EUMETSAT EARS

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Agenda
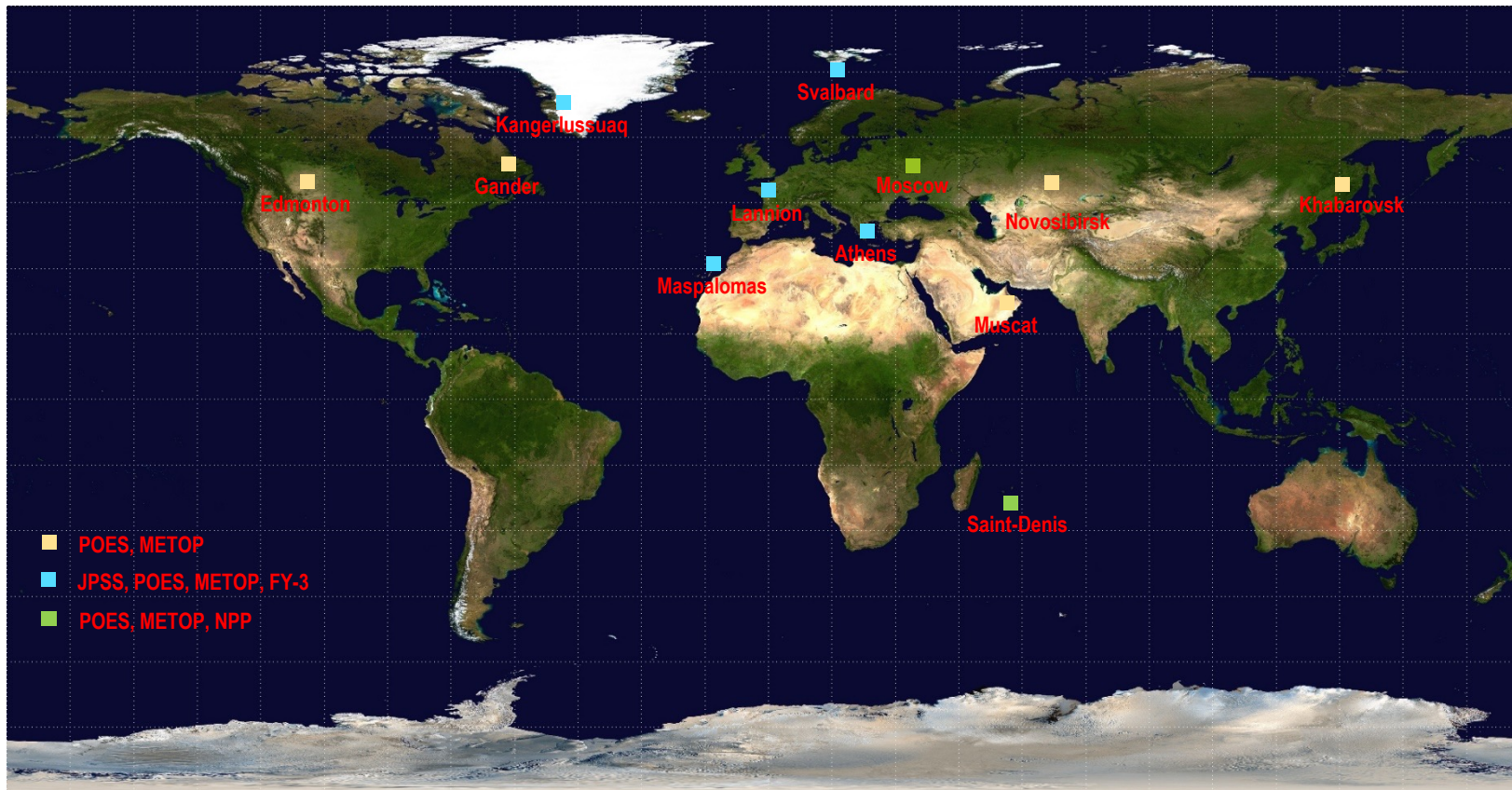
- EARS
- WIS2
- EPS-SG

20 Slides

EARS

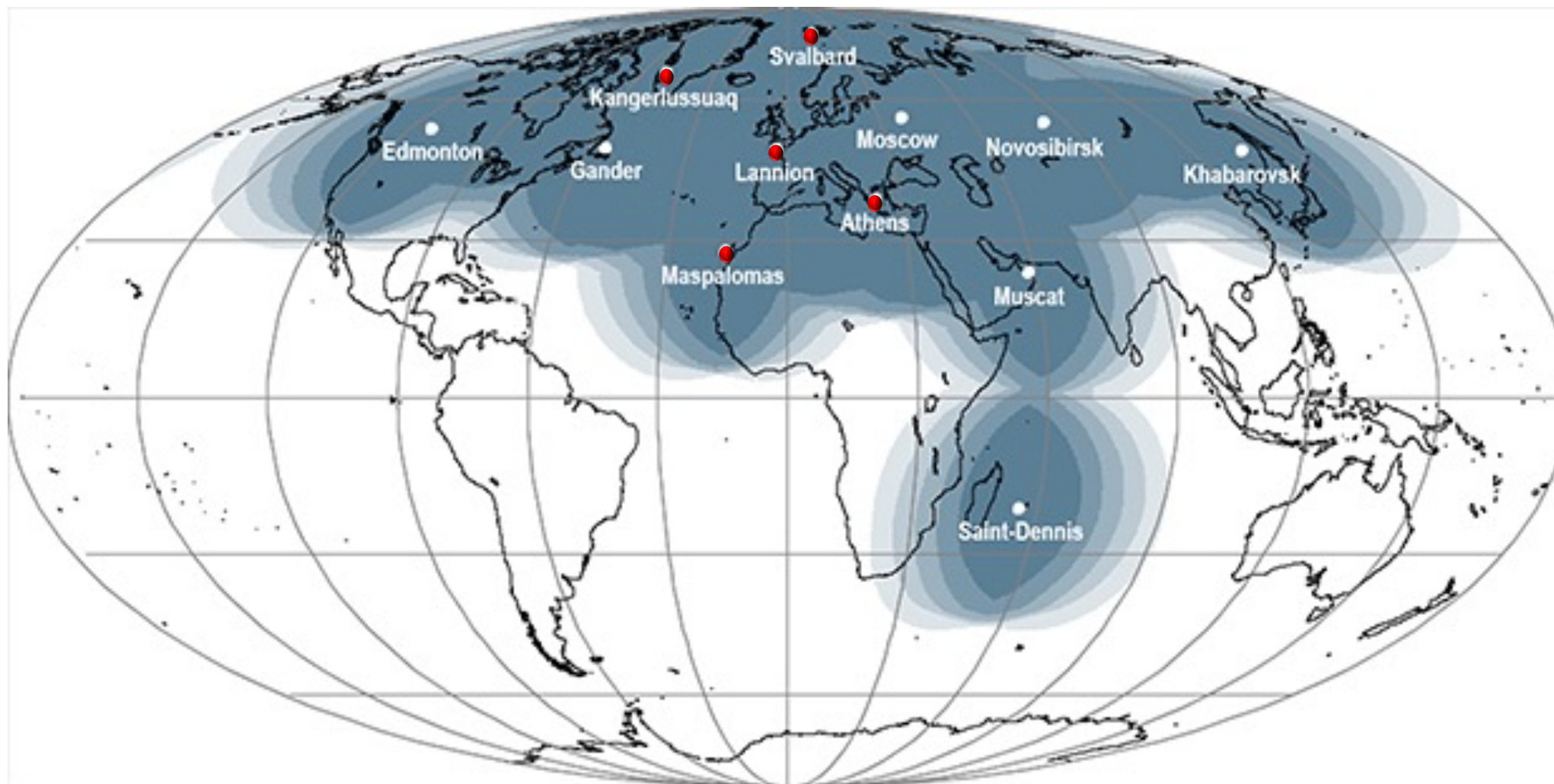# EUMETSAT Advanced Retransmission Service

5 Core Stations
7 contributing stations

Coverage Areas

● **Five Core EARS European Stations**
○ **Contributing EARS Stations**

Service Type	Operational/Approved Services
Sounder	EARS-ATOVS, EARS-ATMS, EARS-VASS
Hyperspectral Sounder	EARS-IASI, EARS-IASI L2, EARS-CrIS
Scatterometer	EARS-ASCAT
Imager	EARS-AVHRR, EARS-VIIRS, EARS-MERSI
Nowcasting (Cloud properties)	EARS-NWC
Micro-Wave Imager	EARS-MWRI

Core Stations (5)

SERVICE/ DB STATION	EARS ATOVS	EARS AVHRR	EARS ASCAT	EARS IASI/L2	EARS NWC	EARS ATMS	EARS CrIS	EARS VIIRS	EARS VASS	EARS MERSI	EARS MWRI
SVALBARD	MetB MetC N18 N19	MetB MetC N19	MetB MetC	MetB MetC	MetB N19	SNPP N20	SNPP N20	SNPP N20	FY–3D	FY–3D	FY–3D
KANGER-LUSSUAQ	MetB MetC N18 N19	MetB MetC N19	MetB MetC	MetB MetC	MetB N19	SNPP N20	SNPP N20	SNPP N20	FY–3D	FY–3D	FY–3D
LANNION	MetB MetC N18 N19	MetB MetC N19	MetB MetC	MetB MetC	MetB N19	SNPP N20	SNPP N20	SNPP N20	FY–3D	FY–3D	FY–3D
ATHENS	MetB MetC N18 N19	MetB MetC N19	MetB MetC	MetB MetC	MetB N19	SNPP N20	SNPP N20	SNPP N20	FY–3D	FY–3D	FY–3D
MASPALOMAS	MetB MetC N18 N19	MetB MetC N19	MetB MetC	MetB MetC	MetB N19	SNPP N20	SNPP N20	SNPP N20	FY–3D	FY–3D	FY–3D

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90%

30 Min

SERVICE/ DB STATION	EARS ATOVS	EARS AVHRR	EARS ASCAT	EARS IASI/L2	EARS NWC	EARS ATMS	EARS CrIS	EARS VIIRS	EARS VASS	EARS MERSI	EARS MWRI
MOSCOW	MetB N18 N19	MetB N19	MetB	MetB	MetB N19	SNPP	SNPP				
NOVOSIBIRSK	MetB MetC N18 N19			MetB MetC							
KHABAROVSK	MetB MetC N18 N19			MetB MetC							
EDMONTON	MetB N18 N19			MetB							
GANDER	MetB N18 N19	MetB N19	MetB	MetB	MetB N19						
MUSCAT	MetB N18 N19		MetB								
SAINT-DENIS	MetB MetC N18 N19		MetB MetC	MetB MetC		N20 SNPP	N20 SNPP				

Orbit	Satellite	Satellite Acquisition Priorities
Mid-morning	Metop-C	1
	Metop-B	4
Afternoon	NOAA-20 (JPSS-1)	5
	SNPP	2
	FY-3D	8
Early Morning	FY3E	3
	NOAA-18	6
	NOAA-19	7

We hope to get the FY3E local processing software very soon

EUMETSAT's Satellite and Terrestrial bases multicast dissemination service "EUMETCast"

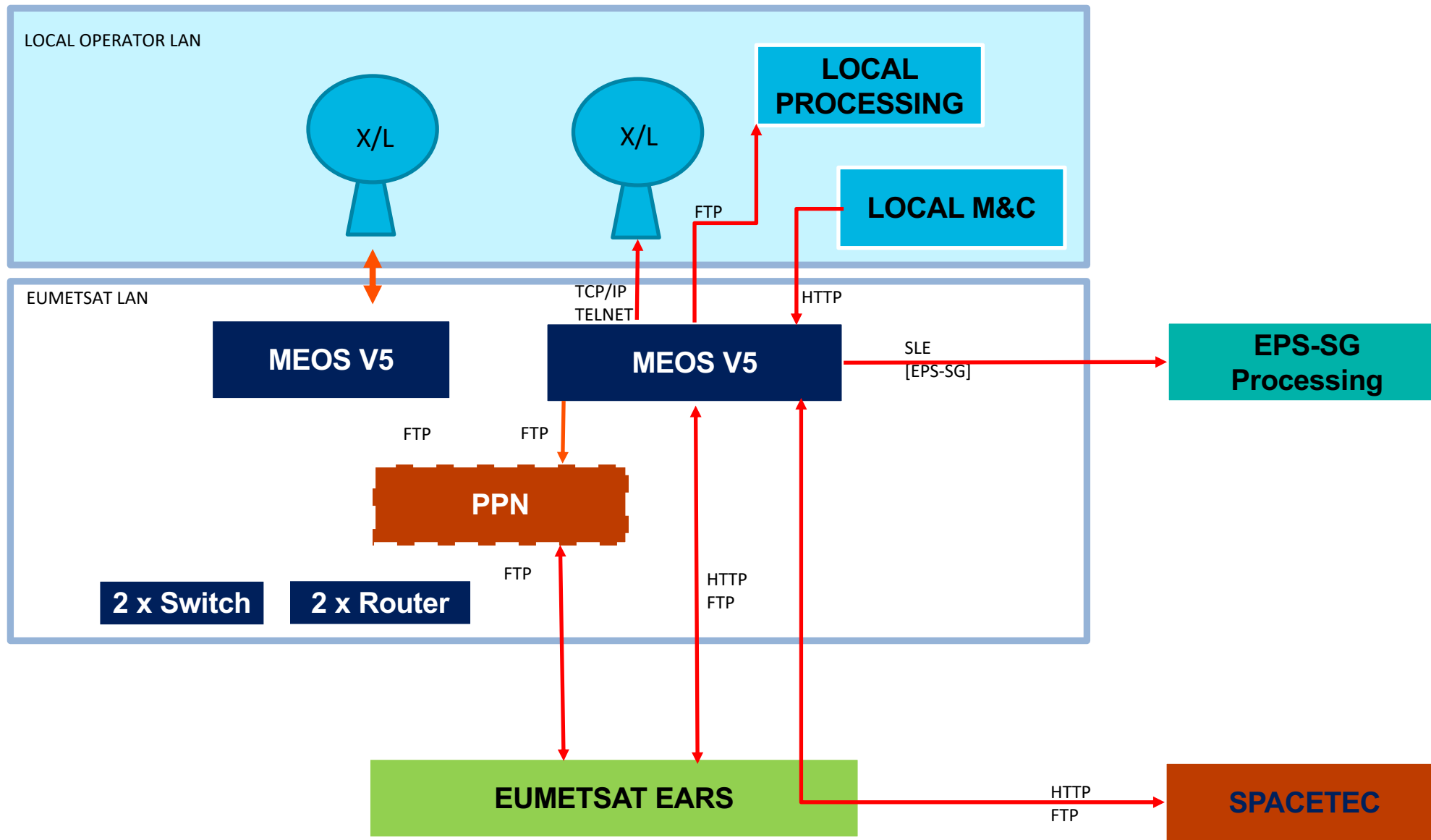|	DAILY DATA VOLUME * (MB)	DAILY DATA VOLUME (%)	NUMBER OF EUMETCAST REGISTERED USERS	NUMBER OF TERRESTRIAL REGISTERED USERS **
EARS-ATOVS	375	1.11%	1225	17 (3)
EARS-AVHRR	3590	10.58%	1580	13 (2)
EARS-ASCAT	240	0.71%	920	15 (2)
EARS-ASCAT (AFRICA)	240	0.71%	171	-
EARS-IASI-L1	2220	6.54%	449	13 (2)
EARS-IASI-L2	3006	8.86%	260	11
EARS-NWC	1624	4.79%	431	13 (2)
EARS-ATMS	198	0.58%	404	14 (2)
EARS-CrIS	1200	3.54%	409	14 (2)
EARS-VIIRS	16698	49.22%	448	18 (1)
EARS-VASS	30	0.09%	316	14
EARS-MERSI	4135	12.19%	142	9
EARS-MWRI	370	1.09%	107	9
Total	33926 ~ **34 Gb/day**	100.00%		

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DBNet

EARS

Dissemination of DB data from EUMETSAT's regional data services

Service	Full data on GTS	Reduced data on GTS	EARS data on EUMETCast
EARS–ATOVS	Yes	No	Yes
EARS–AVHRR	No	No	Yes
EARS–ASCAT	Yes	No	Yes
EARS–IASI	No	Yes	Yes
EARS–NWC	No	No	Yes
EARS–ATMS	Yes	No	Yes
EARS–CrIS	No	Yes	Yes
EARS–VIIRS	No	No	Yes
EARS–VASS	Yes	No	Yes
EARS–MERSI	No	No	Yes
EARS–MWRI	No	No	Yes

LOCAL OPERATOR LAN

X/L

X/L

LOCAL PROCESSING

FTP

LOCAL M&C

EUMETSAT LAN

TCP/IP
TELNET

HTTP

MEOS V5

MEOS V5

SLE
[EPS-SG]

EPS-SG Processing

FTP

FTP

PPN

FTP

HTTP
FTP

2 x Switch

2 x Router

EUMETSAT EARS

HTTP
FTP

SPACETEC

➢Centralisation of EARS L1 processing in EUMETSAT:

- Simplified system operations and maintenance;
- Better scalability and agility for providing new services and products to users.
- Better timeliness to the users.
- Better reliability.

➢Centralisation of scheduling:

Minor update required (upgrade SMART from V2 to V3)
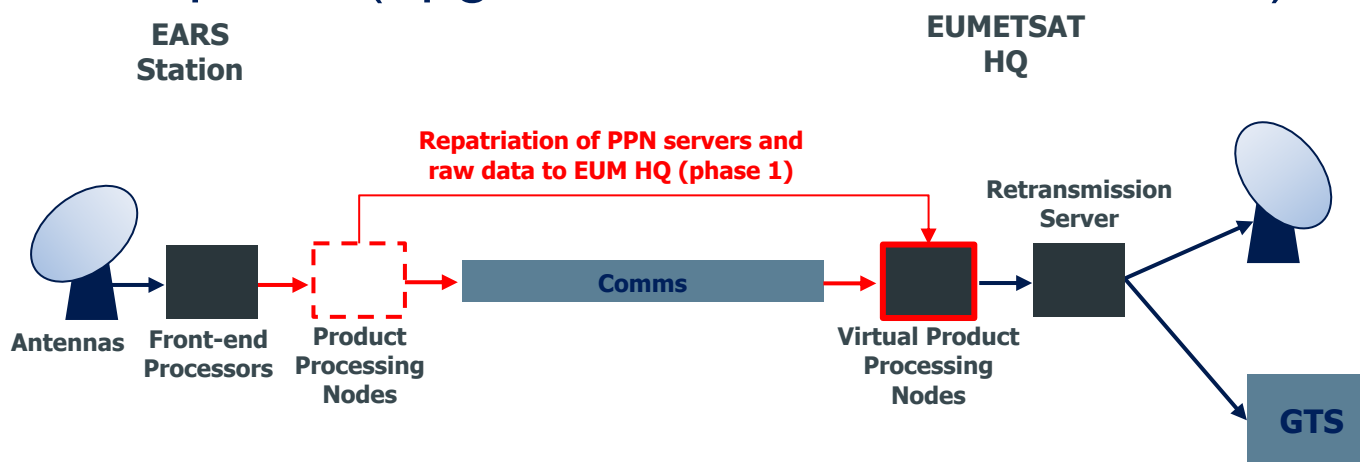
WIS2

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Successful demonstration in May 2022:

- NOAA CIMSS acts as WIS2 node, making full res CrIS and IASI data from DBRTN stations available and publishing to WIS2 global broker hosted by DWD

- EUMETSAT (representing a consumer) subscribed to relevant topics at DWD'S global broker

- EUMETSAT gets announcements of data availability and can retrieve the data automatically over the internet

- Full data available at EUMETSAT within 2 minutes – no losses

- Concept and architecture successfully demonstrated

Using WIS2 approach it would be possible to:

- Globally share full resolution hyperspectral data between centres, rather than needing data reduction

- Add imager data from VIIRS, MERSI and AVHRR to the DBNet system

- Add other relevant data to the DBNet system, such as microwave imagery (MWRI), level 2 now-casting products and Scatterometer winds

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EPS-SG Local Processor

- Launch of EPS-SG 1A planned December 2024.

- Launch of EPS-SG 1B planned January 2025.

- There will be a gap of at least 6 months between launches which means the planned date will change. Could mean B is launched before A.

- For the local processing NWP-SAF will prepare a separate package for each spacecraft A&B. These packages will be delivered 6 months prior to launch at version 1. Version 2 is planned 12 months after commissioning.

- The processing package will not contain processing for RO, 3MI or Sentinel 5.

- It will contain a L2 MetImage cloud mask post processor.

Thank you!

Questions are welcome.