DEPLOYING

OPEN MCT SERVER

FOREWORD

Open MCT is currently open source and actively developed.

The Open MCT Server has been cleared for open source release but we are working on maturing the interfaces before we release it.

Open MCT uses the term "telemetry point" to refer to a single measurement from a spacecraft.

DATA FLOW

1. Spacecraft sends data to ground station via CCSDS Space Data Link Protocols
2. Ground system forwards data to downlink processor.
3. Downlink processor decommutates data, forwarding telemetry values to stream transformer.
4. Stream transformer converts values to Open MCT format (JSON, BSON, or Protobuf), and streams to Open MCT Server.
5. Open MCT Server stores telemetry values in query database and streams to active realtime clients.

STREAM TRANSFORM

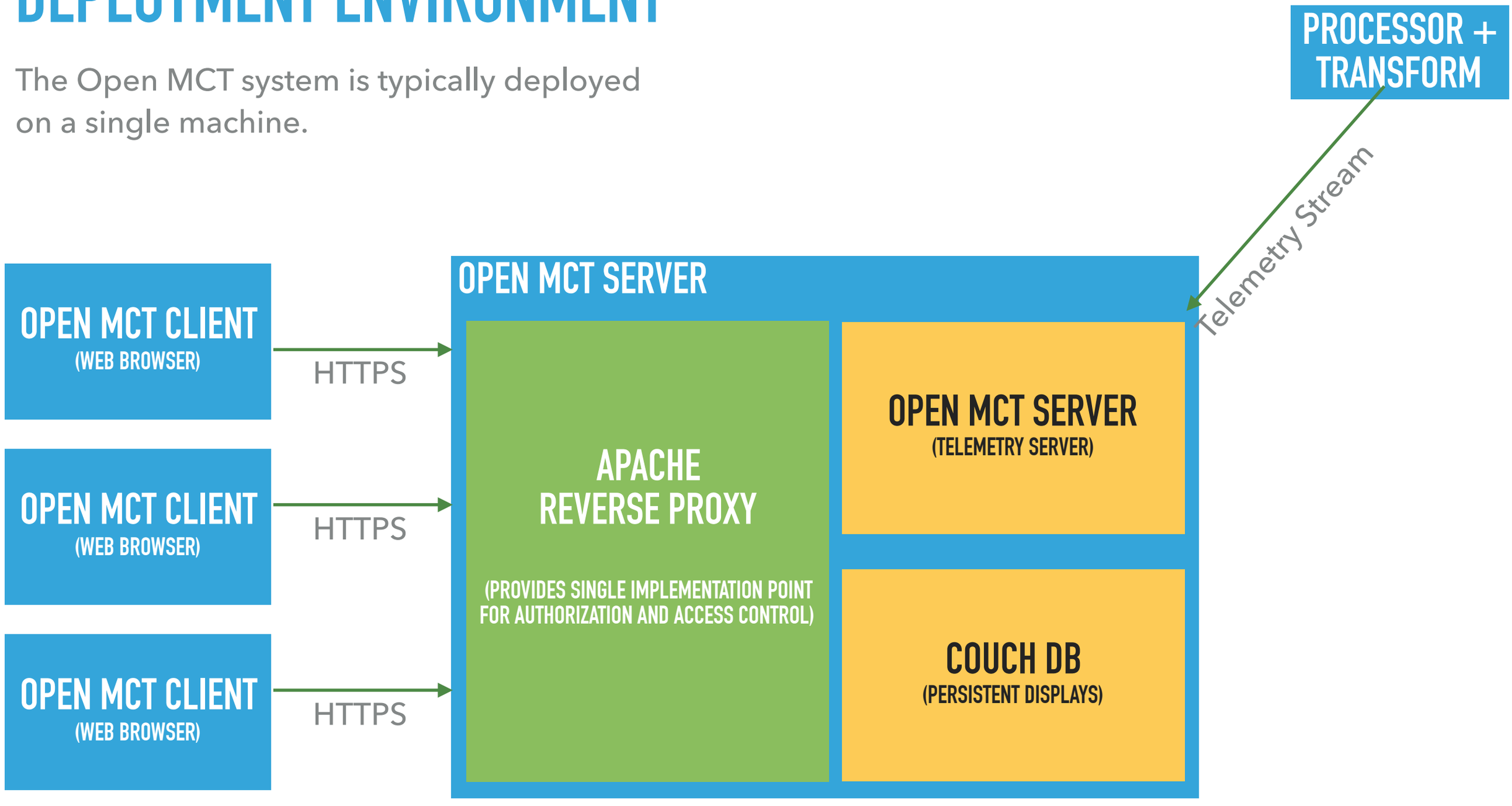
Convert output of downlink processor into Open MCT BSON/JSON/Protobuf format, send over TCP/IP socket to Open MCT Server.

```
{
    "timestamp": 1532628500578, // milliseconds from epoch.
    "flags": 123445678, // communicate alarm state, other details
    "name": "batt.voltage", // name of measurement
    "raw_value": 12.03, // measurement
    "raw_type": 73 // "float" data type
}
```

S/C → DOWNLINK PROCESSOR → STREAM TRANFORM → OPEN MCT SERVER

DEPLOYMENT ENVIRONMENT

The Open MCT system is typically deployed on a single machine.



Alternatives available for Apache and CouchDB

Access controls also available at network level

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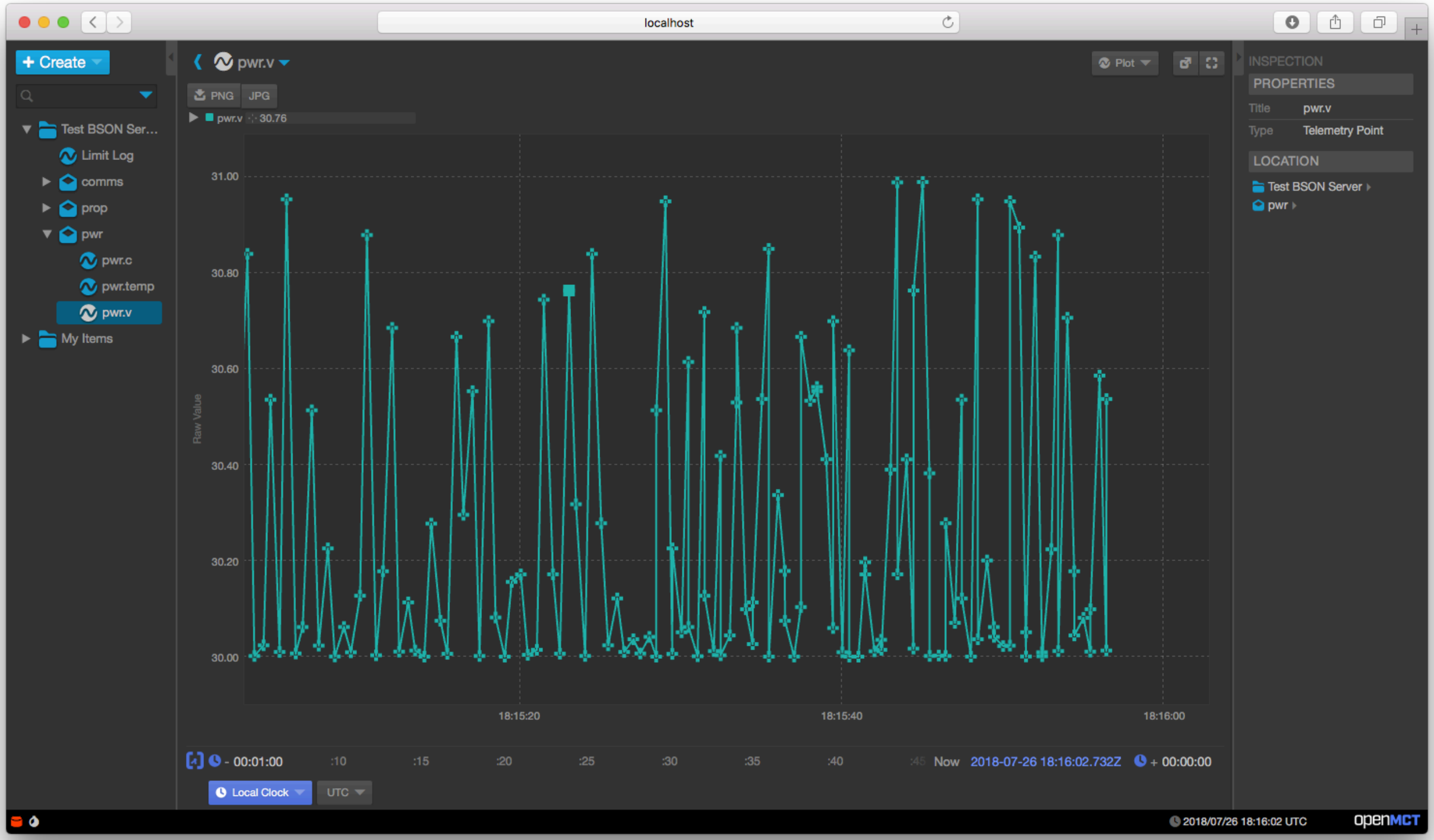
OPEN MCT CLIENT