

MAPLE

Microservices Architecture for PLuggable Environments

WHAT IS MAPLE?

- ▶ Pluggable application framework that seamlessly adapts to evolving operational needs and emerging technologies (e.g., AI/ML), allowing rapid delivery of 3rd party capabilities
- ▶ Provides a level of abstraction that shields 3rd party capability developers from interface and architecture complexity; development efforts can focus on satisfying operational needs (data and algorithms)
- ▶ Single user interface that provides federated search, alerting, and management across all deployed 3rd party services

Feature	Benefit
Speed to Capability	3rd party services integrated via streaming messaging; only need to know about data types (e.g., text, video, image, track) and internal business logic rather than complex system integrations
Service Management	Automated service registration and monitoring, topic subscription, and connection to API Gateway
Extensibility	3rd party services can dynamically define new objects by extending existing data model
Flexibility	3rd party services can be written in any language and use any preferred data store or corpus, and host their own custom user interfaces to enable unique user interactions
Searching and Alerting	Centralized, asynchronous queries across all microservices that be saved to generate alerts whenever new matching data appears within the enterprise

WHY MAPLE?

Customers across domains seeking similar capabilities:

- ▶ Ingest a variety of data types (e.g., text, video, signals, radar)
- ▶ Ingest data from various sources (e.g., HUMINT, IMINT, SIGINT)
- ▶ “Plug and Play” new capabilities
 - › Rapidly and seamlessly add new functionality, such as targeted AI/ML capabilities, without requiring major modifications to the underlying architecture
- ▶ Display results to users in a cohesive, user-friendly manner
- ▶ Scalable architecture that can support enterprise or tactical deployments

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