

# Nalco Champion

An Ecolab Company

## “NexGen” **3D** TRASAR™ for Cooling Water

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## 3D TRASAR™ Technology

Poor **control** of water chemistry is a common cause of reliability issues — especially in high stress situations. 3D TRASAR system is the first and only on-line automation utilizing a patented fluorescence technology.

Industry  
Recognized  
Most Effective  
Technology



> 1,500 units  
Globally across  
Nalco Champion

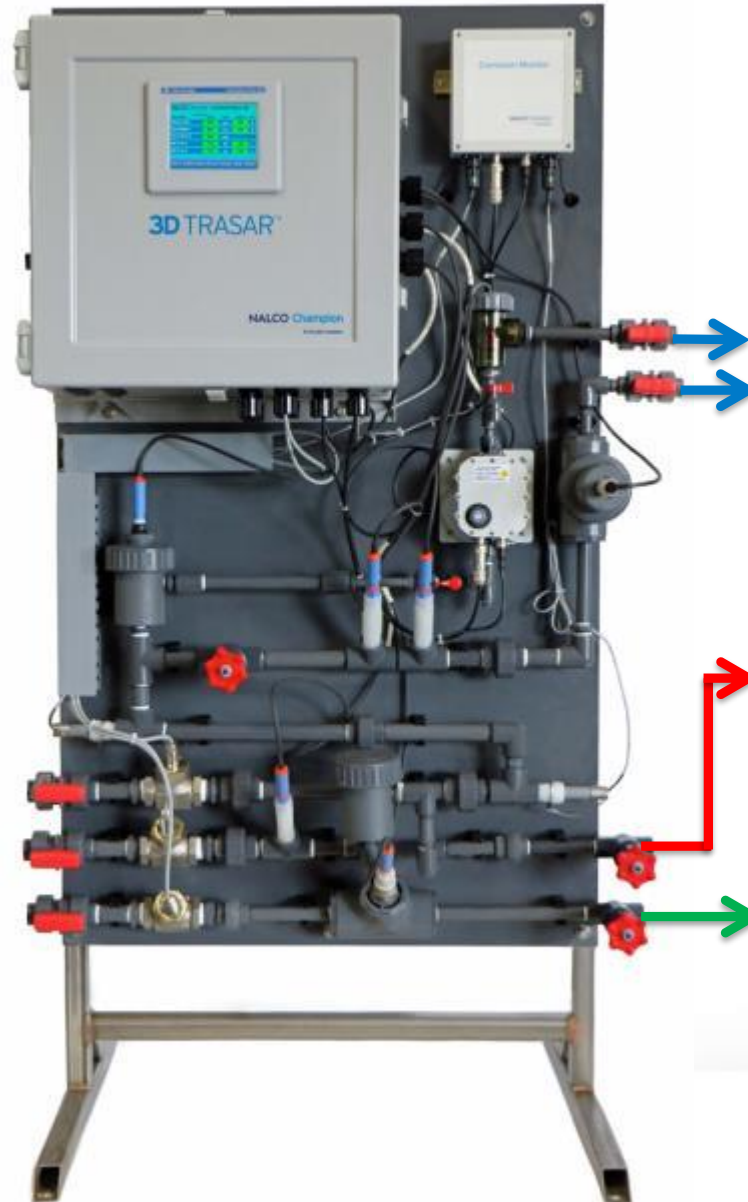


> 30,000  
3D TRASAR  
deployed across all  
Ecolab

**3D TRASAR™**  
*Detect Determine Deliver*

# NexGen 3D TRASAR for Cooling Water

- Class I Div 2 design
- External HMI access
- USB download-capable
- Smart Probe functionality
- Increased inputs/outputs
- “OTS” Components



## SUPPLY water

- Dual pH / ORP (2)
- Conductivity
- Chlorine probe \*
- 2 NCMs
- Flow switch

## RETURN water

- pH/ORP
- Chlorine probe\*
- Flow switch

## MAKE UP water

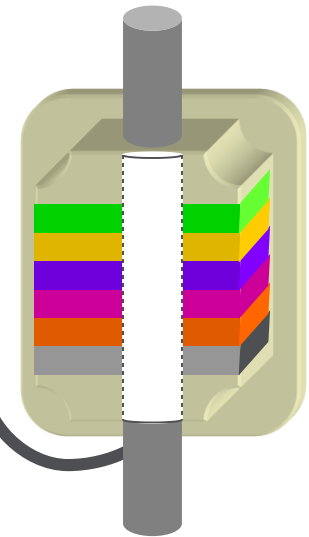
- Flow switch
- Conductivity

Supply →  
Return →  
Make up →

# NexGen Controller and Probes

*“Increased functionality”*

pH/ORP (2) - Supply  
pH/ORP - Return  
Conductivity – MU  
Conductivity - Supply  
Free Chlorine – either  
Supply or Return  
NCM (2)  
Water Temp



TRASAR  
Tagged Polymer  
Turbidity  
Cell Fouling



# Sensor Technology

“SMART probes” - Calibration resides inside the probe

Calibration can be done away from unit, improving accuracy, efficiency and safety

Data from probe health can be downloaded and managed in software separately

Probe data used in tandem with our sensors and control methods for chemical feed/dose

## E+H Partner



Chassis



Combo pH/ORP



Toroidal Conductivity



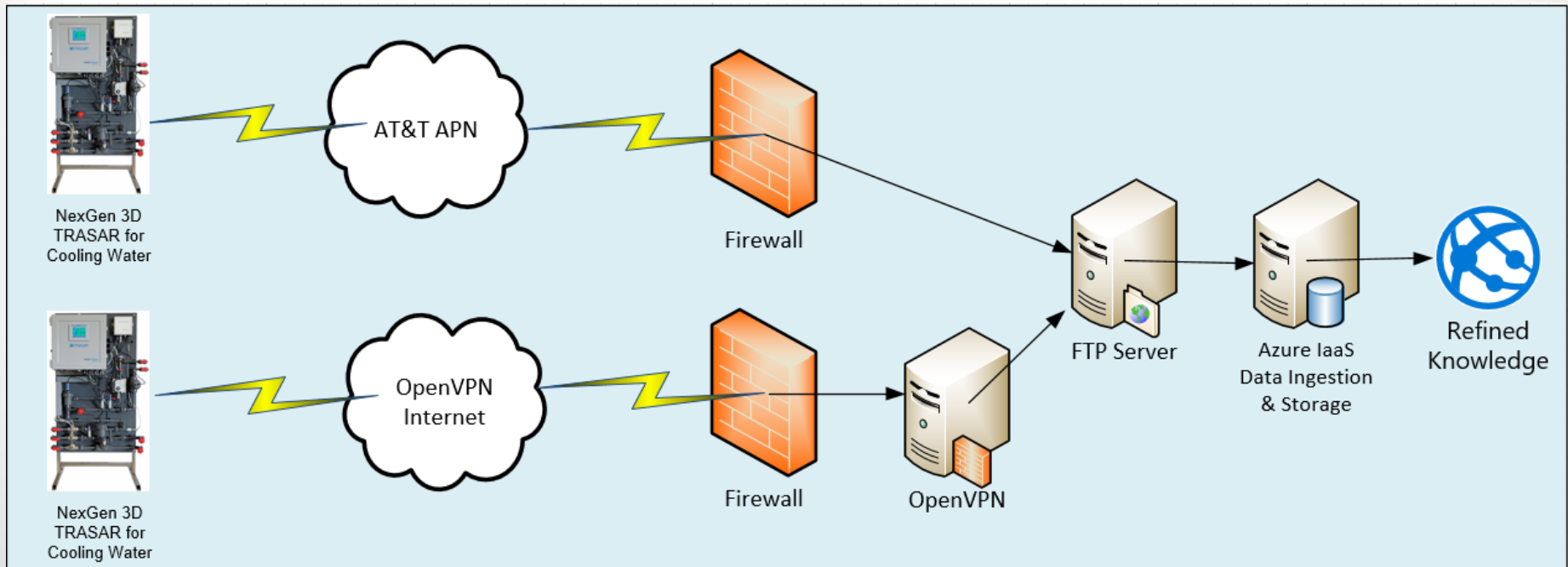
Point Conductivity



Chlorine

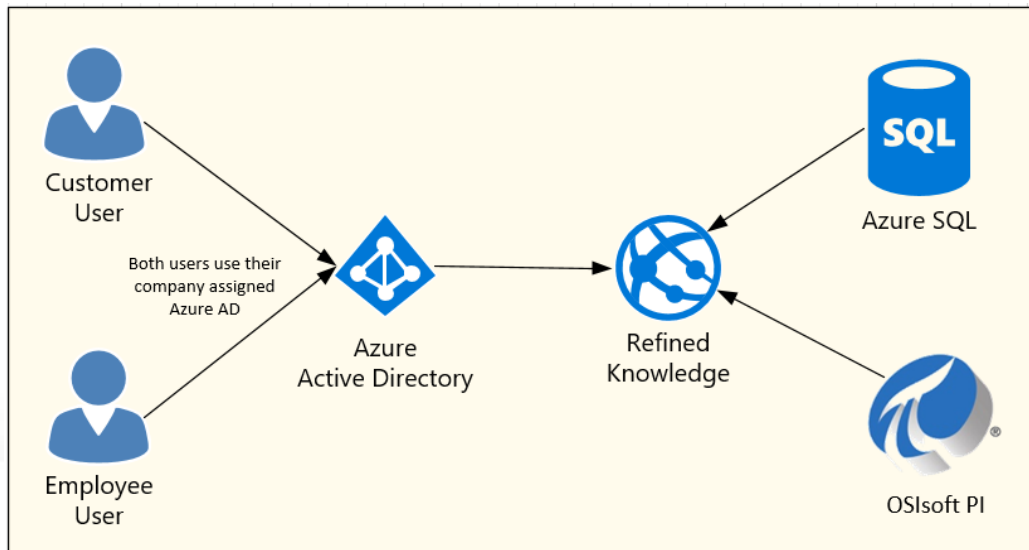
# Data Connection Security

- ▲ AT&T APN. SIM data sent through encrypted VPN to Ecolab data center.
- ▲ Monitoring (Data Streams & Online/Offline)
- ▲ APN failover between Ecolab data centers
- ▲ OpenVPN used for non-APN cellular or other internet connections



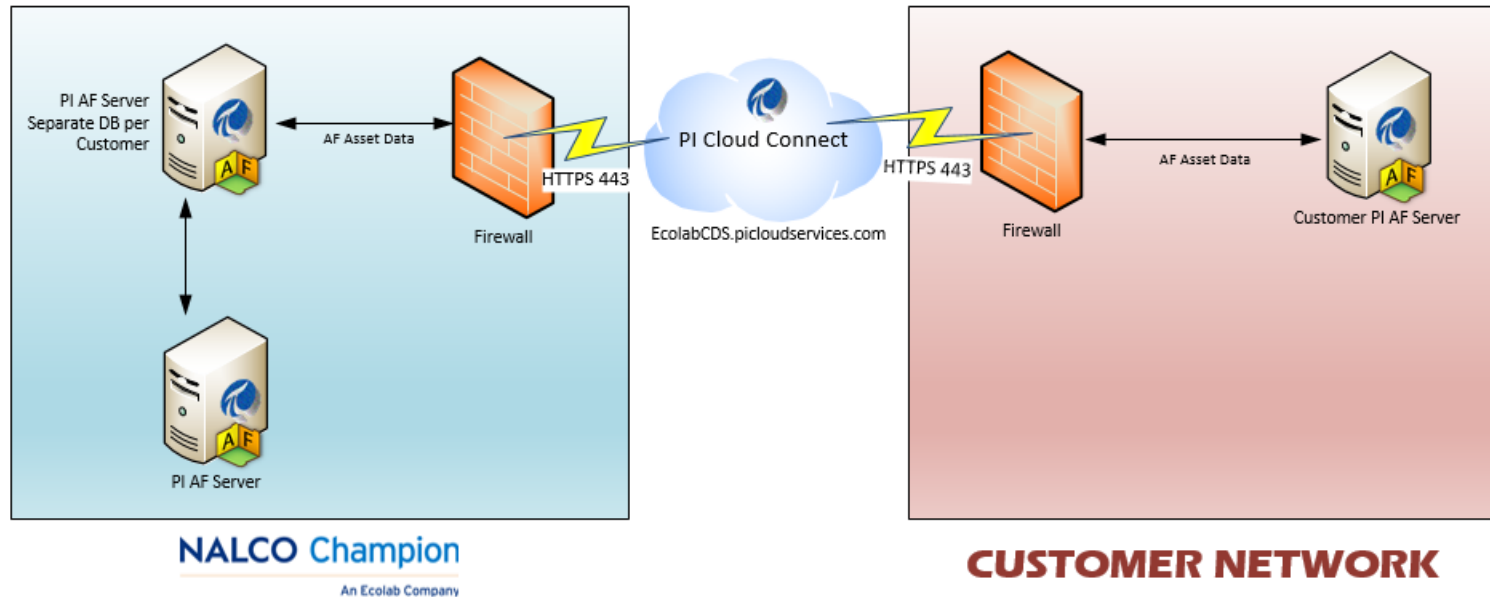
# Refined Knowledge Security

- ▲ Utilize Azure Active Directory for authentication
- ▲ If customer also uses Azure AD, the account they log into Refined Knowledge will be the same as assigned by their corporate IT.
- ▲ If customer does not use Azure AD, they will be created a “viral tenant”. Their account will still be Azure AD.
- ▲ If the customer becomes an Azure AD customer in the future, the email accounts in the viral tenant will automatically be converted to their corporate Azure AD account.
- ▲ We no longer create & maintain customer accounts for Refined Knowledge.



# B2B Connections

- ▲ Data exchange is becoming a bigger request
- ▲ Customers want to see our data in their data historians to match to their assets
- ▲ We want customer data in our historians so we can turn around analysis faster from our experts.
- ▲ PI Cloud Connect (example below), PI to PI Connections, sFTP





# Questions