Orange Belgium
IPV6 deployment

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Christian Dubois
Jerome de Geeter
David Rousseau

orange™

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Orange Restricted
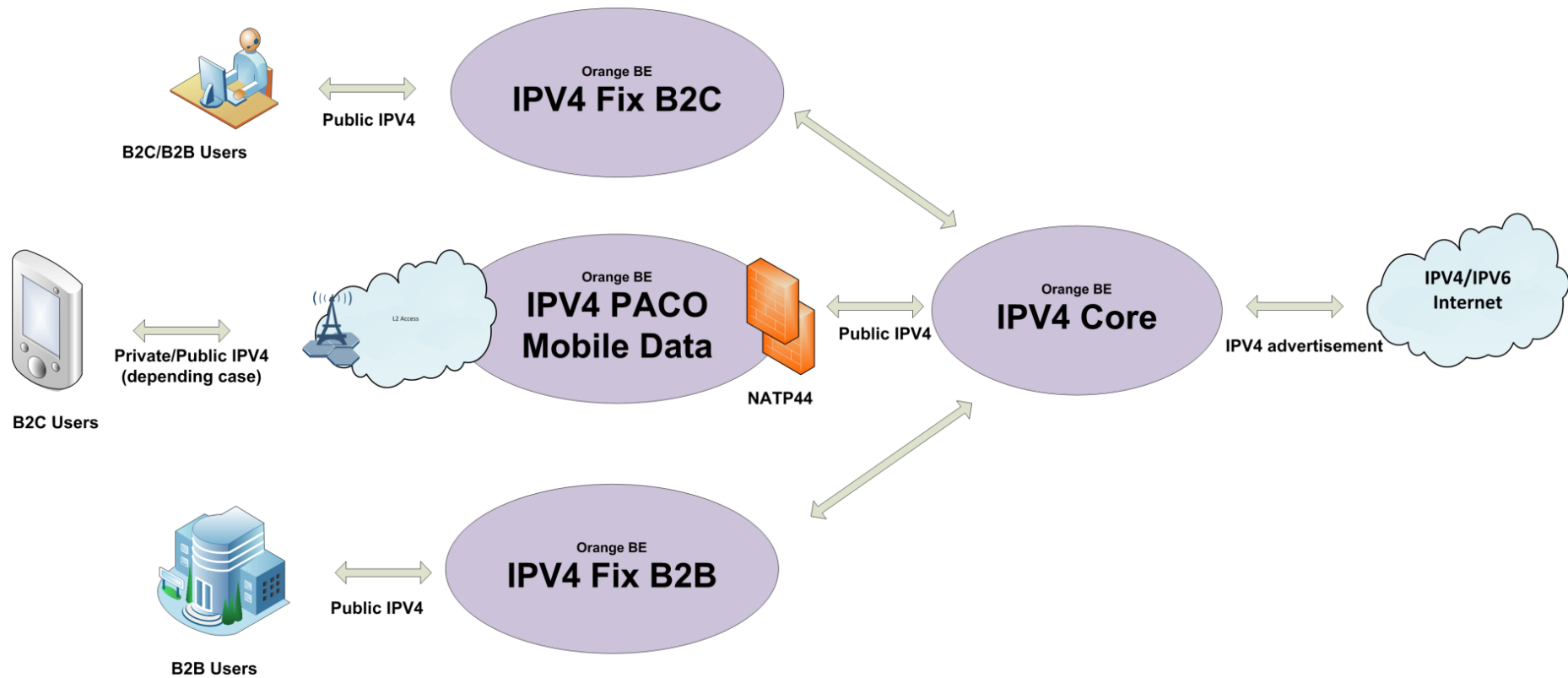
Orange BE IPV6 strategy

The Orange BE IPV6 strategy is derived from the Orange Group deployment recommendations.

IPV6 Orange Global allocation

- **Orange Group** **2a01:c000::0/19**
- Orange BE Fix services 2A01:CC00::/32
- **Orange BE Mobile services** **2A01:CD20::/32**
- **Orange BE Corporate services** **2A01:C780::/32**

On the OBE network, development and test have been driven some years ago on the Corporate IPVPN network. Currently the focus is set on the IPV6 mobile data testing.

Orange BE IPV4 networks

B2C/B2B Users

Public IPV4

Orange BE
IPV4 Fix B2C

B2C Users

Private/Public IPV4
(depending case)

L2 Access

Orange BE
IPV4 PACO
Mobile Data

NATP44

Public IPV4

Orange BE
IPV4 Core

IPV4 advertisement

IPV4/IPV6
Internet

B2B Users

Public IPV4
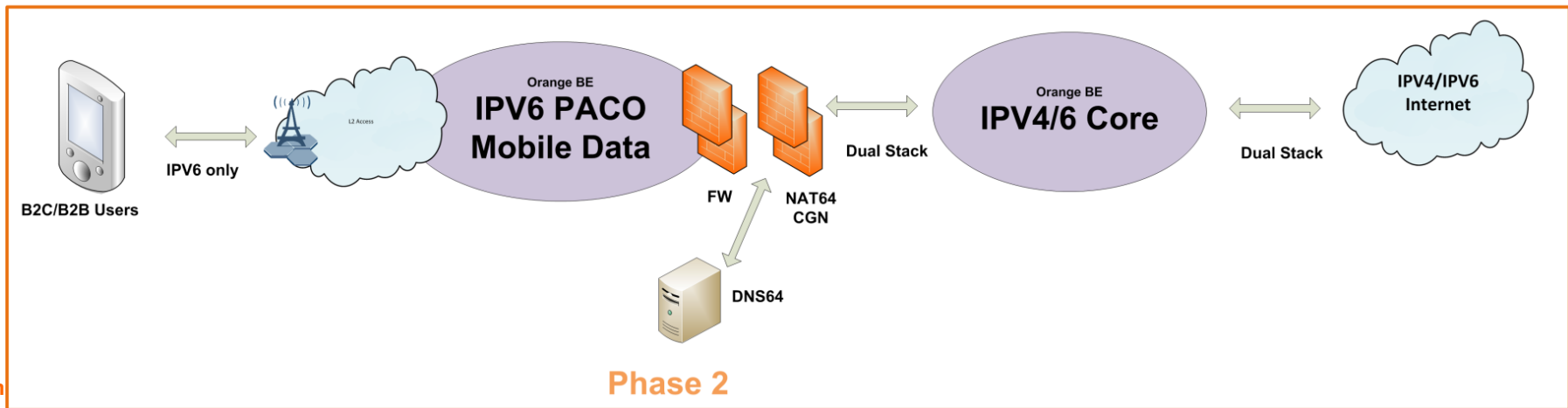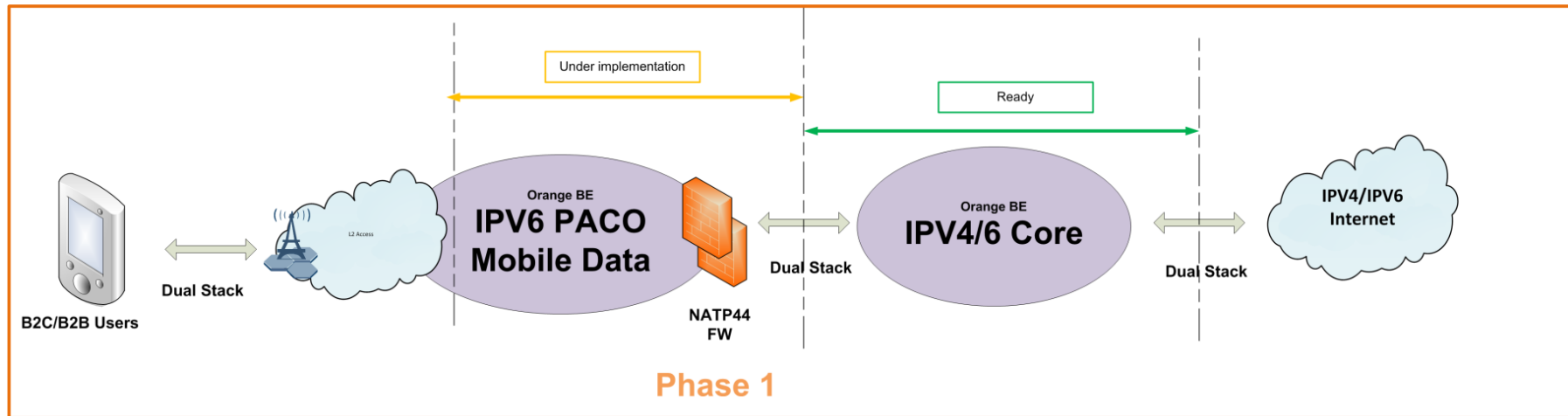
Orange BE
IPV4 Fix B2B

Orange BE IPV6 for Mobile Data

The first phase is move to a Dual Stack architecture, where both IPv4 and IPv6 PDP contexts will be established. the CGN function will still be handled by our FW for the IPV4 traffic.

On a second phase, an IPv6-only PDP contexts can be established and access to IPv4-formatted contents will then rely upon NAT64 capabilities to be deployed in the network via dedicated CGN devices.

We are currently deploying the phase 1 that should be operational for Q3 2018. The phase 2 is scheduled for 2019.

Orange BE IPV6 for mobile data

Under implementation

Ready

Orange BE IPV6 PACO Mobile Data

Orange BE IPV4/6 Core

IPV4/IPV6 Internet

B2C/B2B Users

Dual Stack

L2 Access

NATP44 FW

Dual Stack

Dual Stack

Phase 1

Orange BE IPV6 PACO Mobile Data

Orange BE IPV4/6 Core

IPV4/IPV6 Internet

B2C/B2B Users

IPV6 only

L2 Access

FW

NAT64 CGN

Dual Stack

Dual Stack

DNS64

Phase 2

Orange BE IPV6 for Corporate

Corporate IP network is IPV6 ready

IPV6 basic product for Corporate tested few years ago (Dual Stack VPNV6)

Corporate IPV6 interconnections towards OBE IP Core to be build in 2019 (late deployment due to complex cleaning to be realized)

DS-Lite implementation on the Corporate IP network still to be defined/tested. Can be also considered as a target for 2019.

Note that all testing/architecture work has been realized in advance of any product marketing requirement for an IPV6 product creation.

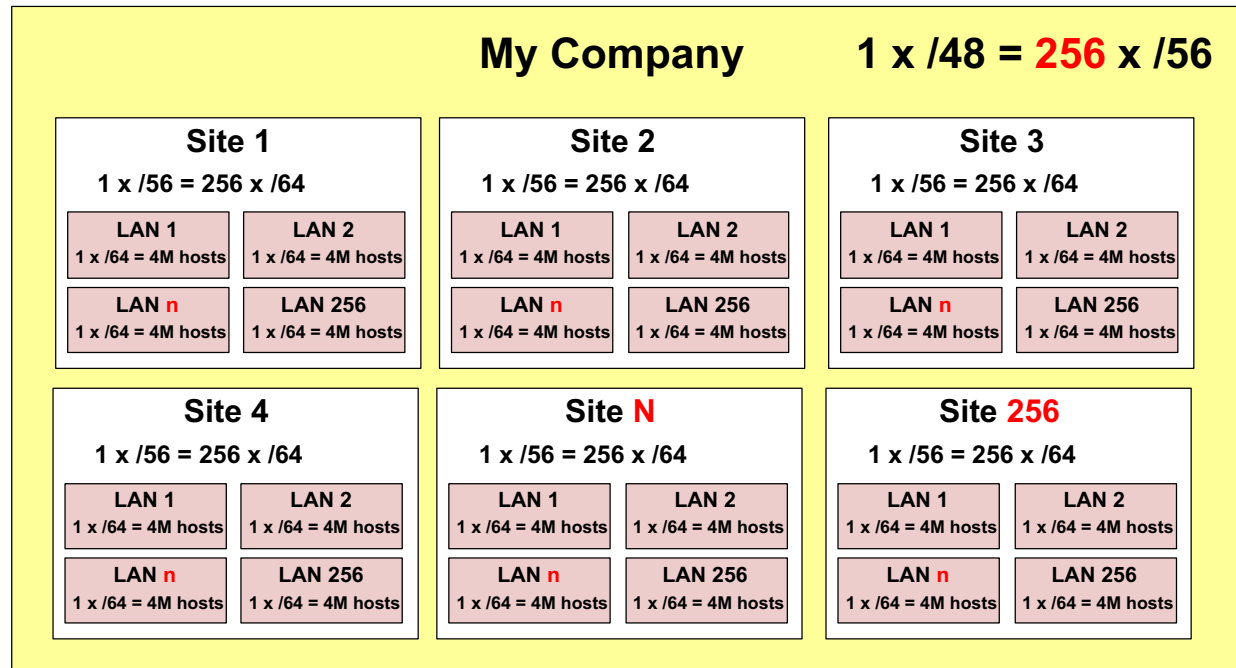# Orange BE IPV6 for Corporate
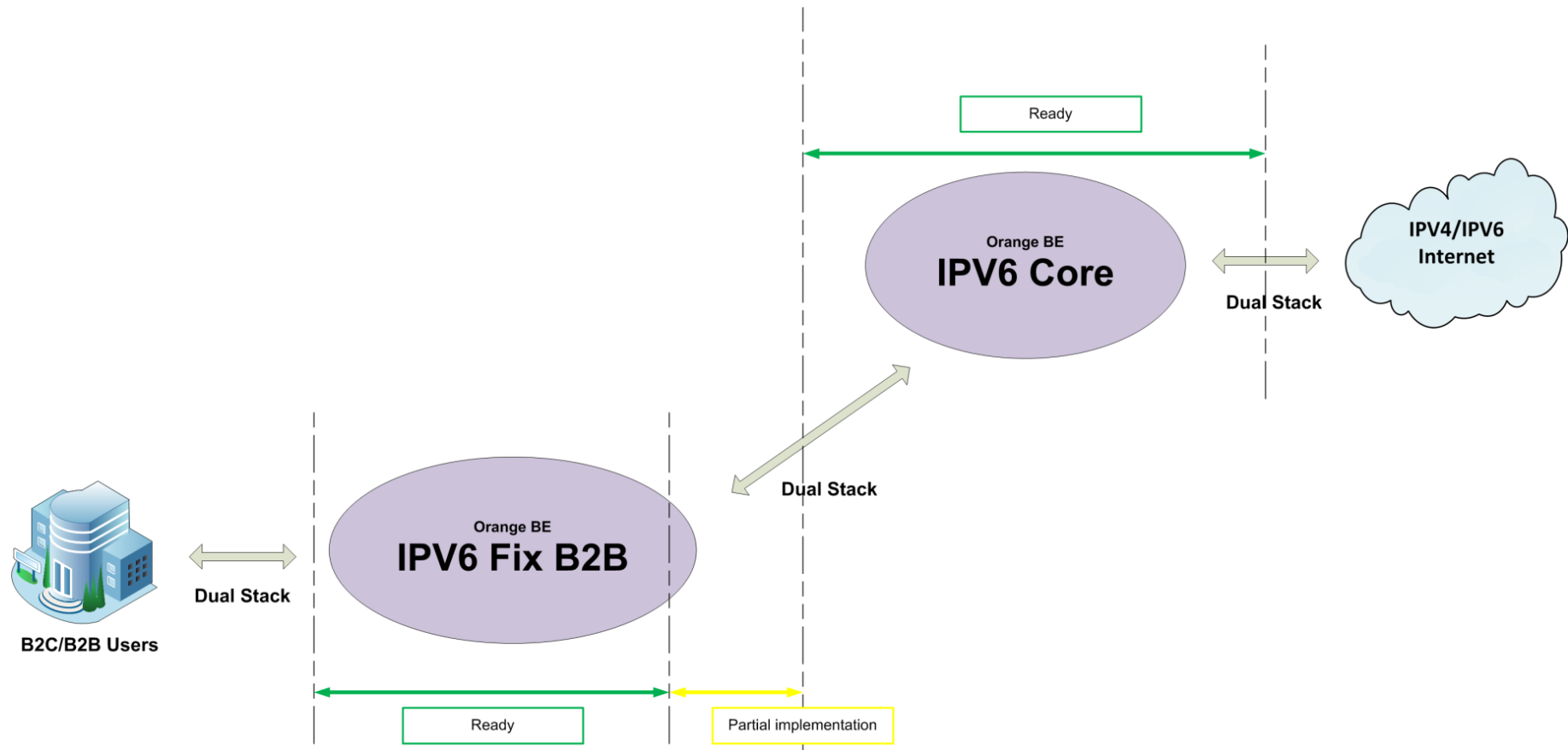
Orange BE IPV6 for Corporate

IPV6 corporate customer allocation strategy.

One /48 per corporate customer that would be split in 256 sites getting each a /56 IPV6 range.

My Company	1 x /48 = 256 x /56

Site 1	Site 2	Site 3
1 x /56 = 256 x /64	1 x /56 = 256 x /64	1 x /56 = 256 x /64

Site 1 — 1 x /56 = 256 x /64

LAN 1 1 x /64 = 4M hosts	LAN 2 1 x /64 = 4M hosts
LAN n 1 x /64 = 4M hosts	LAN 256 1 x /64 = 4M hosts

Site 2 — 1 x /56 = 256 x /64

LAN 1 1 x /64 = 4M hosts	LAN 2 1 x /64 = 4M hosts
LAN n 1 x /64 = 4M hosts	LAN 256 1 x /64 = 4M hosts

Site 3 — 1 x /56 = 256 x /64

LAN 1 1 x /64 = 4M hosts	LAN 2 1 x /64 = 4M hosts
LAN n 1 x /64 = 4M hosts	LAN 256 1 x /64 = 4M hosts

Site 4 — 1 x /56 = 256 x /64

LAN 1 1 x /64 = 4M hosts	LAN 2 1 x /64 = 4M hosts
LAN n 1 x /64 = 4M hosts	LAN 256 1 x /64 = 4M hosts

Site N — 1 x /56 = 256 x /64

LAN 1 1 x /64 = 4M hosts	LAN 2 1 x /64 = 4M hosts
LAN n 1 x /64 = 4M hosts	LAN 256 1 x /64 = 4M hosts

Site 256 — 1 x /56 = 256 x /64

LAN 1 1 x /64 = 4M hosts	LAN 2 1 x /64 = 4M hosts
LAN n 1 x /64 = 4M hosts	LAN 256 1 x /64 = 4M hosts

Thank you