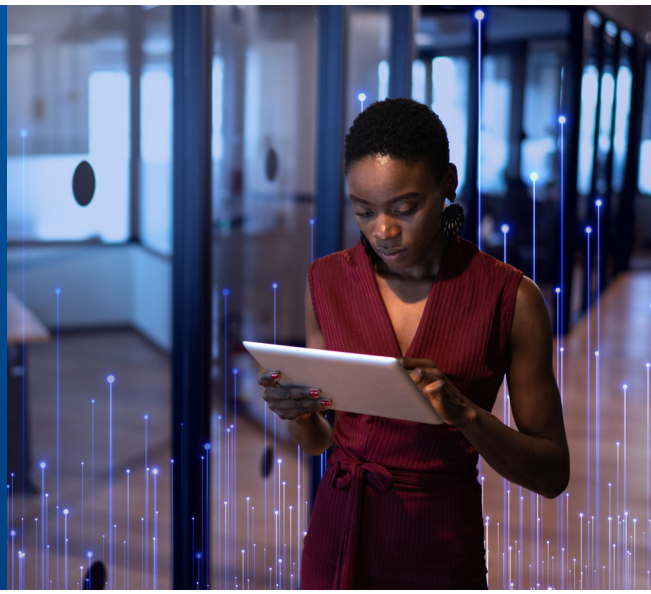
Johnson Controls

OpenBlue Bridge

Cybersecurity Sheet

Achieving next-generation performance through innovative sub-system management



Solution overview

OpenBlue Bridge is an Internet of Things (IoT) connectivity platform designed to connect Operational Technology (OT) and Informational Technology (IT) systems into the OpenBlue Cloud, while managing those connections throughout the device lifecycle.

At Johnson Controls, we harness innovation to create connected solutions that maintain the health of critical equipment such as intelligent edge services, ensuring they last longer and perform better with our best-practice organization-wide strategies.

Analytics at the edge

Data enrichment

Device management

Enables command and control

General cybersecurity features

Security is designed into all Johnson Control products – hardware, software and hosted services. We work with expert partners in government and industry to maintain our customers' regulatory compliance.

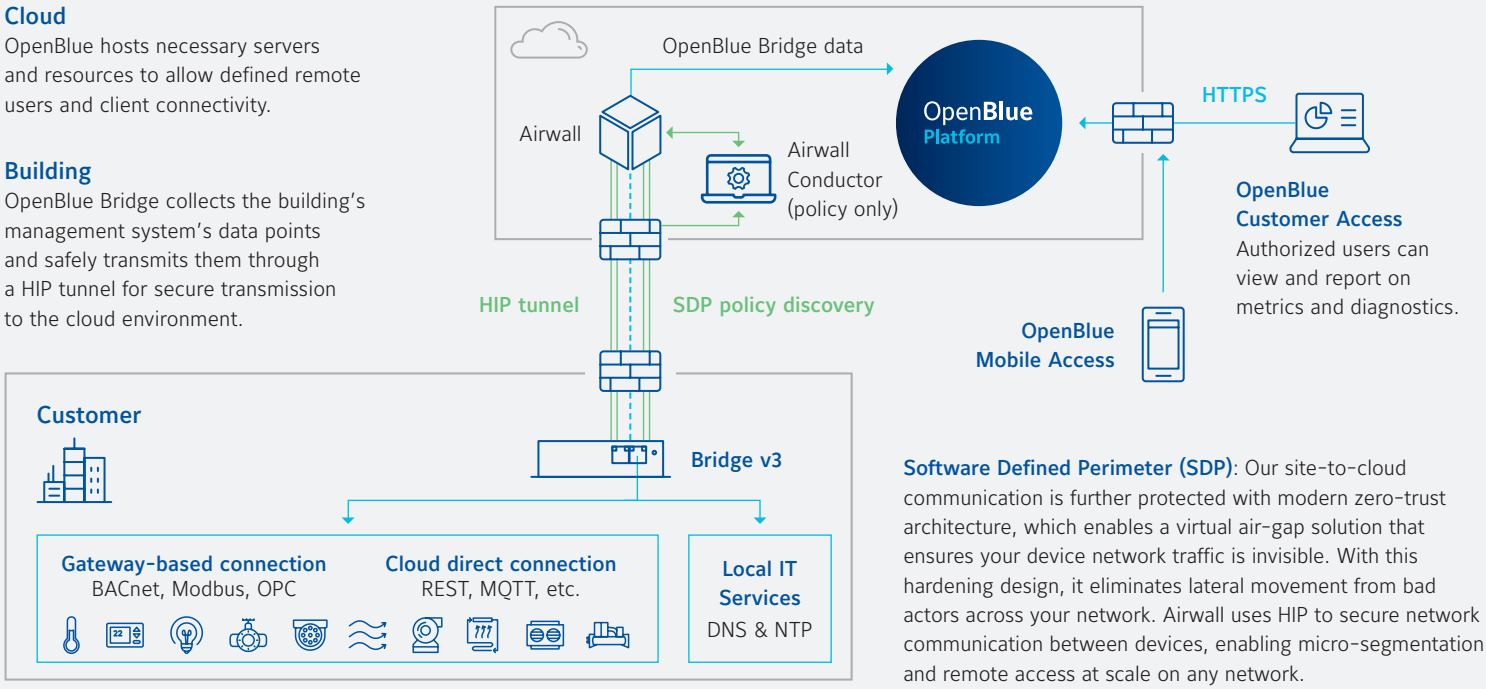
- **Encrypted communications:** building data is sent from site to cloud encapsulated within a Zero-trust Host Identity Protocol (HIP) encrypted tunnel. A second layer of encryption is added by using Transport Layer Security (TLS), which provides additional protection
- **Site-to-cloud communications:** Only two outbound ports are required to initiate site-to-cloud data exchange
- **Zero-trust policy-managed authorizations**: Only defined paths are permitted between OpenBlue Bridge and remote services
- **Forced password change:** Default user account passwords must be changed when commissioning OpenBlue Bridge
- **Remote updates:** When a new version of software is available, the OpenBlue Bridge gateway device periodically reviews and recommends security updates through the embedded secure connection
- **Secure remote management:** Technicians access to protected resources can be scheduled for specific dates and times based on authorizations
- Custom-built Operating System: The OpenBlue Bridge runs on a custom, minimal base image Linux operating system, enhanced with features such as secure boot, AES-256 partition encryption, and a Trusted Execution Environment

Architecture and data flow

Data flow specifics will depend on the components chosen by our customer and how we implement our solution in their facility.

Cloud
OpenBlue hosts necessary servers and resources to allow defined remote users and client connectivity.

Building
OpenBlue Bridge collects the building's management system's data points and safely transmits them through a HIP tunnel for secure transmission to the cloud environment.



Software Defined Perimeter (SDP): Our site-to-cloud communication is further protected with modern zero-trust architecture, which enables a virtual air-gap solution that ensures your device network traffic is invisible. With this hardening design, it eliminates lateral movement from bad actors across your network. Airwall uses HIP to secure network communication between devices, enabling micro-segmentation and remote access at scale on any network.

ISASecure® Security Development Lifecycle Assurance (SDLA) program certified

All Johnson Controls global development locations were found to be in compliance with this security lifecycle development certification conforming with ISA/IEC 62443-4-1 and encompassing all associated brands. This certification reinforces our customer commitment to provide cyber-resilient solutions that follow best-in-class industry practices.

SOC 2 Type 1 report

As part of the Johnson Controls journey to implement best-in-class cybersecurity controls for OpenBlue cloud-hosted products, the first group of OpenBlue products, including OpenBlue Enterprise Manager, OpenBlue Companion, OpenBlue Cloud and OpenBlue Bridge, now have a SOC 2 Type 1 report. This report provides assurance that Johnson Controls meets the standards for securing customer information and transparency in our practices for securely developing and supporting products across their lifecycle.*

Integrate the next-generation smart building with OpenBlue Bridge and discover technology that offers bidirectional edge-to-cloud and cloud-to-edge data communication. Visit **www.johnsoncontrols.com/openblue** today for more information.

*This excludes OpenBlue Services for BAS Optimization applications of OpenBlue Bridge.

Please note that this document is for customer guidance purposes only and is not legal advice. Johnson Controls is not a law firm and does not provide legal advice. While Johnson Controls products and solutions are designed for use in compliance with applicable law, implementation and deployment of Johnson Controls products and solutions should be reviewed by appropriate customer advisors and stakeholders for such compliance.

About OpenBlue
OpenBlue is a complete suite of connected solutions that serves industries from workplaces to schools, hospitals to campuses, and beyond. This platform includes tailored, AI-infused service solutions such as remote diagnostics, predictive maintenance, compliance monitoring, advanced risk assessments, and more. A dynamic new space from Johnson Controls, OpenBlue is how buildings come alive.

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