OneVue™ Technical Overview

Secure, cloud-based workflow, alert, and notification platform built on top of Amazon Web Services (AWS)

Whether you are familiar with OneVue or need more in-depth technical details, learn about key technical details and features. Commonly this information is shared with an organization's IT staff.

Primex is the leading provider of solutions to automate and maintain facility compliance, increase efficiencies, enhance safety and reduce risk for enterprise organizations in the healthcare, education, manufacturing and government vertical markets. Primex delivers solutions that utilize a facility's existing network infrastructure to automate, monitor, document and report essential activities performed by facility staff. Our solutions include synchronized time, automated critical notifications and bell scheduling, and environmental and event monitoring.

Corporate Headquarters

965 Wells Street

Lake Geneva, WI 53147

Phone: 1-262-729-4853

info@primexinc.com

OneVue platform overview

Primex recognizes today's organizations have complex network infrastructures, a division of responsibilities, and standard information security policies associated with data confidentiality, network bandwidth, and security of the systems deployed at their facilities.

This content is intended to provide information to answer the technical questions you or your staff may have regarding the Primex OneVue platform and Primex devices.
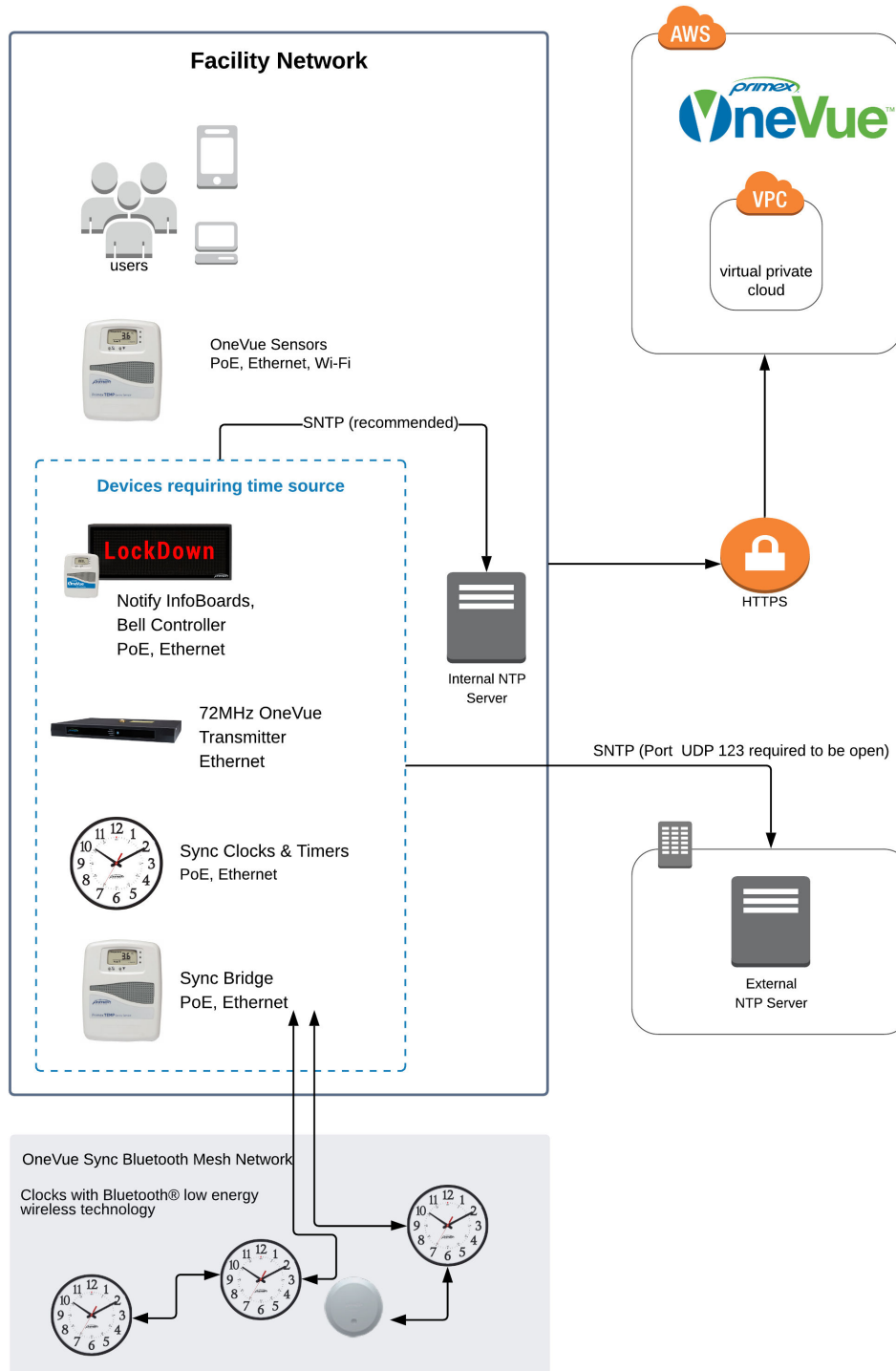
Key technical details

- **Architecture:** OneVue is a multi-tenant solution built on top of Amazon Web Services (AWS). AWS is designed with multiple layers of protection, including secure data transfer, encryption, network configuration, and application-level controls distributed across a scalable, secure infrastructure.
- **Network communication:** Primex devices equipped with Power over Ethernet (PoE), wired Ethernet, or Wi-Fi technology communicate over your facility's network to OneVue by way of the HTTPS communication protocol.
- **NTP Servers:** Primex devices that require an NTP time source can be configured for up to three internal or external NTP Servers. The use of an external NTP server requires port 123 to be open.
- **Network Profiles:** A Network Profile in OneVue represents a network at your facility and each Primex network device is assigned to a network. Once assigned the network settings are downloaded to the Primex device, which allows the device to connect to your facility's network to transmit data to and download settings from OneVue. For OneVue devices that use NTP time, the assigned network also allows their connection to an external NTP time source.
- **Device Preconfiguration:** Automates the configuration of OneVue Sense Sensors, Sync Bluetooth Bridges, and Notify Bell Controllers for use with OneVue before they arrive at your facility - eliminating the need to manually configure a device onsite. Device Preconfiguration is completed after an order is placed with Primex and completed online from your OneVue account. Before the order is shipped from Primex, the order's devices are added to your OneVue account and configured with the settings supplied during preconfiguration, and the devices are labeled.
- **OneVue Wired Device Configurator (OWDC) Android app:** The OneVue app that provides the experience of managing OneVue Sense Sensors, Sync Bluetooth Bridges, Sync PoE Digital Clocks/Timers, and Notify Bell Controllers locally at a device on a mobile platform. The app provides the convenience to add new devices to OneVue (optional method to Device Preconfiguration) and view or edit a device's primary settings. Once you download the app from the Google Play™ store (it's free!), you connect a Primex network device to your Android device and the app guides you through the entire process. It's a simple, easy process that provides onsite configuration.
- **OneVue Device Configurator (ODC) app**: The OneVue app used to configure OneVue Sync Transmitters and Notify InfoBoards during a new system deployment or when adding a new device. Each new device is required to be configured onsite with the ODC app. After deployment, a device's primary settings can be updated from the app. The ODC app is available for both iOS and Android mobile devices. Download the app from the App Store or Google Play™ store (it's free).
- **Primex Device Configuration software:** Standalone software that can be used to configure the network settings of OneVue Sense Sensors, Sync Bluetooth Bridges, Sync PoE Clocks and Timers, and Notify Bell Controllers locally at a device. Required when your facility's network requires EAP-TLS certificates or when your organization's policies do not allow network settings to be stored in third-party applications.
- **Migrating devices to another network:** When the network assigned to a Sense Sensor, Sync Bluetooth Bridge, or Notify Bell Controller is required to be updated or changed, there is a required migration procedure - to ensure the devices do not lose their network connection. There are three options to migrate a device to another network, including directly from OneVue, from the OWDC or ODC app, or the Primex Device Configuration software.
- **Access to network profile settings:** Who has access to view and manage network profiles and device network settings is controlled by the Role assigned to a user.

OneVue device and data communication protocols

- Power over Ethernet (PoE)/Ethernet and Wi-Fi enabled devices connect to OneVue using the Hypertext Transfer Protocol Secure (HTTPS) protocol (port 443); all communication is encrypted and secure at rest and in transit.
- Power over Ethernet (PoE)/Ethernet and Wi-Fi devices, and the OneVue web browser interface only initiate outbound network connections and do not initiate inbound network connections.
- OneVue client and device data is encrypted in transit and all sensitive data is encrypted at rest.
- Primex devices support an array of network communication options for secure wireless network connectivity.
- Users can access OneVue from a supported web browser on any internet-enabled device, improving flexibility and mobility.
- User access to the OneVue user interface is through a web browser by way of the HTTPS protocol (port 443).

OneVue deployment diagram

Facility Network

users

OneVue Sensors
PoE, Ethernet, Wi-Fi

SNTP (recommended)

Devices requiring time source

LockDown

Notify InfoBoards,
Bell Controller
PoE, Ethernet

72MHz OneVue
Transmitter
Ethernet

Sync Clocks & Timers
PoE, Ethernet

Sync Bridge
PoE, Ethernet

Internal NTP
Server

AWS

VPC

virtual private
cloud

HTTPS

SNTP (Port UDP 123 required to be open)

External
NTP Server

OneVue Sync Bluetooth Mesh Network

Clocks with Bluetooth® low energy
wireless technology

OneVue network requirements

The information below provides the details required to allow Primex network-enabled devices to communicate over a facility's network to OneVue. Details include device Wi-Fi, PoE, and Ethernet network communication protocols, and network port and firewall requirements.

Network communication protocols

The OneVue platform is designed, developed, and managed in-house, allowing Primex to control the user experience and provide the highest level of reliability and security.

To support the myriad of network security and protocol standards in today's business environment, Primex network-enabled devices offer an array of options for secure network connectivity. This ensures our customers can use and leverage our full line of products without adding costly additional IT infrastructure.

Wi-Fi specifications

Applies to: OneVue Sense Sensors, Sync Bluetooth Bridge.

- Wireless Networking Protocols: 802.11b, 11g, 11n single stream (2.4 GHz)
- Wireless Security Protocols: WEP (Open & Shared), WPA (TKIP & AES), WPA2 (TKIP & AES)
- Wireless Authentication Protocols: None, EAP-FAST, EAP-TLS, EAP-TTLS (MSCHAPv2), PEAP v0 (MSCHAPv2), PEAP v1 (GTC)
- Network Communication Protocols: Hypertext Transfer Protocol Secure (HTTPS)/TLS 1.2
- IP Addressing: Dynamic Host Configuration Protocol (DHCP), static IP addressing
- Data Packet Size: typically less than 5 kilobytes (kB)

Power over Ethernet (PoE) and Ethernet specifications

Applies to: OneVue Sense Temperature, Differential Pressure, Water Leak, and, Contact Closure Sensors, OneVue Sync Transmitters, Sync Bluetooth Bridge, Notify Bell Controller, and Notify InfoBoards.

- Power over Ethernet (PoE): Compliant with IEEE 802.3af standard
- Network Communication Protocols: Hypertext Transfer Protocol Secure (HTTPS)/TLS
- IP Addressing: Dynamic Host Configuration Protocol (DHCP), static IP addressing
- Data Packet Size: typically less than 5 kilobytes (kB)

Network port requirements

Primex Ethernet, PoE, and Wi-Fi enabled devices communicate to OneVue over a facility's network using the Hypertext Transfer Protocol Secure (HTTPS) protocol. OneVue client and device data is encrypted in transit and all sensitive data is encrypted at rest. An outbound HTTPS connection is established by each device and once complete the IP address is released.

The following ports must be open to allow for outgoing OneVue device communication from the facility network.

- **Port TCP 443:** required to be open to allow Hypertext Transfer Protocol over TLS/SSL (HTTPS) communication with OneVue and Wi-Fi, Power over Ethernet (PoE)/Ethernet enabled devices.
- **Port UDP 123:** used by Wi-Fi, Power over Ethernet (PoE)/Ethernet devices to access an external NTP Server. Port is required to be open for use with external Network Time Protocol (NTP) Servers. Use of internal NTP Servers is also supported.

Network firewall requirements

The OneVue platform runs on the Amazon Web Services (AWS) cloud infrastructure. Organizations with network firewalls in place must proactively allow outbound network communication and file downloads through specific OneVue Domains and URLs. The files downloaded include the Sync device clock list, Notify device schedules, and device setting updates.

OneVue is a high-availability (HA) platform that may change IP addresses at anytime, therefore OneVue does not support the use of firewall IP address filtering.

If the firewall support wildcards:

Domain filters	*.primexonevue.com
	us-east-1-production.s3.amazonaws.com
URL filters	https://*.primexonevue.com
	https://us-east-1-production.s3.amazonaws.com

If the firewall does not support wildcards:

Domain filters	console.primexonevue.com
	deviceapi-alt.primexonevue.com
	deviceapi.primexonevue.com
	onevueapi.primexonevue.com
	us-east-1-production.s3.amazonaws.com
URL filters	https://console.primexonevue.com
	https://deviceapi-alt.primexonevue.com
	https://deviceapi.primexonevue.com
	https://onevueapi.primexonevue.com
	https://us-east-1-production.s3.amazonaws.com

Sync Bluetooth Bridge: Connection to a switch port

Spanning tree portfast (STP) must be enabled when a switch port is not connected to other routers or switches. Optionally STP can be turned off, which is not the same as disable.

Email, text (SMS), and voice communication

OneVue generates email, text (SMS), and voice notifications. Be sure to add **support@primexonevue.com** to your email program's safe senders list. Text and voice alert notifications are sent from phone number (608) 709-7043.

OneVue log in requirements

OneVue is a cloud-based, mobile-first design that can be accessed from a web browser on a smartphone, tablet, laptop, or desktop computer. The mobile-first design eliminates the need for separate mobile apps, plug-ins, or downloads for optimal viewing on any size screen.

Log in to OneVue requires a user to have an active user profile. A user profile is assigned to a Role(s), which grants their access to OneVue account data and permissions to features.

Be sure to bookmark or favorite the OneVue URL: https://console.primexonevue.com

Supported web browsers

OneVue can be accessed from the latest version of the following browsers.

- Google Chrome™
- Mozilla Firefox®
- Microsoft Edge
- Apple® Safari®

To download reports, the web browser must have JavaScript enabled.

Supported mobile devices

OneVue can be accessed from a supported web browser on the following mobile devices. JavaScript must be enabled.

- Apple® mobile devices with iOS 7 and greater
- Android mobile devices with 4.2 and greater