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## 1.0 Executive Summary

Schneider Electric service commissioning service provides an unbiased evaluation of whether a newly constructed data center meets the intended design specifications and intent. Commissioning is the process that reviews and tests the data center's critical physical infrastructure design as a holistic system in order to assure the highest level of reliability.

Proper execution of the commissioning process is a critical step in determining how the data center operates as an integrated system. Customized commissioning of all critical physical infrastructure components assures maximum data center performance

A commissioning report verifies that the entire system is operating as designed. The documentation produced because of commissioning is the single most enduring value-added deliverable in a data center's operational life.

Schneider Electric service will work with you and your commissioning agent to successfully execute the commissioning process and to make sure that our products work seamlessly with the other data center components, and help to prevent disruptive downtime. The Schneider Electric Commissioning service provides a remotely manageable, fully integrated APC or MGE solution that communicates seamlessly with various third party tools.

## 2.0 Features & Benefits

Features	Benefits
Comprehensive reporting	Highlights the specific system components tested, the tests performed, how the tests passed or failed, and how that affects other components.
Trends reporting	Summarizes identifiable system performance trends, issues that were encountered and resolved, and issues that remain open for future action.
Customized power tests and checklists	Provides the opportunity for customized hands-on training and in-depth understanding of various management tools.
Set points / thresholds	Verifies the discussion of all set points/ thresholds with the customer and document the agreed-upon values.
Updated commissioning practices	Employs updated testing procedures consistent with the technology generation of the commissioned equipment.
System component testing	Deploy tools that allow for genuine holistic testing and monitoring of the data center network critical physical infrastructure.

## 3.0 Details of Service

The specific activities of this service are listed below. Schneider Electric service will perform the work described as it relates to the APC or MGE system solution in its entirety, based on testing scripts and stated specifications.

<b>Commissioning Process</b>	
Activities	Description
<b>Planning</b>	Schneider Electric service will provide qualified individuals to meet regularly several weeks before commissioning to inform stakeholders how the commissioning schedule will be organized and identify responsibilities.
<b>Identify Weak Links</b>	Schneider Electric service will create a checklist of anticipated functionality inputs and outputs, derived for each critical component listed in the test schedule.
	Schneider Electric service will identify weak links throughout the commissioning process.
<b>Commissioning Script Validation</b>	On request, Schneider Electric service will create a comprehensive test script prior to the integrated testing of equipment.
	Schneider Electric service will rehearse the script prior to commissioning with team members to make sure all procedures are understood.
<b>Investment</b>	Schneider Electric service will identify and determine the details of commissioning to be performed, depending on the business expectation of cost and need.
<b>Command Center Set-up</b>	Schneider Electric service will execute the testing activities as related to the equipment, based on the directives of the commissioning agent.
	Schneider Electric service will coordinate the actions of third-party vendors that supplied or sold the equipment to the customer.
<b>Emergency Operational Procedures Published</b>	Schneider Electric service will verify the emergency operational procedures during the commissioning process so that future data center operators are informed and aware.
	Schneider Electric service will generate the final commissioning report.

<b>Integrated System Testing</b>	
Activities	Description
<b>Power</b>	Schneider Electric service will verify that all settings & power system operability is correct.
<b>Cooling</b>	Schneider Electric service will verify that cooling components are correct and works with the other network critical physical infrastructure.
<b>Monitoring and Management Systems</b>	Schneider Electric service will verify the building management and energy management monitoring and control systems.
<b>Physical Security Systems</b>	Schneider Electric service will verify the functionality of the central security station site video monitoring, physical security devices, and central sound system as it relates to equipment.
<b>High Density Commissioning</b>	Schneider Electric service will verify the functionality of the power and cooling systems simultaneously, allowing end-to-end reliability.

## 4.0 Deliverables

Project deliverables include a commissioning report that encompasses these aspects:

- “As Built” Script Report – highlighting the specific system components tested, the tests performed, and an account of how each component passed or failed the test.
- Component Error Log Report – detailing the specific system components that failed and what corrective actions were taken, or what recommendations are needed to resolve the deficiencies.
- Trending Report – summarizing identifiable system performance trends, issues that were encountered and resolved, and issues that remain open for future action.

The commissioning documents should be placed into the data center’s library of procedures and practices, not in the possession of one or two individuals who may leave the company.

## 5.0 Assumptions

The successful performance of the activities defined is based on the following key assumptions:

- The equipment will have gone through initial start-up, and all systems have full power and functionality.
- Everything is in the final stage of design and functionality.

The following items are outside the scope of this standard service offering. They can be integrated into a customized Statement of Work (SOW) at your request. Please contact your certified service sales representative for more details.

- Site Coordination
- Start-up
- Project Management
- Commissioning Agent
- Commission third-party systems unassociated with the solution

## 6.0 Scope of Responsibility

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

### 6.1 SCHNEIDER ELECTRIC SERVICE RESPONSIBILITIES

- Schedule certified personnel to perform service
- Coordinate key stakeholders

### CREATE A COMPREHENSIVE TEST SCRIPT

- Create a comprehensive test script prior to the integrated testing of APC and MGE equipment
- Perform the commissioning test and report to the commissioning agent
- Document and correct or rectify any discrepancies
- Provide a customized commissioning output report, detailing the as-built power, cooling, facility and rack configuration of the data center with recommendations for data center critical loads

### 6.2 CUSTOMER RESPONSIBILITIES

- Develop an “Owner Team” with representatives from the IT department, facilities, operations, and key business units
- Verify that installation prerequisites have been identified
- Verify that all system requirements have been met
- Provide data center design parameters
- Provide time for preliminary testing
- Provide specifications for what will be commissioned, if available, prior to testing

## 7.0 Project Work Details

The following details of the project specify the schedule, location and successful completion criteria.

### 7.1 SCHEDULE

Actual set dates will be discussed and approved between Schneider Electric service and the customer.

### 7.2 LOCATION

The commissioning service will be performed on-site.

### 7.3 COMPLETION CRITERIA

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

1. Schneider Electric completes all the tasks described.
2. This project and SOW are terminated for other reasons, within the Schneider Electric Service Customer Agreement.

## 8.0 Pricing

Pricing for Customized Commissioning (QWTEST-MISC) varies, depending on the size of the data center, the number of vendors associated with the commissioning, and the complexity of the system. Contact your service sales representative for a quote.

## 9.0 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.

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