

Choosing the right gateway for industrial monitoring success

January 25, 2022, Tuesday,
SGT 4.30pm – 5.00pm

Your Hosts



Wei Ling, Teo
Marketing Manager,
ACKCIO



Summer Zhang
Senior Marketing Executive,
ACKCIO

Featured Speakers



Arul Kumar
Software Technical Lead
ACKCIO
arul@ackcio.com
Singapore



Mobashir Mohammad
Co-Founder & Chief
Technology Officer
ACKCIO
mobashir@ackcio.com
Singapore

Q&A Support



Minh Phung Quang

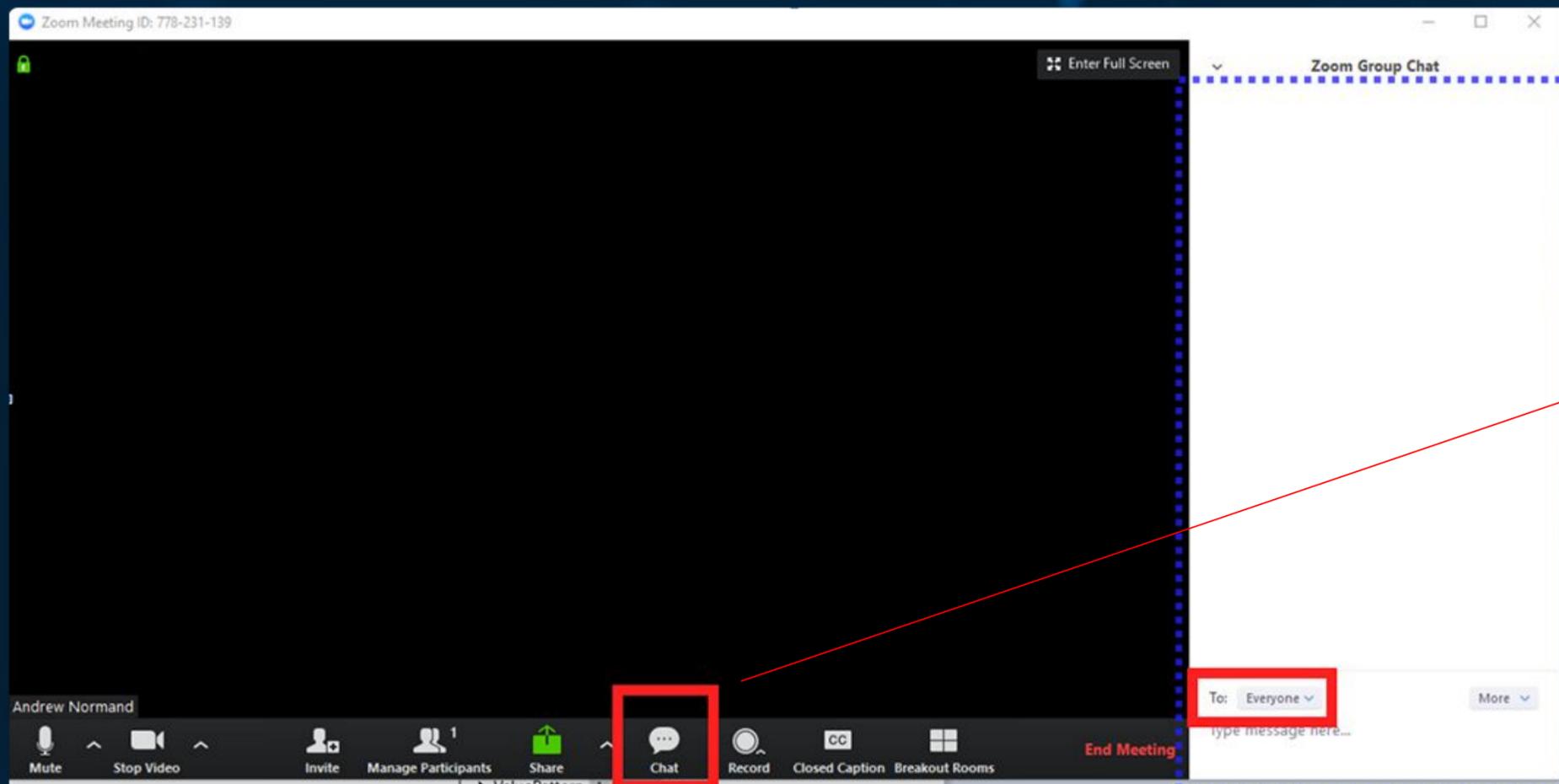
Software Architect

ACKCIO

minh@ackcio.com

Vietnam

Housekeeping Rules



We are live! Please do not unmute your mic.

Pose questions to the speakers here. We'll get to these at the end.

Recording of the webinar will be sent out in the next few days after the webinar.

AGENDA

- 1** Gateway, a central point of failure
- 2** Capabilities of Ackcio's central receiver, Ackcio Gateway
- 3** Capabilities of Ackcio Snape software which runs on the Gateway
- 4** Live demonstration of Ackcio Snape software
- 5** Q&A session
- 6** Closing

IIoT paving digital transformation of many traditional industries



Benefits of real-time monitoring



WORKFORCE SAFETY

No more manual readings in dangerous and remote areas requiring minimal workforce requirement on-site.



RISK MANAGEMENT

Reactive to proactive using real-time data and analysis and move towards preventive maintenance



REDUCE COST

Reduce manpower dependency and expenses due to vandalism and extensive maintenance routines



INCREASE EFFICIENCY

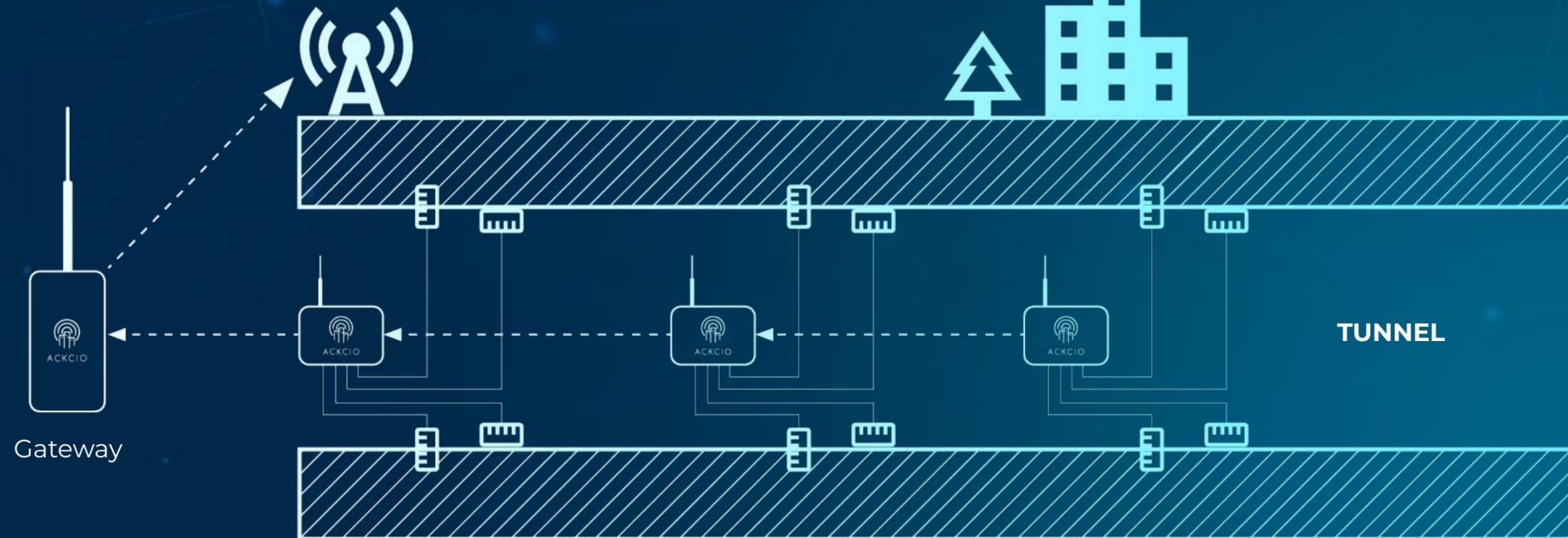
Frequent and real-time data collection leads to deeper insights, quick actions and allows us to capture long-term trends



DATA INTEGRITY AND SECURITY

High quality and secure data availability through reduced manual interventions and end-to-end data encryption

Gateway is the central point of failure



Gateway is the central point of failure

1 HARDWARE FAILURE

- Power outage
- Internet outage
- Physical damages



Gateway is the central point of failure

2 SECURITY LAPSES

- DOS attack
- Data encryption
- Data leakage

Advantech Suffered Conti Ransomware Attack – Hackers Demand 750 BTC Ransom

written by Abeerah Hashim | November 29, 2020



The IoT giant Advantech has become the latest victim of a severe cyber attack. Reportedly, Advantech has fallen prey to the infamous Conti ransomware attack where the hackers have demanded a whopping 750 BTC as ransom.

IoT Cyberattacks Escalate in 2021, According to Kaspersky

Some 1.51 billion IoT breaches occurred from January to June, most using the telnet remote access protocol.

Written by Callum Cyrus 17th September 2021



IoT cyberattacks more than doubled year-on-year during the first half of 2021, according to anti-virus and computer security service provider Kaspersky.

From January to June this year, some 1.51 billion breaches of Internet of Things (IoT) devices took place, Kaspersky reported, an increase from 639 million in 2020.

Gateway is the central point of failure

3 ENVIRONMENTAL FACTORS

- Physical obstructions
- Signal interferences
- Weather conditions



Industrial Gateway Requirements

- ✓ 24/7 availability
- ✓ Easy to configure and troubleshoot
- ✓ Global compliance
- ✓ High performance
- ✓ Open standards



ACKCIO GATEWAY

An industrial centralised data aggregation device

Ackcio Gateway acts as a central receiver that collects data from Ackcio Nodes. It has been designed in a way that it is robust enough to deploy in the harsh climate and tough terrain.



ACKCIO GATEWAY BENEFITS

ACKCIO GATEWAY BENEFITS

Industrial design

- ✓ Rugged die-cast aluminium build
- 👍 IP67 rating for outdoor deployment
- 🕒 Backup power supply for 24x7 availability during a power outage
- 🔧 16GB internal memory to store data for large projects



ACKCIO GATEWAY BENEFITS

Multiple access points



CELLULAR

- 3G/4G connectivity
- Global compatibility

LAN

- High-speed p2p connection

WIFI (Hotspot)

- WPA enabled secured connection

Global compliance

- ✓ Configurable to any region & frequency
- ✓ Ackcio Mesh
ISM Band 863 - 870MHz, 902 - 928MHz
- ✓ Cellular Model
LTE, WCDMA, and GSM

CE FCC IC



Advanced communication



REDUNDANCY
Multi-gateway support



RELIABLE
Frequency hopping



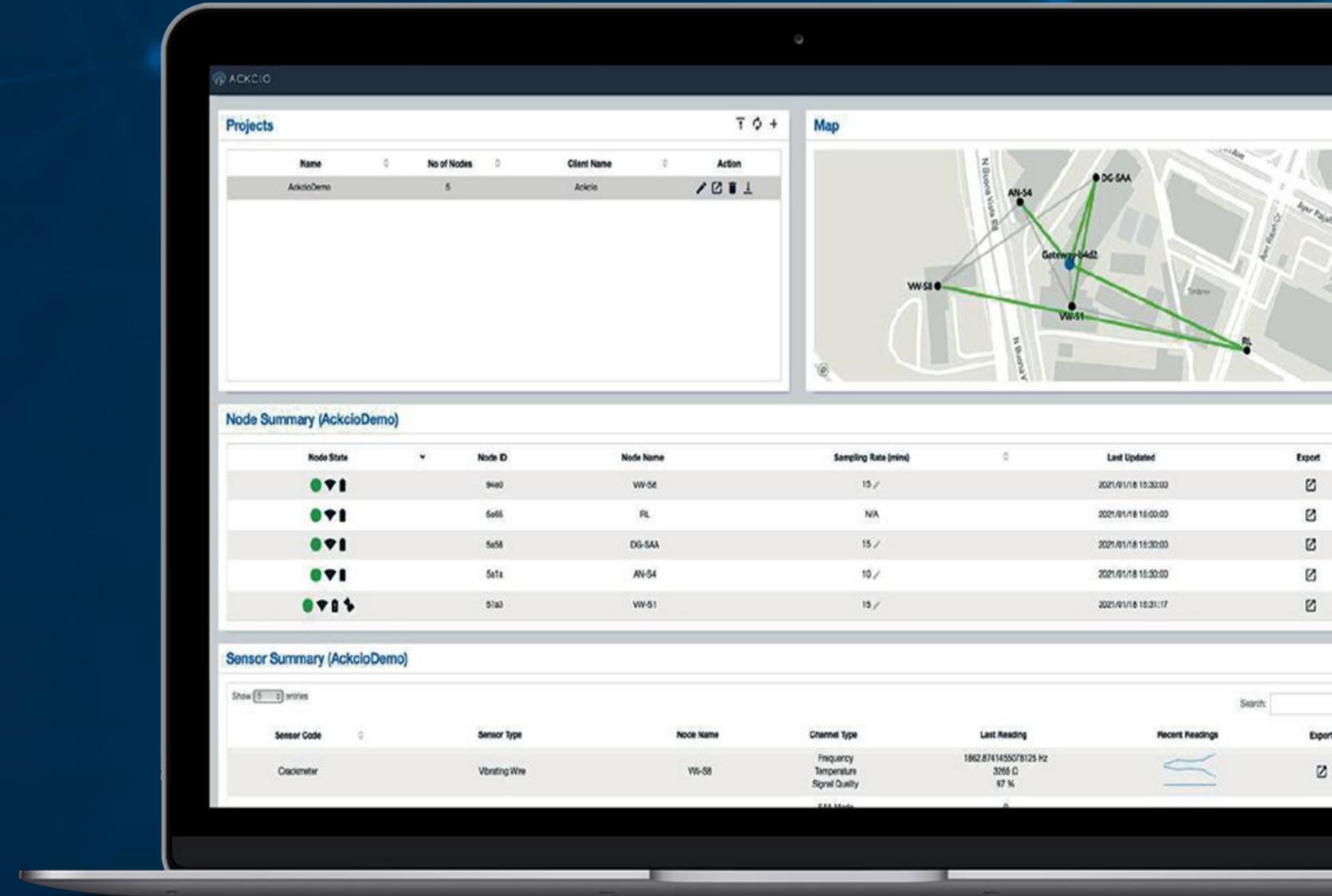
SECURE
AES 128-bit encryption



ACKCIO SNAPE SOFTWARE

Secure and private on-Gateway data and device management software

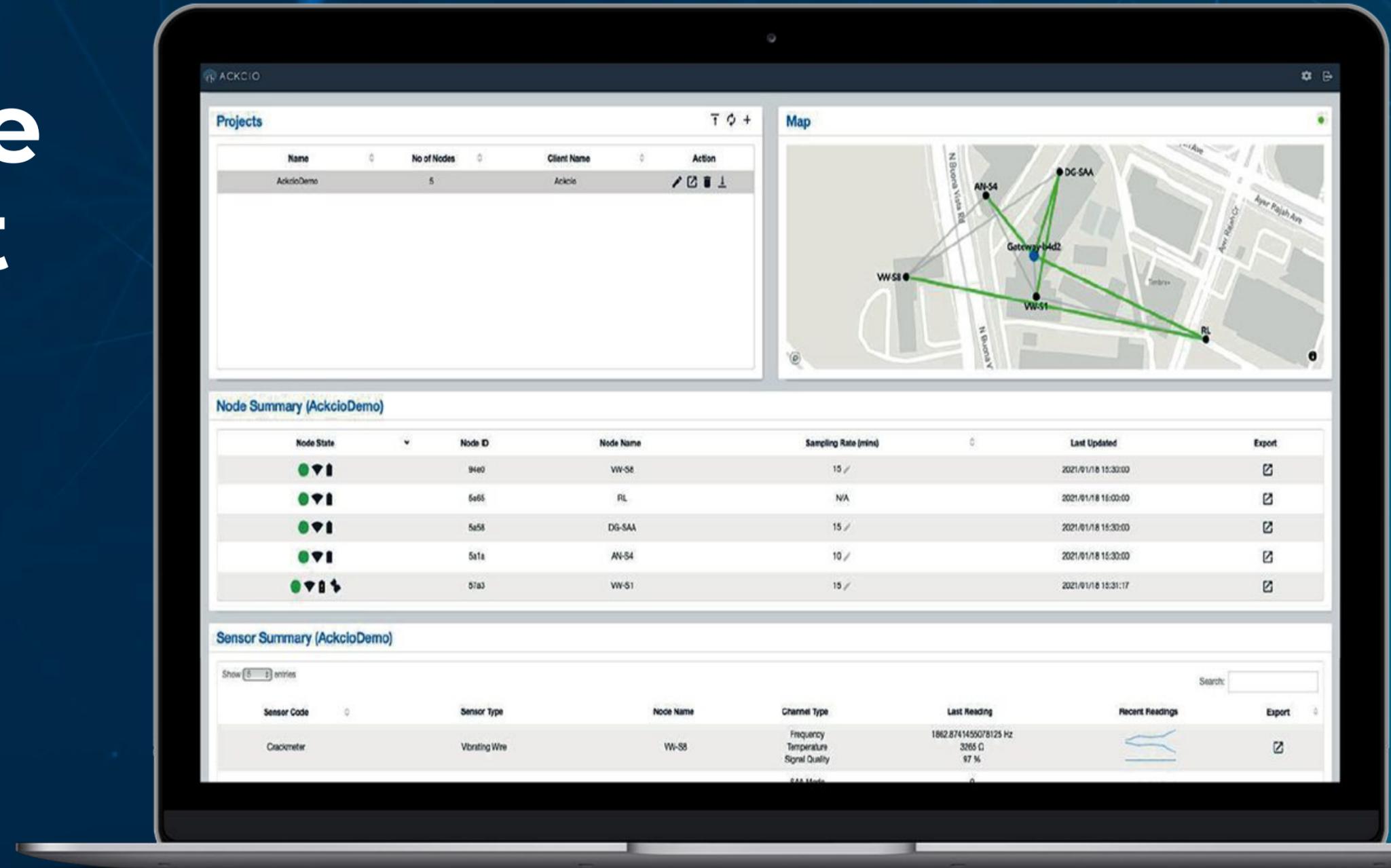
Ackcio's Snape software, which runs on the Ackcio Gateway, helps to configure deployments and manages sensor data collected by our monitoring system securely and conveniently.



ACKCIO SNAPE SOFTWARE BENEFITS

Data & Device Management

- ✓ Modern dashboard for easy management
- ✓ Companion Android application for easy setup
- ✓ Remote troubleshooting
 - Device activity status
 - Device health metrics
 - CSV data export



Private & Secure Edge OS



Runs completely on the edge, providing 100% data privacy

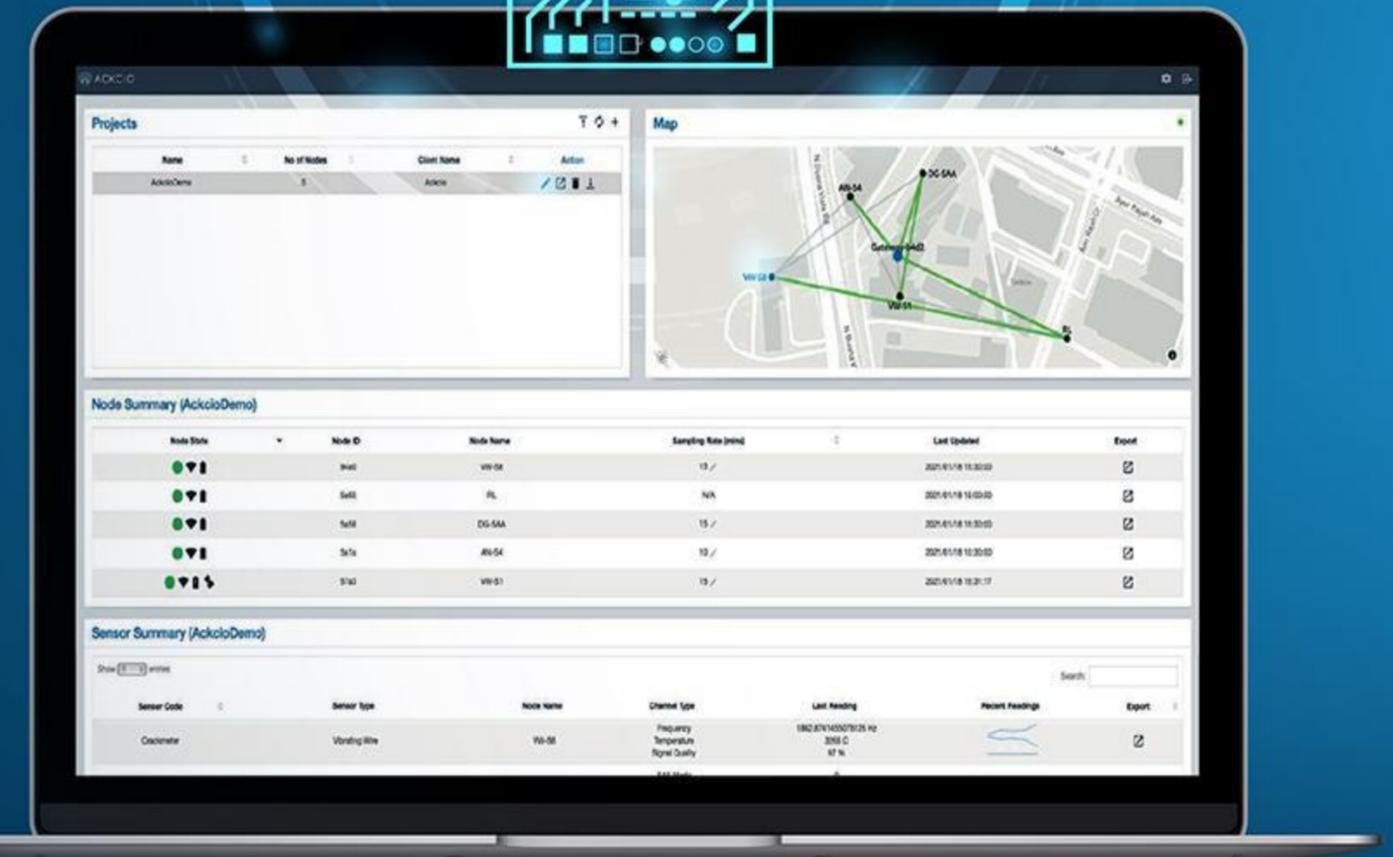


Secure data push

- API integration with JWT and API key authentications
- FTP integration with implicit and explicit authorization



Authenticated remote access



Compatible with leading data analytics platforms

Supported Data Analytics Software Platforms



& more

Data Processing

Real-time data processing on the edge

- Duplicate data detection
- Dynamic data transformation using engineering formulas
- Add virtual sensors

Configure Engineering Formula (Node: VW-S1)
✕

Sensor Code :
StrainGauge
Formula :

MicroStrain (Relative)
 ▼

Parameters

$L_{Eng} = ((R_{Base}^2 - R^2)/1000) * G$

where,

G is gauge factor($\mu\epsilon$ /Digit),

R is current reading(Hz),

R_{Base} is base reading(Hz),

and, L_{Eng} is reading in engineering unit($\mu\epsilon$)

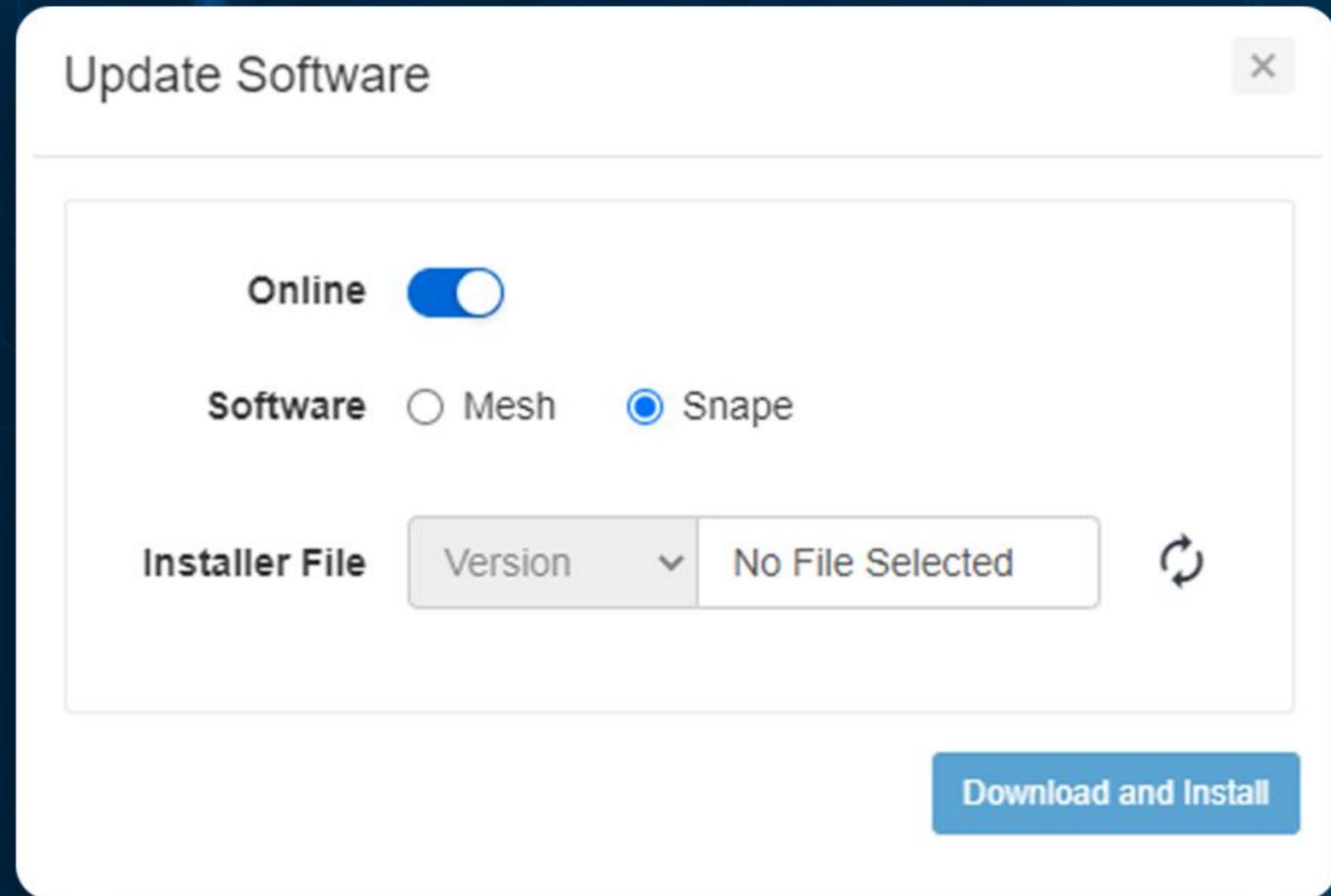
G :

Save changes

Over-the-air Updates

Keep software updated remotely by applying

- Patch bugs
- Apply optimizations
- Add new features



DEMO

Ackcio's Snape software provides you with real-time access to every data point collected from your projects, allowing you to make informed and collective decisions that manage risks and increase productivity and safety.



Q&A



Mobashir Mohammad

Co-Founder
& Chief Technology Officer
ACKCIO



Arul Kumar

Software Technical Lead
ACKCIO



Minh Phung Quang

Software Architect
ACKCIO

Thank you



Help us complete a short survey

Stand a chance to win one of the three US\$50 Amazon gift cards.

**Follow Us
on LinkedIn:**

