

# Why Consider API Management?

In many organizations, APIs proliferate (100s of APIs) and are minimally re-used. Because there is often minimal communication, inefficient coordination, and a lack of trust. teams underutilize API assets. Team members often find it difficult to understand who is consuming APIs, who is writing re-usable APIs, and whether the API is scalable and secure. Without an agile process to find, explore, evaluate, and subscribe to APIs, teams commonly re-build rather than re-use. The prevalent SOA anti-patterns of Not Invented Here (NIH), tight coupling, and 'build again' are reinforced when teams do not know of an API's existence or cannot easily map API functionality to the needed business capability. Exacerbating the situation, bureaucratic red tape creates delays in being able to access the API. Without reliable infrastructure to track usage, manage access, ensure Quality of Service, or monetize the API asset, providers often restrict API consumers to private, internal team use.

# What is WSO2 API Manager?

API Management brings on-demand, self-service development onboarding into the SOA and integration space. Developers can rapidly find relevant APIs, discover API functionality, test APIs online, subscribe to APIs, evaluate them, generate access keys, and interact with API publishers. API publishers can easily provision their APIs, share documentation, manage API keys, and gather feedback on an API's features, quality and usage.

WSO2 API Manager consists of an API policy enforcement gateway and collaboration space where API publishers meet API consumers. The collaboration space consists of an API Store and API Publisher.

**API Gateway:** enables you to secure, protect, manage, and scale API calls

**API Publisher:** enables API providers to easily publish their APIs, share documentation, provision API keys, and gather feedback on an API's features, quality and usage.

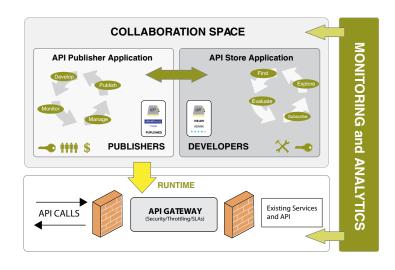
**API Store:** provides a space for consumers to discover API functionality, subscribe to APIs, evaluate them and interact with API publishers.

### Why WSO2 API Manager?

WSO2 API Manager is the only open source API management product available today. The product builds upon WSO2's deep investment in integration, governance, analytics, and security to solve traditional SOA adoption challenges, deliver managed and secure RESTful APIs, manage identities, and enable new business-to-developer distribution channels.

WSO2 API Manager focuses on API governance, API promotion, and rapid developer on-boarding. Because the product is built on WSO2 Carbon's flexible architecture foundation, teams can configure the WSO2 API Manager to handle complex use cases and integrate with existing enterprise security, management, and service infrastructure.

With the API management space rapidly gaining mindshare, start-up vendors (e.g., ProgrammableWeb, Mashery, 3Scale, Apigee) and traditional enterprise vendors (e.g., IBM CastIron, SOA Software Atmosphere, Layer 7) have created many product offerings. An API management evaluation framework can help you understand if a vendor's product is a good fit with your API management requirements and use cases.



### Comparing Layer 7 and Apigee with WSO2 API Manager

	Layer 7	SOA Software	Mashery	Apigee	WSO2	Comments on WSO2 Offering
API Proxy						
Throttling and Rate Limiting	Υ	Υ	Υ	Υ	Υ	Service Level Agreement tiers are enforced
Full on-premises offering using consistent technology	Y	Y	N (requires Cloud services and separate technology stack)	Y (extra cost)	Y	
Transport mediation	Υ	Υ	No	HTTP to JMS only	Υ	The full list of WSO2 ESB transport protocols can be supported by editing the API configuration. A partial list of transport protocols includes JMS, WebSphere MQ, FTP, SMTP, MSMQ, SAP/R3 IDocs, FIX, XMPP
Enterprise-strength security and access control	Υ	Υ	No	Limited	Υ	
Security Firewalling	Υ	Υ	No	Limited	Limited	
Authentication, Authorization, and Audit	Υ	Υ	Υ	Υ	Υ	
XACML	Υ	No	No	No	Υ	
API Lifecycle Management						
API Publishing	Υ	Υ	Υ	Υ	Υ	
API Versioning	Υ	Υ	No	Υ	Υ	Several versions can be deployed in parallel
API Governance workflow	No	Y	No	No	Y	Basic lifecycle management (e.g., created, published, deprecated, retired) included in the initial WSO2 API Manager offering. The offering integrates with the WSO2 Governance registry lifecycle, which offers advanced workflow and approval management
Publish documentation	Υ	Υ	Υ	Υ	Υ	Associate documentation (e.g., files, inline text, external URLs) with APIs
API Metrics	Υ	Υ	Υ	Υ	Υ	
Real-time dashboard	Υ	Υ	Υ	Υ	Υ	
Remote management APIs	Υ	Υ	No	No	Υ	Web-based management consoles
Centrally update policies	Υ	Υ	Υ	No	Υ	API gateways can access central shared registry

Automated migration of APIs across environments	Υ	Υ	No	No	γ*	With WSO2 AppFactory
API Monetization	Y	Y	Y	Y	Limited	Usage information can be easily integrated into enterprise billing, chargeback, or showback systems. The product roadmap indicates embedded monetization will be included in Version 2. For example, track revenue by API and user.
Developer Portal						
API Reporting	Υ	Υ	Υ	Υ	Y	
API Usage	Υ	Υ	Υ	Υ	Υ	
API Key management and distribution	Υ	Υ	Υ	Υ	Υ	
Content Management System	Y	Υ	Υ	Y	No*	Interfaces with your content management system. WSO2 API Manager publishes API documentation containing inline text and URL pointers to online resources.
Architecture						
Multi-tenant components	N	N	N	N	Y	Multi-tenant components enable organizations to flexibly deploy multiple API Stores and re-use multi-tenant gateways
Open and Composable Architecture	N	N	N	N	Υ	
100% Open Source	N	N	N	N	Υ	

## **Next Steps in Your API Manager Evaluation**

- Implement a managed API, build an API Store, and establish an API collaboration channel
- Watch our Practical Guide to API Management On-demand Webinar Presentations
- Learn how API Management promotes services re-use and extends SOA Governance

## Implement a Managed API, Build an API Store and Establish an API Collaboration Channel

- 1. Run the WSO2 API Manager demo lab virtual machine:
  - a. Download the virtual machine, which contains the complete 100% Open Source WSO2 API Management platform, from http://wso2.com/products/api-manager.
  - b. Explore the sample labs, tools, and educational resources bundled in the download.
- 2. Implement a managed API:
  - a. Follow API Lab exercise playbook, implement JSON REST service code, and publish API facade definitions.
  - b. Define custom APIs to your business services or external Cloud APIs (e.g., Twitter, YouTube).
- 3. Collaborate with API consumers using API Store and API Publisher:
  - a. Invite other developers to find, explore, subscribe, and evaluate your API.
  - b. Test API security, rate limiting, and lifecycle versioning.
  - c. Review the API usage dashboard and API consumer feedback.

## Watch our Practical Guide to API Management On-demand Webinar Presentations

Crafted specially for API creators, this webinar series is a practical guide to managed APIs that are:

- Advertised and available for developers to find, understand and subscribe to
- · Secured for authenticated and authorized access
- Managed to ensure a well-defined level of service to Apps
- Monitored for usage, success, performance and other critical measurements, which can be viewed and acted upon

Join WSO2's team of experts as they introduce the technical aspects of an API management solution and how the WSO2 API Manager can help expose, manage and monitor APIs.



#### **On-Demand Webinar**

**Practical Guide to API Management Webinar Series** 

**Watch Now** 

### **Learn How API Management Promotes Services Reuse and Extends SOA Governance**

API management is a strategic component within your Service Oriented Architecture initiative. Many development teams publish services, yet struggle to create a service architecture that is widely shared, re-used, and adopted across internal development teams. SOA governance programs often fall far short of encouraging consumer adoption, tracking service consumption, and illustrating business value. Too often, there is little or no insight into:

- How to enable business functionality as an API
- Who is writing re-usable APIs and services
- Who is consuming APIs and services
- How APIs and services are being used

This white paper describes benefits gained by:

- Publishing managed APIs for consumption within your organization
- Establishing API manager and publisher roles to foster API adoption
- Extending the service governance registry to encourage cross-team (or cross-department) communication, coordination and collaboration
- Overcoming common SOA anti-patterns of 'Not Invented Here' (NIH) and 'Build, and Build Again' by using an API Store
- Following an API roadmap focused on increasing service re-use and enhancing IT business value

#### Whitepaper

Promoting service reuse within your enterprise and maximizing SOA success

**Download Whitepaper** 



