Ressources et Annexes :

Qu'est ce que le nuage (cloud)

https://www.cigref.fr/archives/histoire-cigref/blog/cloud-computing-histoire-de-linformatique-en-nuages/

Les origines du calcul

http://www.histoireinform.com/Histoire/chronlg2.htm

Les origines du stockage

http://www.emsi-histoireinformatique.fr/le-stockage-en-informatique/

Les origines du réseau

https://www.internetsociety.org/wp-content/uploads/2017/09/ISOC-History-of-the-Internet_1997.pdf

Pourquoi la virtualisation s'est imposée ?

https://csrc.nist.gov/Topics/technologies/cloud-computing-and-virtualization

Définition du « Cloud / informatique »

https://csrc.nist.gov/publications/detail/sp/800-145/final

Avantages de la consommation cloud

https://aws.amazon.com/fr/application-hosting/benefits/

Qu'est ce que AWS ?

https://aws.amazon.com/fr/what-is-cloud-computing/

Où se trouve AWS ?

https://aws.amazon.com/fr/about-aws/global-infrastructure/

https://www.infrastructure.aws/

Ressources et Annexes :

Présentation de la console (2020)

https://docs.aws.amazon.com/fr_fr/awsconsolehelpdocs/latest/gsg/getting-started.html

L'interface en ligne de commande (CLI)

https://docs.aws.amazon.com/fr_fr/cli/latest/userguide/install-windows.html

Software développement kit (sdk)

https://aws.amazon.com/fr/getting-started/tools-sdks/?nc2=type_a

Introduction aux services

https://docs.aws.amazon.com/fr_fr/index.html

https://aws.amazon.com/fr/architecture/icons/

Qu'est ce que le CALCUL dans le cloud

https://www.youtube.com/watch?v=7dpFeXV_hqs

[ATELIER] Lancement d'une instance EC2 on demand

https://aws.amazon.com/fr/ec2/

[ATELIER] Connexion à une instance avec session manager

https://aws.amazon.com/fr/about-aws/whats-new/2018/09/introducing-aws-systems-manager-session-manager/

```bash
#!/bin/bash
yum install httpd php php-mysql -y
service httpd start
systemctl enable httpd
echo "<h1>Hello World</h1>" >> /var/www/html/index.html
```

bootstrap.txt

Ressources et Annexes :

```
***************************** Section pour le serveur 1*****************************
#!/bin/bash
yum install httpd –y
service httpd start
echo "<h1>SERVEUR NUMERO 1</h1>" >> /var/www/html/index.html
***************************** Section pour le serveur 2*****************************
#!/bin/bash
yum install httpd –y
service httpd start
echo "<h1>SERVEUR NUMERO 2</h1>" >> /var/www/html/index.html
***************************** Section pour le serveur 3*****************************
#!/bin/bash
yum install httpd –y
service httpd start
echo "<h1>SERVEUR NUMERO 3</h1>" >> /var/www/html/index.html
```

BootStrap (1).txt

[ATELIER] Elastic Load Balancing (ELB)

https://aws.amazon.com/fr/elasticloadbalancing

[ATELIER] AutoScaling

https://aws.amazon.com/fr/ec2/autoscaling/?nc1=h_ls

https://docs.aws.amazon.com/fr_fr/autoscaling/ec2/userguide/create-launch-config.html

https://docs.aws.amazon.com/fr_fr/autoscaling/ec2/userguide/create-lc-with-instanceID.html

https://docs.aws.amazon.com/fr_fr/autoscaling/ec2/userguide/change-launch-config.html

Ressources et Annexes :

[ATELIER] AWS Elastic Beanstalk

https://aws.amazon.com/fr/elasticbeanstalk/?nc2=h_ql_prod_cp_ebs

Elastic Beanstalk > Environnements > My1stappEb-env-1

(i) Création de My1stappEb-env-1
Cela peut prendre quelques minutes..

Liste des actions lors de la création

5:00pm   Environment health has transitioned from Pending to Ok. Initialization completed 22 seconds ago and took 2 minutes.

4:59pm   Successfully launched environment: My1stappEb-env-1

4:59pm   Application available at My1stappEb-env-1.eba-ig2k3pqx.us-east-1.elasticbeanstalk.com.

4:59pm   Added instance [i-0f3d0cc7359515012] to your environment.

4:58pm   Waiting for EC2 instances to launch. This may take a few minutes.

4:58pm   Environment health has transitioned to Pending. Initialization in progress (running for 47 seconds). There are no instances.

4:57pm   Created EIP: 52.206.138.216

4:57pm   Created security group named:
             awseb-e-csc8unc9m3-stack-AWSEBSecurityGroup-12G0M4GVQGUVE

4:57pm   Using elasticbeanstalk-us-east-1-418112653777 as Amazon S3 storage bucket for environment data.

4:57pm   createEnvironment is starting.

Ressources et Annexes :

AWS Lambda (serverless)

https://aws.amazon.com/fr/lambda/?nc2=h_ql_prod_cp_lbd

[ATELIER] AWS Lambda

AMAZON Elastic File system – Les caractéristiques

https://aws.amazon.com/fr/efs/

AMAZON Elastic File system – Avantages et utilisation

https://aws.amazon.com/fr/efs/faq/

AMAZON S3 Simple storage service – Les caractéristiques

https://aws.amazon.com/fr/s3/

AMAZON S3 Simple storage service - Avantages et utilisation

https://aws.amazon.com/fr/s3/faqs/?nc=sn&loc=7

[ATELIER] AMAZON Elastic Block Store

Stockage de Bases de données dans AWS (RDS / DynamoDB)

https://aws.amazon.com/fr/products/databases/

https://aws.amazon.com/fr/neptune/

https://aws.amazon.com/fr/redshift/

https://aws.amazon.com/fr/timestream/

https://aws.amazon.com/fr/elasticache/?nc2=type_a

[ATELIER] AMAZON RDS créer une instance accessible depuis internet en 5 min

https://docs.aws.amazon.com/fr_fr/rds/?id=docs_gateway

Lambda.txt

```
exports.handler = function(event, context, callback) {
    var event_received_at = new Date().toISOString();
    console.log('Event received at: ' + event_received_at);
    console.log('Received event:', JSON.stringify(event, null, 2));

    if (event.Success) {
        console.log("Success");
        context.callbackWaitsForEmptyEventLoop = false;
        callback(null,"Email d'alerte pour Erik");
    } else {
        console.log("Failure");
        context.callbackWaitsForEmptyEventLoop = false;
        callback(new Error("Failure from event, Success = false, I am failing!"), 'Destination Function Error Thrown');
    }
};
```

atelier-EBS.txt

```
sudo su
lsblk
fdisk -l
mkfs -t ext4 /dev/xvdf
clear
pwd cd /
mkdir VolumeEBS1
mount /dev/xvdf VolumeEBS1
echo 'ceci est mon nouveau volume EBS de 1024 Go' > VolumeEBS1/data-ebs.txt
```

réaliser un snapshot puis
umount VolumeEBS1
détacher le volume dans la console supprimer le volume noter le nom du snapshot
re provisionner un nouveau volume a partir du snapshot
mount /dev/xvdf VolumeEBS1
verifier la présence du fichier ebs.txt

Ressources et Annexes :

Content Delivery Network (CDN) data caching

https://www.infrastructure.aws/

[ATELIER] AMAZON Cloudfront (stockage cache réseau CDN)

https://docs.aws.amazon.com/fr_fr/AmazonCloudFront/latest/DeveloperGuide/IntroductionUseCases.html

[ATELIER] AMAZON VPC

https://docs.aws.amazon.com/fr_fr/vpc/latest/userguide/VPC_Subnets.html#VPC_Sizing

https://www.youtube.com/watch?v=24yWA-_BuKE

AMAZON Route53

https://docs.aws.amazon.com/fr_fr/AWSEC2/latest/UserGuide/putty.html

Ressources et Annexes :

IAM Les Bonnes pratiques Atelier 1

https://aws.amazon.com/fr/premiumsupport/knowledge-center/recover-aws-password/

AWS CodeDeploy

https://aws.amazon.com/fr/codepipeline/

https://aws.amazon.com/fr/codecommit/?nc2=type_a

AWS Practice : exemples de questions d'examen

https://aws.amazon.com/fr/certification/certified-cloud-practitioner/

Cloud practitioner

https://aws.amazon.com/fr/premiumsupport/plans/

https://media.amazonwebservices.com/AWS_TCO_Web_Applications.pdf

https://d0.awsstatic.com/whitepapers/aws_pricing_overview.pdf

https://d0.awsstatic.com/whitepapers/aws-overview.pdf