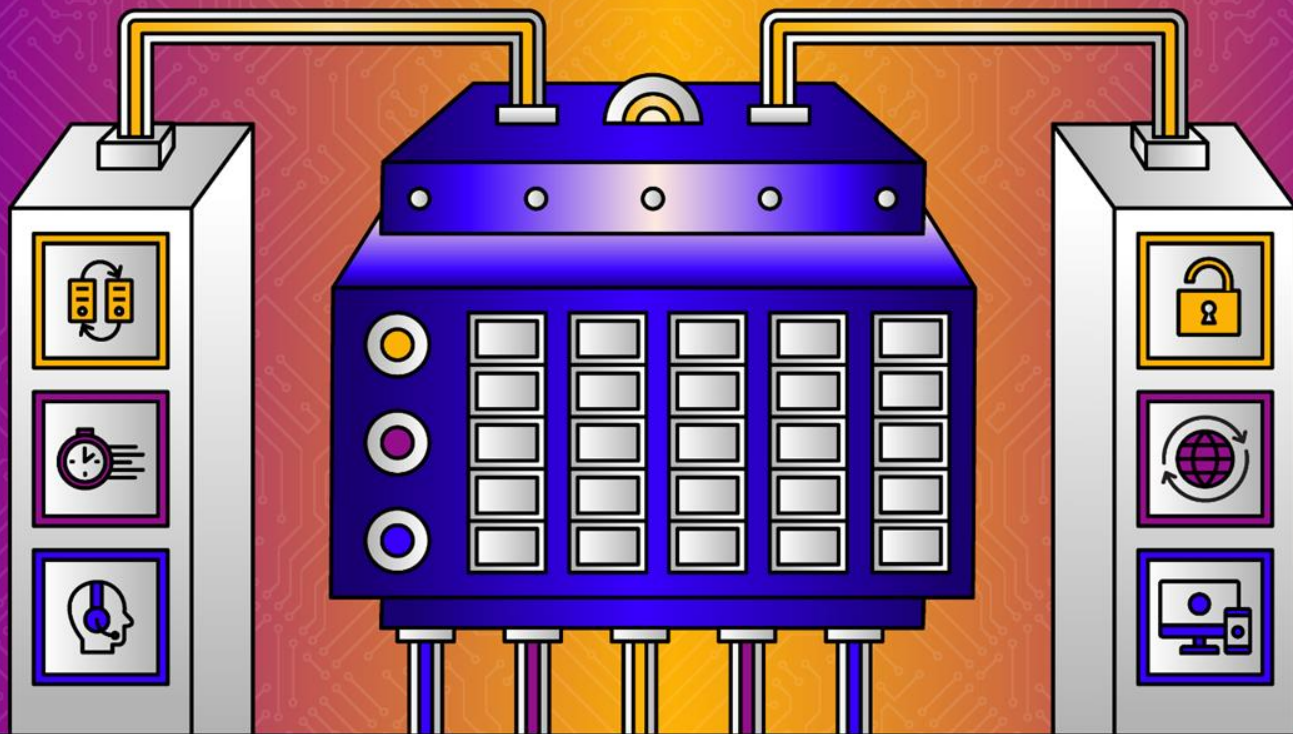


# Boost PLC & Device Interoperability With New Drivers



# Today's Speakers



**Reese Tyson**

Sales Engineer III  
*Inductive Automation*

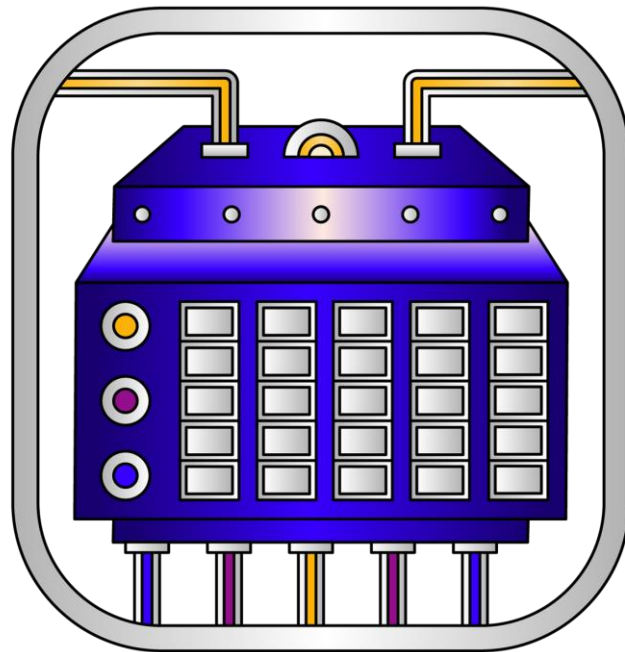


**Thomas Goetz**

Sales Engineer I  
*Inductive Automation*

# Agenda

- The Importance of Interoperability
- Interoperability Challenges & Solutions
- Overview of New Ignition Drivers
- IEC 61850 Driver
- Micro800 Driver
- DNP3 Driver
- Mitsubishi Driver
- Demo
- Q&A



# About Inductive Automation

- We make software for problem solvers
- 57% of the Fortune 100 and 44% of the Fortune 500 use Ignition
- Highly diversified customer base across many industries
- Ignition installations in 100+ countries
- 4,000+ integrators worldwide
- Profitable and independent with no outside investors







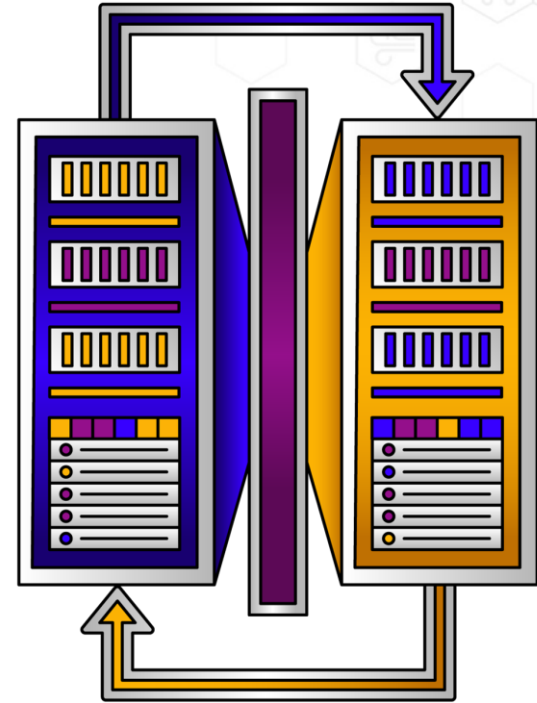
## The Unlimited Platform for SCADA and So Much More

- **Connect, Design, Deploy Without Limits:**
  - One central hub for everything on the plant floor
  - Create any kind of industrial application
  - Web-deploy clients to desktops, industrial displays & mobile devices
- **Unlimited licensing**
- **Industrial-strength security and stability**
- **Trusted by thousands of companies worldwide**

# The Importance of Interoperability

## What Is Interoperability?

- The ability for data to flow easily between different systems and applications.



# The Importance of Interoperability

## 5 Major Benefits of Interoperability

- Get more accurate data
- Connect to devices faster
- Save money
- Integrate with a wider range of devices
- Ease frustrations

# The Importance of Interoperability

## The Result of Interoperability on Operations

- Improved efficiency
- Increased productivity
- Less downtime
- Expand operations easily
- Better decision-making



# The Importance of Interoperability

## How Ignition Boosts PLC & Device Interoperability

- Connect to most major PLCs with included OPC UA Module & drivers
- Add on new drivers quickly, easily, and affordably
- Flexibility to write your own drivers
- OPC UA Module works on any major desktop OS

# Interoperability Challenges & Solutions

## Potential Challenges

- High costs
- Disruption to operations
- Security concerns
- Time

# Interoperability Challenges & Solutions

## Challenge

- High cost

## Ignition's Solution

- A variety of useful drivers are included at no extra charge
- Affordably add on additional drivers

# Interoperability Challenges & Solutions

## Challenge

- Disruption to operations

## Ignition's Solution

- Fast deployment

# Interoperability Challenges & Solutions

## Challenge

- Security concerns

## Ignition's Solution

- OPC UA Module is based on TCP
- Quickly set up secure OPC UA

# Interoperability Challenges & Solutions

## Challenge

- Time

## Ignition's Solution

- Out-of-the-box functionality for included drivers
- Download and install new drivers in minutes



# Overview of New Ignition Drivers

## 4 New Ignition Drivers

- IEC 61850 Driver
- Micro800 Driver
- DNP3 Driver
- Mitsubishi Driver

# IEC 61850 Driver

## Features

- Ideal for power monitoring
- Connect to virtually any IEC-enabled device
- Released in 8.1.25
- Supports MMS Client Communication
  - Does not support GOOSE or SV

# IEC 61850 Driver

## System Functions

### **system.iec61850.**

- system.iec61850.getControlParams
- system.iec61850.operate
- system.iec61850.select
- system.iec61850.cancel
- system.iec61850.listFiles
- system.iec61850.readFile
- system.iec61850.writeFile

# Micro800 Driver

## Features

- Low-cost AB devices
- Connect to Micro800 devices without having to use Modbus
- Micro800 Driver is currently in beta
- Browsing global variables
  - Easily import non-browsable variables

# DNP3 Driver

## Features

- Class-based polling
- Sequence-of-event data
- Scripting functions

# DNP3 Driver

## Scripting Functions

- New system.dnp.x namespace
- Old system.dnp3.x namespace will still exist
- system.dnp.demandPoll



# Mitsubishi Driver

## Features

- Connect to Mitsubishi controllers that support the MELSEC protocol
- Most popular PLCs outside the US
- Global reach

# Mitsubishi Driver

## Features

- Supported hardware series
  - iQ-R
  - iQ-F (FX5U)
  - Q
  - L
  - F (Ignition 8.1.31)
- Gateway configuration
- Designer configuration

# Mitsubishi Driver

## Data Types and Addressing

- Bool
- Int16
- Int32
- Int64
- UInt16
- UInt32
- String
- And More!

OFFSET	BIT POSITION																ADDRESSING	DESCRIPTION
	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0		
0																	D0	
1																	D1	basic addressing by offsets
2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	D2.0	bit addressing within an element
3																	D<int16>3	
4																	D<int16>4	use of explicit datatypes
5																	D<int32>5	
6																		
7																	D<int32>7	double word size
8																		
9																	D<int16[4]>9	1-D array allocation, size 4x1
10																		
11	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	D<int16[4]>9[2] or D<int16>11	single array element accessing
12																	D<int16[4]>9[3].0 or D<int16>12.0	bit addressing within an array element
13																	D<int16[3,3]>13	2-D array allocation, size 3x3
14																		
15																		
16																		
17																		
18																	D<int16[3,3]>13[1][2] or D<int16>18	single array element accessing
19																		
20																		
21																		
22																	D<string6>22	string of length 5, null-terminated
23																		
24																		
25																		
26																		
27																		



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*Ignition User Manual also available at:  
**[docs.inductiveautomation.com](https://docs.inductiveautomation.com)***



# THE DISCOVER GALLERY

**ICC 2024 SUBMISSIONS DUE SOON!**

Ready to submit? Visit: [icc.inductiveautomation.com/discover-gallery-2024](https://icc.inductiveautomation.com/discover-gallery-2024)

Questions? Email us at: [ICC@inductiveautomation.com](mailto:ICC@inductiveautomation.com)

**Submission Deadline: April 30, 2024**



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# Questions & Comments



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