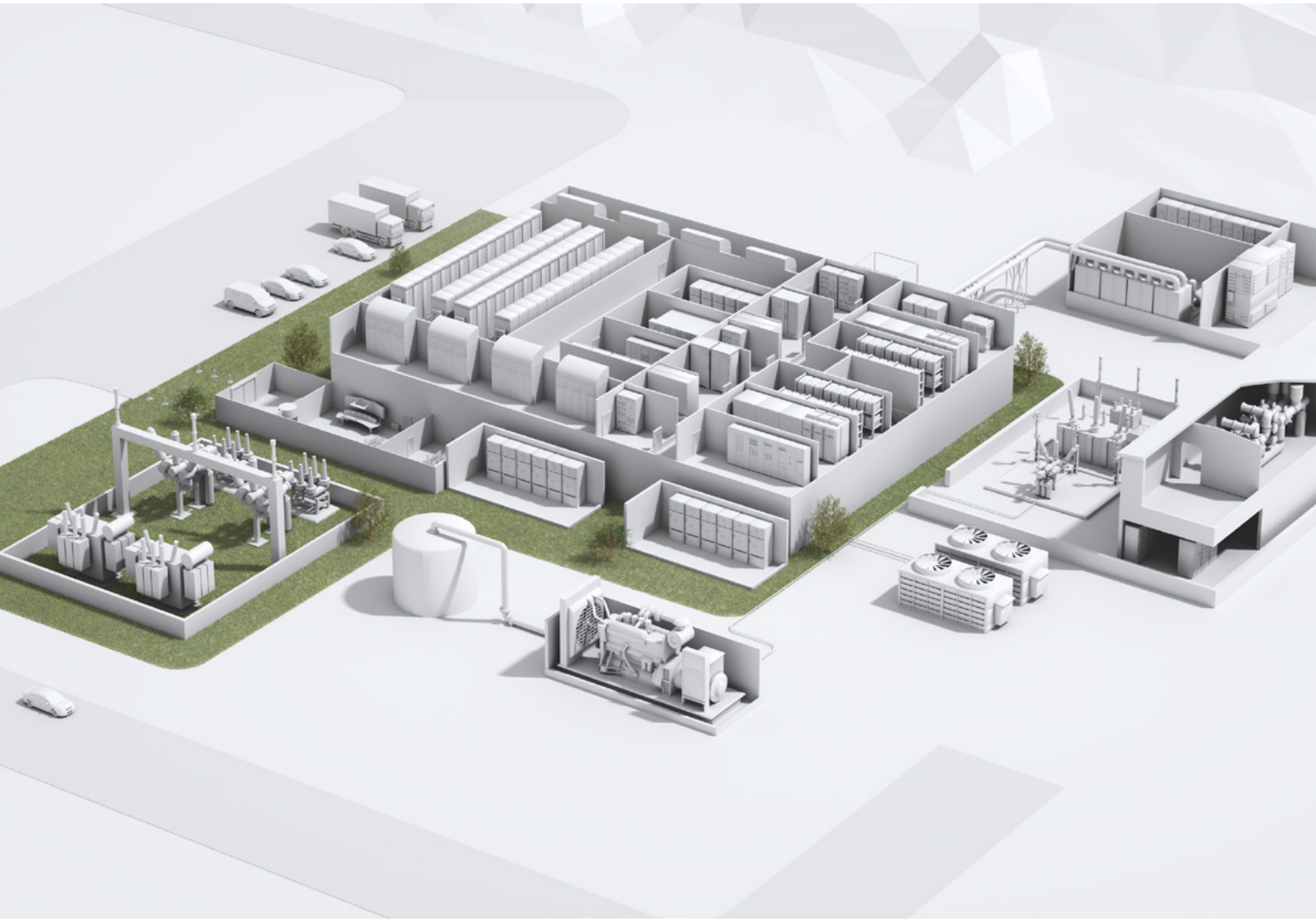

ABB Ability™ Data Center Automation Analytics

Information Management and History Recording

- High performance
- Reliabity
- Maintenance-free operation

ABB Ability™ Data Center Automation Analytics, based on ABB Ability™ History, has been designed and optimized for information management and extensive history recording in Data Center Automation.

High performance, and reliability, together with maintenance-free operation provide a solid platform to connect & collect from data center operations such as EPMS/BMS/CMS/ and support for AI/ML developments.

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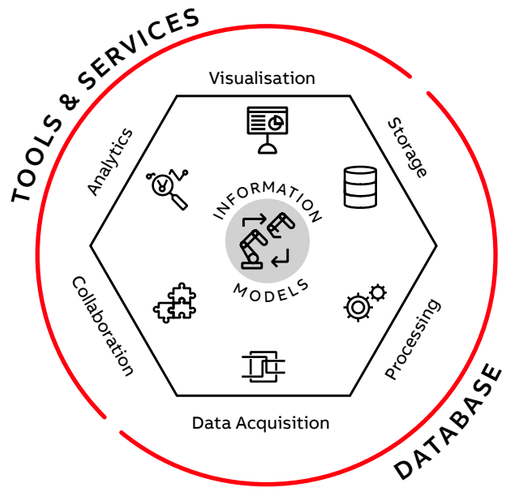
Information Management and History Recording

ABB Ability™ Data Center Automation Analytics, also known as DCA Analytics, is an integrated software technology built on platform pillars such as Time Series Database (TSDB), Visualization, Dashboards, and Equipment Modeling with robust software architecture.

In today's digital age, data centers play a pivotal role in storing and managing vast amounts of information essential for the seamless operation of businesses and organizations worldwide. The product has built-in support for data acquisition from third-party data sources such as control systems, devices, and any third-party OPC Alarm and Events server, ensuring seamless storage of real-time and long-term process data. This ensures that data centers can operate at peak efficiency while maintaining the highest standards of security and reliability.

ABB Ability™ Data Center Automation Analytics is a high-performance time series data platform that incorporates tools to implement high-quality applications for Data Center operations and asset management



Equipment Modeling
- The equipment model is a predefined meta information model that makes it easy to model Data Center equipment assets and to organize instances in functional hierarchies
- It brings semantical modeling and describes all the functionalities for data acquisition, data processing, storing, aggregation, presentation, and analytics
- Enable efficient engineering

Platform Pillars
Functionality for Data Center applications
- Time-series Data Base
- Open APIs and development tooling
  Multiple deployment options
- Hierarchical and Networked system architecture topologies
- Multi-platform: Windows, Linux, and Docker

Robust Software architecture
- The ability to collect data accurately and forward securely close to real-time from the data collector node(s) to the Main Node
- High Performance and reliability

Database
- ABB Ability™ Data Center Automation Analytics are built on a time-series database (TSDB) that can store efficiently all various kinds of time series data such as analog and binary-measurements, text strings, blobs, arrays, alarms, and events with attributes.
- The database is the storage for information models, UI dashboards, calculations, and various other types of application and engineering data.

Tools & Services
- Visualization: UI SDK also known as VIEW - is a high-productivity tool to implement mobile and web UIs from simple panel applications to enterprise-level systems with thousands of users. A rich set of widgets can be built in real-time dashboards are included and can be extended with third-party party Widgets.
- Analytics: Calculation tools are used to implement and run large-scale close-to-real-time calculations with time series data. The entire workflow happens on the web browser with intuitive navigation to calculation modules, parameter mapping, and scheduling in a user-friendly manner.
- Collaboration: All the data from engineering up to time series are available for external use and systems integration with industry-standard APIs - OData, OPC UA, ODBC/SQL, .NET, and JavaScript APIs.

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01 Rack
Dashboard

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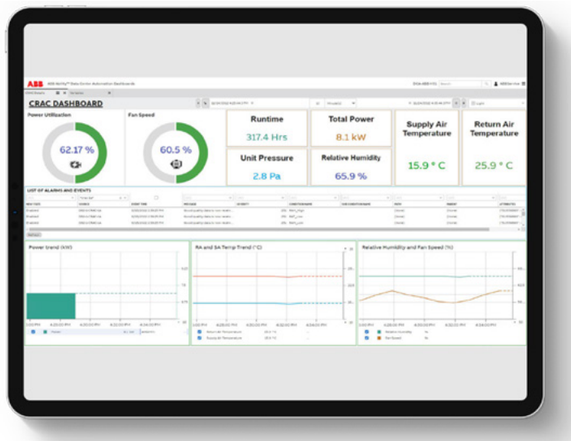
02 CRAC
Dashboard



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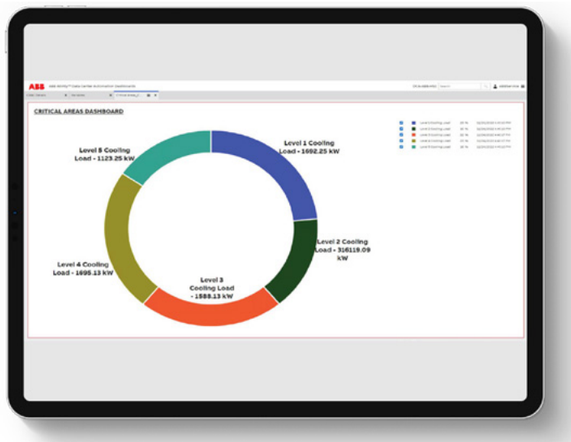
03 Critical
Access
Dashboard



Architecture fundamentals
Data abstraction
- Single API to all data
- Time series aggregation
- NLS, time, and unit conversions
- Multiple data sources – extendable

Security
- Secure transport, RBAC (Role Based Access Control)
- Multiple authentication methods
- Gateway server support

Performance scalability
- Subscriptions – close to real-time
- Hundreds of concurrent users
- Performance accelerators

Extendable
- Third-party party widgets and tools

Flexible and user-friendly dashboard
DCA Dashboard View tool interfaces and enables the creation of user-interactive dashboards. The concept is based on HTML5 and Web socketed technologies and tooling that enable the creation of a desk-top-like user experience in a web browser.

In the editor view, users can create dashboards using the frame on which widgets are placed. Widgets are dynamic, interactive, and often interoperable objects that can be used alone or as a part of a larger collection of visual objects to visualize data in its different forms.

DCA Dashboard View - contains a selection of native widgets ranging from labels and panels todata lists and charts. It is also possible to create custom widgets for more specialized use.

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04 Building
Trends

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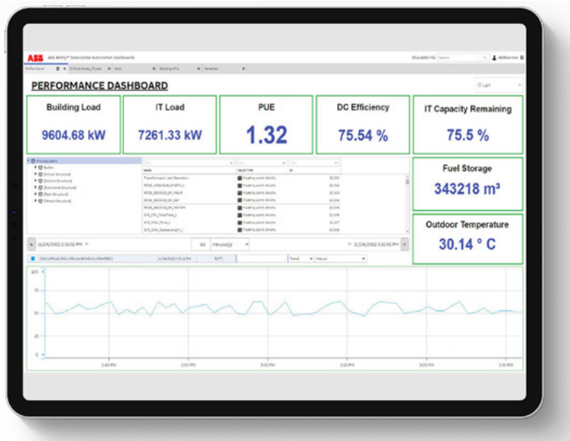
05 Performance
Dashboard
(Light)



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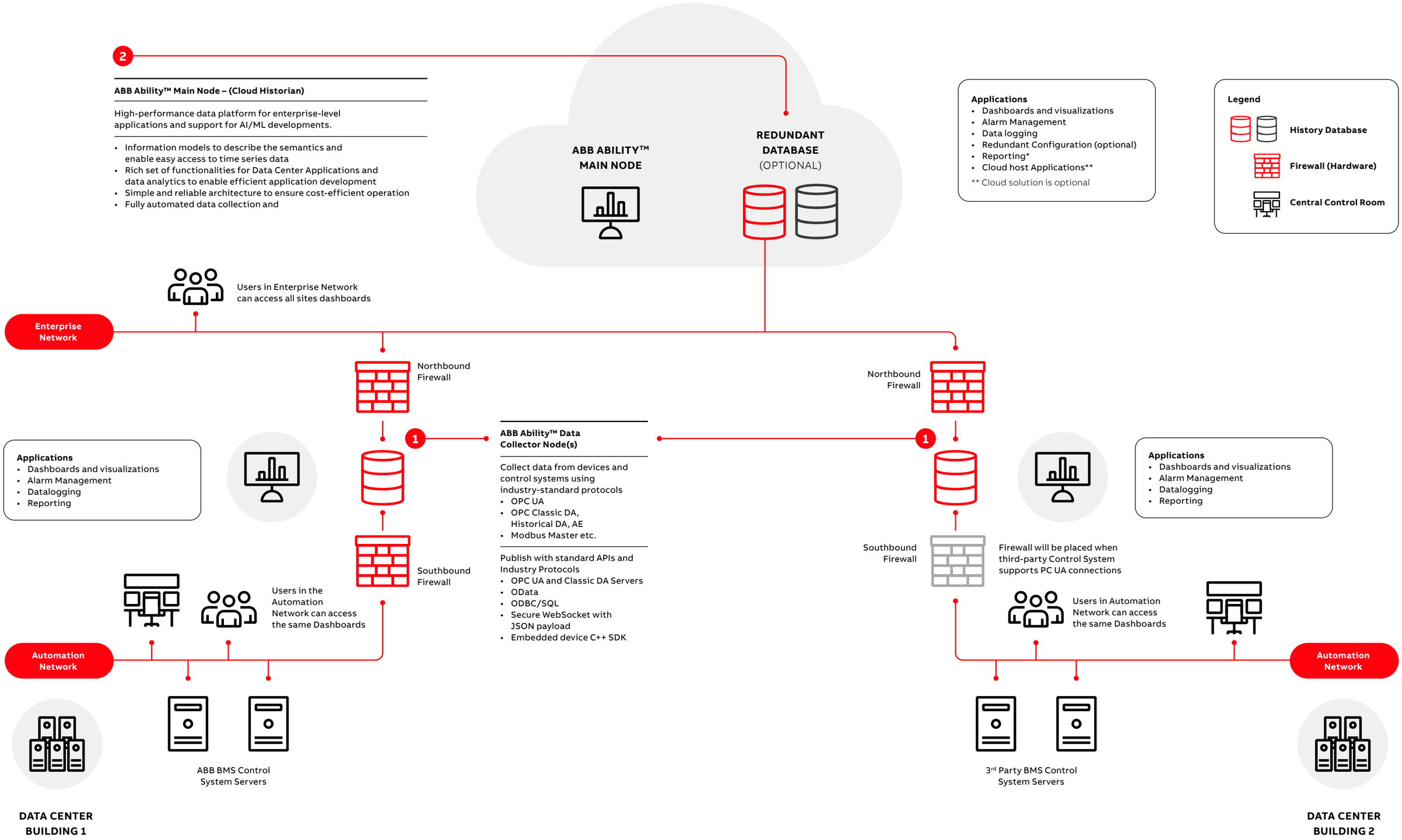
06 Performance
Dashboard
(Dark)

Hierarchical System Architecture



The need for real-time insights in data center infrastructure is paramount in today's digital age. With the increasing complexity and scale of data centers, having immediate access to accurate and actionable data is crucial for maximizing efficiency and ensuring reliability. Real-time insights enable proactive monitoring, swift decision-making, and effective management of resources, which are essential for maintaining optimal performance and preventing downtime. ABB Ability™ Data Center Automation Analytics provides the tools and capabilities necessary to achieve these goals, empowering data centers to meet the growing demands of our information-driven world with confidence and precision.

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solutions.abb/datacenter-automation

CONTACT AN ABB EXPERT

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