

Uniwersytet Zielonogórski

Instytut Sterowania i Systemów Informatycznych

Przedmiot: Automatykacja procesów produkcyjnych

Laboratorium nr. 3

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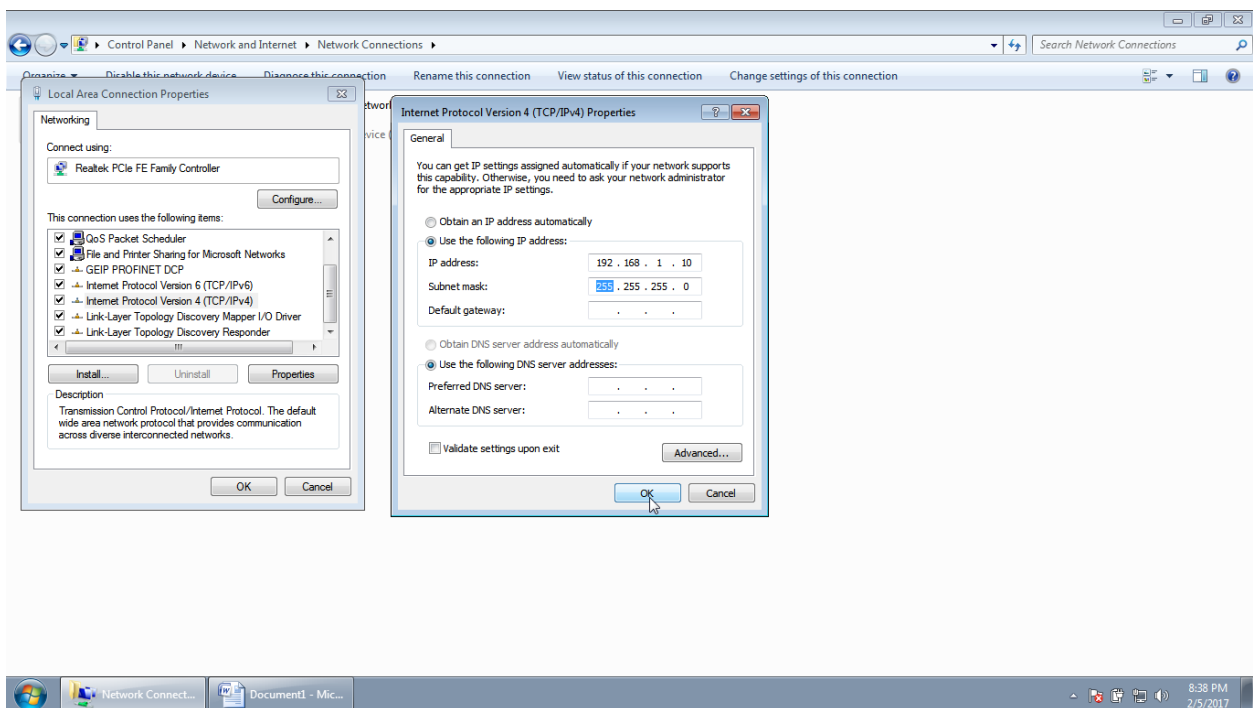
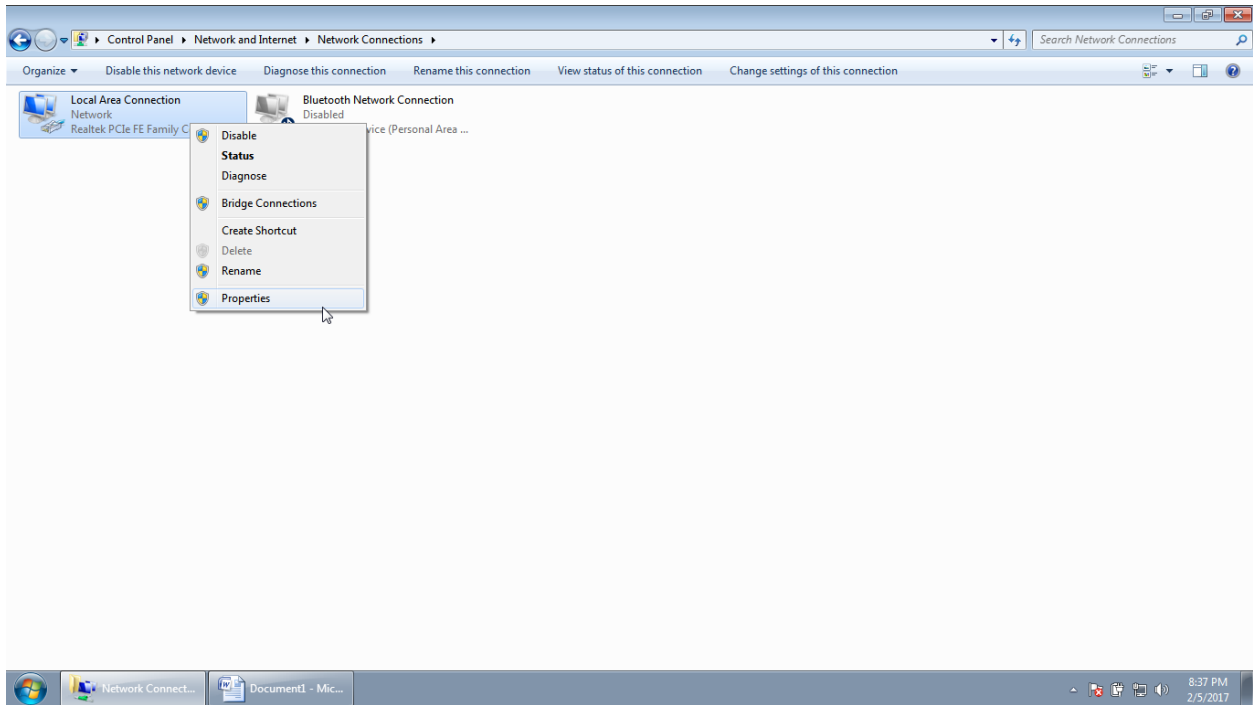
1. Cel:

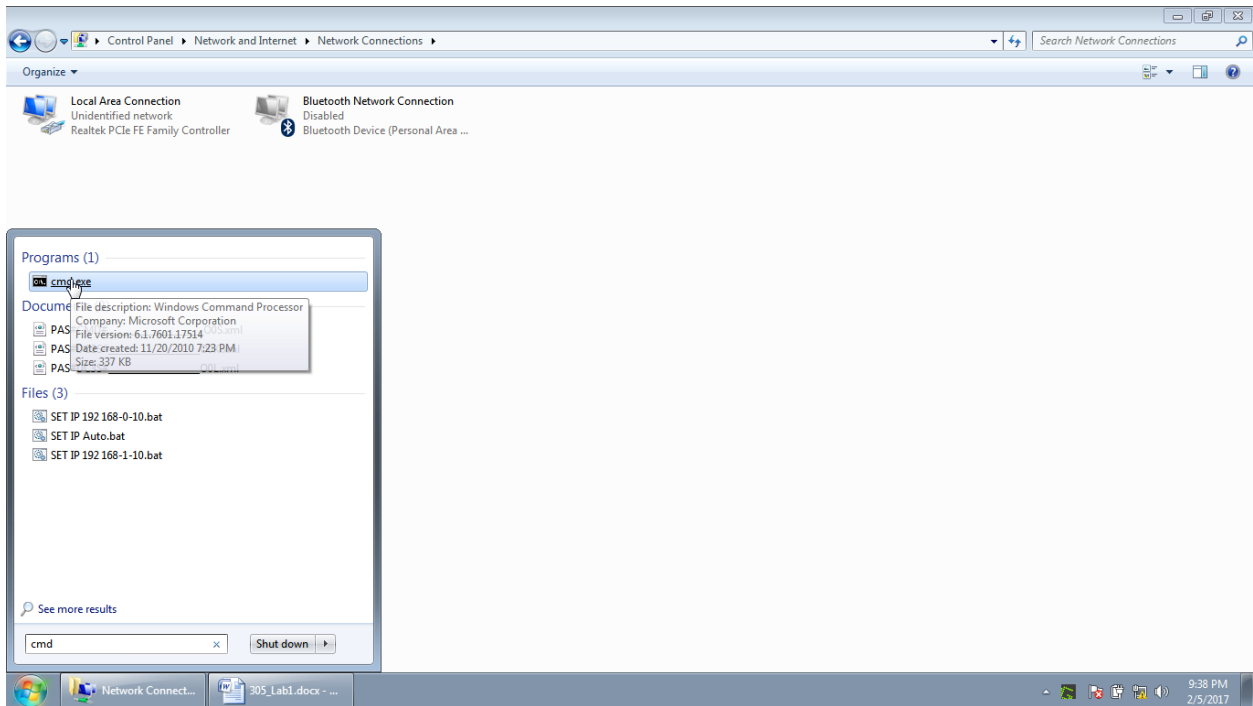
Celem ćwiczenia jest zapoznanie studentów z podstawowa konfiguracja urządzeń Profinet.

2. Opis:

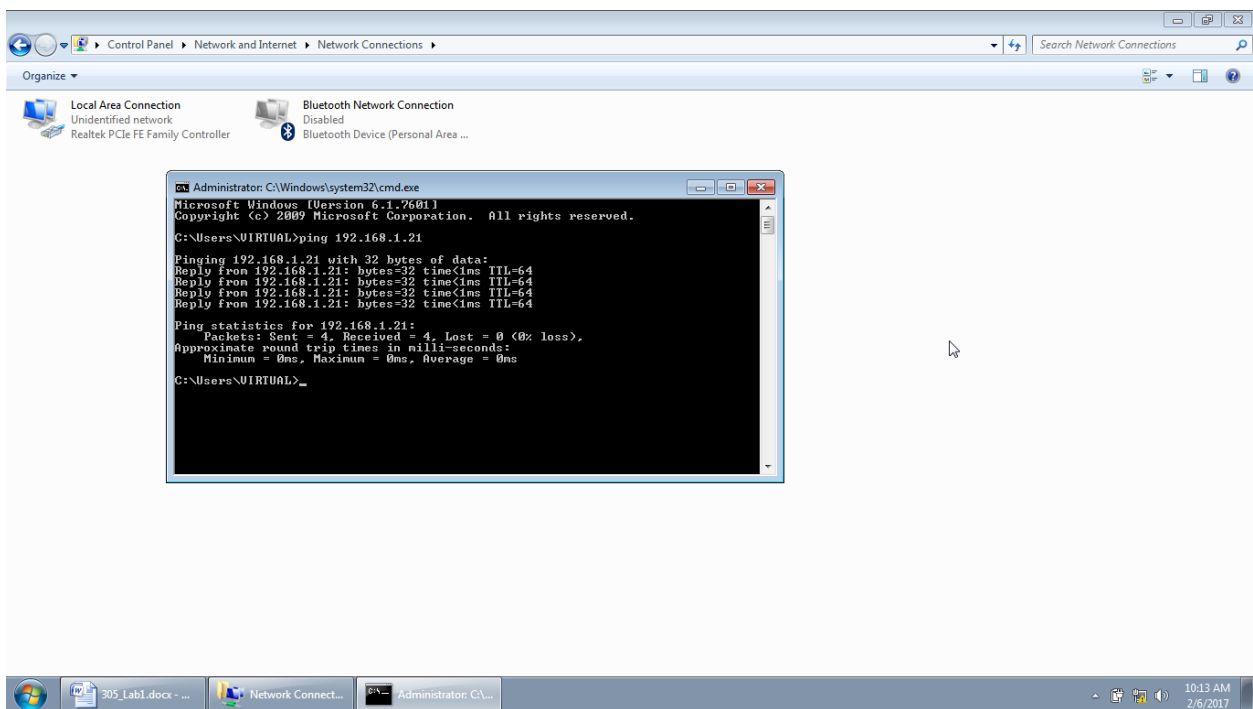
3. Ćwiczenia do wykonania:

3.1. Konfiguracja karty sieciowej do komunikacji w sieci Ethernet

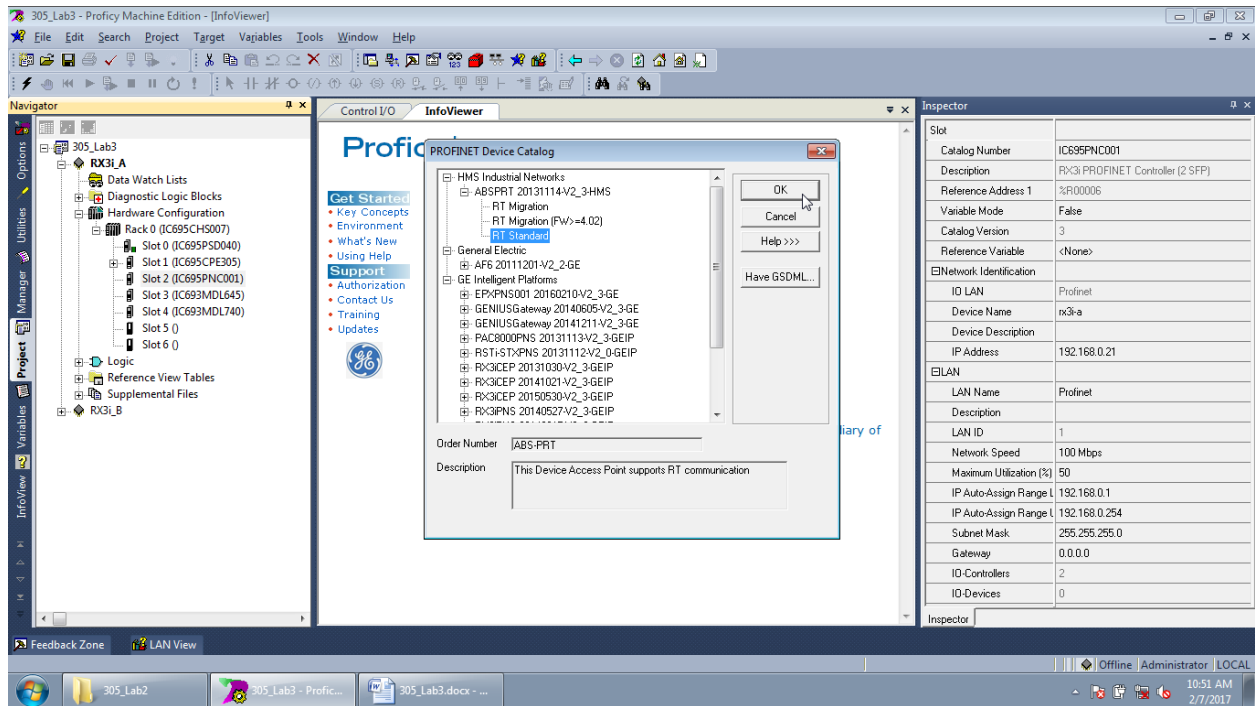
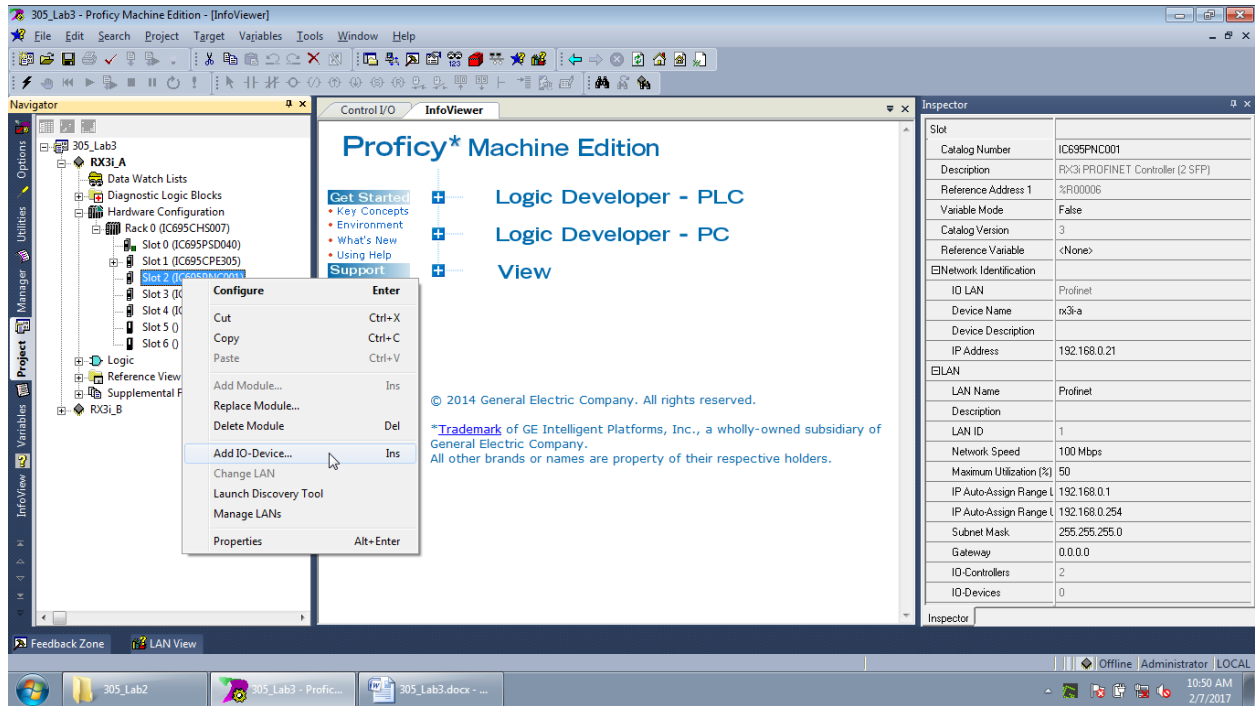


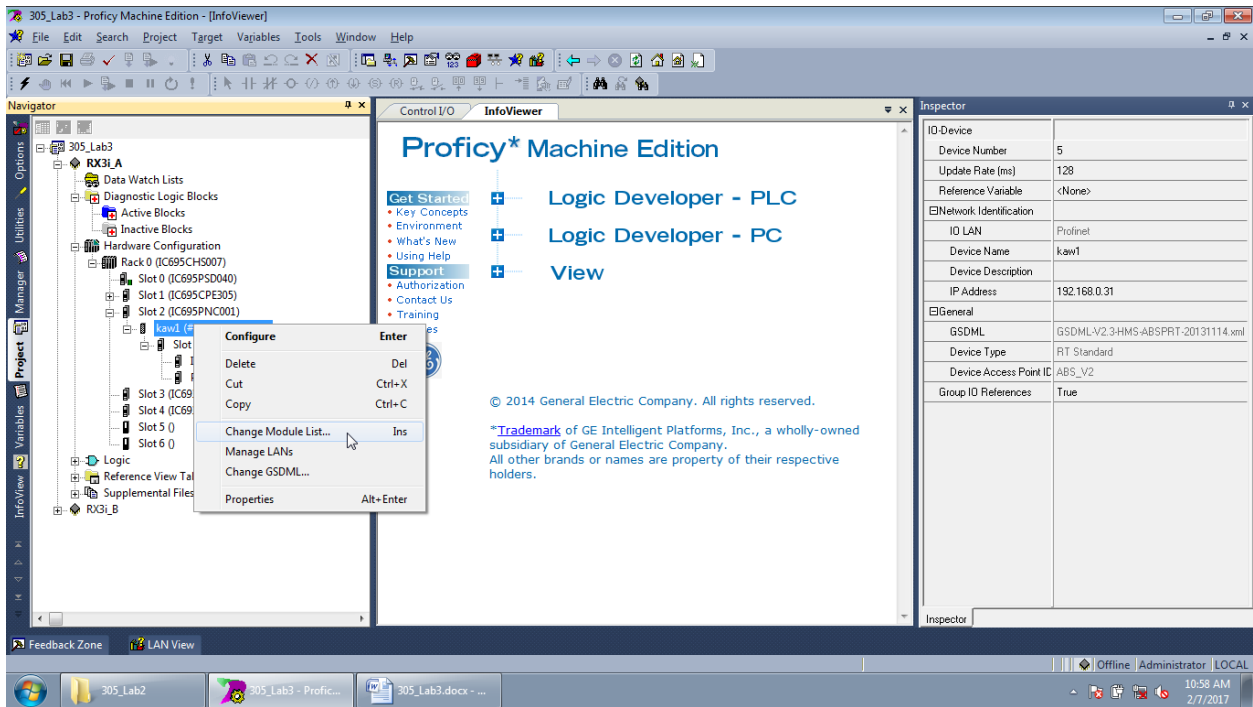
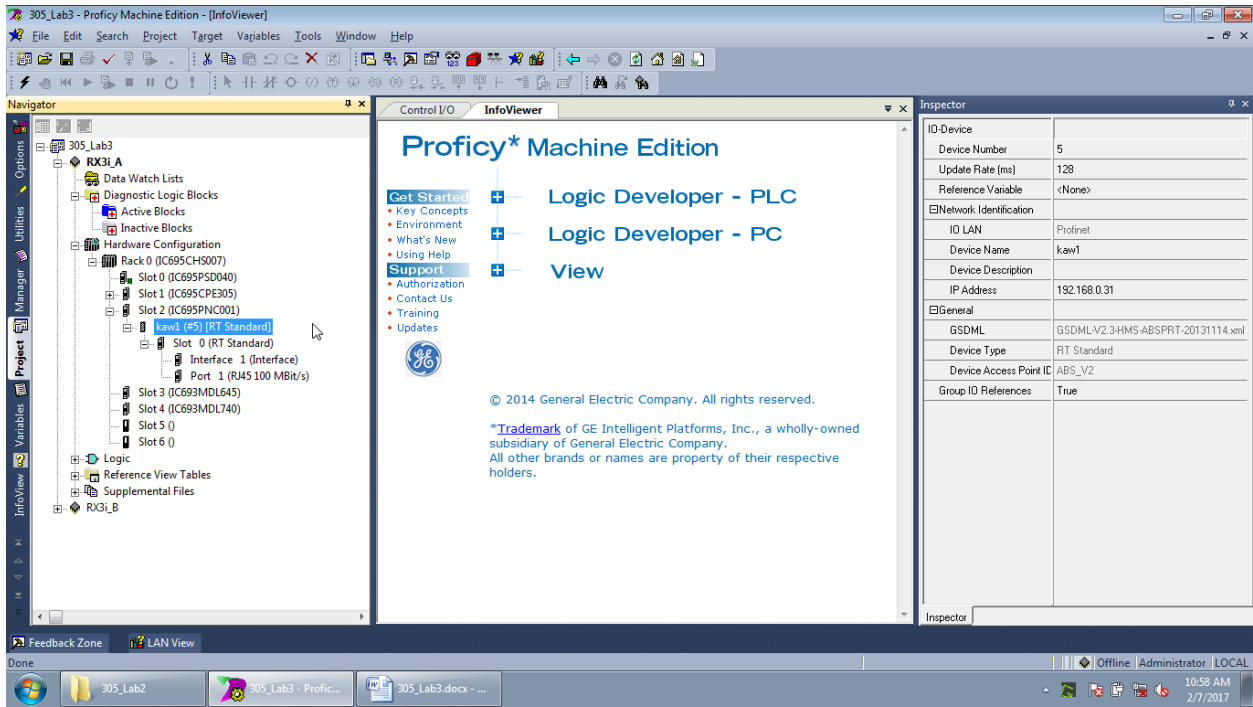


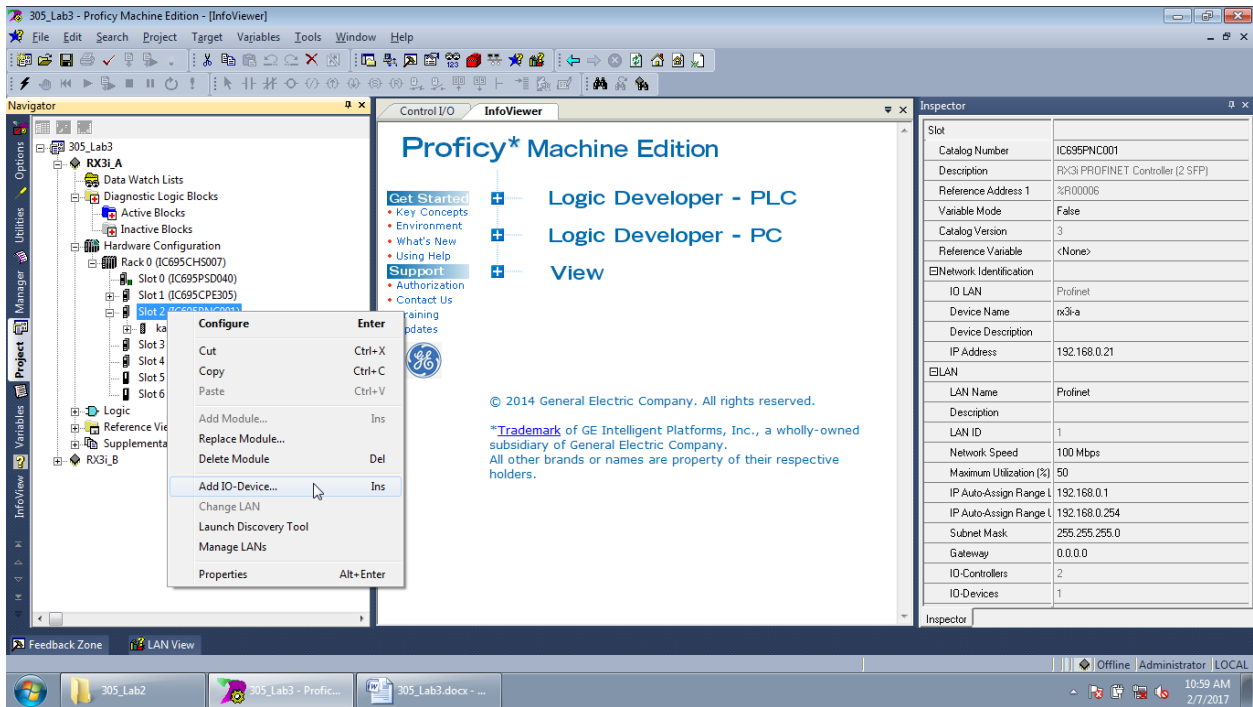
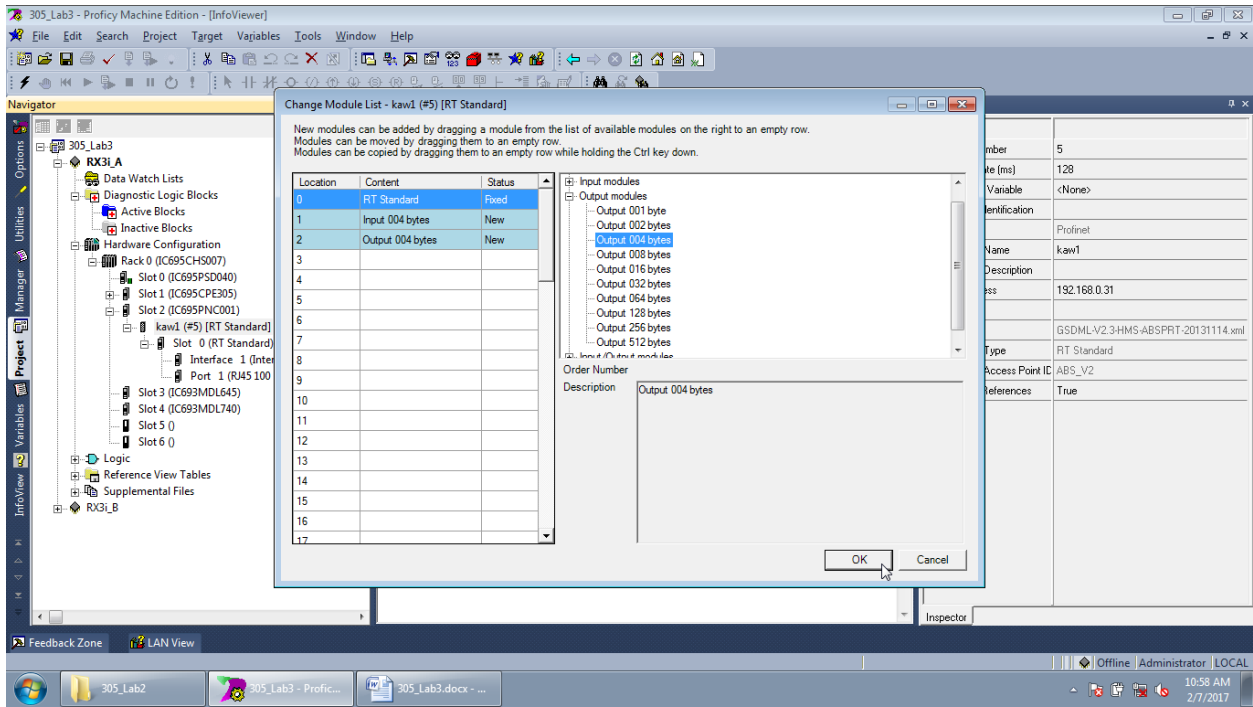
- Kontroler PAC GE RX3i – nr 1 - ping 192.168.1.21
- Kontroler PAC GE RX3i – nr 2 - ping 192.168.1.22



3.2. Konfiguracja urządzeń Profinet dla pierwszego kontrolera







305_Lab3 - Proficy Machine Edition - [InfoViewer]

File Edit Search Project Target Variables Tools Window Help

Navigator

- 305_Lab3
 - RX3I_A
 - Data Watch Lists
 - Diagnostic Logic Blocks
 - Active Blocks
 - Inactive Blocks
 - Hardware Configuration
 - Rack 0 (IC695CH5007)
 - Slot 0 (IC695PSD040)
 - Slot 1 (IC695CPE305)
 - Slot 2 (IC695PNC001)
 - kaw1 (#5) [RT Standard]
 - Slot 3 (IC695MDL645)
 - Slot 4 (IC695MDL740)
 - Slot 5 ()
 - Slot 6 ()
 - Logic
 - Reference View Tables
 - Supplemental Files
 - RX3I_B

Control I/O InfoViewer

PROFINET Device Catalog

- HMS Industrial Networks
 - ABS-PRT 20131114V2_3-HMS
 - RT Migration
 - RT Migration (FW>=4.02)
 - RT Standard
 - General Electric
 - AF6 20111201-V2_2GE
 - GE Intelligent Platforms
 - EPX-PNS 001 20160210V2_3-GE
 - GENIUSGateway 20140605V2_3-GE
 - GENIUSGateway 20141211V2_3-GE
 - PAC800PNS 20131113V2_3-GE-IP
 - RST-STX-PNS 20131112V2_0-GE-IP
 - RX3ICEP 20131030V2_3-GE-IP
 - RX3ICEP 20141021V2_3-GE-IP
 - RX3ICEP 20150530V2_3-GE-IP
 - RX3PNS 20140527V2_3-GE-IP

Order Number: ABS-PRT
Description: This Device Access Point supports RT communication

Inspector

Slot	
Catalog Number	IC695PNC001
Description	RX3I PROFINET Controller (2 SFP)
Reference Address 1	%R00006
Variable Mode	False
Catalog Version	3
Reference Variable	<None>
ENetwork Identification	
IO LAN	Profinet
Device Name	rx3i-a
Device Description	
IP Address	192.168.0.21
EILAN	
LAN Name	Profinet
Description	
LAN ID	1
Network Speed	100 Mbps
Maximum Utilization (%)	50
IP Auto-Assign Range L	192.168.0.1
IP Auto-Assign Range U	192.168.0.254
Subnet Mask	255.255.255.0
Gateway	0.0.0.0
ID-Controllers	2
IO-Devices	1

Feedback Zone LAN View

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File Edit Search Project Target Variables Tools Window Help

Navigator

- 305_Lab3
 - RX3I_A
 - Data Watch Lists
 - Diagnostic Logic Blocks
 - Active Blocks
 - Inactive Blocks
 - Hardware Configuration
 - Rack 0 (IC695CH5007)
 - Slot 0 (IC695PSD040)
 - Slot 1 (IC695CPE305)
 - Slot 2 (IC695PNC001)
 - kaw1 (#5) [RT Standard]
 - kaw2 (#6) [RT Standard]
 - Slot 0 (RT Standard)
 - Interface 1 (Interface)
 - Port 1 (R45 100 MBit/s)
 - Slot 1 (Input 004 bytes)
 - Slot 2 (Output 004 bytes)
 - Slot 3 (IC695MDL645)
 - Slot 4 (IC695MDL740)
 - Slot 5 ()
 - Slot 6 ()
 - Logic
 - Reference View Tables
 - Supplemental Files
 - RX3I_B

Control I/O InfoViewer

Proficy* Machine Edition

- Get Started
 - Key Concepts
 - Environment
 - What's New
 - Using Help
- Support
 - Authorization
 - Contact Us
 - Training
 - Updates

Logic Developer - PLC
Logic Developer - PC
View

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Inspector

IO-Device	
Device Number	6
Update Rate (ms)	128
Reference Variable	<None>
ENetwork Identification	
IO LAN	Profinet
Device Name	kaw2
Device Description	
IP Address	192.168.0.32
EGeneral	
GSDML	GSDML-V2_3-HMS-ABS-PRT-20131114.xml
Device Type	RT Standard
Device Access Point IC	ABS_V2
Group IO References	True

Feedback Zone LAN View

Done 305_Lab2 305_Lab3 - Proficy... 305_Lab3.docx - ...

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305_Lab3 - Proficy Machine Edition - [InfoViewer]

File Edit Search Project Target Variables Tools Window Help

Control I/O InfoViewer

Proficy* Machine Edition

Get Started

- Key Concepts
- Environment
- What's New
- Using Help

Support

- Authorization
- Contact Us
- Training
- Updates

Logic Developer - PLC

Logic Developer - PC

View

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Inspector

IO-Device	
Device Number	1
Update Rate (ms)	128
Reference Variable	<None>
EINetwork Identification	
IO LAN	Profinet
Device Name	wyspa1
Device Description	
IP Address	192.168.0.23
EGeneral	
GSDML	GSDML-V2.0-GEIP-RSTI-STXPN5-2013111
Device Type	STXPN5001
Device Access Point IC	IDD_1
Group IO References	True

Done

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305_Lab3 - Proficy Machine Edition - [(0.2.2.5) ST-5231(1Ch RS485) [RX3I_A]]

File Edit Search Project Target Variables Parameter Tools Window Help

Control I/O InfoViewer [(0.2.2.5) ST-5231(1Ch RS485) [RX3I_A]]

Settings | Module Parameters | GSDML Details

Parameters	Values
Byte input data	%M00049
Length	8
Byte input data	%M00057
Length	8
Byte input data	%M00065
Length	8
Byte input data	%M00073
Length	8
Byte input data	%M00081
Length	8
Byte input data	%M00089
Length	8
Byte output data	%M00049
Length	8
Byte output data	%M00057
Length	8
Byte output data	%M00065
Length	8
Byte output data	%M00073
Length	8
Byte output data	%M00081
Length	8
Byte output data	%M00089
Length	8

Inspector

IO-Device	
Device Number	2
Update Rate (ms)	128
Reference Variable	<None>
EINetwork Identification	
IO LAN	Profinet
Device Name	wyspa2
Device Description	
IP Address	192.168.0.24
EGeneral	
GSDML	GSDML-V2.0-GEIP-RSTI-STXPN5-2013111
Device Type	STXPN5001
Device Access Point IC	IDD_1
Group IO References	True

Done

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305_Lab3 - Proficy Machine Edition

File Edit Search Project Target Variables Tools Window Help

Navigator

- 305_Lab3
 - RX3LA
 - Data Watch Lists
 - Diagnostic Logic Blocks
 - Active Blocks
 - Inactive Blocks
 - Hardware Configuration
 - Rack 0 (IC695CH5007)
 - Slot 0 (IC695PSD040)
 - Slot 1 (IC695CPE305)
 - Slot 2 (IC695PNC001)
 - kaw1 (#5) [RT Standard]
 - kaw2 (#6) [RT Standard]
 - wyspa1 (#1) [STXPNS001]
 - wyspa2 (#2) [STXPNS001]
 - wyspa3 (#3) [STXPNS001]
 - Slot 0 (STXPNS001)
 - Slot 1 (ST-1218(8DI,24V))
 - Slot 2 (ST-1218(8DI,24V))
 - Slot 3 (ST-1218(8DI,24V))
 - Slot 4 (ST-2328(8DO,24V))
 - Slot 5 (ST-2328(8DO,24V))
 - Slot 6 (ST-2328(8DO,24V))
 - Slot 3 (IC693MDL645)
 - Slot 4 (IC693MDL740)
 - Slot 5 ()
 - Slot 6 ()
 - Logic
 - Program Blocks

Inspector

IO-Device	
Device Number	3
Update Rate (ms)	128
Reference Variable	<None>
Network Identification	
IO LAN	Profnet
Device Name	wyspa3
Device Description	
IP Address	192.168.0.25
General	
GSDML	GSDML-V2.0-GEIP-RST-STXPNS
Device Type	STXPNS001
Device Access Point IC	ID0_1
Group ID References	True

Done

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305_Lab3 - Proficy Machine Edition

File Edit Search Project Target Variables Tools Window Help

Navigator

- 305_Lab3
 - Active Blocks
 - Inactive Blocks
 - Hardware Configuration
 - Rack 0 (IC695CH5007)
 - Slot 0 (IC695PSD040)
 - Slot 1 (IC695CPE305)
 - Slot 2 (IC695PNC001)
 - kaw1 (#5) [RT Standard]
 - kaw2 (#6) [RT Standard]
 - wyspa1 (#1) [STXPNS001]
 - wyspa2 (#2) [STXPNS001]
 - wyspa3 (#3) [STXPNS001]
 - wyspa4 (#4) [STXPNS001]
 - Slot 0 (STXPNS001)
 - Slot 1 (ST-1218(8DI,24V))
 - Slot 2 (ST-2328(8DO,24V))
 - Slot 3 (IC693MDL645)
 - Slot 4 (IC693MDL740)
 - Slot 5 ()
 - Slot 6 ()
 - Logic
 - Program Blocks
 - User Defined Types
 - Reference View Tables
 - Default Tables
 - Supplemental Files
 - APM Files
 - AUP Files
 - Controller

Inspector

IO-Device	
Device Number	4
Update Rate (ms)	128
Reference Variable	<None>
Network Identification	
IO LAN	Profnet
Device Name	wyspa4
Device Description	
IP Address	192.168.0.26
General	
GSDML	GSDML-V2.0-GEIP-RST-STXPNS
Device Type	STXPNS001
Device Access Point IC	ID0_1
Group ID References	True

Done

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3.3. Wgrywanie ustawień

Wgrać ustawienia do pierwszego oraz drugiego kontrolera.

UWAGA!!!: Istnieje możliwość wgrywania ustawień tylko i wyłącznie do jednego urządzenia. Aby wgrać ustawienia do drugiego kontrolera należy ustawić kontroler, jako aktywny w programie PME (rysunek poniżej). Jeżeli chcemy wgrać ustawienia pierwszego kontrolera należy go ustawić ponownie na aktywny.

