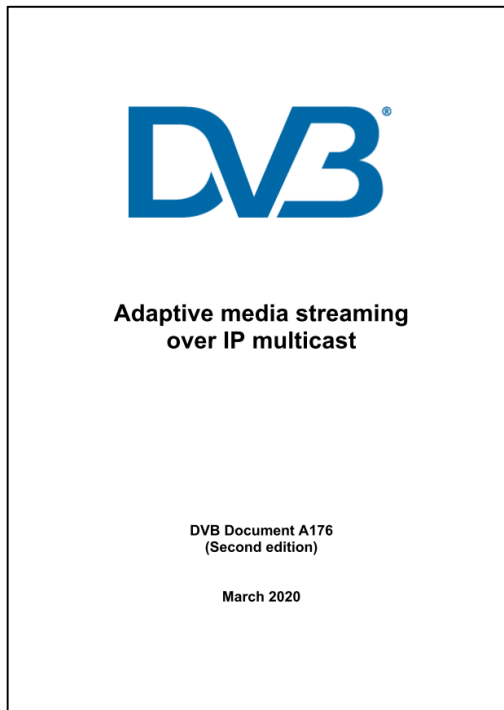




DVB multicast ABR

[guillaume.bichot@broadpeak.tv](mailto:guillaume.bichot@broadpeak.tv)

Access to the specification  
<https://dvb.org/?standard=adaptive-media-streaming-over-ip-multicast>



Feedback: <mailto:dvb@dvb.org>

# Introduction

[richard.bradbury@rd.bbc.co.uk](mailto:richard.bradbury@rd.bbc.co.uk)

DVB MCAST technical working group chair

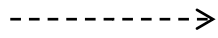


# Overview

# Legend



Unicast interface



Configuration interface

Media Request  
Segment/manifest



Media Content  
segment/manifest



DVB mABR Unicast interface

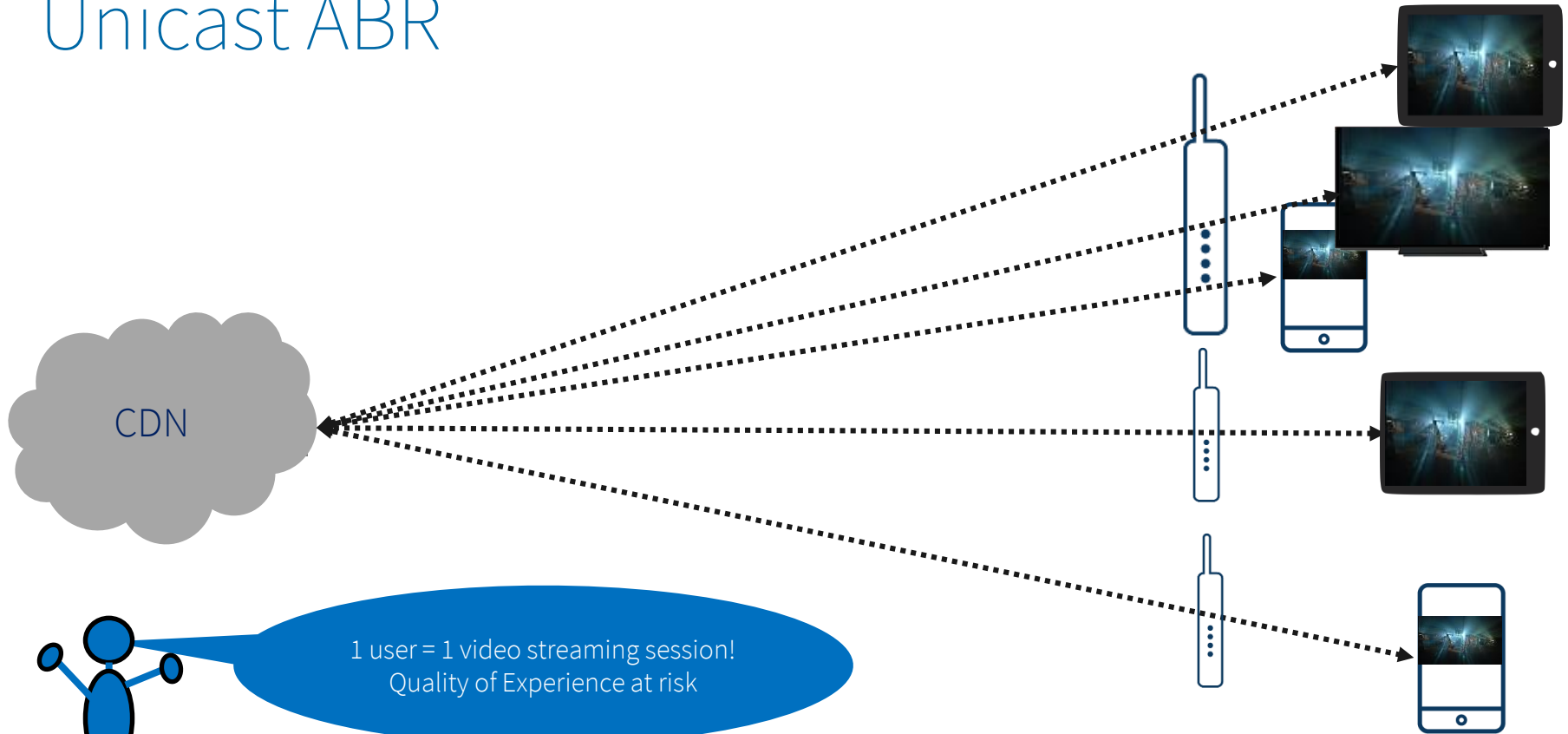


DVB mABR Configuration interface



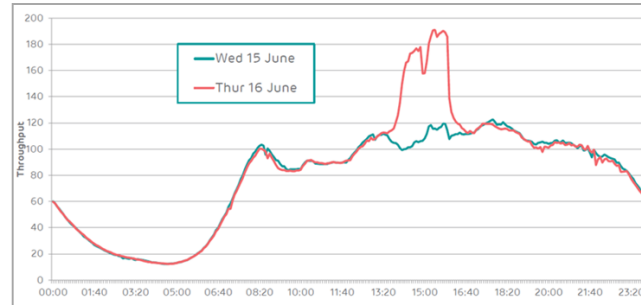
DVB mABR Multicast interface

# Unicast ABR

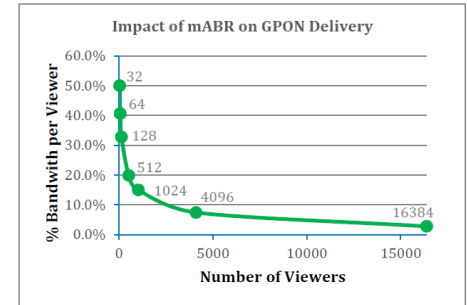


# Motivations

## Multicast versus Unicast



Source: British Telecom  
Traffic levels on a UK mobile network on two consecutive days showing the bandwidth consumption peak on the second day when England played Wales in the Euro 2016 tournament.

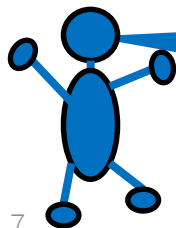
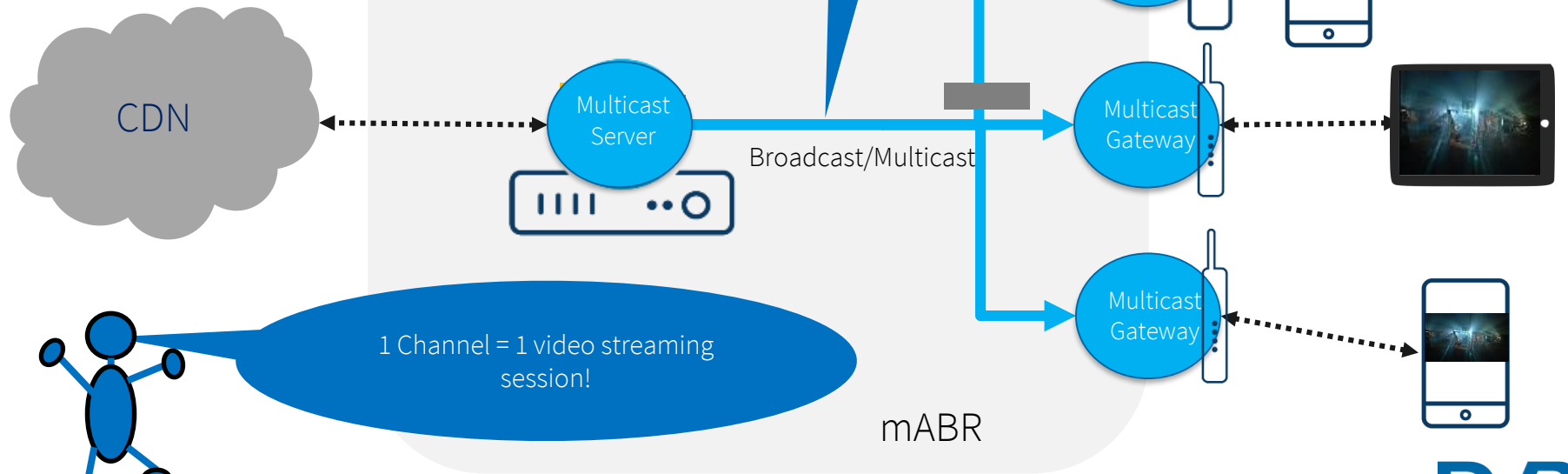
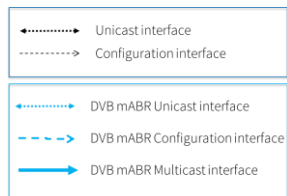


Source: Streaming Video Alliance  
“The Viability of Multicast ABR in Future Streaming Architectures” -April 2019

## ABR content to all screens



# Multicast ABR



1 Channel = 1 video streaming session!

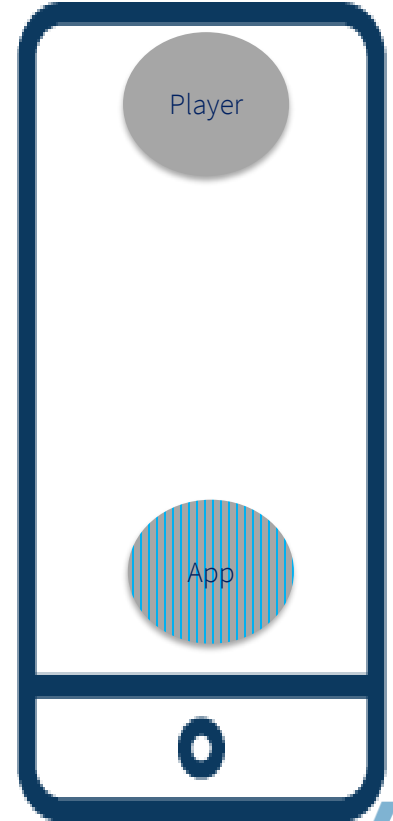
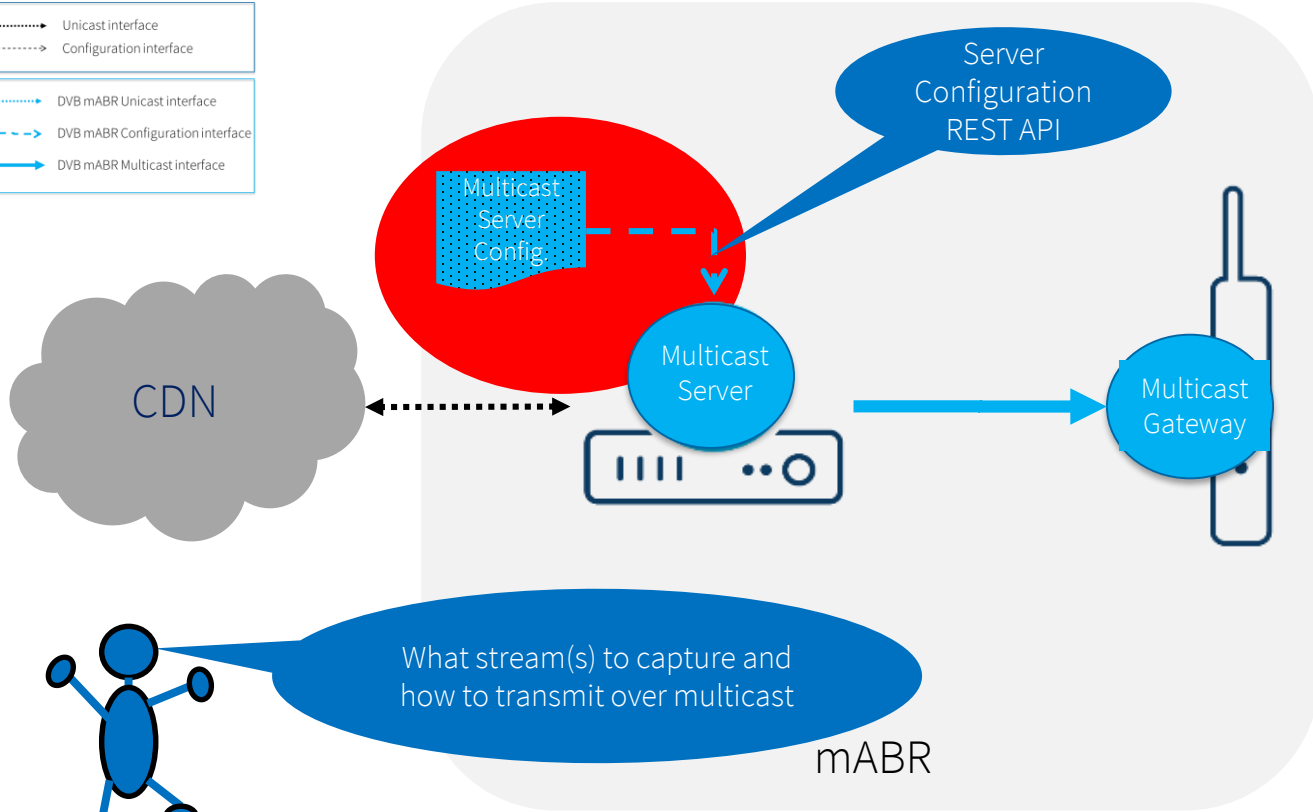
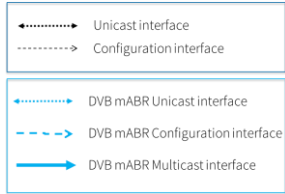
mABR



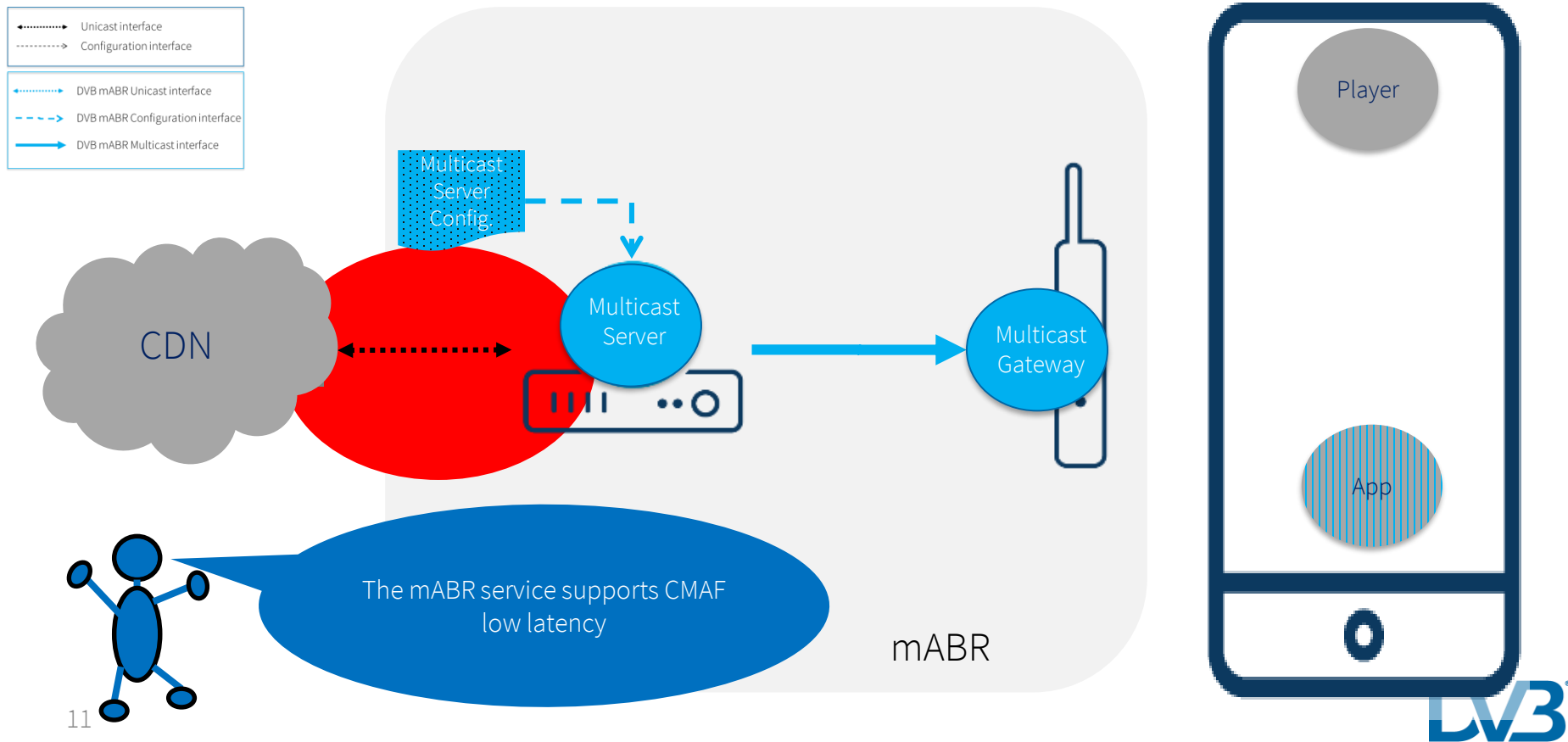
# System Operations



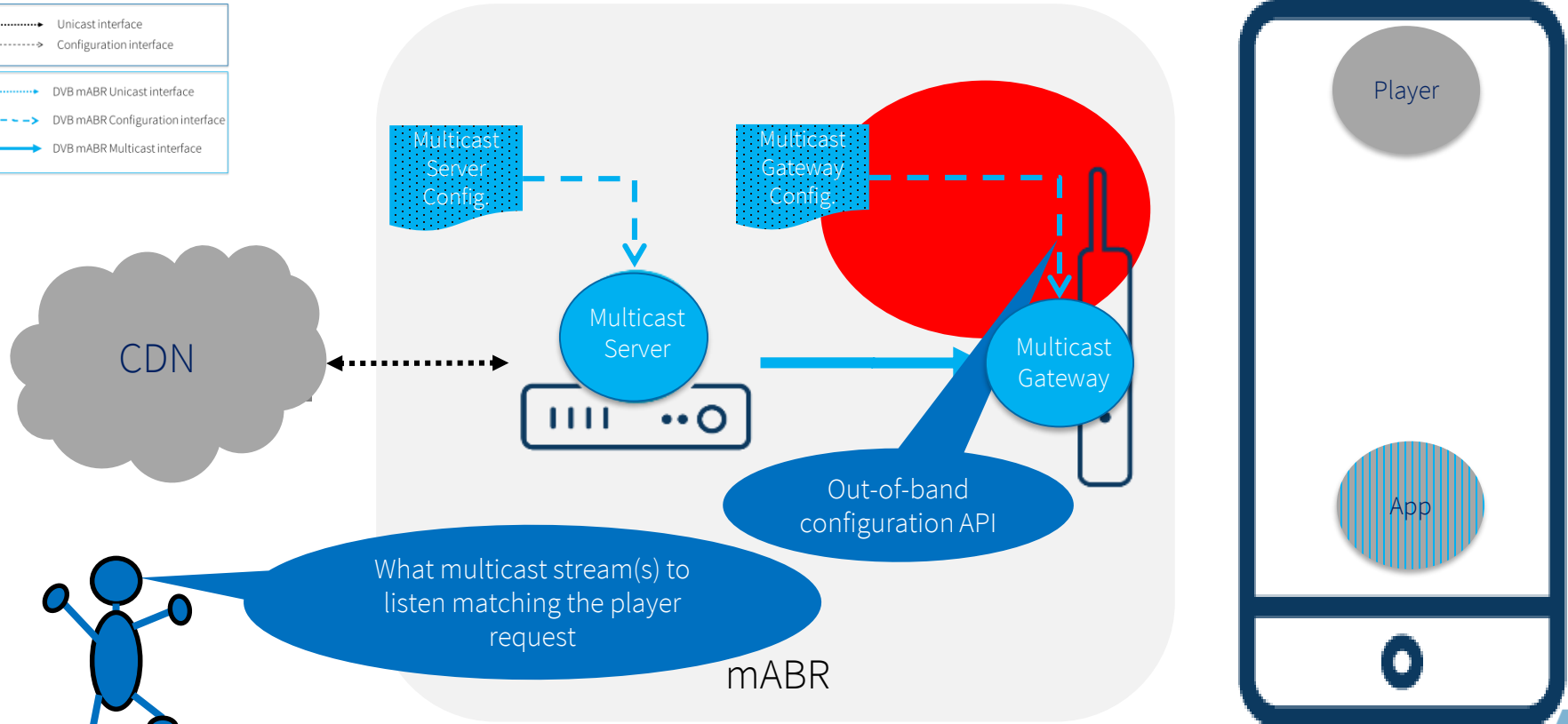
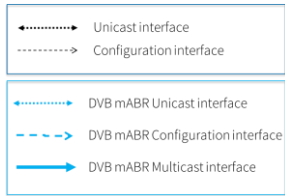
# Multicast ABR - Multicast server configuration



# Multicast ABR – Multicast server ingest



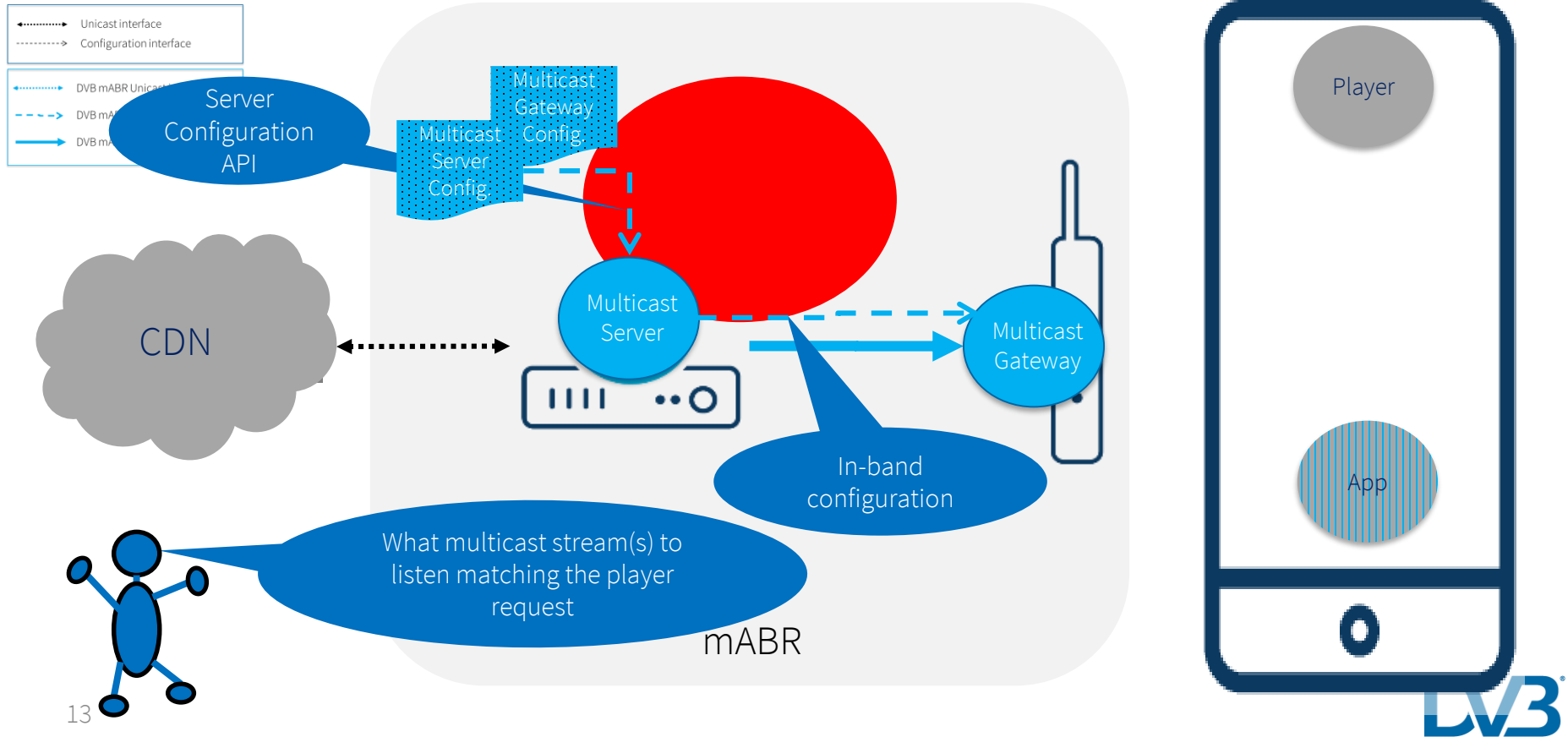
# Multicast ABR – Multicast Gateway configuration 1/3



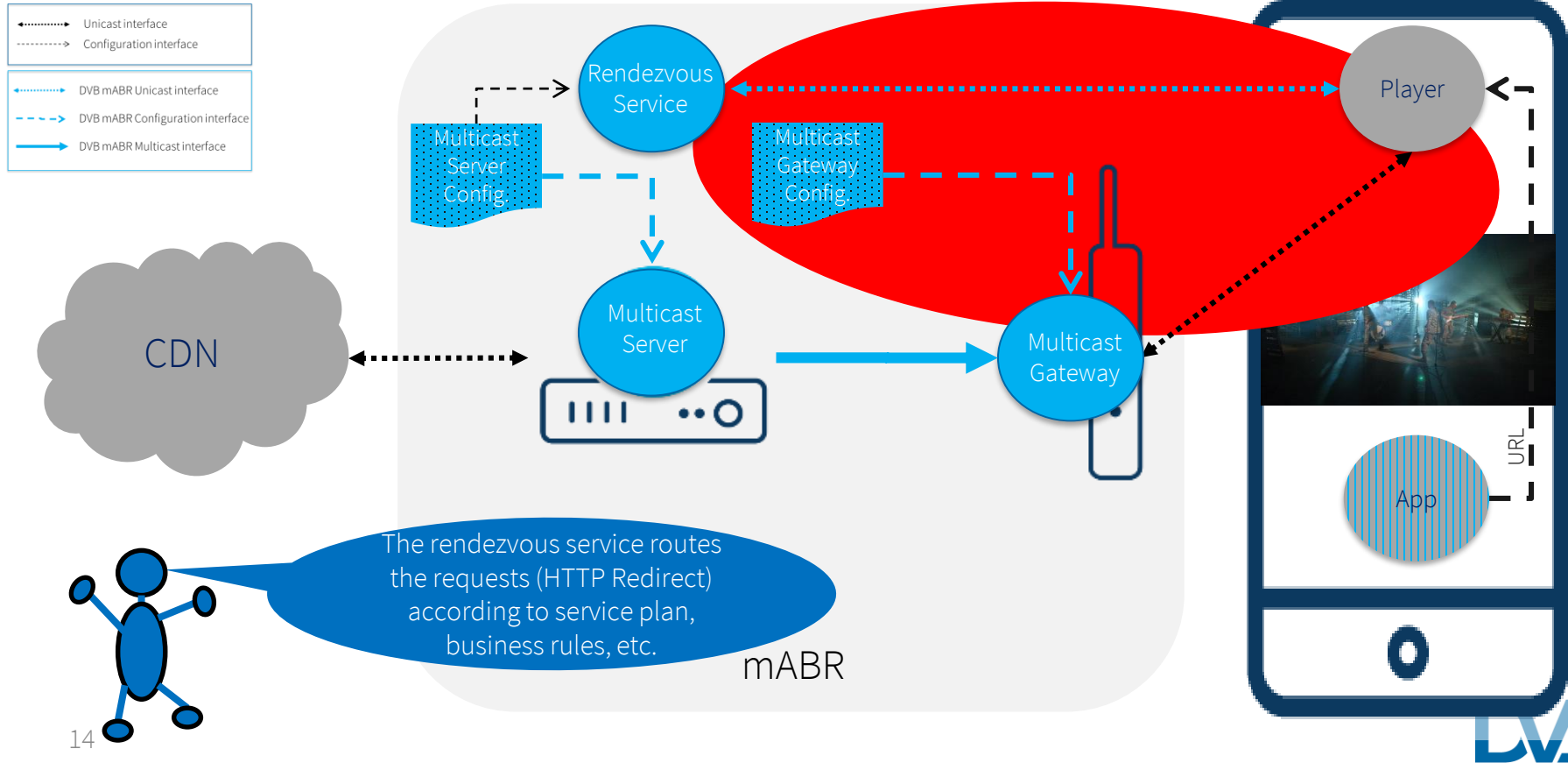
What multicast stream(s) to listen matching the player request

mABR

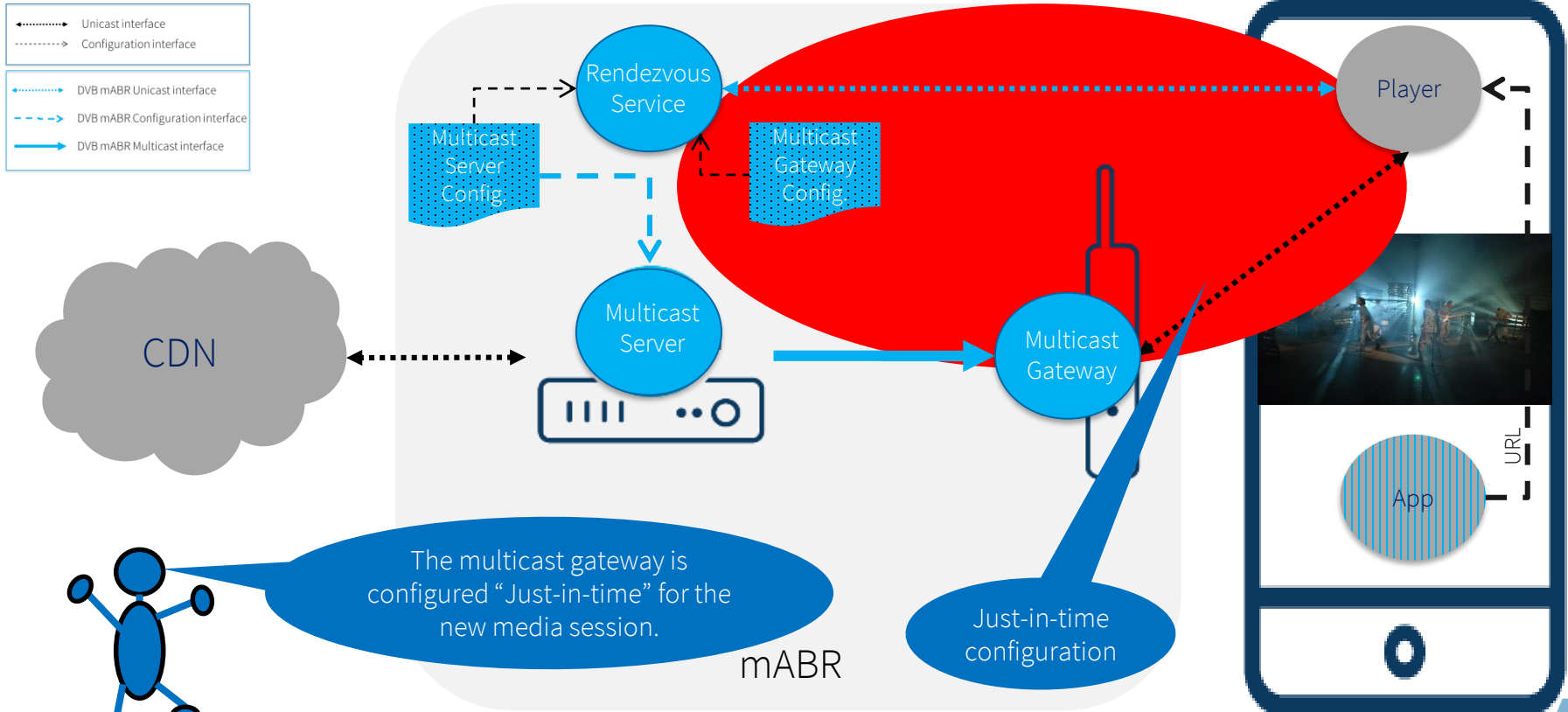
# Multicast ABR – Multicast Gateway configuration 2/3



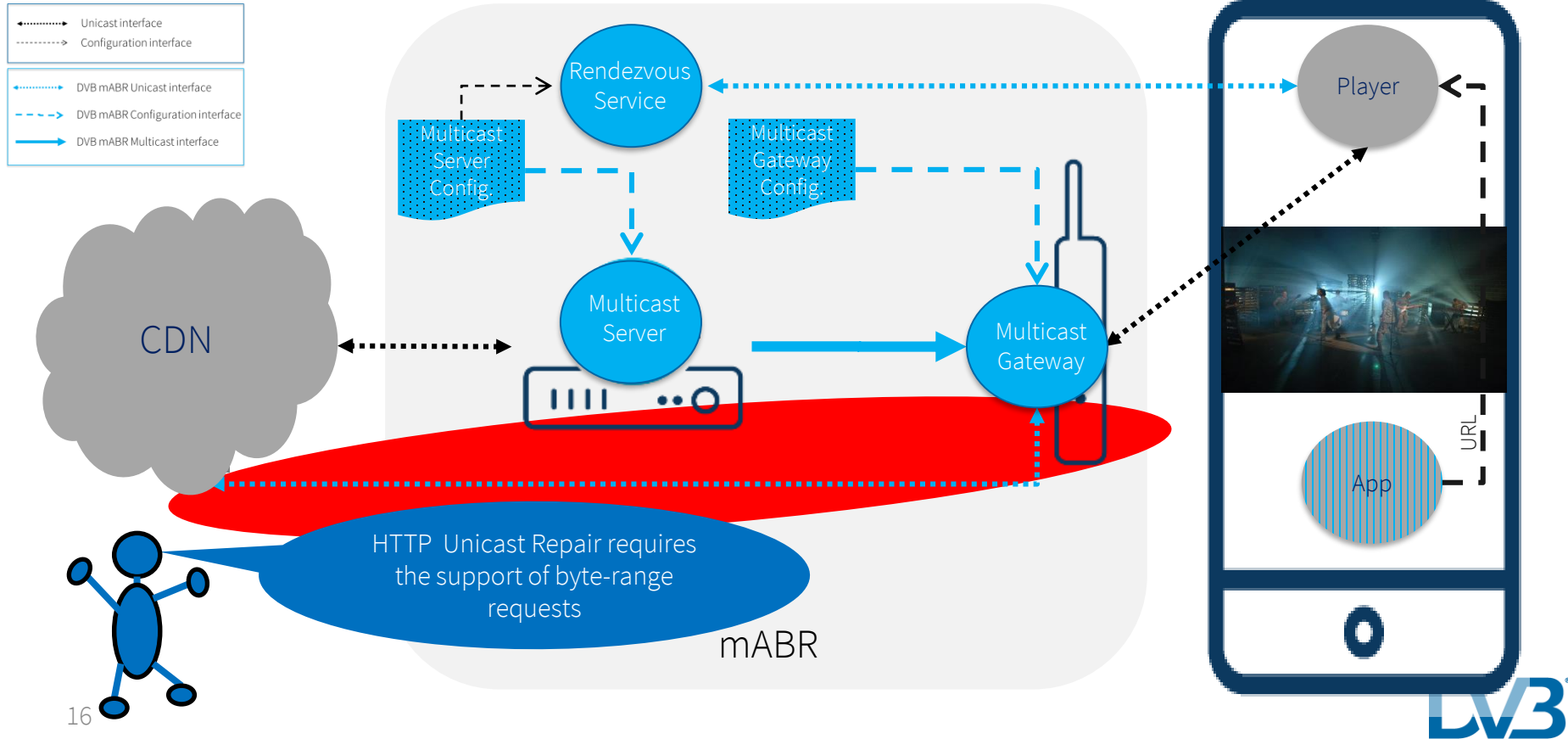
# Multicast ABR – Playout in regular mode



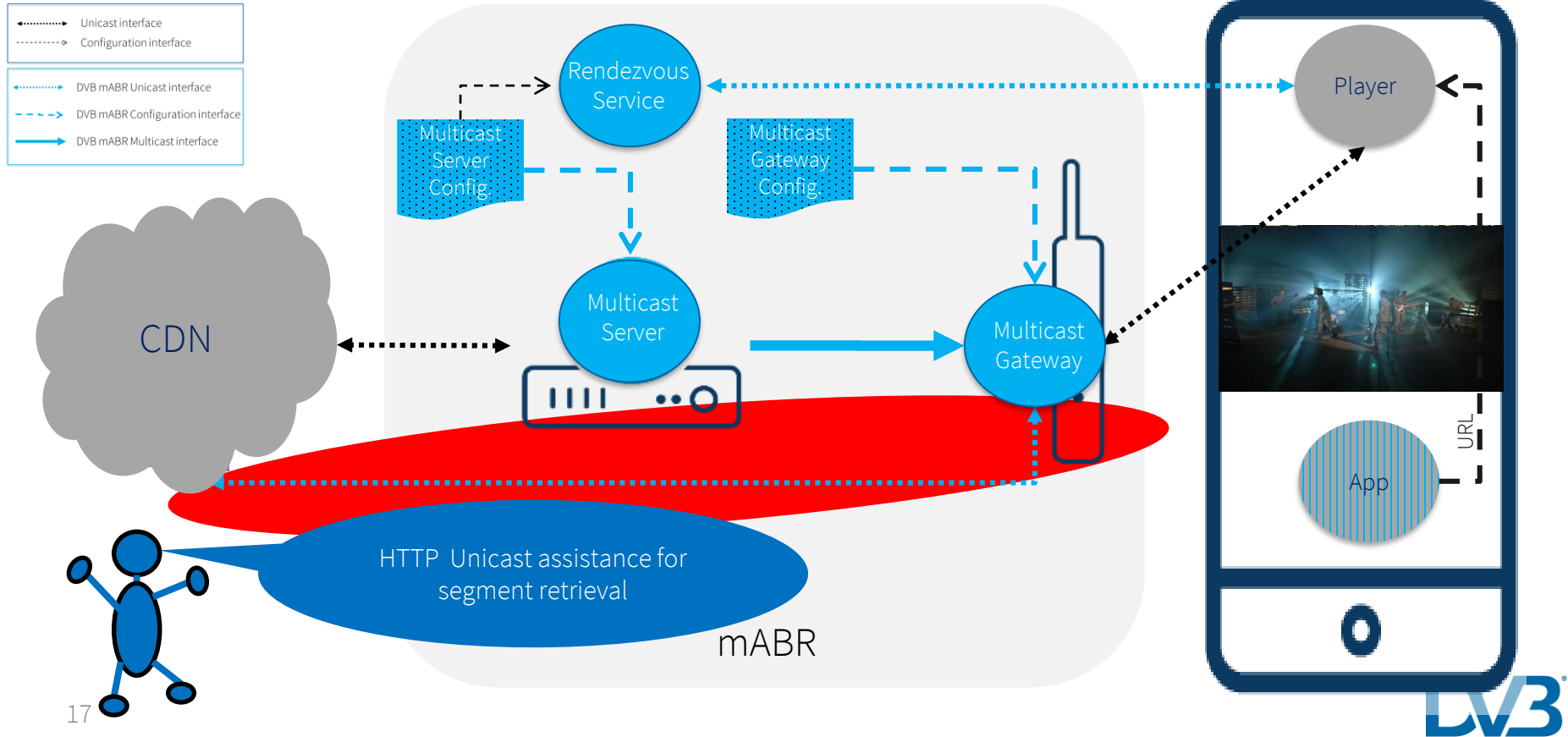
# Multicast ABR – Multicast Gateway Configuration 3/3



# Multicast ABR – HTTP unicast repair



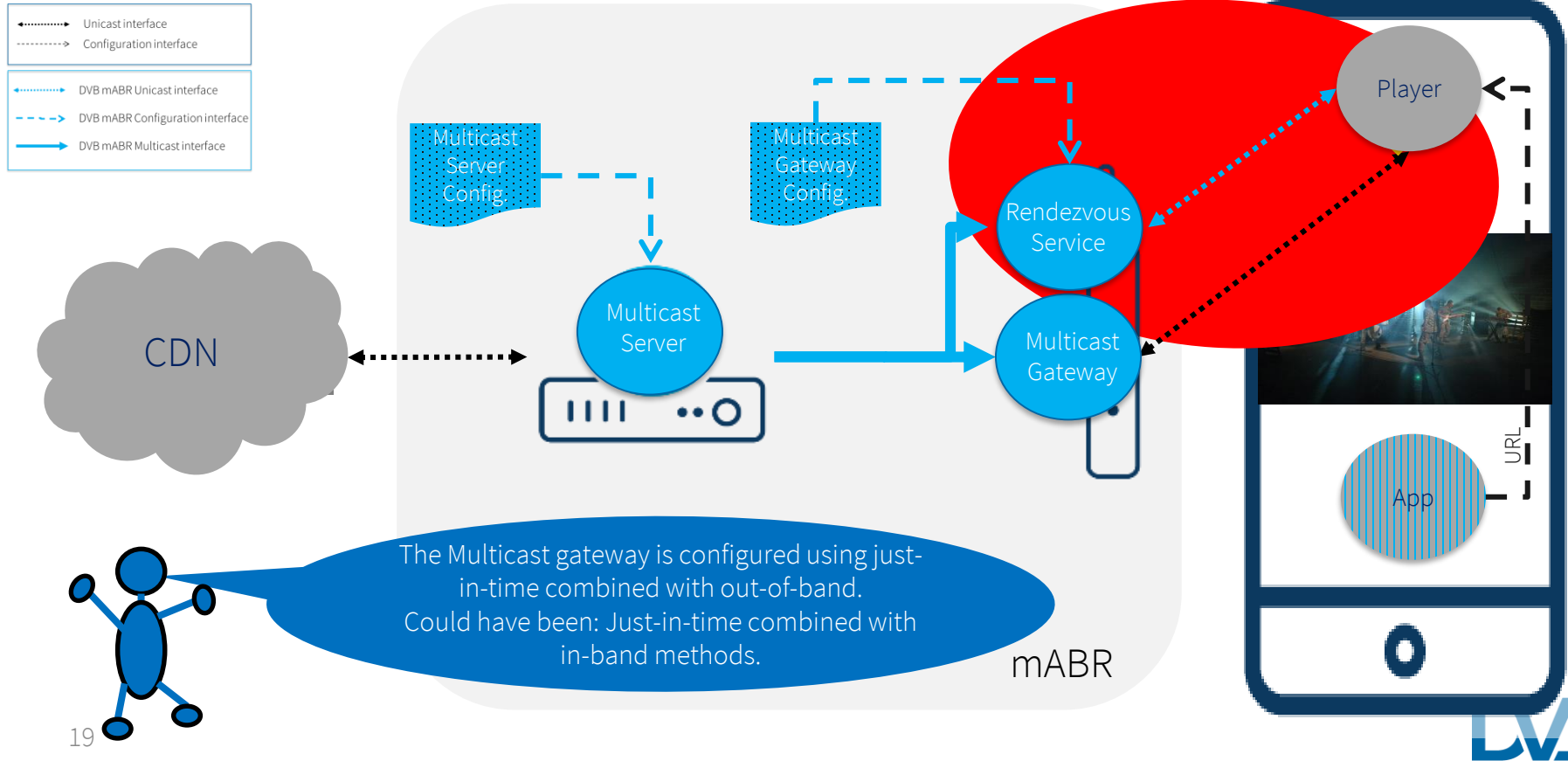
# Multicast ABR – HTTP unicast assistance 1/2





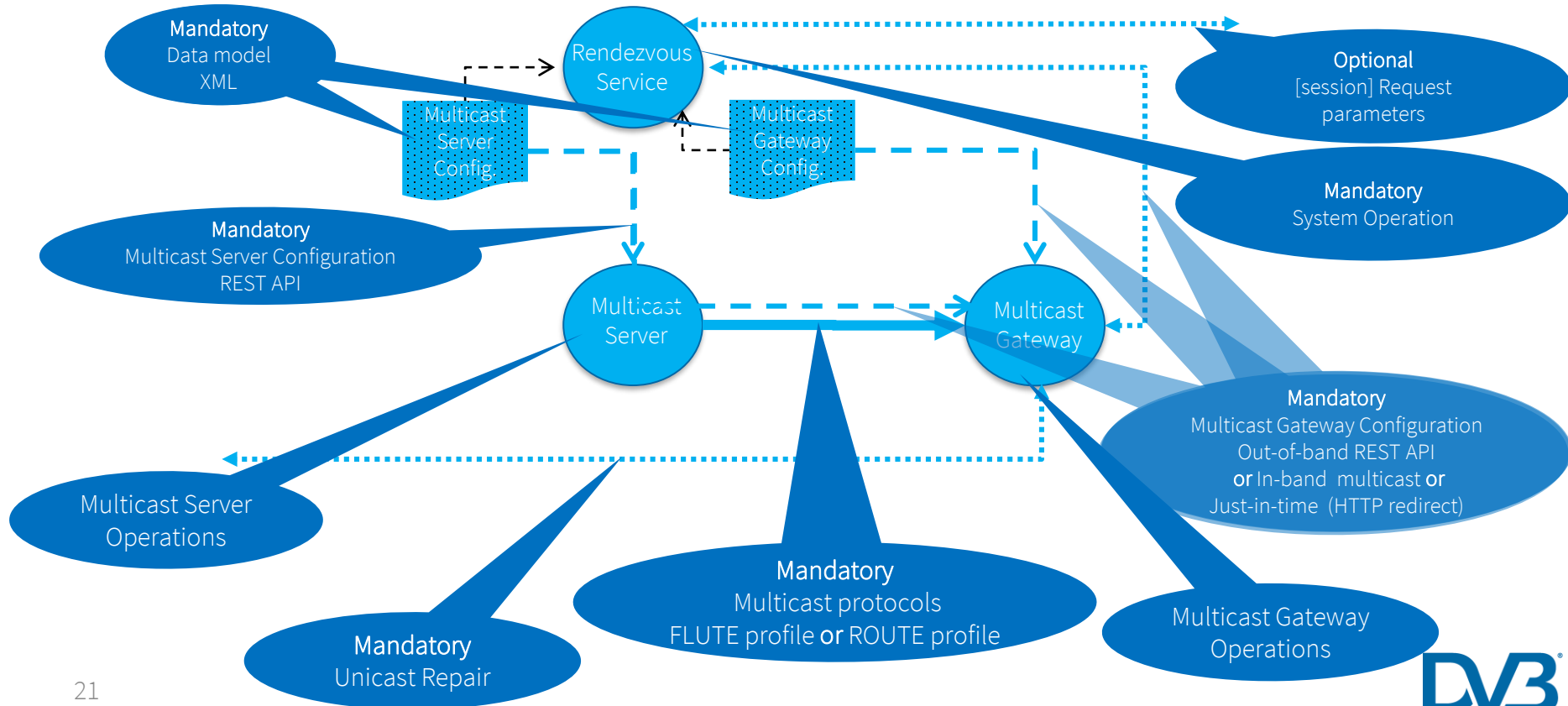


# Multicast ABR – Playout in Co-located Mode

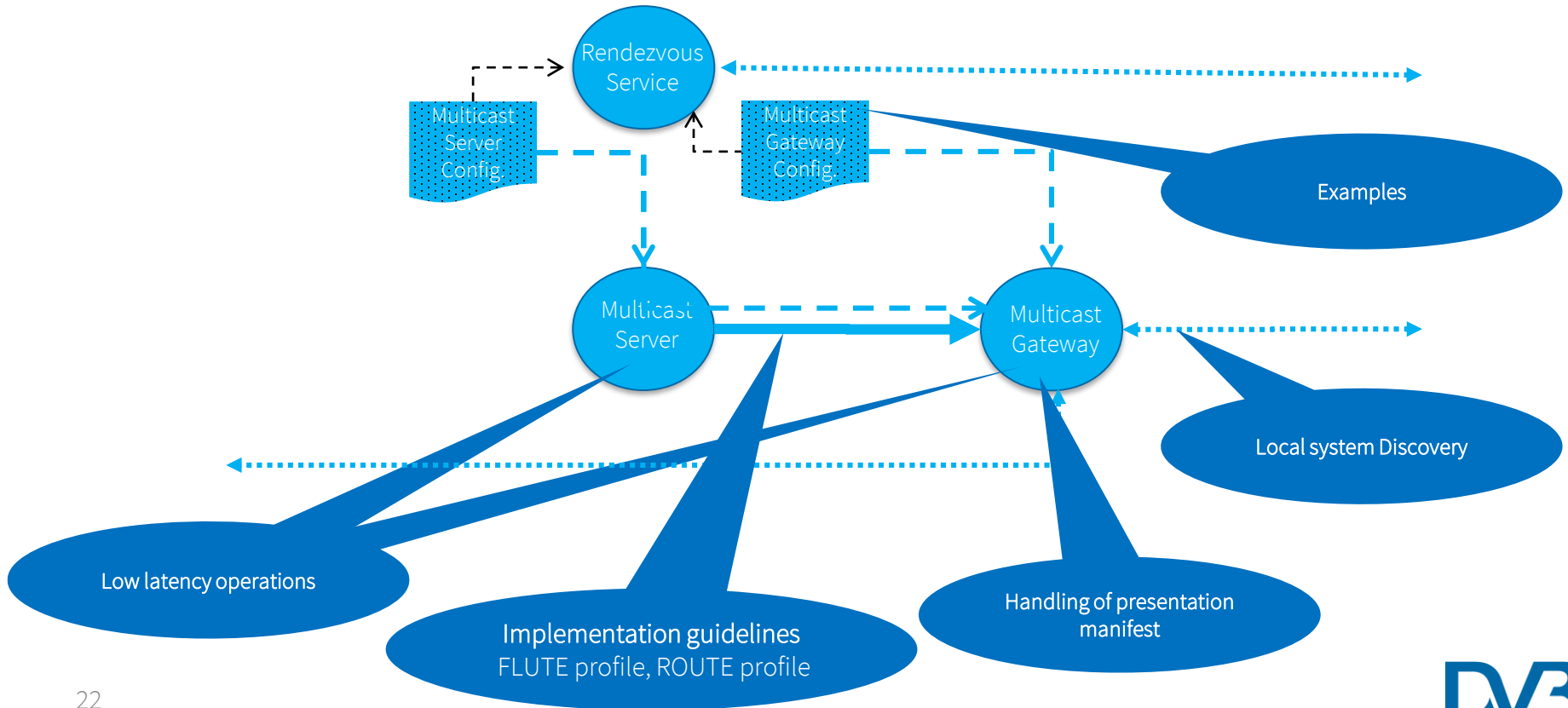


Standard Scope

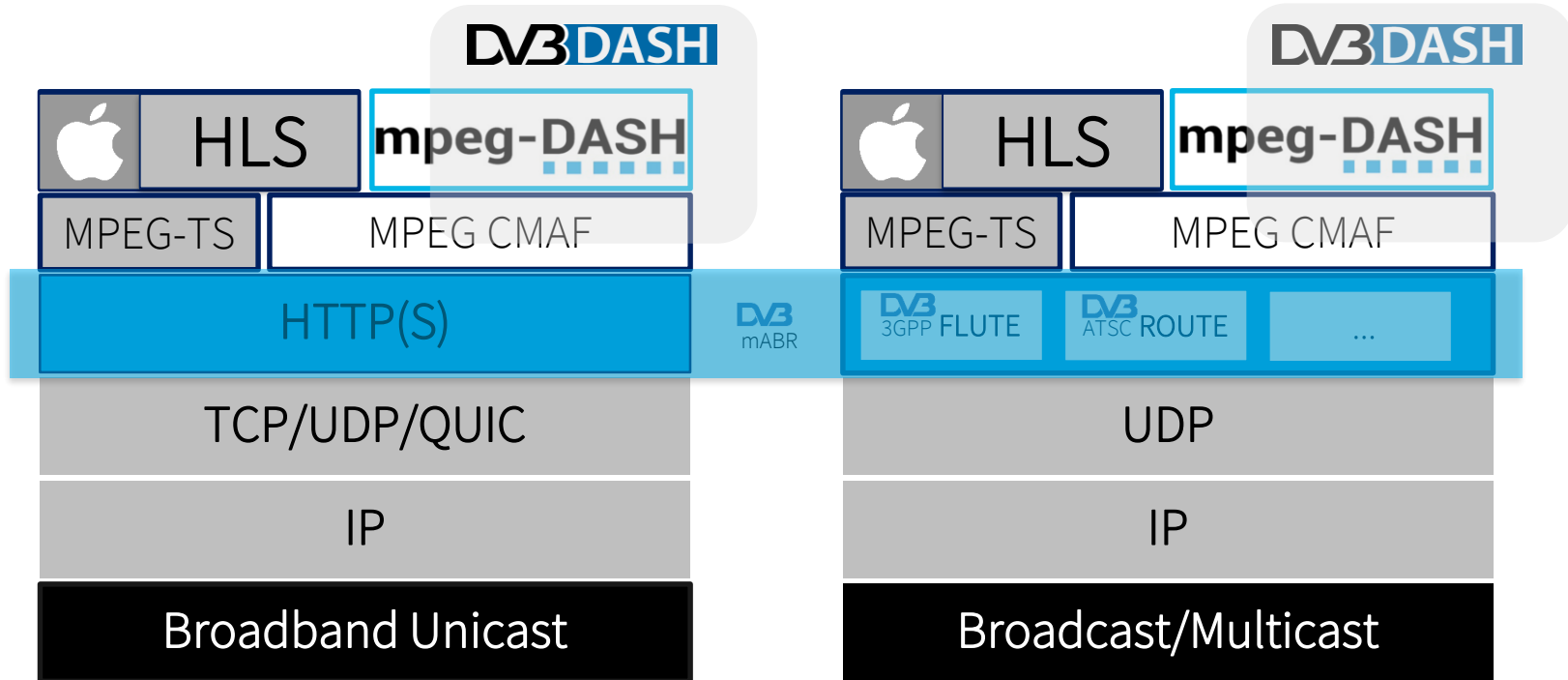
# Multicast ABR – Specification Phase 1 Normative



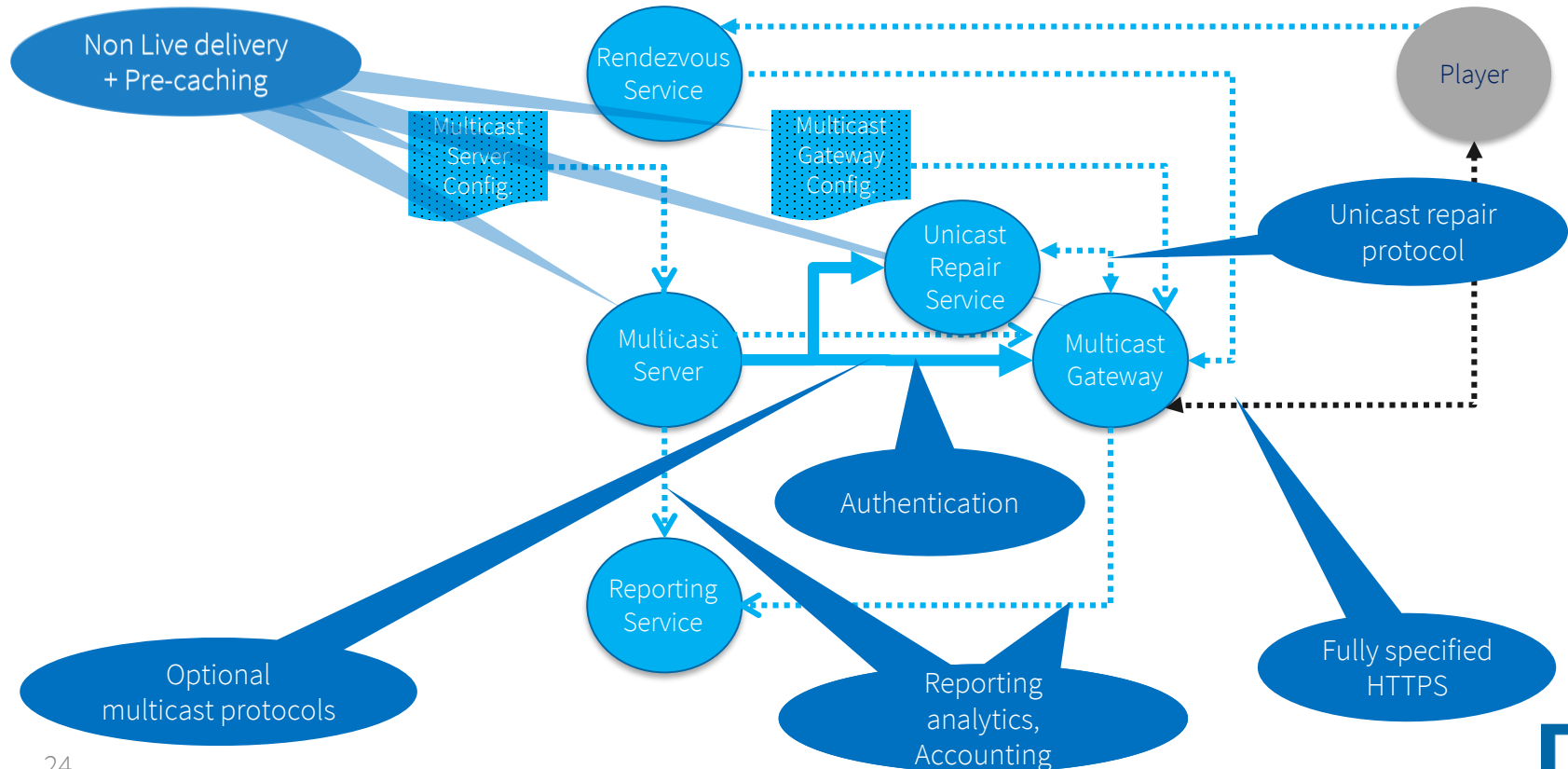
# Multicast ABR – Specification Phase 1 Informative



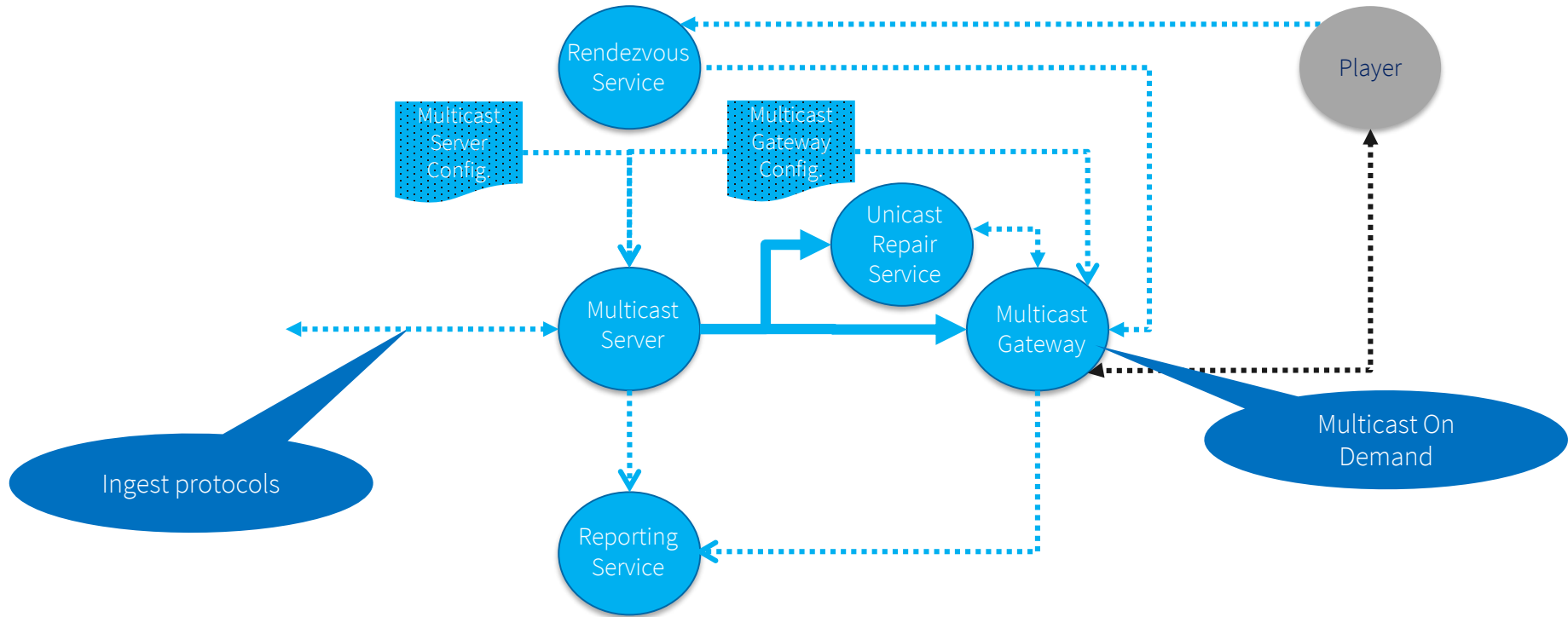
# Multicast ABR - Format, Content, DRM agnostic



# Multicast ABR – Specification Phase 2 (Phase 1 complements)



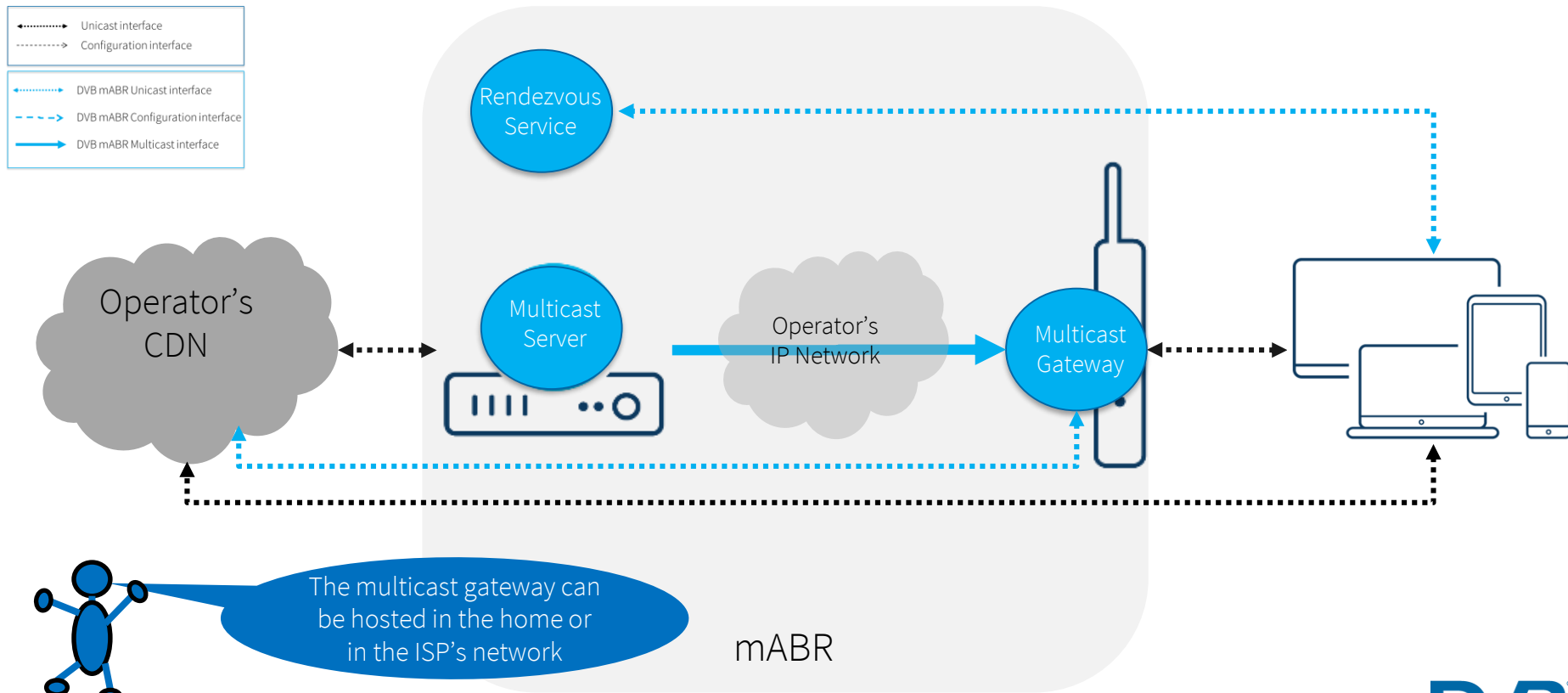
# Multicast ABR – Specification Phase 2 (Potential new Topics)





# Deployments

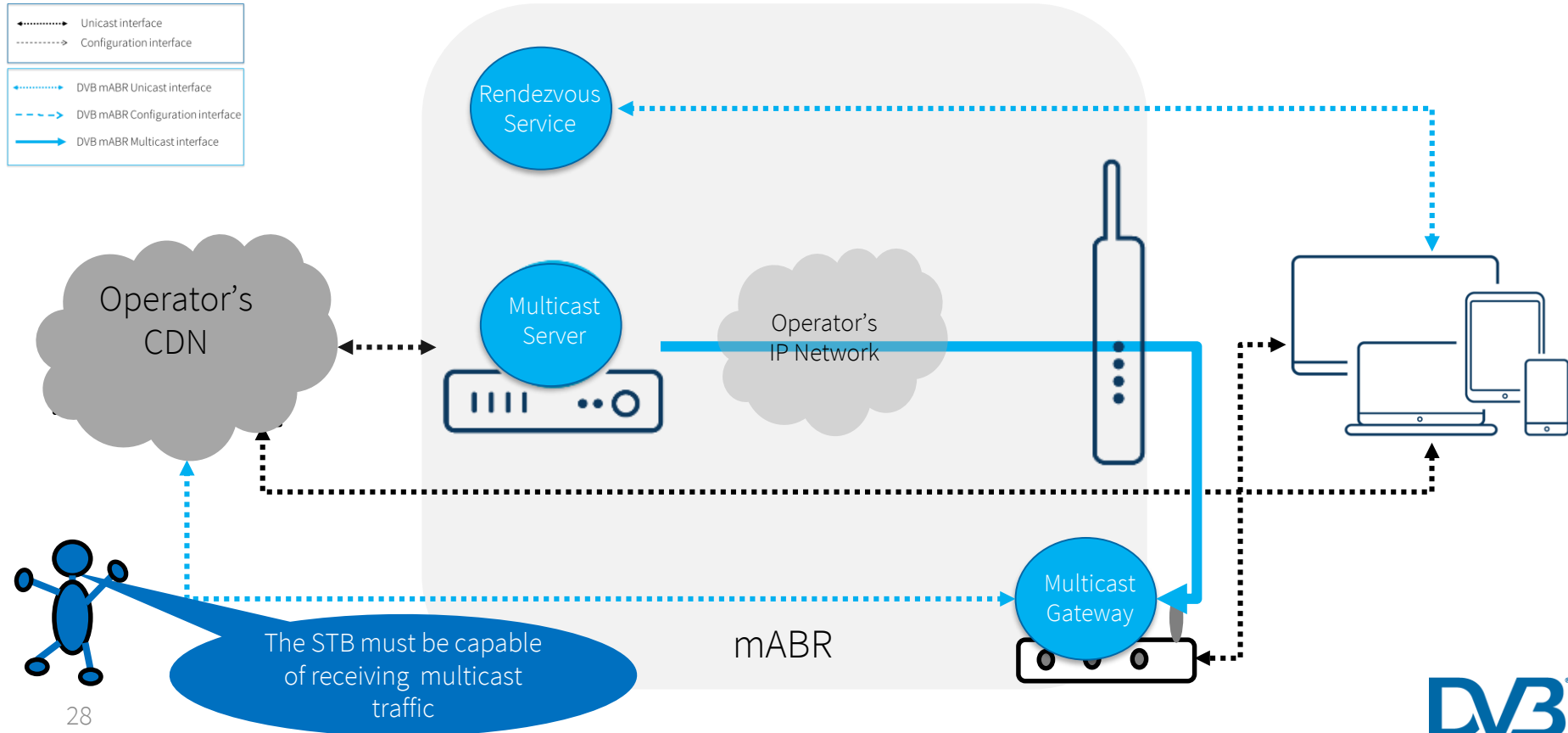
# Multicast ABR – Over broadband



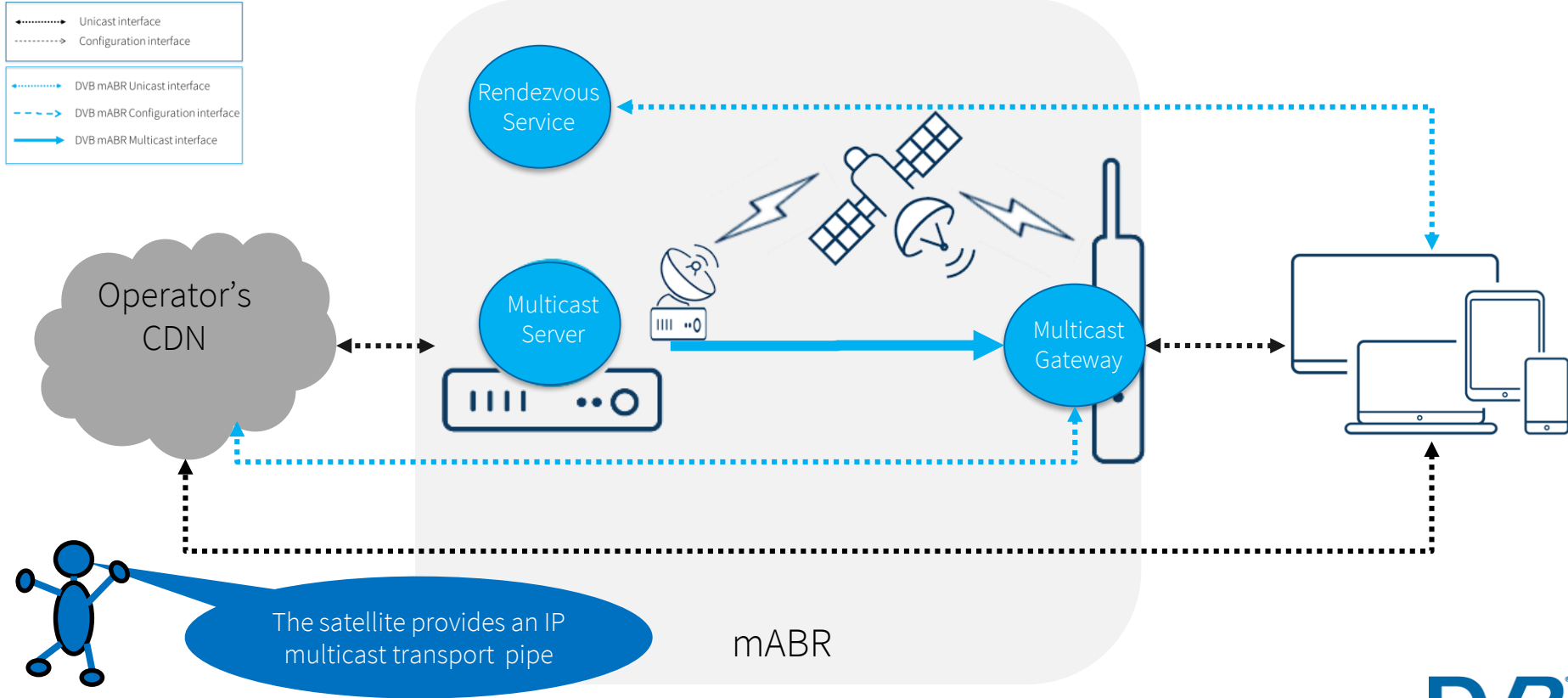
The multicast gateway can be hosted in the home or in the ISP's network

mABR

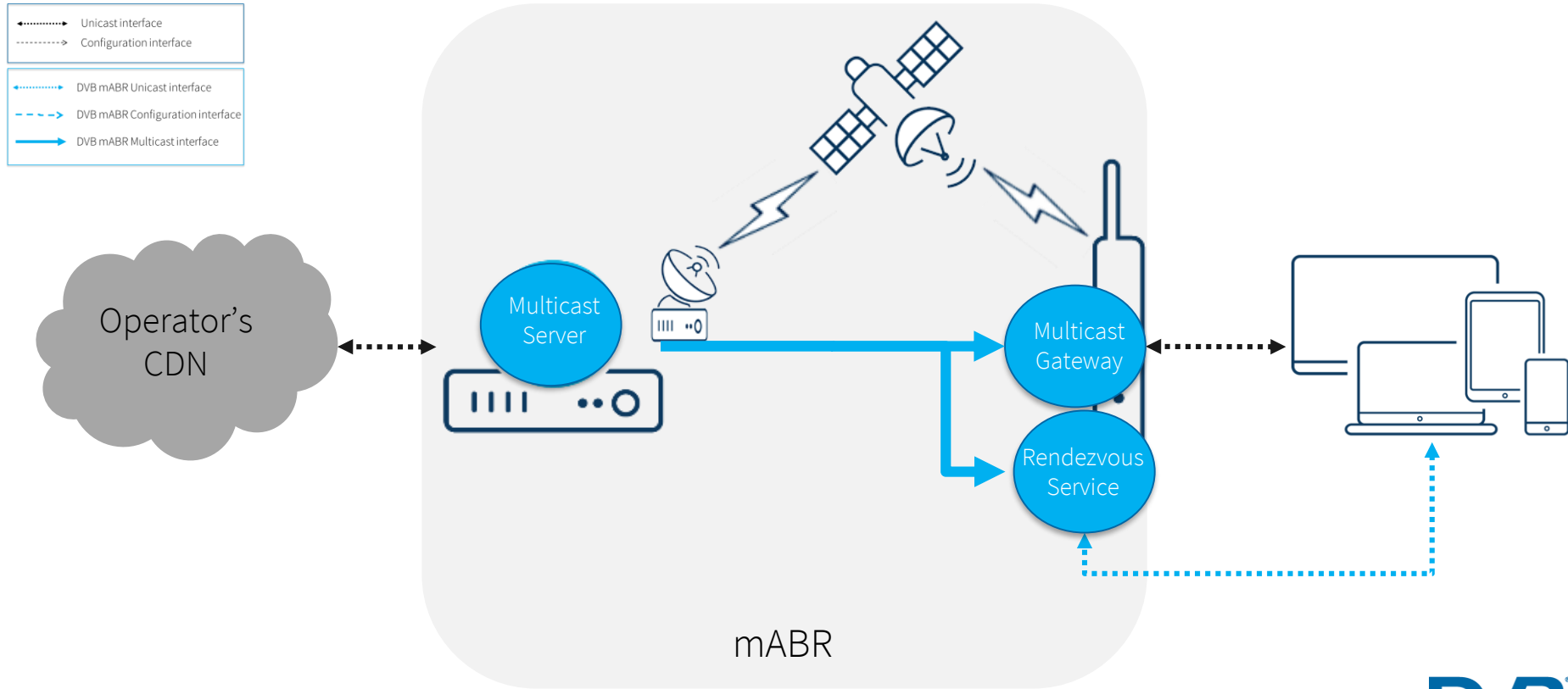
# Multicast ABR – Over broadband STB



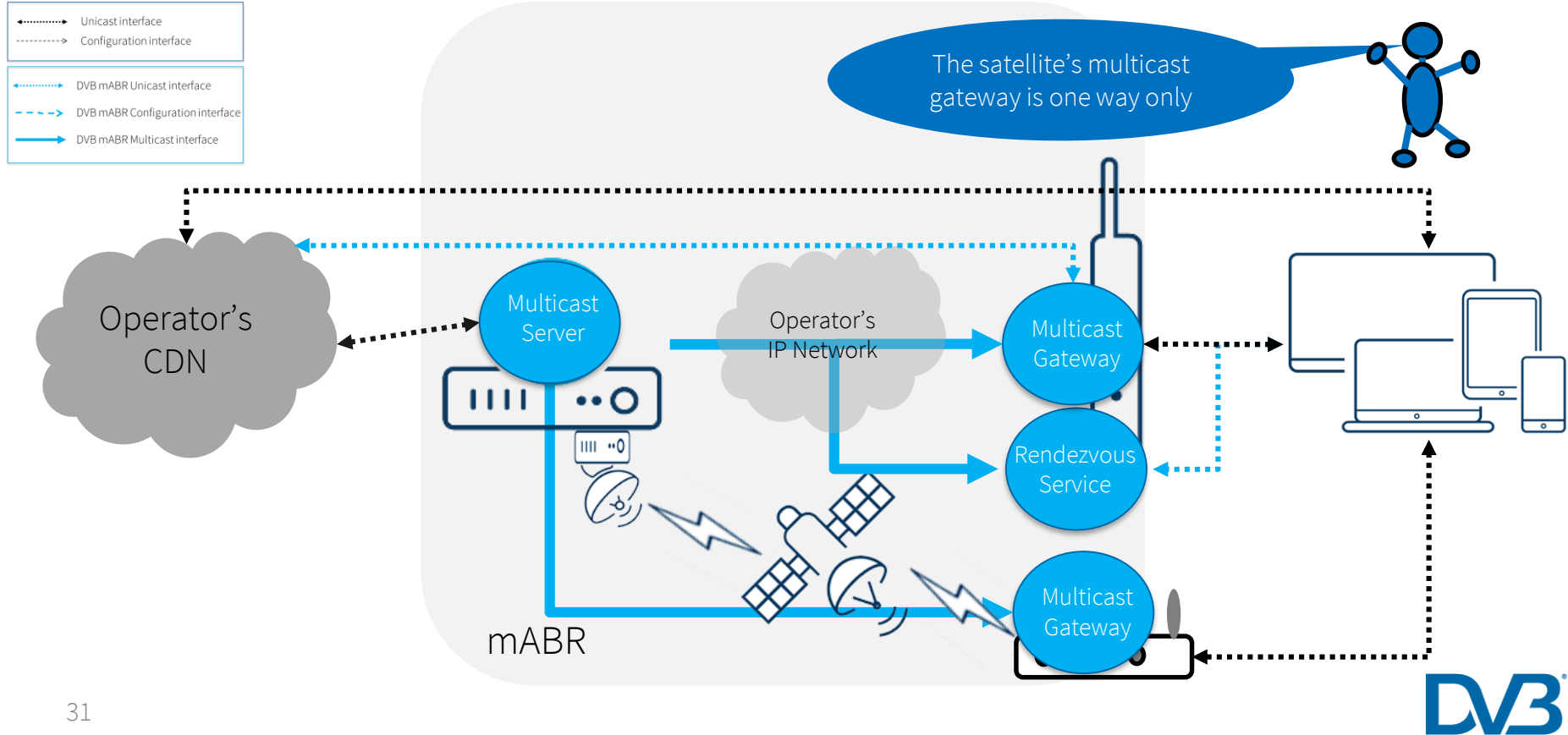
# Multicast ABR – Over satellite



# Multicast ABR – Over satellite / One way



# Multicast ABR – Multicast gateway stacking



# Multicast ABR – 3<sup>rd</sup> party content provider

