



AWS Well-Architected

Are you Well-Architected?



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About @shallawell

- Technical Director / Acting CTO @ inteleomatics.com
- 5+ years experience with AWS
- 25+ years in IT in lots of roles
- Previously worked for AWS partners (doing Well Architected Reviews)
- A passion for good (IT, not buildings!) architecture

- 9 AWS certifications
- Blog <https://shallawell.wordpress.com>



So – you have a workload on AWS ?



YOU should I do a AWS Well-Architected Review

- Measure, Learn, Improve
- Make better informed decision
- Lower or mitigate risks
- Raise the bar for future workloads
- Learn about your solution (what you thought/hoped you had vs what you actually have)
- Learn about and adopt new services (always something new)

What is the Well-Architected Framework?

https://d0.awsstatic.com/whitepapers/architecture/AWS_Well-Architected_Framework.pdf



Pillars

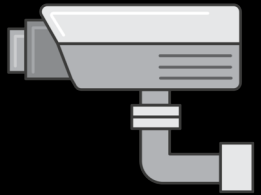


Design Principles

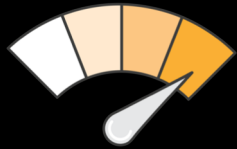


Questions

What are the 5 pillars?



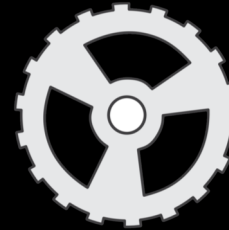
Security



Performance
Efficiency



Reliability



Operational
Excellence



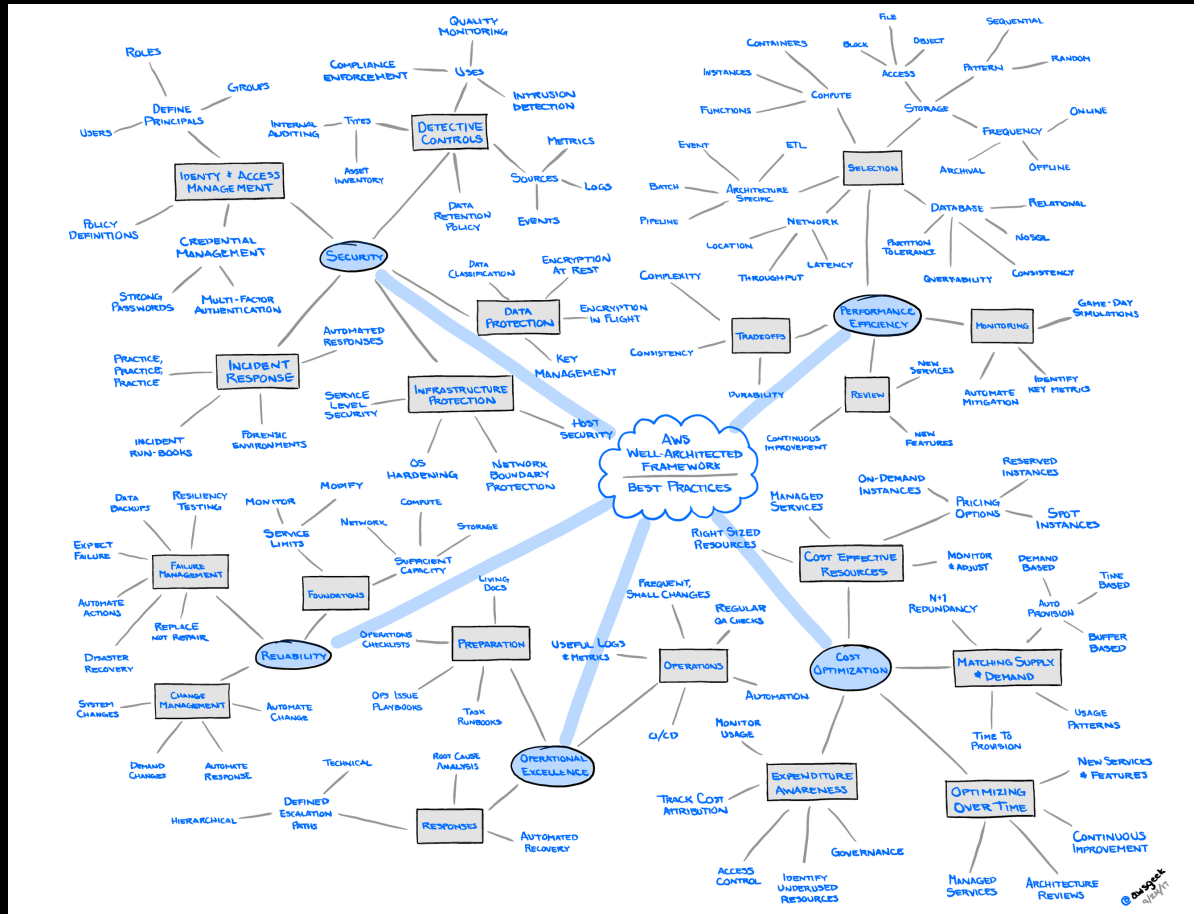
Cost Optimisation

Each pillar has its own Design Principles which should be review and used to guide you through the design process of your workload

The General Design Principles

- Stop guessing your capacity needs
- Test systems at production scale
- Automate to make architectural experimentation easier
- Allow for evolutionary architectures
- Drive architectures using data
- Improve through game days

Visualising the Well-Architected Framework



<https://www.awsgeek.com/posts/AWS-Well-Architected-Framework/>

<https://wa.aws.amazon.com/map.html>

Some Example Questions

SEC 4: How do you detect and investigate security events?

Capture and analyze events from logs and metrics to gain visibility. Take action on security events and potential threats to help secure your workload.

SEC 5: How do you defend against emerging security threats?

Staying up to date with AWS and industry best practices and threat intelligence helps you be aware of new risks. This enables you to create a threat model to identify, prioritize, and implement appropriate controls to help protect your workload.

OPS 6: How do you understand the health of your workload?

Define, capture, and analyze workload metrics to gain visibility to workload events so that you can take appropriate action.

OPS 7: How do you understand the health of your operations?

Define, capture, and analyze operations metrics to gain visibility to operations events so that you can take appropriate action.

OPS 8: How do you manage workload and operations events?

Prepare and validate procedures for responding to events to minimize their disruption to your workload.

So, how does AWS Well-Architected Review work?



AWS Well-Architected Tool

- Re:Invent 2018 saw the introduction of the AWS Well-Architected Tool
- Previously only available to AWS and selected AWS Premium Partners
- Not as flashy as other cool things like ‘containers’

AWS Well-Architected Tool

Review your architecture and adopt best practices

[Get started with the AWS Well-Architected Tool](#)



AWS Well-Architected Tool



What the tool does and doesn't do

IT DOES

- It provides a portal for a DIY approach using the Well-Architected Q's
- A place to track your Well-Architected Review results
- Reminder you of topics of importance you may have forgotten
- Provide a PDF version of the Q&A to share with others

IT DOESN'T

- Provide specific recommendations (which buckets are open, which Security Groups are open to the world)
- Automate the remediation the findings
- Replace the skill of humans

Other resources?



- AWS Well-Architected Framework Whitepaper
<https://aws.amazon.com/architecture/well-architected/>
- 5 separate pillar Whitepapers for a deep dive on each topic
- Well-Architected specific Lens –
 - Serverless
 - High Performance Compute
 - IoT (Internet of Things)
- Use AWS SA's or AWS Partners to assist for a detailed review

Even more resources?



- AWS Game Days <https://aws.amazon.com/blogs/apn/testing-aws-gameday-with-the-aws-well-architected-framework/>
- AWS Trusted Advisor <https://aws.amazon.com/premiumsupport/technology/trusted-advisor/> & Cost Explorer <https://aws.amazon.com/aws-cost-management/aws-cost-explorer/>
- AWS Architecture Centre <https://aws.amazon.com/architecture/>
- AWS What's New <https://aws.amazon.com/new/> – monitor AWSUG Slack or get a browser plugin & AWS
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