EcoStruxure

Power Advisor

Data Quality Report - Summary

Power Advisor Demo
Analysis Period: 2020-02-29 to 2020-03-06

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Site Information
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Report overview

Introduction

This report identifies data quality issues in your power management system. These issues can affect the performance of the power management system and your ability to manage and correctly assess the state of your electrical distribution network.

The information in the report is intended for qualified personnel who are responsible for configuring and maintaining your power management system. Use this information to correct the issues and improve the data collected by the system.

The report contains high level summary information on the issues found, including an overall assessment score for the data quality health of the system.

For detailed information on the issue types and for measurement level details, see the full Power Advisor Data Quality Report.

Note

The findings in this report are based on a Power Advisor analysis of your power management system data for the analysis period. The report was prepared by one of our power system experts as a part of your Power Advisor Digital Service Plan.

Introduction

This section provides high level summary information on the issues found by Power Advisor. It includes an overview of the type and priority of the issues and their overall impact on the power management system health.

This section contains the following topics:

Overall score

This topic shows an overall assessment score for the data quality health of the system.

Identified issues

This topic lists the data quality issues found in the system and their individual impact on the overall assessment score.

Tests passed without issues

This topic shows the Power Advisor tests your power management system has passed without any identified issues.

Analysis insights

Overall score

The overall score is an assessment of the data quality health of your power management system. The score is a number between 100 % and 0 %. A system with few identified issues has a higher score; a system with many identified issues has a lower score. A perfect system score would be 100 %.

To determine the data quality health score, Power Advisor runs a number of tests on the power management system data. A failed test indicates a possible system issue and leads to a reduction of the overall score. The impact of a failed test on the score depends on the type of test, the type and size of load affected, and other weighting factors.

You can think of the overall score as a snapshot of the data quality health of your power management system based on the system status and the electrical network conditions during the analysis period.

Note

The median score shown in the following chart is calculated across all power management systems that have been analyzed by Power Advisor. It is shown as a benchmark to help you compare your overall score to that of other systems.

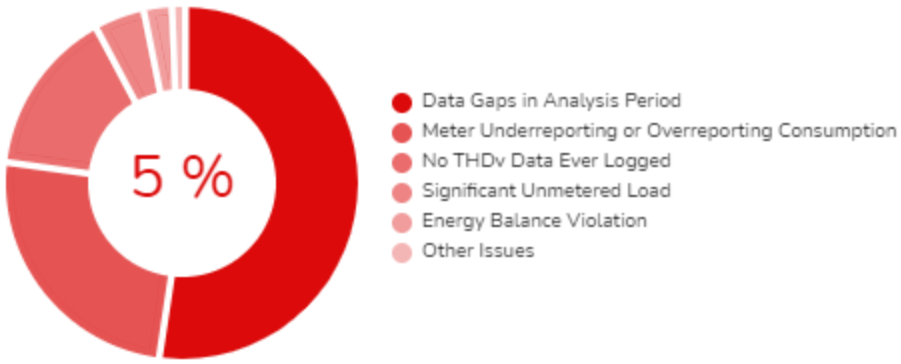
Overall score (continued)

The chart below shows your overall score compared to the median score of all other systems:

95 %

Your overall score: **95 % - good**
Median score of all other systems: **82 % - fair**

The chart below shows a breakdown of the issues that had the biggest negative impact on the overall score:



Analysis insights

Identified issues

To determine the data quality health, Power Advisor runs a number of tests on the power management system data. A failed test indicates a possible issue with the data, the device that collected the data, or the electrical network that is being monitored.

The following table shows the possible issues identified for your system. The table is sorted by impact of the issue on the overall score, with the highest impact issue at the top.

Note

High priority issues can have a high impact on the system for each affected device. We recommend that you review and investigate these issues, even if the impact on the overall data quality score is low.

Impact	Issue Description
2.64 %	Data Gaps in Analysis Period More than 10% of the expected device data for the analysis period is missing. Device affected: 1
1.25 %	Meter Underreporting or Overreporting Consumption High priority The energy measurements are not in the range expected from the parent device data. Device affected: 11
0.76 %	No THDv Data Ever Logged No voltage THD (THDv) data is available for the device. Device affected: 5
0.23 %	Significant Unmetered Load High priority More than 20 % of the energy flow measured by the device is unaccounted for by its child devices. This is based on the placement of parent and child devices in the Hierarchy. Device affected: 2
0.13 %	Energy Balance Violation The power demand measured by the child devices in the Hierarchy is greater than that measured by the parent. Device affected: 1
0.02 %	Meter Detection Threshold Too High Measurement values are either zero or above a certain threshold. Based on the available data, low range values between zero and the threshold level are expected to be present. Device affected: 1
0.01 %	Conflicting Communication Settings Two or more devices have identical IP address and Unit ID settings in the power management system. Device affected: 2

Analysis insights

Identified issues (continued)

Impact	Issue Description
< 0.01 %	All Zero Values The device consistently logged zero values for the Active Power measurement. Device affected: 1
< 0.01 %	Invalid Data Range Some of the measurement values fall outside of the allowable range for this measurement. Device affected: 1
< 0.01 %	No Communication Ever The device has never communicated with the power management system. No information is available for the device. Device affected: 1
< 0.01 %	No Power or Energy Data Ever Logged No Active Power or Active Energy data is available for the device. Device affected: 2
< 0.01 %	No Power or Energy Data Logged in Analysis Period No Active Power or Active Energy data is available for the device for the analysis period. Device affected: 1
< 0.01 %	No THDv Data Logged in Analysis Period No voltage THD (THDv) data is available for the device for the analysis period. Device affected: 1
< 0.01 %	No Voltage Data Ever Logged No voltage data is available for the device. Device affected: 2
< 0.01 %	No Voltage Data Logged in Analysis Period No voltage data is available for the device for the analysis period. Device affected: 1

Analysis insights

Tests passed without issues

To determine the data quality health, Power Advisor runs a number of tests on the power management system data. The following table shows the tests your system has passed without finding any issues. The table is sorted alphabetically by test description.

This information is provided to give you an understanding of the entire test scope; no follow up actions are required for these tests.

	Test Description
✓	Data Spike The data logged includes values that are unexpected and are considered outliers. Power Advisor replaced these outliers with estimated values to run the analysis. The original data in the power management system has not been changed.
✓	High Speed Logging Some of the data is being logged at intervals of less than or equal to one minute.
✓	Incorrect Device Type The device type configuration in the power management system does not match the detected type of the device.
✓	Irregular Device Logging Periods The data logging intervals for the measurement values are not consistent.
✓	Mismatched consumption measurements The parent device and the child device do not measure the same consumption measurement.
✓	Mismatched logging intervals The parent device and the child devices do not log data at the same logging intervals.
✓	Negative Values Present Some or all of the measurement values logged are negative.
✓	Single Phase Installation The phase voltage measurements are not consistent with a three phase load. The measurements suggest a single phase load.
✓	Unchanging Value All the values logged for the measurement for the analysis period are the same.

Disclaimer

The recommendations in this report are based on the information available to Power Advisor and may not consider other information that may be relevant to your situation. Please contact your Schneider Electric sales representative for a comprehensive evaluation.

Before you make any changes to the power monitoring system, make sure you have the proper training and follow all safety precautions.

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