CHPS: More Than Just a Tasty Snack
JPL’s Collaboration Hosting Platform Service

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Session Objectives and Takeaways

CHPS

- Communicate the CHPS Vision
- Understand High Level Architecture
- Share Best Practices and Lessons Learned from an Enterprise-Wide Deployment
- Provide Insight on how Spaces Framework Enforces Governance
• Deliver a .Net based Platform as a Service (PaaS) to Develop Collaborative Applications
• Expedite Application Development Lifecycles by Integrating Collaborative Features and Capabilities
• Deliver a Secure, Highly-Available, and Scalable Infrastructure that Support Development, Testing, and Production Efforts
• Consolidate Similar Applications by Aggregating Capabilities and Functionalities Together
High-Level Architecture

Customers and Consumers

Hosted Applications
- JPL Space Portal
- JPLTube
- My Sites
- Team Sites
- Line Sites

Gateway
- SharePoint 2010
- Adobe Flash Media Server
- Confluence
- Team Center Community
- Team Foundations Server

Collaboration Hosting Platform (CHPS)

Virtual Server Infrastructure

Network and Infrastructure

ExtraNet

Other Consuming Services

Standardized Service Exposure, Packaging, & Development

Application and Service Management & Development Support

OS Administration, DB Administration, Backup, Continuity, Storage, Servers & Hardware

Leverage Component-based model

Graphic courtesy of Michael Stefanini and Gabriel Rangel
Cloud-Based Architecture

- Software as a Service (SaaS)
- Platform as a Service (PaaS)
- Infrastructure as a Service (IaaS)
Production Farm

- CHPS-PROD-NLB
  - Windows NLB
    - CHPS-PROD-WEB01
    - CHPS-PROD-WEB02
    - CHPS-PROD-WEB03
  - CHPS-PROD-APP01
    - Central Administration
  - CHPS-PROD-IND01
  - CHPS-PROD-QRY01

- CHPS-SQLCLSTR
  - (chps-sqlclstr01, chps-sqlclstr02)
  - "SAN boot"

APPLICATION POOLS
- Apps – 443
  - Non-Gateway application app pool
  - Apps should be delivered via JUMP
  - https://appspace.jpl.nasa.gov
- Central Admin
  - SSL port 22222
- Claims – 443
  - Claims based authentication pool
  - Sherona is primary application
  - https://claimspace.jpl.nasa.gov
- Forms – 443
  - Forms and workflow app pool
  - Initial site is VM provisioning
  - https://formspace.jpl.nasa.gov
- Sharepoint – 80
  - Actually uses port 443
  - Gateway web app
  - https://gateway.jpl.nasa.gov

Remove port numbers.
Add FMS server, TCC, etc.
Show relations.
Spaces Framework Governance

What is a Space?

JPL Spaces

- Information Architecture
- Physical/Logical Architecture
- Support Model
Spaces Ten Commandments
Lessons Learned
Cloud Integration

- Windows Azure Platform Integration
- Google Docs Collaboration Capability
- EC2 Hosting/Disaster Recovery
- S3 Storage and Backup
Partnering
Applications

JPLTUBE

GATEWAY

SHERONA
Questions?