

Connecting Everything: APIs and PaaS

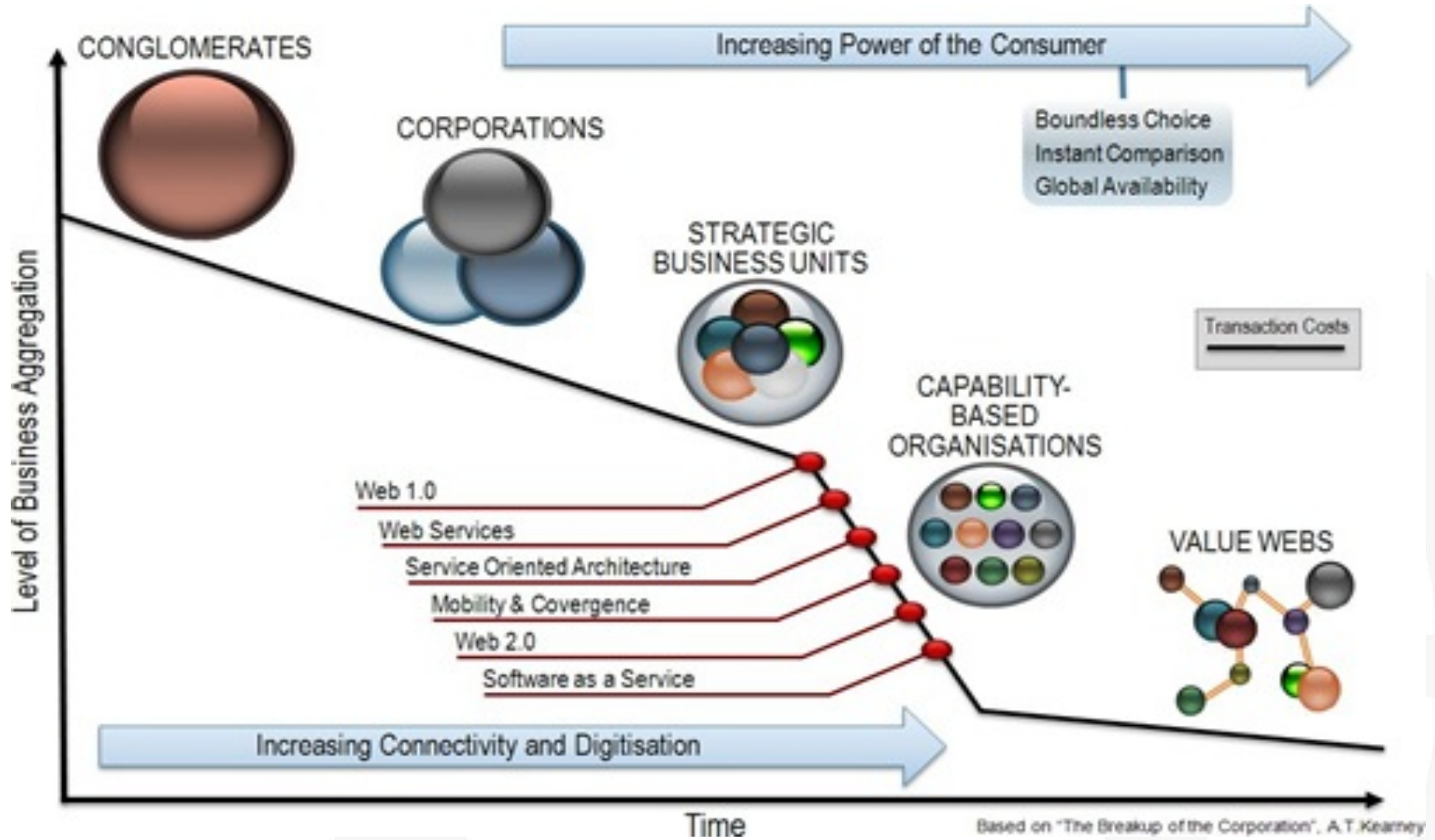
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paul@wso2.com

Plan of action

- Why is everyone so excited about APIs?
 - And should they be?
- Why do PaaS and APIs matter together?
- Digging deeper into APIs and API management
- PaaS approaches
- Next generation PaaS
- APIs + PaaS = ecosystems
- Examples
- Summary and questions

The drive towards Connected Business



- What does Cloud mean?
- My definition is:
 - Self-service
 - Multi-tenant
 - Pay-as-you-go
 - Managed, remote service
- Of whatever you care about:
 - Music, Email, Machines, Networks, Disk
- And now:
 - **Applications, Databases, APIs, ESB, Processes, etc**

APIs and PaaS

- APIs are the virtualization of function
- PaaS is the virtualization of application capabilities and deployment



A Company Without APIs Is Like A Computer Without Internet

You wouldn't want a computer without Internet access, so why is your company still eschewing APIs?



Brian Koles on November 29, 2013

<http://readwrite.com/2013/11/29/company-without-api-computer-without-interne>

- **An API** is a business capability delivered over the Internet to internal or external consumers
 - Network accessible function
 - Available using standard web protocols
 - With well-defined interfaces
 - Designed for access by third-parties
- **A Managed API** is:
 - Actively advertised and subscribe-able
 - Available with SLAs
 - Secured, authenticated, authorized and protected
 - Monitored and monetized with analytics

- The earliest APIs were various XML and SOAP services
 - Also people manipulating web applications and parsing HTML

Secure Customer Login

[Take The Tour](#) | [In The News](#) | [Employment](#) | [Contact Us](#) | [The Foundation](#)

User Name:

Password:

Go!

Get Started Now!

Your first **5** users are **FREE!**

● Sign-up Online »

- or -

Call 1-800-NO-SOFTWARE

Get More Information

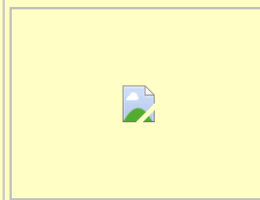
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● Call Me »

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Submit



The Market Leader In Online Sales Force Automation

THE END OF SOFTWARE

Salesforce.com delivers enterprise-class sales force automation as a subscription service online. As easy to use as your favorite Web site, salesforce.com enables you to securely access, manage and share sales information across your company - anytime, anywhere. And there's no software or hardware to buy, install or maintain. Sign up online and your first five licenses are FREE for three months if you register by November 30, 2000!

Take the Tour

See how salesforce.com makes it easy to manage and share sales information.



Product Benefits:

- **Start Immediately**
- Nothing to install, upgrade or maintain
- **Easy to Use**
- As easy to use as your favorite website
- **Collaborate with Teammates**
- Share opportunity and pipeline information real-time
- **Synchronize Offline**
- Sync with Outlook™ and Palm OS™
- **Integrated Content**
- Account/competitor news, financials, and services

Announcements...



IBM and salesforce.com announce alliance. [Tell Me More »](#)

In The News...



• \$50 a month will put your customer relationship management onto the Web



• Forget software on CD-Rom, it's the Web, stupid

[More News »](#)

salesforce.com registers over 20,000 organizations in 8 months »

Attend our online seminar:
"Using the Web to maximize customer relationships"

What Customers are Saying...

Search

Tips for searching
[Secure Search](#)

Getting Started

Development
Products

Apply for the
Developers Program

Application
Certification

Developer Support

News

See what's developing at eBay



Welcome to the home page for the eBay Developers Program, where you'll find what you need to become a third-party eBay application developer.

The eBay Developers Program promotes application development to facilitate and enrich trading on the eBay platform. Through the use of eBay's development products and services, we are providing access to the eBay platform to third-party developers worldwide. Through your efforts, there will be many more innovative new third-party applications made available to the eBay community. We invite you to become a part of our development community and gain access to the largest on-line trading community in the world.

► Getting Started

Start developing your [certified](#) third-party eBay application using eBay's Development Products.

► Development Products

Find out what development products are available to help you develop a [certified](#) third-party eBay application. As a member of the eBay Developers Program, access the latest updates about the eBay Development Products.

► Apply for the Developers Program

Join the eBay Developers Program and receive many [benefits](#) to help you become successful in creating and distributing your own certified third-party eBay application.

► Third-Party Application Certification

Obtain information about contract compliance certification.

► Developer Support

As a member of the eBay Developers Program, [access eBay's Developer Support](#), [Technical FAQs](#), and [bulletin boards](#) to find answers to your eBay development questions or chat with other third-party developers.

► News

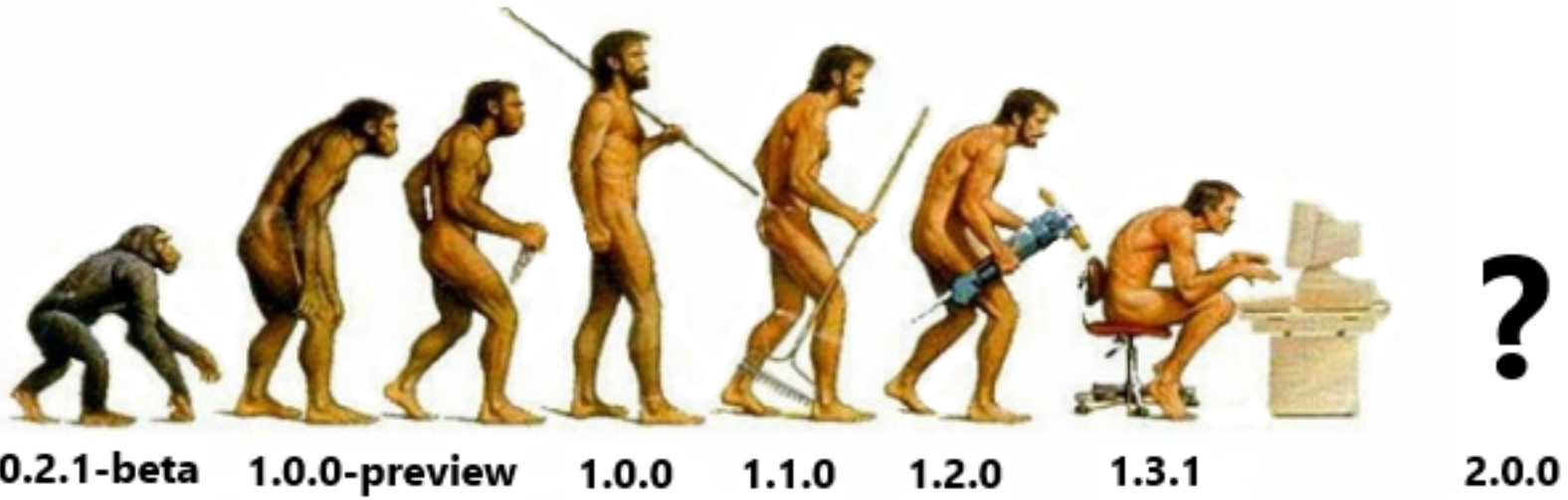
Find out the [latest news](#) about the eBay Developers Program.

Key differentiators in API evolution

- Self-signup / Portal / API Store
- A clear monetization model
 - And a clear value model
- Ecosystem thinking
 - Hackathons
 - Forums*
 - Social Media integration
- RESTful approaches
- Monitoring

* yes, I know the proper Latin is fora. I'm not an ancient Roman though

Versioning



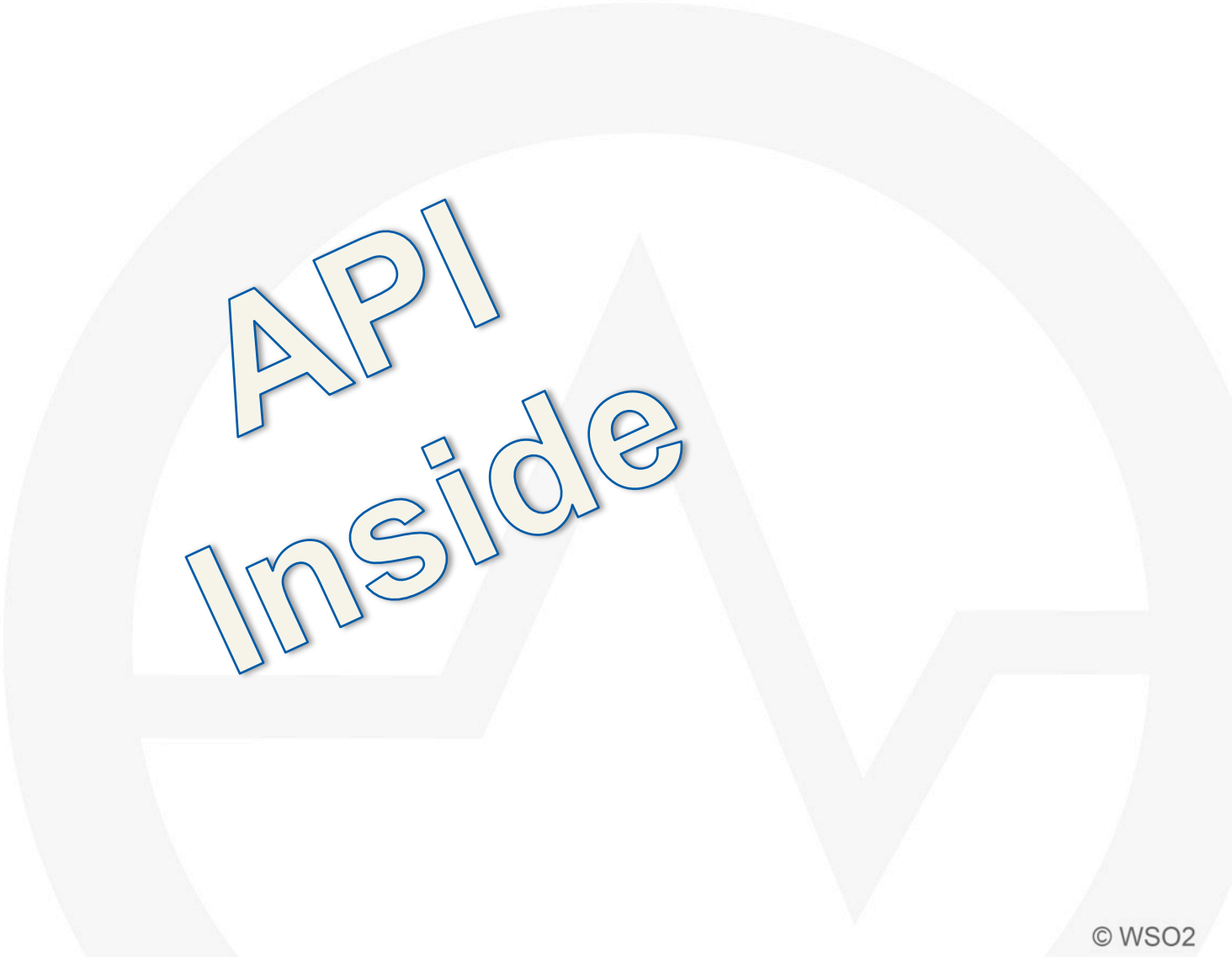


<http://www.pdt.com/news/688>

- **Minimum Viable Product** has just enough features that the product can be deployed and used by *some customers*, and no more.
 - Typically this is a small subset of the future customer base
- **Minimum Viable API** is just enough API that it can be used by some partners
- Highly recommended especially in evolving an API strategy



- Start with the API
 - Before the website / mobile app / internal app / ...
- Why?
 - Ensures a good API
 - External Developers are not second class citizens
 - Inherently “mobile-first-friendly”
 - Decoupled development
 - Evolve-ability
 - APIs everywhere



API Inside

OAuth2 and OpenId Connect



If you want to understand OAuth2 and OpenId Connect

<http://freo.me/1eZYDKt>








White Paper

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Search API

Recently Added

-  **ContactsAPI-1.0**
admin
★★★★★
-  **PhoneVerification-1.0.0**
admin
★★★★★
-  **PlaceFinder-v1.0.0**
admin
★★★★★
-  **UserAPI-1.0.0**
admin
★★★★★
-  **YoutubeFeed-v1.0.0**
admin
★★★★★

APIs

-  **ContactsAPI (1.0)**
admin
-  **FindTweets (v1.0.0)**
admin
-  **PhoneVerif.. (1.0.0)**
admin
-  **PlaceFinder (v1.0.0)**
admin
-  **UserAPI (1.0.0)**
admin
-  **YoutubeFeed (v1...)**
admin

Tags

Youtube api cdyne contacts feeds
places social twitter user

Getting Started

- Getting Started Guide (PDF)
- Installation Guide
- Quick Start Guide
- Samples

Share

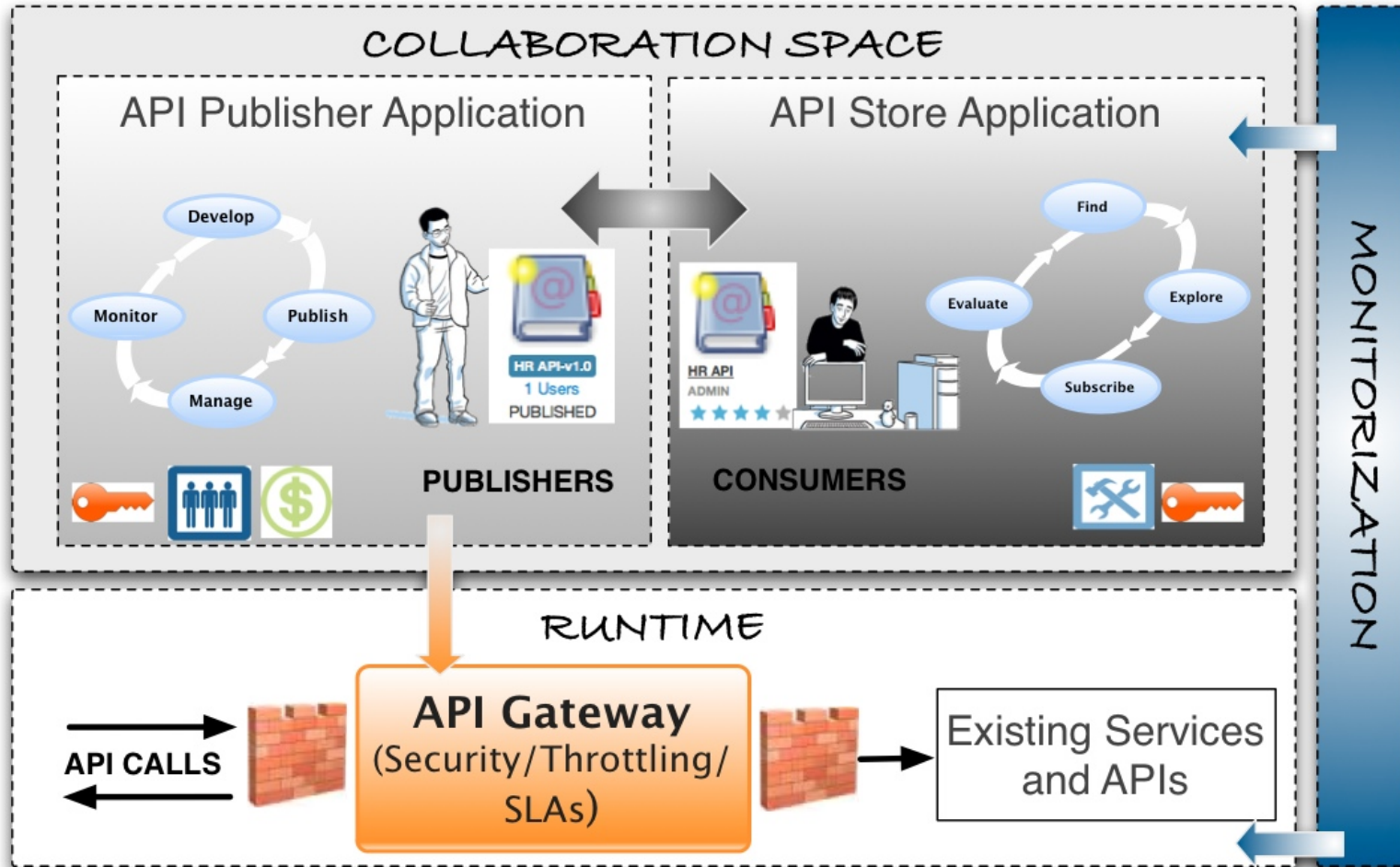


Documentation/Support

- Product Documentation
- Get Support
- Product Home

Resources

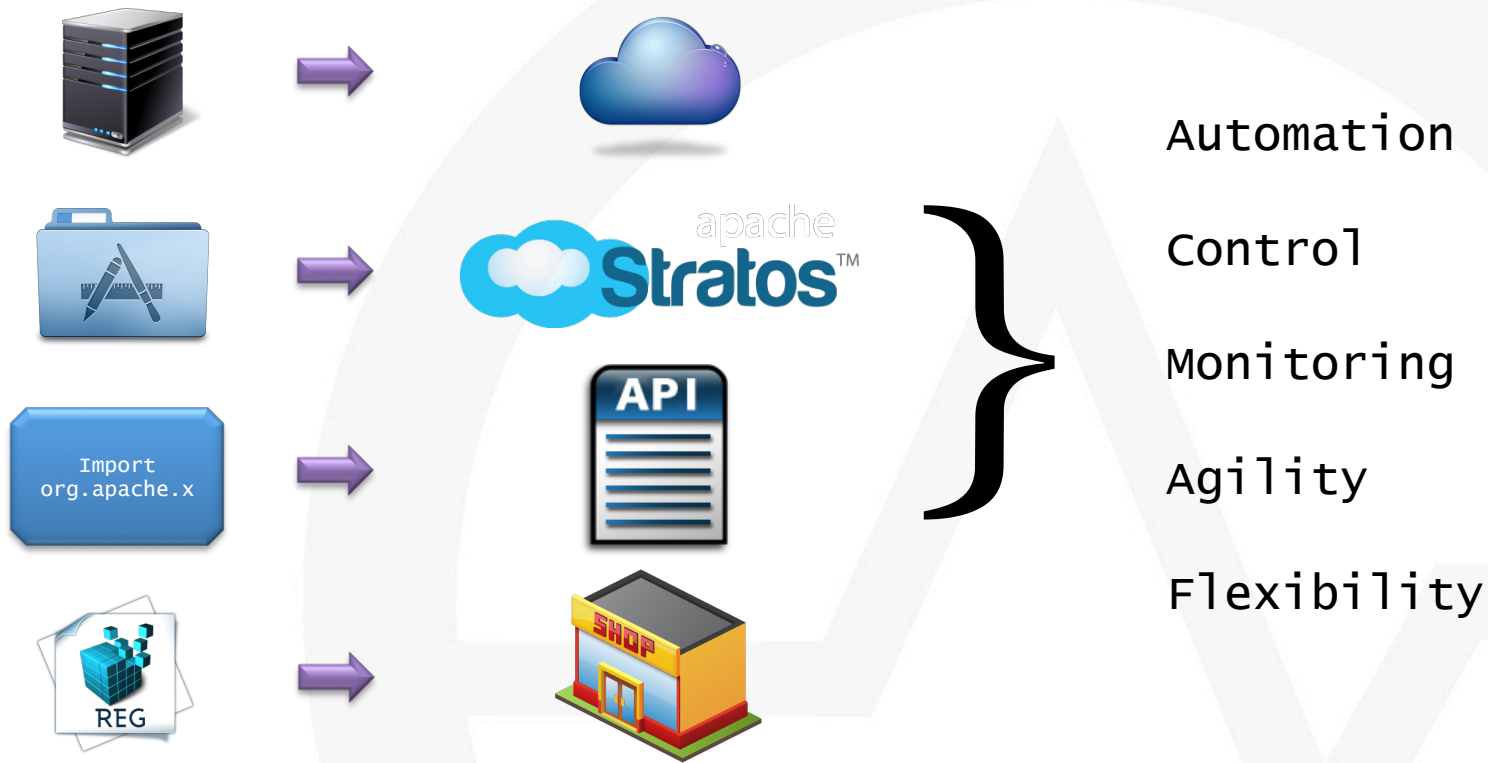
- WSO2 Practical Guide to API Management
- WSO2 Use Case: API Facade Pattern
- More >>





- Allow smaller organizations to compete more broadly
 - Utilize partners, expand reach
- Allow larger organizations to compete more nimbly
 - By working with smaller, more agile partners!
- Enable “best-of-breed” capabilities to conjoin to create better solutions
- Take advantage of APIs and promote APIs
 - A virtuous circle

The wider sense of virtualization



Virtualize everything

- **APIs** are the virtualization of function
- **PaaS** is the virtualization of application deployment
- **Forge/Cloud Toolchain** is the virtualization of development
- **DevOps** is the virtualization of deployment
 - Together these are the basis for the virtualization of an ecosystem
- **Enterprise Store** is the virtualization of application delivery

The screenshot shows the WSO2 App Factory interface for the 'Kitten Insurance App'. The browser address bar shows the URL: <https://appfactory.cloudpreview.wso2.com/appmgt/site/pages/reposBuilds.jag?applicationName=Ki...>

The left sidebar contains navigation options: Overview, Team, **Repos & Builds** (selected), Resources, Issues, and Lifecycle Management.

The main content area is titled 'Repositories & Builds' and includes a search filter 'Filter Repos or Stages' and a 'Build Server' button.

Version	Last Build	Last Deployment
trunk << Development Copy URL Browse URL	Build 1 SUCCESSFUL	Build 1
Create Branch Edit Code Build Deploy Test		
0.0.1 << Development Copy URL Browse URL		
Create Branch Edit Code Build Deploy Test		

Connecting your internal systems, your partners and your ecosystem

Creating a platform for internal and external innovation

Virtualization of your data, function and processes

Cloud based approaches for tenancy, billing, metering and self-service

Monitoring and governance

Boeing Digital Airline

The Digital Airline

Airline Performance Management

Airline-Wide • Fleet-Wide • Real-Time Optimization • Secure

Applications

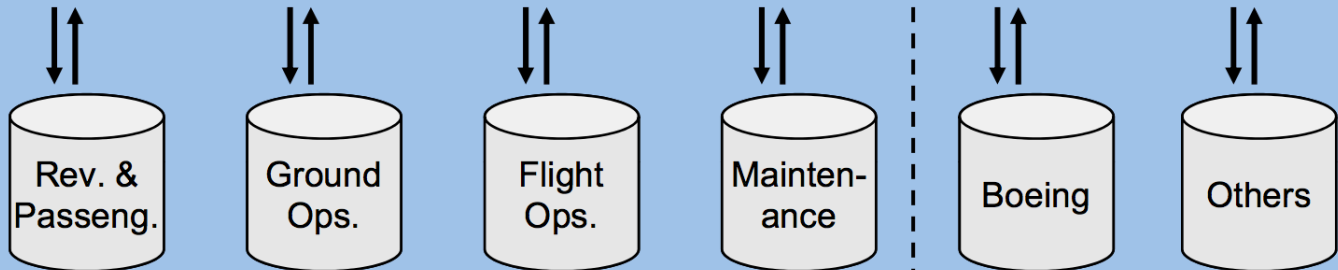


Resources Revenue Passengers Ground Ops Employees Airplanes Maintenance

Information Platform

Data Sharing System

Data



Airline

OEMs

Enterprise Store

Mobile Store

Search

All Categories



Batman:
★★★★★



Contract Killer
★★★★★



iPadSample1
★★★★★



LINE
★★★★★



Quick Office
★★★★★



Sonic
★★★★★



TempleRun2
★★★★★

“ “

Invention comes in many forms and at many scales. The most radical and transformative of inventions are often those that empower others to unleash their creativity - to pursue their dreams.

Jeff Bezos

” ”



- 100% Apache-licensed Open Source products
- Enabling a connected business:
 - Integration
 - API Management
 - PaaS
 - App Factory
 - Monitoring, real-time analytics, and big data

The screenshot shows a navigation bar with categories: Mac mini, iMac, Mac Pro, Mac Accessories, and Compa. Below the navigation bar are social media sharing options for Facebook (Share) and Twitter (Tweet). The main content area features a product listing for the Mac Pro. It includes a 'NEW' badge, the product name '6-Core and Dual GPU', and technical specifications: '3.5GHz 6-Core Intel Xeon E5 processor', '16GB 1866MHz DDR3 ECC memory', 'Dual AMD FirePro D500 with 3GB GDDR5 VRAM each', and '256GB PCIe-based flash storage¹'. The listing also states 'Dispatched: April' and 'Free Delivery'. The price is listed as '£3,299.00', with a note 'Includes VAT of approx. £550.00.*' and a link for 'Special 0% financing'. A blue 'Select' button is positioned at the bottom left of the product details. To the right of the text is a large image of the black Mac Pro tower.

- <http://wso2.com/contact>

