
Cloud Repatriation: from cloud-first to architectural maturity

Rethinking cloud strategies to build a more controllable, sustainable and future-ready IT environment.

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For more than a decade, the cloud-first paradigm has shaped enterprise digital transformation, promising speed, scalability, and simplicity. Moving workloads to the public cloud became the default strategy, often regardless of their specific requirements.

Today, that promise is revealing its limitations. Consumption-based pricing models and data egress fees are making cloud costs increasingly difficult to predict and manage during budgeting. Performance is not always consistent, particularly for mission-critical or latency-sensitive workloads. Managing multi-cloud environments has introduced a level of operational complexity that cloud was originally expected to eliminate, while the widespread adoption of proprietary services has created new forms of vendor lock-in, limiting long-term flexibility and freedom of choice.

At the same time, the regulatory landscape is evolving rapidly. Frameworks such as the GDPR, NIS2, and broader European initiatives around digital sovereignty are making data residency and data governance strategic architectural requirements rather than technical implementation details.

The cloud itself is not being questioned. What is changing is the assumption that a single destination is the right answer for every workload. This is the context in which cloud repatriation is emerging: **the strategic decision to relocate selected workloads to environments that restore greater control, visibility, and operational predictability.**

Rather than a step backwards, cloud repatriation reflects a new level of architectural maturity, one in which organizations no longer ask whether to move to the cloud, but which environment is best suited for each individual workload.

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CHAPTER 01

The shift toward Cloud maturity

Over the past fifteen years, public cloud has represented one of the main accelerators of digital transformation. Scalability, rapid provisioning and as-a-service models have enabled organizations to modernize their IT systems quickly, leading to the widespread adoption of cloud-first strategies.

This paradigm played a fundamental role in the first phase of digital transformation, when the priority was to reduce time-to-market and enable new business models.

Today, however, the context has changed.

Enterprises are entering a phase of maturity in which cloud is no longer a generalized choice, but a set of options that must be governed deliberately. Increasing architectural complexity, growing attention to economic sustainability and new requirements around control and compliance are redefining the role of cloud within IT strategies

In this scenario, a new logic is emerging: no longer "everything in the cloud", but the **right cloud for each workload**.



CHAPTER 02

The cloud reset: from transformation to maturity

The first phase of cloud adoption was driven by the need to accelerate digital transformation.

Organizations progressively migrated applications and workloads to the cloud, adopting SaaS and PaaS services while centralizing infrastructure and data.

This model worked because it simplified adoption and enabled speed.

Over time, however, increasing scale and growing dependence on cloud have revealed new requirements that have made architectures more complex. Cloud is therefore no longer a destination, it has become an **ecosystem that must be orchestrated**.

CHAPTER 03

The tipping point: when cloud stops being "simple"

In its initial phase, cloud reduced complexity. In the current phase, it exposes it.

Organizations are now managing a combination of factors that make an indiscriminate approach less sustainable:

- **costs that are difficult to predict**, linked to variable consumption models, egress fees and non-optimized resources;
- **performance that is not always consistent**, especially in shared environments and for critical workloads;
- **technology lock-in**, caused by the adoption of proprietary services that limit flexibility;
- **data sovereignty, data governance and compliance**, increasingly central in the European context (GDPR, NIS2, initiatives around sovereign cloud and digital solutions);
- **new AI-related pressures**, which require greater control over data, models and infrastructure.

These elements mark a discontinuity: **cloud** is no longer inherently "simple". It requires **governance capabilities**.

In particular, digital sovereignty and data localization are becoming structural factors in architectural choices, pushing organizations to reconsider where and how their workloads reside.

CHAPTER 04

Cloud Repatriation: from tactical correction to strategic choice

Cloud repatriation is not a step back from the cloud. Rather, it is the natural evolution toward a more mature and deliberate strategy, where organizations move beyond the cloud-first paradigm and adopt a workload-first approach.

In this scenario, organizations are progressively rebalancing their architectures toward hybrid models, combining public cloud and private environments to address business requirements with greater precision.

The challenges that have emerged in public cloud are pushing organizations to reassess their architectural choices, with a number of recurring areas of attention:

COST AND ECONOMIC PREDICTABILITY

Difficulty controlling spend over time, driven by pay-per-use models, egress fees, overprovisioning and consumption patterns that are difficult to estimate during budgeting.

OPERATIONAL COMPLEXITY AND GOVERNANCE

Growing complexity in the management of multi-cloud environments, heterogeneous tools, distributed security models and shared responsibilities (the shared responsibility model).

PERFORMANCE AND LATENCY

Performance variability in multi-tenant environments, with impacts on sensitive or mission-critical workloads, especially where low-latency requirements are present.

TECHNOLOGY LOCK-IN

Dependence on proprietary services, specific APIs and non-standardized operating models that make provider changes or a return to alternative environments more costly and complex.

DATA LOCALIZATION AND REGULATORY COMPLIANCE

The growing relevance of regulatory and compliance

requirements, particularly in the European context, including:

- **GDPR (General Data Protection Regulation)** for the protection of personal data,
- **NIS2** for the security of critical infrastructure and essential services,
- initiatives related to **European sovereign cloud** and data localization,
- regulatory developments around **AI and data governance**, which require greater control over data, models and infrastructure.

These elements mark the transition to a phase in which the priority is no longer adoption, but the governability of the architecture.

The point, therefore, is not to simplify infrastructure in absolute terms, but to build a model in which complexity is intentional, controlled and aligned with the requirements of each workload.

The real turning point is therefore not technological, but strategic: organizations are no longer looking only for

scalability. They are seeking the **ability to decide**, over time, where their workloads should **evolve**, transforming cloud from an operating model into a **lever for governing** digital evolution.

The **ARBO** project provides a concrete example of this approach.

The company needed to improve control over its infrastructure and ensure greater operational stability for its systems. Its use of public cloud had introduced complexity in cost and performance management.

Through an architectural review based on a hybrid model, it became possible to reallocate workloads into environments more aligned with application requirements.

The result was improved cost predictability, greater performance stability and stronger infrastructure control.

This approach demonstrates how cloud repatriation, when embedded within a workload-first strategy, is not a tactical operation but a lever for realigning IT with business objectives.

CHAPTER 05

The workload-first paradigm and hybrid-by-design architectures

The change underway is not about adopting new technologies, but about the ability to choose how and where to use them over time.

It is not about opposing legacy and innovation, but about recognizing that a significant portion of enterprise IT still relies on existing systems, critical processes and deep integrations. For this reason, cloud maturity does not mean moving everything to the public cloud, but placing each workload in the most appropriate environment.

This approach leads to a model in which hybrid architectures become the point of balance between different requirements. Public cloud remains essential for dynamic and scalable scenarios, while private environments are better suited to stable or critical workloads.

Organizations are no longer looking only for performance or scalability. They are also seeking reversibility - the ability to:

- **move workloads across different environments,**
- **avoid structural constraints,**
- **preserve freedom of choice over time.**

In other words, they are seeking architectural autonomy: the ability to maintain strategic control over their technology stack and govern their own **technology evolution without excessive dependencies**.

For this reason, organizations are orienting their choices toward:

- **hybrid and federated models,**
- **platforms based on open and interoperable standards,**
- **providers capable of ensuring sovereignty and control,**
- **architectures that make it possible to adapt the cost model to the type of workload.**



CHAPTER 06

Interoperable platforms for hybrid: the Aruba offering

In this phase of maturity, **infrastructure choice becomes central**. It is no longer a purely technical decision, but a **strategic lever that influences control, risk and the ability to evolve**. The most important change is cultural. Organizations are moving from a model based on **technology consumption** to one based on **technology governance**, increasing awareness and decision-making capability.

In this context, the data center and the network become enabling elements.

The data center represents the point of infrastructure governance, while the network is what makes integration across different environments possible: public cloud, private cloud and on-premises.

The ability to interconnect these environments securely and with high performance is what concretely enables the hybrid model.

By directly controlling the physical infrastructure, including the network component, Aruba can manage interconnections flexibly across:

- hyperscalers and public clouds,
- other providers,
- on-premises systems,
- internal environments, including bare metal, private cloud, public cloud and colocation.

This is the foundation on which truly governable architectures are built.

It is at this level - infrastructural, and not only technological - that the real difference between providers emerges.

Aruba fits into this scenario as one of the operators capable of enabling this model natively, thanks to its direct control of data centers and network infrastructure. This makes it possible to design architectures in which **interconnection between environments** is not a constraint to manage, but a **lever to orchestrate**.

The result is the possibility of building hybrid models in which:

- workloads can be distributed according to their requirements,
- interconnections between environments are governed directly,
- complexity remains under control because it is designed, not suffered.

Aruba solutions are part of this model not as isolated components, but as integrated elements of a coherent architecture.

At the network level, **Multi-Cloud Link** enables interconnection between Aruba infrastructure and hyperscalers, while **dedicated connections** make it possible to link Aruba with the customer's on-premises environment in a data center extension model. Within Aruba portfolio, **Hybrid Connect** enables interconnection among services such as Public Cloud, Virtual Private Cloud, Bare Metal, Hosted Private Cloud and Colocation.

If control of the data center and the network represents the **foundation** of the hybrid architecture, it is at the **platform** level that value is fully realized: the ability to build **interoperable, distributed** and **governable** environments.

In this context, the use of **standard market technologies** - both commercial, such as VMware and Azure, and open source, such as Proxmox and OpenShift - makes it possible to build platforms that, although distributed across different environments, maintain consistency in operating models and management tools.

The point is not therefore where the workload resides, but the fact that it can be executed, managed and moved across different environments without operational discontinuity.

It is this level of consistency across **infrastructure, platform** and **management** that makes it possible to build truly interoperable architectures, reduce lock-in and preserve the ability to evolve over time without structural constraints.

The value does not lie in any single technology, but in the ability to combine technologies into an architecture that remains flexible, interoperable and governable over time.

CHAPTER 07

Control, flexibility, evolution: the new cloud balance through Repatriation

Cloud repatriation is not a trend. It is a signal.

It indicates that the market has moved beyond the phase of indiscriminate adoption and is entering a logic of **choice**. The question is no longer "how much cloud to use", but how to build an architecture that preserves **control, flexibility** and the **ability to evolve** over time.

The **workload-first paradigm** introduces a shift in responsibility: organizations can no longer fully delegate infrastructure choices. They must govern them.

In this scenario, **reversibility, interoperability** and **data sovereignty** become central. Not because cloud has lost value, but because its value increasingly depends on the ability to integrate it into a coherent architectural design.

Organizations that succeed in building this capability will gain a **real competitive advantage**: they will be able to **adapt faster, reduce technology risk** and preserve **freedom of choice** over time.

For this reason, the question is not whether to start an architectural review, but when to do it and with what level of awareness.

Organizations that begin rethinking their cloud model today through a workload-first lens are already laying the foundations to govern future complexity.



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About Aruba

Aruba, founded in 1994, is Italy's Cloud Champion and one of Europe's leading providers of digital infrastructures and platforms based on proprietary assets. The company designs and manages the entire technology stack: from the design and construction of data centers to cloud platforms, from trust and cybersecurity services to connectivity and software solutions that support digital strategies and AI-based applications.

With entirely Italian capital, Aruba serves 16 million users from over 100 countries and operates an infrastructure distributed across 8 data centers, hosting thousands of customers' IT infrastructures.



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