

5GO.pt

Mobilizador 5G 2nd Project Workshop

5G Products and Services for the Network Edge

Virtualizing the CPE – Where are the Functions?

May 20, 2021

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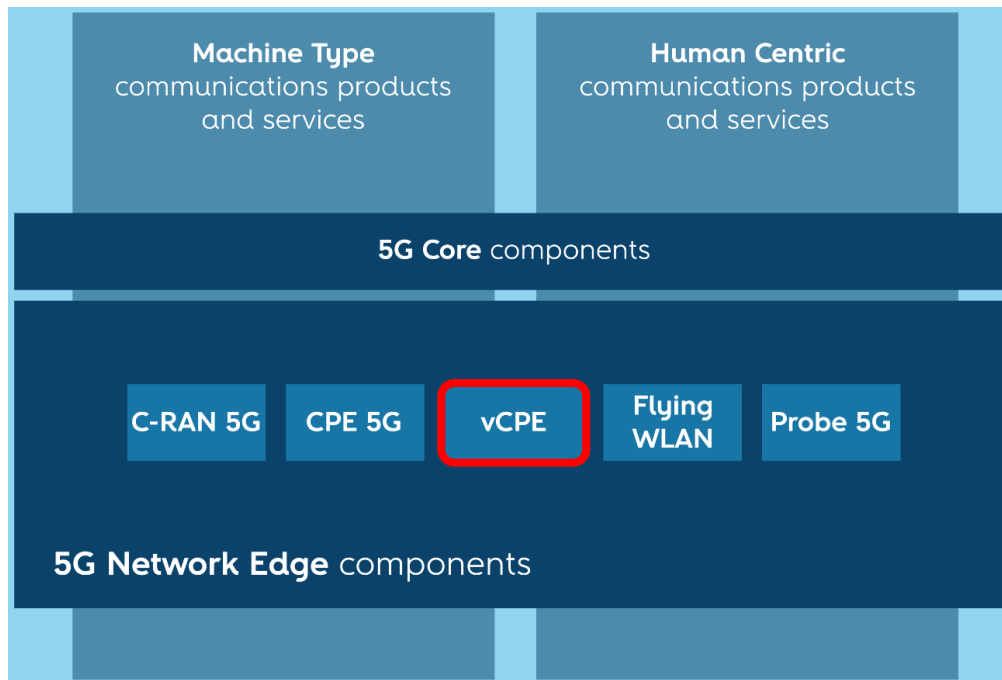
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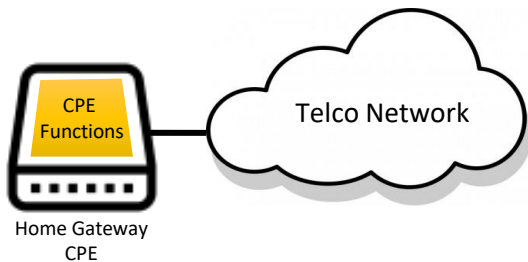
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Why virtualize CPE functions?



Residential CPE – Home gateway

- Scales to millions
- Operational headache

Centralized and managed functions would be good...

Business CPE

- Feature rich
- Distributed services

CPEs should be flexible...

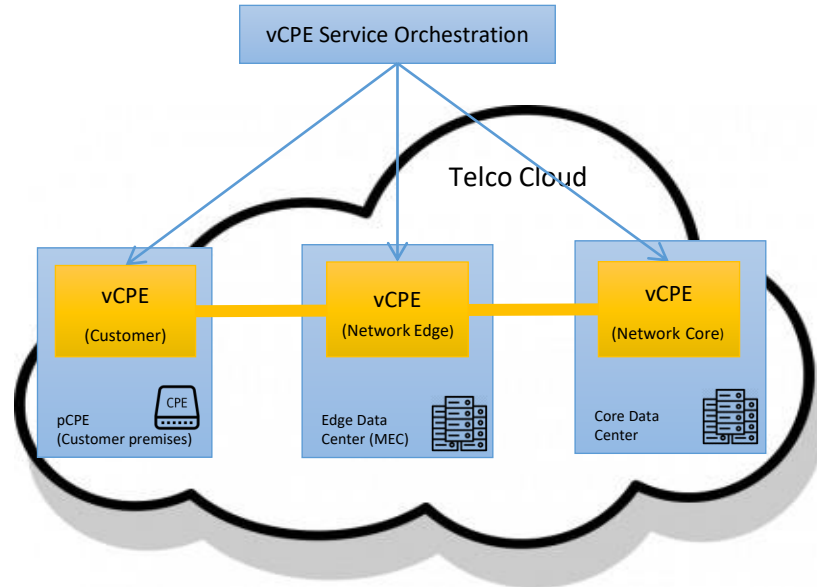
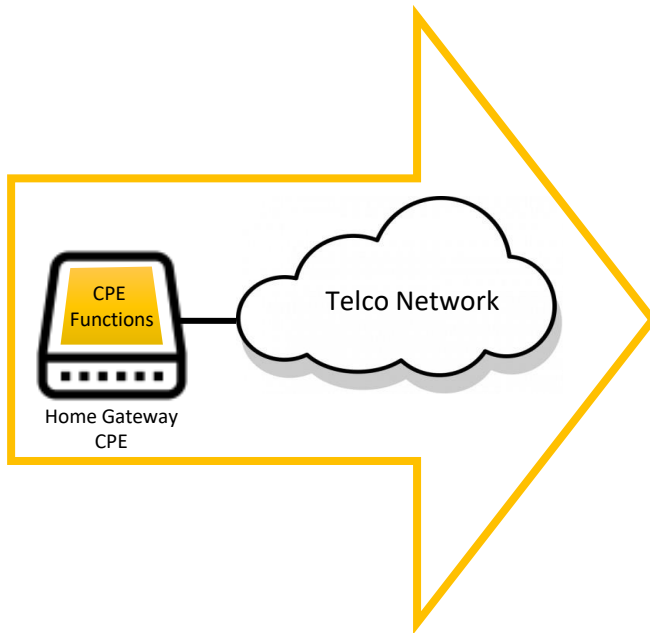
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Why virtualize CPE functions?



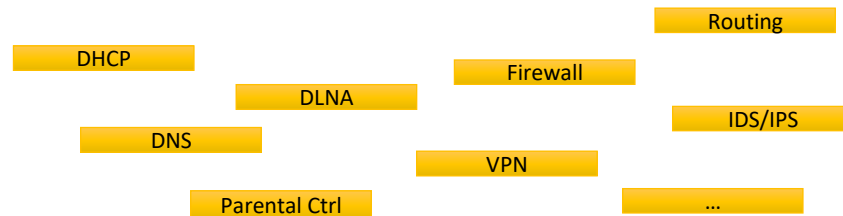
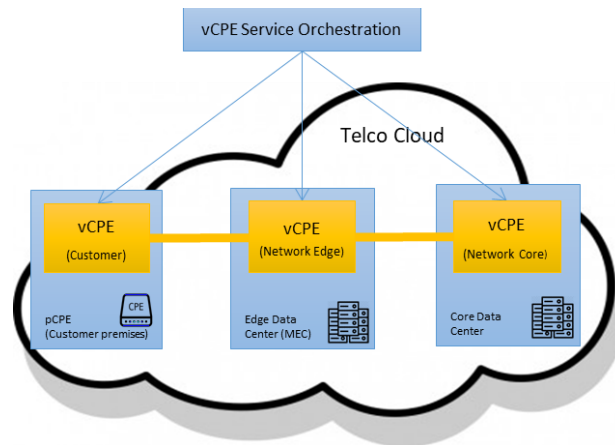
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- CPE functions are
 - Disaggregated
 - Virtualized
 - ...and placed where they fit better
 - Customer Premises
 - Network Edge
 - Network Core
- SDN is used to steer traffic through the functions
- Functions can be managed separately
- New functions can be added any time, any place

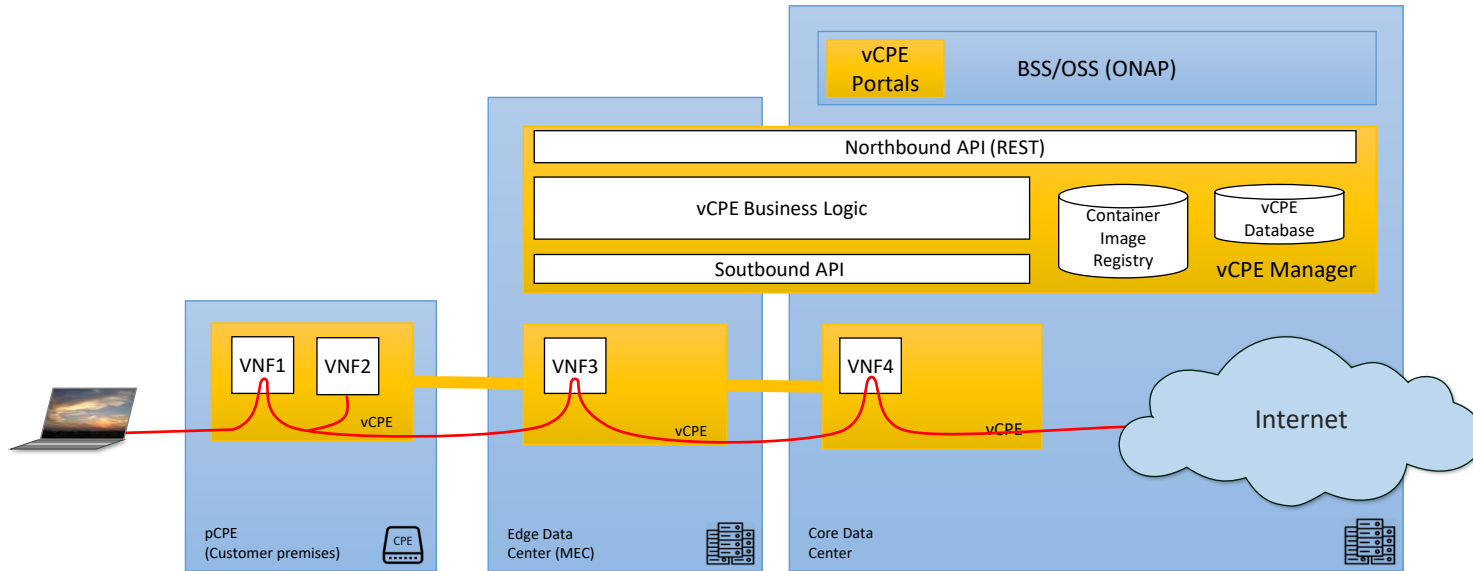


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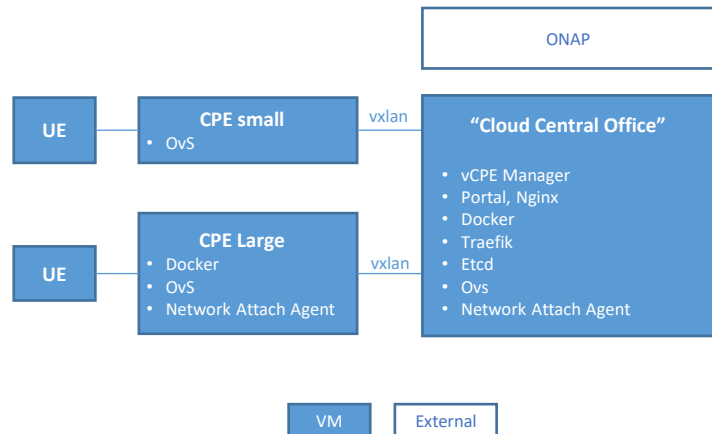
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- Totally supported by the 5Go Openstack platform. Everything is virtualized:
 - User Equipment
 - CPE (small/large)
 - vCPE Manager environment
 - And, obviously, network functions...
- Network Functions are based on Docker containers
- ONAP deploys/bootstraps the vCPE Manager (colaboration between PPS1 and PPS2)
- Operator Portal interacts with ONAP, which interfaces with the vCPE Manager
- vCPE Manager coordinates VNFs across “physical CPEs” and the “Cloud Central Office”



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Client Portal (Mockups)

5G.pt vCPE

Ola Isabel | SAIR

DASHBOARD

Dashboard (informação do utilizador)

João Manuel (Pai) **MODIFICAR**

Data de modificação: 07/07/2023

DISPOSITIVOS **ADICIONAR**

Apoie dispositivos conectados ao utilizador

Dispositivo	Estado (Bloqueado/ativo)
Internet Samsung W323	Ativo
Tablet	Ativo
MAC ADDRESS: DD-80-DD-86-99-112	Bloqueado

Total entries: 15

SERVIÇOS **ADICIONAR**

Defina serviços com base de velocidade

Serviço	Descrição	Categorias
Firewall	Aplicação de segurança de rede ...	Segurança, Pré-instaladas
Hotspots	Hotspots de acesso por Utilizador ...	Utilitários, Família

CSP Portal (functional prototype)

5G.pt

ONAP Portal Manage Support

What are you looking for?

CLIENTES 1

SERVIÇOS 1

VCFES 1

CATALOGO DE VNFS 3

DASHBOARD

Clientes

Virtual Network Functions (vNFs)

Vrouters

Fornece funcionalidades básicas de routing para acesso à Internet

dnsmasq

Implementação das funcionalidades de DHCP e DNS proxy

adkiller

Serviço de valor acrescentado para bloqueio de anúncios na Internet / parental control (pa-hora)

MarketPlace

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