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# Large Scale Adoption of Azure

**Azure Meetup Ruhrgebiet Nr. 23**  
**26. November 2019**

***e-on***

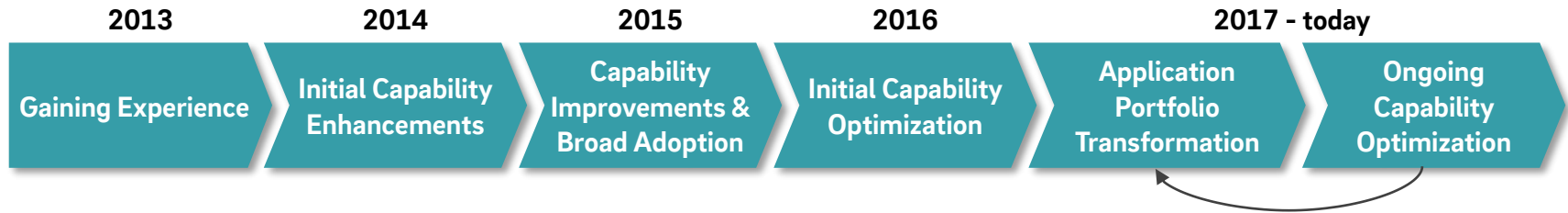
# Agenda

1. Our Cloud Journey So Far
2. E.ON's Central Cloud Framework
3. Network Design & Integration
4. Security & Optimization
5. Summary & Outlook



# Our Cloud Journey So Far

# E.ON's business-driven journey towards the adoption of cloud computing was – and still is – a multi-year endeavor



# E.ON's transformation towards the new energy world required enhanced IT capabilities which are enabled by cloud computing

## Business Strategy

- Close integration with customers & partners
- Digital business models, products & services
- Collaboration in dynamic multi-enterprise ecosystems
- Transformation into decentral & distributed energy world

## Business Drivers & Requirements

- Quick response to unpredictable demand or requests of customers & partners
- Time to market / quick availability of services and products to customers & partners
- Flexible / scalable cost
- Analysis of large data volumes to predict customer demand / service adoption

## Cloud Characteristics

### Elasticity

- Ability to handle expected & unexpected changes in load

### Speed

- Faster availability of business functionality

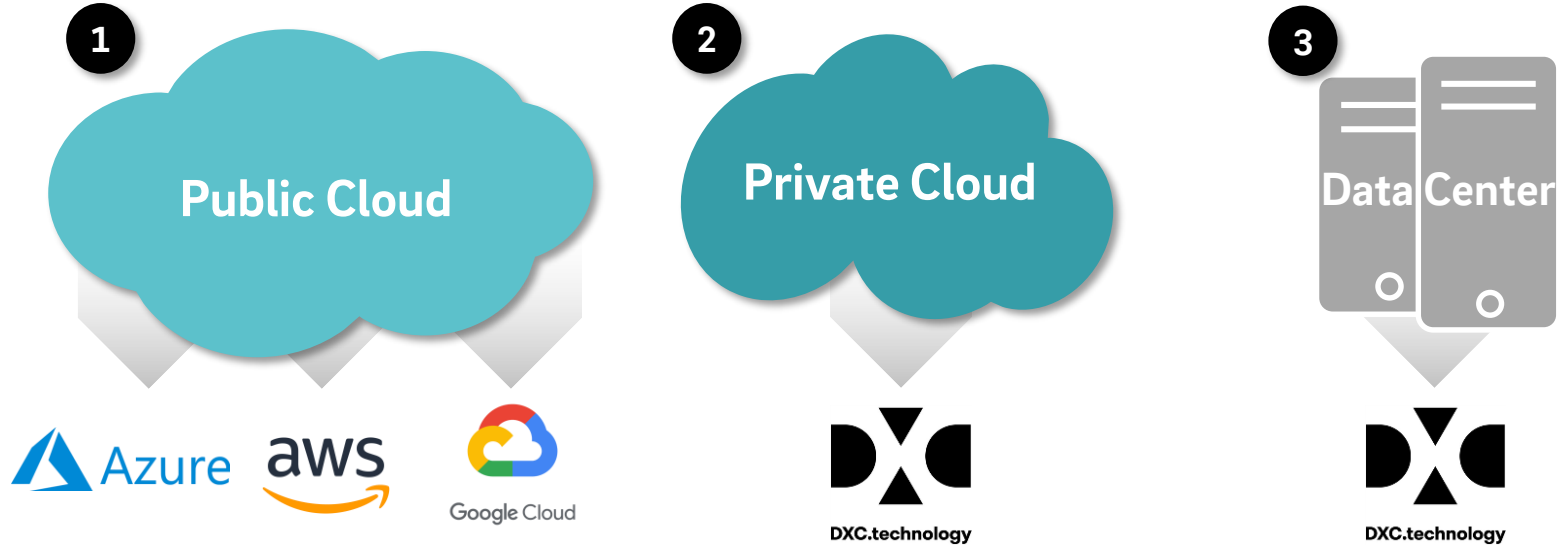
### Cost Flexibility

- Flexible IT costs (as you go model)
- Low costs of adoption & exit cost

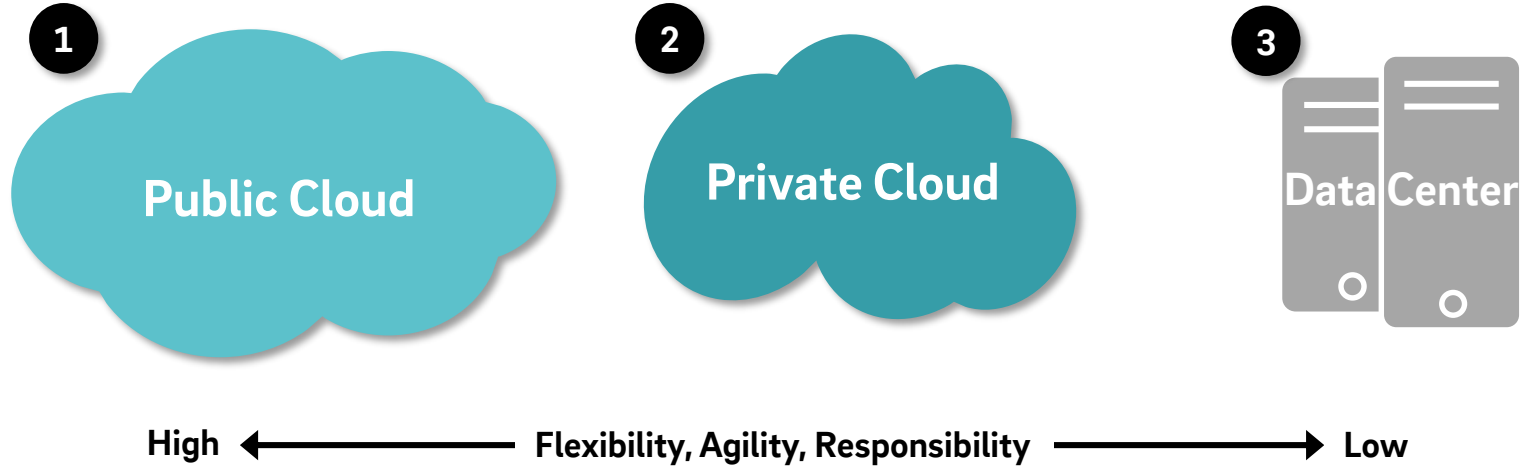
### New Technologies & Architectures

- Leverage quick access to new application platforms & services

# E.ON is implementing a hybrid cloud strategy which defines multiple options for transforming our application portfolio and optimize business value, cost and risk



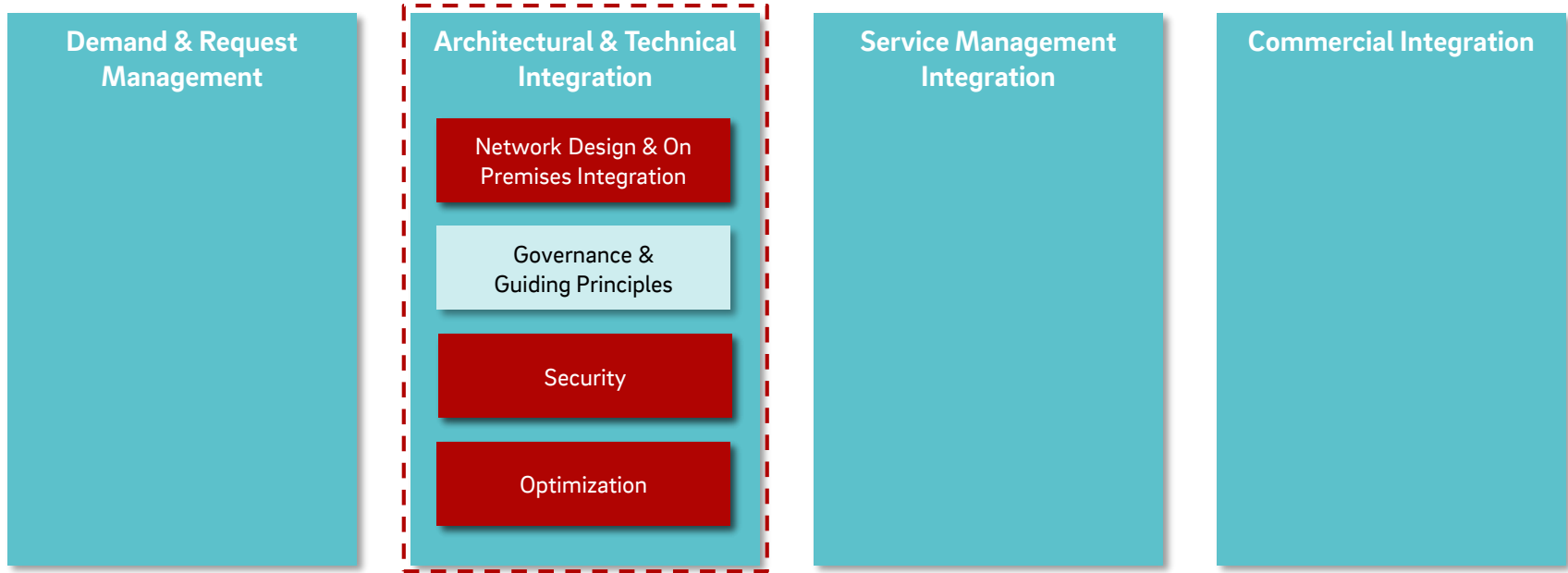
# The adoption of cloud required a new framework for managing the workloads from an end-to-end perspective



# **E.ON's Central Cloud Framework**

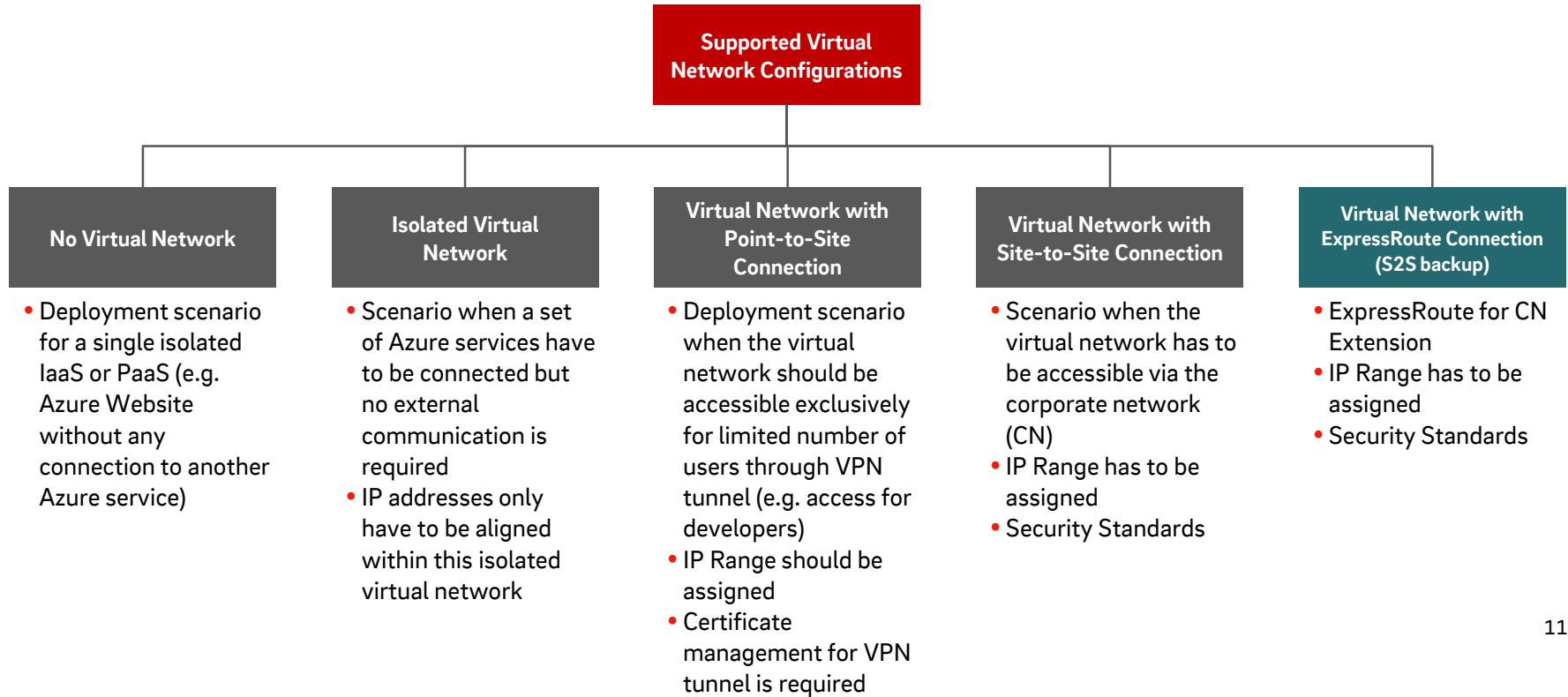


# The adoption of cloud required a new framework for managing the workloads from an end-to-end perspective

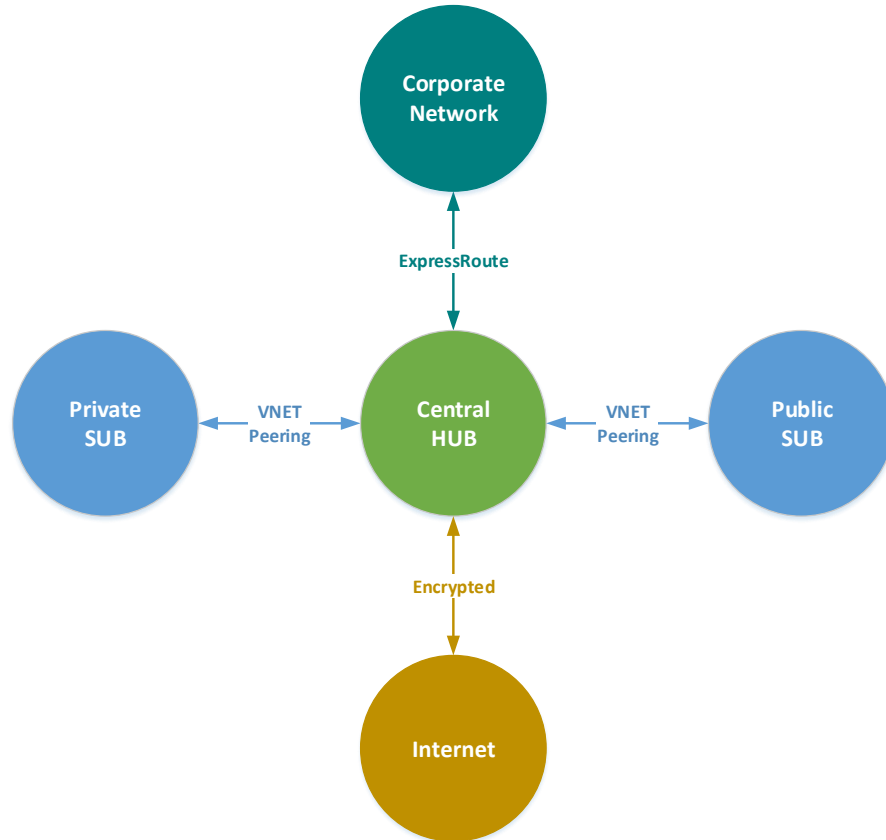


# Network Design & Integration

# We support the deployment an application based on different configurations of the Azure Virtual Networks



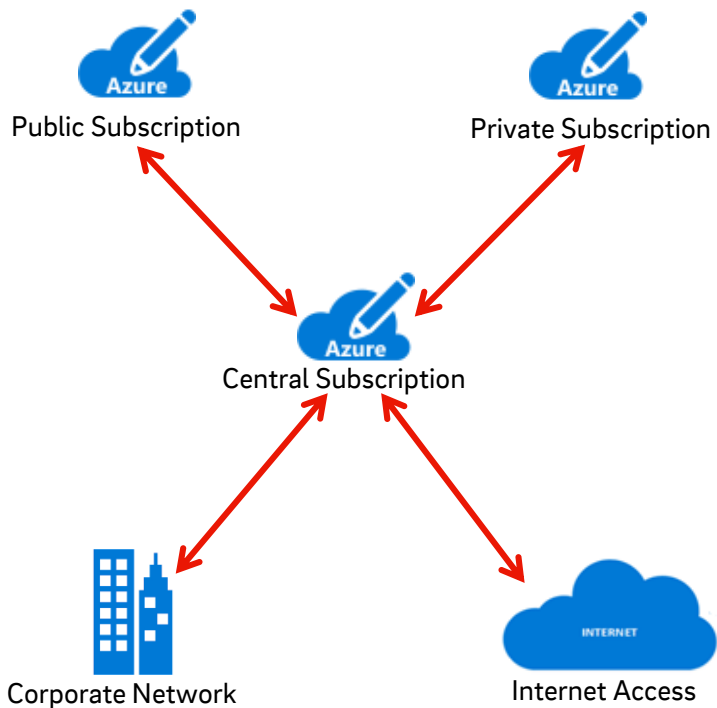
# Central Cloud Framework: Introduction



## Introduction

- The Central Cloud Framework for Azure supports EON to quickly develop and implement Microsoft Azure-based solutions while reducing complexity and risk
- It is based on a combination of Microsoft guidelines, recommended compute, network and storage best practices and E.ON IT security requirements
- The IaaS construct is inspired from the Hub-Spoke network topology, which is included in the Microsoft Azure Virtual Datacenter concept
- PaaS can easily be integrated

# Azure Central Hub



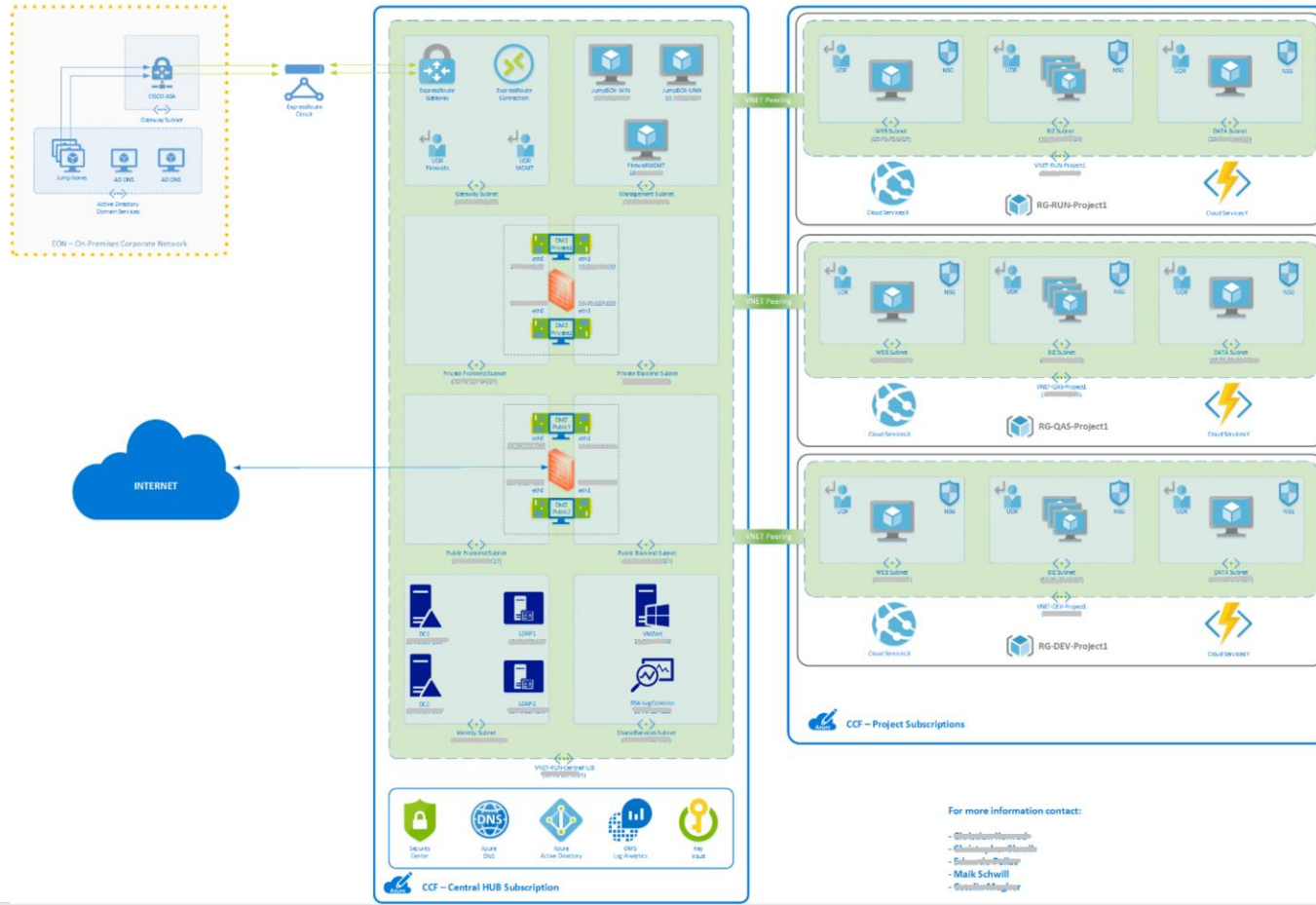
EON's Azure Central Cloud Framework design specifies a centralized set of IT security and management capabilities located in the CCF – Central Hub Subscription.

The intention is to have the capability to deploy individual workloads with the agility and flexibility common to Azure solutions, while adhering to central IT policies.

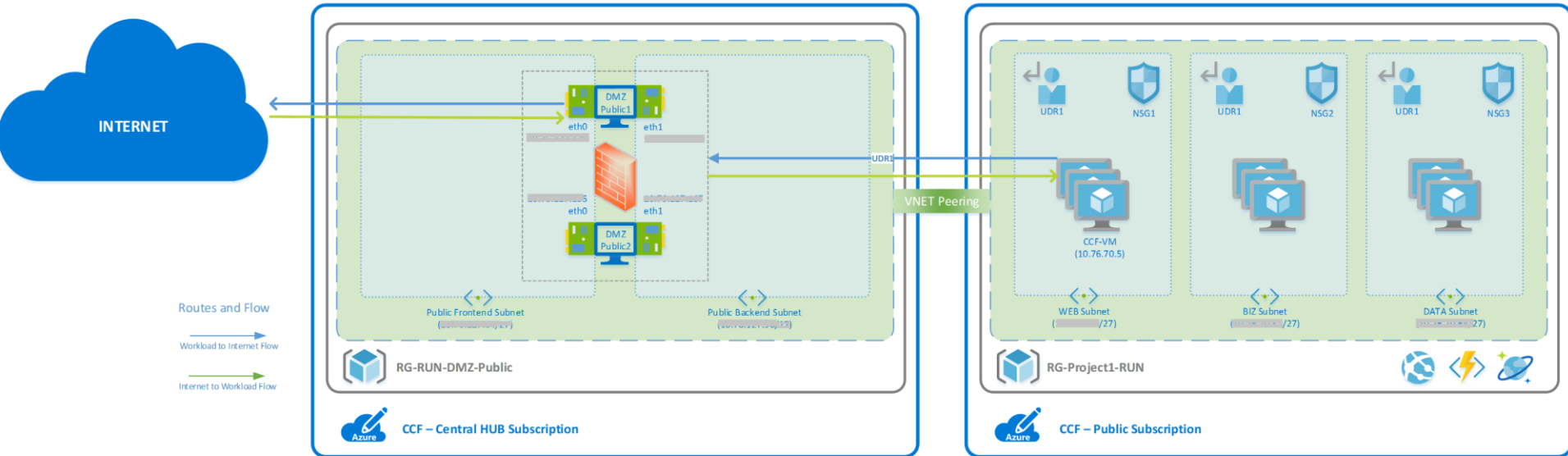
The initial architecture is created in the Azure West Europe Datacenter and thus enforces the projects to be also created in this location.

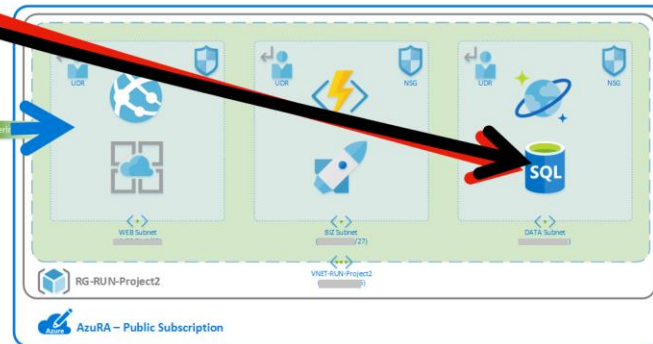
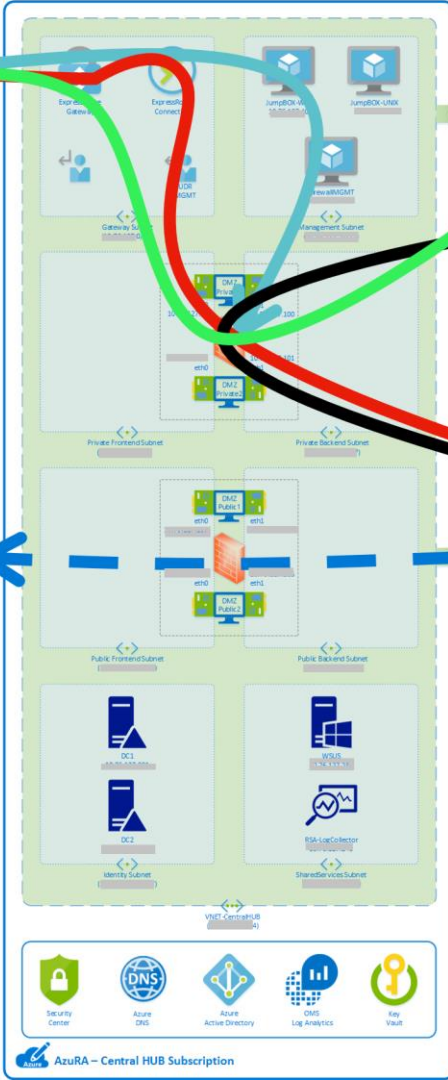
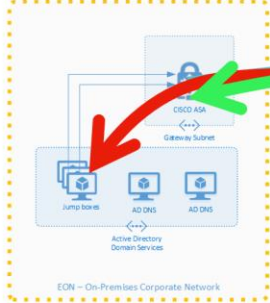
The central infrastructure is supported by a hub-and-spoke network architecture connecting the central IT infrastructure with workloads. All intranet traffic to on-premises and Internet-bound traffic must pass through firewalls.

# Azure Central Cloud Framework: Overview



# Azure Central Hub: Public Firewall





# CCF Network Traffic

On-Prem to Project App

On-Prem to Firewall

VNET Traffic

Project1 to Project2 via FW

Internet Traffic





# Security & Optimization

# Central Governance Elements

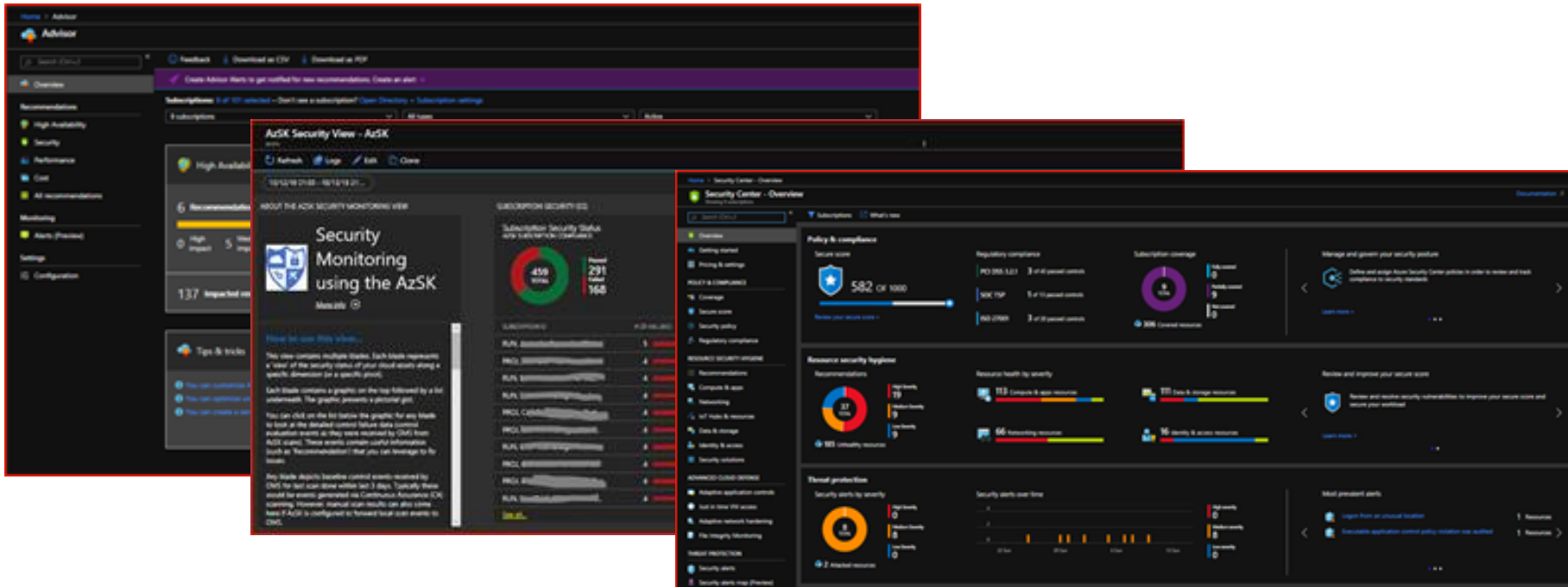
- Cloud Assessment Tool
- Cloud Governance Policy
- Information Security Standards
- Central Cloud Framework
- Azure Inventory Tool (Power BI based)
- Central Cost Monitoring (Power BI based)
  
- **Azure Advisor**
- **Azure Secure DevOps Kit (Central Dashboard)**
- **Azure Security Center**

# Monitoring/Optimization & Security Tooling

Azure Advisor

Azure Secure DevOps Kit (Decentral Dashboard on Subscription)

Azure Security Center



# AzSK – Azure Secure DevOps Kit

AzSK enables you to keep up date with current security related suggestions for your infrastructure directly by Microsoft.

It enables DevOps teams to integrate security into their CI/CD pipeline.

<https://azsk.azurewebsites.net/>



# Azure Advisor and Azure Security Center

Live Demo @ DigitalLab Subscription

# Summary & Outlook

# Thank you!

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