

# SMI Microservice

## *Power and Thermal*

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# 1. Overview

Power and Thermal Microservice collect power monitoring and consumption on compute node using industry standard WS-Management - WSMAN Protocol

## 1.1. Version information

*Version* : 1.0 dev

## 1.2. License information

*License* : Dell SMI License Version 1.0

*License URL* : [www.dell.com/smi](http://www.dell.com/smi)

*Terms of service* : <http://www.dell.com/smi/powermonitoring>

## 1.3. URI scheme

*Host* : 10.62.59.155:46019

*BasePath* : /

## 1.4. Tags

- power-thermal-controller : Power Thermal Controller

# 2. Resources

## 2.1. Power-thermal-controller

Power Thermal Controller

### 2.1.1. /api/1.0/server/powerthermal

POST /api/1.0/server/powerthermal

#### Description

This Webmethod returns Power and Thermal data for a server system

#### Parameters

Type	Name	Description	Schema
Body	<b>request</b> <i>required</i>	request	<a href="#">BasePowerThermalRequest</a>

## Responses

HTTP Code	Description	Schema
200	OK	<a href="#">HwPowerMonitoring</a>
201	Created	No Content
401	Unauthorized	No Content
403	Forbidden	No Content
404	Not Found	No Content

## Consumes

- `application/json`

## Produces

- `application/json`

## Example HTTP request

### Request path

```
/api/1.0/server/powerthermal
```

### Request body

```
{
  "password" : "string",
  "serverAddress" : "string",
  "userName" : "string"
}
```

## Example HTTP response

### Response 200

```
{
  "currentReading" : "string",
  "energyConsumption" : "string",
  "energyConsumptionEndDateTime" : "string",
  "energyConsumptionStartDateTime" : "string",
  "failureThreshold" : "string",
  "fqdd" : "string",
  "id" : 0,
  "lastDayPeakAverage" : "string",
  "lastDayPeakMax" : "string",
  "lastDayPeakMaxTime" : "string",
  "lastDayPeakMin" : "string",
  "lastDayPeakMinTime" : "string",
  "lastDayPeakTime" : "string",
  "lastHourPeakAverage" : "string",
  "lastHourPeakMax" : "string",
  "lastHourPeakMaxTime" : "string",
  "lastHourPeakMin" : "string",
  "lastHourPeakMinTime" : "string",
  "lastHourPeakTime" : "string",
  "lastWeekPeakAverage" : "string",
  "lastWeekPeakMax" : "string",
  "lastWeekPeakMaxTime" : "string",
  "lastWeekPeakMin" : "string",
  "lastWeekPeakMinTime" : "string",
  "lastWeekPeakTime" : "string",
  "peakAmpsEndDateTime" : "string",
  "peakAmpsStartDateTime" : "string",
  "powerCap" : "string",
  "probeName" : "string",
  "profile" : "string",
  "systemInstantaneousHeadroom" : "string",
  "systemPeakAmps" : "string",
  "systemPeakHeadroom" : "string",
  "systemPeakPower" : "string",
  "systemPeakPowerEndDateTime" : "string",
  "systemPeakPowerStartDateTime" : "string",
  "warningThreshold" : "string"
}
```

### 2.1.2. /api/1.0/server/powerthermal

```
PUT /api/1.0/server/powerthermal
```

#### Description

This Webmethod configure physical server for power consumption, by setting power value, server consume power within defined limits

## Parameters

Type	Name	Description	Schema
Body	<b>request</b> <i>required</i>	request	<a href="#">SetPowerThermalRequest</a>

## Responses

HTTP Code	Description	Schema
200	OK	<a href="#">JobStatus</a>
201	Created	No Content
401	Unauthorized	No Content
403	Forbidden	No Content
404	Not Found	No Content

## Consumes

- `application/json`

## Produces

- `application/json`

## Example HTTP request

### Request path

```
/api/1.0/server/powerthermal
```

### Request body

```
{
  "enableCapping" : true,
  "password" : "string",
  "powerCap" : 0,
  "serverAddress" : "string",
  "userName" : "string"
}
```

## Example HTTP response

### Response 200

```
{
  "description" : "string",
  "jobId" : "string",
  "message" : "string",
  "serverAddress" : "string",
  "status" : "string"
}
```

### 2.1.3. /api/1.0/server/powerthermal/all

POST /api/1.0/server/powerthermal/all

#### Description

This Webmethod returns aggregated power consumption data for all servers system

#### Parameters

Type	Name	Description	Schema
Body	<b>request</b> <i>required</i>	request	< <a href="#">BasePowerThermalRequest</a> > array

#### Responses

HTTP Code	Description	Schema
200	OK	<a href="#">HwMonitoringAgg</a>
201	Created	No Content
401	Unauthorized	No Content
403	Forbidden	No Content
404	Not Found	No Content

#### Consumes

- `application/json`

#### Produces

- `application/json`

#### Example HTTP request

#### Request path

```
/api/1.0/server/powerthermal/all
```

#### **Request body**

```
[ {  
  "password" : "string",  
  "serverAddress" : "string",  
  "userName" : "string"  
} ]
```

#### **Example HTTP response**

##### **Response 200**



```

{
  "avgFailureThreshold" : 0,
  "avgWarningThreshold" : 0,
  "currentAvgReading" : 0,
  "currentReading" : 0,
  "hwPowerMonitoring" : [ {
    "currentReading" : "string",
    "energyConsumption" : "string",
    "energyConsumptionEndDateTime" : "string",
    "energyConsumptionStartDateTime" : "string",
    "failureThreshold" : "string",
    "fqdd" : "string",
    "id" : 0,
    "lastDayPeakAverage" : "string",
    "lastDayPeakMax" : "string",
    "lastDayPeakMaxTime" : "string",
    "lastDayPeakMin" : "string",
    "lastDayPeakMinTime" : "string",
    "lastDayPeakTime" : "string",
    "lastHourPeakAverage" : "string",
    "lastHourPeakMax" : "string",
    "lastHourPeakMaxTime" : "string",
    "lastHourPeakMin" : "string",
    "lastHourPeakMinTime" : "string",
    "lastHourPeakTime" : "string",
    "lastWeekPeakAverage" : "string",
    "lastWeekPeakMax" : "string",
    "lastWeekPeakMaxTime" : "string",
    "lastWeekPeakMin" : "string",
    "lastWeekPeakMinTime" : "string",
    "lastWeekPeakTime" : "string",
    "peakAmpsEndDateTime" : "string",
    "peakAmpsStartDateTime" : "string",
    "powerCap" : "string",
    "probeName" : "string",
    "profile" : "string",
    "systemInstantaneousHeadroom" : "string",
    "systemPeakAmps" : "string",
    "systemPeakHeadroom" : "string",
    "systemPeakPower" : "string",
    "systemPeakPowerEndDateTime" : "string",
    "systemPeakPowerStartDateTime" : "string",
    "warningThreshold" : "string"
  } ]
}

```

#### 2.1.4. /api/1.0/server/powerthermal/all

```
PUT /api/1.0/server/powerthermal/all
```

## Description

This Webmethod configure physical servers for power consumption, by setting powercap value, all servers are bound to consume power within defined limits

## Parameters

Type	Name	Description	Schema
Body	<b>request</b> <i>required</i>	request	<a href="#">SetPowerThermalAggRequest</a>

## Responses

HTTP Code	Description	Schema
200	OK	< object > array
201	Created	No Content
401	Unauthorized	No Content
403	Forbidden	No Content
404	Not Found	No Content

## Consumes

- `application/json`

## Produces

- `application/json`

## Example HTTP request

### Request path

```
/api/1.0/server/powerthermal/all
```

### Request body

```
{
  "enableCapping" : true,
  "powerCap" : 0,
  "servers" : [ {
    "password" : "string",
    "serverAddress" : "string",
    "userName" : "string"
  } ]
}
```

## Example HTTP response

### Response 200

```
[ "object" ]
```

## 2.1.5. /api/1.0/server/powerthermal/version

```
GET /api/1.0/server/powerthermal/version
```

## Description

This Webmethod returns the deployed Power and Thermal microservice version

## Responses

HTTP Code	Description	Schema
200	OK	<a href="#">Version</a>
401	Unauthorized	No Content
403	Forbidden	No Content
404	Not Found	No Content

## Consumes

- `application/json`

## Produces

- `application/json`

## Example HTTP request

### Request path

```
/api/1.0/server/powerthermal/version
```

## Example HTTP response

### Response 200

```
{
  "description" : "string",
  "name" : "string",
  "version" : "string"
}
```

## 3. Definitions

### 3.1. BasePowerThermalRequest

Name	Description	Schema
<b>password</b> <i>optional</i>	Example : <i>string</i>	string
<b>serverAddress</b> <i>optional</i>	Example : <i>string</i>	string
<b>userName</b> <i>optional</i>	Example : <i>string</i>	string

### 3.2. HwMonitoringAgg

Name	Description	Schema
<b>avgFailureThreshold</b> <i>optional</i>	Example : <i>0</i>	integer (int64)
<b>avgWarningThreshold</b> <i>optional</i>	Example : <i>0</i>	integer (int64)
<b>currentAveraging</b> <i>optional</i>	Example : <i>0</i>	integer (int64)
<b>currentReading</b> <i>optional</i>	Example : <i>0</i>	integer (int64)
<b>hwPowerMonitoring</b> <i>optional</i>	Example : [ <i>HwPowerMonitoring</i> ]	< <a href="#">HwPowerMonitoring</a> > array

### 3.3. HwPowerMonitoring

Name	Description	Schema
<b>currentReading</b> <i>optional</i>	Example : "string"	string
<b>energyConsumption</b> <i>optional</i>	Example : "string"	string
<b>energyConsumptionEndDateTime</b> <i>optional</i>	Example : "string"	string
<b>energyConsumptionStartDateTime</b> <i>optional</i>	Example : "string"	string
<b>failureThreshold</b> <i>optional</i>	Example : "string"	string
<b>fqdd</b> <i>optional</i>	Example : "string"	string
<b>id</b> <i>optional</i>	Example : 0	integer (int64)
<b>lastDayPeakAverage</b> <i>optional</i>	Example : "string"	string
<b>lastDayPeakMax</b> <i>optional</i>	Example : "string"	string
<b>lastDayPeakMaxTime</b> <i>optional</i>	Example : "string"	string
<b>lastDayPeakMin</b> <i>optional</i>	Example : "string"	string
<b>lastDayPeakMinTime</b> <i>optional</i>	Example : "string"	string
<b>lastDayPeakTime</b> <i>optional</i>	Example : "string"	string
<b>lastHourPeakAverage</b> <i>optional</i>	Example : "string"	string

Name	Description	Schema
<b>lastHourPeakMax</b> <i>optional</i>	Example : "string"	string
<b>lastHourPeakMaxTime</b> <i>optional</i>	Example : "string"	string
<b>lastHourPeakMin</b> <i>optional</i>	Example : "string"	string
<b>lastHourPeakMinTime</b> <i>optional</i>	Example : "string"	string
<b>lastHourPeakTime</b> <i>optional</i>	Example : "string"	string
<b>lastWeekPeakAverage</b> <i>optional</i>	Example : "string"	string
<b>lastWeekPeakMax</b> <i>optional</i>	Example : "string"	string
<b>lastWeekPeakMaxTime</b> <i>optional</i>	Example : "string"	string
<b>lastWeekPeakMin</b> <i>optional</i>	Example : "string"	string
<b>lastWeekPeakMinTime</b> <i>optional</i>	Example : "string"	string
<b>lastWeekPeakTime</b> <i>optional</i>	Example : "string"	string
<b>peakAmpsEndDateTime</b> <i>optional</i>	Example : "string"	string
<b>peakAmpsStartDateTime</b> <i>optional</i>	Example : "string"	string
<b>powerCap</b> <i>optional</i>	Example : "string"	string
<b>probeName</b> <i>optional</i>	Example : "string"	string

Name	Description	Schema
<b>profile</b> <i>optional</i>	Example : "string"	string
<b>systemInstantaneousHeadroom</b> <i>optional</i>	Example : "string"	string
<b>systemPeakAmps</b> <i>optional</i>	Example : "string"	string
<b>systemPeakHeadroom</b> <i>optional</i>	Example : "string"	string
<b>systemPeakPower</b> <i>optional</i>	Example : "string"	string
<b>systemPeakPowerEndTime</b> <i>optional</i>	Example : "string"	string
<b>systemPeakPowerStartTime</b> <i>optional</i>	Example : "string"	string
<b>warningThreshold</b> <i>optional</i>	Example : "string"	string

### 3.4. JobStatus

Name	Description	Schema
<b>description</b> <i>optional</i>	Example : "string"	string
<b>jobId</b> <i>optional</i>	Example : "string"	string
<b>message</b> <i>optional</i>	Example : "string"	string
<b>serverAddress</b> <i>optional</i>	Example : "string"	string
<b>status</b> <i>optional</i>	Example : "string"	string

### 3.5. SetPowerThermalAggRequest

Name	Description	Schema
<b>enableCapping</b> <i>optional</i>	Example : <code>true</code>	boolean
<b>powerCap</b> <i>optional</i>	Example : <code>0</code>	integer (int32)
<b>servers</b> <i>optional</i>	Example : <code>[ "BasePowerThermalRequest" ]</code>	< BasePowerThermalRequest > array

## 3.6. SetPowerThermalRequest

Name	Description	Schema
<b>enableCapping</b> <i>optional</i>	Example : <code>true</code>	boolean
<b>password</b> <i>optional</i>	Example : <code>"string"</code>	string
<b>powerCap</b> <i>optional</i>	Example : <code>0</code>	integer (int32)
<b>serverAddress</b> <i>optional</i>	Example : <code>"string"</code>	string
<b>userName</b> <i>optional</i>	Example : <code>"string"</code>	string

## 3.7. Version

Name	Description	Schema
<b>description</b> <i>optional</i>	Example : <code>"string"</code>	string
<b>name</b> <i>optional</i>	Example : <code>"string"</code>	string
<b>version</b> <i>optional</i>	Example : <code>"string"</code>	string