

CONFIGURAÇÃO

COMUNICANDO CONTROLOGIX COM O PLC GE

Autor: Rodolfo Cintra

Cliente :
Projeto :
Documento : Comunicando com o PLC GE
Arquivo :

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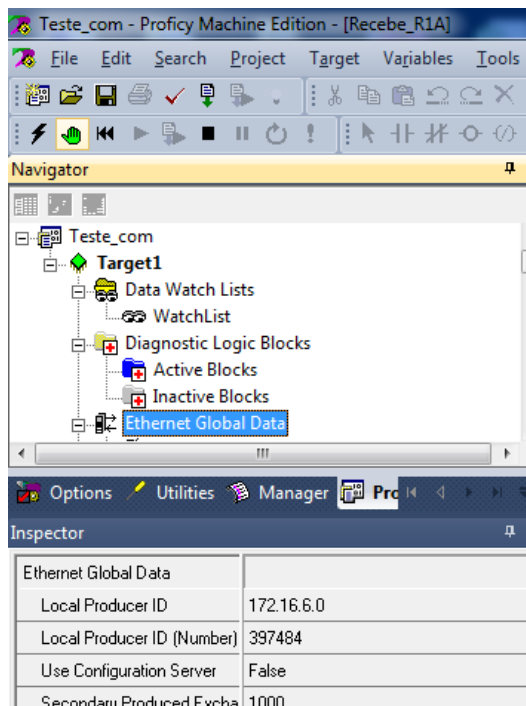
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1. CONDIÇÕES INICIAIS

Para comunicar o PLC da Rockwell (Controllogix) com o PLC GE é necessário um cartão da PROSOFT (MVI56-EGD)

2. COMUNICANDO COM O PLC GE

O PLC GE possui dois endereços IPs, o do cartão que no caso é 172.16.5.1 e outro do EGD que é 172.16.6.0



Navigator

- Slot 2 (IC695CRU320)
- Slot 3 (Used With Slot 2)
- Slot 4 (IC695ETM001)
- Slot 5 0
- Slot 6 0
- Slot 7 0
- Slot 8 0
- Slot 9 0

Options Utilities Manager Pro

Inspector

Slot	
Catalog Number	IC695ETM001
Description	Ethernet Interface Module
Reference Address 1	%I00001
AUP File Name	
Variable Mode	False
Catalog Version	5

Control I/O InfoViewer (0.4) IC695ETM001 Recebe_R1A

Settings RS-232 Port (Station Manager) Power Consumption

Parameters

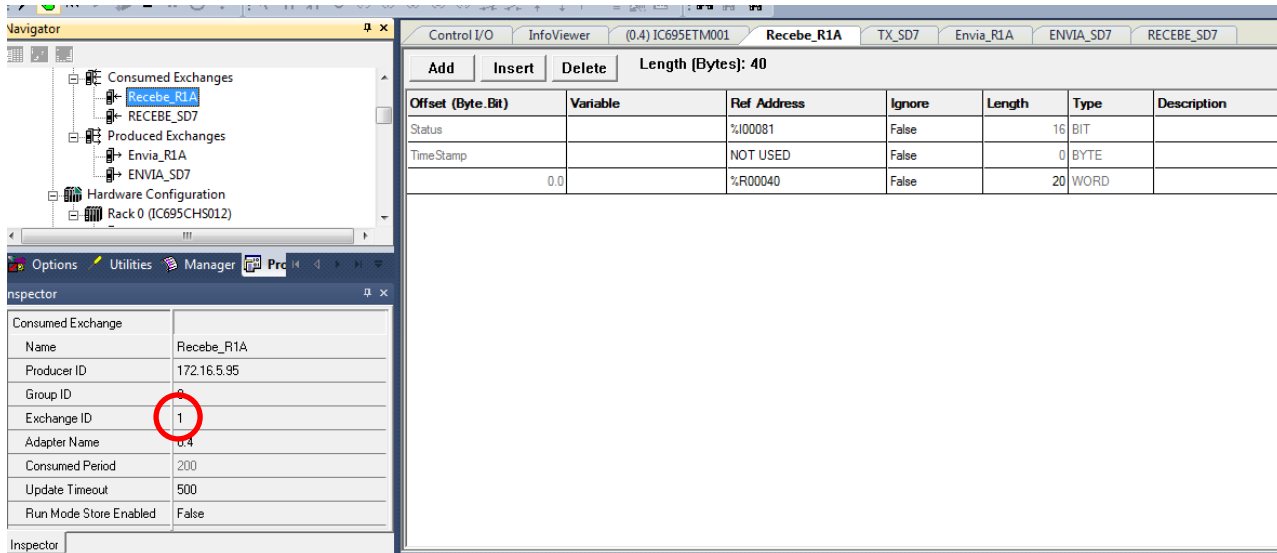
Configuration Mode	TCP/IP
Adapter Name	0.4
Use BOOTP for IP Address	False
IP Address	172.16.5.1
Subnet Mask	255.255.252.0
Gateway IP Address	0.0.0.0
Name Server IP Address	0.0.0.0
Max FTP Server Connections	0
Network Time Sync	None
Status Address	%I00001
Length	80
Redundant IP	Disable
I/O Scan Set	1

2.1 CONFIGURANDO EXCHANGE PARA RECEBER DO CONTROLOGIX

Ip do cartão Prosoft 172.16.5.95

Leitura no %R0040 de 20 registros

Número da Exchange ID -1 (Esse número é importante ele deve ser configurado no cartão Prosoft também)



The screenshot shows the Prosoft Engineering software interface. On the left, the 'Navigator' pane displays a tree structure with 'Consumed Exchanges' expanded, showing 'Recebe_R1A' and 'RECEBE_SD7'. Below this, the 'Inspector' pane shows the configuration for 'Recebe_R1A'.

Offset (Byte.Bit)	Variable	Ref Address	Ignore	Length	Type	Description
Status		%I00081	False	16	BIT	
Time Stamp		NOT USED	False	0	BYTE	
0.0		%R00040	False	20	WORD	

The 'Inspector' pane shows the following configuration for 'Recebe_R1A':

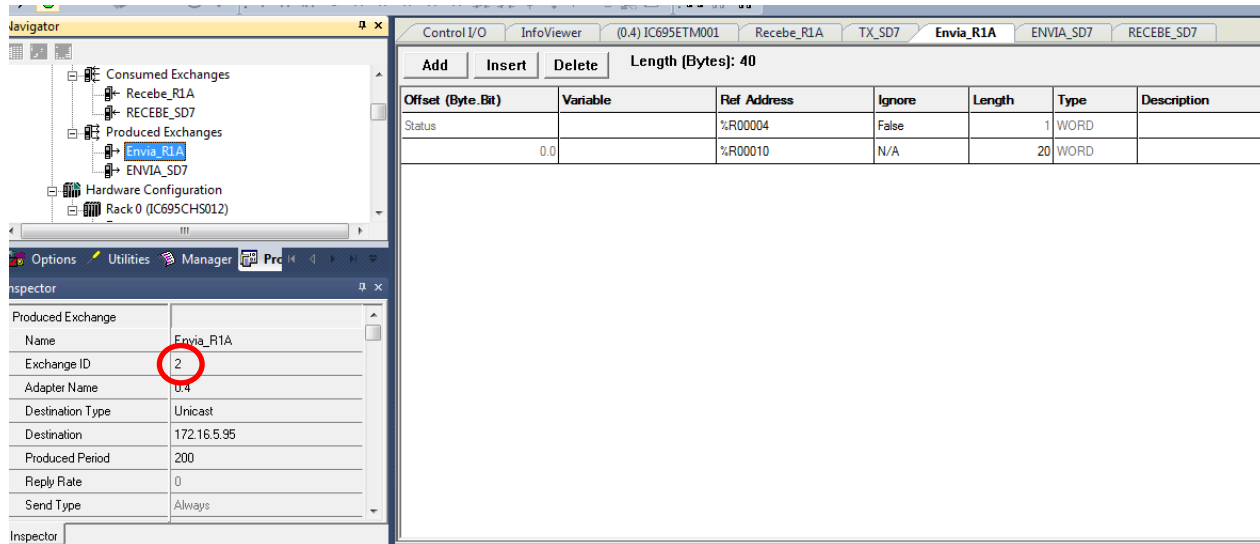
Property	Value
Name	Recebe_R1A
Producer ID	172.16.5.95
Group ID	0
Exchange ID	1
Adapter Name	0.4
Consumed Period	200
Update Timeout	500
Run Mode Store Enabled	False

2.2 CONFIGURANDO A EXCHANGE PARA ENVIO

IP do destino (cartão Prosoft) 172.16.5.95

Envio do registro %R0010 de 20 registros

Número Exchange ID -2, esse número é único e o cartão Prosoft deve ser configurado da mesma forma.



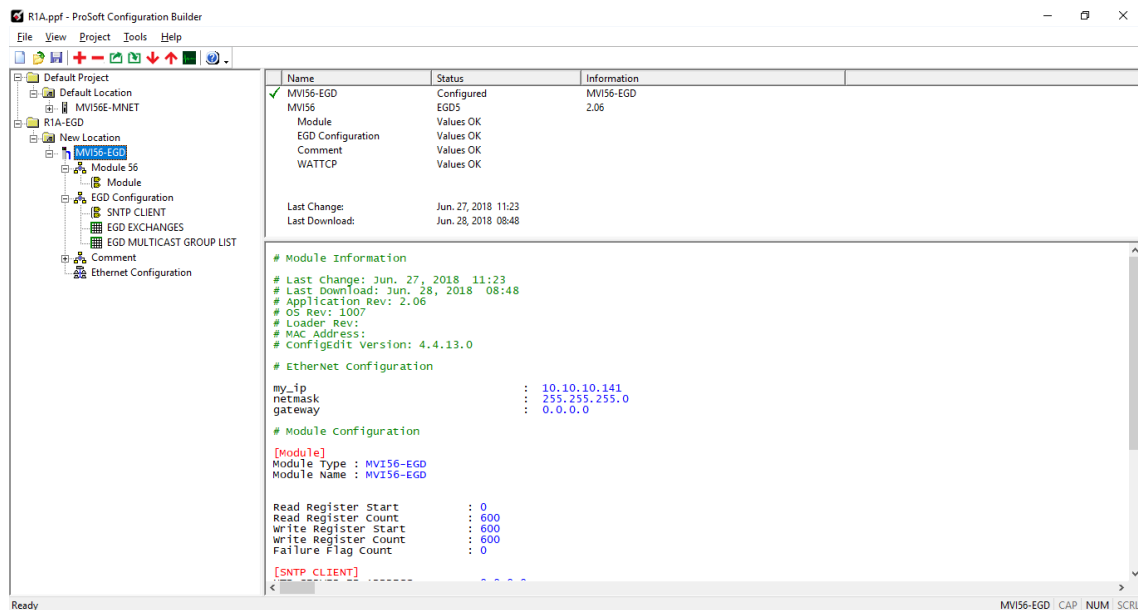
The screenshot shows the Prosoft Engineering software interface. On the left, the 'Navigator' pane displays a tree structure of exchanges. Under 'Produced Exchanges', 'Envia_R1A' is selected. Below the Navigator, the 'Inspector' pane shows the configuration for 'Envia_R1A'. The 'Exchange ID' field is circled in red and contains the value '2'. Other fields include 'Name' (Envia_R1A), 'Adapter Name' (0.4), 'Destination Type' (Unicast), 'Destination' (172.16.5.95), 'Produced Period' (200), 'Reply Rate' (0), and 'Send Type' (Always).

The main window displays the 'InfoViewer' tab for the selected exchange. It shows a table with the following data:

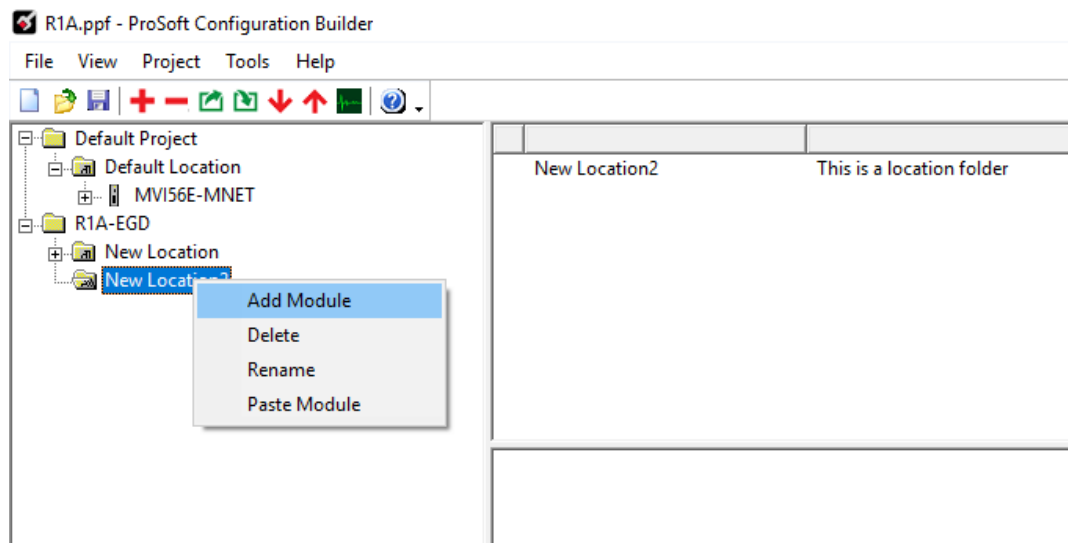
Offset (Byte.Bit)	Variable	Ref Address	Ignore	Length	Type	Description
Status		%R00004	False	1	WORD	
0.0		%R00010	N/A	20	WORD	

3. CONFIGURAÇÃO DO CARTÃO

Para configurar o cartão é necessário o software Prosoft Builder



3.1 ADICIONAR MÓDULO



Choose Module Type

Product Line Filter

☐ All
☐ PLX4000
☐ PLX6000
☐ MVI46
☒ MVI56
☐ MVI71

☐ PLX5000
☐ PLX30
☐ MVI69
☐ MVI56E
☐ PTQ

☐ MVI69E
☐ MVI69L
☐ PLX80

Search Module Type

STEP 1: Select Module Type

MVI56-101M
MVI56-101M
MVI56-101S
MVI56-103M
MVI56-104S
MVI56-BDW
MVI56-BSAPS
MVI56-DH485
MVI56-DH485R
MVI56-DNP
MVI56-DNPSNET
MVI56-EGD
MVI56-FLN
MVI56-GEC
MVI56-HART
MVI56-KOS
MVI56-MCMR

Module Definition:

IEC-870-5-101 MASTER COMMUNICATION MODULE

Action Required

UnCheck if Not Used
UnCheck if Not Used
UnCheck if Not Used
Check to Use

IEC-101 Master Ses... Not Used

IEC-101 Master Ses... Not Used

IEC-101 Master Ses... Not Used

OK

Cancel

3.2 REGISTROS DE LEITURA E ESCRITA

Na tabela interna do cartão os registros de leitura estão à partir do registro 0 e a quantidade são 600, os de escrita estão à partir do registro 600 e são 600 também.

R1A.ppf - ProSoft Configuration Builder

File View Project Tools Help

Default Project

- Default Location
 - MVI56E-MNET
- R1A-EGD
 - New Location
 - MVI56-EGD
 - Module 56 (highlighted)
 - Module
 - EGD Configuration
 - SNTP CLIENT
 - EGD EXCHANGES
 - EGD MULTICAST GROUP LIST
 - Comment
 - Ethernet Configuration
 - New Location2
 - MVI56-EGD_000

Name	Status
✓ Module 56	Configured
Module	OK

Read Register Start	: 0
Read Register Count	: 600
Write Register Start	: 600
Write Register Count	: 600
Failure Flag Count	: 0

3.3 ENDEREÇO IP DO CARTÃO

R1A - ProSoft Configuration Builder

File View Project Tools Help

Default Project

- Default Location
 - MVI56E-MNET
 - Module
 - MNET Client 0
 - MNet Servers
 - STATIC ARP TABLE
 - Comment
 - Ethernet Configuration
- R1A-EGD
 - New Location
 - MVI56-EGD
 - Module 56
 - EGD Configuration
 - Comment
 - Ethernet Configuration (highlighted)

Name	Status	Information
✓ WATTCP	All Tags ...	

[WATTCP]	
my_ip	: 172.16.5.95
netmask	: 255.255.252.0
gateway	: 0.0.0.0

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3.4 CONFIGURANDO TROCA DE INFORMAÇÃO (EXCHANGE)

Para configurar as exchanges, basta clicar duas vezes sobre "EGD EXCHANGES"

R1A.ppf - ProSoft Configuration Builder

File View Project Tools Help

Default Project

- Default Location
 - MV156E-MNET
- R1A-EGD
 - New Location
 - MV156-EGD
 - Module 56
 - Module
 - EGD Configuration
 - SNTP CLIENT
 - EGD EXCHANGES
 - EGD MULTICAST GROUP LIST
 - Comment
 - Ethernet Configuration
 - New Location2
 - MV156-EGD_000

WATTCP All Tags Good

Edit - EGD EXCHANGES

Exch Type	Cast Type	DB Reg	Reg Count	Swap Code
✓ 1 Producer	Producer Unicast	600	1	No Change

Exch Type Value Status - OK

Set to Defaults Add Row Insert Row Delete Row Move Up Move Down

Edit Row Copy Row Paste Row OK Cancel

it Swap No Ch

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3.4.1 Leitura

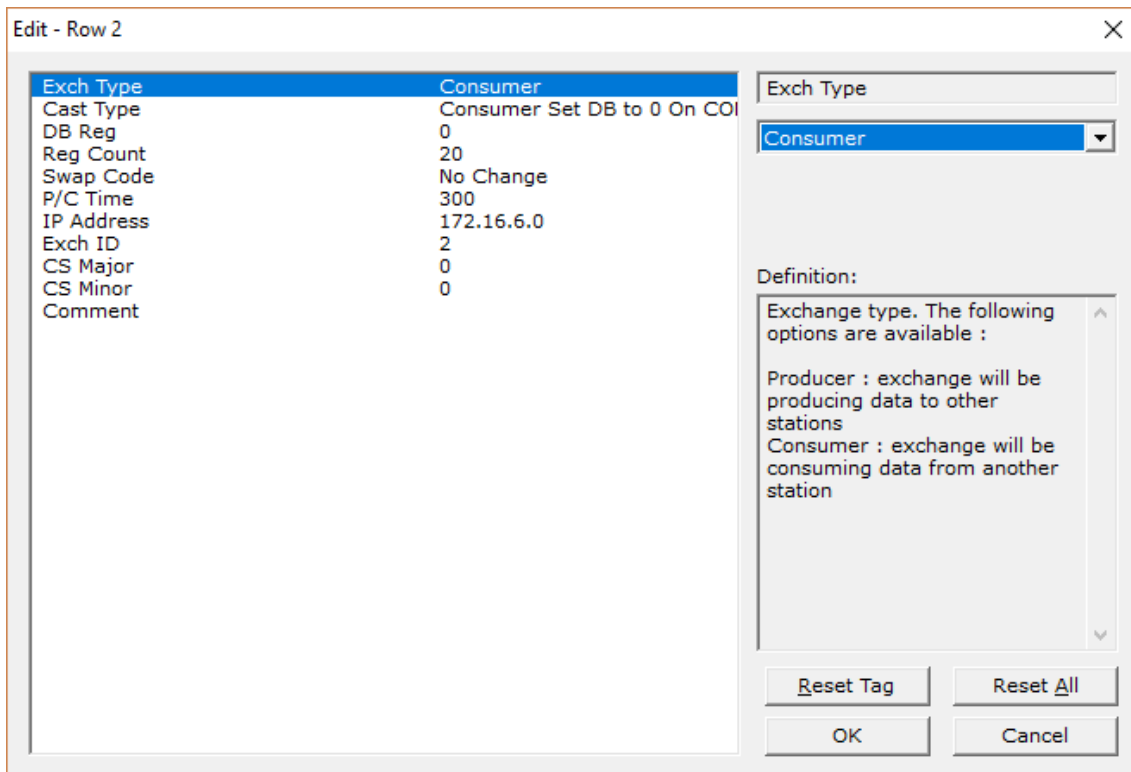
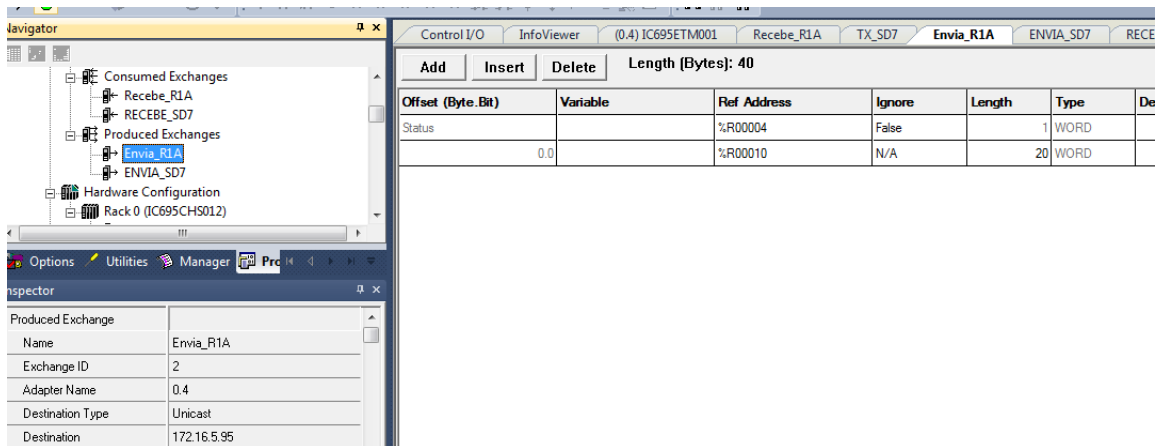
Exchange de leitura do cartão de informações do PLC GE

No caso do PLC GE ele possui dois IP, um do cartão ethernet e outro do EGD

Clicar em “Add Row”

O endereço de leitura deve ser o endereço de IP configurado no EGD,

A configuração da mensagem deve ser compatível com a configuração feita no cartão EGD principalmente o “Exch ID” e a quantidade

Offset (Byte.Bit)	Variable	Ref Address	Ignore	Length	Type	De
Status		%R00004	False	1	WORD	
0.0		%R00010	N/A	20	WORD	

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3.4.2 Exchange de Escrita

Escrita do PLC Rockwell no PLC GE

O endereço de escrita deve ser o endereço de IP configurado no cartão

A configuração da mensagem deve ser compatível com a configuração feita no cartão EGD principalmente o "Exch ID" e a quantidade

Edit - Row 1

Exch Type	Producer	IP Address
Cast Type	Producer Unicast	
DB Reg	600	
Reg Count	20	
Swap Code	No Change	
P/C Time	10	
IP Address	172.16.5.1	
Exch ID	1	
CS Major	0	
CS Minor	0	
Comment		

Definition:

IP address of destination (produced data) or source (consumed data)

Reset Tag Reset All

OK Cancel

Navigator

- Consumed Exchanges
 - Recebe_R1A
 - RECEBE_SD7
- Produced Exchanges
 - Envia_R1A
 - ENVIA_SD7
- Hardware Configuration
 - Rack 0 (IC695CHS012)

Control I/O InfoViewer (0.4) IC695ETM001 Recebe_R1A TX_SD7 Envia_R1A ENVIA_SD7

Add Insert Delete Length [Bytes]: 40

Offset (Byte.Bit)	Variable	Ref Address	Ignore	Length	Type
Status		%I00081	False	16	BIT
Time Stamp		NOT USED	False	0	BYTE
0.0		%R00040	False	20	WORD

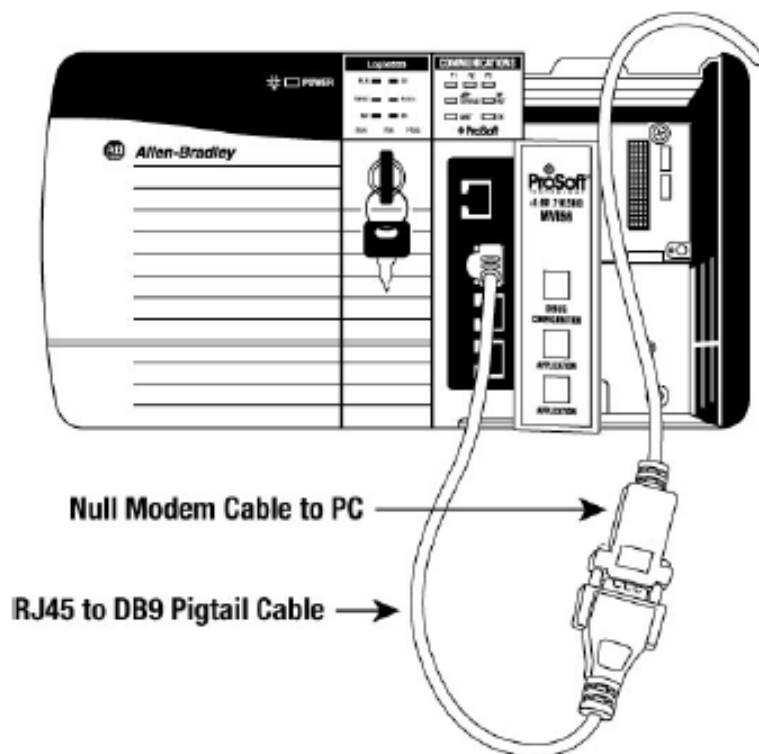
Inspector

Consumed Exchange	
Name	Recebe_R1A
Producer ID	172.16.5.95
Group ID	0
Exchange ID	1
Adapter Name	0.4

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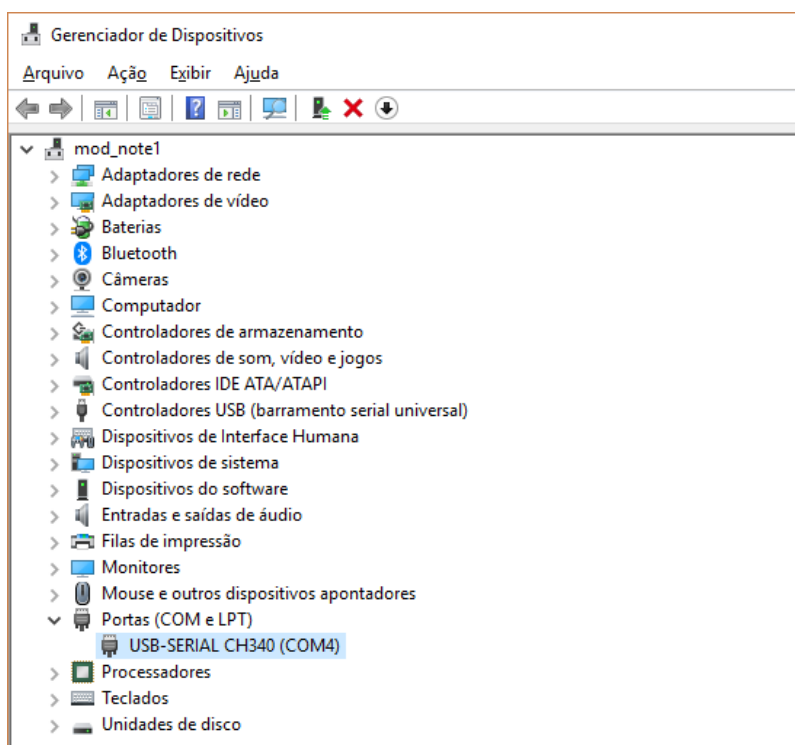
4. DOWNLOAD



4.1 PORTA SERIAL

Verificar a porta que o cabo serial esta conectado. Nesse caso esta na porta 4

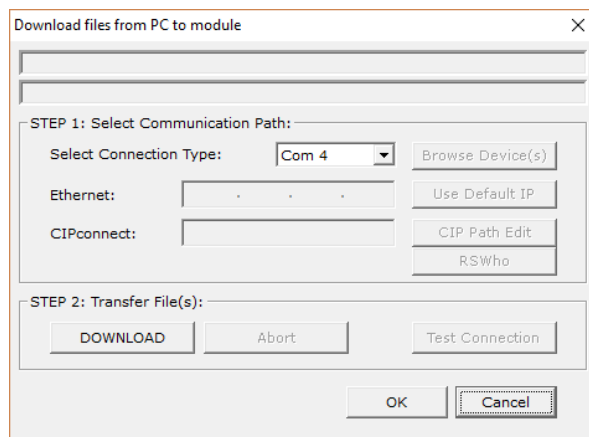
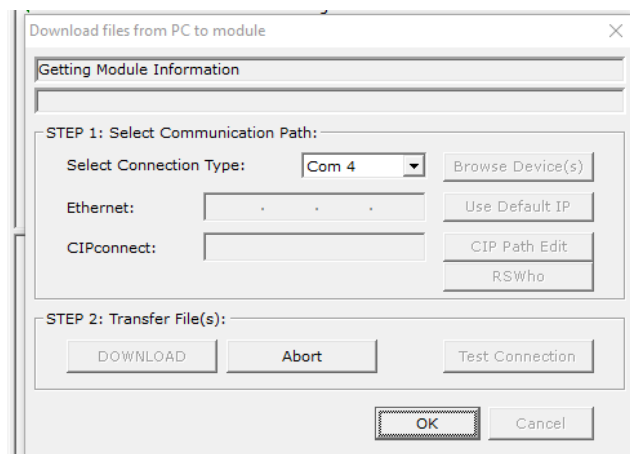
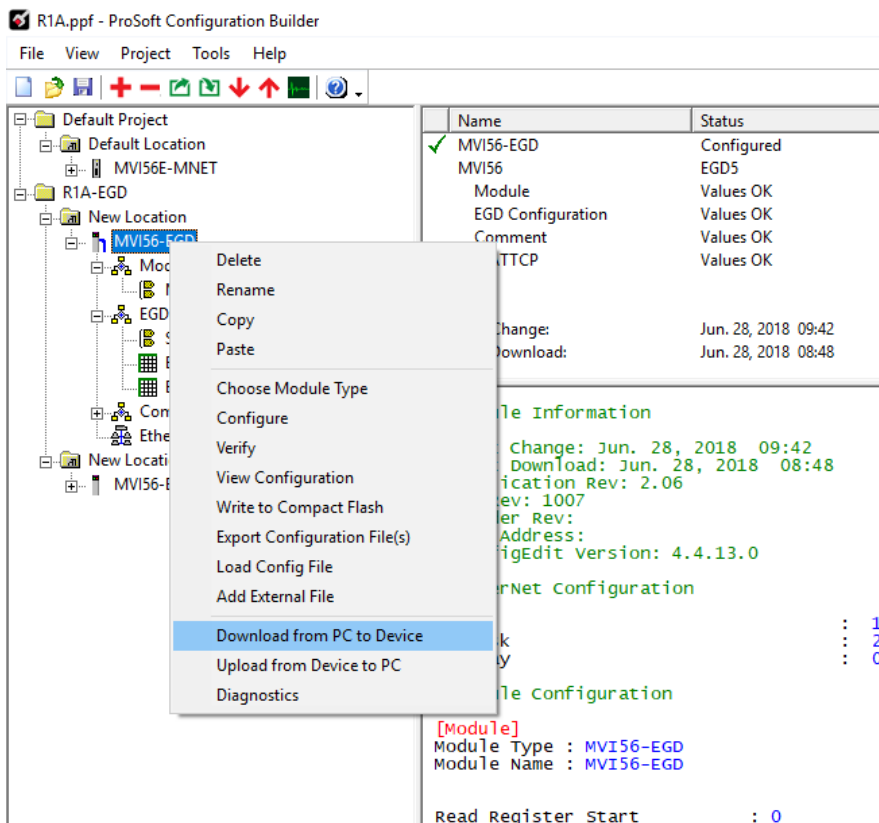
Clicar com o botão
cartão e selecionar
PC to Device"



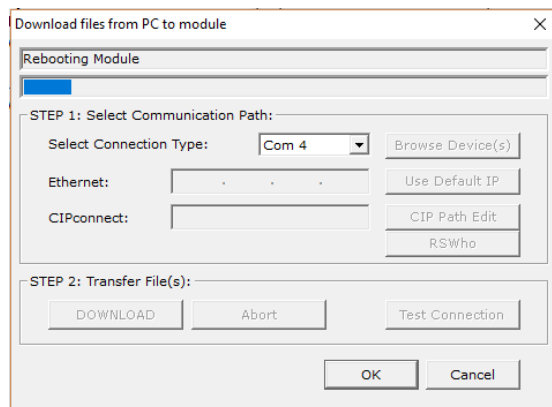
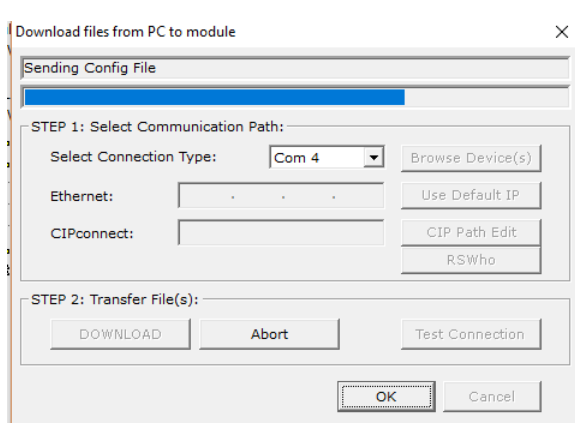
direito sobre o
"Download from

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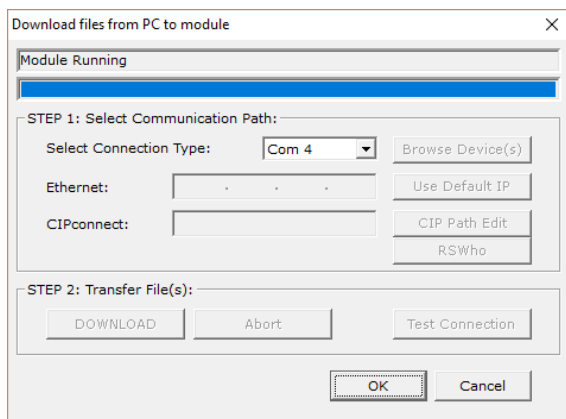
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A configuração é enviada para o cartão e logo na sequência o cartão é reiniciado.

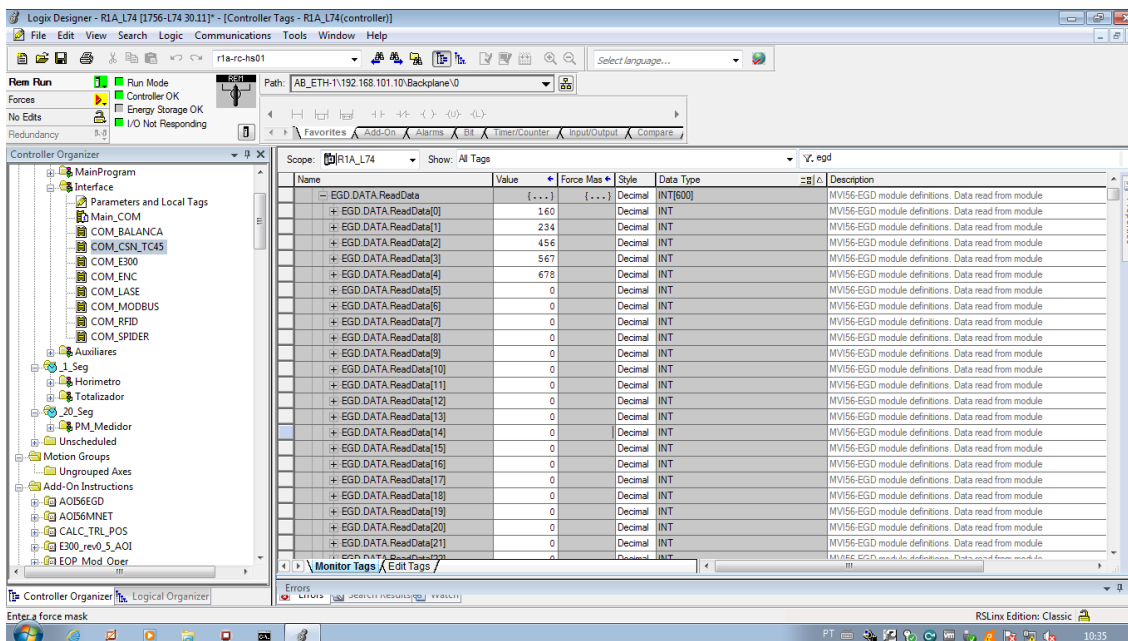
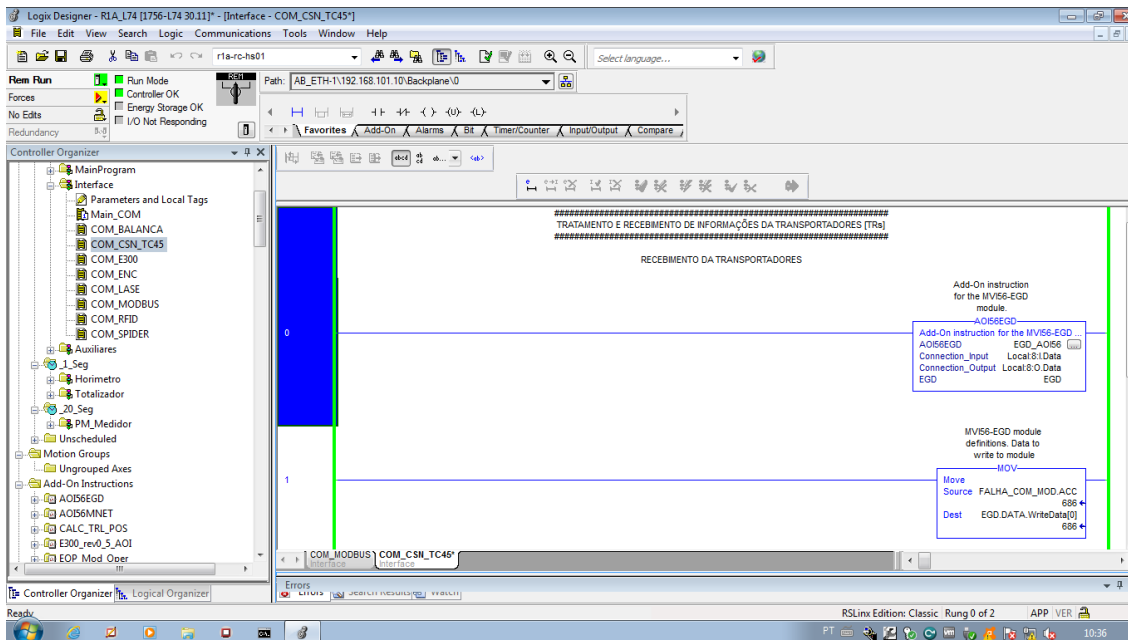


Após o reinício do cartão ele volta para o status de “Running”



5. CONFIGURAÇÃO NECESSÁRIA NO CONTROLOGIX

Para o contrologix é necessário só importar a linha padrão da Prosoft



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6. MODIFICAÇÃO

Revision	Date	Author	Details
00	13 jun 19	Rodolfo Cintra	Revisão inicial

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