Perspectives on DevOps at CGI

Venkat Kodumudi, Director, Innovation & Outreach, Emerging Technologies Practice, CGI Federal

February, 2018

© CGI Group Inc.
What DevOps Means to CGI?

Feedback Loop

Plan → Code → Build → Test → Release → Deploy → Operate

DevOps

Continuous Delivery
Continuous Integration
Agile Development
Continuous Testing

Collaboration
CGI DevOps Reference Model

- Governance & Organization
  - Principles
  - Strategy
  - Metrics
  - Governance Model
- People
  - Cross Functional Teams
  - Collaboration
  - Full Life Cycle
  - Business Value
- Process
  - CGI DevOps Maturity Model
  - Agile Software Development
  - Fail Forwards
  - CGI Six Steps to DevOps
- Technology
  - Tool Stack
  - Hybrid IT Environment as Code
  - Monitor
  - Automate
Key Principles of DevOps

- Quality Management and Automation
  - Continuous Business Testing
  - Acceptance Test Driven Development

- Business and IT Alignment
  - Increase Service Availability
  - Increase Operational Efficiency
  - Proactive Capacity and Demand Management

- Full Stack Teams
  - Predictive Monitoring
  - Incident Prevention
  - A/B Testing in Production

- End User Engagement

- Software Dev. Improvement
  - Develop Enterprise Standards
  - Configuration Management, Knowledge Management
  - Technical Debt Inventory

- Application Focused
- Solution Focused
- Pipeline Focused
- Service Focused
- Customer Focused

- BASIS
  - Adhoc automation and collaboration

- MANAGED
  - Availability based SLA

- RESPONSIBLE
  - Quality of service based SLA

- OPTIMIZING
  - Continuous improvement based SLA

- APPRECIATED
  - SLA based on customer service
DevOps Best Practices

- Culture
  - Disruptive
  - Governance Model
- People
  - Collaboration
  - Softskills Development
- Changes in Existing Processes
- Integrated DevOps Toolset
- Identify Trusted Team with Mature Services
"Any opinions, findings, conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the Networking and Information Technology Research and Development Program."

The Networking and Information Technology Research and Development (NITRD) Program

**Mailing Address:** NCO/NITRD, 2415 Eisenhower Avenue, Alexandria, VA 22314

**Physical Address:** 490 L'Enfant Plaza SW, Suite 8001, Washington, DC 20024, USA Tel: 202-459-9674, Fax: 202-459-9673, Email: nco@nitrd.gov, Website: [https://www.nitrd.gov](https://www.nitrd.gov)