



OMNISECURE 2022

The Airbus Restricted Cloud

DEFENCE AND SPACE

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AIRBUS

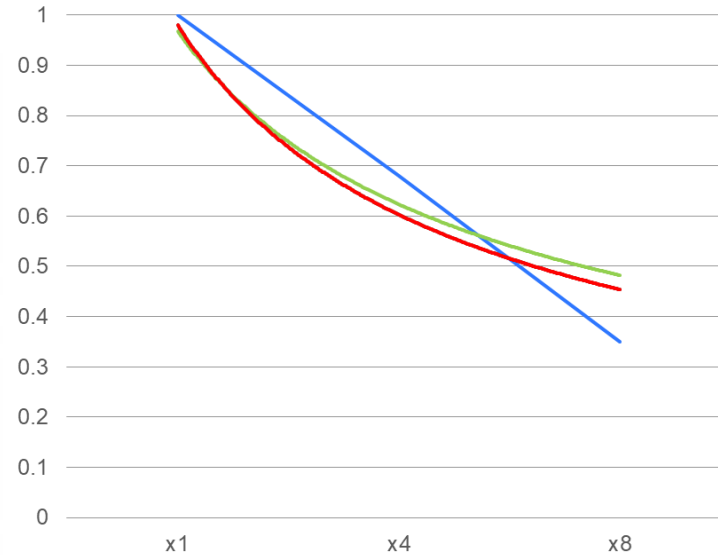
Airbus Restricted Cloud Motivation

More Restricted Data



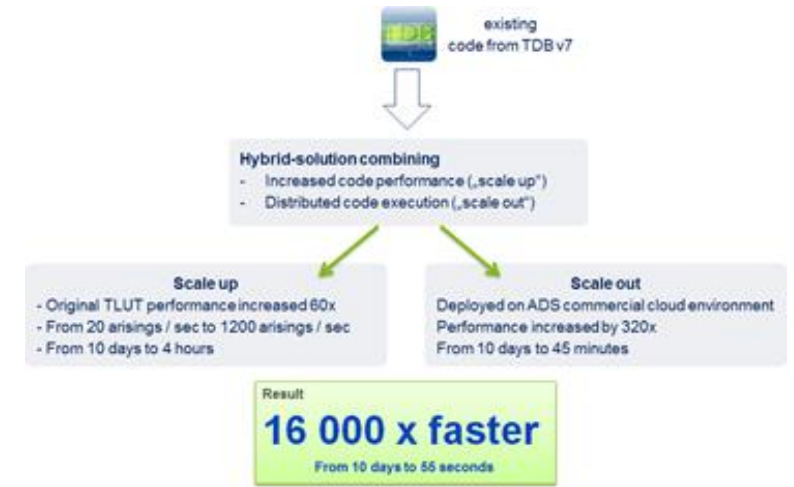
Just 6 upcoming Airbus DS use cases produce > 100 PB / year. Many with hard time-boxed processing requirements.

Cheaper



Inverse price curve compensates exponentially growing data and processing cost with decreasing unit prices at scale

Faster



The Airbus Restricted Cloud processes restricted data orders of magnitude faster than traditional environments

The Airbus Restricted Cloud Role in the Airbus Hybrid-Cloud Strategy



Journey to cloud
use case triage



Infrastructure cost savings

especially for large, dynamic loads

Innovation acceleration

by using significant off-the-shelf functionality

Scale

virtually endless space and support for some of the largest data services ever created



Data Sovereignty

ensure that data is stored only in specific geographic locations and devices

Data Access

ensure that data is accessible only by certain nationals or companies

Auditability

deep monitoring at all levels of the technology stack

The Airbus Restricted Cloud Key Value Proposition

- 1 Modern Technology Stack for Digital Business**

We offer a rich feature set of cloud and analytics software building blocks that accelerate time to market of software-driven services.
- 2 Support for Restricted & Export Controlled Data**

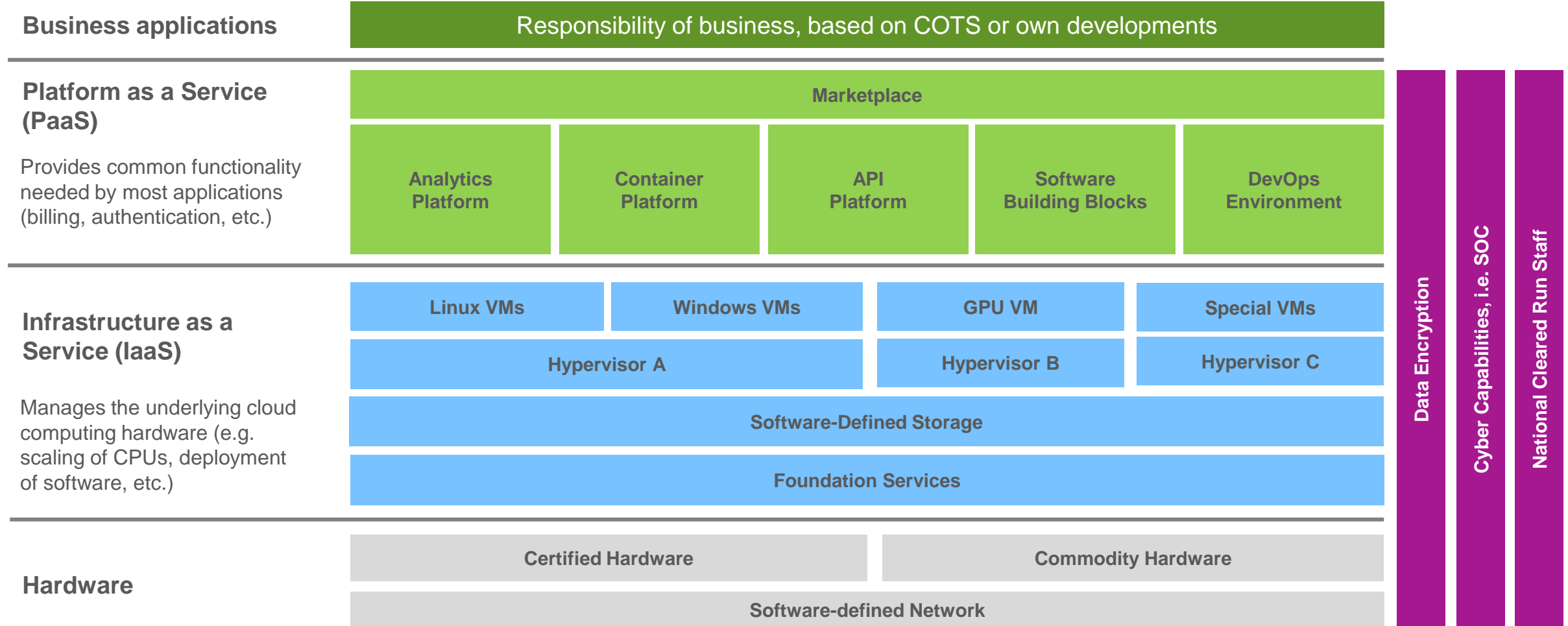
We are able to process and store restricted data of all Airbus home countries:
National: DE: VS-NFD / FR: DR, PSTN / ES: DL / UK: OS
International: NATO Restricted for Industrial Use, OCCAR Restricted for Industrial Use
Export Controlled Data
- 3 Self-Service & Consumption-Based Charging**

We put the power of the cloud directly into the hands of capable end-users and deliver within minutes thanks to radical automation; or provide support for those who need it.
- 4 High Levels of Standardization, Automation & Scalability**

We provide a standardized platform across countries that allows services to be written once and deployed anywhere, thus boosting initiatives such as digital product continuity.

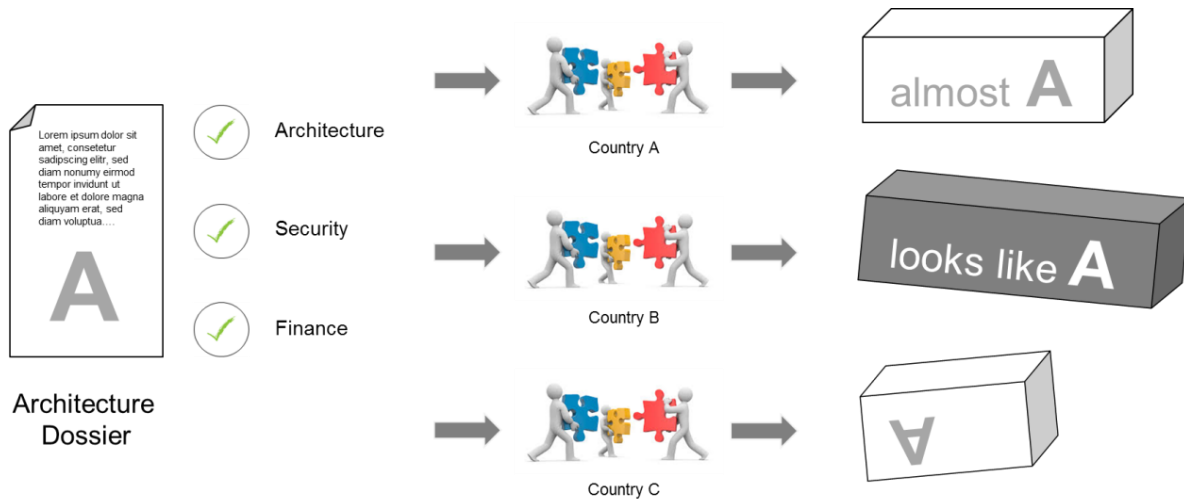
The Airbus Restricted Cloud

A Modern Technology Stack for Digital Use Cases

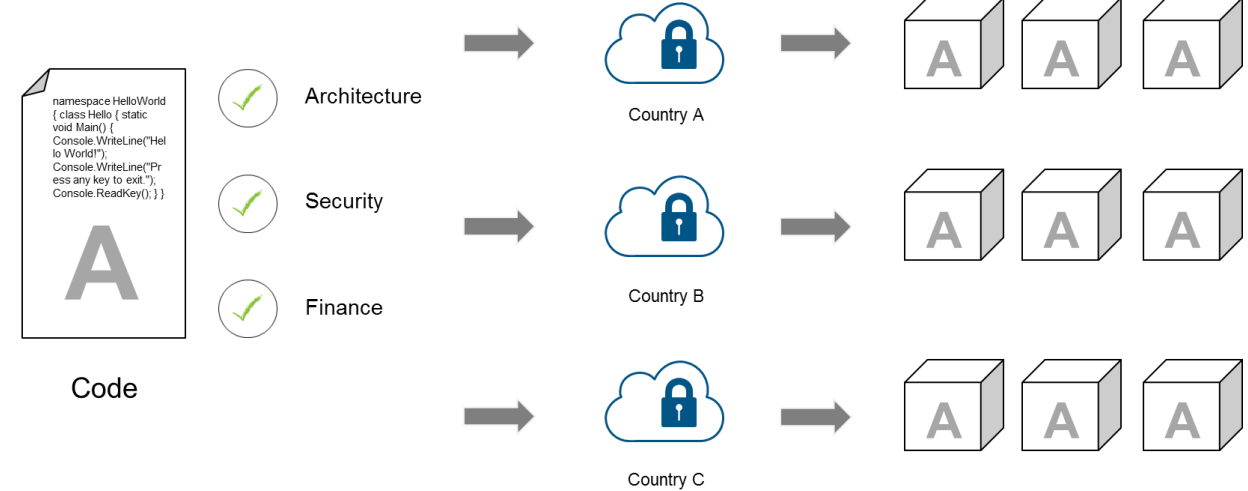


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Why Automation is Key



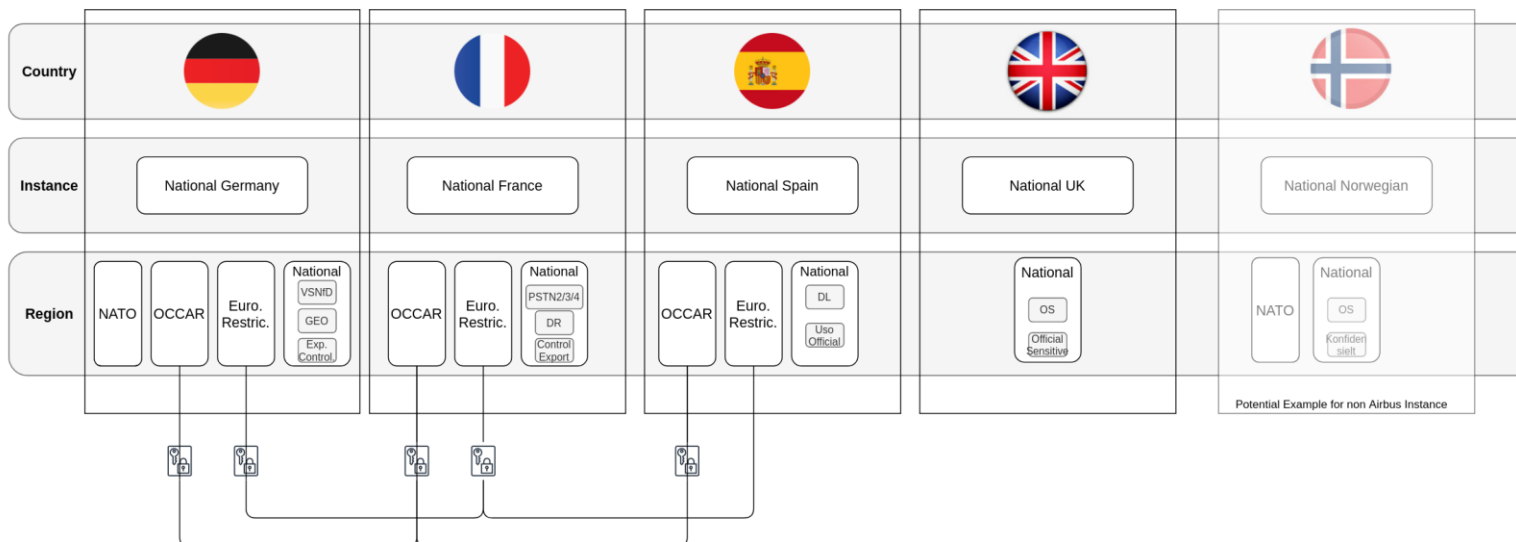
No matter how much governance you add, there is always room for human interpretation and error, leading to divergent outcomes.



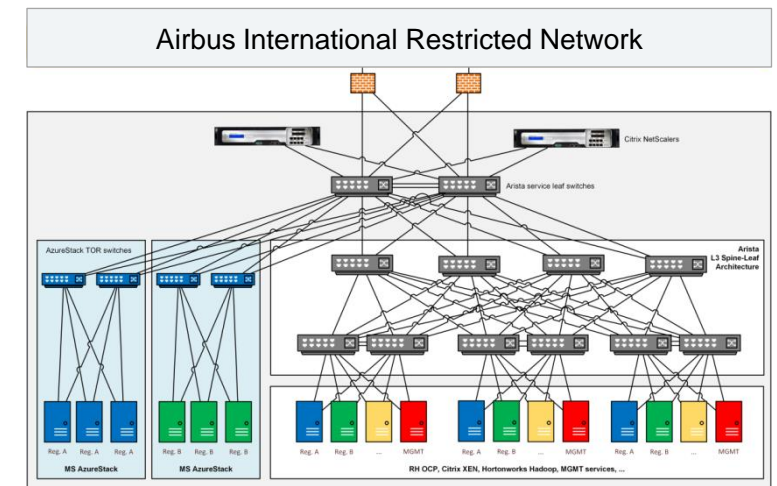
DevOps removes the human from the delivery chain and produces the same result every single time. This boosts security, standardization and scalability.

The Airbus Restricted Cloud Sovereignty and Security by Design

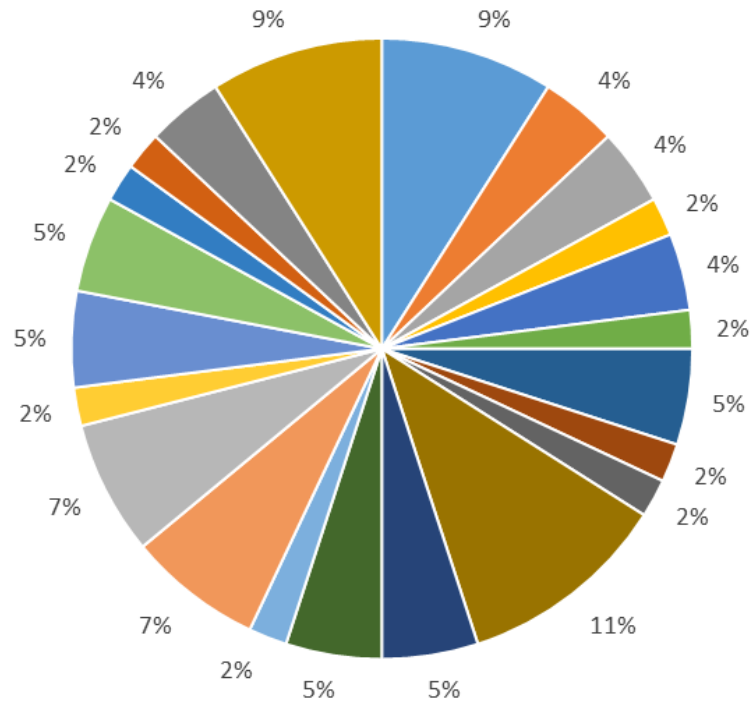
- **Nationally-restricted instances**
 - In-country hosting
 - In-country processing
 - Nationally cleared run teams
- **Trusted Airbus physical security**
 - Access control
 - Sabotage countermeasures
- **Physical and logical segregation**
 - Region-explicit physical compute and storage separation, i.e. to support dedicated tagged hardware.
 - Logical VRF network separation
 - Routing separation by Traffic Domain
 - Strict separation of Admin and Data/Production areas
 - Advanced physical firewall cluster
- **Best-in-class security features:**
 - End-to-end automation (*no intermediaries and manual steps*)
 - L7 Gateway for all traffic domains
 - No direct data access possible (*NAT + ALG enforced*)
 - Instanced IAMs (*hash keys are only valid for a single tenant*)
 - Instanced firewalls (*potential errors can only affect a single tenant*)
 - Tenant-tenant interactions require two-way handshake.



Airbus International Restricted Network



The Airbus Restricted Cloud Modular Architecture Ready for European Sovereignty



From 0% to 13% European Components

- **ARC has a future proof, modular architecture** that allows it to **evolve over time**, i.e. to **become more European** as sovereign technology components become available.
- Today, **87%** of components are **US based** technologies with potential to **reduce mid-term to ~66%**
- This **concept has been proven** by replacing key components of the architecture (e.g. Configuration Management Database, Service Management Tool, ...)

ARC has a modular architecture that allows European components to be introduced over time. We look forward to this journey.

Thank You