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Adria Forum 2025

Befrending Automation

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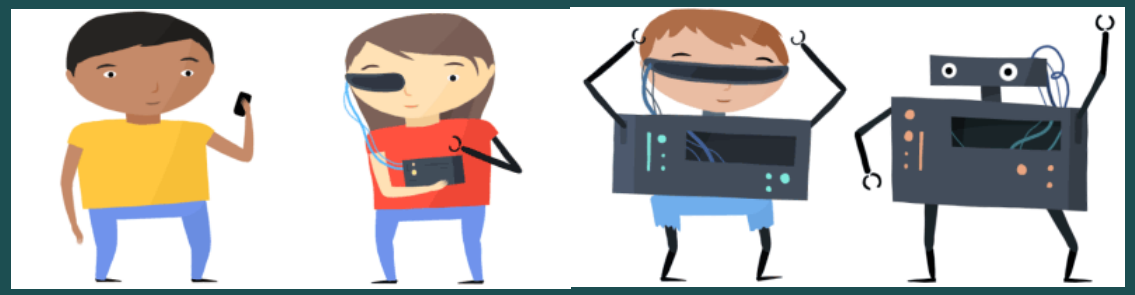
IT Automation

"The use of software/systems to automatically perform repetitive processes, tasks, actions that would otherwise require human intervention."

"User" vs "admin" process automation

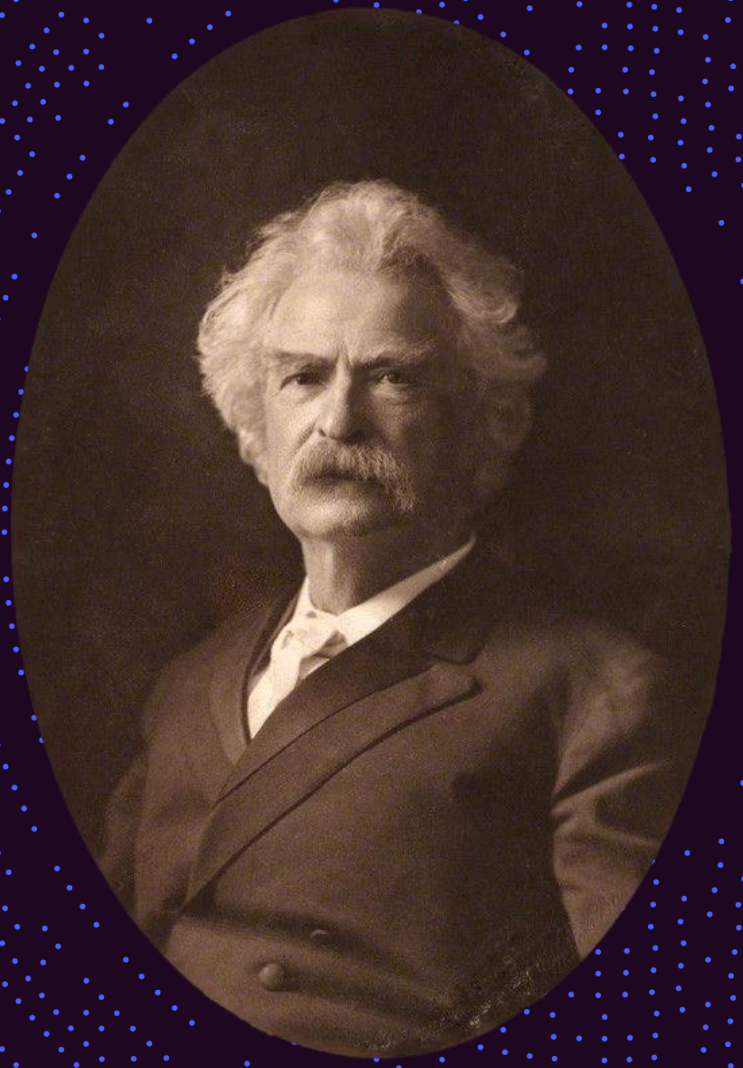
Less automation



More automation

IT Automation Uncomfortable Statistics

- 73% of projects fail to deliver promised ROI
- 68% are cancelled within 18 months
- 84% of ”successfully delivered” required more than 60% of QA time for maintenance



Sensitivity Classification: Internal

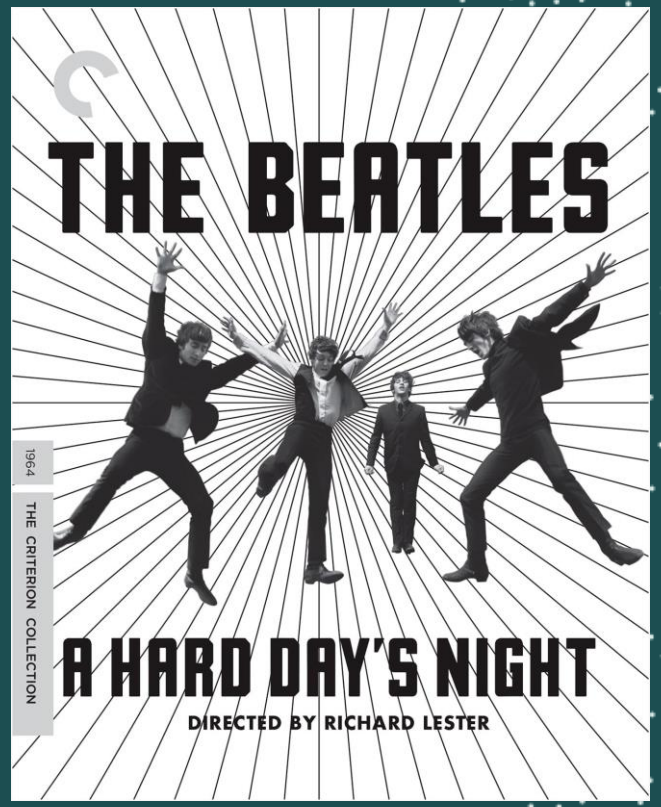
Why?

What?

How ?

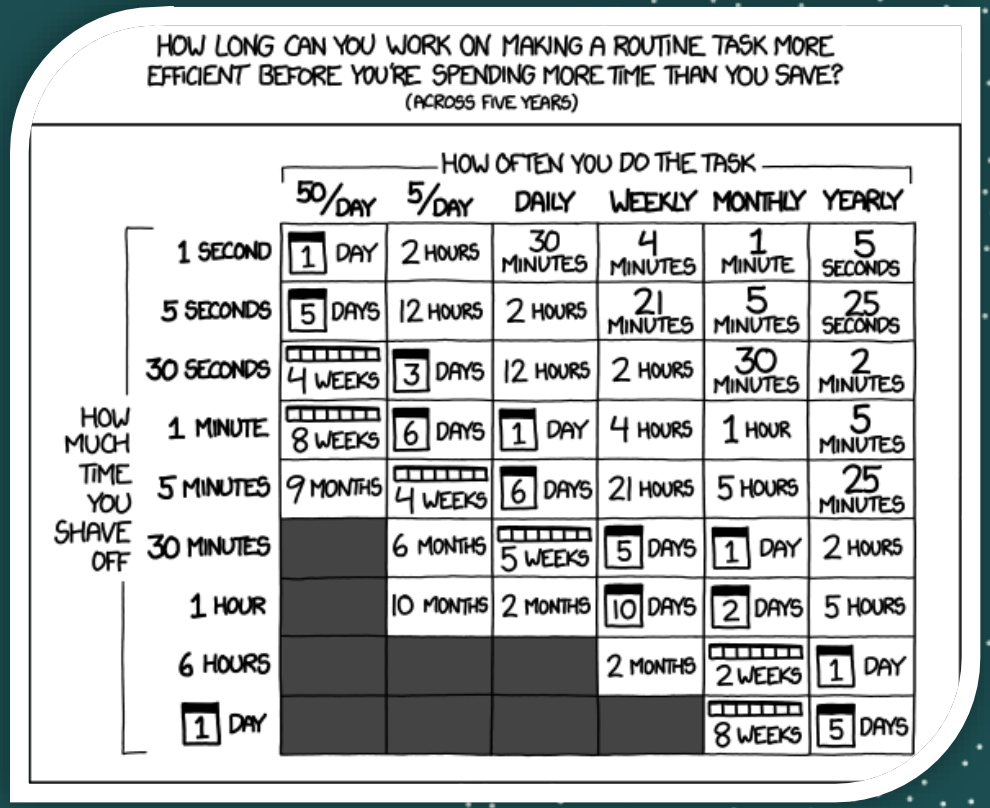
Why?

- Less errors
- Quicker implementation
- Reduce management complexity
- Simplified configurations
- Time savings



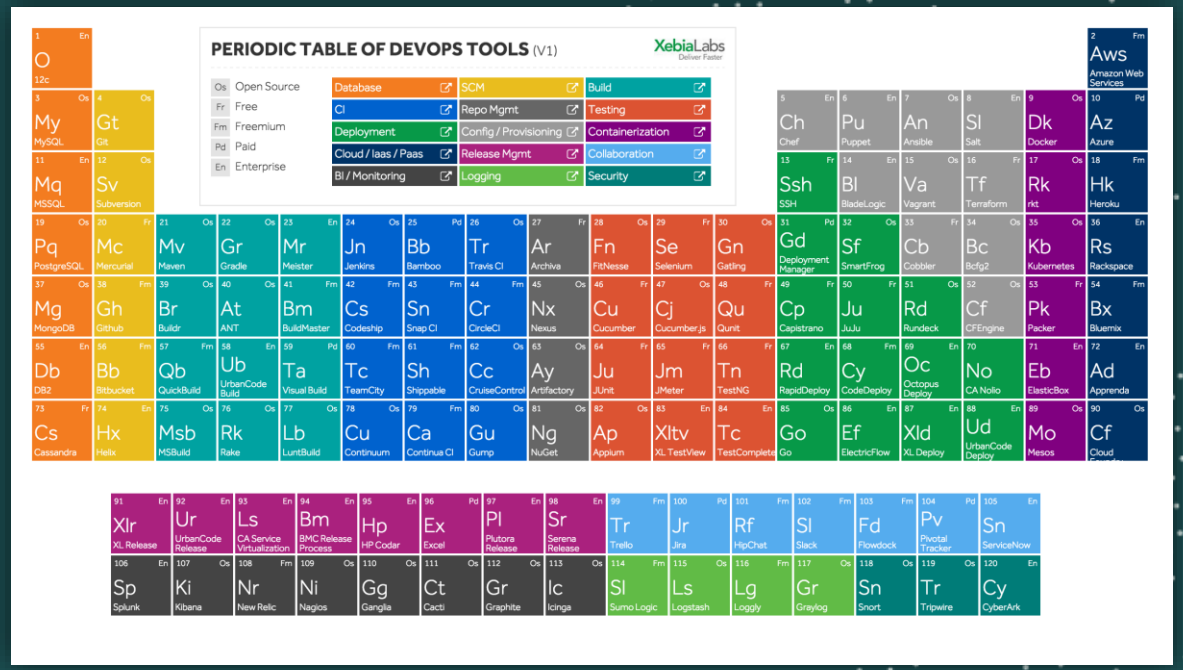
What?

- Repetitive & mundane tasks
  - Time consuming
  - Complex
  - Error prone
  - Repeatable
- Any part or whole infrastructure*
- Day-0 >> Day-1 >> Day-2
  - Bootstrap solution, migrate, config update, document, monitor, compliance check, patch/update/upgrade ...



How?

- DevOps tools (15+ categories, 120+ tools)
- Questions
  - “Push vs. pull” model?
  - “Declarative vs. imperative”?
  - Commercial or open-source?
  - “Lock-in”?
  - “Data Modeling Language”?
  - Error handling (“rollback”)



LIFECYCLE

L I F E C Y C L E

Analysis

L I F E C Y C L E

Analysis
Design

Sensitivity Classification: Internal

L I F E C Y C L E

Analysis

Design

Develop

Sensitivity Classification: Internal

L I F E C Y C L E

Analysis

Design

Develop

Maintenance

Sensitivity Classification: Internal

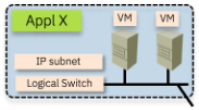
Automation Use Cases …

- Solution – Private Cloud
- Business aspect – Disaster Recovery
- Infrastructure management – GitOps with VMware K8 Cluster Fleet
- Knowledge management – LLM AI based search

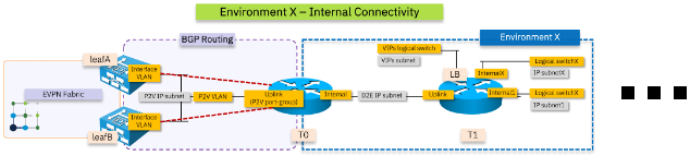
Sensitivity Classification: Internal

Architecture Components

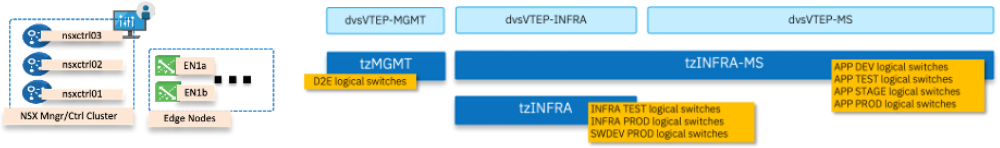
Applications



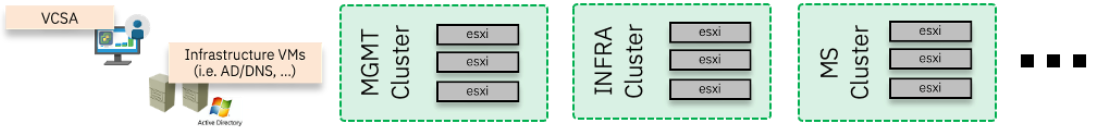
Environments



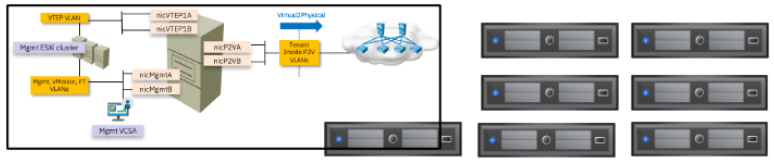
NSX SDN



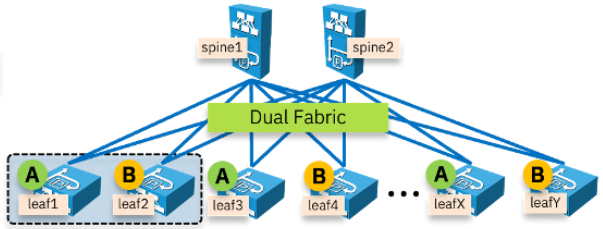
vSphere Infrastructure



Compute Infrastructure



EVPN Fabric



Evolving Architecure

2011 - 2013

- **Scaling + upgrades + updates + redesigns + adding solutions ...**
- NET virtualization with Cisco N1k
- BKP with Veeam BRS
- NET, SEC redesign

2018 - PRESENT

- **Complexity kicks-in**
- **NSX-V to NSX-T redesign/redeploy**
- **Automation**
  - Ansible, Python, Gitlab
  - 2019 - prod v1
  - 2021 - prod v2
  - 2023 - prod v3

START - 2010

- **PHY >> VIRT (2 locations)**
- VMware vSphere 4
- Blade servers
- Cat4900M+Cat6500+ASA+N4k
- Scaling virtual infrastructure

2014 - 2017

- **NET - SDN & Leaf-Spine**
  - 2014 - VMware NSX-V
  - 2016 - EVPN with Cisco N9k
- **STORAGE - AFA**
  - 2015 - PureStorage FlashArray
  - Dual-site + async replication

“Moon, Mars, and beyond ...”

- prompt > _

Disaster Recovery – Why?

- In many cases, diverse locations aren't separate IT ecosystems but rather mirrored extensions. The challenge lies in the automation connecting these parts.
- Migrations often involve human errors. Is there a way to prevent unnecessary mistakes?
- There is a list of different tasks, and I don’t have the budget nor time to resolve them all. I need to prioritize.
- Is it possible to establish an independent testing environment?
- The extensive interdependence between two locations results in numerous unnecessary and time-consuming workloads. Is there any way to isolate locations?

Sensitivity Classification: Internal

Example - Oil&Gas Industry

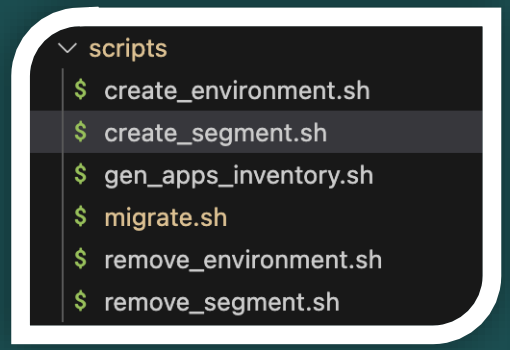
- Geo analysis services for underwater drilling
  - Ocean floor “imaging” (floor analysis, sonar scanning …)
  - AI-ML based data processing

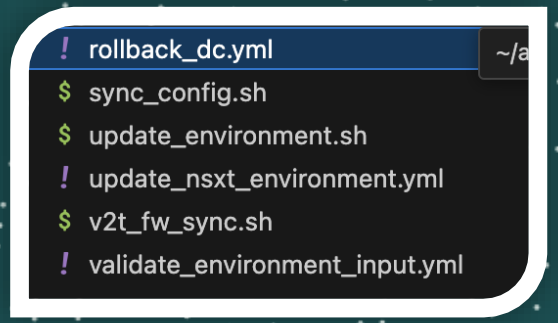
Application	RTO	RPO	Volume	Category	Impact
Asset management	4h	5d	Low	Important	$
Geo imaging	1d	No loss	Huge	Critical	$$$
Analysis output	12h	1d	Large	Important	$$
E-mail	2d	5d	Medium	Best-effort	
…					

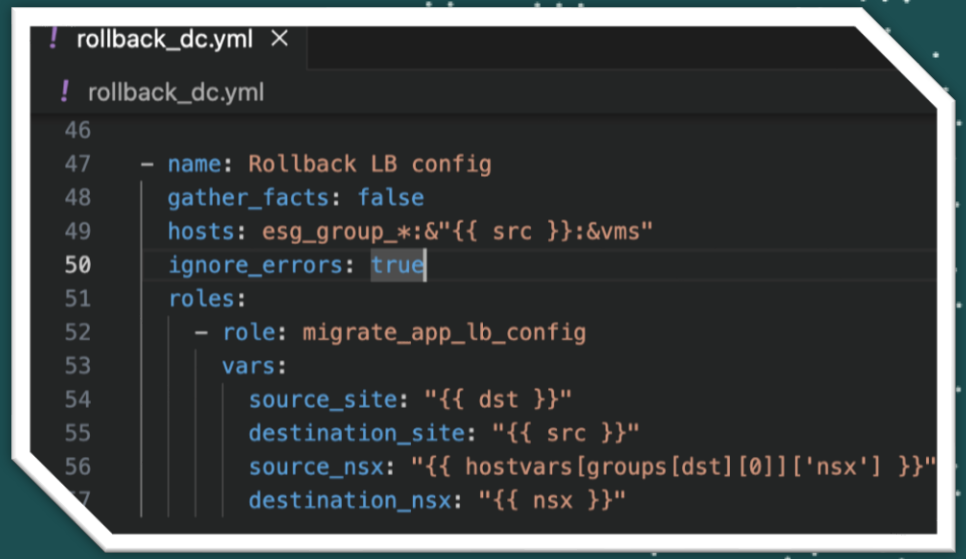
Sensitivity Classification: Internal

DR Automation

- Environment creation, update, removal
- Location switchover
  - Disaster Recovery activation
  - Failover - Fallback
  - Location evacuation
- Granular migration (environment, application)
- Automated firewall rule migration
- Cross-location LB/FW synchronization
- Health check







1. Why – What – How
2. Lifecycle
   - Analysis
   - Design
   - Develop
   - Maintenance

Sensitivity Classification: Internal

Thank You