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API Governance and Monetization



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About Me

- I'm the technical product manager for WSO2 API Manager and API Platform for Kubernetes, with 14 years of experience in software design and development.
- Technology areas
  - API management and integration
  - Docker, Kubernetes
  - API gateways, high performance gateways
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Agenda

- Evolution of API management
- APIs as digital products
- API governance and practical usages
- API governance best practices and sample framework
- API revenue models and monetization
- Implementation of effective API monetization strategy

Evolution of API Management

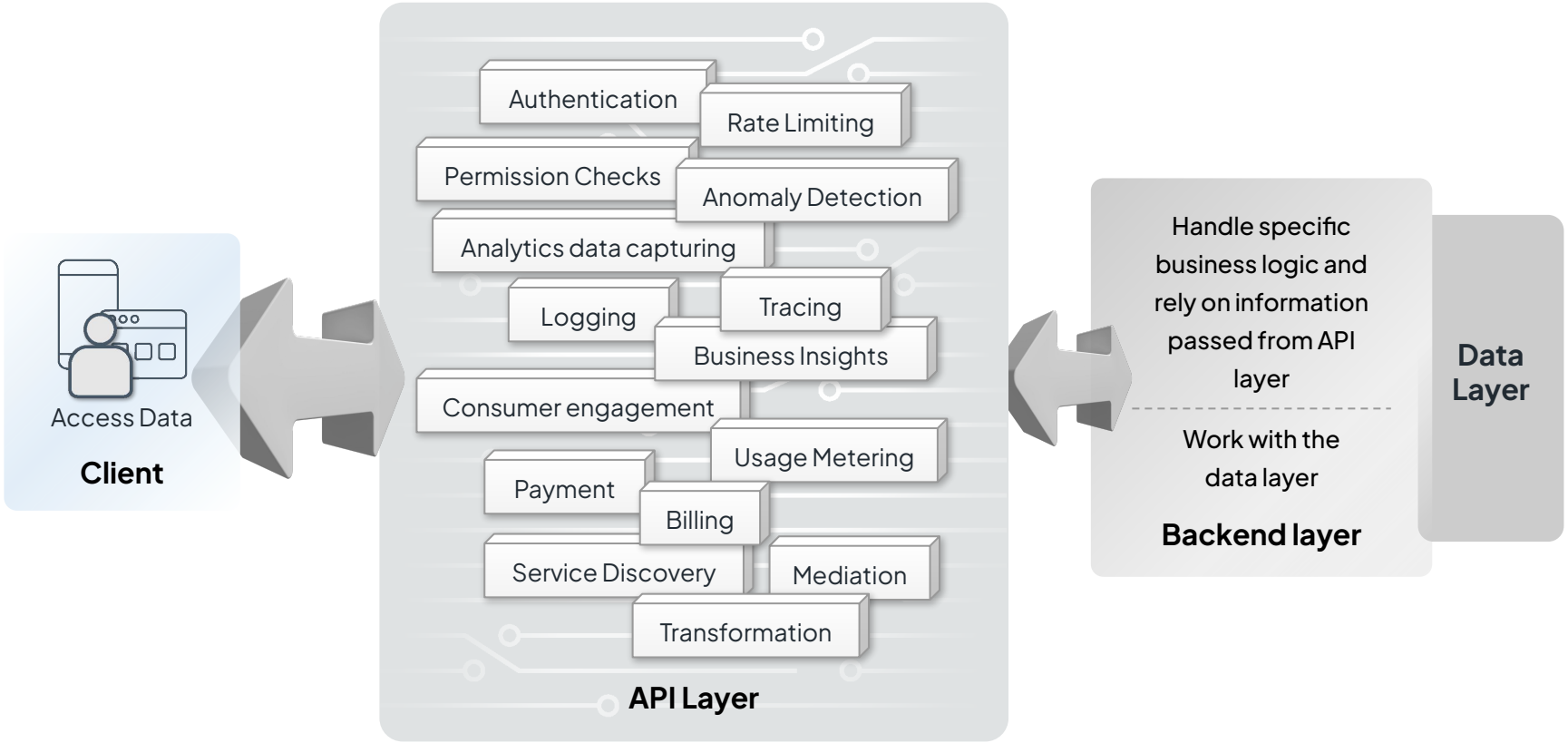
Evolution of API Management

- Some questions we posed in the early days
  - How do you change the authentication mode for a given API?
  - How do you manage access control for different roles and permissions for the same API?
  - What steps are taken to help consumers easily use APIs? Do you provide documentation?
  - Are auto-generated SDKs and documents provided? Is there a user-friendly portal for developers to browse and use APIs?

Evolution of API Management

- Web services evolved to meet specific requirements, allowing backend developers more freedom.
- API management facilitated coordination among different teams and simplified service integration.
- APIs increasingly served as the primary external interfaces for services.
- Governance became increasingly prominent as the importance of APIs grew.

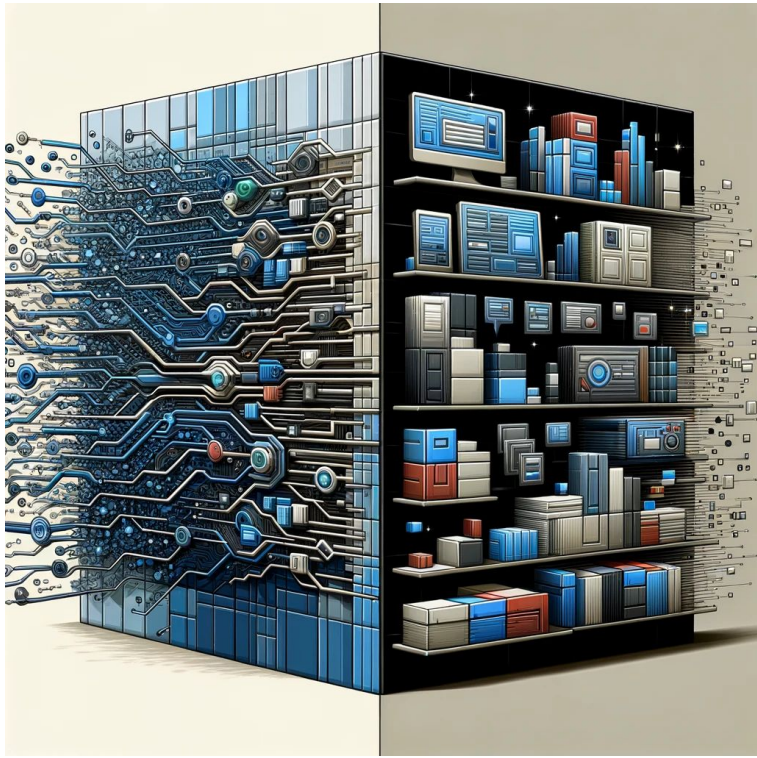
Evolution of API Management



APIs as Digital Products

Transformation of APIs into Marketable Products

- Shifting Perspective: APIs are no longer just technical interfaces but are increasingly viewed as digital products that drive value for businesses.
- Characteristics of Successful API Products: Successful API products are easy to use, well-documented, scalable, and offer clear value propositions to developers and end-users.



Transformation of APIs into Marketable Products

- Feature Rich: Like physical products, APIs now come equipped with usage metering, documentation, and toolkits.
- Customer Orientation: Designed to meet customer needs, making them akin to consumer goods in the digital space.



Implementing Governance for API as Digital Products

- Introduction of Governance: With APIs becoming a key customer-facing element, governance has become crucial to maintain quality and security.
- Establishing Guidelines: Organizations are now setting up specific processes and guidelines to manage these APIs effectively.
- Enforcement of Best Practices: Focus on enforcing best practices to ensure APIs are reliable, secure, and user-friendly for clients.

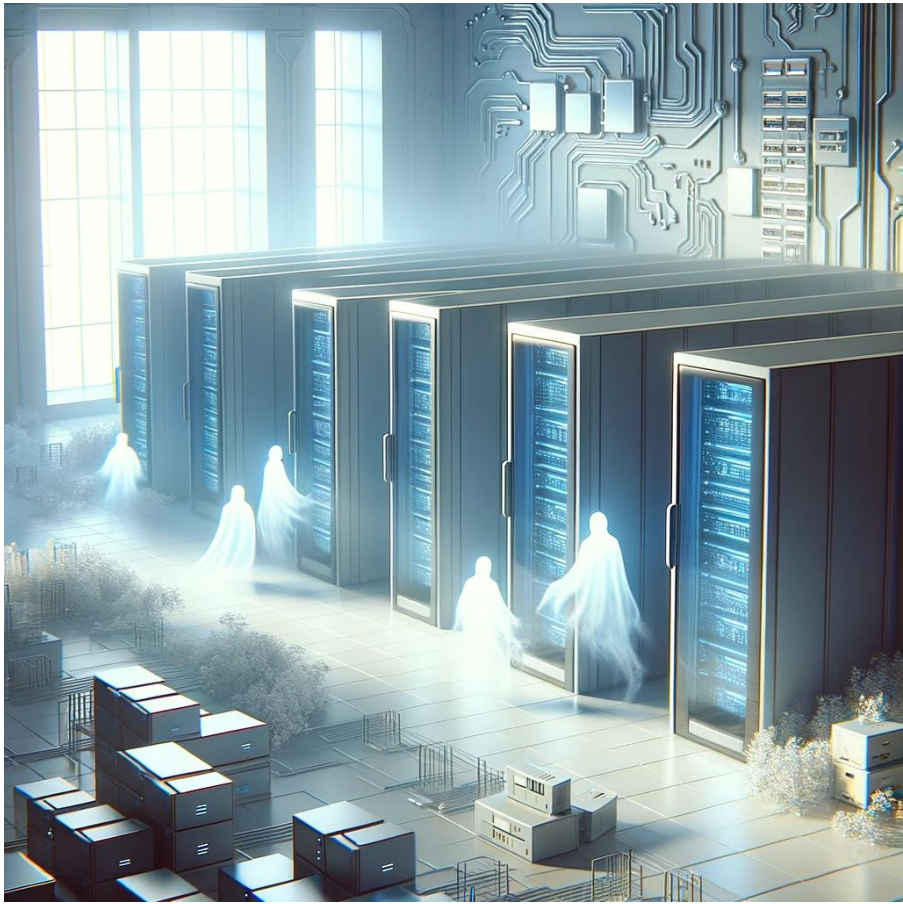
Why API Governance Matters

- Security: Protects sensitive data and prevents unauthorized access.
- Consistency: Maintains a consistent experience for developers using your APIs.
- Reliability: Guarantees APIs are available and function as expected.
- Visibility: Provides insights into API usage and performance.
- Reduced Costs: Efficient API development and management saves resources.

Practical Applications and Governance of APIs

Some Experiences

- Some do not have clear idea about how many APIs exposed, whether they follow security best practices etc.
  - Some major organizations have recently suffered significant data breaches due to neglecting basic API best practices.
  - One of our own user recently told us that they have around 1,000 APIs, but they really do not need that many.



The Importance of API Governance in the Present Era

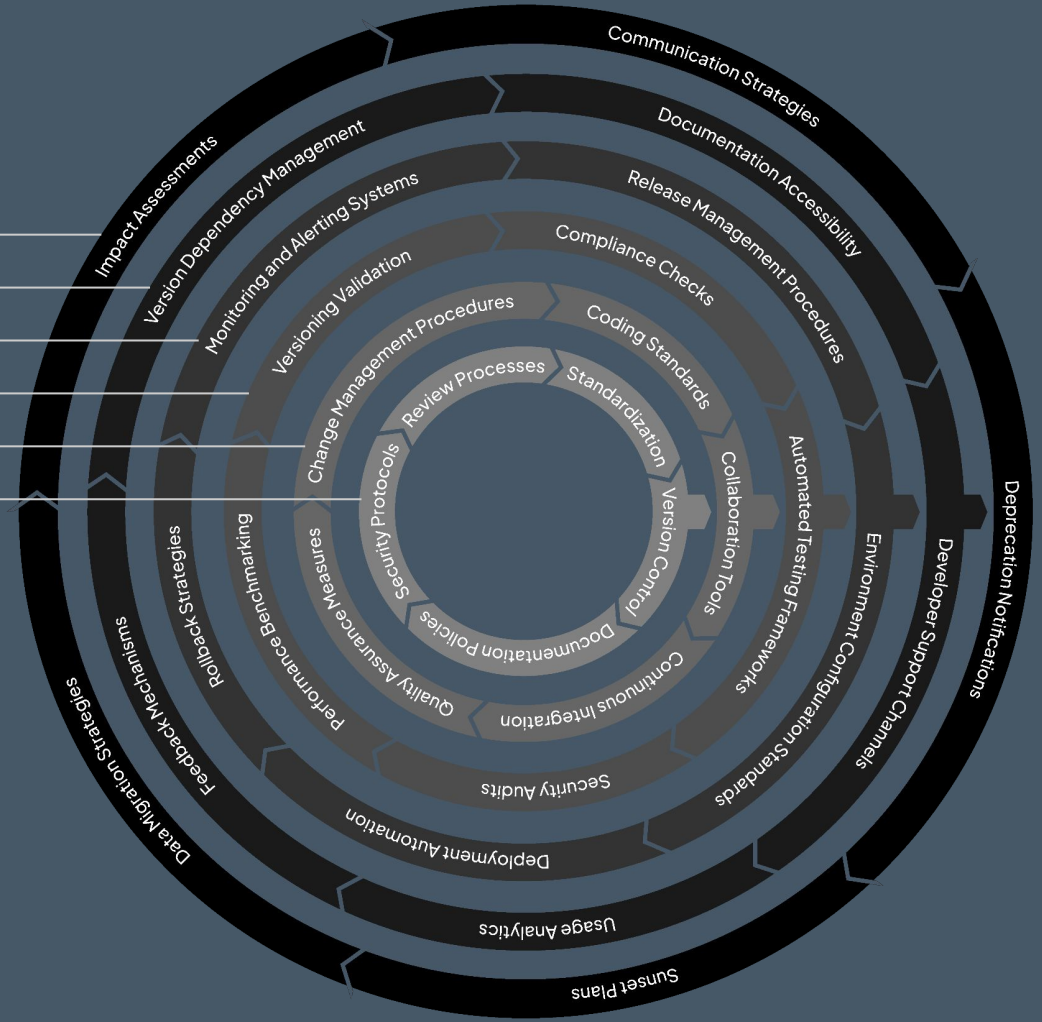
- Many organizations have developed APIs rapidly over the last decade.
- These APIs often have security flaws.
- Data breaches result from these flaws.
- Strong governance is essential for security and compliance.



Best Practices and Frameworks for API Governance

API Governance

- API Retirement Phase
- API Consumption Phase
- API Deployment Phase
- API Testing Phase
- API Development Phase
- API Design Phase



Future Directions for API Governance

Future Direction

- API governance will prioritize a seamless developer experience.
- New security protocols with threat protection and tokenization will be prominent.
- AI will automate tasks, identify anomalies, and optimize API performance.
- Standardized governance frameworks will simplify API management across organizations.



API Revenue Models and Monetization Strategies

API Governance and Monetization

API revenue models and governance are linked because:

- Access Control: Defines user tiers and pricing.
- Quality Assurance: Supports premium pricing with reliable services.
- Compliance: Ensures the API is secure and meets legal standards, attracting paying users.
- Usage Limits: Enables tiered pricing models based on user consumption.
- Monitoring: Helps refine pricing by analyzing user behavior and API performance.

API Revenue Models

Direct API Revenue Models

- Users are charged for each API call.
- Users pay a recurring fee for API access, often with tiered options.
- Multiple plans offer different levels of access and features.

Indirect API Revenue Models

- Basic services are free; advanced features cost extra.
- Revenue is generated by selling data or insights.
- APIs promote other products or services.
- The API is free but includes advertisements.

Implementing an Effective API Monetization Strategy

Role of API Management Platform in Effective API Monetization

Usage Tracking: Log API calls for analytics and billing.

Billing Integration: Automate billing based on usage.

Rate Limiting: Set usage limits to prevent abuse.

Subscription Management: Handle sign-ups and plan changes.

API Gateway: Manage API traffic and enforce policies.

SLA Management: Track and manage service level agreements.

Scalability: Automatically adjust to increased usage.

Developer Portal: Provide easy to use platform for API consumption.

Question Time!



Thank You!