

AWS User Group Oulu – Sponsored by Brightly Works Oy

17:00 Welcome, Jyrki Puttonen, Solutions Architect, AWS

17:10 Are You Well Architected - Intro to AWS Well-Architected Framework, Jyrki Puttonen, Solutions Architect, AWS

17:40 5 min break

17:45 Lakehouse architecture in AWS by Pekka Vuorio, Chief Architect, Co-Founder at Brightly Works Oy

18:15 5 min break

18:20 Cloud Security Musings Juho Myllylahti, Data Architect, Tietoevry Create

18:50 Closing Words

Organizers: jyrkiput@amazon.fi, juho.myllylahti@iki.fi



Are you Well-Architected?

Introduction to AWS Well-Architected

Jyrki Puttonen

Solutions Architect, AWS



Today's agenda

1

What is the AWS Well-Architected Framework

2

Overview of the Well-Architected Framework

3

Performing a Well-Architected Framework Review

4

What is available in the Well-Architected Framework?

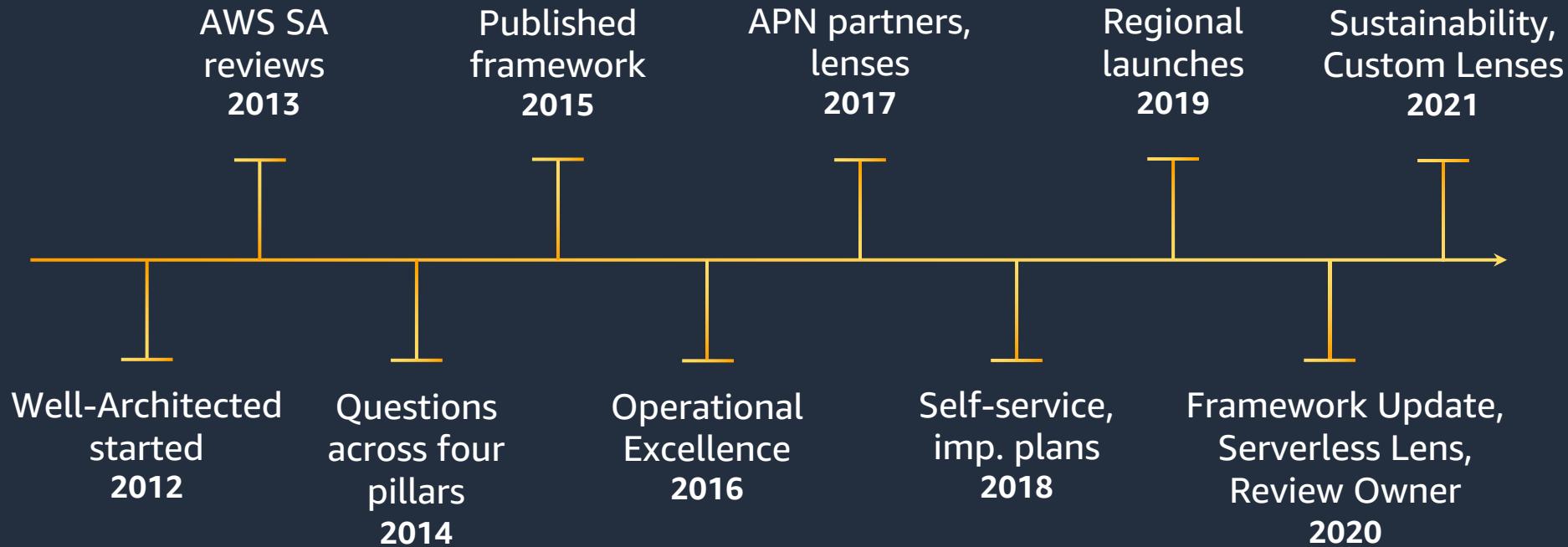
Section 1:

What is the AWS Well-Architected Framework

When you look at the
workloads your team is building,
can you answer the question:

“Are you Well-Architected?”

A brief history of Well-Architected





Why 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

What is the AWS Well-Architected Framework?



Pillars



Design principles



Questions

AWS Well-Architected Lenses



SaaS
Lens



Serverless
Lens



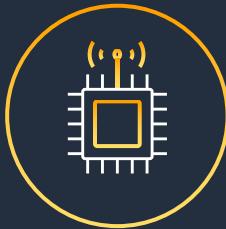
Analytics
Lens



IoT
Lens



Machine Learning
Lens



HPC
Lens



Financial Services
Lens

Section 2:

Overview of the Well-Architected Framework

Pillars of AWS Well-Architected



Operational
Excellence



Security



Reliability



Performance
Efficiency



Cost
Optimization



Sustainability

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
- ⌘ Drive architectures using data
- ⌘ Improve through game days



Section 3:

Performing Well-Architected Framework Review

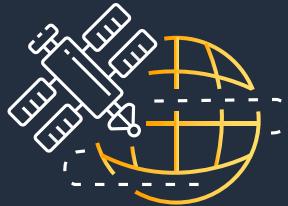
Intent of review

Not an audit



Working together
to improve

Not architecture
astronauts



Pragmatic,
proven advice

Not a one-time
check



Throughout
lifecycle

Learnings

Pre-launch only?



Earlier
is better

Make bad decisions?



Not considered
decisions

Findings?



Most workloads
can be improved

Use cases



Learning best
practices for the cloud

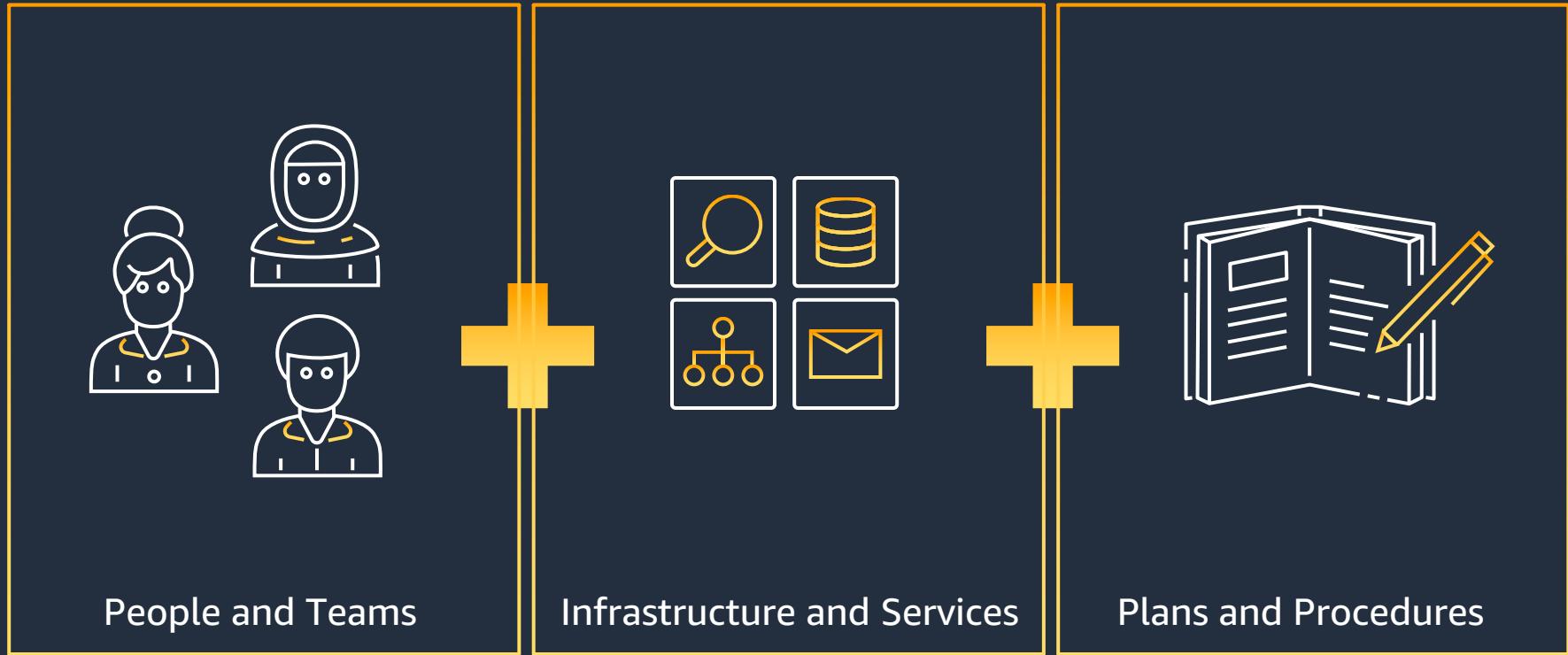


Technology
governance



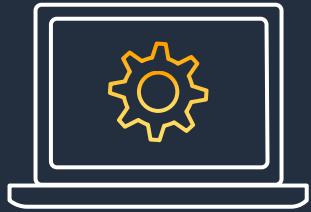
Portfolio
management

Define a Workload



Key concepts

Identify key workloads



Identify workload sponsor



Identify pillar sponsors



Three Phases to the Review

Prepare



- Define Workload
- Identify Sponsors
- Scope Workload

Review



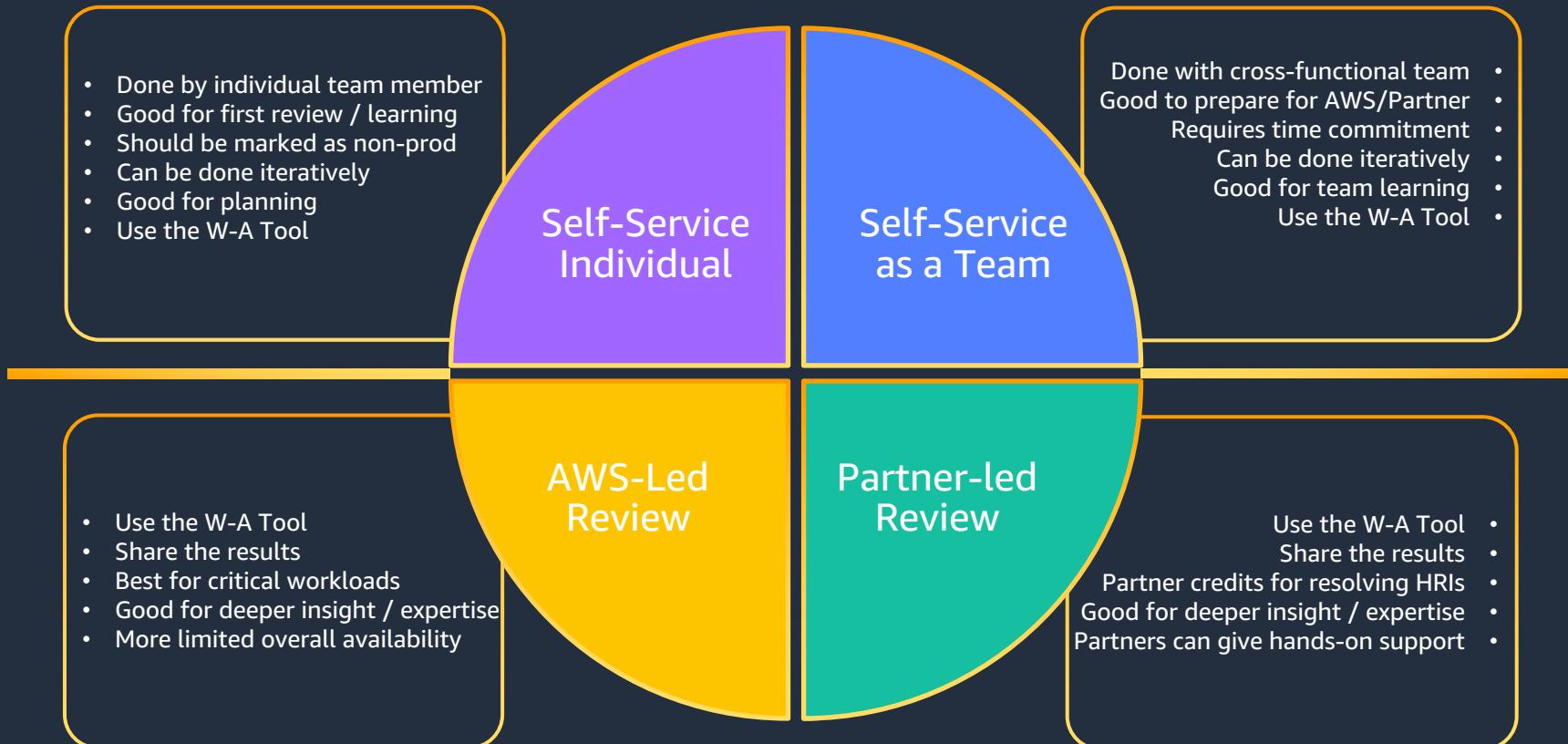
- Review the Workload
- Record the Review
- Publish Report

Guide



- Prioritize HRIs
- Customer Review
- Treatment Plan

Review Format Options



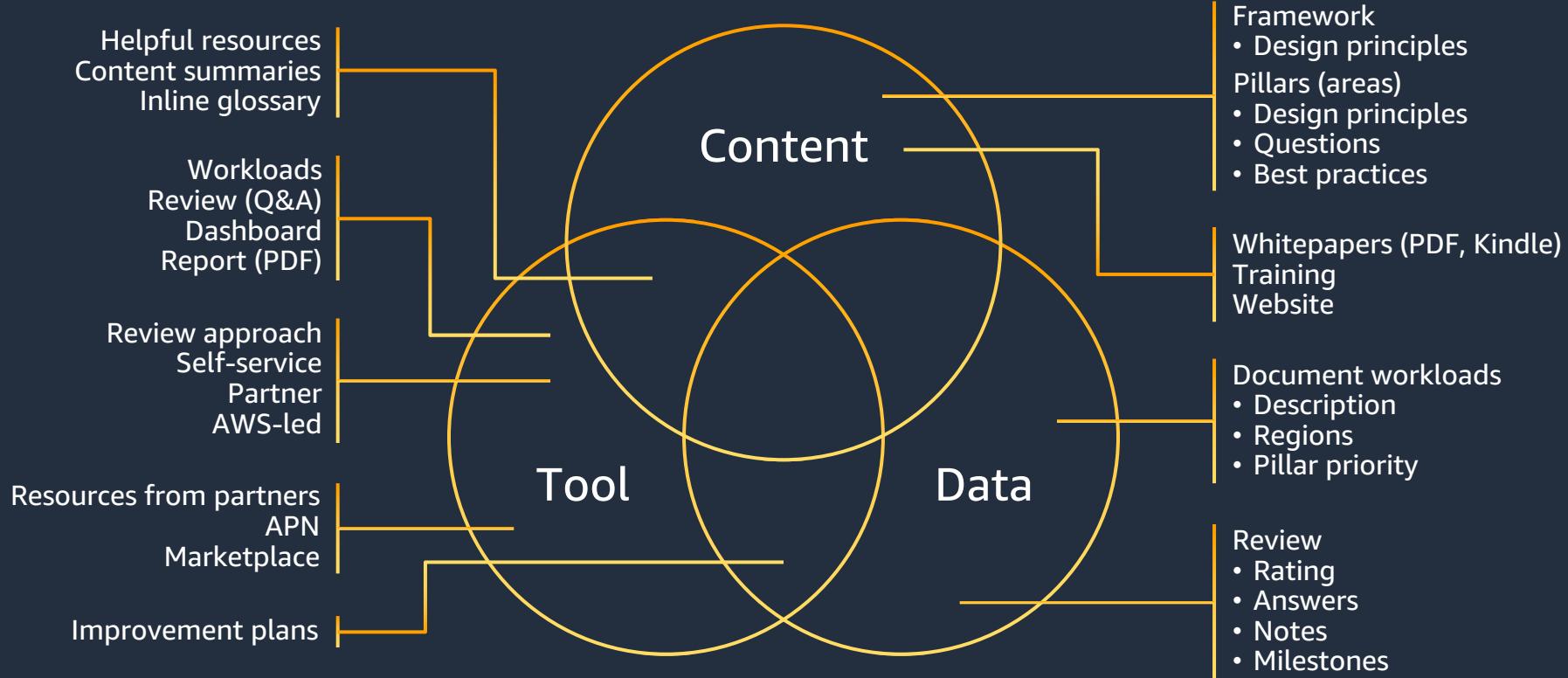
The Well-Architected Process



Section 4:

What is Available in the Well-Architected Framework?

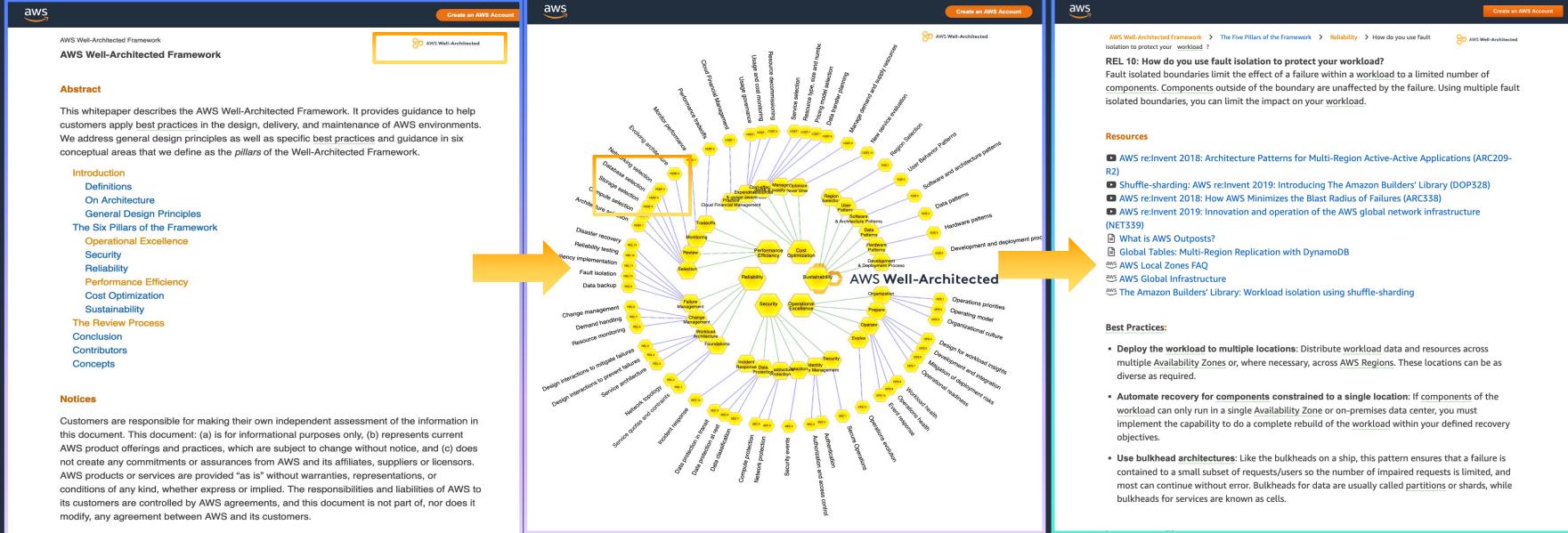
What is available?





Well-Architected content website

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



Well-Architected Labs

<https://wellarchitectedlabs.com/>

A screenshot of the AWS Well-Architected Labs website. It features a dark background with a large yellow hexagonal logo at the top left. Below the logo, the text "AWS Well-Architected Labs" is displayed. A search bar with a magnifying glass icon and a clear button is positioned below the logo. On the left side, there is a sidebar with the following links: "Operational Excellence", "Security", "Reliability", "Performance Efficiency", "Cost", "Well-Architected Tool", and "Amazon Free Tier".

AWS Well-Architected Labs

Search...

Operational Excellence

Security

Reliability

Performance Efficiency

Cost

Well-Architected Tool

Amazon Free Tier

Introduction

The [Well-Architected](#) framework has been developed to help cloud architects build the most secure, high-performing, resilient, and efficient infrastructure possible for their applications. This framework provides a consistent approach for customers and partners to evaluate architectures, and provides guidance to help implement designs that will scale with your application needs over time.

This repository contains documentation and code in the format of hands-on labs to help you learn, measure, and build using architectural best practices. The labs are categorized into levels, where 100 is introductory, 200/300 is intermediate and 400 is advanced.

Prerequisites:

An [AWS account](#) that you are able to use for testing, that is not used for production or other purposes.
NOTE: You will be billed for any applicable AWS resources used if you complete this lab that are not covered in the [AWS Free Tier](#).

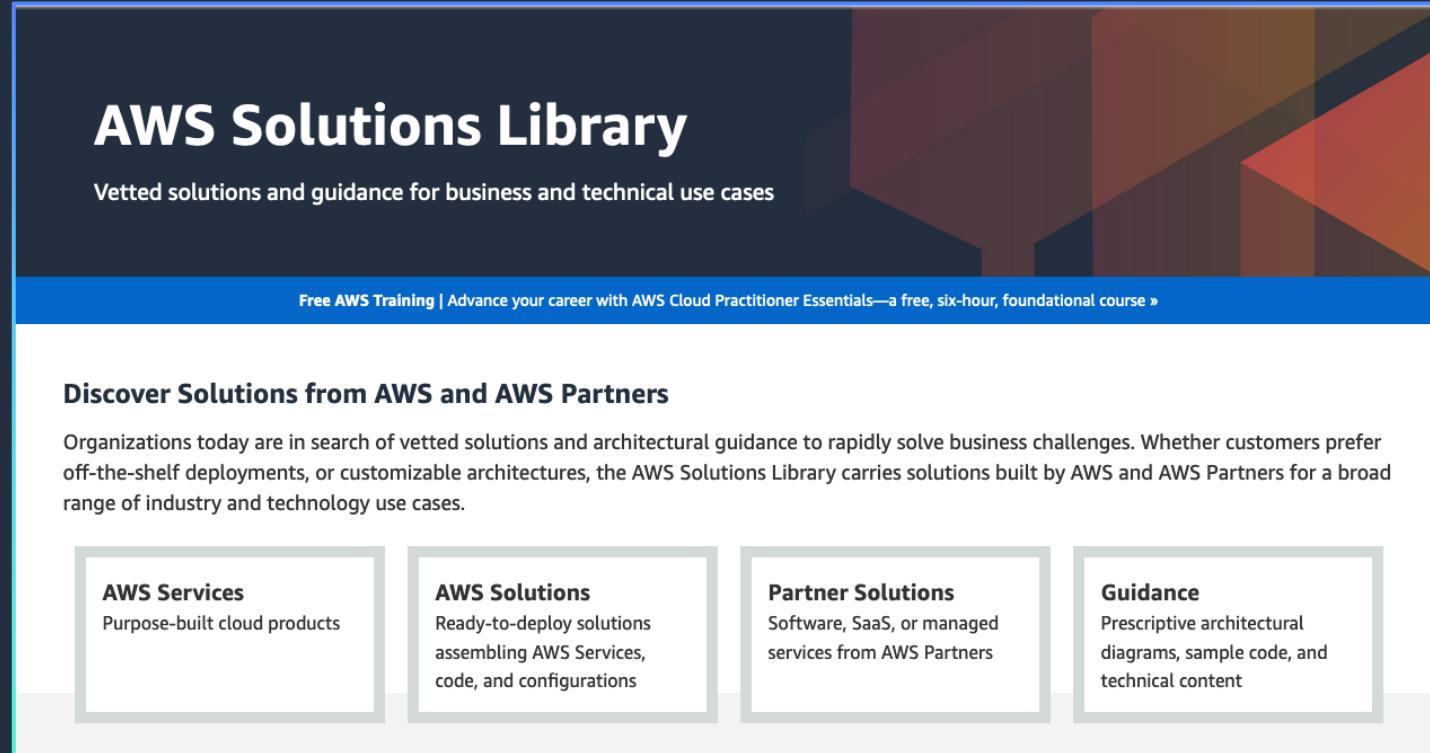
Labs:

The labs are structured around the five pillars of the [Well-Architected Framework](#):

- [Operational Excellence](#)
- [Security](#)

AWS Solutions Library

<https://aws.amazon.com/solutions/>



The screenshot shows the AWS Solutions Library homepage. The top half has a dark blue background with a large white title "AWS Solutions Library" and a subtitle "Vetted solutions and guidance for business and technical use cases". Below this is a blue banner with the text "Free AWS Training | Advance your career with AWS Cloud Practitioner Essentials—a free, six-hour, foundational course »". The bottom half has a white background with four grey boxes containing text: "AWS Services" (Purpose-built cloud products), "AWS Solutions" (Ready-to-deploy solutions assembling AWS Services, code, and configurations), "Partner Solutions" (Software, SaaS, or managed services from AWS Partners), and "Guidance" (Prescriptive architectural diagrams, sample code, and technical content). The right side of the page features a decorative graphic of overlapping triangles in shades of red, orange, and brown.

AWS Solutions Library

Vetted solutions and guidance for business and technical use cases

Free AWS Training | Advance your career with AWS Cloud Practitioner Essentials—a free, six-hour, foundational course »

Discover Solutions from AWS and AWS Partners

Organizations today are in search of vetted solutions and architectural guidance to rapidly solve business challenges. Whether customers prefer off-the-shelf deployments, or customizable architectures, the AWS Solutions Library carries solutions built by AWS and AWS Partners for a broad range of industry and technology use cases.

AWS Services
Purpose-built cloud products

AWS Solutions
Ready-to-deploy solutions assembling AWS Services, code, and configurations

Partner Solutions
Software, SaaS, or managed services from AWS Partners

Guidance
Prescriptive architectural diagrams, sample code, and technical content

OPS 1 How do you determine what your priorities are?

Everyone needs to understand their part in enabling business success. Have shared goals in order to set priorities for resources. This will maximize the benefits of your efforts.

Best practices

- [OPS01-BP01 Evaluate external customer needs](#)
- [OPS01-BP02 Evaluate internal customer needs](#)
- [OPS01-BP03 Evaluate governance requirements](#)
- [OPS01-BP04 Evaluate compliance requirements](#)
- [OPS01-BP05 Evaluate threat landscape](#)
- [OPS01-BP06 Evaluate tradeoffs](#)
- [OPS01-BP07 Manage benefits and risks](#)

OPS 6 How do you mitigate deployment risks?

Adopt approaches that provide fast feedback on quality and enable rapid recovery from changes that do not have desired outcomes. Using these practices mitigates the impact of issues introduced through the deployment of changes.

Best practices

- [OPS06-BP01 Plan for unsuccessful changes](#)
- [OPS06-BP02 Test and validate changes](#)
- [OPS06-BP03 Use deployment management systems](#)
- [OPS06-BP04 Test using limited deployments](#)
- [OPS06-BP05 Deploy using parallel environments](#)
- [OPS06-BP06 Deploy frequent, small, reversible changes](#)
- [OPS06-BP07 Fully automate integration and deployment](#)
- [OPS06-BP08 Automate testing and rollback](#)

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- [OPS06-BP08 Automate testing and rollback](#)

REL 3 How do you design your workload service architecture?

Build highly scalable and reliable workloads using a service-oriented architecture (SOA) or a microservices architecture. Service-oriented architecture (SOA) is the practice of making software components reusable via service interfaces. Microservices architecture goes further to make components smaller and simpler.

Best practices

- [REL03-BP01 Choose how to segment your workload](#)
- [REL03-BP02 Build services focused on specific business domains and functionality](#)
- [REL03-BP03 Provide service contracts per API](#)



Thank you!

