Training Course

	Edge Connectivity Basics (I/O, MGate, NPort) (IIOT-CON1)
Objective	After this course, participants will be able to successfully configure and use three important types of edge connectivity devices: remote I/O (Moxa products ioLogik and ioThinx), protocol converters (Mgates), and serial-to-Ethernet converters (Nports). This will be key for putting together more complex distributed IIoT solutions like in IIOT-CON2
Prerequisites	I/O Come with general ability to change IP and come with Chrome Browser Preferably prepare a Laptop with Admin Rights Read Moxa Tech note "technote-how-to-use-mqtt-to-connect.pdf" Read ioThinx 4510 User Manual pages that explain MQTT configuration Mgate: Basic infrastructure understanding – Passed IES-F1 modules Modbus Knowledge Basic knowledge on MGATE (download manual) [How to power up and set mapping] Basic understanding of MQTT Nport: Basic understand of serial-to-Ethernet conversion Read NPort User Manual.
Content	I/O This training based on ioThinx 4510 will enable participants to efficiently control the device and its features via GUI for enabling Edge to Cloud communication. Knowledge acquired after training will be about: General understanding of MQTT and Subscriber/Publisher concept Understand ioThinx 4510 Web GUI and menu ioThinx Security (e.g. Service enable/disable) Participants will earn the following skills: Participants will learn how to configure Modules (as Input/Output modules) Participants will learn how to setup ioThinx to bring data to the cloud, including Configuring required Services Configuring MQTT Broker connection Configuring custom Publish/Subscribe Topics Configure which information to be sent and which not (Limit Read/ Write to existing Modules/Available Information How to use the filter and keyword when configuring MQTT Topic Settings Participants will learn how to control I/O remotely (via the cloud) MGate: Using Moxa MGATE with features enabling moving data into a cloud destination. This session will not provide a tutorial on the cloud itself, rather,

| | a mechanism to transport data to a cloud destination. The data type to be studied is Modbus.

Knowledge acquired after training will be about: Protocols used, Transforms, Connectivity, Typical use-case, Background information on the Modbus protocols as used by Moxa products, Basic understanding of MQTT, Overview of making a connection to the cloud.

Participants will earn the following skills: View of MGATE Manager and why should not be used, Prepare the connections in configuration, Prepare the data mapping, MQTT/JSON, Understand the information to make the cloud connection

Security considerations
Nport:
In this course participants will learn common operation modes supported by Nport as Real COM, TCP client, TCP server, and UDP. |
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| Duration | 1 Day |
| Certification | MTC IIoT |