

-INTERNET
-LIVE CHAT
-MEDIA
-PHOTOS
-VIDEOS
-MUSIC

Fast Lane IT-Forum

AWS Spezial

Frankfurt 18.12.2019

aws partner
network

Select
Consulting
Partner

APN Training Partner

Fast Lane



Herzlich Willkommen zum AWS IT-Forum.

Agenda 18. Dezember 2019

Ab 12:30 Empfang & Brötchen

13:00 —13:15 What happens in Vegas stays in Vegas? (Thomas Mitzka)

13:15 —14:00 Evolution of Containers & Serverless (Steffen Grunwald, AWS)

14:00 —14:45 Next Generation Data Processing & In-Memory Computing mit AWS (Markus Kett)

14:45 —15:00 Kaffeepause

15:00 —15:45 High-Speed Digitalisierung und hochsicherer Datentransfer mit AWS bei der Allianz SE (Christian Kümmer)

15:45 —16:00 What's new about AWS Training? (Thomas Mitzka)

Ab 16:00 Snack & Talk

Feedback

Zum Feedbackbogen

Wir hoffen, die Veranstaltung entspricht Ihren Erwartungen.
Wir freuen uns über Ihr Feedback.



Jetzt 20% auf AWS Trainings!

Wir verlängern bis zum **31.01.2020** für alle Teilnehmer
des AWS IT-Forums unsere 20%-Aktion!

Buchen Sie jetzt mit dem **Code „AWS 2019 20%“** und
erhalten Sie 20% Rabatt auf Ihr nächstes Training.

Alle AWS – Aktionstermine finden Sie unter:

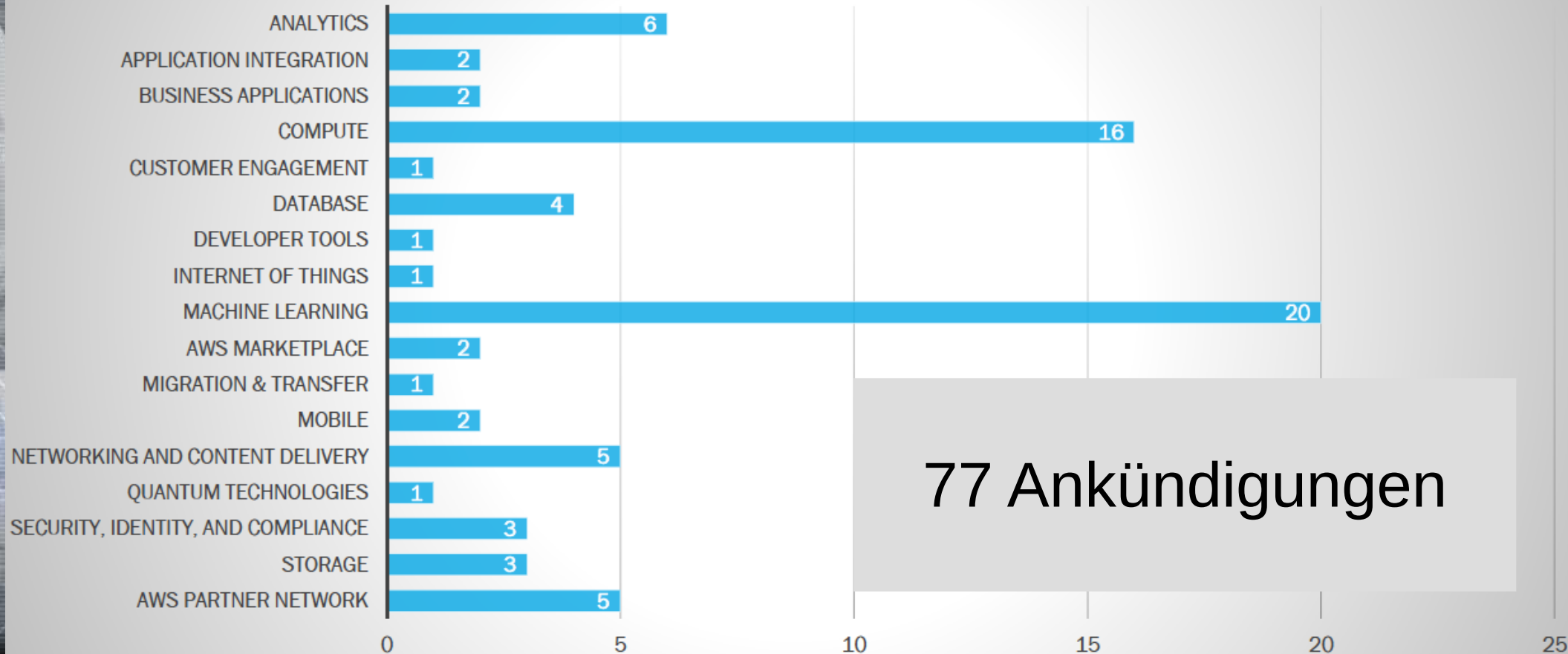
www.flane.de/aws-special

AWS-Aktionstermine



AWS re:invent / 01.Dec – 06.Dec 2019 Las Vegas

Annoucement by Category - 2019



Ein paar High-Lights

- Analytics

- **Amazon EMR** now available in your DC with AWS outpost

- Compute

- **EC2 Image Builder** (life cycle Linux / Windows Server Images)
- **Compute Optimizer** (ML assists to optimize consumption / up to 25% savings)
- New instance types, better performance, cost optimized

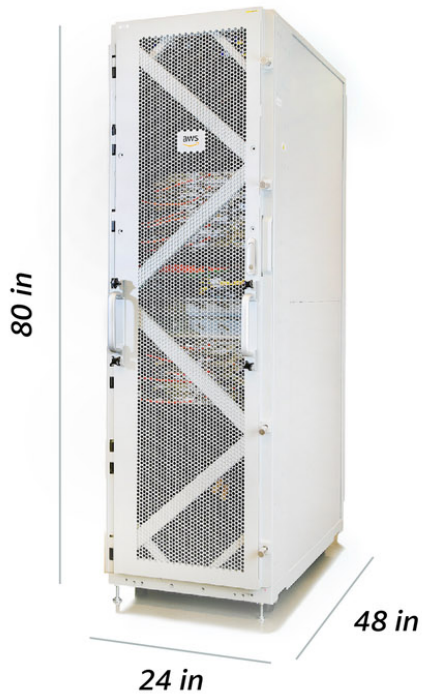
- Machine Learning

- Code guru (automated code review/optimization – based on best practice & ML)
- Deep Java Library (DJL), API to train, test and deploy Deep Learning Models in Java
- Trabscribe Medical speech recognition
- **Sagemaker** enhancements / Sagemaker studio IDE for ML
- **Deep Composer** / ML for Keyboards / make melody to song

- Analytics

- **Amazon EMR** now available in your DC with AWS outpost

42U Rack



Patch Panels
1/10/40/100G
Network Fiber
Uplink Options

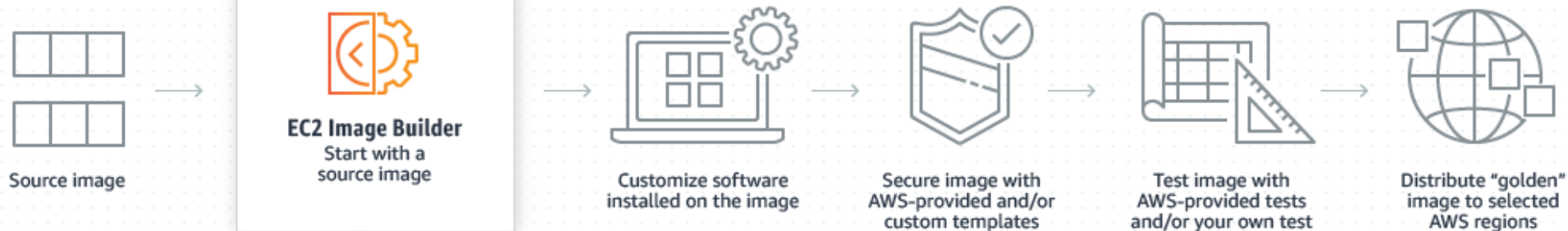
Network Switches

Hosts



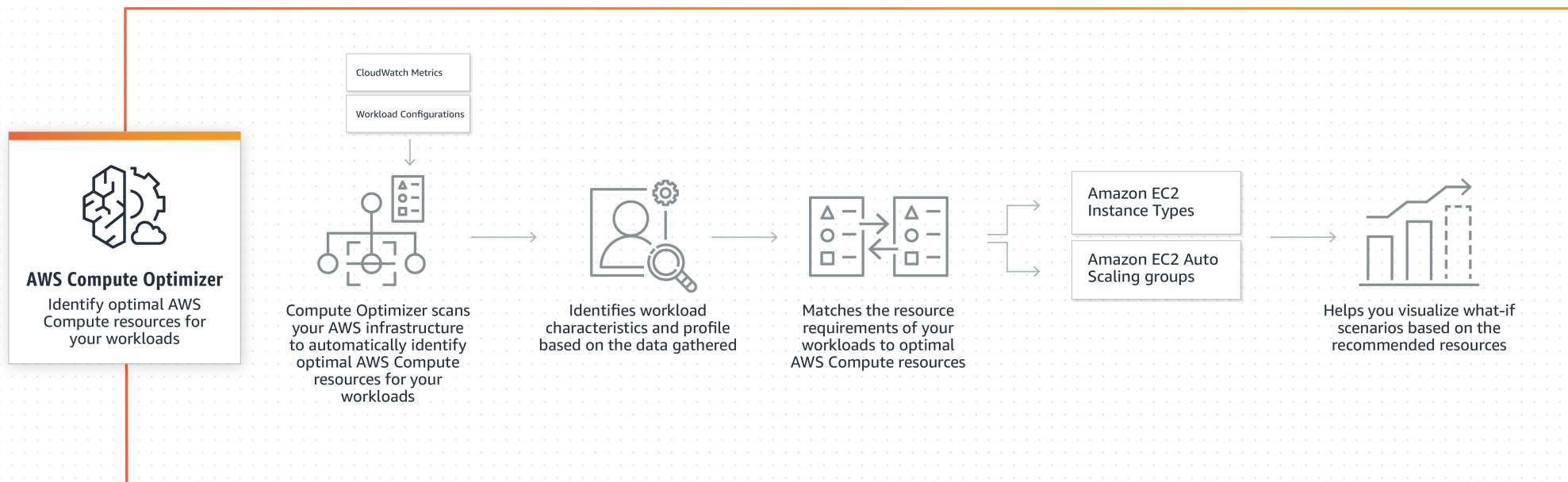
5kVA-15kVA
Power Supply
With support for
redundant feeds

- Compute
 - **EC2 Image Builder** (life cycle Linux / Windows Server Images)



- Compute

- **Compute Optimizer** (ML assists to optimize consumption / up to 25% savings)



Machine Learning

Sagemaker enhancements / Sagemaker studio IDE for ML

The screenshot displays the Amazon SageMaker Studio IDE interface. The main window shows a Jupyter notebook with Python code for training a TensorFlow model using SageMaker. The code includes setting up the estimator, defining rules for overfitting, and starting the training job.

```
[8]: estimator = TensorFlow(
    role=sagemaker.get_execution_role(),
    base_job_name='mnist-tensorflow-example',
    train_instance_count=1,
    train_instance_type='ml.p3.2xlarge',
    image_name='cpu_training_image',
    entry_point='entrypoint_script',
    framework_version='1.13',
    py_version='py3',
    train_max_run=3600,
    script_mode=True,
    sagemaker_session= sess,
    ## New parameter
    rules = [ Rule.sagemaker(rule_configs.vanishing_gradient()),
              Rule.custom(name='Overfitting', # used to identify the rule
                           image_uri='759209512951.dkr.ecr.us-west-2.amazonaws.com',
                           instance_type='ml.c4.xlarge', # instance type to run the
                           source='inv_custom_rule.py', # path to the rule source f
                           rule_to_invoke='CustomGradientRule', # name of the class
                           volume_size_in_gb=400, # EBS volume size required to be
                           collections_to_save=[CollectionConfig(name='losses')],
                           rule_parameters={
                               'threshold': '20.0' # this will be used to initialize
                           }) ],
    hyperparameters = {'num_epochs': 100 }
)
```

Note that Sagemaker-Debugger is only supported for py_version='py3' currently.

Let's start the training by calling `fit()` on the MXNet estimator

```
[9]: # After calling fit, SageMaker will spin off 1 training job and 1 rule job for y
# The rule evaluation status(es) will be visible in the training logs
# at regular intervals

estimator.fit(wait=False)
```

Describe Trial Component

Experiment: Unassigned
Trial: Unassigned

Trial stages		Charts	Metrics	Parameters	Artifacts	AWS Settings	Debugger
mnist-tensorflow-example-2019-12-02-09-52-13-126-aws-training-job							
Status	Last modified	Rule name		Job ARN			
Created	4 minutes ago	VanishingGradient		arn:aws:sagemaker:us-west-2:3			
15 minutes ago	4 minutes ago	Overfitting		arn:aws:sagemaker:us-west-2:3			

Trial Component Chart

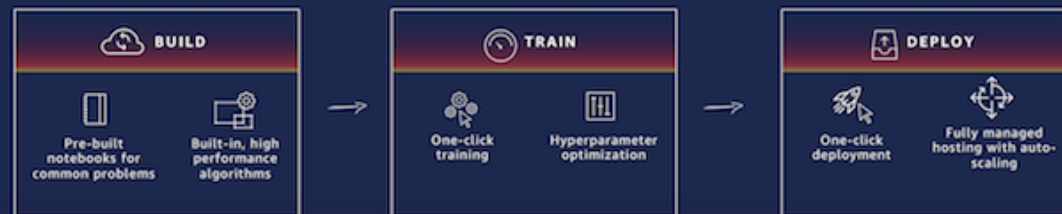
TRIAL COMPONENTS 1 rows selected. Select rows to toggle chart visibility.

Experiment	Trial	Trial Component	Type	Train
N/A	N/A	mnist-tensorflow-example-2019-12-02-09-52-13-126-aws-trainin...	Training job	~10

2 CHARTS

sparse_softmax_cross_entropy_loss/value:0_avg with 1-minute aggregation

Amazon SageMaker

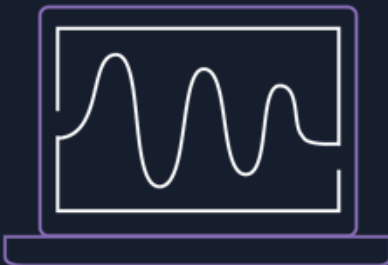


- Machine Learning
Deep Composer / ML for Keyboards / make melody to song



Keyboard

Input a melody by connecting the AWS DeepComposer keyboard to your computer, or play the virtual keyboard in the AWS DeepComposer console.



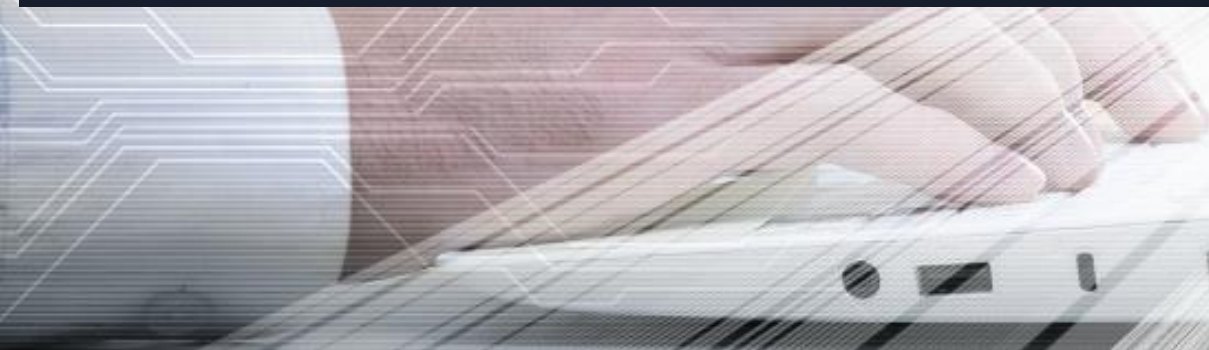
Console

Generate an original musical composition using the pre-trained genre models in the AWS DeepComposer console. Choose from rock, pop, jazz, classical, or build your own custom genre.



Publish

Share your creations by publishing your tracks to SoundCloud in just a few clicks from the AWS DeepComposer console.



Generator



Discriminator



Freuen uns jetzt auf die technischen Beiträge zum AWS IT-Forum Spezial

**Evolution of Containers & Serverless
(Steffen Grunwald, AWS)**

Next Generation Data Processing & In-Memory Computing mit AWS (Markus Kett)

Kaffeepause

High-Speed Digitalisierung und hochsicherer Datentransfer mit AWS bei der Allianz SE
(Christian Kümmel)

AWS Training News
(Thomas Mitzka)

TRAININGS-ROADMAP «OLD»

Professional

Two years of comprehensive experience designing, operating, and troubleshooting solutions using the AWS Cloud



Associate

One year of experience solving problems and implementing solutions using the AWS Cloud



Architect

Operations

Developer

Foundational

Six months of fundamental AWS Cloud and industry knowledge

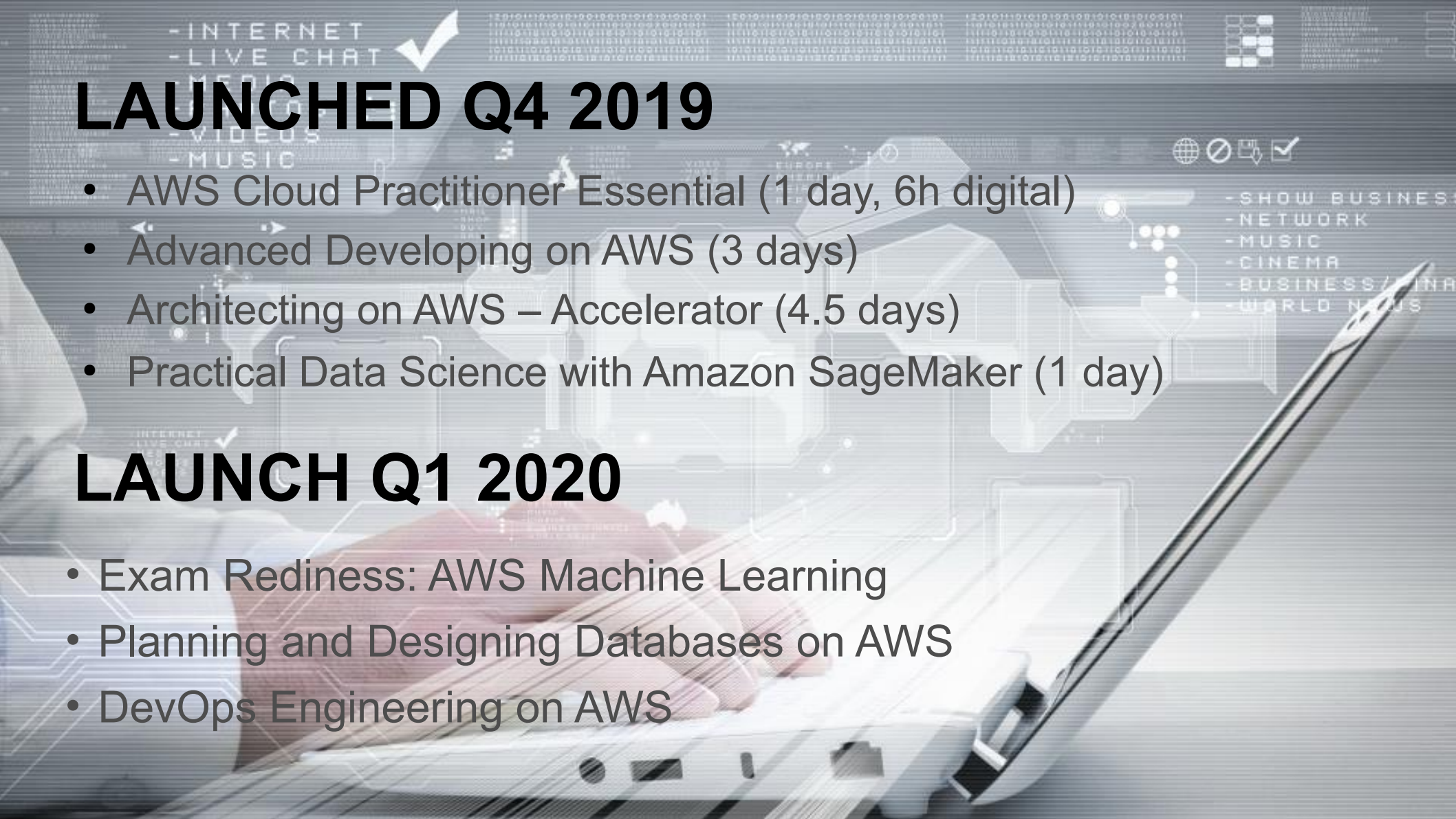
Cloud Practitioner



Specialty

Technical AWS Cloud experience in the Specialty domain as specified in the exam guide





LAUNCHED Q4 2019

- AWS Cloud Practitioner Essential (1 day, 6h digital)
- Advanced Developing on AWS (3 days)
- Architecting on AWS – Accelerator (4.5 days)
- Practical Data Science with Amazon SageMaker (1 day)

LAUNCH Q1 2020

- Exam Rediness: AWS Machine Learning
- Planning and Designing Databases on AWS
- DevOps Engineering on AWS

CERTIFICATION UPDATES

New certification exams coming soon:



March, 2020



April, 2020

Beta open
until Jan 10,
2020



April, 2020

Beta open
until Jan 10,
2020

