

DIGITAL TALENT SCHOLARSHIP 2020



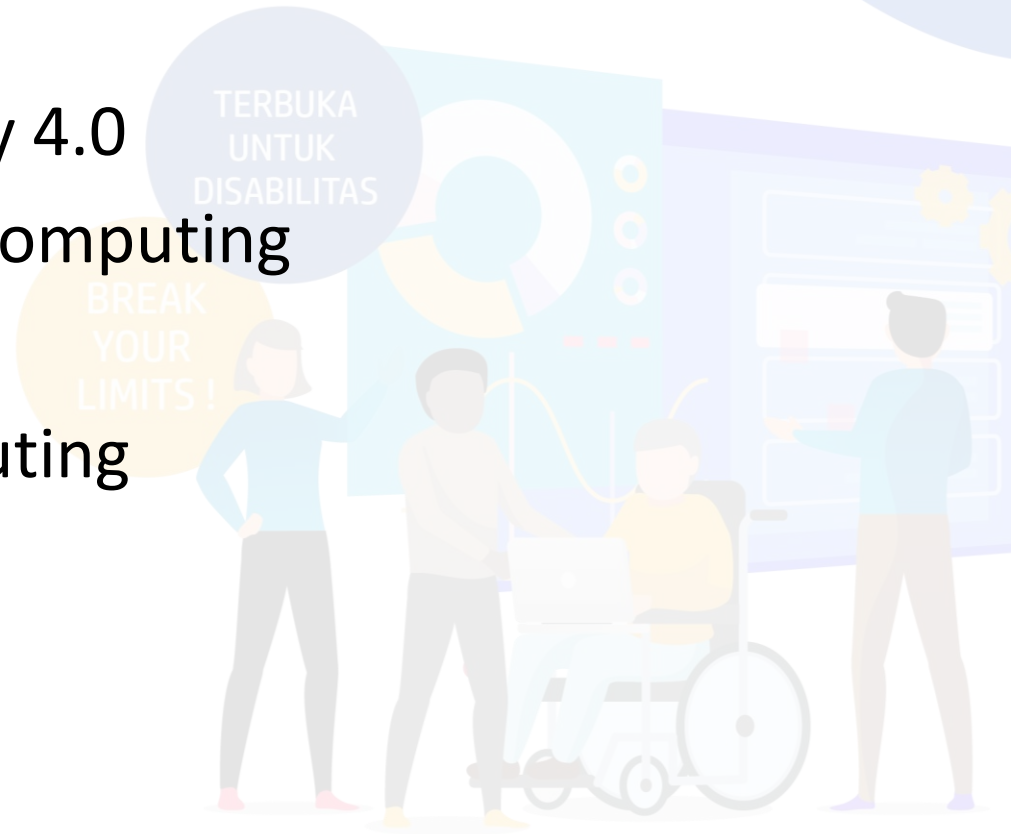
Introduction to Cloud Computing & AWS

TERBUKA
UNTUK
DISABILITAS

BREAK
OUR
LIMITS

Topic

- Introduction to Industry 4.0
- Introduction to Cloud Computing
- What is AWS
- Benefit of Cloud Computing
- AWS Educate



Industrial Revolution Era

- Industry 1.0

It's started at 18th Century with **Machine**, base on the Steam Engine

- Industry 2.0

Started on 20th Century, with the electricity power and the **conveyor belt** system

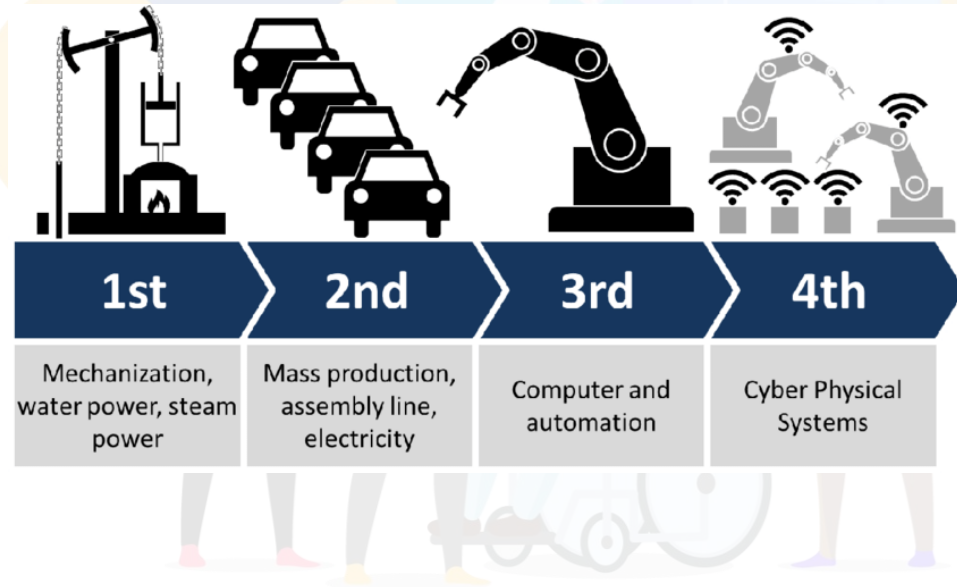
- Industry 3.0

Digitalization (Computerization) all started by the invention of IC (Integrated Circuit)

- Industry 4.0

Otomatization & Data, including IoT (Internet of Things), Cloud Computing, & Cognitive Computing (AI / ML)

TERBUKA
UNTUK
DISABILITAS



Before Cloud

- Complicated Infrastructure
- Long time Budgeting Plan
- Long time Procurement Process
- Implementation Phase
- Not Scalable (Only Scale Up Option)

Guessing theoretical
maximum peaks?

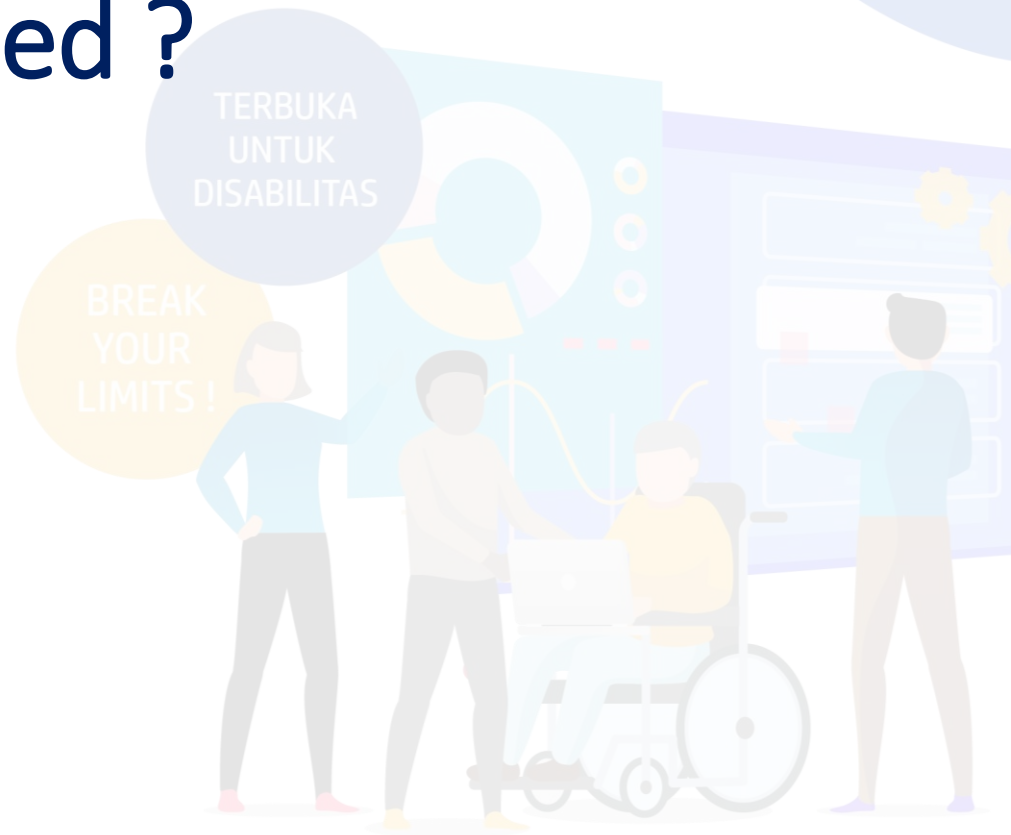
Is there
enough
resource
capacity?

Is it
enough
storage?



What business need ?

- Flexibility
- Security
- Capacity
- Cost
- Open





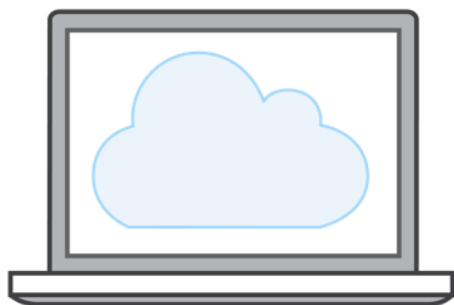
on-premise

VS

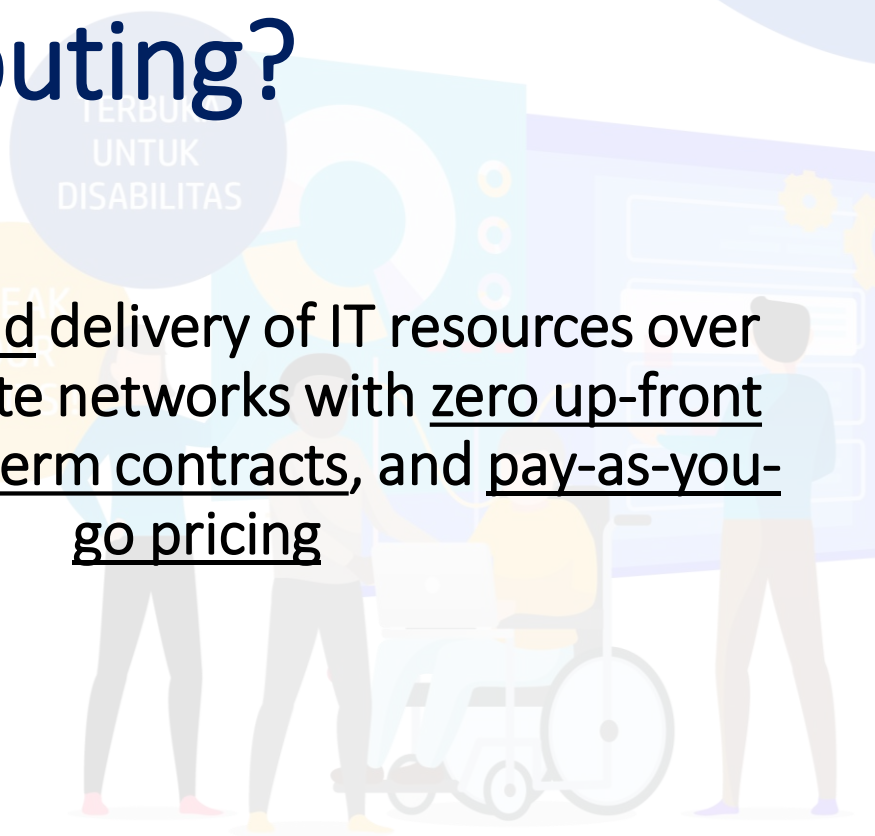


cloud

What is Cloud Computing?



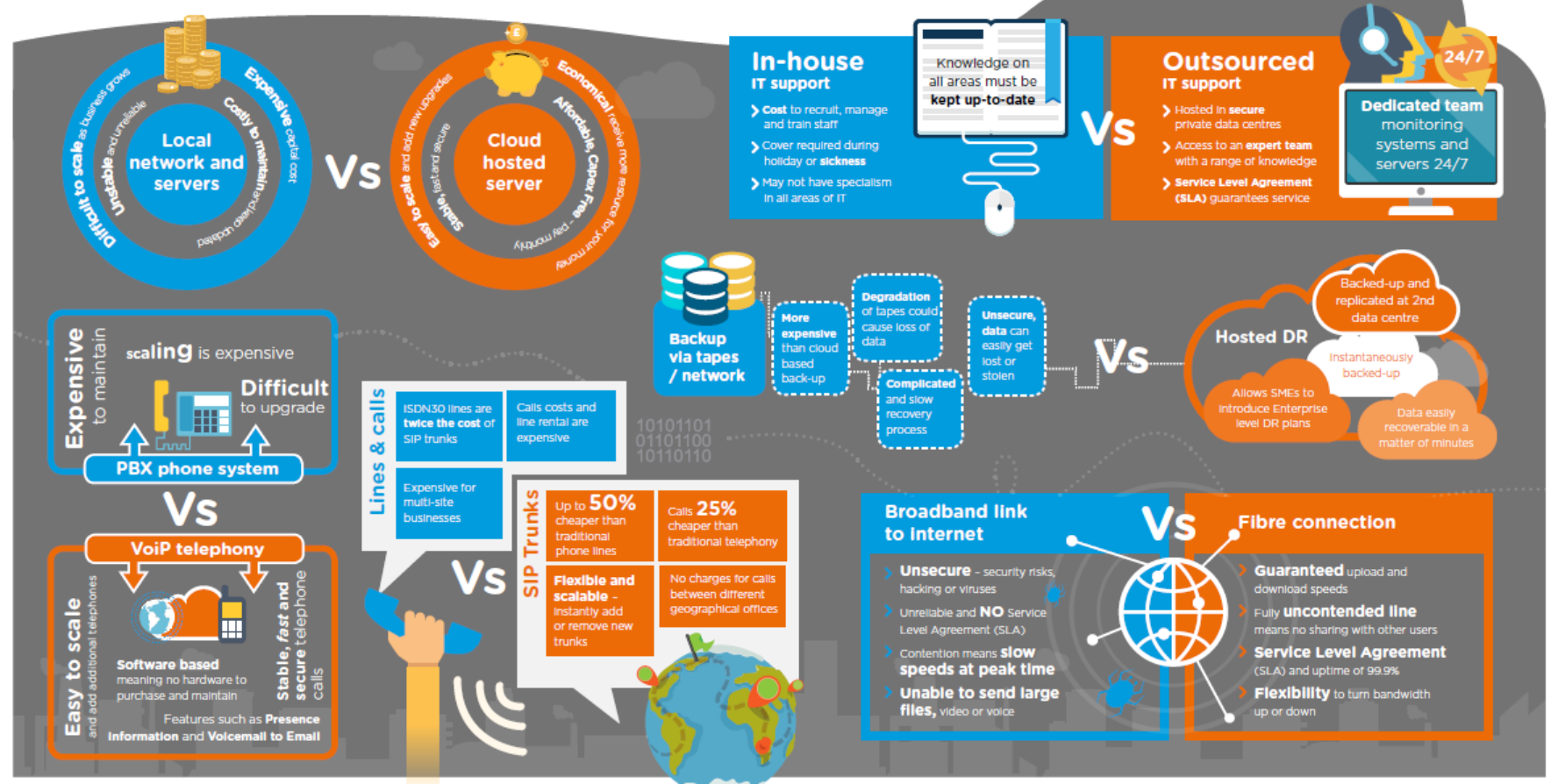
The on-demand delivery of IT resources over public or private networks with zero up-front costs, no long-term contracts, and pay-as-you-go pricing



ON-PREMISE Vs CLOUD HOSTED

■ On-Premise
■ Cloud Hosted

ebc group
your workplace technology partner





Publically Shared
Virtualised Resources

Supports multiple
customers



Supports connectivity
over the internet

Suited for less
confidential information



VS



Privately Shared
Virtualised Resources

Cluster of dedicated
customers

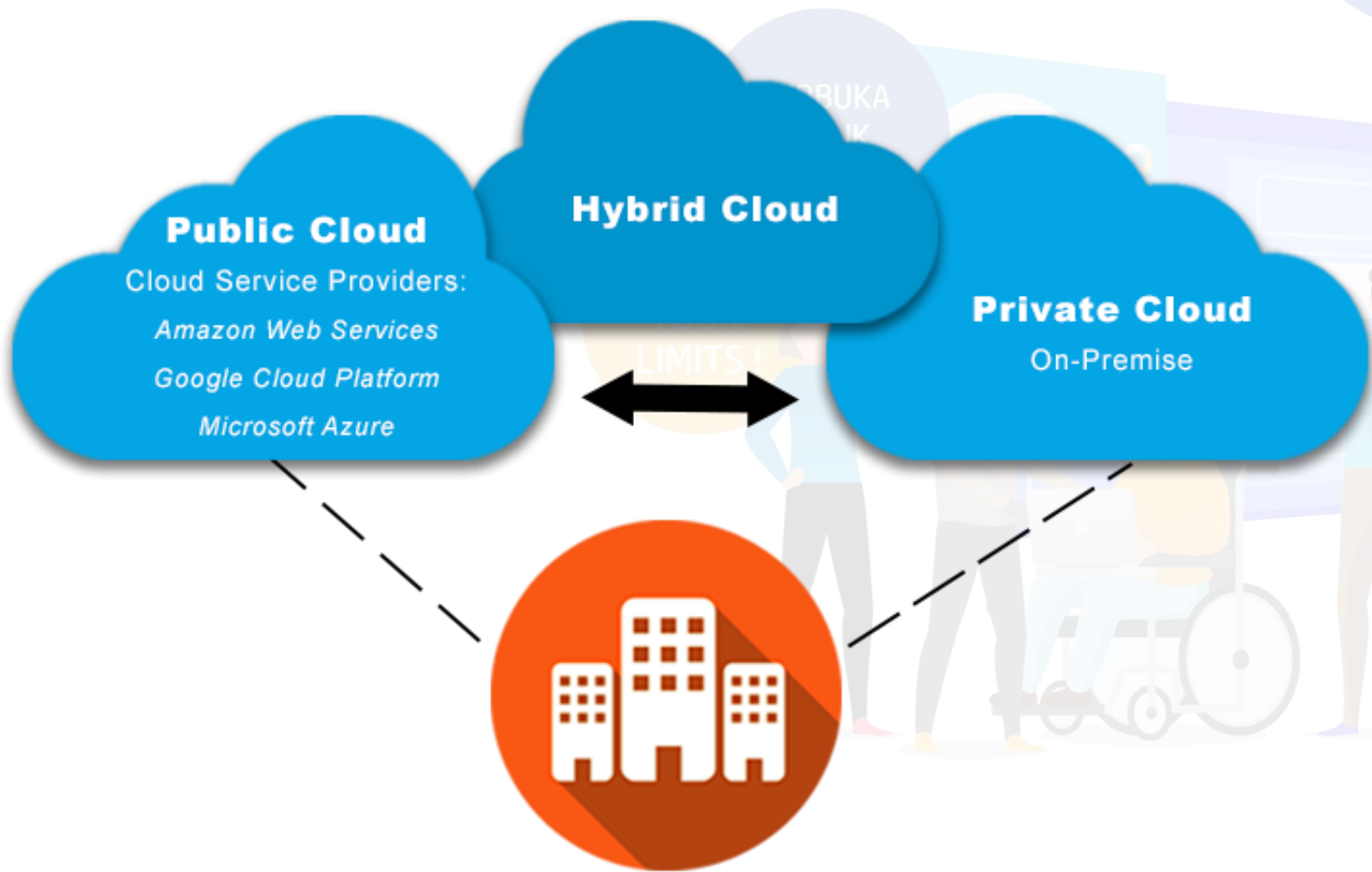


Connectivity over
internet, fibre and private network



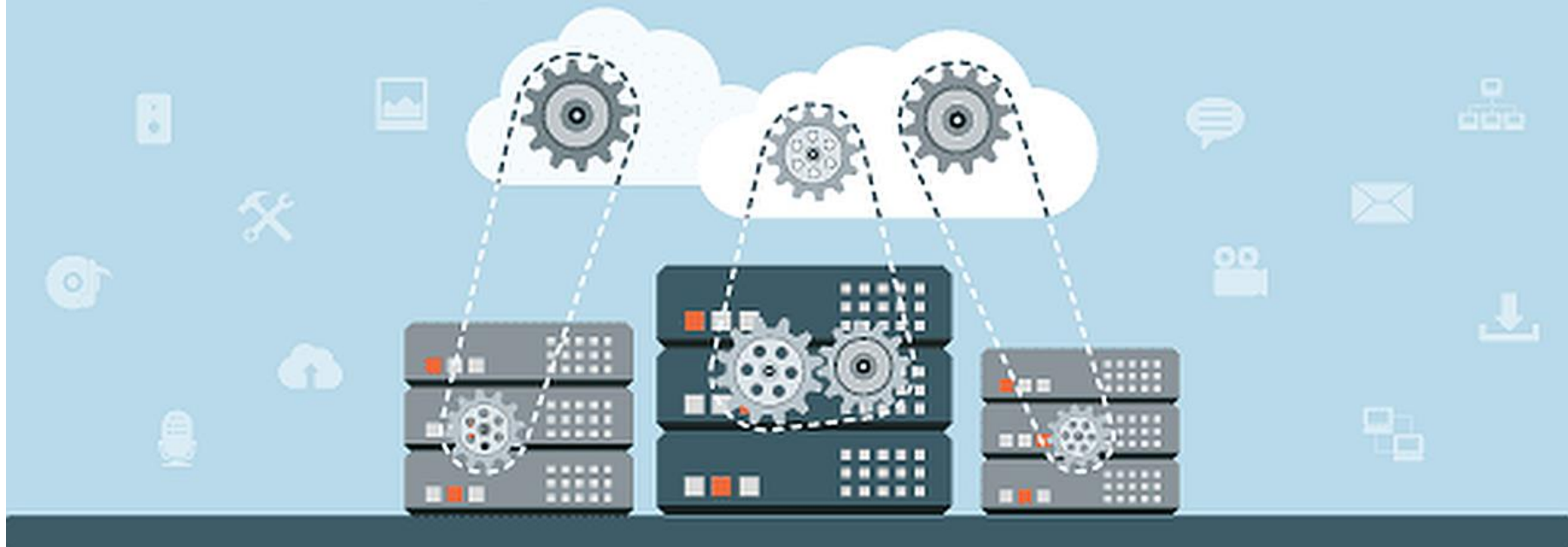
Suited for secured
confidential information
& core systems





IaaS vs. PaaS vs. SaaS

Comparing the Different Cloud Service Models



YOUR OWN CAR

On-premises solution



LEASED CAR

IaaS



TAXI

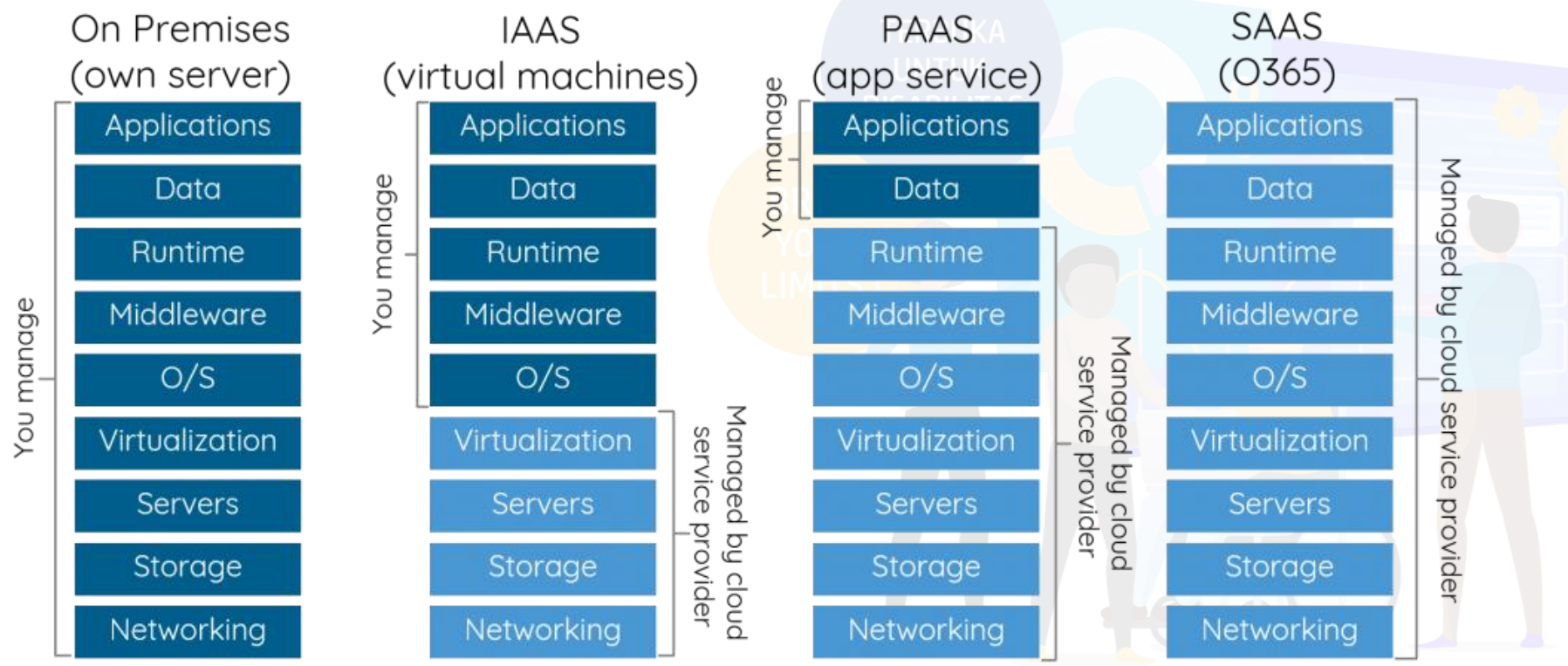
PaaS



BUS

SaaS





What is AWS?

AWS provides a highly reliable, scalable, low-cost infrastructure platform in the cloud that powers more than 1 million active businesses in 190 countries

Traditional Infrastructure



Equipment



Resources and
Administration



Contracts



Cost

AWS Cloud



No Up Front Expense
Pay for what you Use



Improve Time to
Market & Agility



Scale Up and
Down



Self-Service
Infrastructure

AWS Customers

- Over 1 million **Active** customers in 190 countries

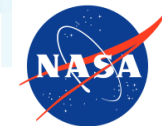
Enterprises



Startups



Public Sector



Benefit of Cloud Computing



Trade capital expense for variable expense



Benefit from massive economies of scale



Stop guessing about capacity



Increase speed and agility

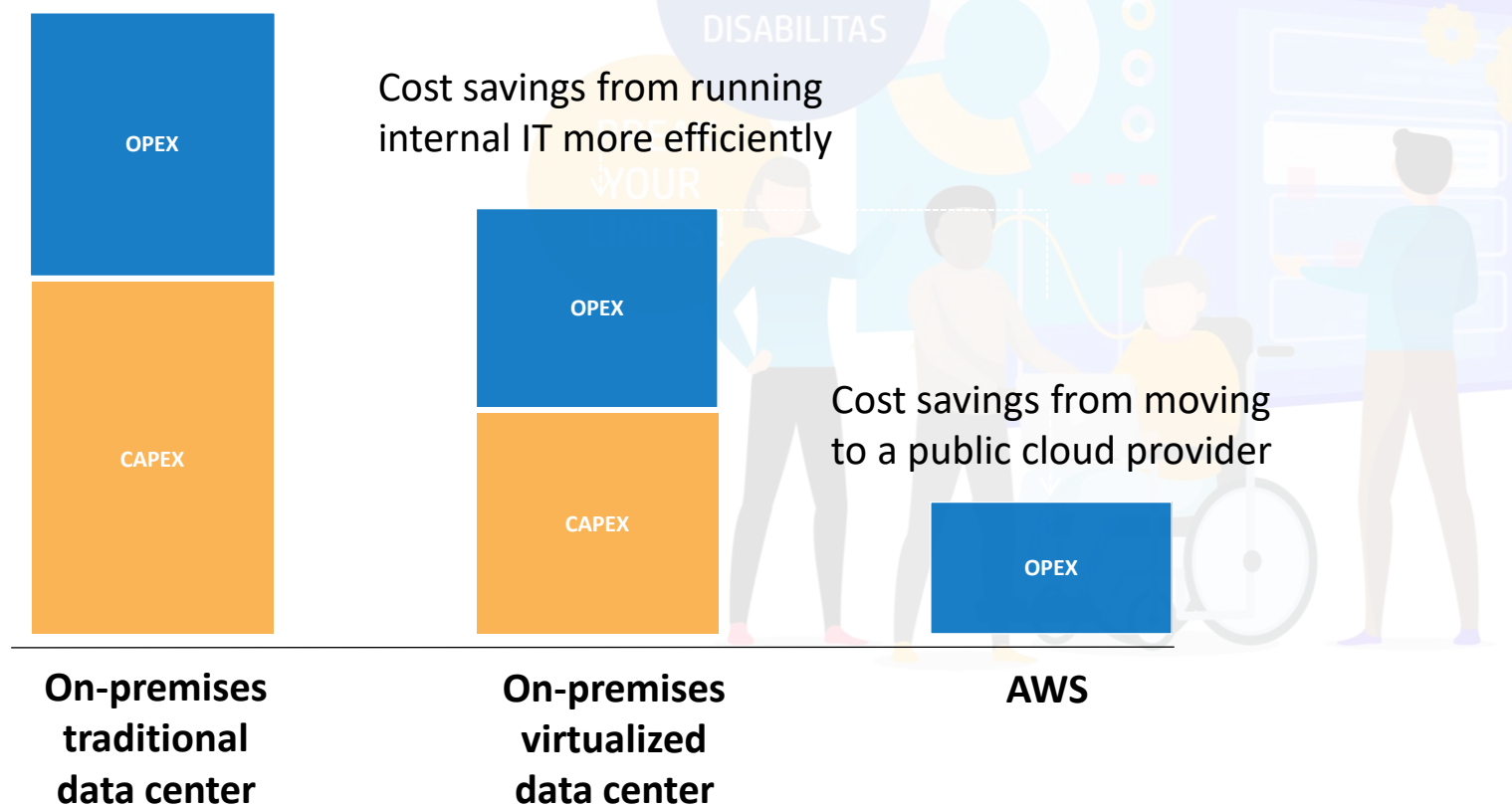


Focus on what matters



Go global in minutes

Trading CAPEX for OPEX



Benefit of Cloud Computing



Trade capital expense for variable expense



Benefit from massive economies of scale



Stop guessing about capacity



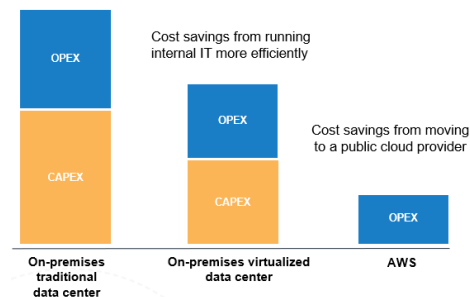
Increase speed and agility



Focus on what matters



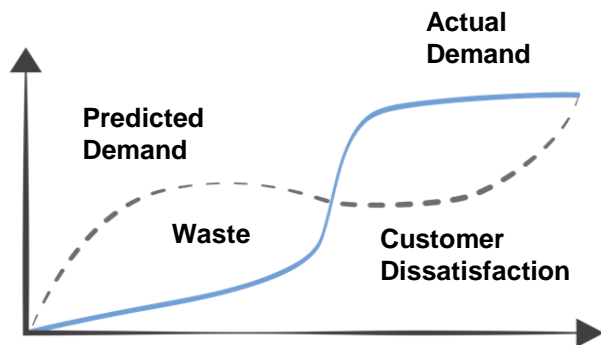
Go global in minutes



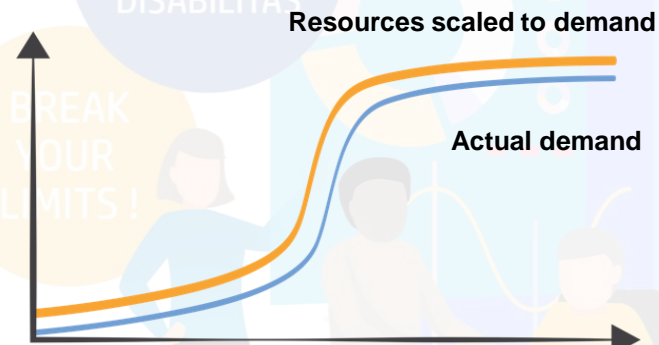
Proactive price reductions until Jan 2020



Stop Guessing Capacity



Rigid On-Premises Resources



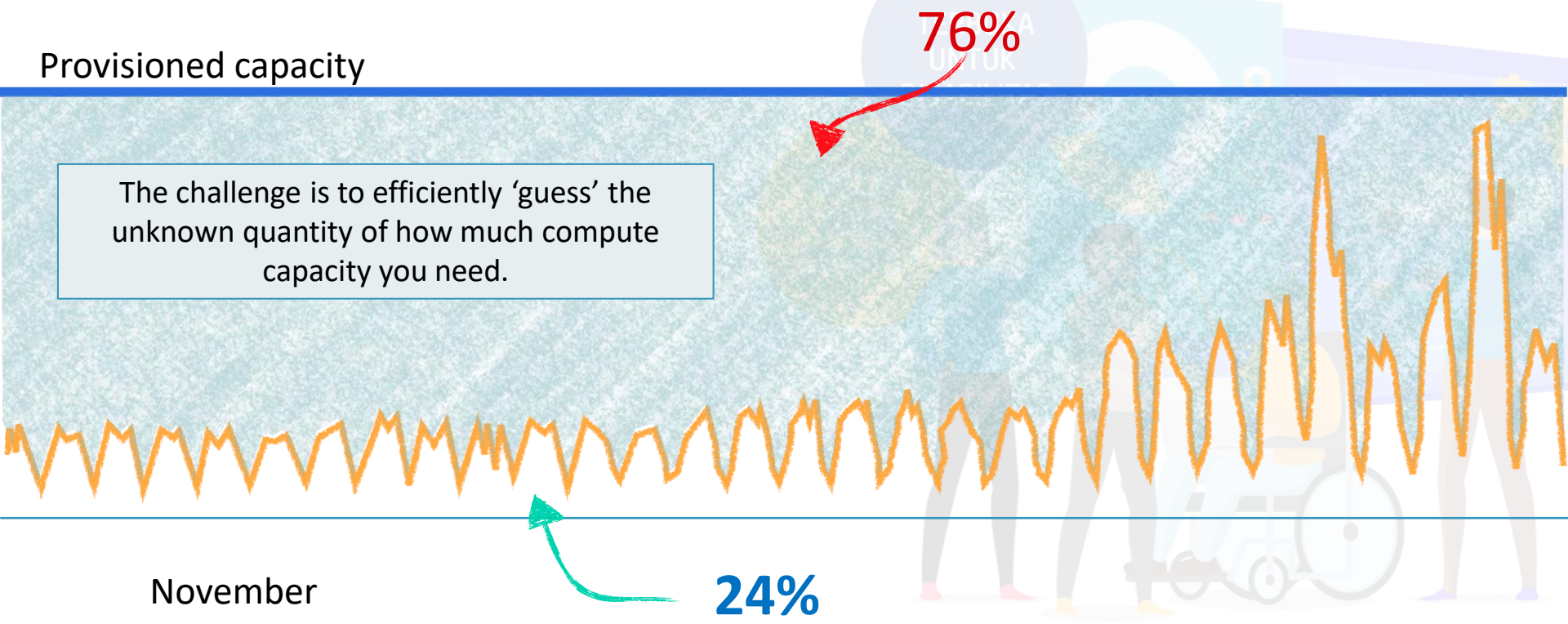
Elastic Cloud-Based Resources



November Traffic to Amazon.com

Provisioned capacity

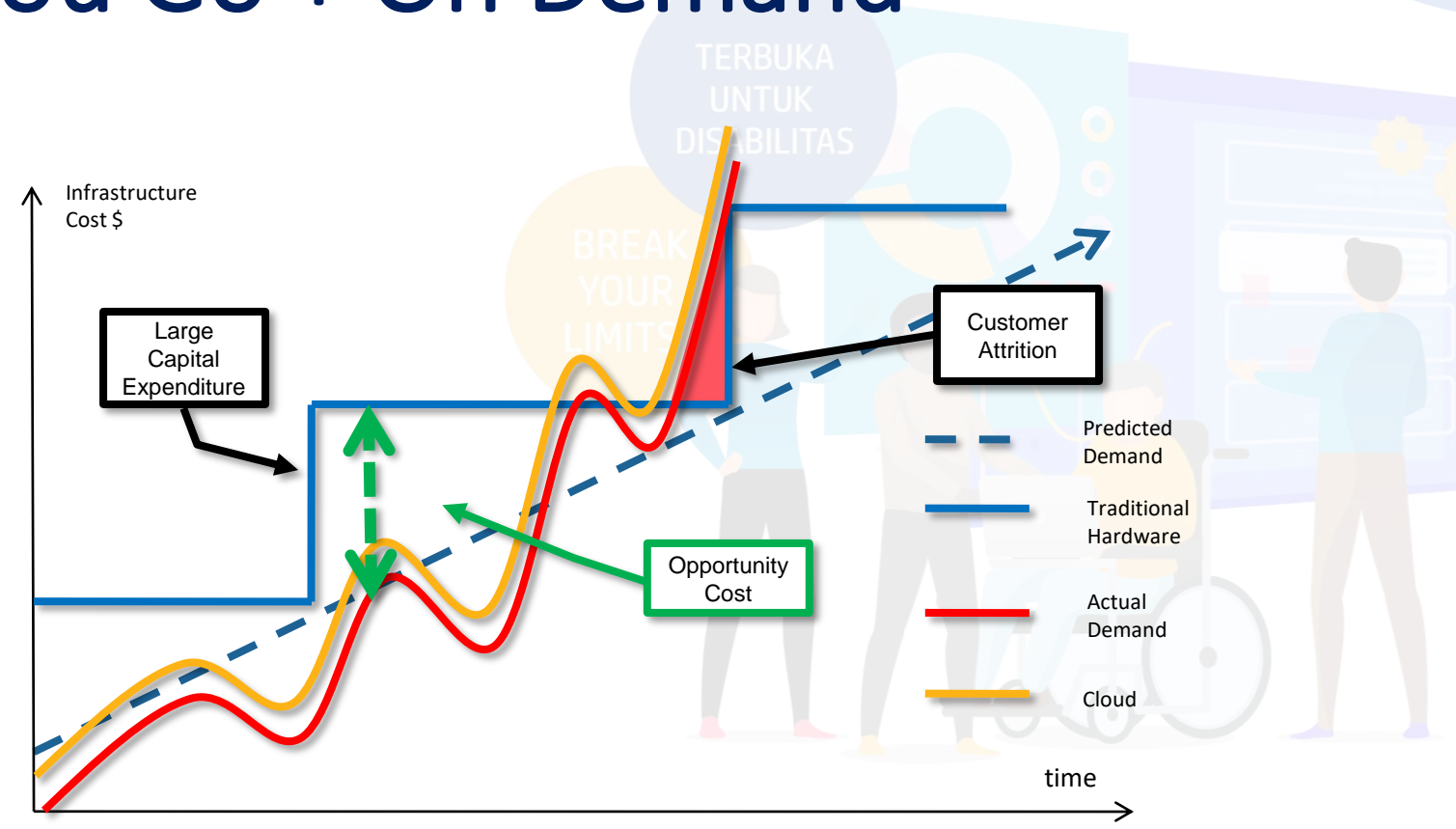
The challenge is to efficiently 'guess' the unknown quantity of how much compute capacity you need.



November

24%

Pay As You Go + On Demand



Benefit of Cloud Computing



Trade capital expense for variable expense



Benefit from massive economies of scale



Stop guessing about capacity



Increase speed and agility



Focus on what matters



Go global in minutes

Launch Instance Connect Actions

Filter by tags and attributes or search by keyword

Name	Instance ID	Instance Type	Availability Zone	Instance State
RedServer	i-00394196acaf556de	t2.micro	ap-southeast-1b	running
YoutubeServerBa...	i-01a6216767b6d9b...	t2.nano	ap-southeast-1b	running
ServerYouTube	i-0c0bb7ea3f8aa913f	t2.nano	ap-southeast-1c	running
PythonFurin	i-09b14704d1bb0c950	t2.micro	ap-southeast-1c	stopped

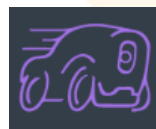
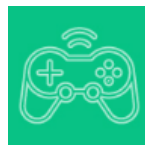
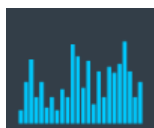


Amazon RDS



AWS has 24 Regions and 77 AZ with confirm 3 other regions, Indonesia, Spain and Japan.

Today's and future trends



TERBUKA
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DISABILITAS

BREAK
YOUR
LIMITS !

How to Start ?

aws  educate



Teach Tomorrow's Cloud Workforce Today

With the increasing demand for cloud employees, AWS Educate provides an academic gateway for the next generation of IT and cloud professionals.

Explore Cloud Career Pathways

Explore AWS Educate's Cloud Career Pathways to start building the key cloud skills you'll need to be successful in leading technology careers. Earn a completion credential for each pathway and share with prospective employers to show what you've learned.

Check out the roles below to learn more about each pathway and get started!

<h3>Cloud Computing 101</h3> <p>Take a crash course on the cloud, its history, solutions, and why companies across the globe are looking for employees with AWS cloud expertise.</p> <p>START ▶ LEARN MORE ▶</p>	<h3>Application Developer</h3> <p>Custom how App Developers design, test, and improve engaging web and mobile applications in the cloud? Learn more about the skills you'll need.</p> <p>START ▶ LEARN MORE ▶</p>	<h3>Cloud Support Associate</h3> <p>If you're excited by the future of cloud computing and enjoy working directly with customers, learn more about becoming a Cloud Support Associate.</p> <p>START ▶ LEARN MORE ▶</p>	<h3>Cloud Support Engineer</h3> <p>Interested in multiple technologies and working with companies to support AWS cloud solutions? Learn more about becoming a Cloud Support Engineer.</p> <p>START ▶ LEARN MORE ▶</p>
<h3>Cybersecurity Specialist</h3> <p>Cybersecurity Specialists use expertise in networking, programming, and coding to protect customer data every day. Learn more about the skills they use.</p> <p>START ▶ LEARN MORE ▶</p>	<h3>Data Integration Specialist</h3> <p>Excited about bringing data sources together to tell the story of a product's performance? Discover ways to build and improve products through data.</p> <p>START ▶ LEARN MORE ▶</p>	<h3>Data Scientist</h3> <p>Custom how discovering patterns in large data sets can translate into new business strategies? Learn more about how Data Scientists do this every day.</p> <p>CONTINUE ▶ LANGUAGE ▶</p>	<h3>DevOps Engineer</h3> <p>If you like working behind the scenes to tackle challenges and are curious about skills like scripting and coding, learn more about becoming a DevOps Engineer.</p> <p>START ▶ LEARN MORE ▶</p>
<h3>Machine Learning Scientist</h3> <p>Custom how artificial intelligence and predictive modeling are used to create dynamic experiences? Learn more about becoming a Machine Learning Scientist.</p> <p>START ▶ LEARN MORE ▶</p>	<h3>Software Development Engineer</h3> <p>If you're a builder who wants to learn more about using software engineering principles to design original applications, explore the skills you'll need.</p> <p>START ▶ LEARN MORE ▶</p>	<h3>Solutions Architect</h3> <p>Custom how Solutions Architects deliver strategic, scalable AWS cloud infrastructures to their customers? Learn more about the skills they use every day.</p> <p>START ▶ LEARN MORE ▶</p>	<h3>Web Development Engineer</h3> <p>If you're interested in developing innovative web experiences through software design and programming, learn more about the skills you'll need.</p> <p>START ▶ LEARN MORE ▶</p>

nd More

Find out about badges

Expand your career exploration by earning an AWS Educate Badge in one of today's hottest growing internet career Learning, Internet of Things (IoT) and Startup. As you pursue a badge in one or more of these areas, AWS Educate and industry experts on from AWS services are used to design robust game environments, create and architect digital networks of devices, systems, and services, and/or grow and expand startup virtualized teams. AWS Educate Badges help demonstrate your expertise by persistence through, and completion of the content on the pathway. Click to learn more! Select one of the following learning pathways to get started.



<h3>Cloud Literacy (Inventor)</h3> <p>The AWS Educate Cloud Literacy Badge for Inventors is for students who are starting to learn about computer science and the cloud. This badge will introduce you to the cloud through an adventure where a school grading system has been hacked and teach you about the fundamentals of the cloud.</p> <p>EARN YOUR BADGE</p>	<h3>AWS RoboMaker Badge</h3> <p>The purpose of this course is to introduce students to the basics of the AWS RoboMaker service and how to develop, test, and deploy intelligent robotic applications at scale utilizing the open-source robotics software frameworks, Robot Operating System (ROS), with connectivity to cloud services, and building within the Cloud9 IDE.</p> <p>EARN YOUR BADGE</p>
<h3>DeepLens Badge</h3> <p>DeepLens is a fully programmable video camera that comes with code and pre-trained models designed to expand your deep learning knowledge and skills. These directly from professionals in this field, complete articles and review reference materials to learn more about DeepLens and how you can start using the device for your projects or research.</p> <p>EARN YOUR BADGE</p>	<h3>AWS DeepRacer Badge</h3> <p>In this brief workshop-style badge we will be talking about reinforcement learning using Amazon Web Services' DeepRacer, a deep learning-enabled race car. This course will explore reinforcement learning by exploring the 1/16 inch scale race car.</p> <p>EARN YOUR BADGE</p>
<h3>Alexa Badge</h3> <p>Alexa is Amazon's cloud-based voice service available on tens of millions of devices from Amazon and third-party device manufacturers. You can use Alexa to build natural voice experiences to interact with devices and technology in a new, intuitive way to interact with the technology they use every day.</p> <p>EARN YOUR BADGE</p>	<h3>Sumerian Badge</h3> <p>Amazon Sumerian is a set of tools for creating high-quality virtual reality (VR) experiences on the web. With Amazon Sumerian, you can construct an interactive 3D scene without any programming experience, test it in the browser, and publish it as a website that is immediately available to users. In this specialization badge, you'll learn how to build an application in Amazon Sumerian.</p> <p>EARN YOUR BADGE</p>
<h3>IoT Badge</h3> <p>The AWS Educate IoT Badge provides you with an introductory exploration of IoT and AWS. Learn how networked connectivity of devices, systems, and services is changing the world around us.</p> <p>EARN YOUR BADGE</p>	<h3>Gaming Badge</h3> <p>The AWS Educate Gaming Badge leads you on a guided tour of AWS gaming tools. Through hands-on activities learn how to build a game environment, design a character and create multiplayer functionality.</p> <p>EARN YOUR BADGE</p>
<h3>Startup Badge</h3> <p>The AWS Educate Startup Badge empowers you to real-world application and use cases of AWS to jumpstart and scale startup deployment efforts. You'll explore strategies to scale your platform, secure and distribute content and ways to improve your investor pitch.</p> <p>EARN YOUR BADGE</p>	<h3>Datapalooza Badge</h3> <p>In this workshop, we'll be talking about deep learning using Amazon Web Services' DeepLens which is a deep learning-enabled video camera.</p> <p>EARN YOUR BADGE</p>
<h3>American Heart Association: PMP Badge</h3> <p>AWS Educate collaborated with the American Heart Association to bring heartware visibility into the AFib Precision Medicine Platform, a cloud-based solution that streamlines access to datasets and provides secure workspaces with state-of-the-art tools for data analysis.</p> <p>EARN YOUR BADGE</p>	



Welcome to the AWS Cloud Computing Fundamentals course.

As you move through this pathway, you will be introduced to the basics of cloud computing as well as many of the services offered on the AWS Cloud.



Topics

- AWS Cloud Computing Fundamentals
- AWS Cloud Computing Services



Assessments

- Knowledge Checks (3 to 5 item assessments)



Audience

- This survey pathway is aimed at individuals interested in cloud computing with little to no working knowledge of AWS.

Duration:

- 8-10 hours

Good luck with your journey!

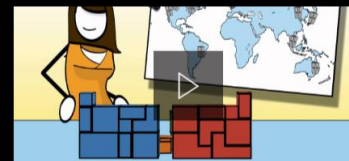
Get Started!

AWS Cloud Computing Fundamentals

Explore the content below to learn about the fundamentals of cloud computing. Scroll through the window below, or click the expand icon to enlarge the content.

opportunity to replace upfront capital infrastructure expenses with low variable costs that scale with your business. With the cloud, businesses no longer need to plan for and procure servers and other IT infrastructure weeks or months in advance. Instead, they can instantly spin up hundreds or thousands of servers in minutes and deliver results faster.

Today, AWS provides a highly reliable, scalable, low-cost infrastructure platform in the cloud that powers hundreds of thousands of businesses in 190 countries around the world. [3]



What is AWS?

Cloud Computing Basics

Started: 15 Jun at 12:25

Quiz Instructions

This quiz consists of questions carefully designed to help you self-assess your comprehension of the information presented on the topics covered in the module.

Read each question carefully, and click on the answer choice next to your response. Each correct or incorrect response will result in appropriate feedback immediately at the bottom of the screen.

Good luck!!



Question 1

1 pts

AWS was started in 2009.

☐ True

☐ False



AWS Educate Starter Account

Your cloud journey has only just begun. Use your AWS Educate Starter Account to access the AWS Console and resources, and start building in the cloud!

AWS Educate Starter Account

Your account has an estimated **60** credits remaining and access will end on **Apr 30, 2020**.

Welcome to AWS Educate Starter Account

Use your Starter Account to access to a wide variety of AWS Services and start building! Click on the AWS Console button to sign and get started.

• What AWS services can I use in my Starter Account?

You can use the following services in your Starter Account: apigateway, athena, cloud9, cloudformation, cloudfront, cloudtrail, cloudwatch, codecommit, codedeploy, codepipeline, cognito-identity, cognito-idp, cognito-sync, comprehend, deeplens, dynamodb, ec2, ecs, elasticsearch, elasticfilesystem, elasticloadbalancing, elasticmapreduce, events, execute-api, glue, iam, inspector, iot, kinesis, kinesisanalytics, firehose, kms, lambda, lex, logs, machinelearning, mobilehub, opworks, polly, rds, rekognition, route53 (other than domain name purchasing), s3, sns, sqs, swf, sagemaker, translate, transcribe

• What regions can I use with a Starter Account?



Your Starter Account Status



Active

full access (furin.ongko+student@trainocate.com)



\$60.03

credits (estimated)



319d 20:50:59

remaining term



0:60

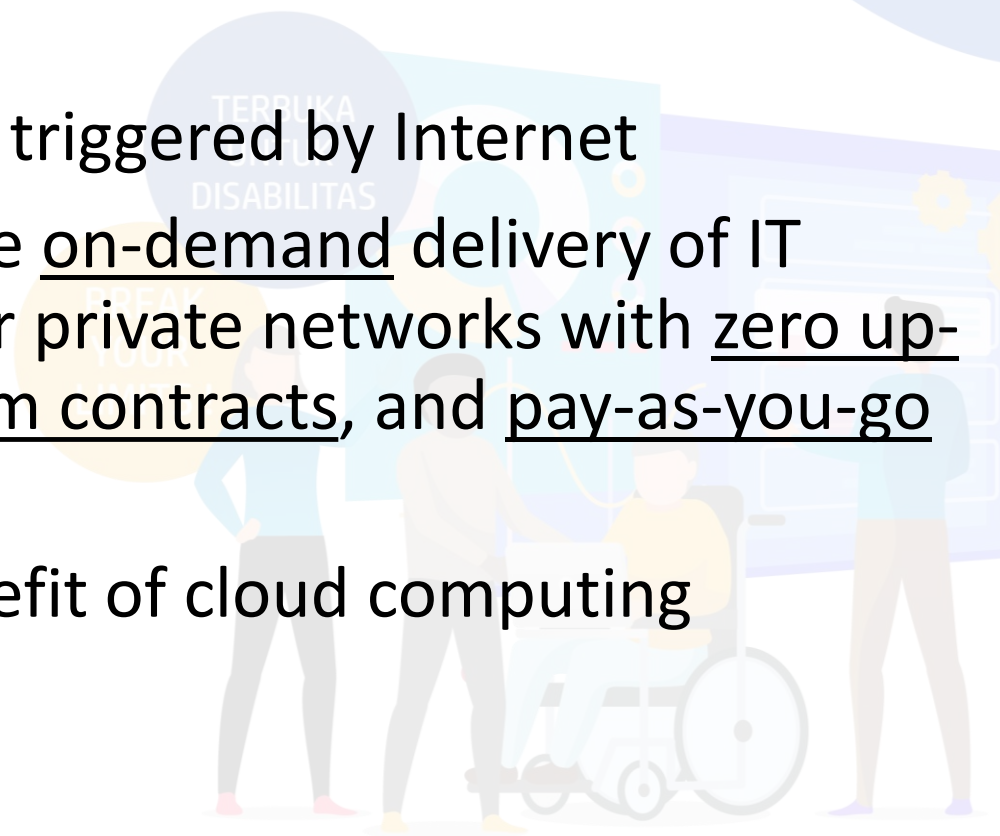
session time

Account Details

AWS Console





Key Point

- Industry Revolution 4.0 triggered by Internet
- Cloud computing is : the on-demand delivery of IT resources over public or private networks with zero up-front costs, no long-term contracts, and pay-as-you-go pricing
- We have define six benefit of cloud computing



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