



# **Personal Ideas**

## **AWS Technical Essentials**

**Francisco Moreno**

December/2025

# Agenda

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### Value of being certified

AWS Certification & Training  
Tips and resources to fast-track your Cloud Career  
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**Top 10 Benefits of AWS Certification**

**5 Ways Professional Certifications Add Value**  
By MBO Partners | April 1, 2022

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SKILLS HAVE BECOME THE GLOBAL CURRENCY OF 21ST CENTURY ECONOMIES!  
In a world where competition for jobs, pay increases, and academic success continues to increase, certifications offer hope because they are a credible, third-party assessment of one's skill and knowledge for a given subject.

### Options

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Partnering higher education institutions to prepare students for careers in the cloud.  
Fill out institution application

### Paradigms to be on cloud

**THE NEW STACK**  
PODCASTS EBOOKS EVENTS NEWSLETTER  
ARCHITECTURE ENGINEERING OPERATIONS

**Introduction to AWS Economics**  
Reducing Costs and Complexity  
May 2023

**'Merchants of Complexity': Why 37Signals Abandoned the Cloud**  
Provisioning a fleet of servers in 30 minutes is magic, but it is not a requirement that comes up that often for most businesses, David Heinemeier Hansson argues.  
By John Gruber | 2023 by John Gruber

**Leaving the Cloud: Cloud Computing Isn't For Everyone**  
We've run extensively in both Amazon's cloud and Google's cloud, but the savings never materialized. So we've left.

**Cloud Economics Center**  
Understand and optimize the value of AWS  
Join research

### Paradigms of using microservices

**Scaling up the Prime Video audio/video monitoring service and reducing costs by 90%**  
The move from a distributed microservices architecture to a monolith application helped achieve higher scale, resilience, and reduce costs.

**Best of 2023: Don't Build Microservices, Pursue Loose Coupling**  
By CHRIS BERTINATO ON DECEMBER 28, 2023

**Rebuilding Netflix Video Processing Pipeline with Microservices**  
Netflix Technology Blog | Follow  
Published in Netflix Technology | 5 min read | Jan 10, 2024

### Paradigms of using in the normal way

**OpenTF Joins The Linux Foundation as OpenTofu!**  
Osany May  
enxO CTO & Co-founder, OpenTofu Steering Committee

**One staging for each engineer: introducing Layerform**  
@layerform  
#devops #infrastructurecode #terraform

### Don't follow normal structures

**68-year-old has spent 50 years at the same company as an engineer, even without a college degree—this is his one regret**

**Experiment: IT companies eager to hire self-taught pros**  
Updated on November 15, 2023 12:02 PM · 12 min read  
By Heather Nagley, Senior Journalist

**Estudiar informática ha dejado de ser el camino hacia la tierra prometida del dinero y la seguridad laboral**  
By José María Ruiz, Business Insider | 17 June 2023 17:00

### Think by yourself

**EducationWeek**

**'I Literally Cried': Teachers Describe Their Transition to Science-Based Reading Instruction**  
By Elizabeth Heubusch — September 16, 2023 · 6 min read

**Cognitive Bias:**  
Outcome Bias (Historian Error): Once you look back, every decision looks like it makes sense. But when you are in the moment, it is not that clear. The 2008 bank crisis seems very easy to understand, but back in time, even the smartest Wall Street traders were confused.

**Reciprocity**  
Reciprocity is the central core of cooperation among people that sustains economic growth and social development. The act of reciprocity is employed by Non-Governmental Organizations (NGOs) and philanthropic organizations.

**THE ART OF THINKING CLEARLY**  
The Secrets of Perfect Decision-Making  
ROLF DOBELLI



# Don't follow normal structures

CLOSING THE GAP

29-year-old makes \$125K working in tech without a bachelor's degree—here's how

POP CULTURE AND MEDIA

Oscars 2024: Greta Gerwig was rejected by every grad school she applied to

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Want a job or promotion? Here's how to brag, WI

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## 68-year-old has spent 50 years at the same company as an engineer, even without a college degree—this is his one regret

Published Sun, Oct 1 2023•9:30 AM EDT



Jennifer Liu  
@IN/JLJENNIFERLIU  
@JLJENNIFERLIU

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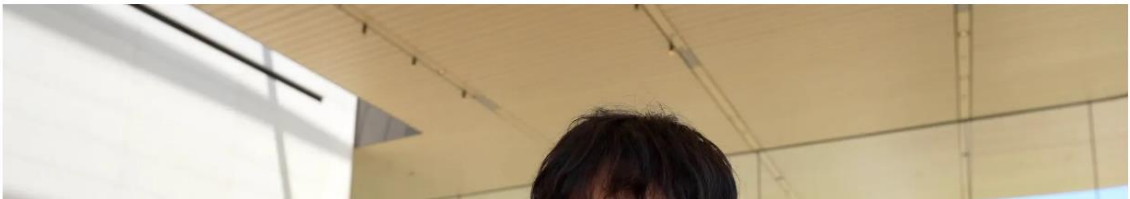
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## Estudiar informática ha dejado de ser el camino hacia la tierra prometida del dinero y la seguridad laboral

Kwan Wei Kevin Tan, Business Insider 23 nov. 2023 23:30h.



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## Experiment: IT companies eager to hire self-taught pros

Updated on: November 15, 2023 12:53 PM 1



Ernestas Naprys, Senior Journalist







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## 5 Ways Professional Certifications Add Value



By MBO Partners | April 1, 2022

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certification

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empowering higher education institutions to prepare students for the future of work through cloud communications and careers in the cloud

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## 'Merchants of Complexity': Why 37Signals Abandoned the Cloud

Provisioning a fleet of servers in 30 minutes is magic, but it is not a requirement that comes up that often for most businesses, David Heinemeier Hansson argues.

Dec 26th, 2023 8:15am by [Joab Jackson](#)



★★★★★ "GETS BETTER AND BETTER"

## Leaving the Cloud: Cloud Computing Isn't For Everyone

We've run extensively in both Amazon's cloud and Google's cloud, but the savings never materialized. So we've left.

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### Cloud Economics Center

Understand and optimize the value of AWS

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## Introduction to AWS Economics

Reducing Costs and Complexity

*May 2015*



# Paradigms of using microservices

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prime video | TECH

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Our People

Video Streaming

## Scaling up the Prime Video audio/video monitoring service and reducing costs by 90%

The move from a distributed microservices architecture to a monolith application helped achieve higher scale, resilience, and reduce costs.



### Architecture Style : Modulith (vs Microservices)



Pier-Jean Malandrino · Follow

Published in Level Up Coding · 4 min read · Jan 28, 2024

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Best of 2023: Don't Build Microservices, Pursue Loose Coupling

## Best of 2023: Don't Build Microservices, Pursue Loose Coupling



BY: CHRIS BERTINATO ON DECEMBER 26, 2023

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## Rebuilding Netflix Video Processing Pipeline with Microservices

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🏠 > Blog > OpenTF Joins The Linux Foundation as OpenTofu!

## OpenTF Joins The Linux Foundation as OpenTofu!



**Omry Hay**

env0 CTO & Co-founder, OpenTofu Steering Committee

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**Lucas F. da Costa**

Posted on 29 Aug 2023



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## One staging for each engineer: introducing Layerform

#devops #infrastructureascode #terraform





READING & LITERACY

## ‘I Literally Cried’: Teachers Describe Their Transition to Science-Based Reading Instruction



By [Elizabeth Heubeck](#) — September 15, 2023 ⌚ 6 min read

### Cognitive Bias:

**Outcome Bias (Historian Error):** Once you look back, every decision looks like it makes sense. But when you are in the moment, it is not that clear. The 2008 bank crisis seems very easy to understand, but back in time, even the smartest Wall

#### #6 Reciprocity

Reciprocity is the central core of cooperation among people that sustains economy growth and social development. The act of reciprocity are employed by Non-Governmental Organizations (NGOs) and philanthropic

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## THE ART OF THINKING CLEARLY

The Secrets of Perfect Decision-Making

**ROLF DOBELLI**



- **Comms Engineer**, M.Sc., University of York, UK. **Electronic Engineer**, U Javeriana.
- {Enterprise, Solutions, Software} **Architect**, **DevOps Engineer**, Low-Level **Developer**.
- 16 years of working experience on massive transport, financial companies (Banks and **Transactional Platforms**) and software companies (Current).
- 20+ Cloud Certifications

 /in/fmorenod - fmorenod@gmail.com





- **Schedule** your appointments: 5 sessions.
- Arrive early to check your connection. Bring your own questions from concepts or from labs.
- **No recording** is allowed, except extraordinary cases.
- **Raise your hand** or interrupt the class **if you have to**: I plan to ask every 2/3 slides.

## Features

A course that "Identify (..) services, compare features, and explore best practices to architect resilient, secure, and highly available IT solutions on AWS."

- It is a course refined by thousands of students and hundreds of instructors over the years, focusing on the most widely used methods and services in the industry.
- A course does not guarantee that all the requested topics will be covered as there are many services for each exam – 6 pages for SAA, 5 for DAV and 7 for SAP.
- It is expected that there will be independent work on the part of the student to read the Whitepapers, documentation and FAQs.
- Labs contains required information to work as independent tasks, are not taught in class, and are handled by the AWS Platform. **HOWEVER**, the student requests to BSG to do it on class (to do at the end of the class)
- AWS recommends course length and cadence.







## Classes Management: Automatic generated URL

aws training and certification

My account

My Classes > Architecting on AWS

### Architecting on AWS

Location	Start Date	End Date
<a href="#">Virtual Class Link</a>	August 23, 2023 @ 11:00 AM America / Bogota (UTC-05:00)	October 30, 2023 @ 11:59 PM America / Bogota (UTC-05:00)

### Labs

Labs will be made available by instructors

Lab Guide [Lab Guide](#) [Student Guide](#)

**Lab 1 - Explore and interact with the AWS Management Console and AWS Command Line Interface**

2 HOURS

This lab provides you with a basic overview of the AWS Management console and API

[Launch](#)

online.vitalsource.com/reader/books/200-ARCHIT-75-EN-LG-E/pageid/98

Architecting on AWS 7.5.5 (EN): Lab Guide

AWS Training and Certification

Contents	
Lab 1: Exploring and Interacting with the AWS Management Console and AWS CLI	4
Lab 2: Building your Amazon VPC Infrastructure	19
Lab 3: Creating a Database Layer in Your Amazon VPC Infrastructure	52
Lab 4: Configuring High Availability in Your Amazon VPC	69
Lab 5: Building a Serverless Architecture	94

### Task 2: Creating three Amazon SQS queues

In this task, you create three Amazon SQS queues and subscribe the queues to the previous Amazon SNS topic.

#### Task 2.1: Creating an Amazon SQS queue

- At the top of the AWS Management Console, click **Services**.
- In the search bar, type **Simple Queue Service**.
- Click **Create queue**.
- On the **Create queue** page, choose **Standard** for **Queue type**.
- For **Queue name**, enter **thumbnail-queue**.
- Click **Create queue**.

Amazon SQS creates the queue and returns the queue URL.

### Lab Support

Almost all AWS courses have self-directed labs for the students.

online.vitalsource.com/reader/books/200-ARCHIT-75-EN-SG-E/pageid/555

Architecting on AWS 7.5.5 (EN): Student Guide

AWS Training and Certification

Module	Page Count
Module 8: Automation	396
Module 9: Containers	428
Module 10: Networking 2	464
Module 11: Serverless	503
<b>Module 12: Edge Services</b>	<b>550</b>
Module 13: Backup and Recovery	607
Course Summary	654

### Edge services architecture

In this module, you learn about each AWS service involved in this example:

Review the edge services architecture. A user sends a request to an application partly hosted on premises. The user's request interacts with Amazon Route 53, AWS WAF, Amazon CloudFront, and Amazon S3. The AWS services hosted in the cloud are protected with AWS Shield.

In this module, you learn about each of the services labeled in the example.

- First, you learn about Amazon Route 53 and how you can use it to direct traffic to your resources. Route 53 operates at edge locations around the world.
- Next, you learn about the AWS content delivery network known as Amazon CloudFront.

## Lab environment

You are tasked with evaluating and improving an event-driven architecture. Currently, Customer Care professionals take snapshots of products and store the images. The development team runs PHP applications that upload a file to the ingest S3 bucket. Uploading a file triggers an event notification to an Amazon SNS topic. The initial design was to use separate SQS queues. The initial design was to use separate SQS queues. The initial design was to use separate SQS queues.

The following diagram shows the workflow:



## Start lab

- To launch the lab, at the top of the page, choose **Start lab**.
- You must wait for the provisioned AWS services to be ready before you can continue.
- To open the lab, choose **Open Console**.

You are automatically signed in to the AWS Management Console in a new web browser tab.

**Do not change the Region unless instructed.**

## Common sign-in errors

**Error: You must first sign out**

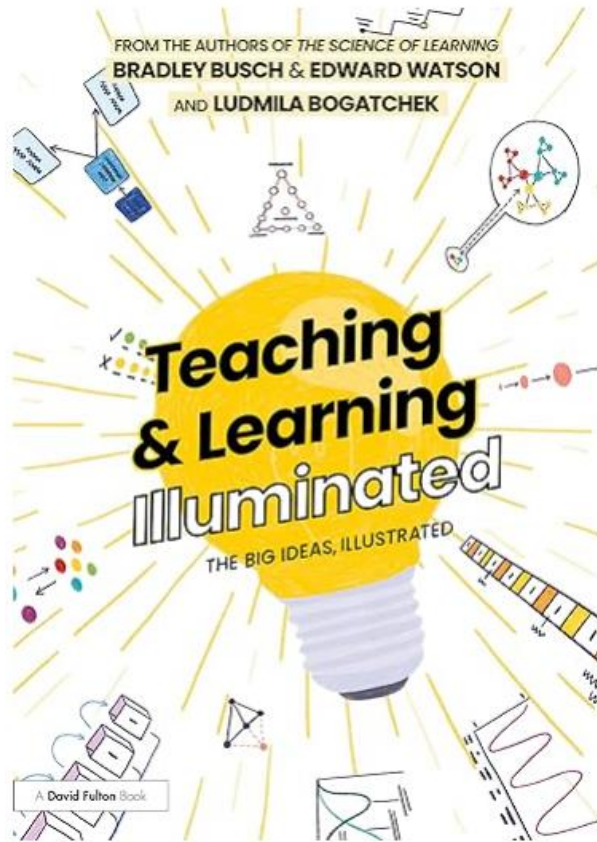
### Amazon Web Services Sign In

You must first log out before logging into a different AWS account.

To logout, [click here](#)

If you see the message, **You must first log out before logging into a different AWS account:**

- Choose the [click here](#) link.



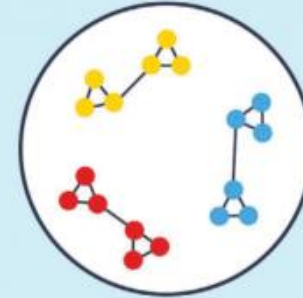
## Working memory is very small

This means that we forget new information quickly.



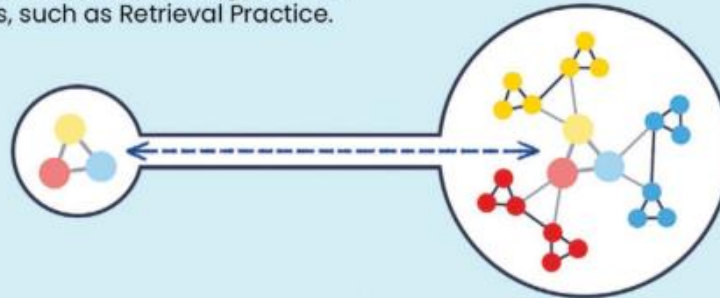
## Long-term memory is very large

This means that we can remember things from years and years ago.



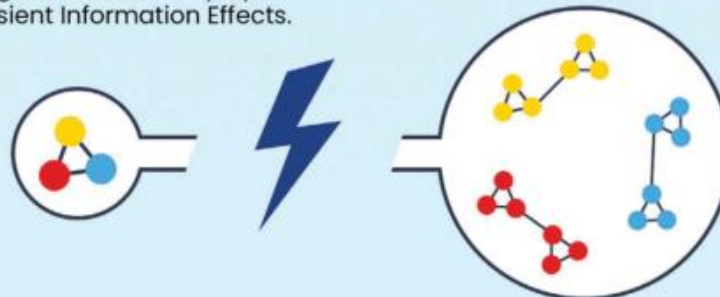
## Transfer between working memory & long-term memory is key for learning

This can be facilitated through several strategies, such as Retrieval Practice.



## Unfortunately, cognitive overload hinders this transfer

This overload can be reduced through mitigating the Redundancy, Split-Attention and Transient Information Effects.





## Choke Points and Pitfalls in Learning

