



# Post-VT25

26.02.2026

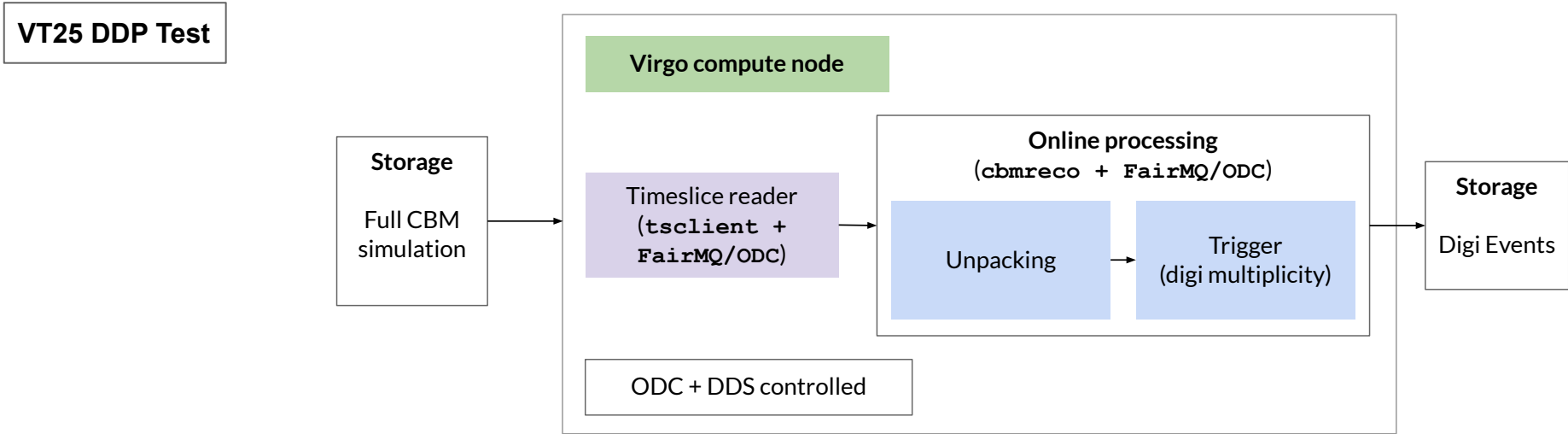
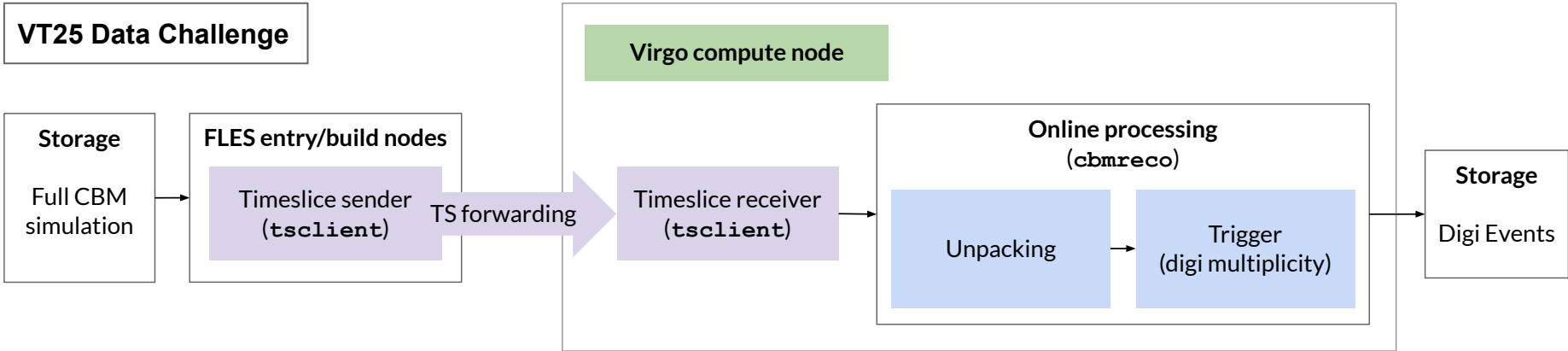


Bartosz Soból

# Deployment system test (ODC + DDS)



- Performed after VT25 Data Challenge (4 Feb, same Slurm reservation)
- **Goals**
  - Check behavior of the ODC integration into cbmreco and tsclient
  - Measure overhead
  - Identify potential weak points
- Setup very similar to the actual DC
  - Topologies from 1 to 12 Virgo nodes, up to 432 processes (tsclient + cbmreco)
  - Data read from Lustre instead of FLES nodes
- Evolution of this setup is to be used at VT26 Data Challenge



# Results

**Submit** - submit and start Slurm job,  
deploy DDS agents

**Activate** - activate DDS topology, run  
container, start FairMQ devices

**Config** - initialize tasks, read params,  
allocate resources, shm, etc.

**Processing** - ~0.08-0.11 ts/s/src

Nodes	Src.	Proc.	Submit [s]	Activate [s]	Config [s]
1	4	24	19	20	18
2	8	48	23	22	18
4	16	96	24	40	19
8	32	192	22	22	18
12	48	384	22	24	22
12	48	432	23	23	20

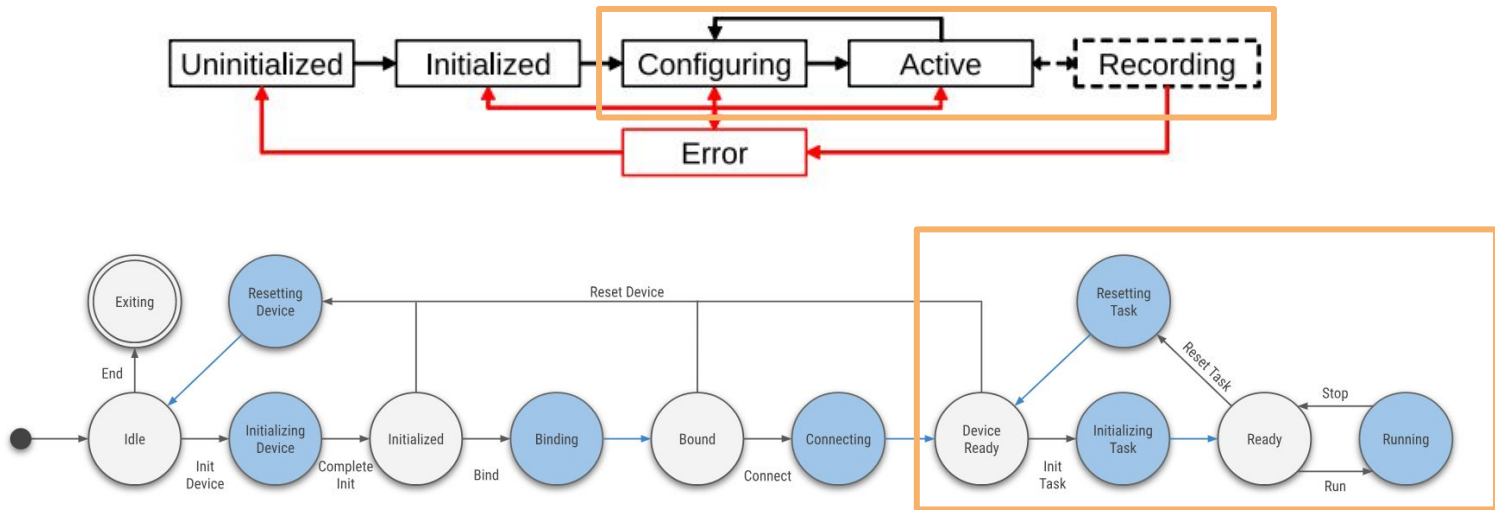
# Tools behavior



- Multiple configurations submitted trying to test and break the system
- ODS commands and FairMQ state machine work predictably as expected
- Two issues occurred
  - 1x Lock when topology *B* is submitted when *A* is being finalized and there's not enough resources for  $A+B$
  - 1x random freeze during state transition without particular error in tsclient/cbmreco
  - Likely connected to DDS-slurm plugin
  - Logs collected, I'll talk to devs

# Flesnet integration

- Currently, in Flesnet/timeslice forwarding, `get ()` method in timeslice sources are blocking, without a *hook* to break the loop and *pause* processing
- Such a functionality might be needed for efficient transitions between without restarts  
*Configuring - Active - Recording* states of ECS (and equivalent FairMQ states)



# vtfeeder compression

- **TS compression**

TS compressed when writing to file, used in VT25

- **MS compression**

MS compressed when adding to TS, no compr. when writing to file

	No compr.	TS compr.	MS compr.
<b>vtfeeder</b> runtime [s]	28.8	32.3	32.3
<b>vtfeeder</b> memory [GB]	17.2	17.2	14.4
<b>.tsa</b> filesize [MB]	2299	1028	1028
<b>cbmreco</b> total runtime [s]	16.3	18.4	18.3
<b>cbmreco</b> TS processing [s]	15.1	15.0	17.7
<b>cbmreco</b> memory [GB]	5.8	5.8	4.5