

IBM Agile Lifecycle Manager and ADVA universal CPE

IBM Agile Lifecycle Manager and ADVA Ensemble provide a complete NFV DevOps tool and hosting environment for operationalizing uCPE deployments and powering service innovation



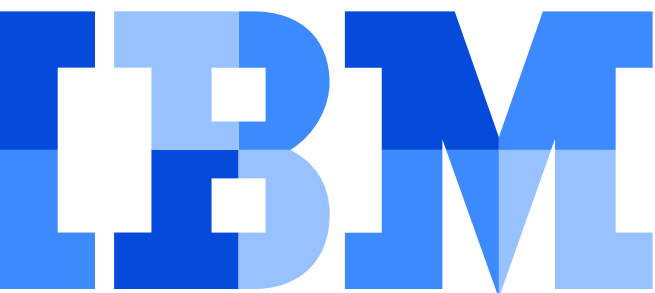
Highlights

- **Universal customer premise equipment (uCPE):** Open platform for cloud-centric service innovation at the edge of the network
- **Virtual network functions (VNFs):** Basis for construction and deployment of software-based services
- **IBM® Agile Lifecycle Manager resource management framework:** Standardized state model and interface for rapid onboarding and high levels of automation
- **ADVA Ensemble suite and VNF ecosystem:** Vendor agnostic, advanced architecture and components for delivery of VNF-based services hosted on uCPE

Enterprise customers move applications to the cloud to gain cost savings and operational flexibility. Service providers also move to network functions virtualization (NFV) for the agility enabled by a software-centric computing model.

Service providers used to focus their NFV efforts on centralized deployments, using hardware appliances at the customer site. This approach works, but doesn't meet the needs of the customer. Consider the case of the chief information officer (CIO) of a Fortune 500 company with thousands of sites around the world. If services are delivered with appliances, then every service change means a change of appliances at each of those sites. The enterprise must often buy the appliance even when the service is managed. If the enterprise changes service providers, the appliances might have to be written off. How can enterprises get managed software-centric services that remove the appliance handicap? The answer is uCPE.

uCPE is a more recent version of NFV and service providers around the world, including public market leaders, are using them to simplify customer site deployments. uCPE can replace dedicated appliances with software VNFs running on a single, universal platform.



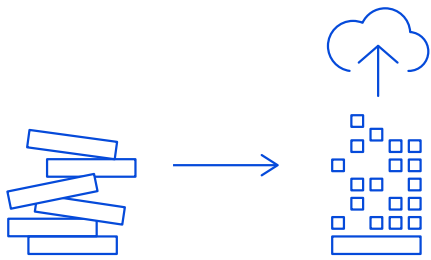


Figure 1: The NFV principle: enterprise customers move network functions to a uCPE or to the cloud to gain cost savings and operational efficiencies.

uCPE extends cloud-centric technologies to the access part of the telco network.

To manage these uCPE environments, IBM Agile Lifecycle Manager empowers service providers to extend networking, simplify operations and maximize choice.

What is uCPE?

The components of uCPE include:

- White box or commercial off-the-shelf (COTS) server for hosting
 - Standard and open software architecture, for example, a network OS with a Linux, kernel-based virtual machine (VM), open source containers and OpenStack
- Multivendor solutions for both hardware and software
- Zero-touch, fully automated deployment
- Scalable solutions that adapt from very small branch offices to corporate headquarters and massive data centers
- All operations are automated with IBM Agile Lifecycle Manager

Software-based network functions and software lifecycle tasks can be highly automated

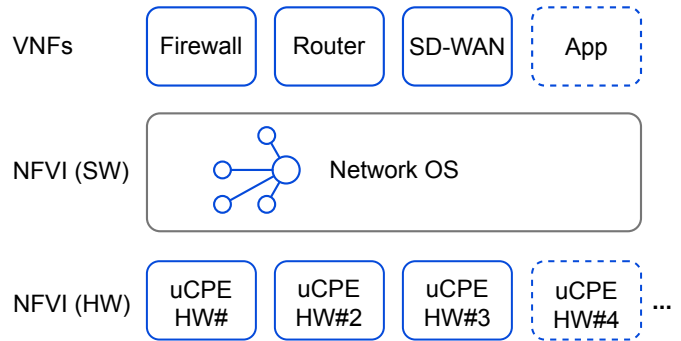


Figure 2: The three layers of a uCPE solution include hardware, software and virtual network functions.

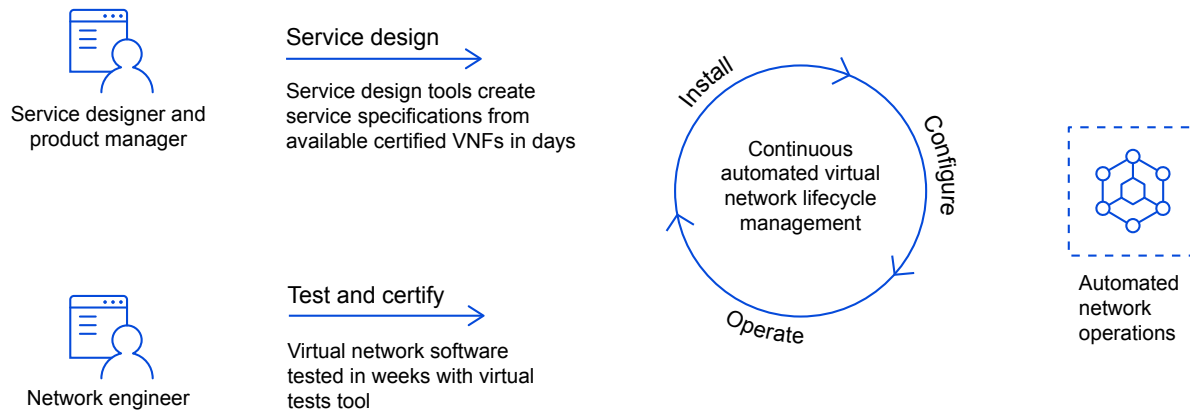


Figure 3: Illustration of the complete DevOps tool chain provided by the IBM Agile Lifecycle Manager.

Lifecycle resource management is key

IBM Agile Lifecycle Manager provides a complete DevOps tool chain that manages the end-to-end lifecycle of virtual network services.

From the release management of VNF software packages to the continuous orchestration of running VNFs and service instances, the solution addresses the challenges and complexities of the NFV paradigm as depicted in Figure 3.

The time is now, and IBM can help

Many service providers are concerned with the complexity and issues related to a relatively new technology, such as NFV. However, the path to the cloud doesn't have to be difficult. IBM and ADVA Ensemble can help with your cloud journey.

Now, service providers can move from closed appliances to a software-centric platform—all controlled by IBM Agile Lifecycle Manager and hosted with ADVA Ensemble. With IBM and ADVA Ensemble, service providers can realize the vision of NFV and bring the power of the cloud to the network.

Why IBM?

IBM Agile Lifecycle Manager automates manual operations by instructing all the product elements to work together—managing their lifecycle in order of dependency, and helping to ensure that any damaged components are replaced or healed without human intervention. This capability lowers the total cost of ownership (TCO) required to manage the entire lifecycle of the products and services, and decreases the margin of error, thus scaling the factory.

To learn more about IBM Agile Lifecycle Manager, please contact your IBM representative or IBM Business Partner, or visit ibm.com/us-en/marketplace/agile-lifecycle-manager.

Why ADVA Ensemble?

ADVA Optical Networking provides a comprehensive set of hardware and software products to simplify network virtualization.

ADVA Ensemble contains a full NFV software architecture. It includes best-of-breed components that work together or separately when needed.

To learn more about ADVA Ensemble, please visit advaoptical.com/en/products/network-virtualization.



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