File Data Reduction Spreadsheet

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SNIA Emerald™ Power Efficiency Measurement Specification

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Data Reduction of sFlow and power meter

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- Required data reduction steps
  - Extract the data from text or CSV file from sFlowtool
    - Cut and past the IF_(index) from the text file
    - Extract the data from the CSV file (need to use –4 -L)
  - Convert sFlow data into MiB/s with time stamps
  - Combine the sFlow and power data
  - Identify the workload start and stop time stamps
    - Can use tag2014
  - Use linear interpolation on sFlow data to match power meter
  - Generate 30 Metric points (MiB/s/W)

Validation and Metric Generation

- Stability Validation
  - test using the moving average
  - test using the least fit squares
- Generate Metric
  - average performance/average power across the 300 second period

Sample Data Reduction Spreadsheet

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Contains 9 Tabs

- SNIA Copyright
- SNIA Disclaimer
- ReadMe (List the steps required for data reduction and what tab to use)
- Sflow Data
- Power
- Combined
- VDA Raw
- VDA Test Chart
- VDA 10

Extract Data sFlow and Power Data

- Use tabs sFlow Data and Power Data
  - sFlow Tab
    - Placed the pulled data from the Sflow text file
    - This tab will convert UTC to Ms Excel time format
      - May have to change the time zones
    - Generate the mib/s data
  - Power Tab
    - Copy in the power data (example was from Yokogawa on 5 second reading rate)
      - Generate 10 second averages and keep every other point

Combine Data and Identify Load Points

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- Copy in sFlow data and Power data in the Combined tab
  - Try to initial match a starting time stamp
- From the SPEC2014SFS log file find the start and stop time for each workload and load point

Pull out the Desired Workload

- Pull out the workload with all ten load points
  - Example is VDA workload and place in the VDA Raw Tab
  - From the SPEC2014SFS log file find the start and stop time for each load point
  - Updated the graph for current workload VDA Test Chart
    - Good way to see run

Calculate data from Load Point

- Pull out the 30 points from the desired load point
  - Place in VDA10 tab
- Review if difference in time stamps
  - Time stamps my match and do not need to be Interpolated
  - Make sure points are not more than -10 seconds off
- Review stability data
- Review calculated metric