API Management: Nuts and Bolts Perspective

Dan Tracy, Sr. Solutions Architect, Mashery Customer Success

May 19, 2016

#TIBCONOW
SAFE HARBOR DISCLOSURE

During the course of this presentation, TIBCO or its representatives may make forward-looking statements regarding future events, TIBCO’s future results or our future financial performance. Although we believe that the expectations reflected in the forward-looking statements contained in this presentation are reasonable, these expectations or any of the forward-looking statements could prove to be incorrect and actual results or financial performance could differ materially from those stated herein.

TIBCO could experience factors that could cause actual results or financial performance to differ materially from those contained in any forward-looking statement made in connection with this presentation. TIBCO does not undertake to update any forward-looking statements that may be made from time to time or on its behalf.
This document (including, without limitation, any product roadmap or statement of direction data) illustrates the planned testing, release and availability dates for TIBCO products and services. This document is provided for informational purposes only and its contents are subject to change without notice. TIBCO makes no warranties, express or implied, in or relating to this document or any information in it, including, without limitation, that this document, or any information in it, is error-free or meets any conditions of merchantability or fitness for a particular purpose. This document may not be reproduced or transmitted in any form or by any means without our prior written permission.

The material provided is for informational purposes only, and should not be relied on in making a purchasing decision. The information is not a commitment, promise or legal obligation to deliver any material, code, or functionality. The development, release, and timing of any features or functionality described for our products remains at our sole discretion.

During the course of this presentation TIBCO or its representatives may make forward-looking statements regarding future events, TIBCO’s future results or our future financial performance. These statements are based on management’s current expectations. Although we believe that the expectations reflected in the forward-looking statements contained in this presentation are reasonable, these expectations or any of the forward-looking statements could prove to be incorrect and actual results or financial performance could differ materially from those stated herein. TIBCO does not undertake to update any forward-looking statement that may be made from time to time or on its behalf.
The following information is proprietary information of TIBCO Software Inc. Use, duplication, transmission, or republication for any purpose without the prior written consent of TIBCO is expressly prohibited.
So you have an API Strategy… But how do you execute?
This document (including, without limitation, any product roadmap or statement of direction data) illustrates the planned testing, release and availability dates for TIBCO products and services. It is for informational purposes only and its contents are subject to change without notice.

© Copyright 2000-2016 TIBCO Software Inc. All rights reserved. TIBCO Confidential & Proprietary Information.
Assemble APIs
Assemble your APIs

Minimum

Even Better

BEST PRACTICE

Design and model your API and mock your endpoints BEFORE beginning to code your services empowering AGILE Parallel development.

Be consistent: URI patterns, data element and query parameter naming conventions, versioning, request/response headers, media-type negotiation, error handling, and schema definitions.

Orchestrate your microservices and APIs in a dedicated scalable orchestration/integration platform such as TIBCO® Cloud Integration

WHY? Different skillset used to develop vs. productize and distribute APIs.
Productize APIs:

- Private “Internal” API
- Semi-Private Partner API
- Public “Open” API
APIs as Products

**Minimum**
- Road-mapping
- Lifecycle Management

**Even Better**
- Business and Market-driven
- Know your Competitive Differentiation
- Developer-needs Based Packaging

**BEST PRACTICE**
Your API program should have a strong executive champion.

If you have a public API program, market it through your developer portal, SEO, hackathons and/or via a dedicated developer evangelist.

If you have a semi-private or public API, incentivize your developer partners who create new revenue channels via recognition and revenue sharing.
Scaling Your APIs and Services

Minimum

- Off-load Scaling to the Cloud
- Leverage Elastic Scalability

Even Better

- Edge Caching
- Geo Distribution
- Microservices

BEST PRACTICE

Integrate with TIBCO’s Mashery® APIs and automate as your services footprint and API programs grow.

Dynamically control your cache settings based on API traffic conditions and data freshness requirements.

Make use of the Mashery® global cloud geo-routing capabilities.
Distribute APIs
API Documentation

Minimum
- PDF
- WSDL

Even Better
- Everything
  - All we ever wanted
- Curl
- Whoops!!!
  - We're having some technical difficulties.
  - [Oh, yeah, that's right. Technical difficulties. Very difficult.]
  - [Please ignore this. It's just a test.]

BEST PRACTICE
- Auto-generate Swagger definitions for your APIs using TIBCO Cloud Integration.
- All-docs-as-a-single-page.
- Provide libraries of example requests and responses in several different languages (CURL, PHP, Java, Python, Node etc.).
- Integrate your API documentation with a common browser REST client to allow developers to orchestrate dependent API call flow tests without having to write code.

TIBCO NOW™
© Copyright 2000-2016 TIBCO Software Inc. All rights reserved. TIBCO Confidential & Proprietary Information.
#TIBCONOW
Securing your API Calls

Minimum

Even Better

BEST PRACTICE

Use token-based authentication, such as OAuth 2.0 or JWT to protect your APIs and your end-users’ data.

Document to your developers thoroughly how you want them to manage their tokens, beyond just documenting the token and authorization endpoints.

Mashery supports OAuth 2.0 out of the box and will allow you to use client credentials flow with no coding and only a few setting selections.

Basic Auth

API Keys

hashed signatures

79054025
255fb1a2
6e4bc422
aef54eb4

Even Better

NO Custom Auth / One Offs

Hashed Signatures
Securing your API Infrastructure

**Minimum**
- Whitelisting
- Service Throttling

**Even Better**
- SSL/TLS Connections
- Knowing Who Is Calling your API

**BEST PRACTICE**
- Use the Mashery API Packager feature to set read/write controls.
- Platform-level security awareness and patching of security vulnerabilities.
- Monitoring/alerting.
- Threat protection: SQL injection, vulnerability audits, penetration testing.
- Disaster recovery plans / failover.
Measure and Manage APIs
API Analytics

Minimum

Even Better

BEST PRACTICE

Use TIBCO Simplr™ and TIBCO Spotfire® to build your own custom analytics dashboards and visualizations based on API analytics data from your Mashery instance and/or from your central business intelligence system.

Don’t forget about your developers. Provide them with their own analytics tools so that they can see how they are using your APIs.
API Program – Critical Success Factors

**Assemble APIs**

**Critical Success:**
Don’t be the bottleneck to digital innovation.

AGILE Parallel development.

**Productize APIs**

**Critical Success:**
Understand how your APIs provide value and who will be consuming them.

Strong executive champion.

**Measure and Manage with API Analytics**

**Critical Success:**
Have a deep understanding of how your developers and partners are using your APIs and how you can better serve them.

**Distribute APIs**

**Critical Success:**
Knowledge who your developer-partners are and what motivates them.

Security at the edge of your enterprise should not be an afterthought.