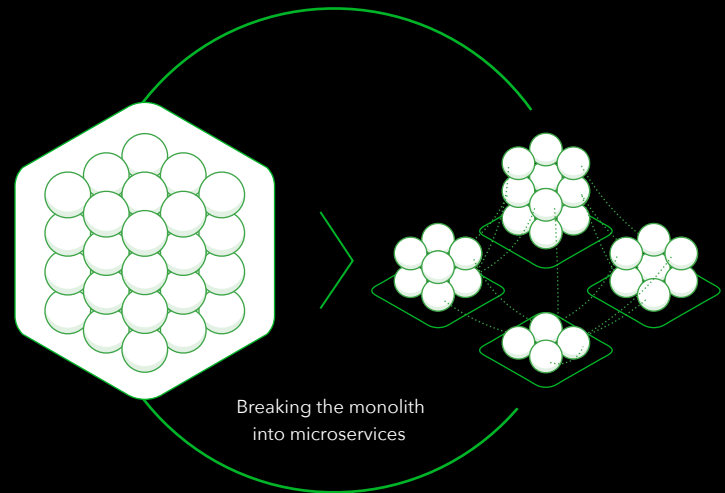# Microservices for Enterprise IT

Monolithic architecture slowing down operations?

Decompose your code into loosely-coupled microservices. A microservice architecture helps you scale, test, upgrade, and replace code faster, with less risk to operations. Unlike large monoliths, microservices do not use large, complex, single-use libraries and binaries. Instead, microservices are small, reusable code modules that improve the flexibility, capability, and strength of your operations.

Breaking the monolith into microservices

Scale, experiment, and grow capabilities with microservices

Microservices offer the following benefits to enterprise IT.

Better system performance. Microservices are loosely coupled, secure, lightweight, and resilient. A single code failure in a monolithic architecture could bring down an entire system. Microservices run independently of neighbors and the network. If one or more face issues, remaining services can still do their jobs.

Reduced cost over time. Replacing out of date or problematic microservices is quick, cheap and easy. They can be added or removed, and scaled up or down for effective IT resource and cost management. A microservice architecture will provide considerable savings over time.

Improved user experience. Microservices offer higher data capacity and functional variety, which means richer and more engaging user experiences across multiple domains and distributed systems.

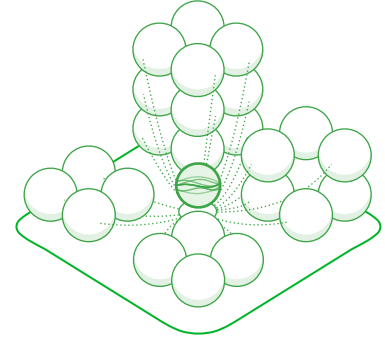## Common questions about adopting microservices

What kind of help do I need? Find, recruit, and retain a strong group of highly skilled developers, architects, and site reliability engineers. However, be prepared to pay a premium for in-house help.

How do I avoid hidden costs and unforeseen difficulties? Find the right technology partners to manage your microservice architecture. Microservice-based systems are difficult to design, develop, and control. They introduce significant deployment and management complexity on the network. Microservices require more oversight and carry heavier data loads which can cause system lag if not well managed. Find a group with the experience and skill to expertly navigate these challenges.

The Service Mesh Explained

Simplify microservice management

The service mesh is a layer of infrastructure adapted to provide command and control of communications between microservices. It is a layer of infrastructure typically comprised of a network of adaptable sidecar proxies. This layer, at its base, orchestrates and manages communications between microservices.

Strengthen your infrastructure

A service mesh offers the following benefits to enterprise IT.

The service mesh manages the performance of each microservice in the architecture via their sidecar proxies.

More control. A service mesh manages the activities, policies, security, and data of every microservice in a multi-tenant mesh across multiple clouds. Without a service mesh, microservice management is extremely difficult, *if not impossible,* at an enterprise scale.

Improved operations. Microservice architectures may contain thousands of microservices across many systems. A service mesh provides essential policy and data management, and orchestration to keep complex systems working as intended.

Business insights. A service mesh provides a complete view of your microservices. It stops microservices from carrying added operations and data, limiting them to the fulfillment of their unique roles. The data each microservice generates precisely reflects the operations of a specific business action providing deeper insight. A service mesh also supports the scaling and flexibility needed by cloud-based technologies, such as streaming video and big online retail services.

Grey Matter

Introducing Grey Matter, the intelligent service mesh

What is it? Decipher's Grey Matter is an intelligent mesh for hybrid cloud, multi-tenant microservices within an enterprise.

What can it do? Grey Matter uses captured network data, an underlying data delivery network, and business measurement overlays to reduce enterprise costs and optimize business growth.

What will it do? Grey Matter enables intent-based networking (IBN), or automated network management, determined by business key performance goals. Grey Matter combines network information, business insights, and content traffic with cutting edge AI to automate monitoring, control, optimization, and resource management for each system connected to the mesh.