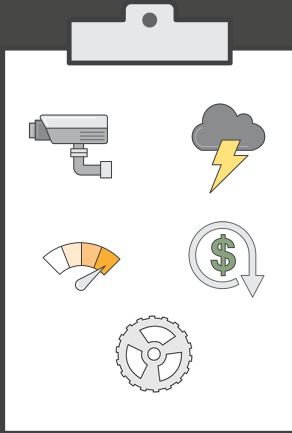




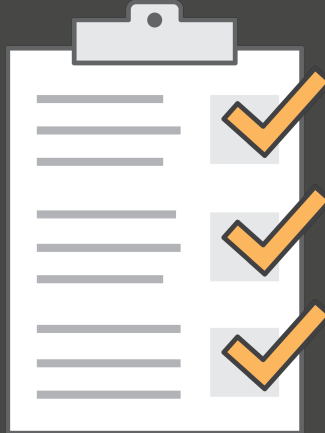
Well-Architected

<https://aws.amazon.com/well-architected/>

# What is the Well-Architected Framework?



Pillars



Design Principles



Questions

# Why would I want to apply the AWS Well-Architected Framework?



Build and  
deploy faster



Lower or  
mitigate risks



Make informed  
decisions



Learn AWS  
best practices

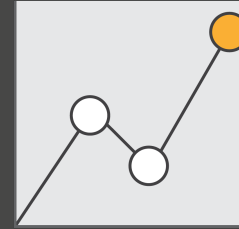
# A Mechanism for your Cloud Journey



Learn

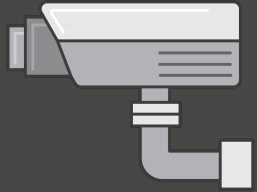


Measure



Improve

# Pillars of Well-Architected



Security



Reliability



Performance  
Efficiency

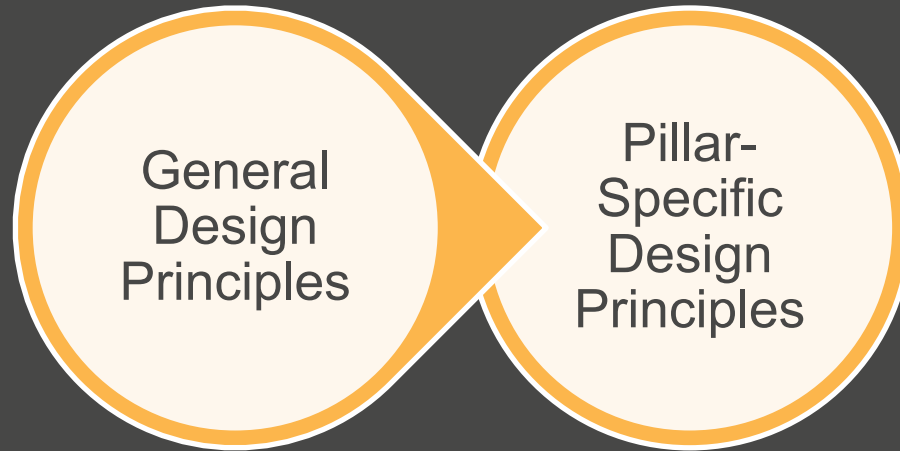


Cost  
Optimization



Operational  
Excellence

# Design Principles



**Automate responses to security events:** Monitor and automatically trigger responses to event-driven, or condition-driven, alerts.

# General Design Principles

Stop guessing your capacity needs



Test systems at production scale



Automate to make architectural experimentation easier



Allow for evolutionary architectures



Build data-driven architectures



Improve through game days



# Design Principles for Security

**Apply security at all layers**



**Enable traceability**



**Implement a principle of least privilege**



**Focus on securing your system**



**Automate security best practices**





# Design Principles for Reliability

Test recovery procedures



Automatically recover from failure



Scale horizontally to increase aggregate system availability



Stop guessing capacity



Manage change in automation



# Design Principles for Performance Efficiency

**Democratize advanced technologies**



**Go global in minutes**



**Use serverless architectures**



**Experiment more often**



**Mechanical sympathy**



# Design Principles for Cost Optimization

**Adopt a consumption model**



**Benefit from economies of scale**



**Stop spending money on data center operations**



**Analyze and attribute expenditure**



**Use managed services to reduce cost of ownership**



# Design Principles for Operational Excellence

**Align Operations Processes to Business Objectives**



**Perform Operations with Code**



**Make Regular, Small, Incremental Changes**



**Test for Responses to Unexpected Events**



**Learn from Operational Events and Failures**



**Keep Operations Procedures Current**



# Questions

## Incident Response

**SEC 12. How do you ensure that you have the appropriate incident response?**

Putting in place the tools and access ahead of a security incident, then routinely practicing incident response will make sure the architecture is updated to accommodate timely investigation and recovery.

Best practices:

- **Pre-Provisioned Access** Infosec has the right access, or means to gain access quickly. This should be pre-provisioned so that an appropriate response can be made to an incident.
- **Pre-Deployed Tools** Infosec has the right tools pre-deployed into AWS so that an appropriate response can be made to an incident
- **Non-Production Game Days** Incident response simulations are conducted regularly in the non-production environment, and lessons learned are incorporated into the architecture and operations.
- **Production Game Days** Incident response simulations are conducted regularly in the production environment, and lessons learned are incorporated into the architecture and operations.

Pillar Area

Question Text

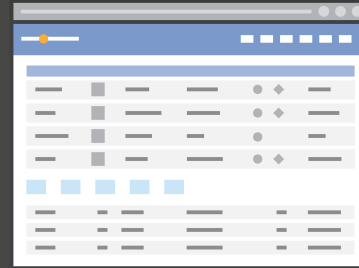
Question Context

Best Practices

# Benefits of Well-Architected



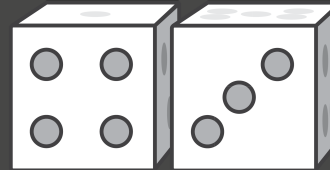
**Think Cloud-Natively**



**Consistent Approach to Reviewing Architecture**

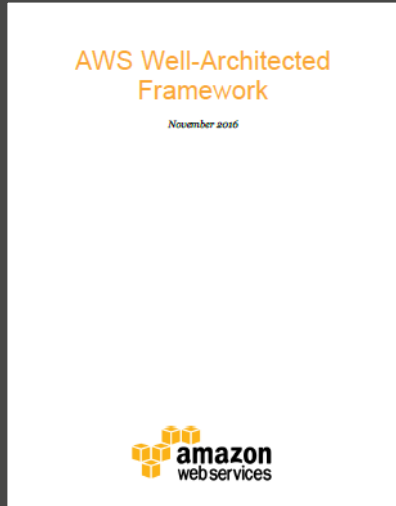


**Understand Potential Impact**

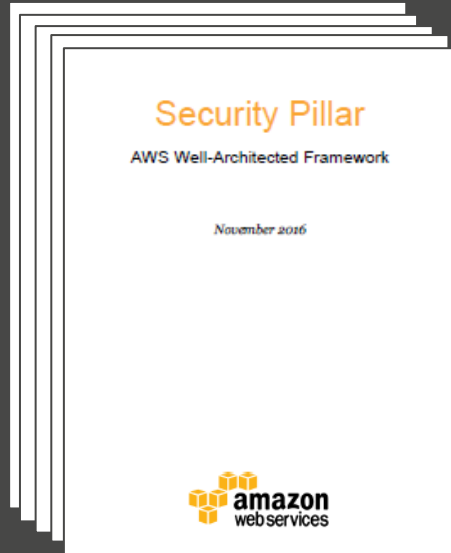


**Visibility of Risks**

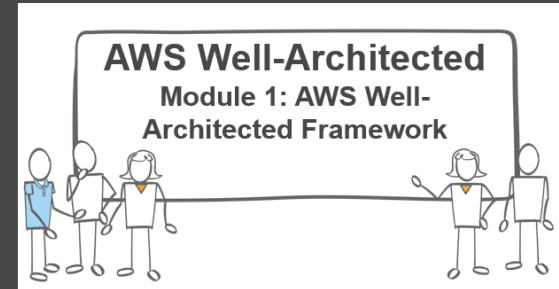
# For More Information...



AWS Well-Architected  
Framework Whitepaper



Pillar Specific  
Whitepapers



Free Online Training

<https://aws.amazon.com/well-architected/>