

Connection

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These methods allow controlling the behaviour a Client Object.

Function	Purpose
ConnectTo	Connects a S7Client object to a PLC
Connect	Connects a S7Client object to a PLC with implicit parameters
Disconnect	Disconnects a S7Client
SetConnectionType	Sets the connection type (PG/OP/S7Basic)
SetConnectionParams	Sets Address, Local and Remote TSAP for the connection

ConnectTo

Description

Connects the client to the hardware at (IP, Rack, Slot) Coordinates.

Declaration

```
public int ConnectTo(String Address, int Rack, int Slot)
```

Parameters

Name	Type	Note
Address	string	PLC IPV4 Address e.g.: "192.168.1.10"
Rack	int	see table
Slot	int	see table

Return value

- 0 : The Client is successfully connected (or was already connected).
- Other values : see the Errors Code List.

Rack and Slot

In addition to the IP Address, that we all understand, there are two other parameters that index the unit : Rack (0..7) and Slot (1..31) that you find into the hardware configuration of your project, for a physical component, or into the Station Configuration manager for WinAC.

There is however some special cases for which those values are fixed or can work with a default as you can see in the next table.

PLC	Rack	Slot	
S7 300 CPU	0	1	always
S7 400 CPU	not fixed	not fixed	according to the hw config
WinAC CPU	not fixed	not fixed	according to the hw config
S7 1200 CPU	0	0 or 1	
S7 1500 CPU	0	0 or 1	
WinAC IE	0	0	according to the hw config

Connect

Description

Connects the client to the PLC with the parameters specified in the previous call of `ConnectTo()` or `SetConnectionParams()`.

Declaration

```
public int Connect()
```

Return value

- 0 : The Client is successfully connected (or was already connected).
- Other values : see the Errors Code List.

Remarks

This function can be called only after a previous of `ConnectTo()` or `SetConnectionParams()` which internally sets Address and TSAPs.

Disconnect

Description

Disconnects “gracefully” the S7Client from the PLC.

Declaration

```
public void Disconnect()
```

Remarks

This function can be called safely multiple times. After calling this function `LastError = 0` and `Connected = false`.

SetConnectionType

Sets the connection resource type, i.e. the way in which the Clients connects to a PLC.

Declaration

```
public void SetConnectionType(short ConnectionType)
```

Parameters

Name	Type	Note
ConnectionType	short	See the table

Connection type table

Connection Type	Value	Helper Const
PG	0x01	S7.PG
OP	0x02	S7.OP
S7 Basic	0x03..0x10	S7.S7_BASIC

SetConnectionParams

Description

Sets internally (IP, LocalTSAP, RemoteTSAP) Coordinates.

Declaration

```
public void SetConnectionParams(String Address, int LocalTSAP, int RemoteTSAP)
```

Parameters

Name	Type	Note
Address	string	PLC IPV4 Address e.g.: "192.168.1.10"
LocalTSAP	int	Local TSAP (PC TSAP)
RemoteTSAP	int	Remote TSAP (PLC TSAP)

Remarks

This function must be called just before Connect().

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