CIO Guide to Universal API Management

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Introduction

The rise of technologies like generative AI opens up new market opportunities and use cases, and data has quickly become the new currency. To take full advantage of this opportunity, an organization's digital building blocks must be easily accessible across the organization.

> **A proper API strategy must be in place to connect these various AI models, APIs, automations, applications, and systems.**

Today, virtually every company runs on APIs, with 99% using them. And the value they provide is clear: APIs drive revenue and increase productivity, with around one-third of revenue coming from APIs and API-related offerings.

And API proliferation only continues to grow. The traditional enterprise landscape uses nearly 1000 applications and at least between ten and thirty APIs per application. Now, enter AI. AI only exacerbates this proliferation, as these APIs often interface with large language models (LLMs).

This API sprawl becomes a substantial hurdle and security risk for IT organizations. To combat this sprawl, IT teams spend critical time identifying APIs which prevents them from effectively governing and managing APIs and limits their ability to use automation and AI solutions effectively.

Developing API management capabilities in-house is a tedious process – and organizations often discover how flawless the system's functionality must be under the hood, with little room for failure.

In an ideal world, an API strategy would be a one-size-fits-all solution, but the reality is vastly different. APIs are in various programming languages and serve distinct functions across the business, which means a universal API management vision and strategy are vital.

> **A universal API management approach allows organizations to manage, govern, and secure across the digital ecosystem — no matter where your APIs are created.**

Universal API management enables developers to catalog APIs in one place to create single source of truth for all APIs. This approach allows IT teams to govern, manage, and secure from a centralized control plane – regardless of which platform the APIs are developed on – to build and compose APIs that conform to best practices or industry regulations.

MuleSoft's unified platform is for all APIs, anywhere.

Universal API management on Anypoint Platform is a set of product capabilities that empowers enterprises to manage the full lifecycle of APIs – built for any purpose across any language, API gateway, or environment.

Accelerate Application and Automation Delivery

Jumpstart API building blocks by discovering APIs or composing APIs using diverse protocols.

- **API Designer:** create reliable and standardized APIs quickly.
- **Code Builder:** a next generation IDE for developers.
- **API Catalog CLI:** discover and catalog your APIs and documentation.

Gain Consistent Security and Quality

Secure and govern every API in any environment without adding development overheads.

- **API Designer:** create reliable and standardized APIs quickly.
- **API Manager:** control your APIs and microservices from one place.

Implement Modern Architectures

With a flexible gateway, you can manage and protect any service– regardless of size, language, or cloud.

- **Flex Gateway:** ultrafast lightweight API gateway to manage and secure APIs running anywhere.
- **Mule Gateway:** embedded gateway to protect APIs developed on MuleSoft platform.
- **API Manager:** control your APIs and microservices from one place.

Create Vibrant Ecosystems

Maximize the value of your APIs by driving adoption and engaging your API communities.

- **API Experience Hub:** publish and share APIs with any audience.
- **Anypoint Exchange:** discover and use prebuilt assets.

What is universal API management?

Universal API management is the ability to open the scope of full lifecycle management capabilities – management, governance, observability, engagement, and discoverability – of APIs built and deployed anywhere. It's the next evolution of API management that offers a more open, flexible, and scalable approach.

To achieve this, organizations must ensure their technology stack can:

Work with any API

Enterprises augment their APIs beyond RESTful APIs with protocols like AsyncAPI, GraphQL and gRPC to support microservices and event driven initiatives. Universal API management enables organizations to work with any API – regardless of origin or protocol.

Operate in any Cloud

Universal API management enables the APIs and their governance, observability, and discoverability capabilities to operate independently from their hosting environment across on-premises, hybrid, and cloud environments.

Implement Modern Architecture

There are various architecture options, ranging from monolithic applications to microservices. With universal API management, organizations can work with any architectural pattern by securing all their services regardless of size.

Create Vibrant Ecosystems

With universal API management, enterprises have a central repository for their APIs, allowing internal and external audiences to gain value, improve customer experiences, foster partnerships, and business models.

Standard Bank becomes a future-ready business by unifying its tech stack

The Standard Bank Group is Africa's largest banking and financial services group. Headquartered in Johannesburg, South Africa, it services more than 15 million individuals, businesses, institutions, and corporations in more than 20 African countries.

Universal API management provided teams across the business with consistent API governance and universal cataloging.

This approach enabled team members to respond quickly to customer needs by delivering a single source of truth across the entire customer journey.

- Established a Center for Enablement to define API strategy and best practices and accelerate delivery of IT projects.

- Launched an API Marketplace to connect financial services ecosystems with customers to deliver unique experiences.

- Created 2 API developer portals in just 12 months with required governance and quality control to help developers be more productive.

35% faster time to close cases.

30% increase in agent productivity.

70% of all APIs are governed and cataloged.

How does universal API management create value in my enterprise?

Composability bridges the gap between the siloed, current state of the enterprise to the fast-moving, agile vision its leaders strive toward. It breaks down monoliths into building blocks that can quickly be composed together to deliver new innovations from existing components.

However, organizations often impede their own composability with complex ecosystems – many having architectures built for specific use cases on diverse technologies, disparate platforms, and environments.

CIOs can not afford to rip and replace their entire infrastructure to achieve this agile, composable future; the only way to achieve it from their current state is taking a universal approach to managing their infrastructure.

Promote innovation across the business.

Leading consumer brands are setting the bar for the types of seamless, digital, and integrated experiences customers now expect. Many enterprises struggle to deliver similar experiences for their customers because they operate in silos and have fragmented technology stacks.

Business units within large enterprises tend to operate independently, working on different use cases with different objectives. Eventually, every unit is operating in a heterogeneous environment with disparate technology stacks. For example, the banking, lending, and insurance divisions of a large financial institution might offer similar customer experiences, but each division might adopt entirely different solutions to bring them to life.

When enterprises give each business unit ownership over their own technological needs – creating a siloed digital ecosystem for each – the organization falls short in providing services that require an information exchange across different technology stacks. A universal API management approach allows business teams to innovate while maintaining total control and governance.

Bridge the transformation gap with universality.

Over the coming years, the composable enterprise is expected to mature – meaning that businesses will seek out new opportunities to enhance their composability, and thus, increase their agility.
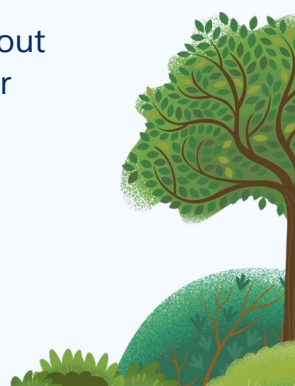
Enterprises are expected to follow the innovative lead of consumer markets by composing their processes into packaged business capabilities to respond to customer needs faster. CIOs today must use technology to drive business value, deliver seamless customer experiences, and act as the change agents behind this transformation.

As CIOs enforce this across the enterprise, IT teams must harness the full value of their heterogeneous environments, disparate architectures, and multiple gateways without changing the entire infrastructure.

This means that each element within the ecosystem must be manageable, governable, observable, and discoverable via a single, universal control plane.

Organizations have shifted from using APIs for integration to using them to drive composability.

However, enterprises need universality to truly achieve this at scale. Universality enables organizations to compose, connect, and control their ecosystem – regardless of the technology, architecture, or environment. When applied to API management, universality advances the organization's journey toward composability.

Why universality unlocks the composable vision.

01. Decomposing monolithic structures
Over the last ten years, large enterprises have been tasked with breaking down their monolithic architectures into decentralized, composable services.

**02. Unique and independent journeys to composability**
Since business units operate independently, they often choose different technology stacks to meet their needs. This creates heterogeneous environments and diverse architectures that make it hard to connect enterprise-wide services.

03. Siloed sprawl of APIs
Each business unit has its own application network which creates a sprawl of APIs, preventing the enterprise from composing new capabilities quickly and from implementing security policies consistently.

04. Ability to build and deploy anywhere
Enterprises today require universal discovery, manageability, and security across their services – no matter where they're built, which architecture they're implemented in, or the environment in which they're hosted.
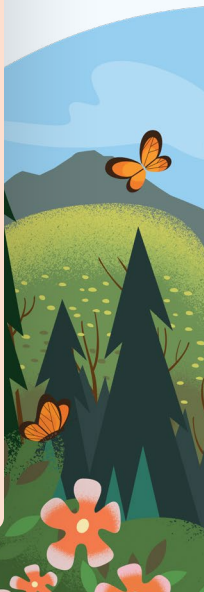
Three steps to help begin your universal API management journey

01. Review your API strategy
Make sure you have the capabilities to design, build, and compose modern APIs using various technologies. And capabilities to protect and manage any APIs including APIs to support AI applications.

02. Evaluate your API Programs
Align your organization and culture to deliver API-enabled initiatives with the right guardrails and best practices. Increase API engagement with tools and processes to promote reuse and composability. Make sure your API Programs and strategy align with your business outcomes.

03. Improve visibility into your API investments
API teams can innovate using different technologies. But bring those APIs in one place for a single source of truth for all APIs. You can then deliver successful, faster, and trusted API initiatives.
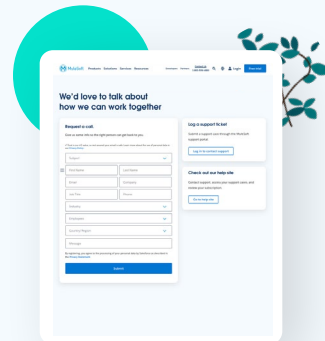
Get started with MuleSoft.

Adopt a trusted platform for automation and more.

Learn how MuleSoft can help your team increase productivity, democratize innovation, and ultimately create exceptional customer experiences.
Get connected

Dive deeper into universal API management and AI.

MuleSoft's Universal API Management helps protect and govern any API including LLM APIs to be built and deployed anywhere.
Watch on-demand

Secure your digital estate with these best practices.

Guide your organization to develop a comprehensive API security strategy, and demonstrate why your strategy must be developed as soon as possible.
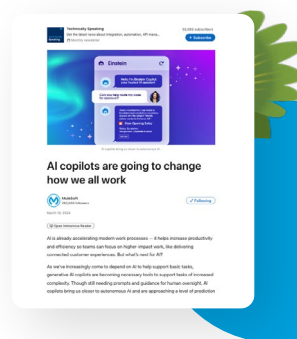Get the whitepaper

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