NSF/IUCRC CAC PROJECT

MONITORING, VISUALIZING, AND PREDICTING HEALTH STATUS OF HPC CENTERS

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METRICS FROM REDFISH

],

```
https://10.101.1.1/redfish/v1/Chassis/System.Embedded.1/Thermal
"@odata.type": "#Thermal.v1_0_2.Thermal",
"Redundancy": [],
"Description": "Represents the properties for Temperature and Cooling",
"Redundancy@odata.count": 0,
                                                                     "time": 1583792296,
"Fans@odata.count": 4,
"@odata.id": "/redfish/v1/Chassis/System.Embedded.1/Thermal",
                                                                     "measurement": ("Thermal",
"@odata.context": "/redfish/v1/$metadata#Thermal.Thermal",
"Fans": [
                                                                     "tags":
                                                                            "NodeId": "101.10.1.1"
       "Status": {
           "State": "Enabled",
                                                                            "Sensor": ("FAN_1",)
           "Health": "OK"
       },
                                                                     "fields":
       "UpperThresholdNonCritical": null,
                                                                            "Reading": 9310
       "MaxReadingRange": 0,
       "Redundancy": [],
       "LowerThresholdCritical": 1050,
       "Redundancy@odata.count": 0,
       "@odata.id": "/redfish/v1/Chassis/System.Embedded.1/Sensors/Fans/0x17%7C%7CFan.Embedded._1",
       "MemberId": "0x17||Fan.Embedded._1",
       "MinReadingRange": 0,
       "UpperThresholdFatal": 17850,
       "ReadingUnits": "RPM",
       "LowerThresholdFatal": 1050;
       "LowerThresholdNonCritical": null,
       "Name": "FAN_1",
       "Reading": 9310,
       "UpperThresholdCritical": 17850,
       "FanName": "FAN 1"
```

```
"time": 1583792296,
"measurement": "JobsInfo",
"tags":
     "JobId": 123456
     "Queue": "quanah"
"fields":
    "StartTime": 1583792200
    "SubmitTime": 1583792200
    "TotalNodes": 1
    "NodeList": ["101.10.1.1"]
    "CPUCores": 10
    "JobName": "test"
    "User": "abc"
```

Only update when a new job is submitted

Understand measurements

All measurements :845,241

- Numerical measurements :10

Jobs measurements :845,217

- Other measurements :14

Understand sample data points

Convert

All measurements :12

Demo

Data points range:
Friday, April 12, 2019 8:39:41 AM
Friday, April 12, 2019 8:49:41 AM

