The operational excellence pillar focuses on running and monitoring systems to deliver business value, and continually improving processes and procedures. Key topics include managing and automating changes, responding to events, and defining standards to successfully manage daily operations.

Resources:

Website:

https://aws.amazon.com/architecture/well-architected/

Whitepaper

Operational Excellence
The operational excellence pillar focuses on running and monitoring systems to deliver business value, and continually improving processes and procedures. Key topics include managing and automating changes, responding to events, and defining standards to successfully manage daily operations.

Operational Excellence whitepaper PDF | Kindle

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Resources:

HTML Version of Performance Pillar:

https://wa.aws.amazon.com/wat.pillar.operationalExcellence.en.html

Design Principal:

Perform operations as code

Annotated documentation

Make frequent, small, reversible changes

Refine operations procedures frequently

Anticipate failure
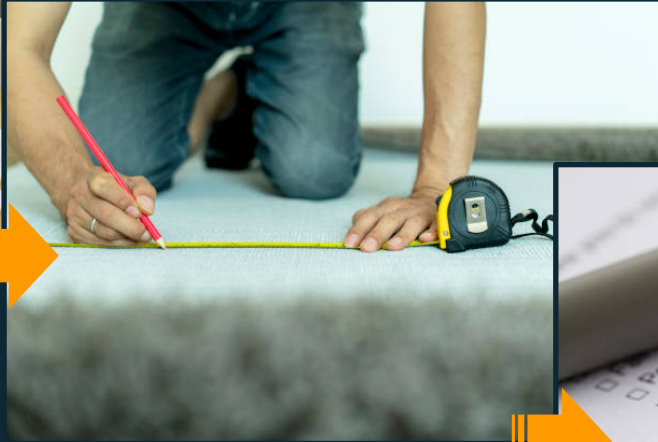
Learn from all operational failure

Definitions:

Prepare

Operate

Evolve

Prepare

Prepare

- Operational priorities
  - Understand your workload
  - Role
  - Business goal
  - External regulatory and compliance requirement
- Design for operations
  - How it will be deployed, updated, and operated?
  - Defect reduction and fixes(quick and safe)
  - Log, monitor, metrics
- Operational readiness
  - Checklists
  - Runbooks
  - process

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Prepare

- Operational priorities
    - AWS Support : Business Support/Enterprise Support
    - Trusted Advisor
    - Cloud Compliance : (https://aws.amazon.com/compliance/programs/)
    - Well Architected Framework
- Design for operations
    - CloudWatch
    - CloudFormation
    - Developer Tools
    - AWS X-Ray
- Operational readiness
    - Lambda
    - AWS Config
    - AWS Systems Manager

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Definitions:

Prepare

Operate

Evolve

Operate

Operate

- Understanding operational Health
    - Monitoring
    - What metrics?
    - Which level?
    - Only number or useful insights?
- Responding to Events
    - Planned events, unplanned events….
    - How to response?
    - RCA

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Operate

- Understanding operational Health
  - CloudWatch, CloudWatch Logs
  - ES
  - Personal Health Dashboard
  - Service Health Dashboard
- Responding to Events
  - AWS Lambda
  - CloudWatch, CloudWatch Events
  - SNS
  - Auto Scaling
  - Systems Manager

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Definitions:

Prepare

Operate

Evolve

Evolve

Evolve

- Learning from Experience
  - Analyze your operations over time
  - Review, and validate insights
- Sharing learning
  - Use code methodologies.
  - Sharing resource with other accounts
  - Integrate with 3rd party tools

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Evolve

- Learning from Experience
    - ES
    - QuickSight
    - Athena
    - S3
    - CloudWatch
- Sharing learning
    - IAM
    - SNS
    - CodeCommit
    - Lambda
    - CloudFormation
    - AMIs

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Q: What best practices for cloud operations are you using?

Operational Checklist to Evaluate Readiness

Not Evaluating Readiness

Proactive Plan for Events

No Active Plan for Events

Security Checklist to Evaluate Security Readiness

Not Evaluating Security Readiness

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Q&A

Thank you!

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