GGSN/P-GW Integrated System

NEC vMVNO-GW

Introducing the world's first NFV Concept, "Layer2 Connection" and "NFV" achieve the MVNO solution to keep you 1 step ahead of your rivals.

The vMNVO-GW is the world's first GGSN/P-GW integrated system that adopts the NFV concept (virtualization of network functions) to create a virtual platform for functions like L2 connections required for MVNO businesses. Major benefits include "Small Start," to help reduce the risks in your initial investments, "Cost Reductions," and "Various Services" to reinforce competitiveness in the MVNO business.

Here are some of your problems we can solve

We want to prepare a wide variety of services to stay ahead of the competition …

- We want to provide services that meet our users' needs.
- L3 connections have too many functional restrictions.

L2 Connections

Creating A Wide Variety of Services by Utilizing Abundant Functions

With the L2-connectable vMVNO-GW, a wide array of services including reinforced security and the allotment of private addresses can be applied to meet your users' needs.

*L2: Layer2

We want to be involved in the MVNO business, but we're concerned about the cost …

- The initial investment is too costly.
- We want to invest according to the amount of traffic

NFV (Network Functions Virtualization)

Starting with Low Start-up Costs

The vMVNO-GW which adopts the NFV concept, allows for a wide range of software functions over the general purpose server. An MVNO business can be started up from a single 1U rack server, thereby drastically reducing the amount of your initial investment.

*When in non-redundancy

We're worried if we can install and operate the system properly …

- We want the flexibility to adapt to future growth and development.
- We need technical support.

Abundant achievements and technical knowledge

NEC Supports Newly Entered MVNO Businesses.

NEC has always been at the forefront of mobile core products and technology in Japan, and has an excellent track record in its achievements and knowledge resources. By applying this knowledge and experience, we wish to fully support all newcomers into the MVNO business with a wide range of services.

NEC's vMVNO-GW becomes the first in the industry to adopt "NFV"
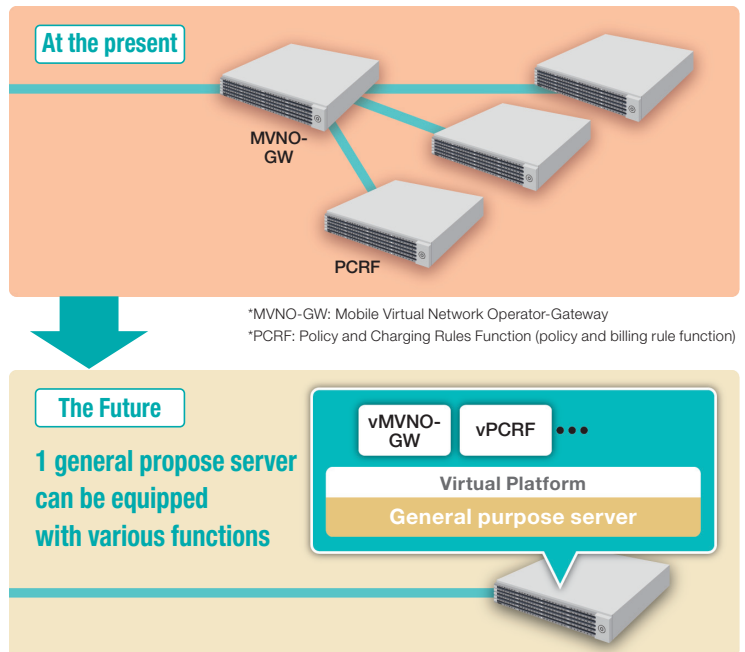
What is NFV?

NFV stands for Network Functions Virtualization. By utilizing this concept,network functions are enabled using software over general purpose servers without previous needs of installing specialized devices.

● The merits of using NEC's vMVNO-GW

Virtualization not only equates to cost reductions, but saving space and energy as well. Since this system allows for small starts, the risks involved in your business investments will also be greatly reduced. At the same time, network functions can also be easily expanded to meet the growth of your business' users. And the simplification of operations and maintenance duties will furthermore, lead to a reduction in your TCO.

● The Future

Although we currently offer only GW functions, in the future, we intend to provide a wide range of functions necessary for MVNO businesses, including PCRF on the server's virtual platform.

At the present

MVNO-GW

PCRF

*MVNO-GW: Mobile Virtual Network Operator-Gateway
*PCRF: Policy and Charging Rules Function (policy and billing rule function)

The Future

1 general propose server can be equipped with various functions

vMVNO-GW   vPCRF   ●●●

Virtual Platform

General purpose server

An MVNO solution combining NFV with L2 connections puts you one step ahead of competitors

Implementing the vMVNO-GW allows L2 connections, resulting in a more flexible system environment than the L3 connections of the past.

L2 connections enable IP Address and Session Management, as well as Billing, QoS and APN controls and authentication. This then allows for a wide range of services including "Total volume control for each uses," "Targeting a large number of corporations" and "Using large numbers of IP addresses like M2M," to meet your clients' various needs.

By implementing the vMVNO-GW, which combines the functionality of NFV with L2 connections, you are offered an MVNO solution that puts you one step ahead of your rivals.

Main functions provided by the NEC vMVNO-GW

- Virtual APN function
- Total volume control function
- Billing function
- DPI function
- Authentication function
- Others (Maintenance and operation function, roaming function, IP address allocation/ external server cooperation etc.)

Why NEC is chosen all over the world

● The world's first commercialization of NFV technology

On October 2013, the "vEPC (Virtualized Evolved Packet Core)" became the world's first commercial product adopting the NFV concept to virtualize the mobile communication core network.

In December the same year, NEC took the global initiative in this field by implementing this new technology to assist Myanmar's communications infrastructure project.

● Abundance of achievements in a mobile-advanced country

Japan is one of the world's most advanced countries in mobile services today and NEC has always been at the forefront, supplying mobile core products since its inception. Today, NEC continues to reaffirm its status as one of the leaders in this field by supplying a wealth of technology and knowledge to the same industry.

Towards a global, eco-friendly community

For more information contact:

NEC Telecom Carrier Business Unit 1st Carrier Services Division
http://www.nec.com/en/global/solutions/nsp/mvno-gw/index.html