



As companies grow in maturity in their Cloud strategy they increasingly look to mix and match the best available technologies that will enable a competitive advantage.

As a result, more and more enterprises are moving to a hybrid Cloud model, a mix of on-premises infrastructure and public Cloud services.

In this hybrid Cloud environment, communication networks are the basis for a successful digital transformation of critical workloads.

ITALTEL FAST-SHIFT SOLUTION

From Lift and Shift to
Fast-Shift: how to solve
critical migration
problems in a Hybrid
Cloud context

FAST-SHIFT: THE SOLUTION THAT RESPONDS TO MARKET NEEDS

Italtel, together with its reference partners, **Cisco and Microsoft**, has developed Fast-Shift, a software solution to limit network impacts and constraints in the migration processes of applications from local Data Centers to Microsoft Azure Cloud environments.

The Fast-Shift solution allows the extension of one or more subnets of the Data Center to the Azure Cloud, enabling the following scenarios:

- **keep IP addresses and network parameters configuration unchanged** for applications migrated to Azure Cloud, even if they are obsolete, no longer supported or have a wired IP address within the application itself.
- **speed migration times** without changing your application code and current network infrastructure.
- **selectively and gradually migrate** applications, preserving their reachability, avoiding the need for a massive migration to the Cloud.
- since it is a completely overlay solution, therefore agnostic with respect to the existing network infrastructure, it will be possible to interconnect the **on-prem environment** and the Cloud without the need for analysis and network adaptations.

This solution is therefore an enabler both for approaching a hybrid Cloud model and for migrating workloads in Lift and Shift mode, without any constraints to redesign the network or applications. Further advantages of the solution are:

- a pragmatic approach to migrating applications from the Data Center to the Cloud.
- the migrated application will be able to take advantage of the Cloud paradigm, reducing internal infrastructure costs.
- connection to backup services for disaster recovery.
- additional support that can be activated, as well as the possibility of free security updates if adopted to migrate Windows and SQL servers to Azure in EOS.

MIGRATION TO THE CLOUD: MARKET CRITICALITY

What is the market proposal today?

Thanks to the methodology offered by the Hyperscaler market, called Lift and Shift, companies are already able to migrate their applications to the Cloud quickly and easily. With the lift and shift approach, on-premises applications can move to the Cloud without being re-engineered.

It is a method that allows companies or Public Administrations to start a path towards IT modernization, moving to an open and more extensible architecture in the Cloud, while also benefiting from reduced costs and better performance and resilience.

However, the current market proposal may not satisfy some specific needs of customers who need to migrate their applications to a Cloud environment, approaching a hybrid Cloud model.

This is the case, for example, where applications to be migrated have a dependency on or must be subject to compliance requirements from specific IP addresses.

In these circumstances, it may be necessary to extend one or more local subnets of the private Data Center to the public Cloud, so that the same IP addressing plan can be maintained.





THE VALUE OF ITALTEL

Italtel guarantees a wide range of expertise and knowledge, starting from the skills acquired in the creation of its products in a "cloud native" logic, with devops development methods, and from proven references of implementations in private and cloud ready environments.

Italtel's hybrid cloud offer is based on solutions and services for two main scenarios:

- Re-invent the data center: designing the evolution of private data centers in terms of automation and management tools for opening up to hybrid cloud environments and smart operations.
- Embrace multi-cloud: designing the migration of applications to the cloud, ensuring interoperability between public and private clouds. The Cloud Maturity Model guides the operation of Italtel services.

To address these scenarios Italtel operates with leading international ICT vendors and cloud providers with qualified partners in the ICT sector to ensure strengthening its portfolio of tailor-made solutions and services that meet the needs of customers globally. Strategic partners and technology partners contribute with Italtel in providing to the customers tailor-made solutions and services.

With the aim of facilitating and accelerating the adoption of the cloud, Italtel, with Microsoft and Cisco, has created the FAST SHIFT solution that allows you to migrate applications to the Azure Cloud, without any network constraints. The solution includes Italtel proprietary developments to guarantee redundancy and for the automated configuration of the solution.

A HIGHLY RELIABLE SOLUTION

Italtel offers its customers a complete and highly reliable solution, including the implementation and configuration of Cisco virtual components, both in a Data Center environment and on Azure.

To address the problem of high reliability related to the Fast-Shift solution, Italtel has developed "Italtel Fast-Shift Redundancy Software".

It is software implemented in the Cloud that enables the management of automatic failover (automatic and uninterrupted transition to a reliable backup system) of Cisco virtual network components on the Azure Cloud, both in the presence of failures and in anticipation of maintenance activities scheduled.

Our redundancy software brings automation to fault tolerance management. Without this development, each recovery activity would have to be performed manually, with the critical issues this presents the possibility of human error, longer times and, consequently, cost impacts.

USE CASE: SOME APPLICATION EXAMPLES WITH BENEFITS FOR DIFFERENT TYPES OF CUSTOMERS

The Fast-Shift solution allows a "soft" approach to the Cloud, with the possibility of benefiting from the advantages of the Cloud Azure, without having to face a massive migration and, above all, without any constraints in having to redesign the network or the applications.

This is why Fast-Shift allows for different use cases, such as:

- In small and medium-sized companies, where IT staff is limited to a few units, there is no time to analyze and implement all the steps necessary to migrate applications and data to the Cloud in total security. Precisely for this reason, a technically simple solution such as Fast-Shift can be useful, able to accelerate the adoption of Azure Cloud and its benefits.
- For large enterprises, moving to hybrid Cloud allows organizations to save on operational costs compared to an entirely on-premises infrastructure. Also, in a large infrastructure, it's often not easy to know which applications are vital, which ones need to be updated, and ultimately which ones need to be eliminated. For this reason, the use of Fast-Shift can enable the migration to the Cloud without the real risk of interruption for business- critical applications and, through the rationalization of the Data Center, it also brings economic advantages. A rationalization that is also possible for Data Centers in remote locations by enabling the migration of applications to the Azure Cloud while maintaining reachability towards the main offices. All this turns into a reduction in infrastructure complexity and management costs.
- For the Public Sector: to enable the transfer of applications to the Azure Cloud infrastructure and allow for the improvement of services in terms of availability, accessibility and interoperability. With the ability to easily operate updates or maintenance without having to run into the high costs associated with maintaining proprietary servers at the site of the Public Administration.

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