

**Mi**

MODERN INFRASTRUCTURE DECISIONS  
APRIL 11, 2013 NYC



# Application Delivery in the Mobile Era

XaaS, Virtualization, On-device Deployment:  
Lessons Learned from the Trenches

Steve Damadeo,  
IT Operations Manager, Festo Corporation

[events.techtarget.com](http://events.techtarget.com)

# Some Quick Facts About Festo

- Privately-held, family-owned company
  - 15,500 employees in 60 countries
  - 2011 revenue: \$2.7 billion
  - Headquarters: Esslingen, Germany
  - Primary industry: industrial machinery and components
- 
- Current System Environment Size
    - 8300 desktops
    - 8300 laptops
    - 3000 smartphones
    - 400 tablets



# Why Do I Care? Can't I Just Do It All in the Cloud?

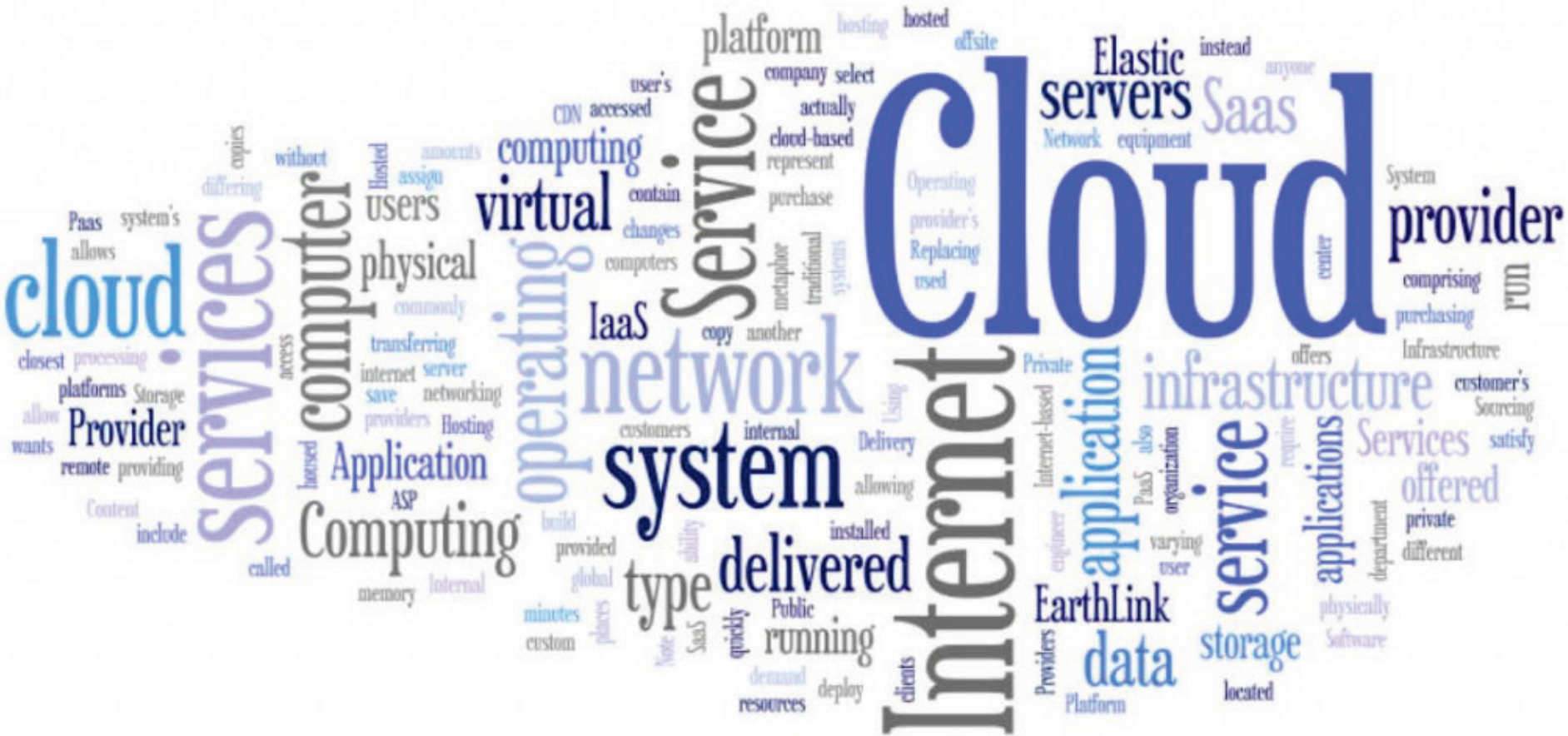


Image taken from: <http://www.earthlinkcloud.com/cloud-computing-basic-terms-to-know/>

# Major Application Delivery Methods

- XaaS – Everything as a Service
- Virtualization
- On-device deployment

# XaaS – Everything as a Service

- Service Types
  - SPI Model
    - **SaaS**: Software as a Service
    - **PaaS**: Platform as a Service
    - **IaaS**: Infrastructure as a Service
  - **SaaS**: Storage as a Service
  - **CaaS**: Communications as a Service
  - **NaaS**: Network as a Service
  - **MaaS**: Monitoring as a Service

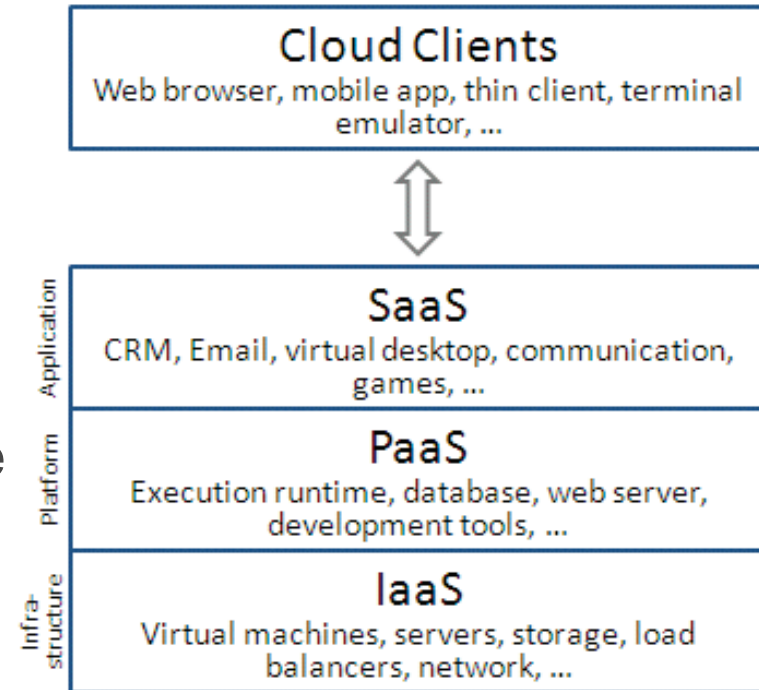


Image taken from:  
[http://en.wikipedia.org/wiki/Infrastructure\\_as\\_a\\_service](http://en.wikipedia.org/wiki/Infrastructure_as_a_service)

# SaaS: Software as a Service

- What is SaaS?
  - “Software as a Service (SaaS) is a software distribution model in which applications are hosted by a vendor or service provider and made available to customers over a network, typically the Internet.”<sup>1</sup>
- How long has SaaS been around for?
  - Term was coined in 2001
  - Philosophy has been around since the 1990s...this is nothing new!
  - All of your web applications touch upon SaaS in one way or another

<sup>1</sup><http://searchcloudcomputing.techtarget.com/definition/Software-as-a-Service>

# PaaS: Platform as a Service

- What is PaaS?
  - “Platform as a Service (PaaS) is a way to rent hardware, operating systems, storage and network capacity over the Internet. The service delivery model allows the customer to rent virtualized servers and associated services for running existing applications or developing and testing new ones.”<sup>1</sup>
- How long has PaaS been around for?
  - Grew as an off-shoot of SaaS
  - No common agreement on age – seems to be about 5-10 years

<sup>1</sup> <http://searchcloudcomputing.techtarget.com/definition/Platform-as-a-Service-PaaS>

# IaaS: Infrastructure as a Service

- What is IaaS?
  - “Infrastructure as a Service is a provision model in which an organization outsources the equipment used to support operations, including storage, hardware, servers and networking components. The service provider owns the equipment and is responsible for housing, running and maintaining it. The client typically pays on a per-use basis.”<sup>1</sup>
- How long has IaaS been around for?
  - At least 15 years, some think closer to 20+
  - Most infrastructure managers likely run this on their own premises already (we call it a “private cloud”)

<sup>1</sup> <http://searchcloudcomputing.techtarget.com/definition/Infrastructure-as-a-Service-IaaS>



# What To Use...What To Use...

	When To Use It	When Not to Use It
<b>SaaS</b>	<ul style="list-style-type: none"><li>• Internet connection availability assumed</li><li>• Device and form factor neutral</li><li>• Application not within your team's core competencies</li></ul>	<ul style="list-style-type: none"><li>• Highly secure data</li><li>• Offline use required</li><li>• Customizations needed for smaller screen sizes</li></ul>
<b>PaaS</b>	<ul style="list-style-type: none"><li>• Development environments</li><li>• Geographically distributed access</li><li>• Offloading legacy applications</li></ul>	<ul style="list-style-type: none"><li>• Transactional data</li><li>• Concern over vendor lock-in</li></ul>
<b>IaaS</b>	<ul style="list-style-type: none"><li>• Drastic fluctuation in resource consumption</li><li>• Network connectivity assumed</li></ul>	<ul style="list-style-type: none"><li>• Most infrastructure managers say you can never not use it</li><li>• Question is who hosts it</li></ul>

# Virtualization

- Virtualization Methods
  - Infrastructure
  - Desktop
  - Application

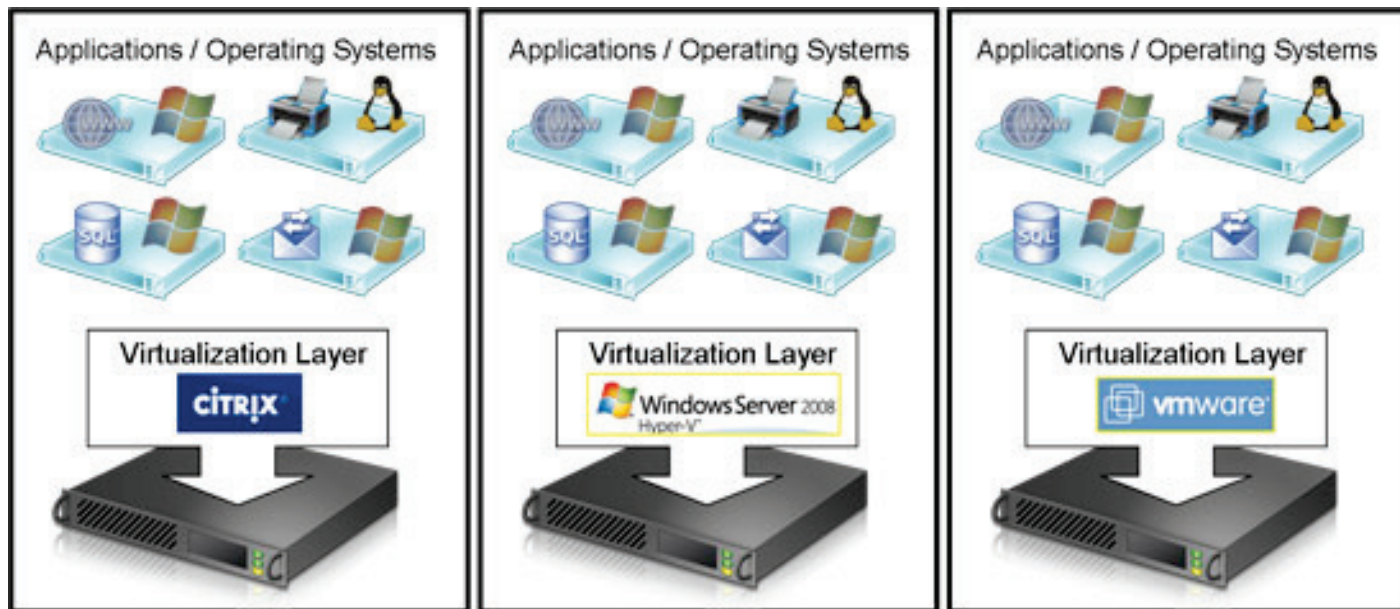


Image taken from: <http://www.cdw.com/content/solutions/server-virtualization.aspx>

# On-Device Deployment

- App Store Methods
  - Corporate
    - Companies create their own app store
    - Usually based on premise of “whitelisting” and “blacklisting”
    - Policy settings can be used to force devices to pull from these app stores rather than the public
  - Public
    - Platform-specific app stores owned by a vendor (i.e. Apple/Android/Microsoft)
    - Typically keeps everything open and trusts device and data safety to the vendors

# Festo's Approach to Application Delivery

- It depends on the application/capability required
- Our criteria
  - Core competency of our experts
  - Device form factors
  - Data intensity
  - Speed/latency requirements
  - Offline needs
  - Required inputs (i.e. typing, voice, images)
- In general, we use a combination of everything!

# Festo Use Case: Warehouse Supervisors

- Business needs
  - Flexibility to work on tablets and smartphones
  - Barcode scanning capability
  - Wireless printing
  - Direct access to backbone system
  - Encryption not needed, since data is stored in-house
- Solution
  - Desktop virtualization on tablet (we used the iPad)

# Festo Use Case: Sales Force Automation

- Business needs
  - Ability to enter brief visit reports via voice interface
  - Accessibility only needed on smartphone
  - Network connectivity not always assumed
  - Data must be secured
- Solution
  - Developed Smartphone application and deployed via our corporate app store
  - Encrypt data traffic over cellular and Wi-Fi networks

# Festo Use Case: Expense Management

- Business needs
  - Ability to enter expenses and scan receipts
  - Should be usable on all devices, anytime, anywhere
  - Simple data extract needed back to our core system
- Solution
  - Procured SaaS solution from outside vendor
  - Utilize company's mobile app via public app store

# Festo Use Case: Management Information

- Business needs
  - View and run reports via web console
  - Available on any device, anywhere
  - Data must be secured (sales and financial information)
- Solution
  - IaaS solution to host our reporting environment
  - Devices connect back via a web client through our VPN



# Some Final Recommendations

- Know what your team is good at
- Don't overdevelop!
- Leverage existing infrastructure whenever possible
- Be flexible in your deployment choices – each case is different
- Secure the data, not the device
- Mobility is entirely about the user experience

# Thank You! Questions?

## Keep in Touch

E-mail [Steve.Damadeo@us.festo.com](mailto:Steve.Damadeo@us.festo.com)



<http://www.linkedin.com/in/sdamadeo>



@sdamadeo





# TechTarget

*Where serious technology buyers decide*