



1.0 Executive Summary

Schneider Electric Critical Power and Cooling Services (CPCS) Advantage Max service option for your Advantage Plan provides a Data Center Health Check and an Asset Capacity Trending during the agreement year.

Table of Contents

- 1.0 Executive Summary
- 2.0 Features & Benefits
- 3.0 Details of Service
- 4.0 Assumptions
- 5.0 Scope of Responsibility
- 6.0 Project Work Details
- 7.0 Terms & Conditions

1.1 ANNUAL DATA CENTER HEALTH CHECK

The Annual Data Center Health Check consists of two components, an Asset Management Plan and an IT Room Audit. The Data Center Health Check provides a proactive asset maintenance planning guide along with a site-level assessment of IT room reliability, capacity, and efficiency with best-practice optimization advice. A detailed report will be provided upon completion of the visit.

Asset Management Plan

Schneider Electric CPCS will provide a comprehensive maintenance plan overview at the site-level for assets covered by a Schneider Electric maintenance contract. This overview allows the customer to understand, budget for, and schedule future planned maintenance activity and consumable parts replacements.

IT Room Audit

Schneider Electric CPCS will deliver a graphical site report documenting potential risks and providing clear ranking, benchmark, and dedicated recommendations regarding the data center's uptime, capacity, and efficiency. This comprehensive report looks at Power Supply, Physical Layout, Rack, Air Conditioning, and Air Distribution Management, providing detailed information and recommendations for each.

1.2 ASSET CAPACITY TRENDING

Schneider Electric CPCS will provide you with the data you need to maximize the performance of your data center at the asset-level, and to plan for future expansion and maintenance needs. The Asset Capacity Trending report includes a system capacity snapshot, year-over-year capacity trending as well as asset management tools detailing the recommended part replacement lifecycle of your equipment.

2.0 Features & Benefits

Features	Benefits
Data Center Health Check	Maximize data center/IT Room uptime and performance while reducing operations cost through power, cooling, air flow, room layout and rack management assessment, along with proactive asset maintenance planning.
Asset Capacity Trending	Detailed view of system capacity utilization rates, creating a clear picture of the existing capacity usage and planning for future capacity demand to proactively manage the lifecycle and replacement schedule of key equipment components.

3.0 Details of Service

3.1 ANNUAL DATA CENTER HEALTH CHECK DELIVERABLES

The Annual Data Center Health Check provides Schneider Electric CPCS certified service personnel at the customer's location on a pre-determined scheduled date. The following tables list the details of the service tasks provided with this visit.

Activities	Descriptions
Provide a comprehensive maintenance plan	Schneider Electric CPCS will provide a comprehensive maintenance planning table for assets covered by a Schneider Electric maintenance contract. This allows the customer to understand, budget for, and schedule future planned maintenance activity and consumable parts replacements including batteries, power supply, fans, and capacitors.
Perform a ranking and provide a clear benchmark on the 5 key domains of Data Center Management	Schneider Electric CPCS will provide a critical infrastructure overview of the five key domains of Data Center (power supply, room layout, rack, air conditioning and air distribution). This global and unique ranking illustrates the current situation and provides a clear benchmark situation against risk on uptime, poor efficiency, and the best balance between them.
Perform a detailed air management analysis based on a 3D model of your room(s)	Schneider Electric CPCS will provide a 3D model of each data center with a detailed air management analysis which allows customers to visualize the cooling effects on their critical infrastructure for easy identification of overcooling and hotspot problems.
Provide a Power Supply, Physical, Rack, Air Conditioning, and Air Distribution Management Summary	Schneider Electric CPCS offers a general description, performance metrics, and clear recommendations on: <ul style="list-style-type: none"> • Power uptime and UPS redundancy; • Room layout, room space usage, and security considerations; • Rack space usage and air inlet climatic conditions (Data Center Temperature Index); • Cooling typology, latent and sensible cooling load; • Air mixing (Air Ratio Index) and best practices implementation (9 checks).
Deliver Documentation	Schneider Electric CPCS will deliver, and review with the customer, a graphical site report documenting potential risks and providing clear ranking, benchmark, and dedicated recommendations regarding the Data Center(s) uptime, capacity, and efficiency.
Visual Inspection	<ul style="list-style-type: none"> • Perform a visual inspection of the data center, checking for existing condition, improper installation practices, damaged equipment, and note any deviations from industry best practices that compromise the operation of the data center.
3D Floor layout model	<ul style="list-style-type: none"> • Document (create the first year or update in subsequent years) a floor plan of the existing data center. • Add or update all components like row, rack, UPS, cooling unit, power distribution unit, switchgear, etc. • Document the identification, manufacturer, type, model, and nameplate capacity data of each component.
Power Supply Management	<ul style="list-style-type: none"> • Identify redundancy of power distribution system. • With displayed data or based on maintenance report, collect and record the UPS(s) downstream voltage, current, power factor, power feed and level of redundancy.

Data Collection and Analysis	
Activities	Description
Power Supply Management	<ul style="list-style-type: none"> Identify redundancy of power distribution system. With displayed data or based on maintenance report, collect and record the UPS(s) downstream voltage, current, power factor, power feed and level of redundancy.
Physical Room Management	<ul style="list-style-type: none"> Check and report the implementation of recommendations regarding access floor, circulation and pathways, row of racks typology, and air distribution typology Check and report recommended approach regarding access control system, intrusion alarm system, fire detection system, fire suppression system and other sensors related to safety and security.
Rack Management	<ul style="list-style-type: none"> Measure and record average rack inlet and outlet temperatures using an IR thermometer, inlet humidity ratio, size (U) and free space. Examine each rack enclosure for airflow suitability. Identify where air mixing is likely to occur and where blanking panels and side panels should be installed.
Cooling Management	<ul style="list-style-type: none"> Measure and report, average cooling unit(s) supply and return temperature and humidity ratio using a data logger during a significant period. Check and report the temperature and humidity ratio set point. Check and report the perforated tiles size and location.

Schneider Electric will provide the following documentation and support after the conclusion of the on-site data collection.

- A customized assessment report with general recommendations to improve power, cooling, utilization, and availability as specified in Section 3.
- Identification of inefficient systems, equipment, and operations within the data center.
- Identification of potential risks to Data Center Management that may compromise the uptime, capacity, and efficiency.

3.2 ASSET CAPACITY TRENDING DELIVERABLES

Schneider Electric CPCS's Asset Capacity Trending provides the customer with a system capacity snapshot, year-over-year capacity trending as well as asset management tools detailing the recommended part replacement lifecycle of equipment on site.

Activities	Descriptions
Perform Overall Capacity Reading	Schneider Electric CPCS will provide a snapshot of the current UPS and/or Cooling capacity. This will detail the maximum capacity of the UPS and/or Cooling, current capacity available, and percentage of the current capacity being used.
Perform Capacity Trend Reading	Schneider Electric CPCS will provide a year-over-year capacity analysis.
Provide Asset Management Summary	Schneider Electric CPCS offers a snapshot of where the UPS and/or Cooling consumables fall within their defined lifecycles.
Perform Capacity Phase Balance Reading	Schneider Electric CPCS will provide a detailed view of how the current UPS load is distributed between the three power phases.
Perform Power Module Reading	Schneider Electric CPCS will provide a detailed view of where each power module falls within its defined lifecycle.

Activities	Descriptions
Perform Battery Module Reading	Schneider Electric CPCS will provide a detailed view of where each battery module falls within its defined lifecycle.
Perform Fan Reading	Schneider Electric CPCS will provide a detailed view of where each fan module falls within its defined lifecycle.
Perform Compressor Reading* <small>*Except in chilled water units</small>	When applicable, Schneider Electric CPCS will provide a detailed view of where the compressor falls within its defined lifecycle.
Perform Pump Reading	Schneider Electric CPCS will provide a detailed view of where the pump falls within its defined lifecycle.
Deliver Documentation	Schneider Electric CPCS will deliver graphical reports documenting UPS and/or Cooling capacity and asset status. Schneider Electric CPCS will recommend any additional service activities as required resulting from the Asset Capacity Trending activities listed above.

4.0 Assumptions

The successful performance of the tasks defined in this Statement of Work is based on the following key assumptions, which are agreed to by Schneider Electric CPCS.

- All services performed on-site by Schneider Electric CPCS will be executed during CPCS business hours unless otherwise requested by the customer.
- All services are performed on-site by certified Schneider Electric CPCS service personnel.
- The UPS and Cooling system must be kept in an environment that adheres to manufacturer specifications.
- Hours of Operation for Technical Support are Country specific and include either 7X24 or business hours coverage.
- Geographical restrictions may apply. Please verify the service coverage and response time for your location with your local APC by Schneider Electric office.
- Some aspects of the service definition presented in this document may vary by location. In the case of a conflict between the service definitions contained on this Statement of Work and the local service definitions the local service definitions will prevail. For more information, please refer to your Certified APC sales representative.
- The Advantage Max service must be purchased in conjunction with Advantage Plus, Prime, or Ultra for fulfillment of the services detailed in this Statement of Work.
- Advantage Max is designed for rooms with a typical configuration of 1-4 centralized UPSs, 2-10 Cooling units, and 10-100 racks in a 50 to 500 square meter (500 to 5000 square feet) white space area.
- Asset Maintenance Plan and Asset Capacity Trending services not available for all systems, please consult your Schneider Electric CPCS representative for availability.

The following items are not included in the scope of this service:

- Support for third party equipment.

The following items are not included in the scope of this service but are available as part of the Schneider Electric comprehensive suite of data center assessment services:

- Assessment of infrastructure components outside of the IT space like the main power distribution system, mechanical plant cooling system, generators, etc.
- Detailed component level assessment of the infrastructure equipment within the IT space.
- Power Usage Effectiveness (PUE) measurement of data center electrical efficiency.
- Safety and reliability of the power infrastructure system.

5.0 Scope of Responsibility

The items stated here are responsibilities of both Schneider Electric CPCS and the customer.

5.1 SCHNEIDER ELECTRIC CPCS RESPONSIBILITIES

- Schedule and coordinate the site visit.
- Meet the customer's service schedule date.
- Assign a qualified service engineer for the assessment
- The Schneider Electric service engineer will bring all the equipment and tools necessary to perform the on-site data collection.
- Perform all of the service activities in Section 3 of this Statement of Work.
- Submit Site Report and Maintenance Forms to the customer.
- Ensure all action items are completed.
- Inform and provide recommendations to the customer about any action items not included in the SOW (statement of work).

5.2 CUSTOMER RESPONSIBILITIES

- Provide dates and times when the scheduled work can be performed.
- Facilitate site access for Schneider Electric CPCS service personnel.
- Notify Schneider Electric CPCS personnel of any security clearance requirements in advance of arrival.
- Notify Schneider Electric CPCS personnel of any safety training and safety equipment requirements.
- Provide an on-site point of contact
- Provide qualified personnel to escort the service engineer in the data center, if required.
- Inform Schneider Electric if photography is prohibited in the data center.
- Ensure safety plan is in place prior to intervention.
- Sign the completed Maintenance forms after the intervention.

6.0 Project Work Details

The information stated here are the details of the project performed by Schneider Electric CPCS for the customer with specifications on date, time, and place.

6.1 SCHEDULE

1. Actual set dates will be discussed and approved between Schneider Electric CPCS and the customer.
2. All on-site services performed by Schneider Electric are executed during the normal business hours. Exceptions are national or provincial holidays. Services performed outside of normal working hours may incur additional charges.

6.2 LOCATION

The location of this project will be on-site. It will be discussed and approved by Schneider Electric CPCS and the customer.

6.3 COMPLETION CRITERIA

Schneider Electric CPCS is expected to have finished its written duties when any of the following occurs:

1. Schneider Electric CPCS completes all the tasks described in Section 3 of this SOW.
2. This project and SOW are terminated for other reasons, within the Schneider Electric CPCS Customer Agreement. Termination fees may apply.

7.0 Terms and Conditions

Schneider Electric standard Terms and Conditions apply.

The information provided in this Scope of Work cannot be used or duplicated, in full or in part. Other uses for this document are prohibited without written consent by Schneider Electric. All documentation, photographs, imaging or other information provided by the customer, or gathered at the customer site, will be for internal use only and used solely for the purpose of report generation, analysis and recommendations. All services' conditions included in this document apply (i) only between Schneider Electric and that organization that bought the Services Solutions; and (ii) only to those products and services ordered by the Customer at the time that the Schneider Electric Services information is current. Schneider Electric may change the Schneider Electric Services Information at any time. The Customer will be notified of any change in the Schneider Electric Services Information in the manner stated in the then current product ordering and/or services solutions related agreement between Schneider Electric and the Customer, but any such change shall not apply to products or service ordered by the Customer prior to the date of such change. Schneider Electric will have no obligations to provide Services Solutions with respect to equipment and assets that are outside the Service Area. "Schneider Electric Service Area" means a location that is within (i) one hundred (100) miles or one hundred and sixty (160) kilometers radius of a Schneider Electric service location; and (ii) the country in which the Installation site is located, unless otherwise defined in the governing agreement with Schneider Electric, in which case the definition in the governing agreement prevails. If for any reason, Schneider Electric determines that it is unable to repair the covered unit, Schneider electric will offer a pro-rated refund of the service contract. Please refer to Schneider Electric standard terms and conditions. Products or services obtained from any Schneider Electric partner or reseller are governed solely by the agreement between the purchaser and the reseller. That agreement may provide terms that are the same as the Schneider Electric Services Solutions on this document. Please contact the reseller or the local Schneider Electric sales representative for additional information on Schneider Electric Services Solutions on Products obtained from a reseller.

© 2018 Schneider Electric. All rights reserved. All Schneider trademarks are property of Schneider Electric and its subsidiaries and affiliates. Other trademarks are property of their respective owners. Specifications are subject to change without notice. Disclaimer: This information is reliable at the point of creation and may be subject to change.