

# A Service Delivery Model for Multi-Cloud Environments

InterComms talks to Ulrich Schälling, Head of Business Line Telecommunications, FNT, about a service delivery model for multi-cloud environments. This will help communication service providers and multi-service providers to optimize their time-to-market for new products and to provide cloud-based services in a flexible manner and with consistently high quality, while also keeping costs under control



Ulrich Schälling,  
Head of Business Line Telecommunications, FNT

**Ulrich Schälling, Head of Business Line Telecommunications, FNT, has been working in the telecommunication market in various roles for Alcatel-Lucent for the last 20 years, most of the time in the OSS and system integration business.**

**Q:** In our last issue you mentioned FNT's new service management product, FNT ServicePlanet. Given that today's service providers deal with the challenge to implement service delivery models for multi-cloud environments, could you please explain what this involves?

**A:** Today's service provider product offerings to residential and business customers are composed of various service items bundled into product packages for service delivery.

In the past, service providers owned most of their service chain. Today, however, CSPs are faced with strong competition and a highly dynamic market environment. Ongoing pressure to cut costs, boost operational efficiency, and offer new and innovative products with reduced time to market will lead to more and more cloud-based service compositions.

From a customer perspective, the service provider is responsible for the service package delivered and is the single point of contact in the event of any requests or complaints. However, the service bundle is typically composed of an array of service items hosted in a multi-cloud environment. There may be cloud-based infrastructure type services, IPTV services, and other applications, as well as security services, hosting of virtual servers and portals, storage capacities, backup & restore, and many other services from different providers, which together make up the final product bundle delivered to the customer.

- The first and most crucial challenge for a service provider is to create transparency throughout the entire service chain, across all partners and layers.

**Q: How can a better transparency throughout the entire service chain for multi-cloud environments be created?**

**A:** Creating transparency in multi-cloud environments means covering all aspects of applications, as well as service and network resources, in a seamless manner on different abstraction levels according to their origination. As with the customer perspective, the application part of a service is increasingly taking center stage. Service providers need a cohesive view of the applications, servers, and underlying data center management issues in their IT environment, at least for their own production chain. Cloud-based service items are managed on a higher abstraction level, based on the relevant service parameters and service levels, in conjunction with the cloud service provider.

Creating transparency means structuring all the items to deliver a holistic product portfolio and service model. This requires a sophisticated methodology and appropriate software tools to cope with the challenges of the multi-cloud environment.

**Q: What are the main elements of the service delivery methodology you are talking about?**

**A:** A practice-oriented product portfolio and service model for service providers should answer all the questions related to a multi-cloud environment, as well as traditional environments. It enables service providers to operate and manage such environments.

The core elements required for a viable service methodology are:

1. **The definition of a product and service portfolio:** The product portfolio is the summary of all orderable (standardized) products. The service portfolio comprises the ordered (in operation) subset of all contracted services.
2. **The service architecture:** The service architecture is a standardized way of defining products. They can be offered in various combinations as solutions or business services. The service architecture covers everything from infrastructure technologies to the requirements of the individual customer business services.
3. **The product and service documents:** The necessary technical and functional documents for the products (within the product catalogue), including the basic infrastructure information. The service documents define contract forms, service descriptions, service level agreements, etc.
4. **Role- and process definitions:** A clear definition of roles and processes is an important requirement for

implementing a service management approach within an organization.

5. **Tools:** The appropriate software and tools to manage, monitor, and control all elements referred to above.

With our new software product FNT ServicePlanet we enable service providers to reduce the complexity and cost of their service delivery and to accelerate the service management processes.

They obtain transparency regarding their customers and an overview of current services.

This unique solution provides the foundation for defining, managing, and monitoring business services and service assets within internal networks or multi-cloud environments over the entire service lifecycle. We developed the product based on a well-proven methodology from our partner bluEDGE. The methodology is configurable and can easily be adapted to our customers' needs and methodologies.

**Q: Why is such a standardized methodology necessary for service delivery and especially for service delivery in multi-cloud environments?**

**A:** The implementation of standardized software tools and methodology ensures reliable products and high service quality. A service must be defined, controlled, and guaranteed with regard to customer delivery. To provide such services, a provider needs an environment where all guaranteed functions can be assured in a reliable and reproducible way. This includes planning and engineering, as well as service delivery and verification of the services within a service architecture framework.

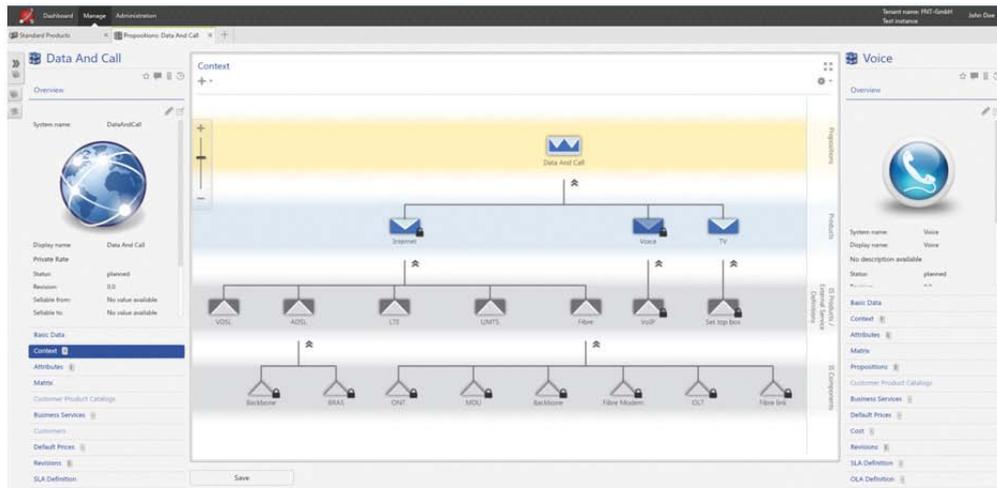
A service architecture framework makes it possible to avoid the two most common mistakes:

- Service provisioned without defined, standardized, and re-usable product assets
- Building new service types for each customer

A well-defined service architecture offers a framework for managing the infrastructure layer in relation to the service layer. This service architecture can also be used to manage product assets from external service providers that sell their services to the service provider, as well as for an internal service provider within an organization. It is important to note that the service architecture also describes collaboration between different service providers, e.g., bundling and reselling of internal services or external services.

The philosophy of the service architecture and service methodology is based on one simple statement: "I can only manage what I can measure." The service architecture offers a key advantage because it combines all these elements and thus creates a customer view (business service view). ►

Fig. 1 Product definition for a "Data and Call" package in FNT ServicePlanet



► The main part of the service architecture resides in a service management database such as FNT ServicePlanet (including the service and business service layer), together with a configuration management database such as FNT Command (for the infrastructure layer and topology).

**Q:** So a key point for a successful service delivery in multi-cloud environments is the integration between business view, the resource view and other service management tools?

**A:** Yes, integration matters – Based on the service management methodology, the right tool solution is among the most important elements of an integrated approach for multi-cloud service management.

Service providers typically don't have all the information they need to:

- define infrastructure services and their (virtual) components across the entire service lifecycle in a reusable, manageable, and verifiable way
- monitor business-supporting services successfully
- implement effective SLA-based impact analysis and troubleshooting
- continually improve services with the aid of targeted analysis
- create transparency with regard to the quality and cost of the services provided

FNT ServicePlanet is a new, packaged software product that supports the essential overview of a product or service lifecycle. All information required for defining, modeling, provisioning, billing, and operating bundled products consisting of complex service items that are delivered by the organization's own infrastructure and/or by cloud providers is managed in a central product and service repository. FNT ServicePlanet provides all service-related data to other tools, such as ticketing, service monitoring, or ERP systems. It is the central tool for managing services in a multi-cloud environment.

With FNT ServicePlanet, the product manager defines a product and all the related service elements. The service manager selects the product from a product catalog in FNT ServicePlanet and specifies all the relevant services and configuration parameters. For an in-house infrastructure, the necessary data is provided via seamless integration with FNT Command, the OSS and configuration management solution from FNT. FNT Command maps all aspects of the OSS, IT, and data center infrastructure in a single data model. Other CMDBs could also be integrated via a standard adapter.

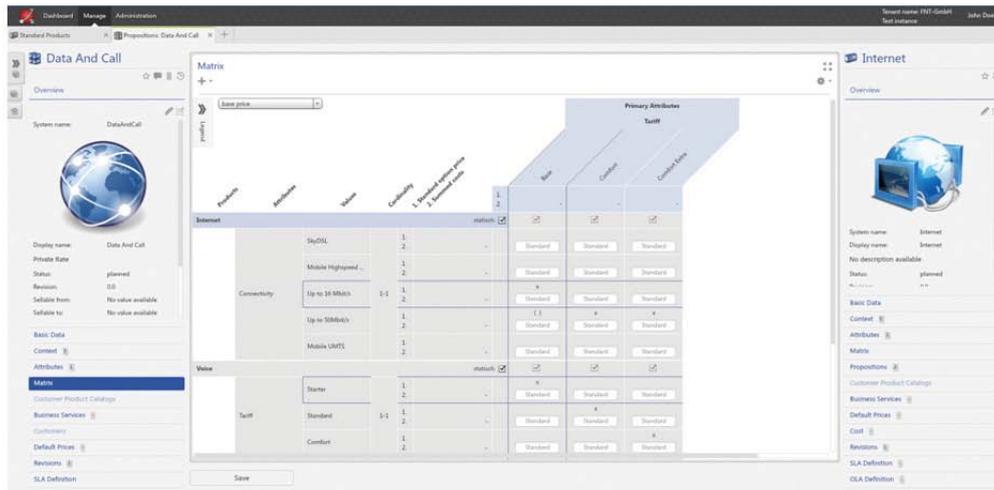
For cloud-provided service elements, the service parameters are likewise defined and configured in FNT ServicePlanet. The OLA parameters of these external service elements are exchanged with the cloud providers for the purposes of service level management.

When providing the products or services to the customer, it is important to be able to configure and vary them in several attributes or pre-defined and pre-configured packages quickly and efficiently. All product-related information must be documented and updated over the entire lifecycle. When delivering a product, the configuration of marketing and end customer-related attributes at the service level should also automatically ripple through to the underlying infrastructure components. Specifically, it is necessary to select and provide different infrastructure resources based on service configuration in order to be able to provide the proper product or service to the customer.

FNT ServicePlanet makes it easy to configure services based on the product specification and to set the product's explicit attributes. Dependencies defined on the product side are reflected in the selection of attributes, enabling automated instantiation of the product. This allows maximum freedom when providing products and services while ensuring transparency into the underlying resources.

Services delivered to customers need to be covered by legally binding contracts. It is especially important to capture and evaluate all relevant information, including customer data, quotations, contracts, and agreements (BLAs, SLAs, OLAs).

Fig. 2 Configuration of the "Data and Call" product during service provisioning



**Q: What are the core functions of FNT ServicePlanet?**

**A:** FNT ServicePlanet provides support by way of the following core functionality:

Product and service modeling: Method-based definition and standardization of products and reusable product components

Product catalog: Structuring and production of all available products with all the information and links required for service creation

Service provision: Configuration and rule-based instantiation of all services sold to a customer

Repository: Documentation and generation of historical data for all products, product components, services, and associated information in a central database based on an integrated data model

Reporting and dashboarding: Managing and monitoring the entire product and service lifecycle, including status analysis and automated generation of service trees and product documentation

Connectivity: Integration and adaptation to existing service architectures by linking to service desks, CMDBs, and other components thanks to an open repository and options for easy customization.

The biggest challenge around managing multi-cloud environments is the trade-off between the need to create an attractive, appealing, and easy-to-understand product for the customer and staying in control of the complex reality of the bundled services in the background. In multi-cloud environments, this becomes even more difficult to manage. FNT ServicePlanet and FNT Command can help to bridge this gap.

**For more information please visit:**

[www.fnt.de](http://www.fnt.de)

Fig. 3 Core functions of FNT ServicePlanet

