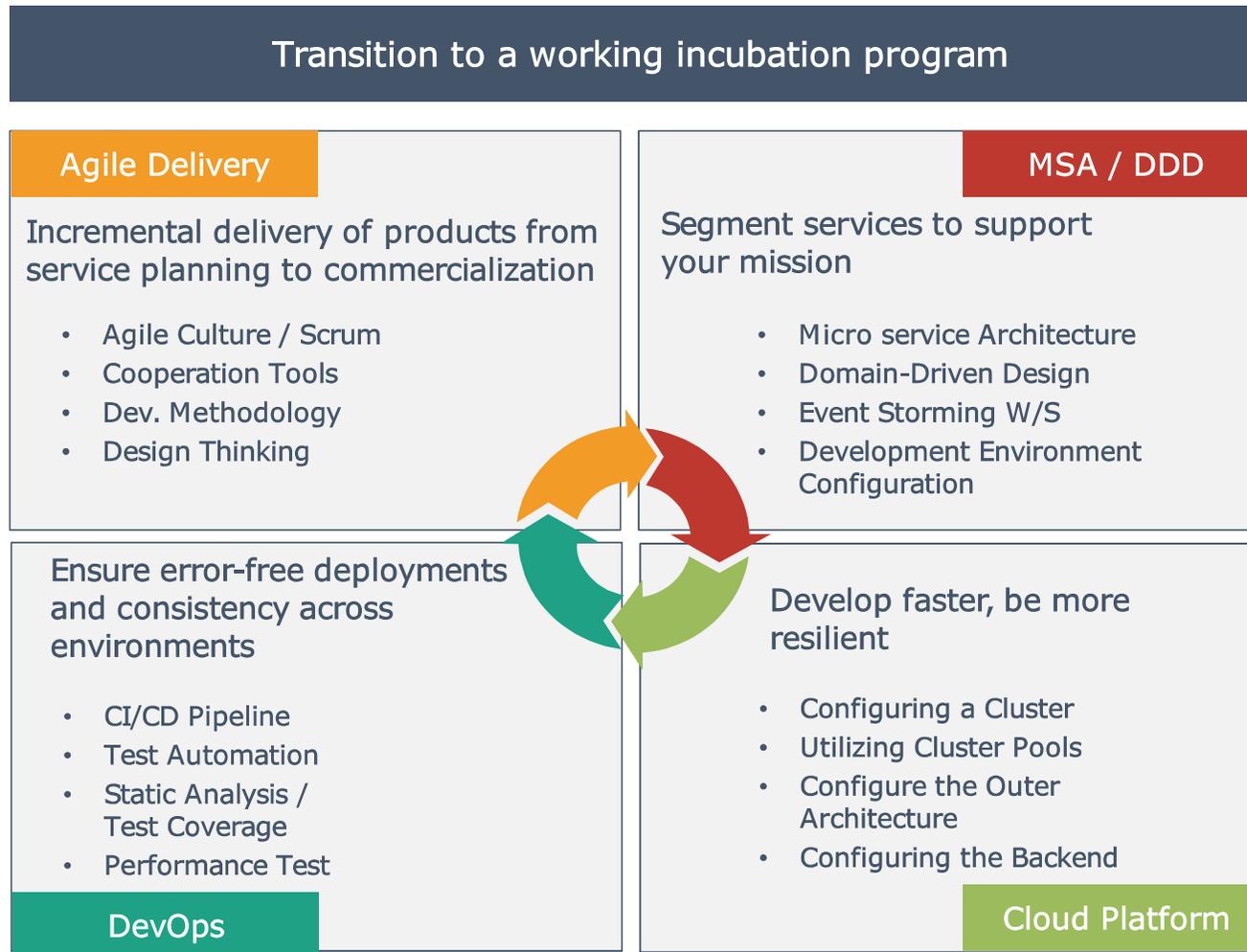


3. App Modernization Factory

- Provide Cloud Environment, MSA, Agile Delivery, DevOps Offering for Incubating Project

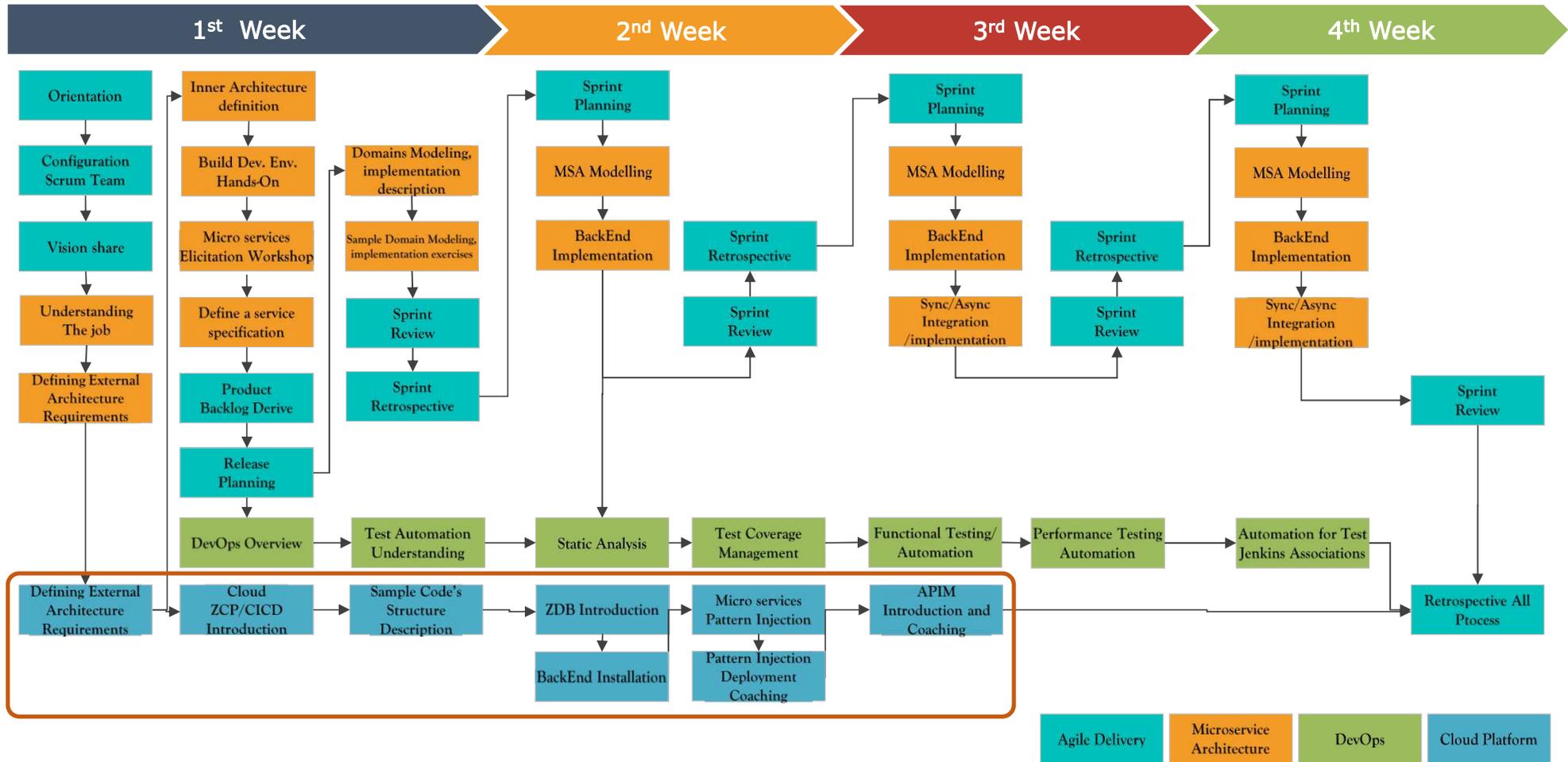


4. AMF as a practical incubation program



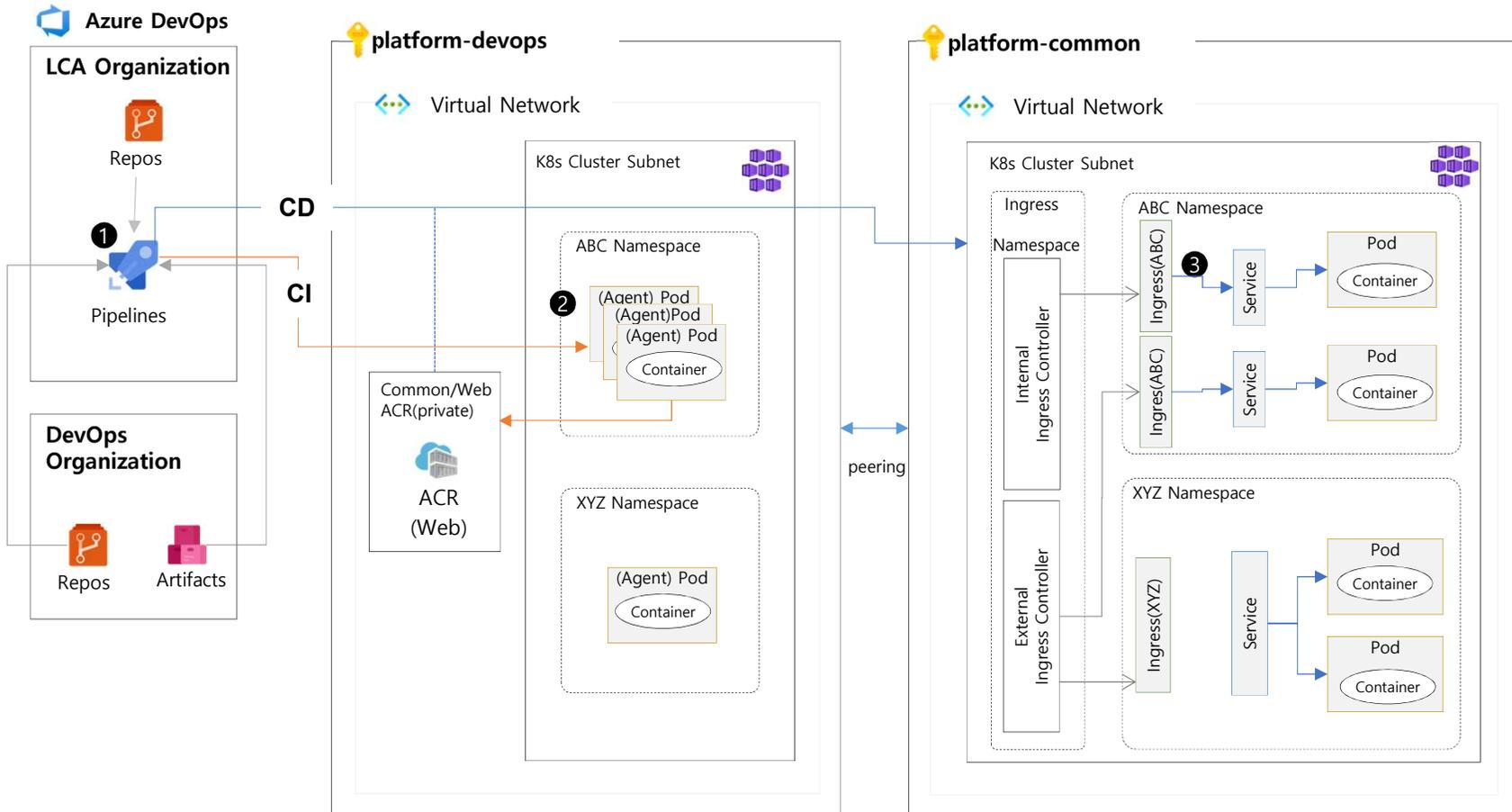
5. SK C&C Services for Cloud Migration (Build)

- 4 Weeks Program for Cloud Migration



6. Standard Architecture – CI/CD Flow

Below is the Azure DevOps CI/CD Flow, which you can use as a guide for your design

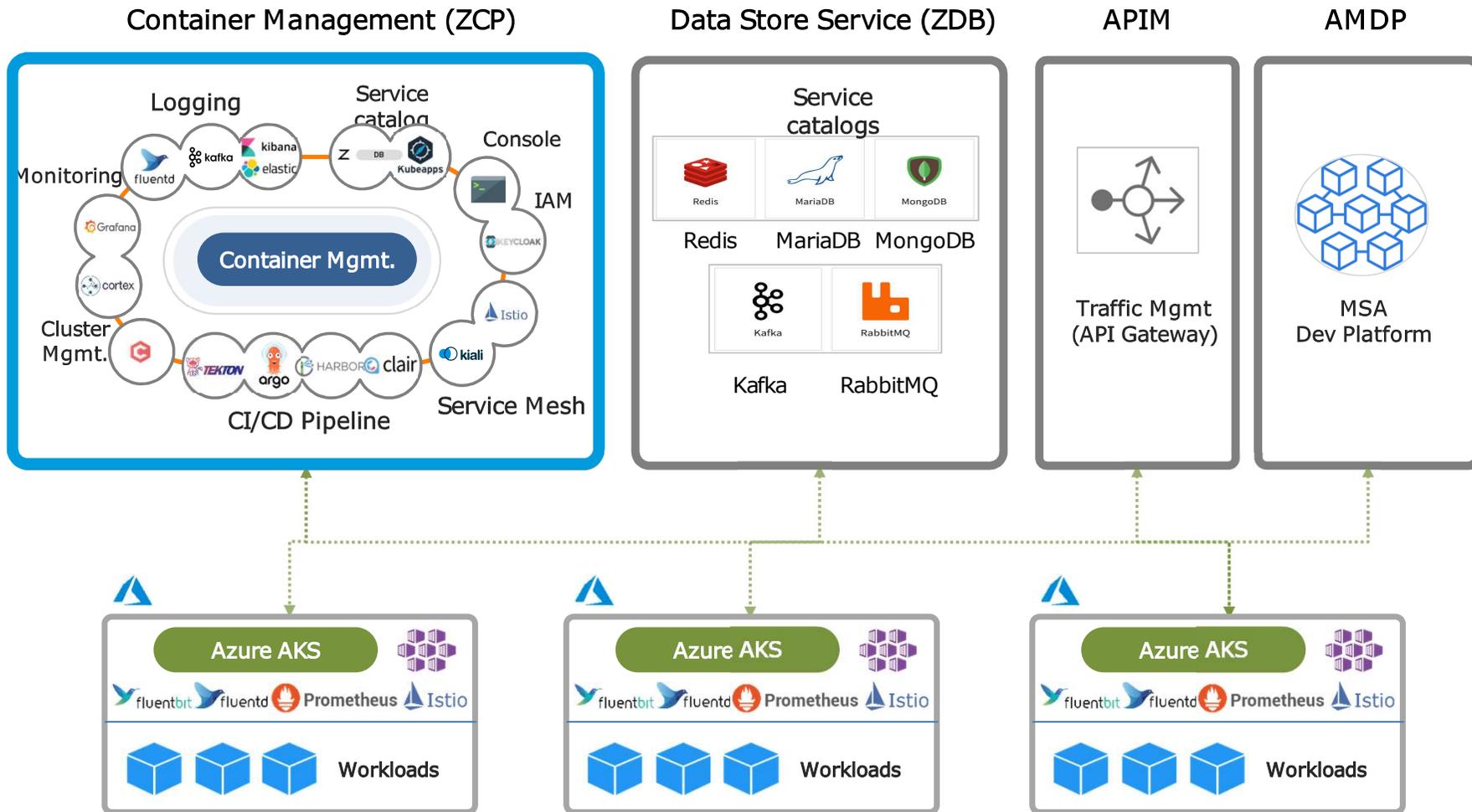


- 1 Template-based CI/CD Pipeline configuration**
 - Each project comes with a registered Self-hosted Agent
 - - Configure CI pipeline by defining parameters of template according to build environment-
 - Configure the CD pipeline by registering the ingress, service, and deployment manifest parameters for

DevOps Templates repos	Artifact Feed
manifestes	- Maven
└ ingress.yaml	- Nodejs
└ service.yaml	- Python
└ deployment.yaml	
pipeline	
└ ci-pipeline.yaml	
└ cd-pipeline.yaml	
- 2 Self-hosted Agent Pool CI/CD**
 - Per-organization agent namespace and container-based build agent configured
 - Agent Pods are scaled-in/out based on a set threshold (HPA)
 - - The resulting built container images are stored in a common ACR (application-specific repository configuration)
- 3 Deploy Unified Cluster Resources**
 - Deploy Pod k8s objects including Ingress for application internal and external communication via CD pipeline, Service for calling network services, and Application container

7. SK Modernization Platform on Azure (Cloud Z CP)

- Components

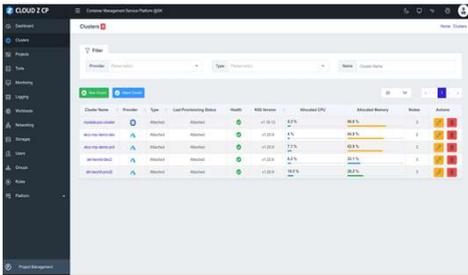


7. SK Modernization Platform on Azure (Cloud Z CP)

Key features of Cloud Z CP(Container Platform)

Multi-Cluster Management

- Create & Manage Multi-Cluster
- Automation for AKS creation



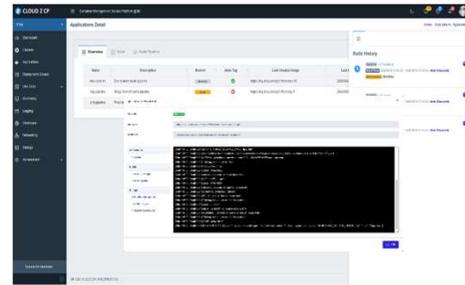
Resource & Project Management

- Manage container resources & projects
- User Rights Management Console
- Quota, Workload, N/W Policy



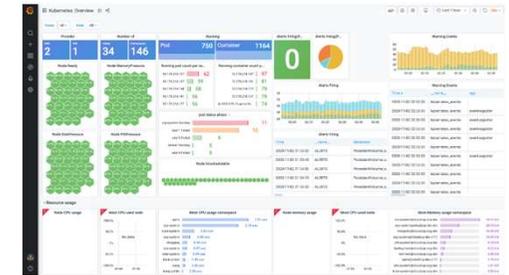
CI/CD Pipeline

- Deploy Application based on Kubernetes
- Source repositories, Image Registry



Monitoring/Logging

- Operational tools for container and workload management



What to expect with Z CP



Quickly get your development environment up and running

- Source repositories, Image Registry, CI/CD Pipeline for Development
- Manage deployment history, Rolling Back



Make container management more efficient

- Consolidated Resource Management for Multi-Cluster Environments

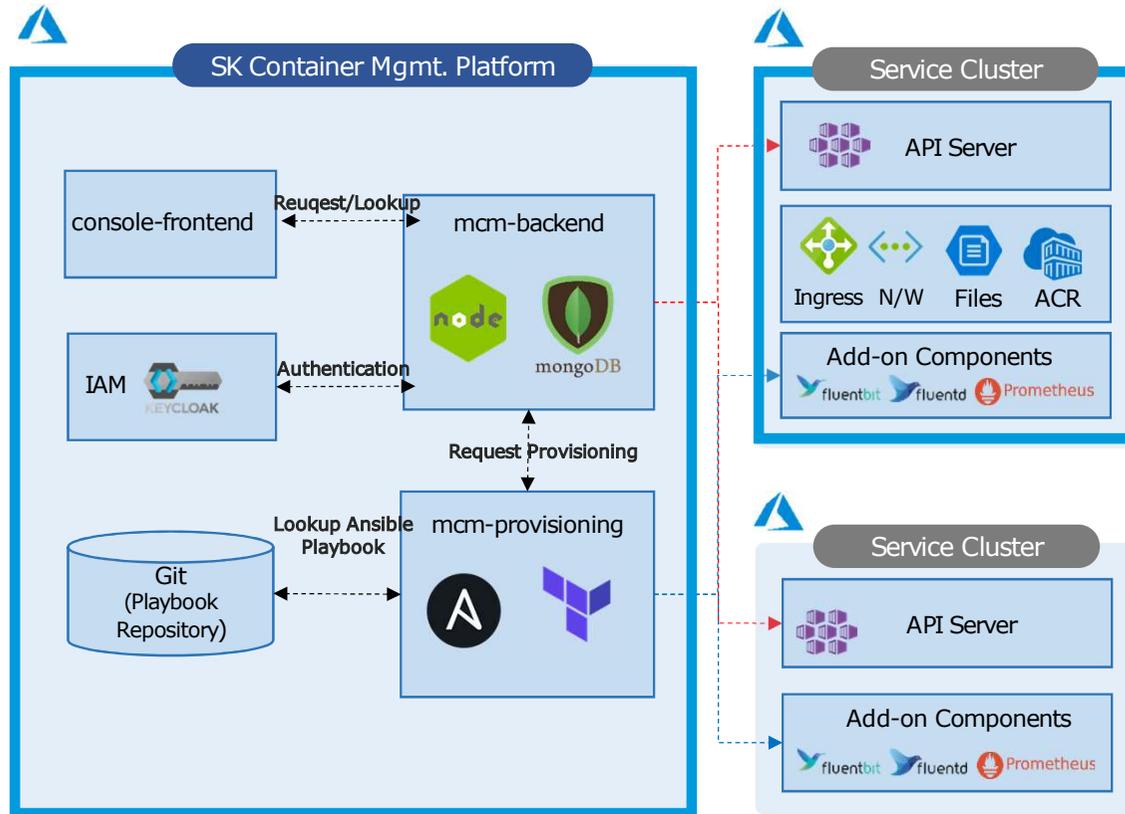


Get operational tools and systems in place

- Monitoring and Dashboard based on 1,500 metrics
- 100 Alert Rule Sets and 3rd Party Integration

7. SK Modernization Platform on Azure (Cloud Z CP)

- Feature 1. Minimize modernization technology complexity and ensure reliability



❖ Container Orchestration Platform

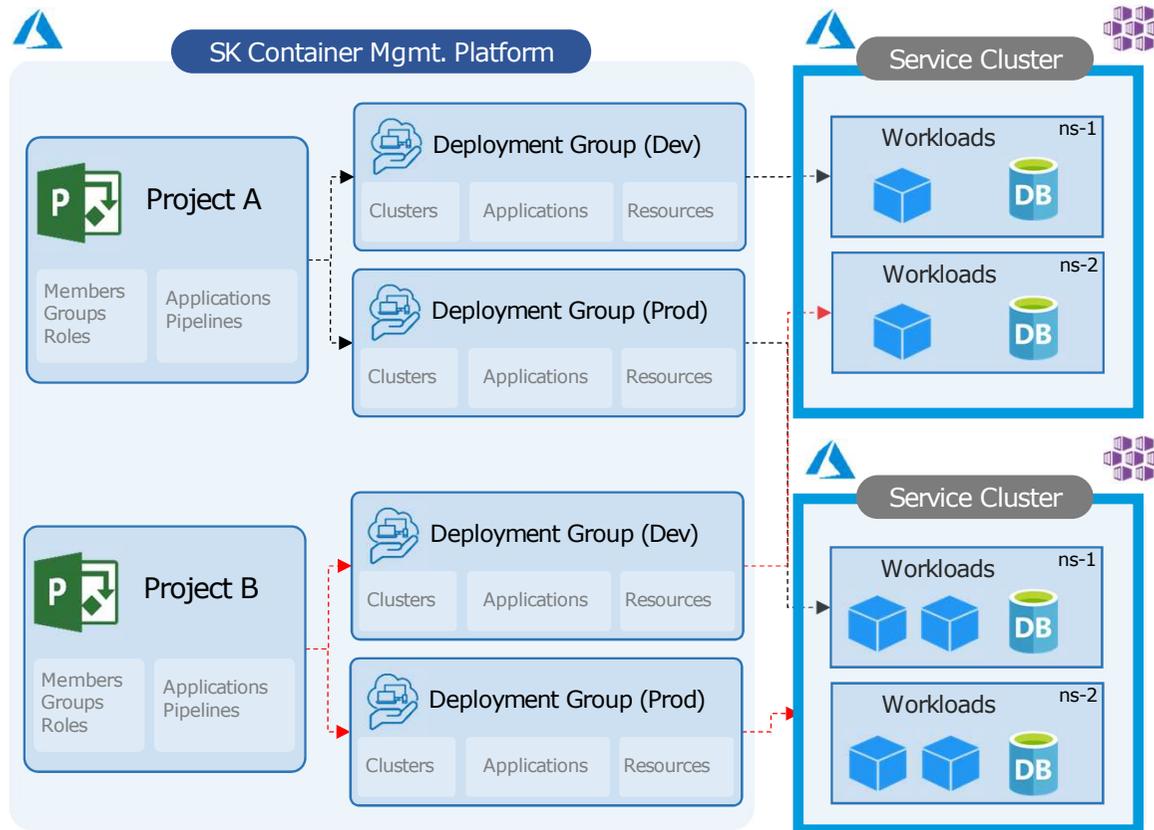
- Establish the standard architecture for AKS
- Organize the automation of the technical elements required for AKS
 - AKS Cluster Architecture (Network, PV Storage, Ingress)
 - Add-On Component (Operation, Alert)

Effect

- ✓ Quickly acquire the skills you need for MSA
- ✓ Proven Architecture & Stable Platform
- ✓ Minimize technical complexity & Learning Curve

7. SK Modernization Platform on Azure (Cloud Z CP)

Feature 2. Multi-Env CI/CD Pipeline



❖ Multi-Cluster (AKS) Deployment

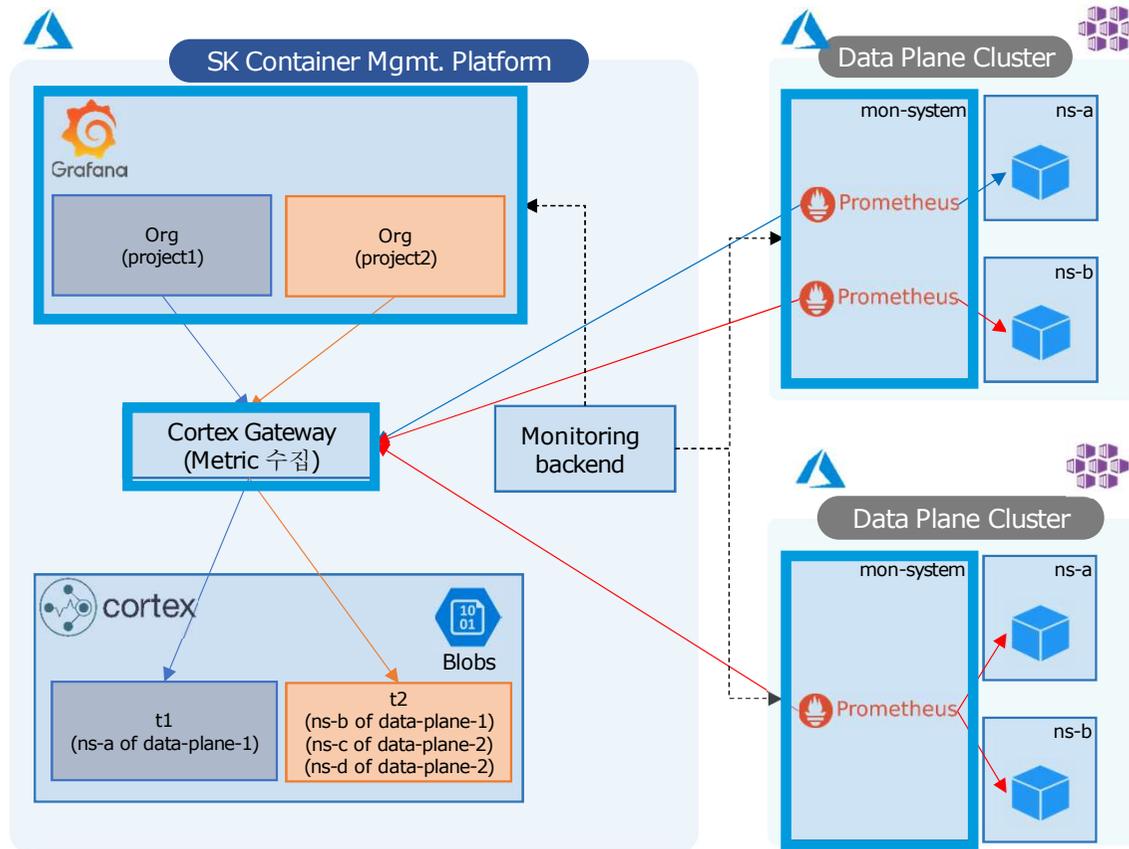
- Project Management based on Multi-Tenancy
- Deploy Multi-Environment (AKS)
 - Manage which AP and targets to deploy
 - Deployment History and Rolling Back
 - Service Status of Deployment Resources

Effect

- ✓ Support deployment of architectures optimized for AKS
- ✓ Quickly get Azure technology-based deployment schemes
- ✓ Reduce deployment preparation and time to release

7. SK Modernization Platform on Azure (Cloud Z CP)

Feature 3. Provide Micro-service Centralized Operation



❖ Manage Unified Monitoring

- Unified Monitoring of Multi-Cluster (AKS)
 - MSA, Container and Worker Node monitoring dashboard
 - Separate storage of metrics by project

❖ Fault Recognition and Propagation

- Pre-Defined Metric, Rule Set
- Slack Integration with rasing Alert

Effect	<ul style="list-style-type: none"> ✓ Immediately utilize metric-based monitoring dashboards for container workloads ✓ Provide advanced monitoring based on experience
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7. SK Modernization Platform on Azure (Cloud Z CP)

Feature 4. Monitoring

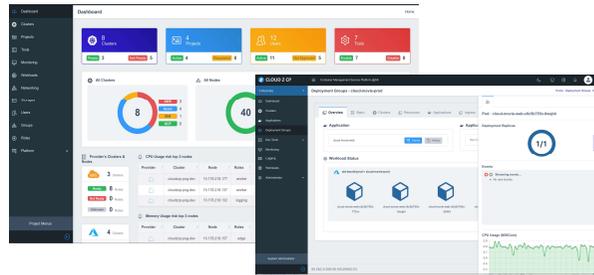
SK C&C Modernization



Application/Infra Modernization

Quickly set up container environment

- Provide a variety of AWS-based integration experiences to drive rapid enterprise transformation



Application Factory (MSA Coaching)

- Accelerate and Stabilize application transformation through F/W (guide, environment, code, etc.) coaching for MSA-based modeling and development



Operation Modernization

Cloud Operation Visibility

- Provide a unified environment that maximizes the visibility of all information generated by cloud operations



Ops Professional Services

- Promote SRE-based hybrid cloud monitoring, event recognition, propagation automation system and environment configuration PoC/expert support of operation modernization



7. SK Modernization Platform on Azure (Cloud Z CP)

- Feature 5. MSA Coaching Program (AMF) : Digital Technology Experience required for MSA Development

Agile Delivery

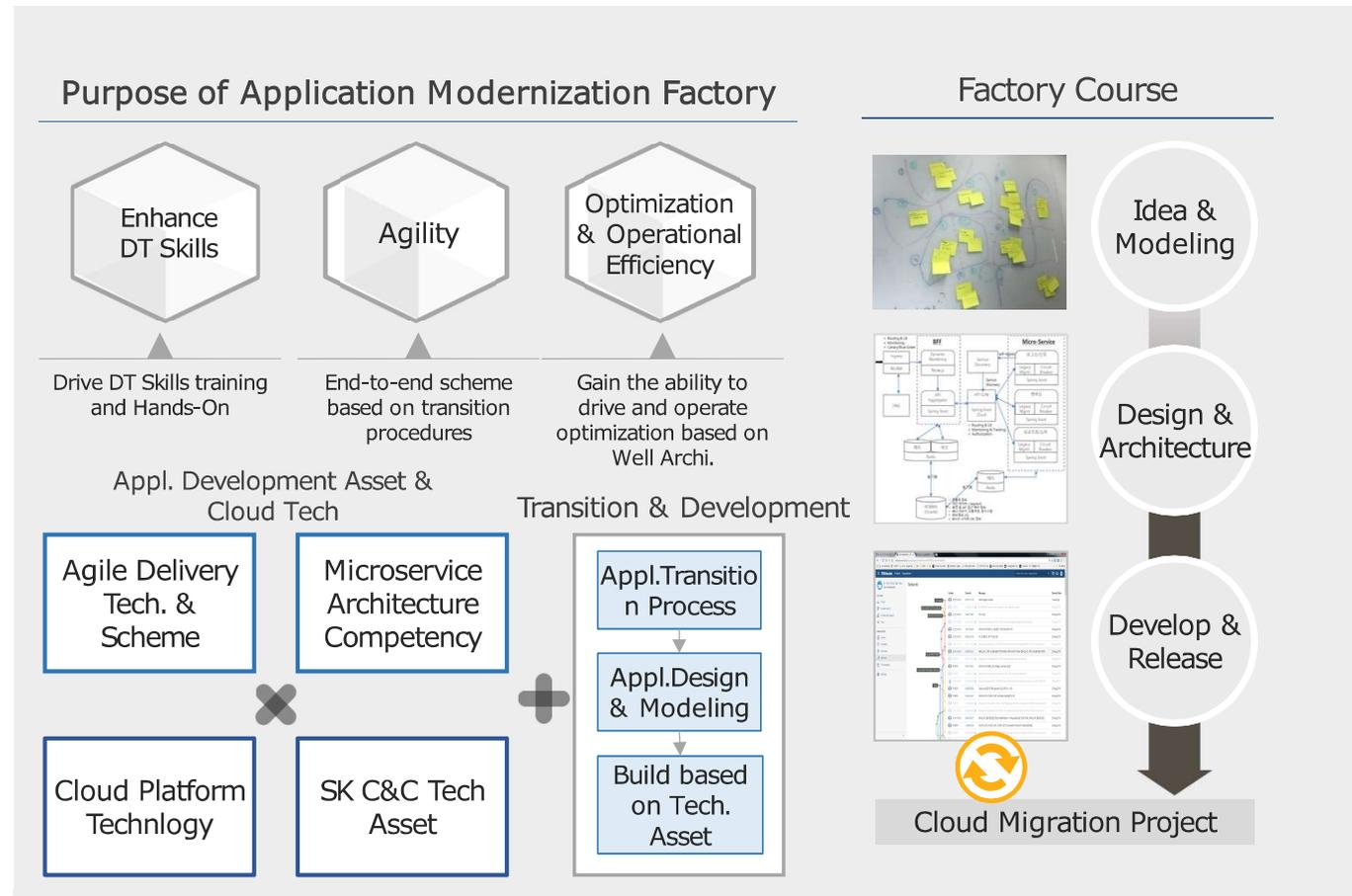
- Secure progressive delivery system from service planning to usage
- Agile Culture, Scrum
- Dev. Methodology, Design Thinking

DevOps

- Support uninterrupted deployment & service persistence schemes in various environments
- K8S-based environment configuration, architecture

Cloud Native App.

- Cloud-ready architecture on legacy systems
- Support the technology and service connectivity required for Cloud Native Apps



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