



# NEW B3 DATA CENTER

Workshop about the PUMA Trading System's Migration: Technological Aspects and Parallel Production

**Migration Planning**

**Reservation and Rack Handling**

**Smart Hands Services**

**GPS Server Services**

**Connectivity**

**Network Topology**

**Parallel Production and PUMA Migration**

**Workshop Wrap Up and Recommendations**

# MIGRATION PLANNING

**April 24<sup>th</sup>**

Start of Migration/Deployment of the Dedicated Circuits

**November 11<sup>th</sup>**

PUMA Migration

2017

**June 5<sup>th</sup>**

Start of customer hardware deployment at Santana de Parnaíba

**August to October**  
Parallel Production

**Mock Trading Sessions**

Jul 8<sup>th</sup>; Aug 5<sup>th</sup>; Sep 2<sup>nd</sup>;  
Sep 30<sup>th</sup>\*; Oct 28<sup>th</sup>\* ; Nov 11<sup>th</sup>\*

2018

**March 31<sup>st</sup>**

Deadline for Deactivation of Praça and UEC sites

# Reservations and Rack Handling

# RESERVE YOUR RACK AT B3 DATA CENTER

Please specify how many hosting  
units are to be reserved

Website [datacenterdabolsa.com.br/en/](http://datacenterdabolsa.com.br/en/)

---

Email [marketdata@bvmf.com.br](mailto:marketdata@bvmf.com.br)

---

Phone **(55 11) 2565-7105**

---



# CO-LOCATION MIGRATION STRATEGY

Please check your migration strategy with B3

## Technology Update

Acquire new equipment, links and installation services

---

Bear delivery deadlines (for imported hardware) in mind

---

Schedule activation in advance

---

Validate connectivity

---

Participate in the Mock Trading Sessions

## SPA Co-location Migration

Guarantee connectivity with SPA

---

Specialized transportation service

---

Plan the hardware move with B3

---

Map current infrastructure

---

Schedule activation in advance

---

Validate connectivity

---

Participate in the Mock Trading Sessions



# 1/2 TRADING RACK



[B]<sup>3</sup>

# 1/2 TRADING RACK

**2 connections** to the Trading Environment in LC/LC Multimode Fiber Cables

---

**2 connections** to Telecom Room 1 and 2 in LC/LC Single-mode Fiber Cables

---

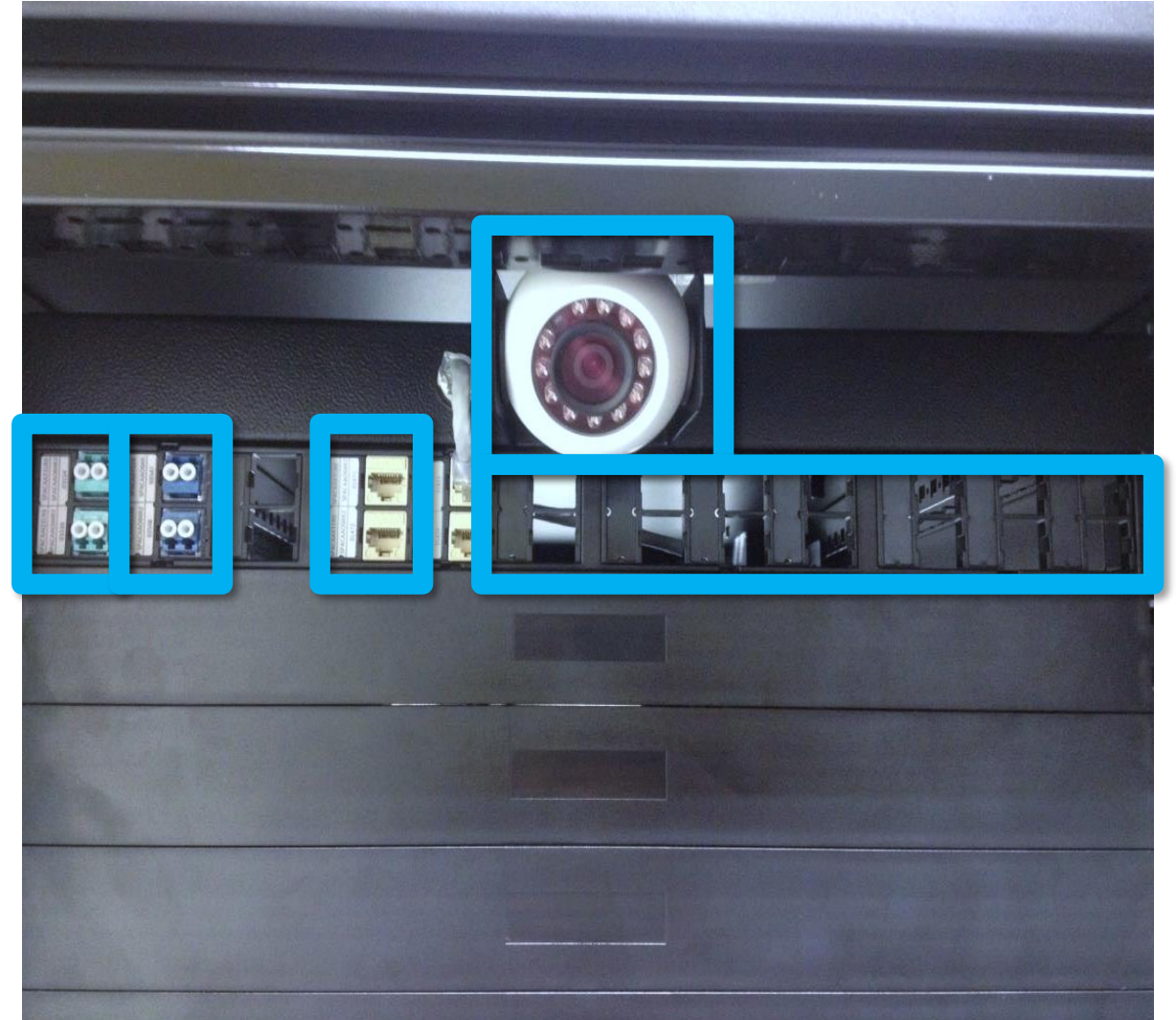
**2 connections** for VPN access

---

**1 Internal camera** per 1/2 Rack

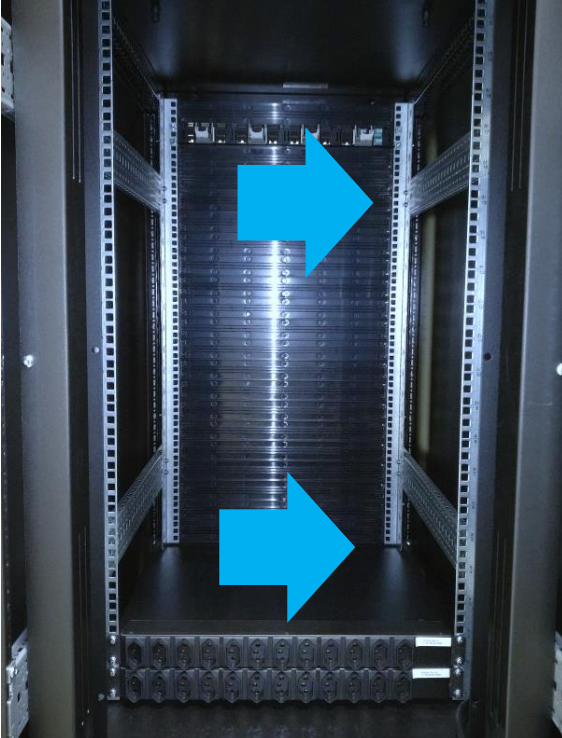
---

**Available space** for cross connections (copper + fiber)



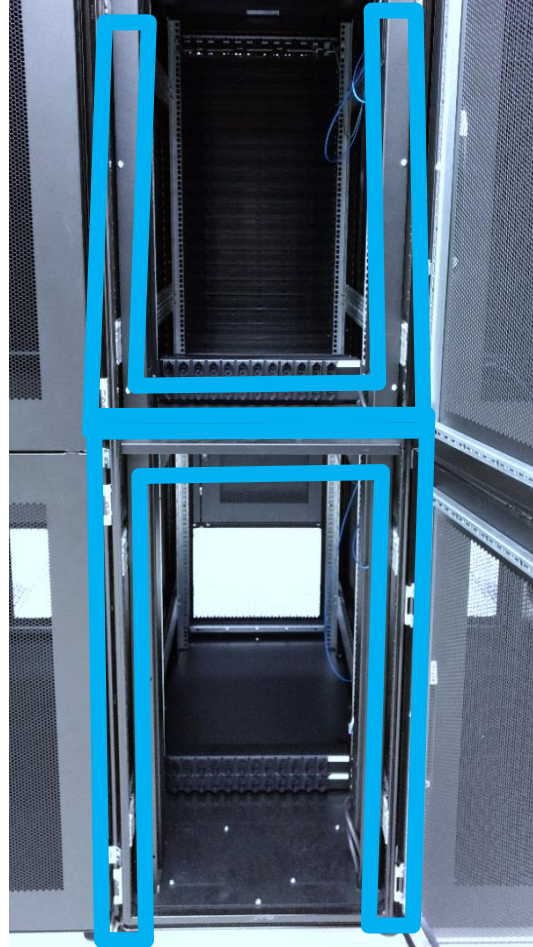


Channels for isolated cabling between racks

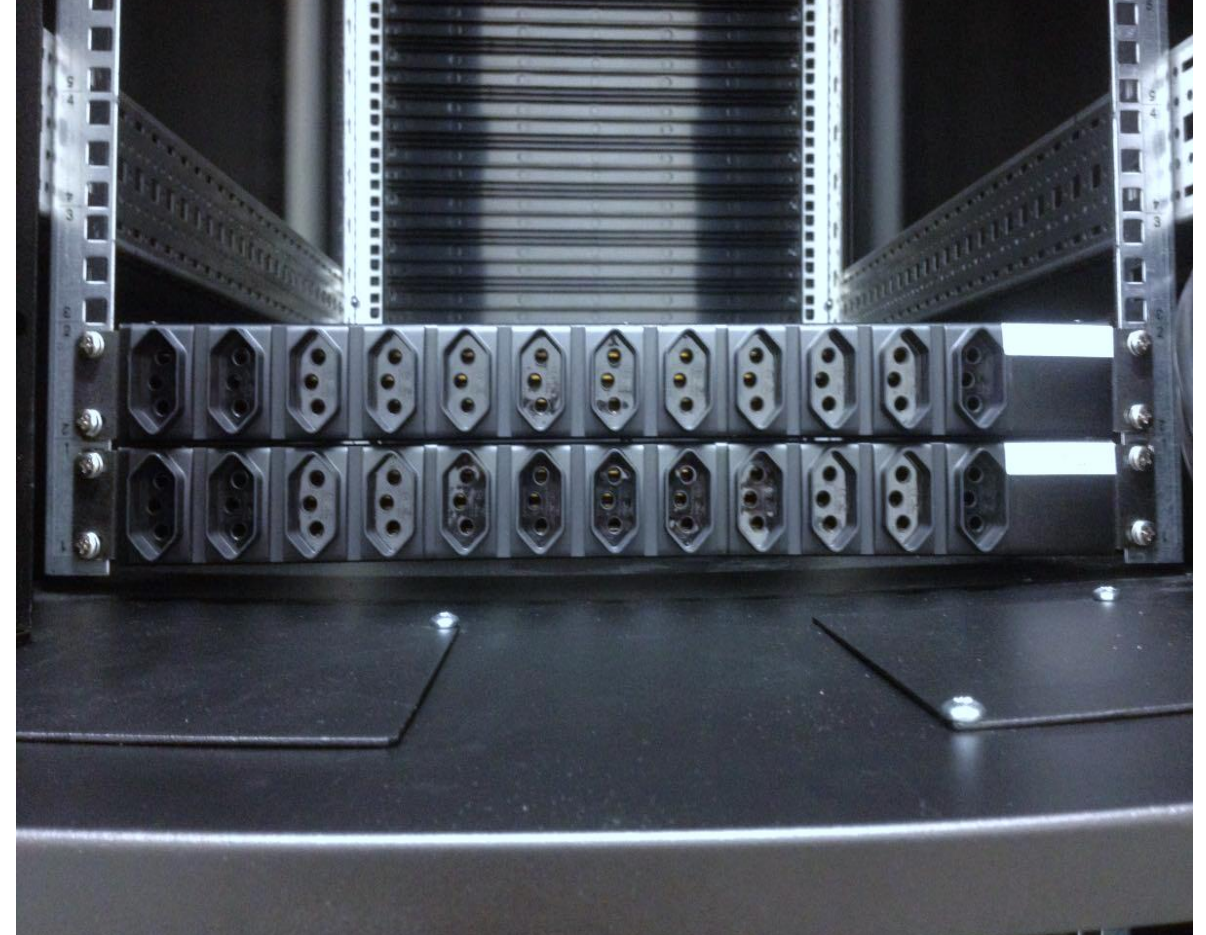


Default 19'  
600mm x 1200mm x  
1000mm

Horizontal and vertical  
partitions between ½ racks



Default electrical jack NBR-14136  
Redundant electrical circuits



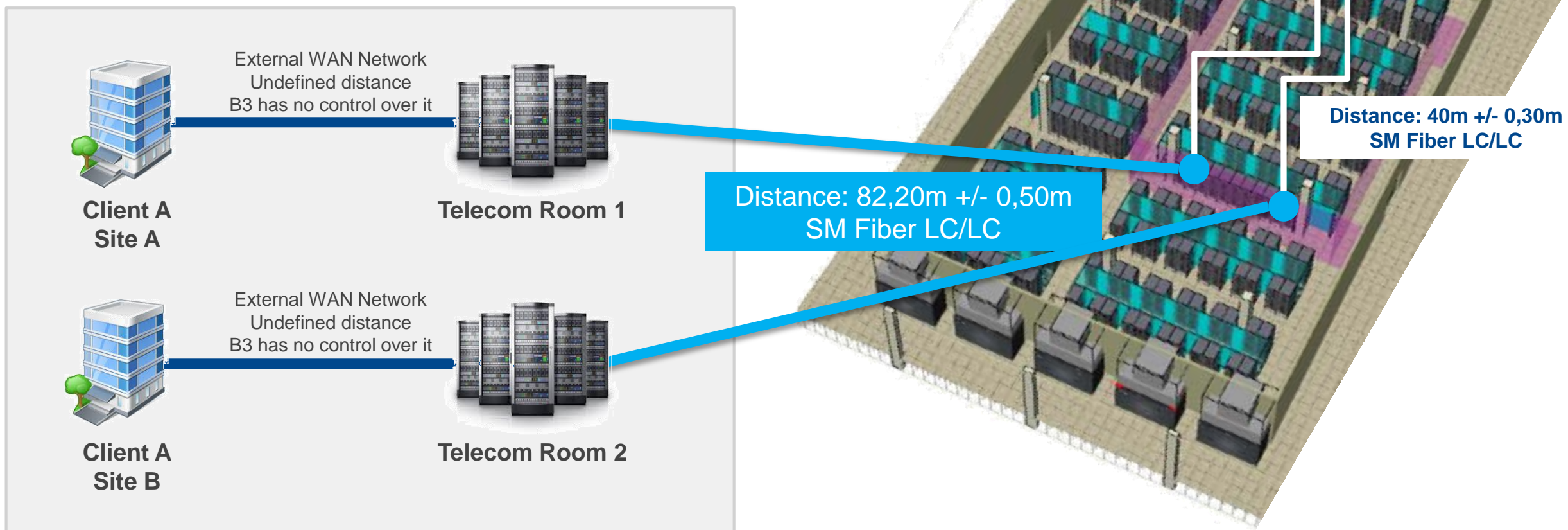


# RACK ENVIRONMENT

Racks distributed in two-yes/one-no pattern



# CLIENT CONNECTIONS DIAGRAM





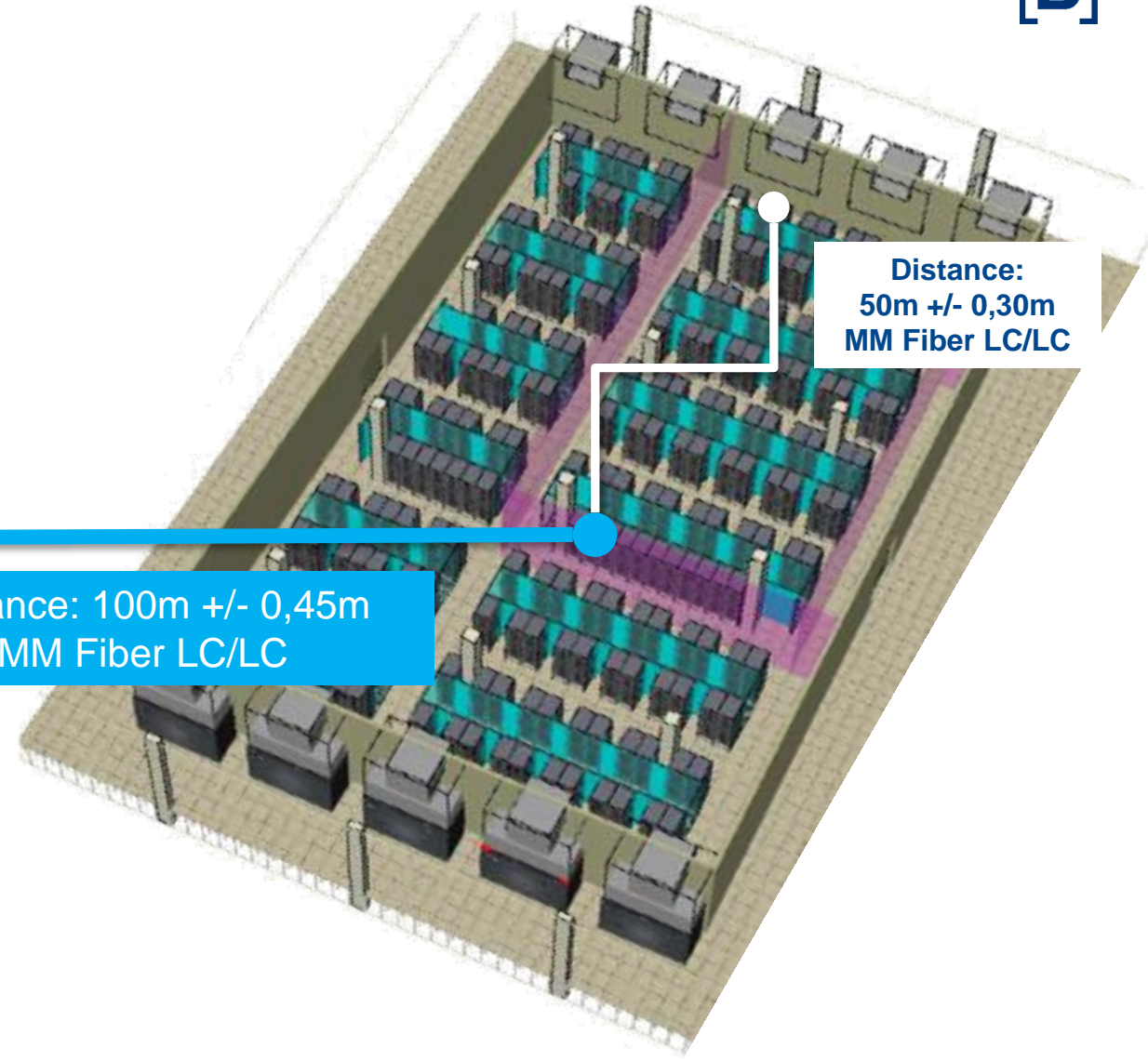
# PUMA CONNECTION DIAGRAM

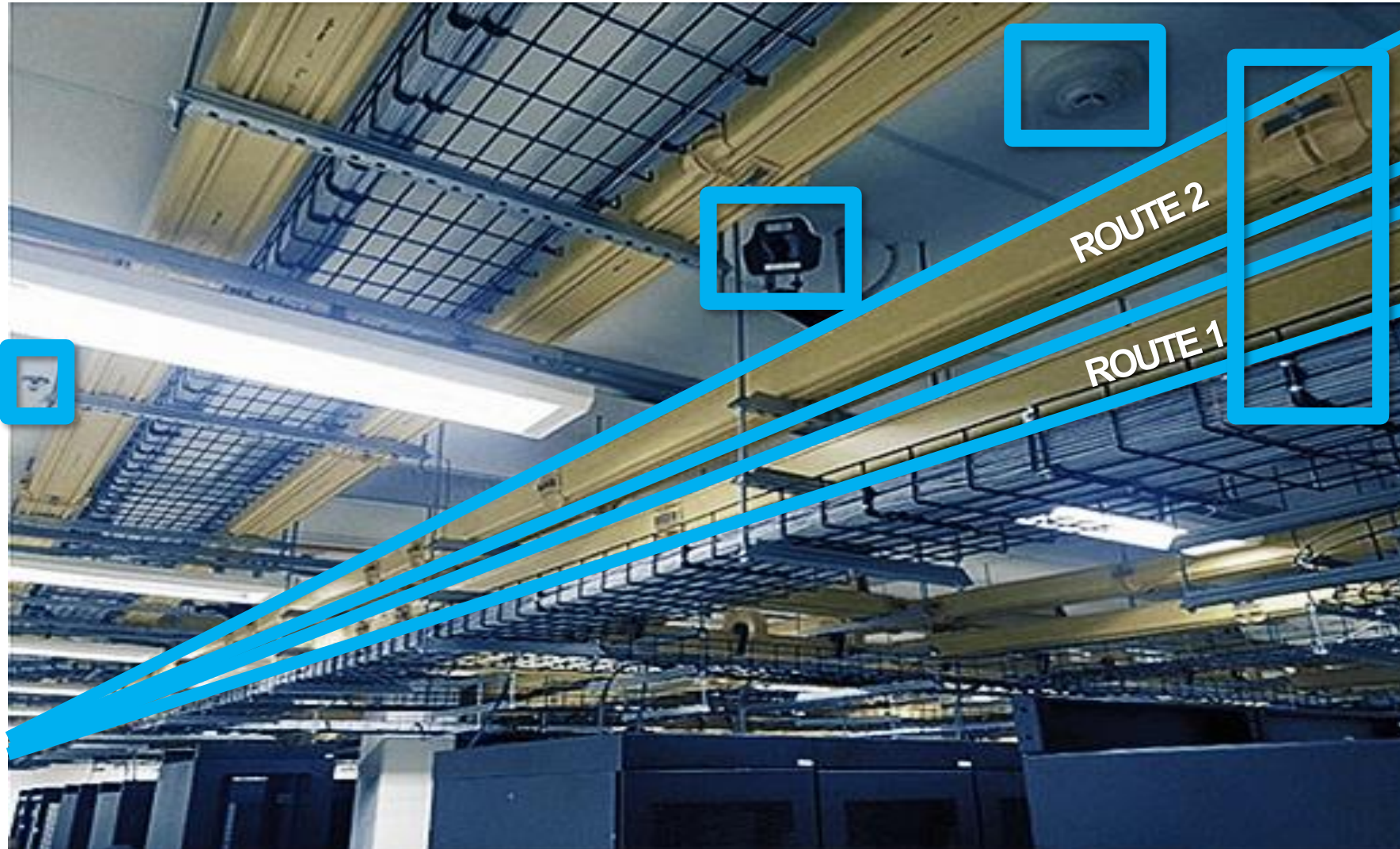


PUMA

Distance: 100m +/- 0,45m  
MM Fiber LC/LC

Distance:  
50m +/- 0,30m  
MM Fiber LC/LC





**Aerial routes for  
optic fiber**

---

**Aerial routes for  
copper**

---

**Vesda (detection)**

---

**Smoke Detector**

---

**Sprinkler (dry pipe)**

---

**Security camera**



# Smart Hands Services

# SMART HANDS SERVICES

## Services Provided

- Cabling
- Console port configuration and reset
- Activity surveillance
- SFP, HD and power supply installation (hotswap)
- Hardware reception and return

## Services Not Provided

- OS Installation
- IP address changes
- Hardware maintenance
- Transportation

- Client has 10:00 hours monthly per hired unit, non-cumulative
- Activation/deactivation services are not discounted from the available hours

# Time Server Services

## TIME SERVER SERVICES

- Partnership with Perseus
- Equal service guarantee to all participants
- GPS antenna access
  - Cross Connect charged by B3
- Time Server Services
  - NTP
  - PTP

**For more details, please contact**

André Gomes [agomes@perseus.co](mailto:agomes@perseus.co)

Jeff Mezger [jmezger@perseus.co](mailto:jmezger@perseus.co)

# Connectivity



## Trading Rack

What changes in relation to current provision:

- Two connections with the trading network in **10 Gbps Ethernet** (media: **multimode optic fiber**)
- Option to contract **dedicated links** for direct access to the hired racks (check the provider list on the datacenter webpage)
- For the **Web Rack**, **interconnection with the Trading Rack** will be done at **no cost**

What is kept:

- Provision of VPN internet for administration
- Camera for monitoring access to the rack

## RCB

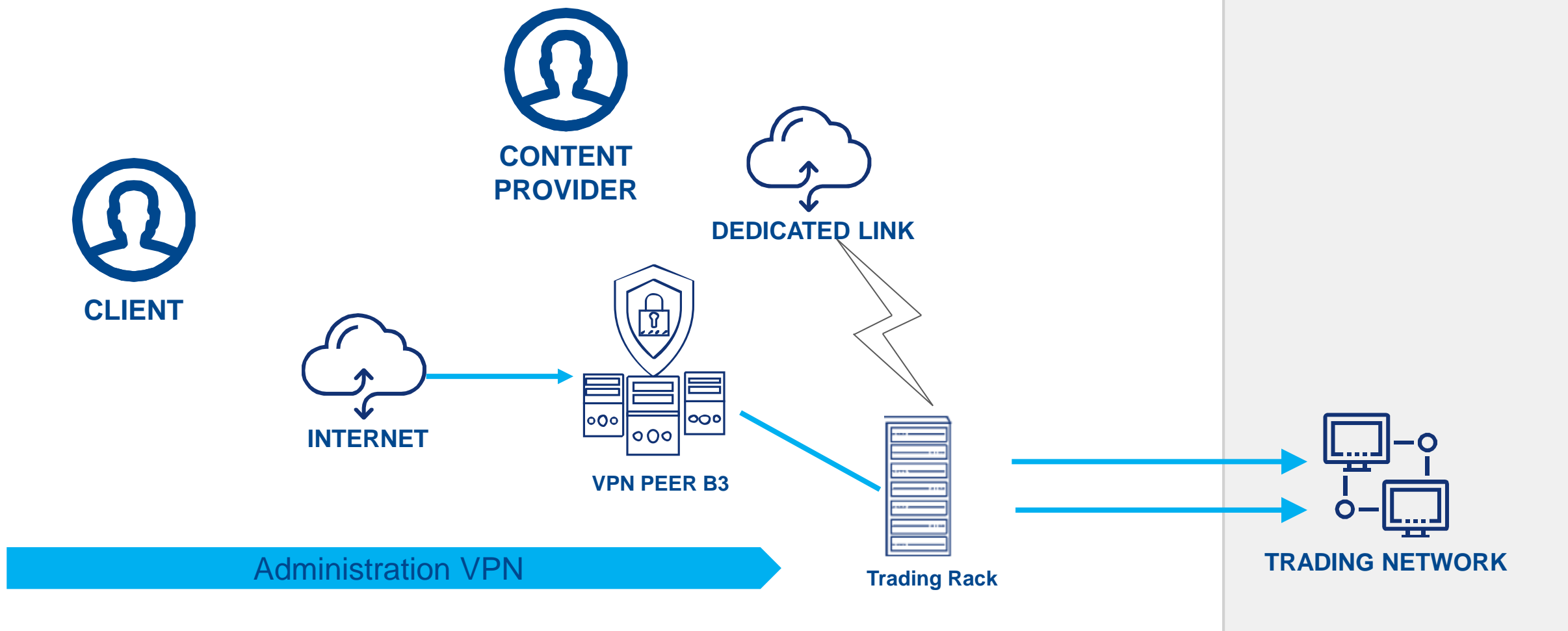
What will be changed:

- **In Mock Trading Sessions** for the new platform and on the go-live of the new platform on DC SPA, **the main traffic for order entry (main link)** will be prioritized for those connected at the **DC SPA** border

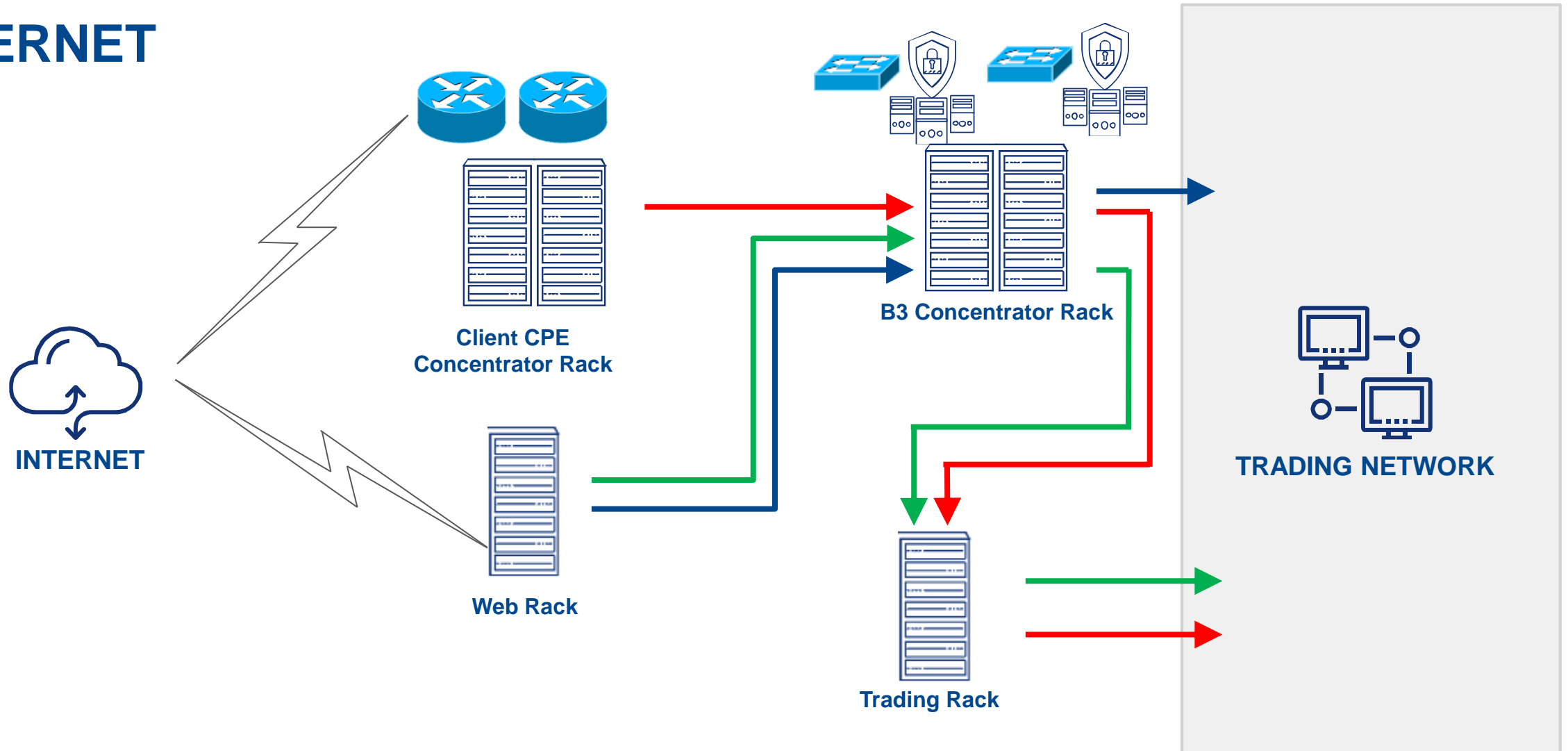
What is kept:

- **During parallel production, order entry traffic** for the new trading platform will be maintained through the link connected to the **DC XV** border

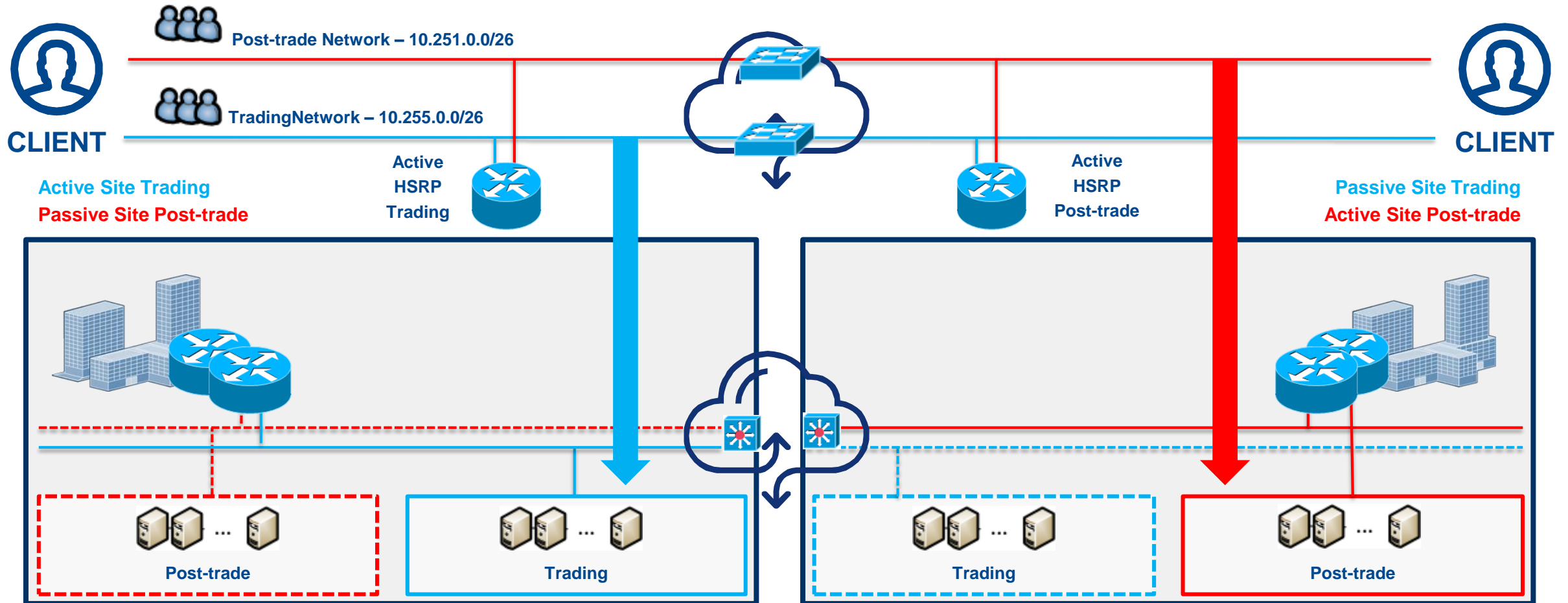
## DEDICATED LINK AND ADMINISTRATION VPN



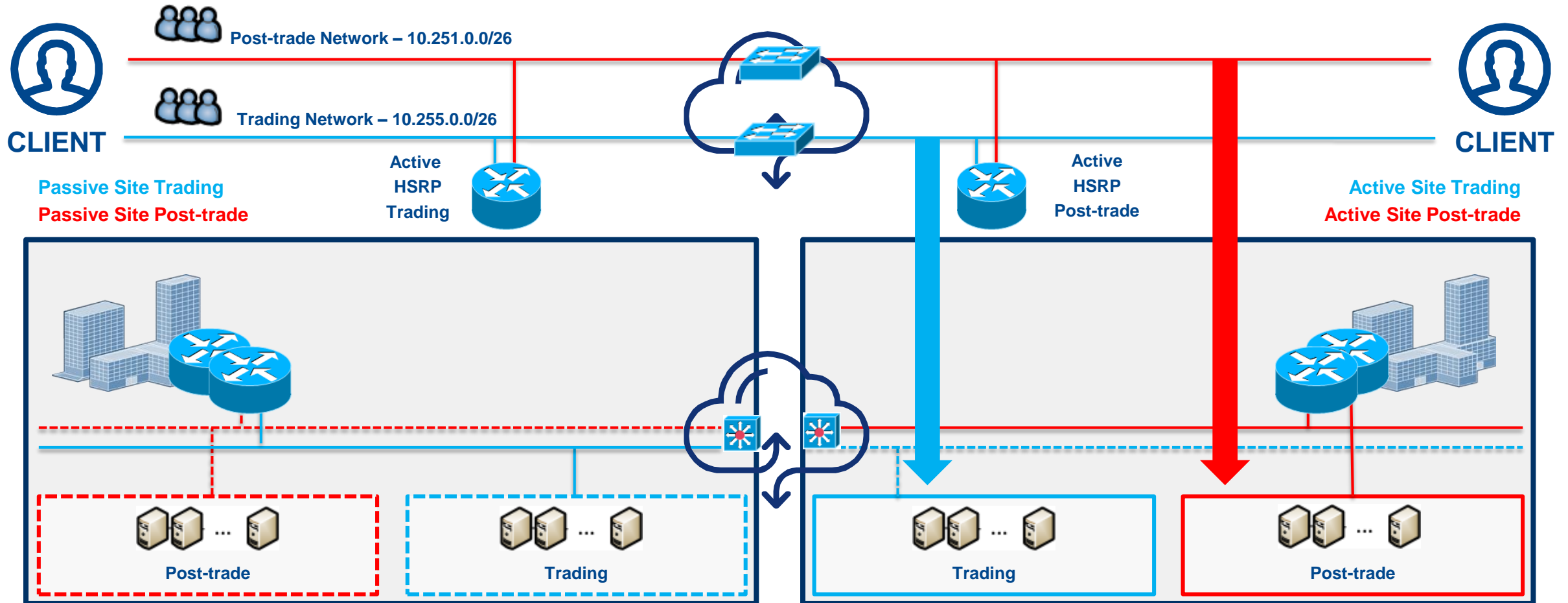
# INTERNET



# RCB (PUMA)



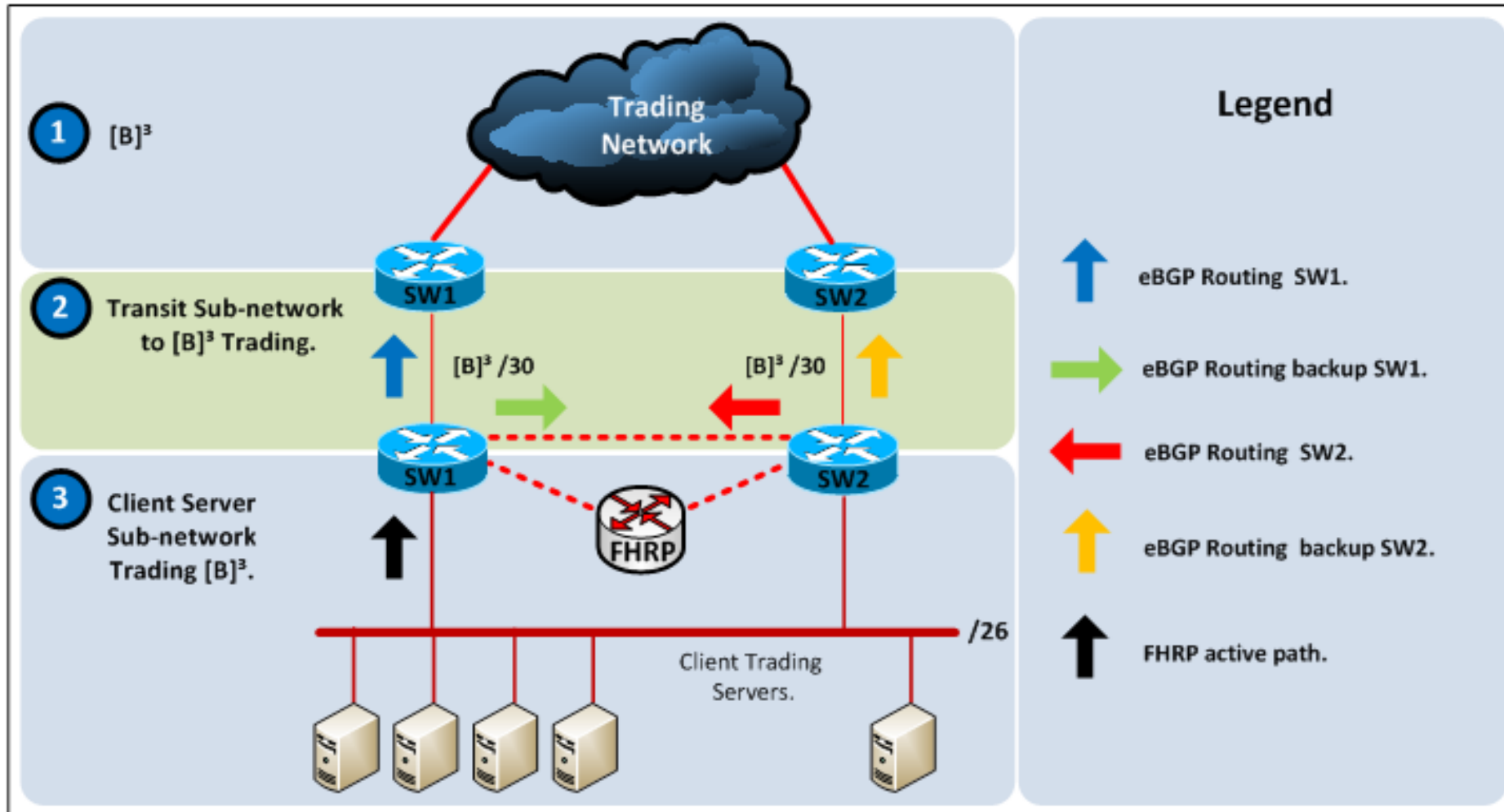
# RCB (NEW DATA CENTER)



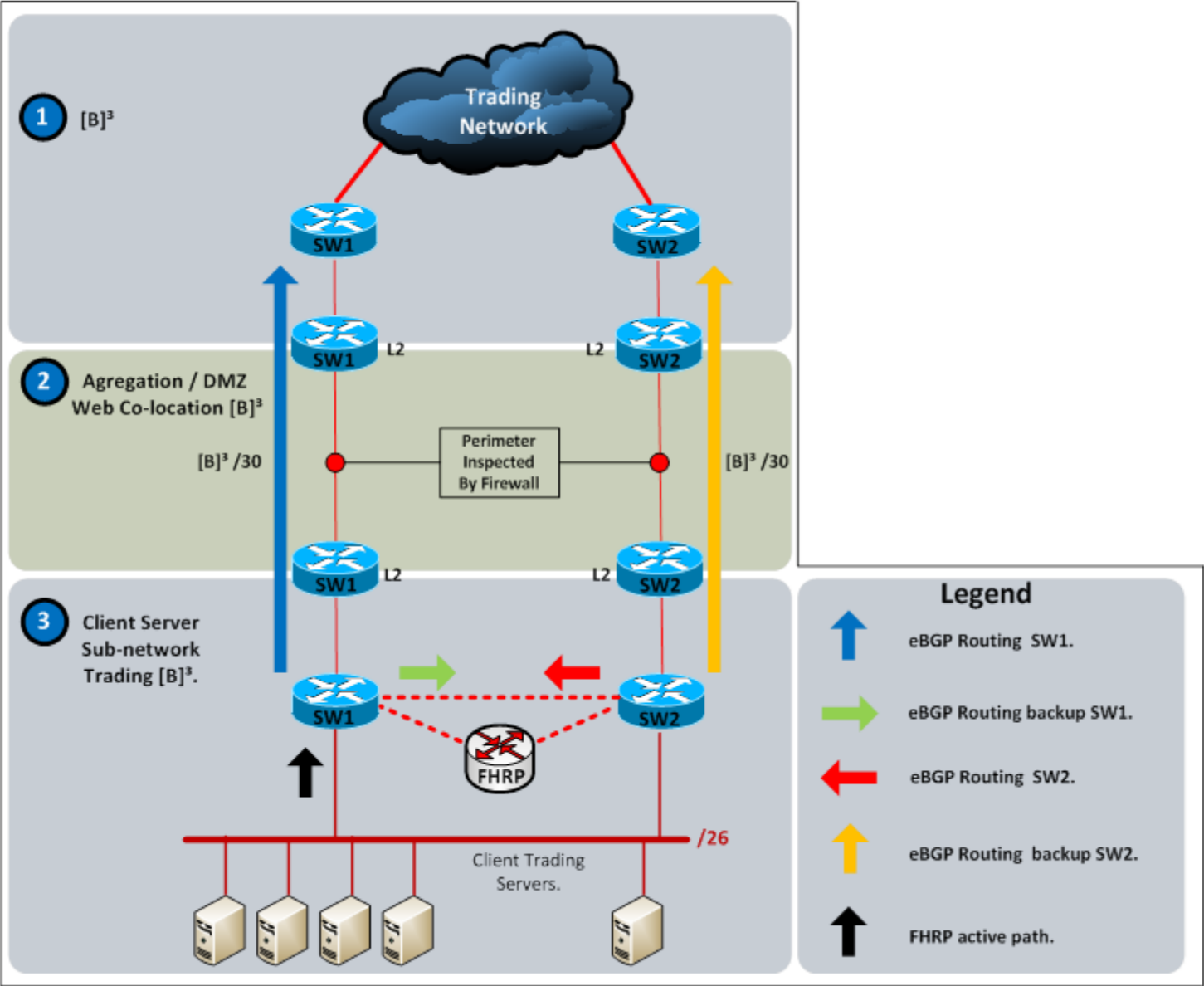


# Network Topology

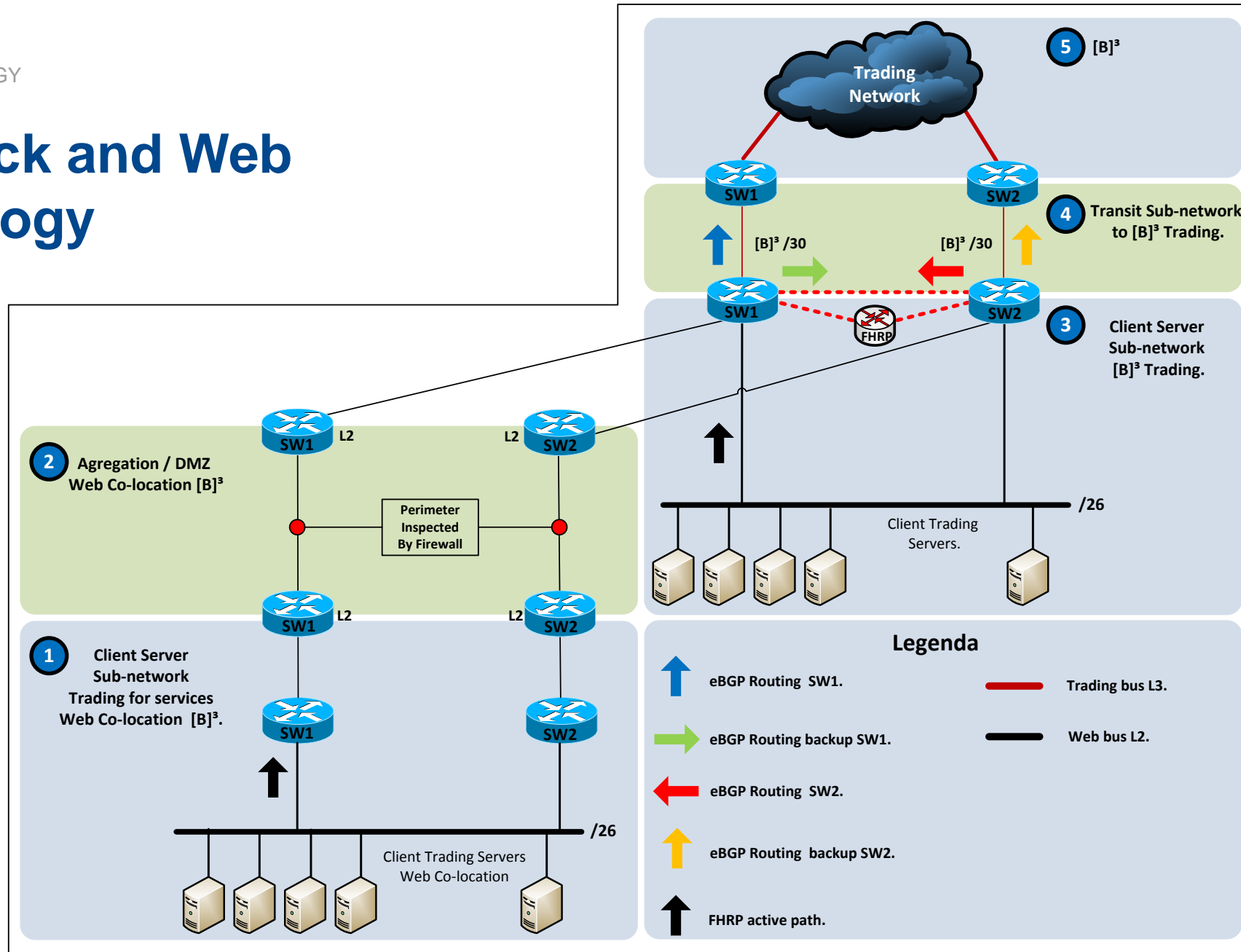
# Trading Rack Topology



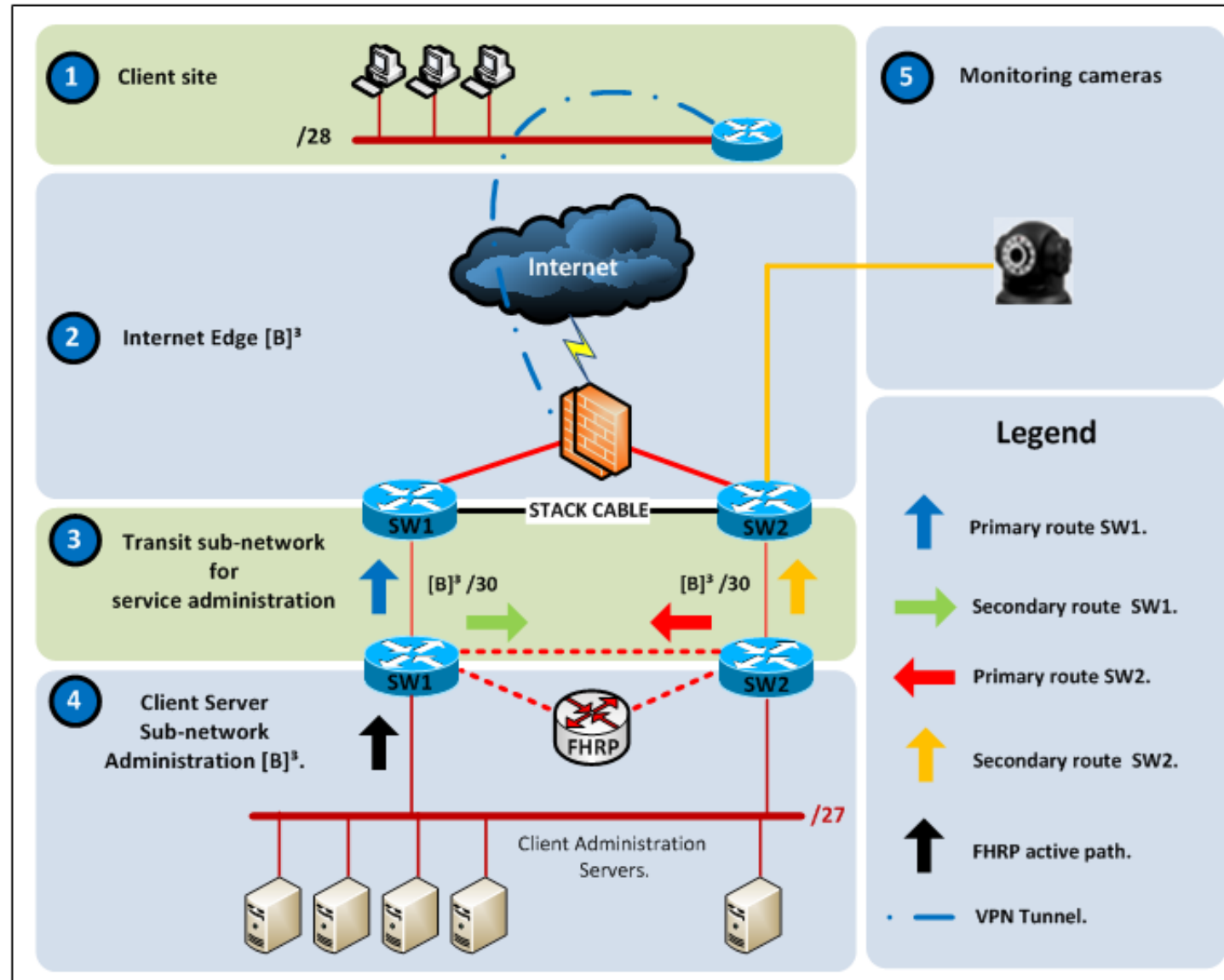
# Web Rack Topology



# Trading Rack and Web Rack Topology

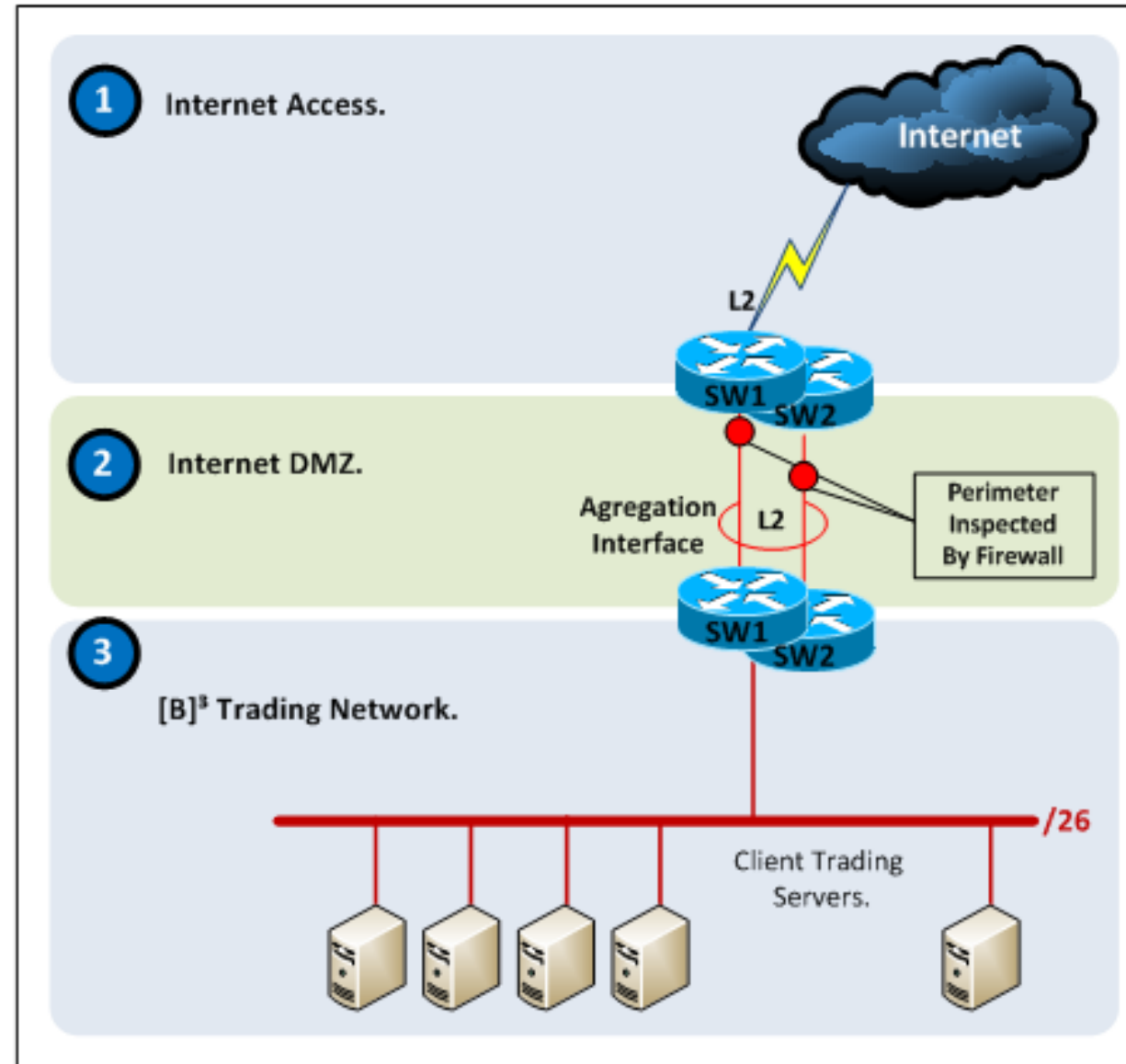


# VPN Solution Camera





# Co-location Internet Access



## RCB

- Verify the need for **capacity improvement** to the network hardware and links, mainly those links connected to DC SPA
- Verify **link exchange** (ex. “A point” inversion)
- There will be **new IP addresses** for OE and Market data (RP and Channels)
- Participant **CPE adjustments** will be required (RP and FHRP)

## Co-location

- It will be possible to access the new platform from DC Praça Co-location, but there will be a **400µs minimum latency penalty** per section in comparison with the DC SPA Co-location
- There will be **new IP addresses** for OE and Market data (RP and Channels)
- There will be **new IP addresses designated for the trading access network** from the new Trading and Web Racks

EMBRATEL

ALGAR

CMA

VIVO

SAMM

UOLDIVEO

SEABORN

LEVEL3

PERSEUS

# Parallel Production and PUMA Migration

## PUMA - Parallel Production Strategy: Aug. 05, 2017 to Oct. 28, 2017

Connectivity tests  
with the new IP  
addresses

Test Instrument  
Trading

Market Data  
Reception

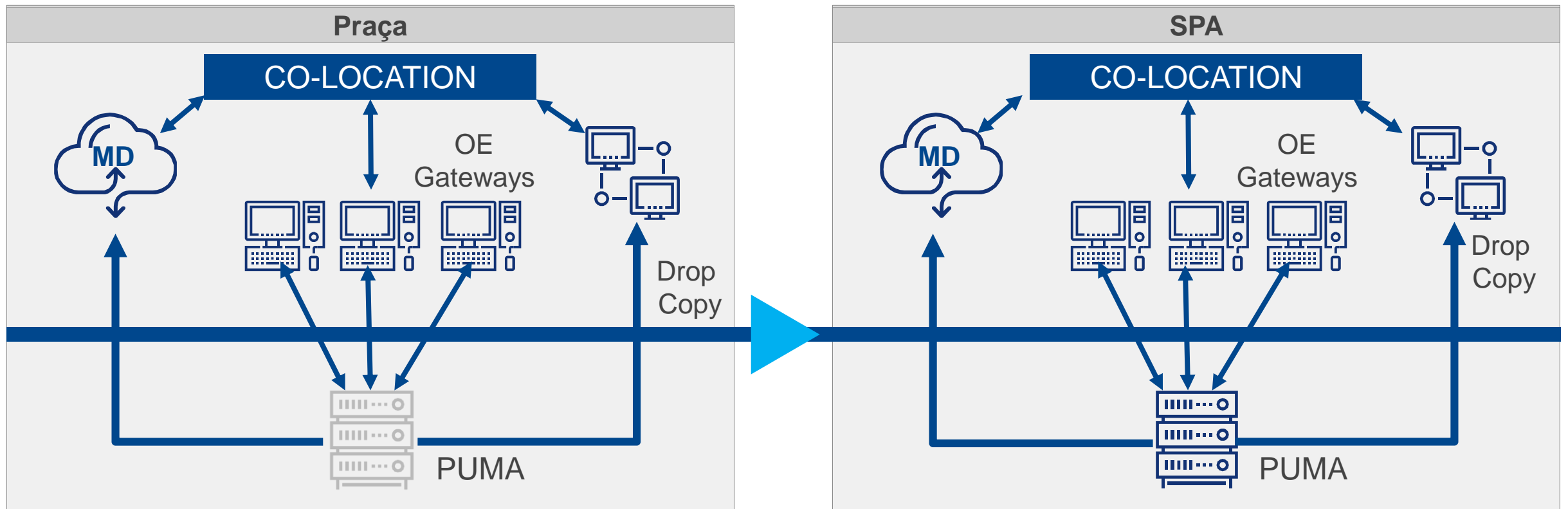
Drop Copy  
message reception

## PUMA – Parallel Production Strategy: Aug. 05 - Oct. 28, 2017

Production	Parallel Production (Prod //)	Mock Trading Session
Order Entry Real and Test Instruments	Order Entry New test instruments	Order Entry Real and Test Instruments
Production Market Data	Production Market Data + Prod //	Production Market Data
Production Drop Copy	Production Drop Copy + Prod //	Production Drop Copy

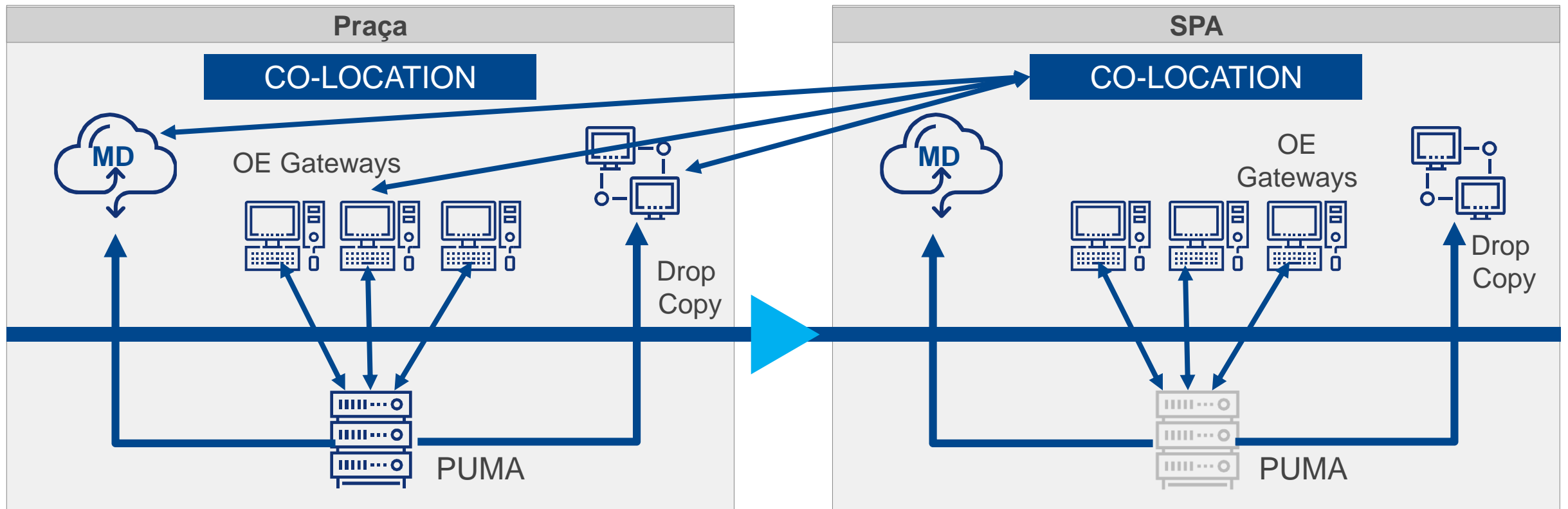
## PUMA – Parallel Production Strategy: Aug. 05 - Oct. 28, 2017

Co-lo client accessing the New Data Center directly



## PUMA – Parallel Production Strategy: Aug. 05 - Oct. 28, 2017

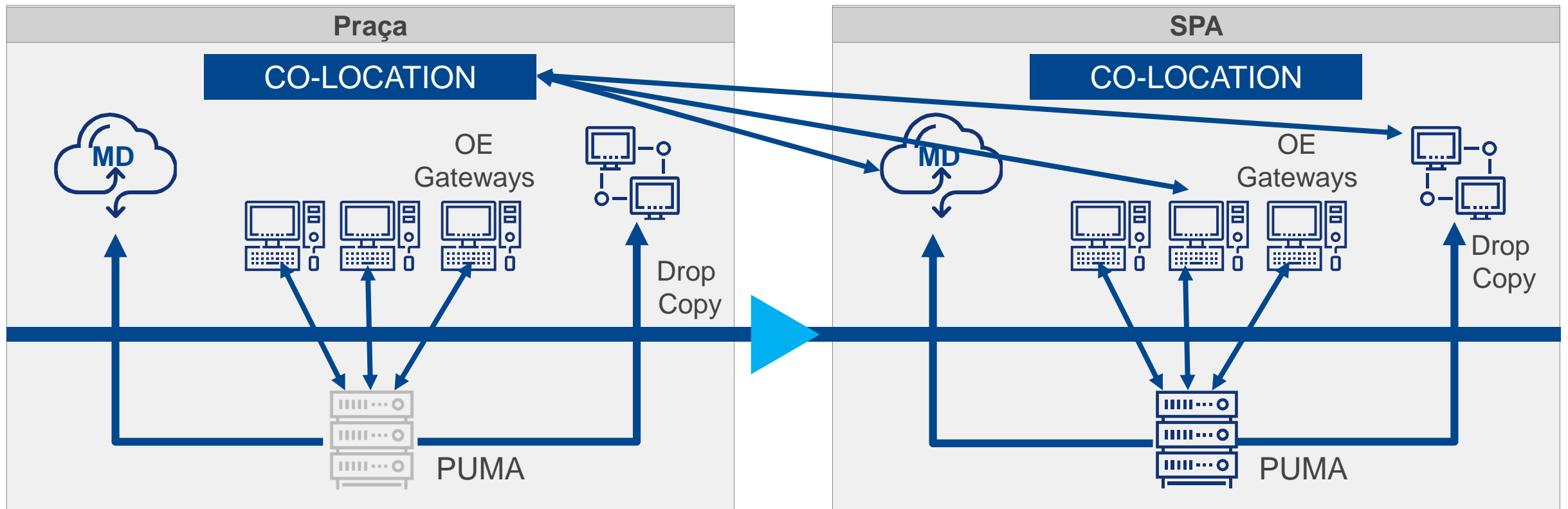
Co-lo client accessing the current Data Center from the New Data Center





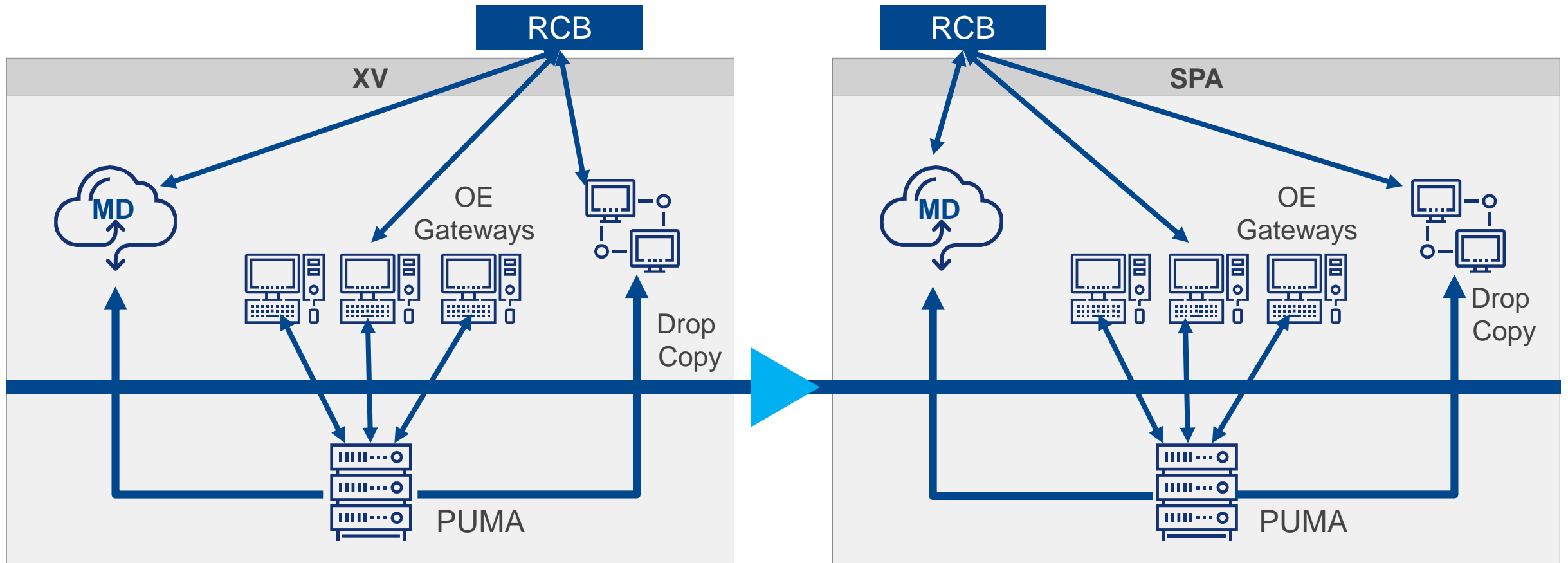
## PUMA – Parallel Production Strategy: Aug. 05 - Oct. 28, 2017

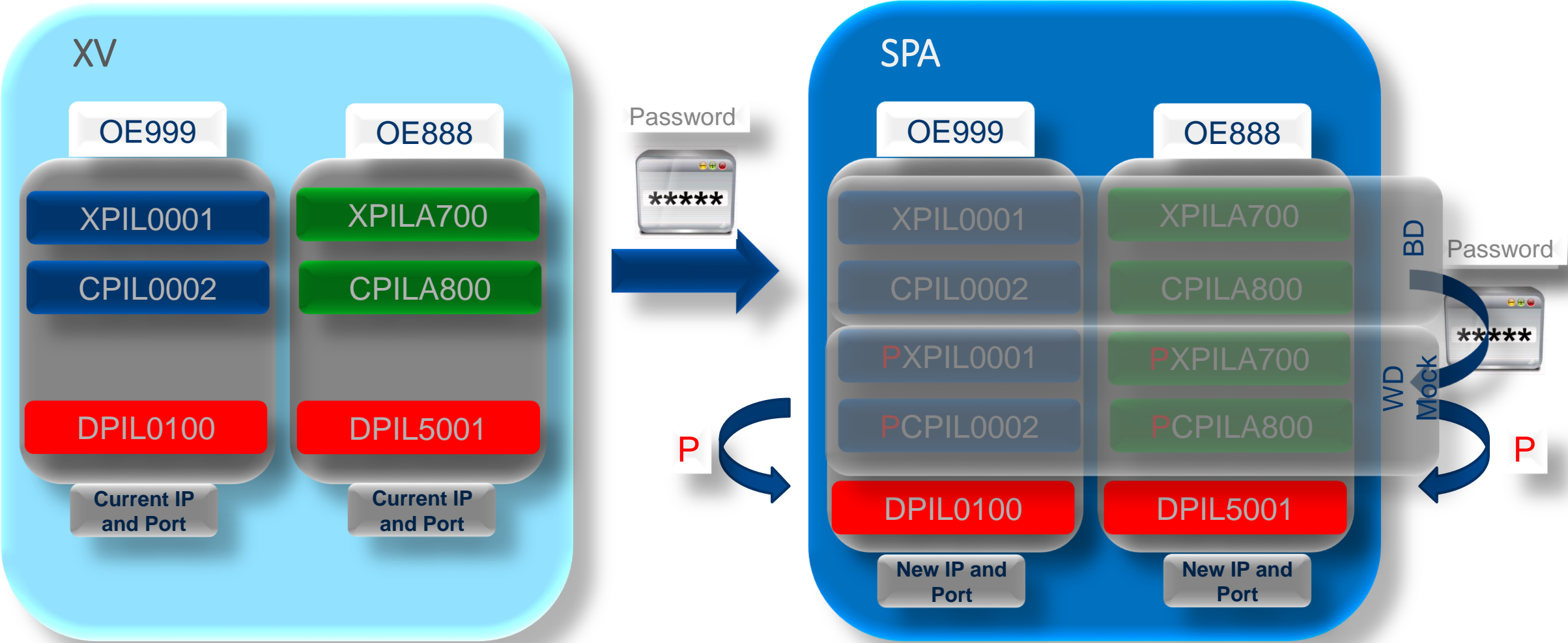
Co-lo client accessing the New Data Center from the current Data Center



# PUMA – Parallel Production Strategy: Aug. 05 - Oct. 28, 2017

RCB client accessing both Data Centers





# Workshop Wrap Up and Recommendations

## Workshop Wrap Up and Recommendations

Start of hardware deployment at  
Santana do Parnaíba:  
**June 5<sup>th</sup>**

Parallel Production from August  
to October  
**Mock Trading Session  
participation is mandatory**

PUMA Trading System  
migration:  
**November 11<sup>th</sup>**

Reserve your Racks

Migrate in advance

More info:  
[datacenterdabolsa.com.br/en/](http://datacenterdabolsa.com.br/en/)



**Eduardo Kashiwakura | Rodrigo Tatekawa | Eduardo Rodrigues | Carlos Gastaldo | Thiago Ferraz | Mateus Saldanha**

Phone number: (+55 11) 2565-4444 | (+55 11) 2565-7105 | (+55 11) 2565-5000 option 2  
[colocation@bvmf.com.br](mailto:colocation@bvmf.com.br) | [marketdata@bvmf.com.br](mailto:marketdata@bvmf.com.br) | [suporteanegociacao@bvmf.com.br](mailto:suporteanegociacao@bvmf.com.br)