kalki.io

kalki.io Device Access Pack

Manage your Devices from Anywhere

Device Access pack provides remote configuration and management access for field devices by securely extending connectivity between the programming port of the device and its engineering tool over a public/ private network.

Asset owners' maintenance strategy is being evolving from reactive → Planned → Proactive → Predictive maintenance over the past few years. In order to enable this migration, real time collection of asset health and operational data is critical. Remote monitoring of field equipment is an add-on function available in the kalki. io platform which can be used to monitor health and operational data.

kalki.io remote access service is a a centralized device management Software as a Service (SaaS) solution for devices/equipment deployed in the field. This technology framework can be leveraged by existing device engineering tools and communication networks to establish a secure connectivity with distributed assets.

It enables remote maintenance of field devices, which helps users to reduce engineering and integration time, costs and resources. It also enables equipment manufacturers to connect and access to their field equipment remotely with enterprise class cyber-security to ensure the safety of the system and data. Remote access pack can be used as an solution to streamline operations and there by improve maintenance efficiency for most of the industries having intelligent field assets.

BENEFITS OF DEVICE ACCESS PACK

Equipment Manufacturers

Improve reliability by pro-active maintenance

Increase asset productivity by reducing downtime

Asset Owners

Reduce unplanned incidents

Reduce estimated replacement cost

O&M service providers

Reduce O&M costs

Protect assets & equipment by taking on-time action

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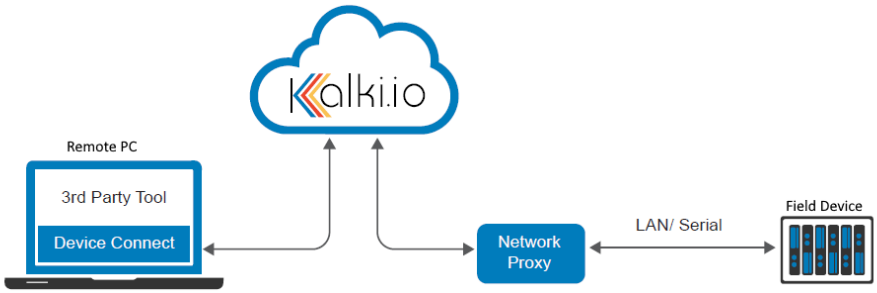
SOLUTION

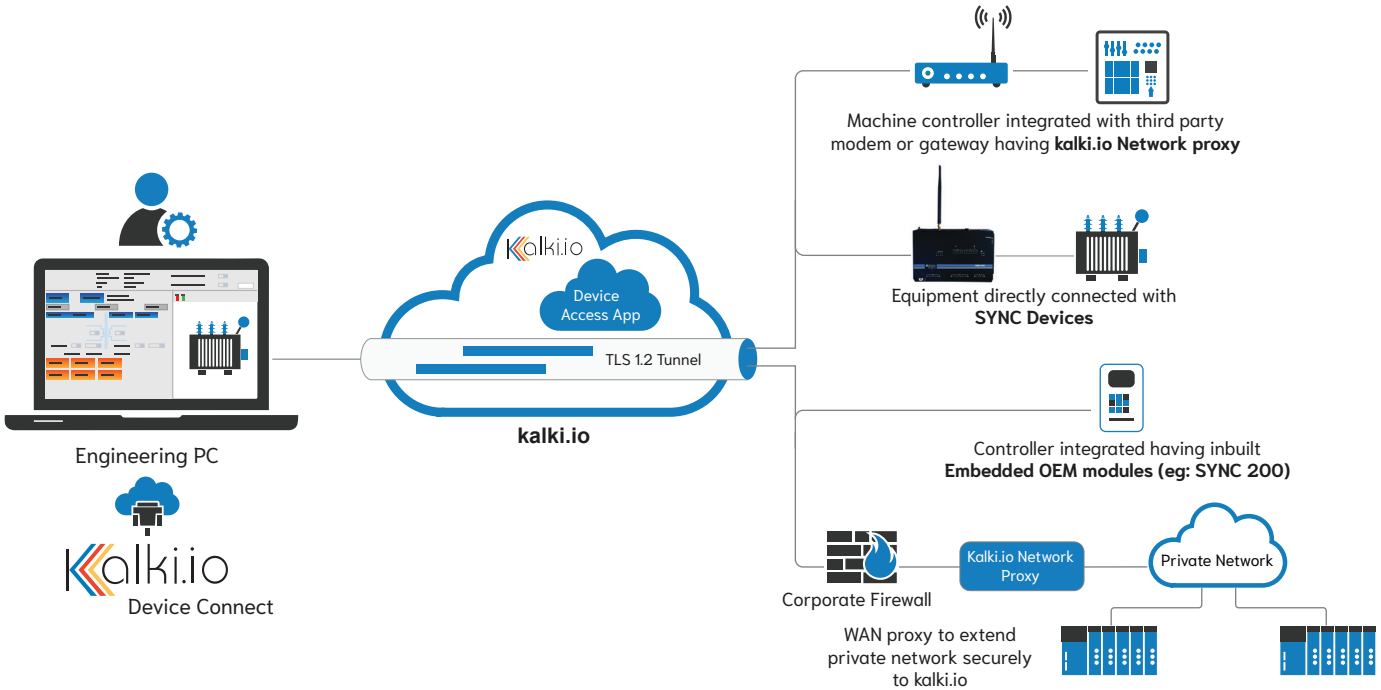
Field equipment can connect with kalki.io using an external gateway or directly. Gateways with kalki.io Network Proxy can connect with the field devices or equipments using serial / Ethernet link. See list of devices or software which can be used as network proxy are listed in the table below. Equipment manufacturers also have the option to directly connect with kalki.io without using an external gateway. Interface card hardware or a software stack (Network proxy – see definition below) can be embedded inside the equipment along with a cellular modem to achieve this functionality.



Device Connect software pack installed in the engineering PC at your office/home creates a secure TLS 1.2 tunnel to the kalki.io remote access service. kalki.io validates user privileges and permissions with the requested device before forwarding it to the designated device. Vendor tools installed in the engineering PC can make use of this tunnel and create a connection with field devices. User privilege validation which is part of kalki.io remote access service ensures that devices cannot be accessed by unauthorized users.

PKI infrastructure available in the kalki.io device management service authenticates each user and device. This enables secure remote PC connectivity with field equipment for configuration, debugging and updates.

Device Access Pack Solution Architecture



GATEWAYS FOR EQUIPMENT MANUFACTURERS

SyncConnect
is a software gateway ideal for edge devices. It simplifies and accelerates the collection, aggregation and protocol conversion of field device data from many vendors.

Kalki.io Network Proxy
is the software which can be deployed on any edge device or industrial PC or embedded computer. It extends the connectivity to individual device for remote connectivity over secured TLS 1.2 tunnel.

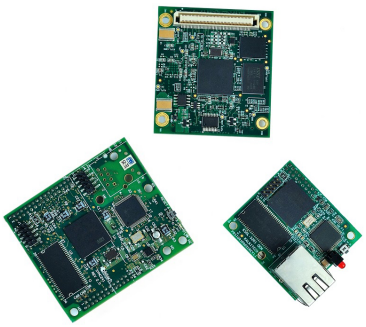
SYNC 2100
are compact and rugged remote terminal units used for applications that control and monitor the distribution grid.

SYNC 2000
Secure Substation Gateways support +40 utility protocols with many to many protocol conversions of telemetry data.

SYNC 3000
is a rugged communication and computing platform with data concentration built with IEC 61131 based user logic programing to provide engineering flexibility for data computation.

EMBEDDED OPTIONS FOR EQUIPMENT MANUFACTURERS

Hardware Interface	Software Interface



SYNC 200 are embedded system on module (SOM) boards which can be directly plugged into field equipment/ devices to enable it with multiple protocols without changing the core hardware.

kalki.io Device Agents provide an interface definition for securely connecting any grid devices with kalki.io.

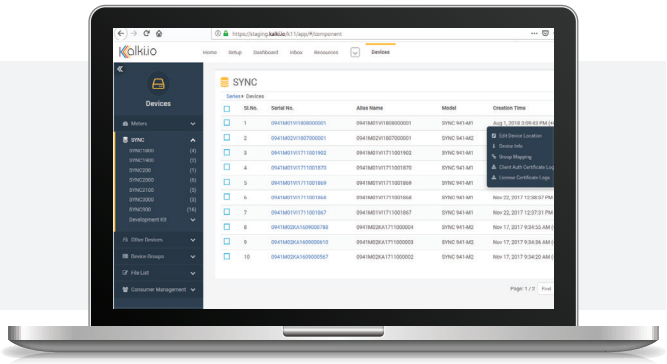
KEY FEATURES

- Use Ethernet or cellular connectivity
- Does not require static IP SIM cards
- Automatic registration of equipment
- Secure TLS 1.2 tunnel from configuration PC and equipment
- Vendor and protocol agnostic solution
- SMS or email-based notification and alerts
- RBAC ensuring authorized access to equipment/devices
- Hierarchy based configuration and access settings
- Customized equipment/device groups
- Private deployment option available

SIGN UP AND EXPLORE KALKI.IO

kalki.io Energy IoT Platform

www.kalki.io



APPLICATIONS

Inverter & UPS

Generator Set

Industrial PLC & Machines

Wind Turbine Controller

Building Automation

Telecom Base Stations

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