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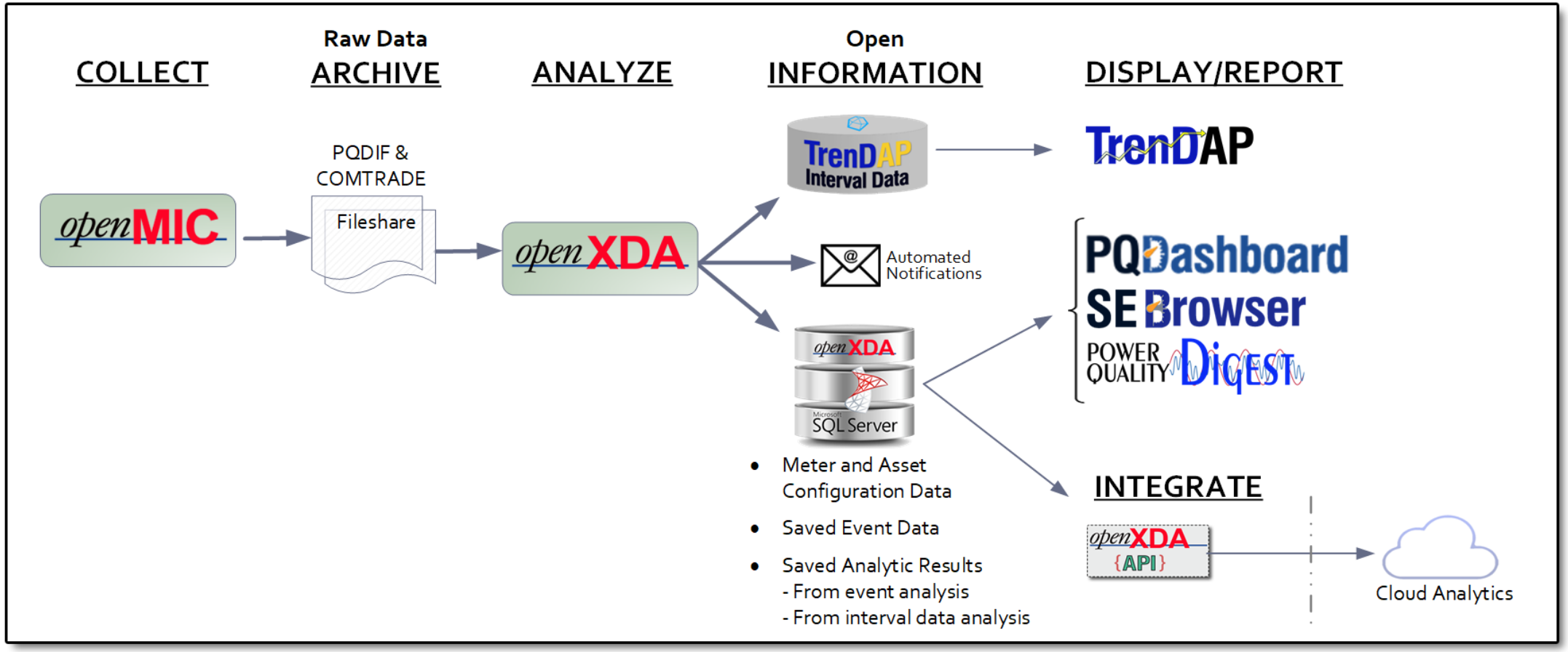
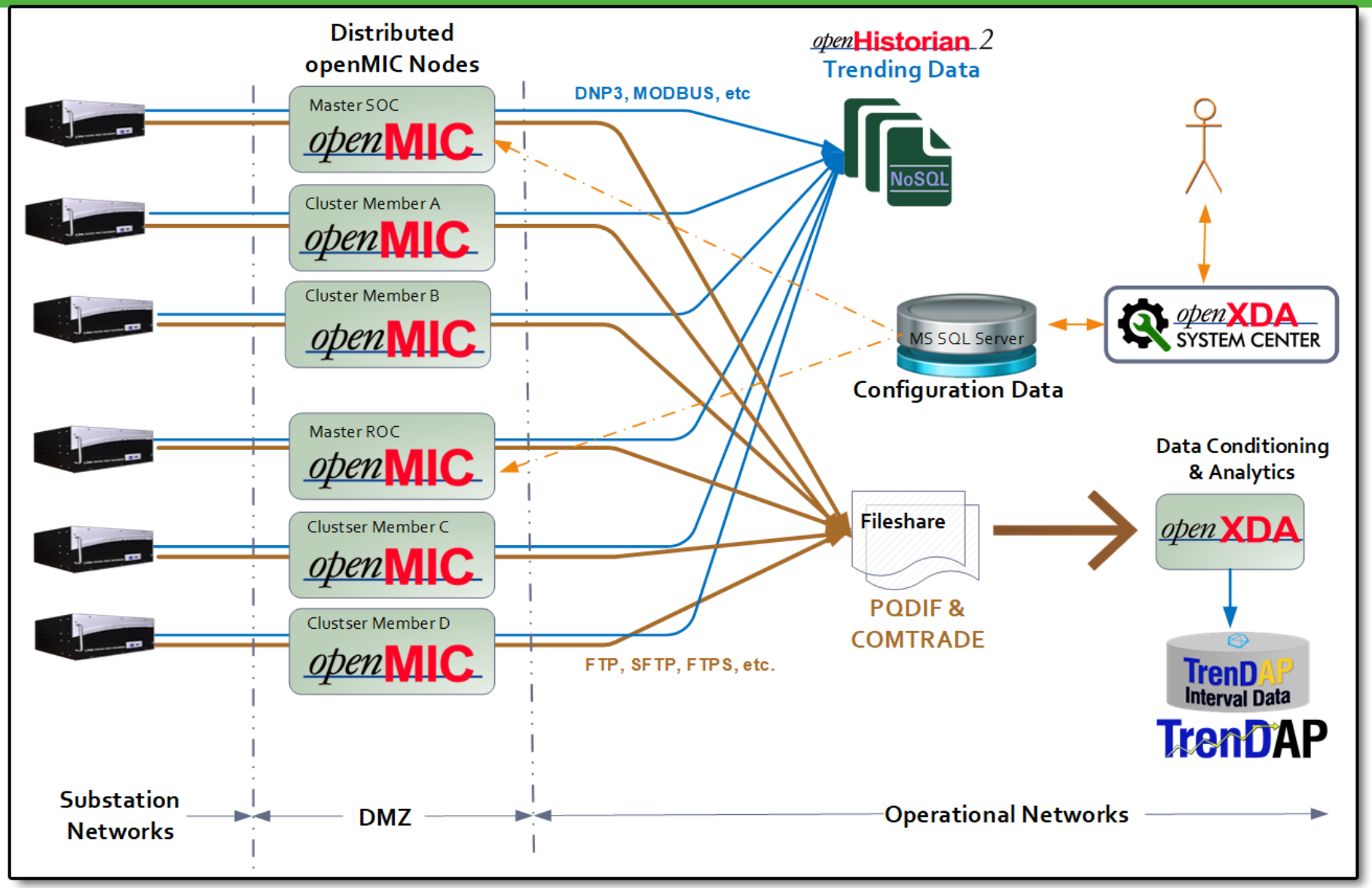
PQ Dashboard User's Group - 2021

openMIC Improvements

High-Level Data Flow



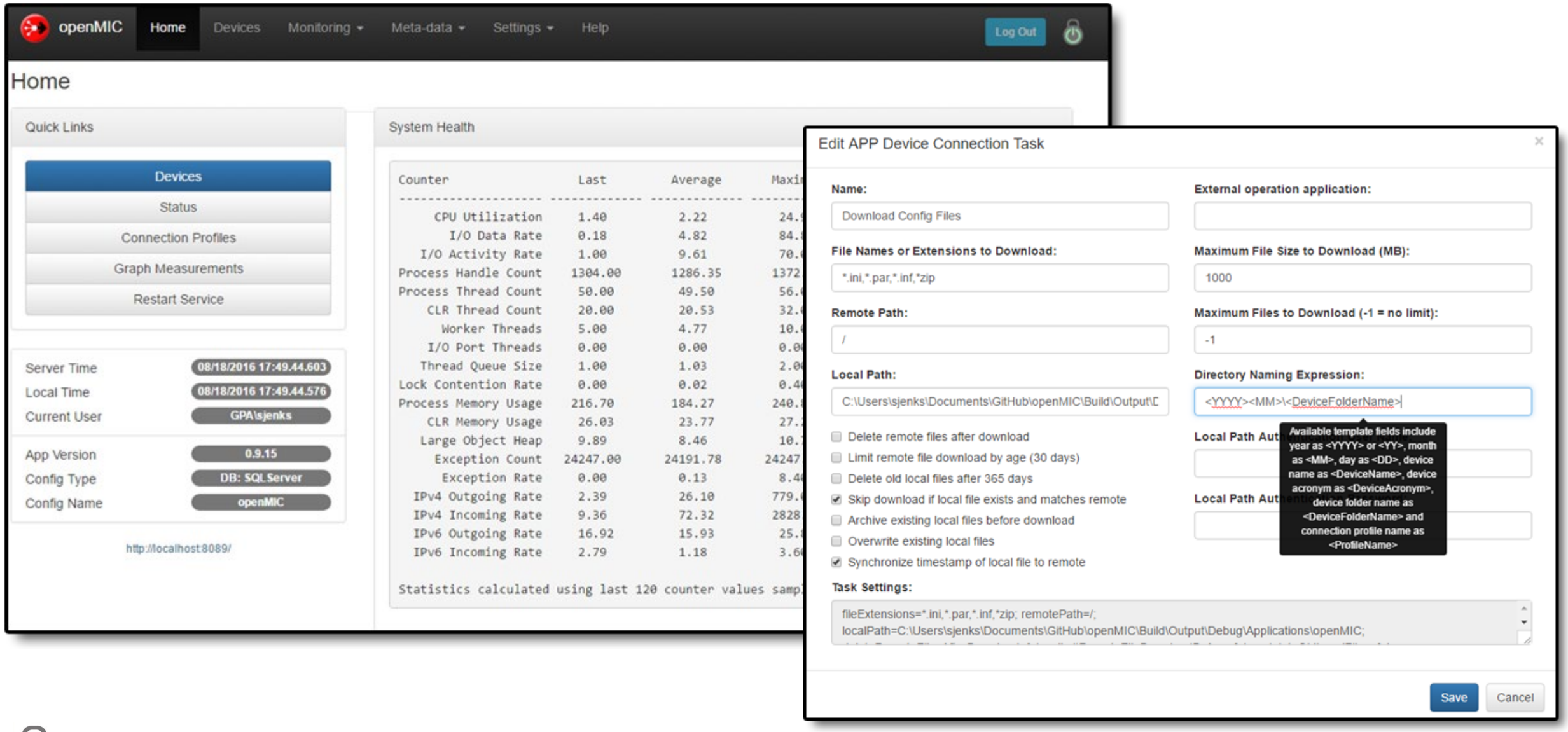
openMIC Data Flow



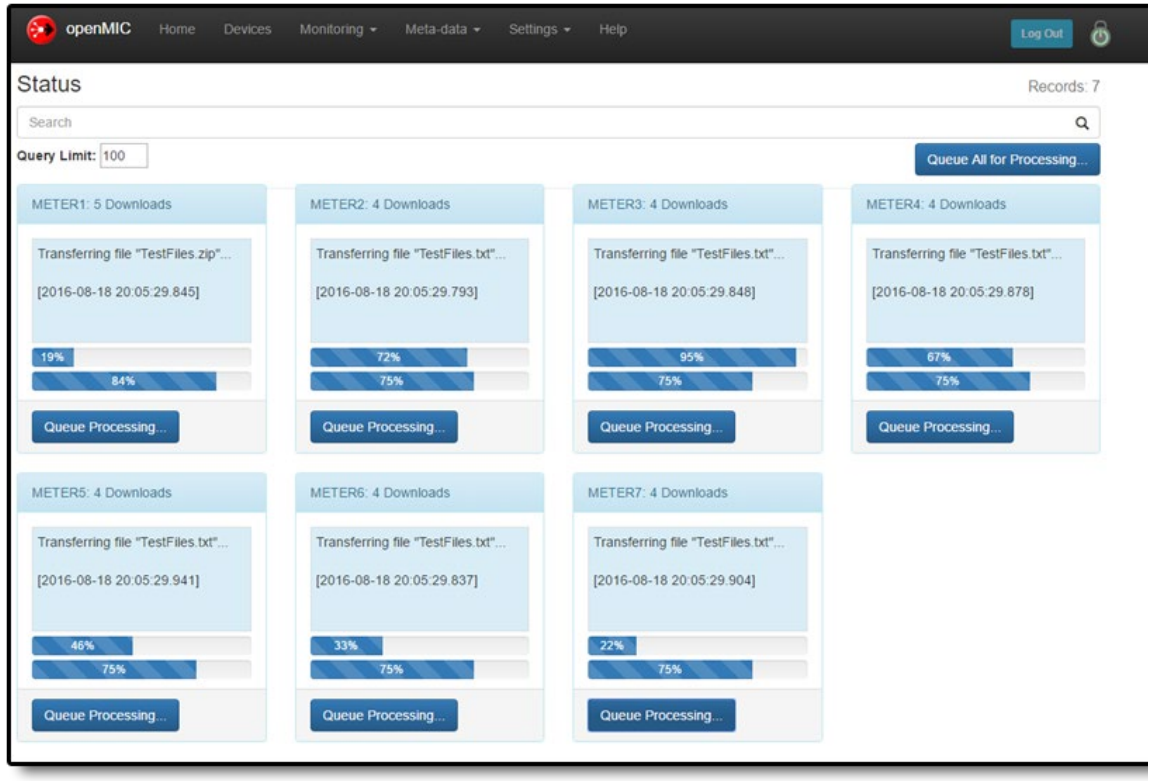
openMIC – Key Features

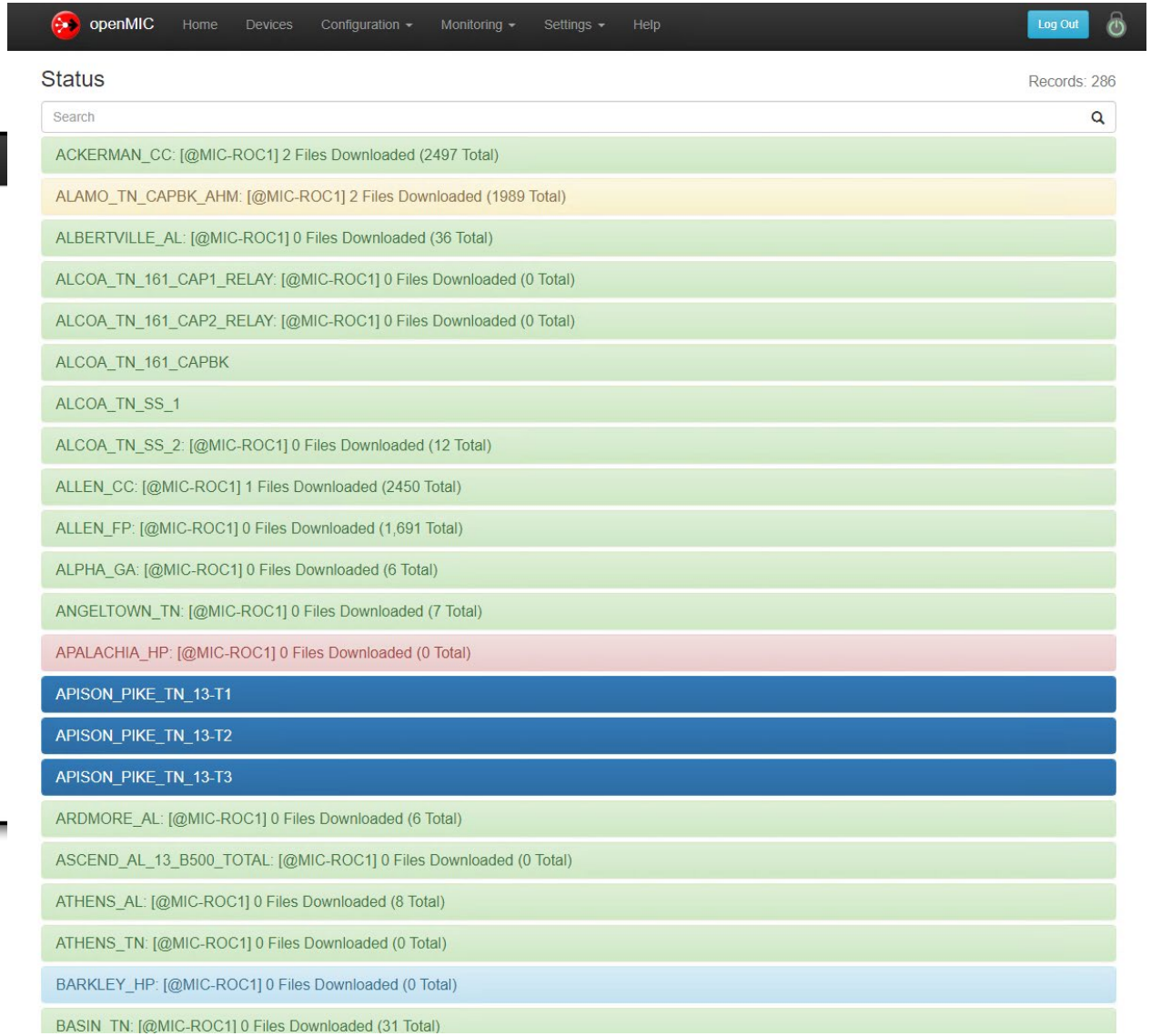
- Designed for deployment on critical, utility networks
- Polls substation devices for data – each device can be on separate schedule
- Default polling uses FTP, but openMIC can use custom downloaders to accommodate proprietary device protocols – i.e., for BIN DFRs
- Uses IP or RAS/modem communications paths for downloading files with event, configuration or trending data
- Other time-series data flows are supported over IP and serial using Modbus, DNP3, STTP, etc.
- Includes a built-in web-based configuration system
- Includes logging and reporting on communication success and failure to identify communications issues

Web Configuration System



Download Progress Screen





Recent openMIC Improvements

- Improved FTP time constraints
- Support for overridable task schedules
- Added support for priority-based download schedules, include custom task schedules
- Ability to queue tasks with time-constrained download
- Updated CRON schedule validation and help dialogs
- Included support for STTP in openMIC for improved time-series data distribution, e.g., from DNP3 or Modbus
- DNP3 updated with TLS support

openMIC Enterprise Edition

- Ability to interrogate substation devices using vendor specific, proprietary protocols
  - ION meters
  - Dranetz 61000s
  - SATEC meters
- These custom adapters produce well-formed PQDIF so that raw data can be achieved vis-à-vis other meter types
- Ability to horizontally scale into a high-availability, load-balanced system
  - One system, typically a fail-over cluster, is setup to be the *primary scheduling system*
  - Any number of other systems are then setup as *subordinate pooled worker instances*
  - Pooled instances can easily come and go for maintenance or load distribution
- Ability place devices in a substation where there has been a breaker operation at the top of polling queue
- Available at the cost of standard maintenance for openMIC