Power and Energy Monitoring MIB

draft-ietf-eman-energy-monitoring-mib-01

Mouli Chandramouli,
B. Schoening
Juergen Quittek
Thomas Dietz
Benoit Claise

82th IETF Meeting, Taipei, 2011

What is new in version 01 ?

- Editorial: Consistent with terminology draft
  - Including the MIB objects prefix
- Editorial: Revised the description clause for Power, Voltage (AC power is not an RMS measurement, it is an average reading).
- Circuit breakers not in scope of EMAN – Closed
- NamePlate Power definition – Closed
- Time Stamps for Power measurements – Not needed - SNMP measurement request based on a time schedule.

What is new in version 01 ?
Textual convention for IANAPowerStateSet

- Adopted the proposal from Juergen

```
IANAPowerStateSet ::= TEXTUAL-CONVENTION
        STATUS      current
        DESCRIPTION
           "IANAPowerStateSet is a textual convention that describes
            Power State Sets and Power State ...
        SYNTAX      INTEGER {
              other(0),               -- indicates other set
              unknown(255),       -- unknown power state

              ieee1621(256),      -- indicates IEEE1621 set (S=1)
              ieee1621On(257),
              ...
              dmtf(512),          -- indicates DMTF set (S=2)
              dmtfOn(513),
              ...
              eman(768),          -- indicates EMAN set (S=3)
              emanmechoff(769),
              ...
           }
```

- However, some more improvements under discussion on the mailing (Thanks Bill, Ira, Juergen)

What is new in version 01 ?
IANA Considerations

- As agreed: Revised IANA Considerations based on RFC 5226
  - New assignments in Power State Sets based on Expert review; experts designated by the Area Director.

- Currently : IEEE1621 3 states (on, off, sleep), DMTF - 16 states (ACPI 7 states + transitional states), EMAN – 12 states (ACPI non-operational states, operational states)

- To be done: Process for deprecation of Power State Set or some of the Power States of the Power State Set

- Open Issue: Consideration of IEEE-ISTO PWG Power State Set
  - Proposal: to be requested from IANA when the IANA procedure is in place

What is new in version 01 ?
ODVA Compliance

- Directional measurement of Energy
  - Energyconsumed, EnergyProduced and EnergyNet
  - MaxConsumed, MaxProduced

```
EoEnergyIntervalEntry ::= SEQUENCE {
    eoEnergyIntervalStartTime                TimeTicks,
    eoEnergyIntervalEnergyConsumed           Integer32,
    eoEnergyIntervalEnergyProduced           Integer32,
    eoEnergyIntervalEnergyNet                Integer32,
    eoEnergyIntervalEnergyUnitMultiplier     UnitMultiplier,
    eoEnergyIntervalEnergyAccuracy           Integer32,
    eoEnergyIntervalMaxConsumed              Integer32,
    eoEnergyIntervalMaxProduced              Integer32,
    eoEnergyIntervalDiscontinuityTime        TimeTicks
}
```

To be done

- Index eoPowerIndex from EMAN Monitoring MIB has to be updated with index EntPhysicalIndex
- Some More Consistency with ODVA Information Model?
  - Need to get the ODVA baselined document with the complete information model
  - Then we compare the attributes one by one
- Review comments from Minoru.Teraoka
- Need to check if all requirements are met
  - Work in progress
- AC Power configurations: any other configuration next to WYE and Delta
  - No conclusion on the mailing list
  - Next step: check with the ODVA baselined document with the complete information model

Open Issue: Demand Measurement

- A second approach needed?
  - Approach 1: eoEnergyParameterTable, eoEnergyTable (for sufficiently large devices)
  - Approach 2 for smaller devices ?
    - Sequence equally spaced power measurements over time – the NMS can compute the demand over a time interval
- Received feedback from Jeff Taft

Open Issue: Time series of measurements – Power, Energy ?

- Proposal
  - Time series not needed for ‘instantaneous’ values – Power, Voltage
  - Time series needed only for averaged values – Demand, Energy
  - Refer to [EMAN-FMWK] for the reference to IPFIX. IPFIX must not be mentioned in this MIB module

Open Issue: Temperature

- Temperature measurement added to battery.
- Does it make sense to add it to other Energy Objects (e.g. Chassis?)
  - If yes, the Monitoring MIB should be updated.
  - However, we can simply rely on the ENTITY SENSORY MIB, which contains the temperature.
  - Note: this MIB module will follow the EMAN-REQ direction.

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- Summary
  - Updated the MIB module based on WG resolution
  - Discussed the feedback from the mailing list
  - WG comments