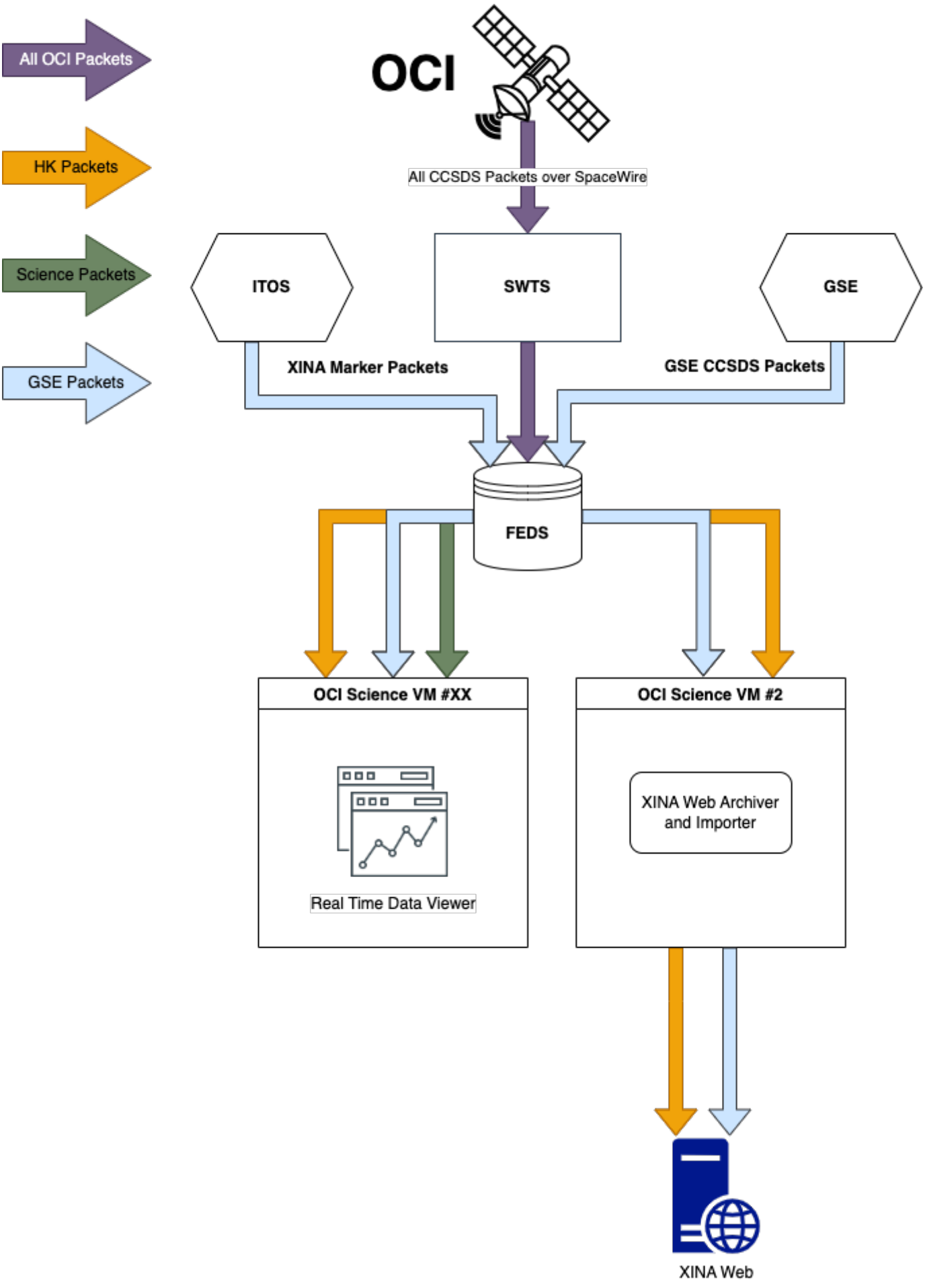
OCI IandT

- Data Flow wrt XINA and ocidataview
- Data Flow In Depth
- Raw Capture Process
- Scope Capture Process

Data Flow wrt XINA and ocidataview

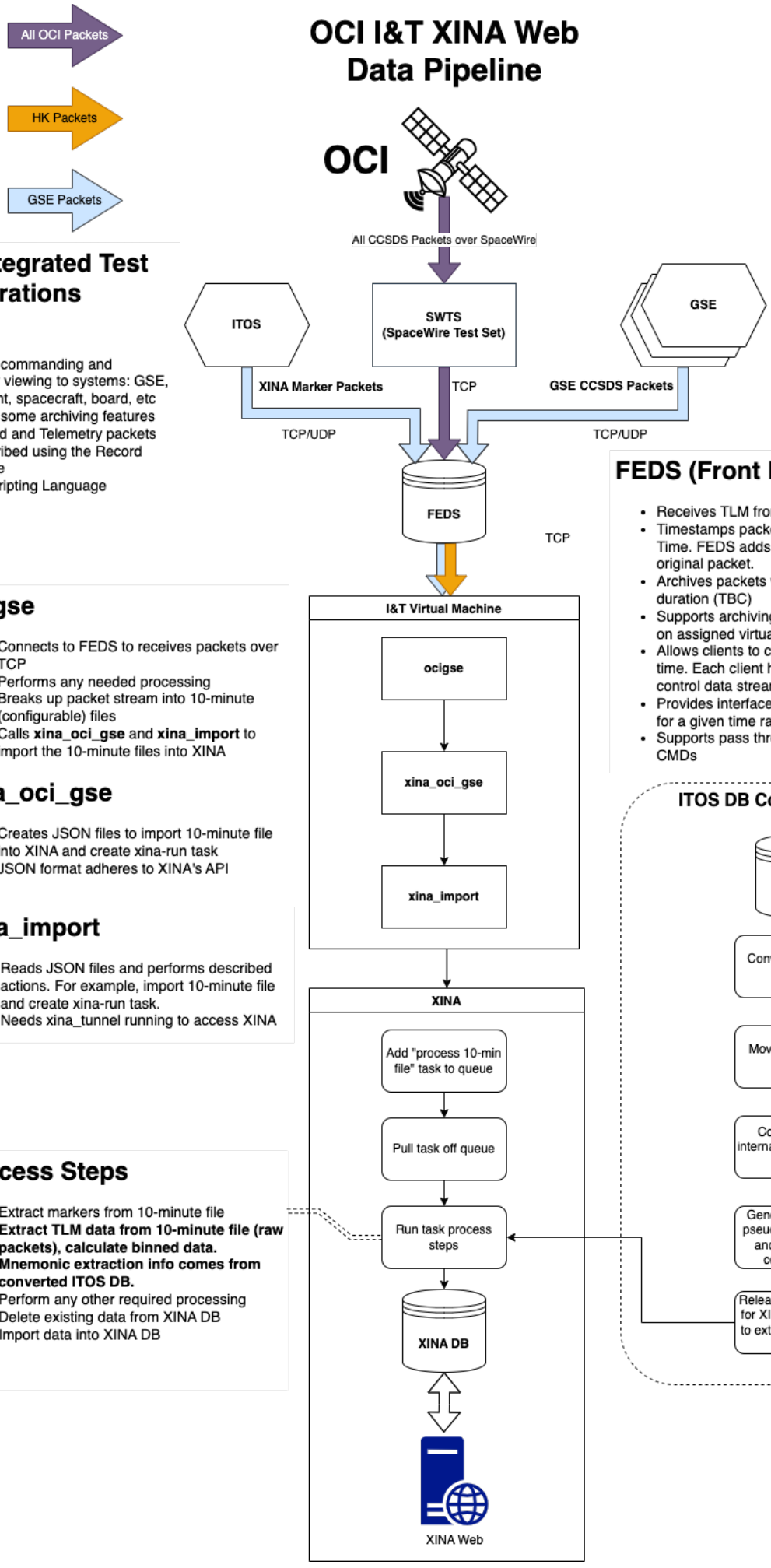
Data Flow at OCI I&T from XINA's perspective



Data Flow In Depth

This diagram shows and describes the lower level details of the XINA data pipeline.

OCI I&T XINA Web Data Pipeline



ITOS (Integrated Test and Operations System)

- Provides commanding and telemetry viewing to systems: GSE, instrument, spacecraft, board, etc
- Provides some archiving features
- Command and Telemetry packets are described using the Record Language
- STOL Scripting Language

FEDS (Front End Data System)

- Receives TLM from all data sources
- Timestamps packets with the Ground Receipt Time. FEDS adds its own headers around the original packet.
- Archives packets with configurable file size or duration (TBC)
- Supports archiving data into different files based on assigned virtual channel
- Allows clients to connect to receive packets in real-time. Each client has a configurable filter file to control data streams the client receives.
- Provides interface to perform playbacks of packets for a given time range
- Supports pass through of CMDs to archive all CMDs

ocigse

- Connects to FEDS to receives packets over TCP
- Performs any needed processing
- Breaks up packet stream into 10-minute (configurable) files
- Calls **xina_oci_gse** and **xina_import** to import the 10-minute files into XINA

xina_oci_gse

- Creates JSON files to import 10-minute file into XINA and create xina-run task
- JSON format adheres to XINA's API

xina_import

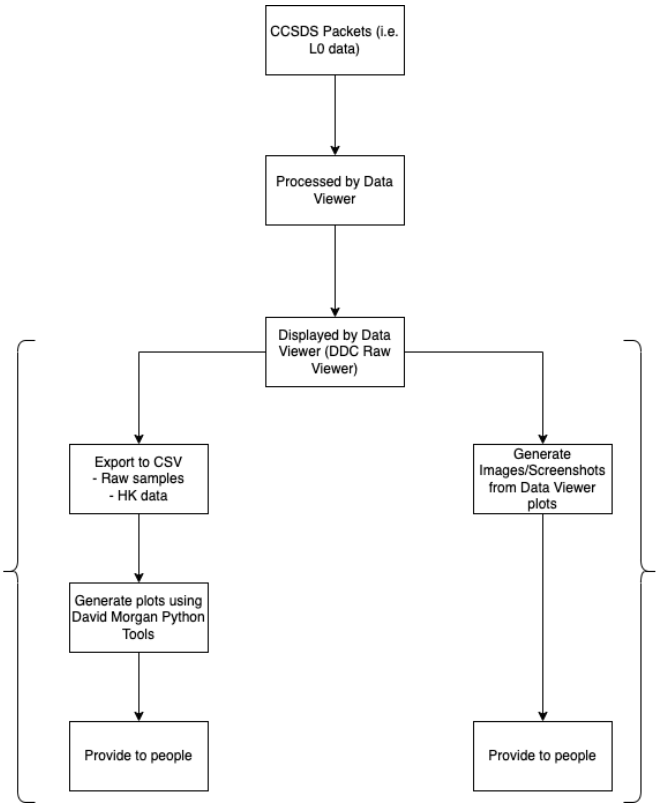
- Reads JSON files and performs described actions. For example, import 10-minute file and create xina-run task.
- Needs xina_tunnel running to access XINA

Process Steps

1. Extract markers from 10-minute file
2. **Extract TLM data from 10-minute file (raw packets), calculate binned data. Mnemonic extraction info comes from converted ITOS DB.**
3. Perform any other required processing
4. Delete existing data from XINA DB
5. Import data into XINA DB

Raw Capture Process

DDC Raw Captures



This path was generally used during the more extensive testing, for example, FPA tuning. David's tools perform more analysis and generate more plots than the Data Viewer. These plots were used by Ulrik to make tuning decisions.

This path was generally used for the Raw Captures that were part of every DDC functional or basic checkouts of the instrument since the plots were "good enough"

Scope Capture Process

