Driving Agility in Business Transformation with Stability and Sustenance

Delta Air Lines
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- Delta’s Evaluation with other Red Hat Products
Delta has initiated the app modernization and digital transformation journey to enable its existing applications to move to a lean architecture, leading to improved customer experience and time-to-market.

**Business Agility**
Creating modularized and business aligned components leading to accommodate business changes quickly.

**Release Velocity**
Establishing a DevOps culture and a tools foundation which will aide in the overall release velocity.

**Technical Debt**
Simplification and continuous assessment based on tools to ensure the application stays relevant to modern digital needs.

**Scalable Architecture**
Creating light weight deployment units which can lend itself to on-demand scaling needs.

**Security Vulnerabilities**
Standardization of security scans in CI/CD and legacy practices & Implement Standard code quality analysis and reporting.
Dojo Program
The Dojo Program

Incubation for ‘Being Agile’

OPERATING MODEL

**OFFERINGS**

- **8 week** Immersive Learning Program
- Customized learning offerings to address specific needs
- Dedicated Workspace in ATL & MSP
- Multiple CoEs with dedicated experts
- Expert **Coaching Community** for technical maturity & workflow needs
- Formal **Training Curriculum** specific to Delta
  - Direct Coaching
  - Instructor Led
  - Self Learning
- Architecture Vision & Framework Compliance

**OTHER FEATURES**

**Ops Concierge Services**
- Expedited support for Operational needs

**Access to IaaS & PaaS**
- Curriculum designed to prepare teams to utilize Delta’s Cloud Platform and OpenShift

**Transformation Assessment & Measure**
- Team & Product Health
- Delivery Planning and Management Priorities
- Technical Practices (including CI/CD and Automation)
- Learning Culture and Environment

#redhat #rhsummit
PaaS Program
PaaS in Delta is a private cloud computing service that provides a platform allowing portfolio customers to develop, run, and manage applications. Also utilizing the CI/CD process on the OpenShift platform, without the complexity of building and maintaining the infrastructure typically associated with developing and launching an app.

App Mod PaaS team – Delta has partnered with Tata Consultancy Services (TCS) as the technology partner for migrating the legacy application to the PaaS (Red Hat OpenShift).
Delta’s PaaS Journey

- **Red Hat OpenShift Adoption**
- **OpenShift Platform Setup & Pilot APP Deployment**
- **PaaS Migration**
- **Application Rollouts on Temporary Production**
- **PaaS Production & Cut Over – Permanent H/W**

Partnered with Tata Consultancy Services (TCS) & Initiated the Application Migration
Operating Model

**Feature offerings**

- Accelerate application delivery with agile and DevOps methodologies
- Modernize Delta apps to Cloud Friendly mode
- Expert Knowledge and technical expertise in OpenShift & DevOps migration
- Establish Partnership with application portfolio teams for app migration
- Utilize established and proven processes for migration
- Ensure application teams are ready for Day2 Support

**Paired Programming**

- Git lab, Jenkins pipeline, Maven/Gradle, Sonarqube, Nexus
- JBOSS 7.1 EAP / Spring Boot
- Red Hat Application Migration Tool Kit
- Deployment on Red Hat OpenShift
Below is Delta’s approach for migrating existing legacy applications to OpenShift
PaaS Features & Benefits for Delta

**PaaS Features**

- Consistent Environment – app build, development, non-prod, prod
- Resiliency – Most resilient platform at Delta Airlines
- Easily Attained Resiliency:
  - Pod level
  - Compute node level
  - ESX level
  - Data Center level (with a little more effort from App Dev Team)
- Blue-Green\Canary Deployment Capability
- Easily portable
- Secure certificate handling

**Infrastructure & Reliability Benefits**

- Automated Recovery
- Elasticity
- Leverage CI Pipeline
- Greater App Density

**Developer & Application Benefits**

- Quick and Efficient Patching
- Pipeline Application Deployment
- Accelerate release cycles
- Platform designed for 12 factor apps
- Strengthen Security
- Agile in Delivery

**What this Means for Delta**

- Maximum uptime – Active/Active/Active
- Ability to Innovate Faster
- Reduced lead time
- Improved Application Support
- Improved Business Operations
Other Red Hat Products in Delta

Ansible
- Limits configuration drift
- Decreases deployment time
- Allows for self-service
- Standardizes application deployments
- Orchestrates tasks on multiple systems

RHEL
- History of stability
- Live kernel patching without the need to reboot
- Specialize Features like SE Linux and Cockpit

Satellite
- Used as key part of RHEL server build automation
- Delta patching team utilizes Satellite for RHEL patching instead of local repositories
Learnings During the PaaS Journey

- Cross-Functional Teams established on process, tools, and platform
- Enterprise application pre-assessment and repeatable pattern identification
- OpenShift product catalog feature exploration and availability on Delta’s Marketplace
- Gain commitment, knowledge, transition, mindshift and platform adoption from teams
- Platform upgrade, patching, tool integration and maintenance
- Spread knowledge and create community to share best practices across the enterprise with proactive inputs
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