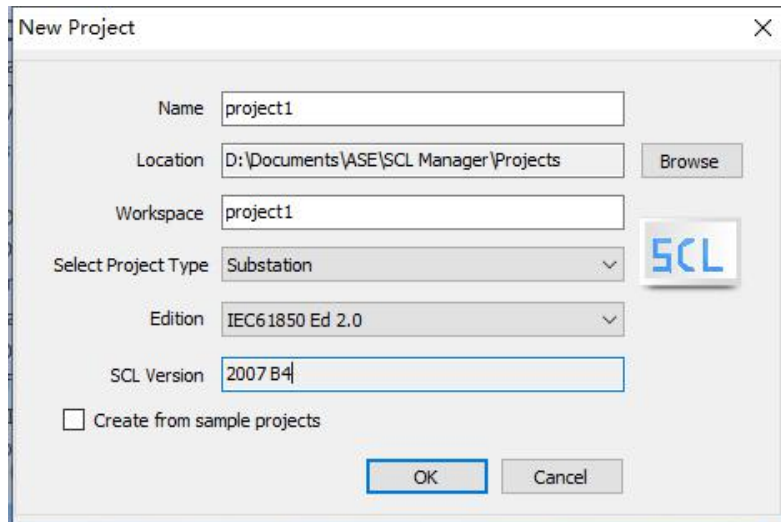


SCL Manager Instructions

SCL Manager is a modeling software. It provides IEC61850 modeling file (Automatic Control(Axxx), Generic Function(Gxxx), Protection(Pxxx), etc.) for EasyConnect software to implement Modbus to IEC61850 data mapping.

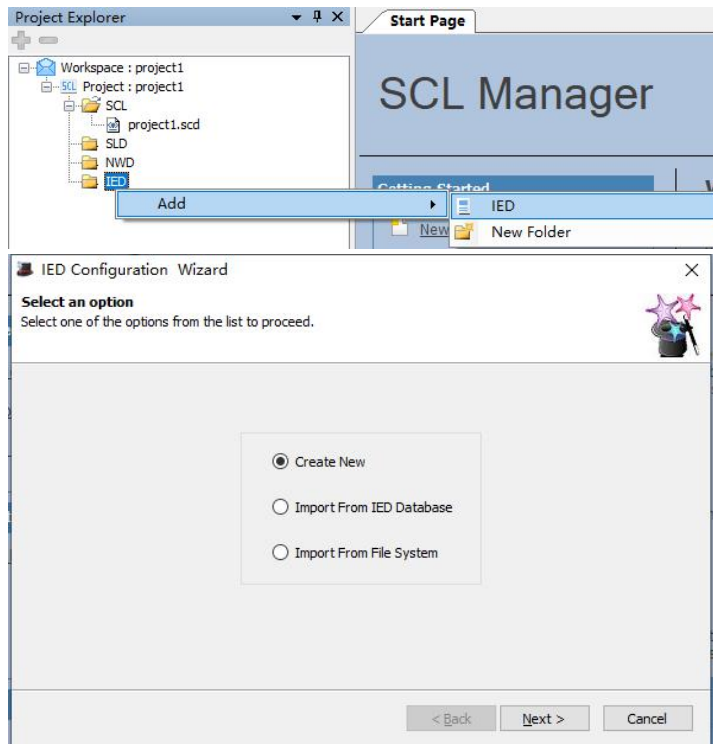
Step 1: Create a project



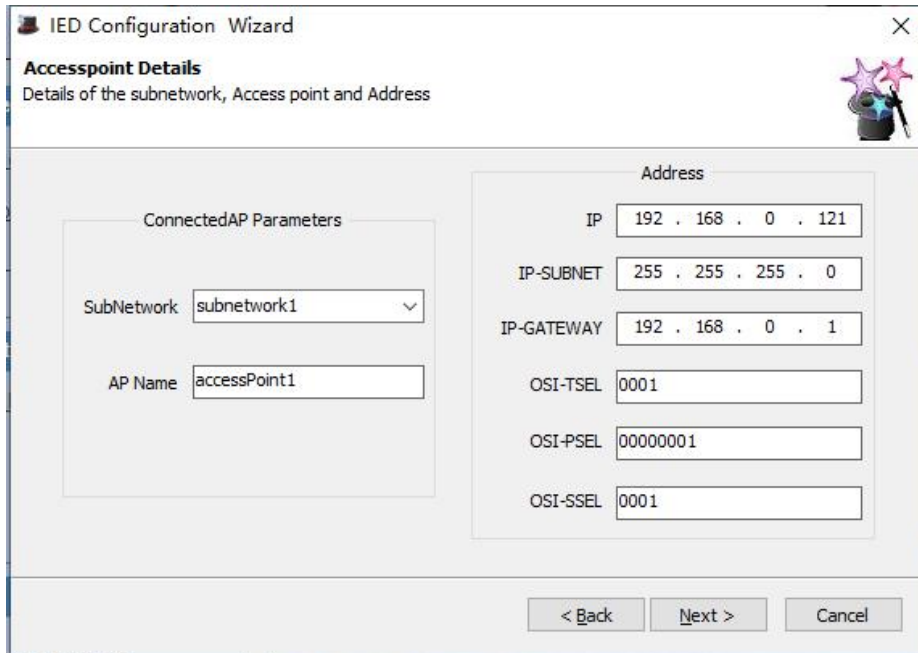
Click OK, the project is created successfully

Note: IEC 61850 Ed 1.0 and Ed 2.0 are for iGate-850 V1.0 and V1.1 respectively.

Step 2: Create IED



Step 3: Fill in the IP address



IED Configuration Wizard
Accesspoint Details
 Details of the subnetwork, Access point and Address

ConnectedAP Parameters

SubNetwork:

AP Name:

Address

IP:

IP-SUBNET:

IP-GATEWAY:

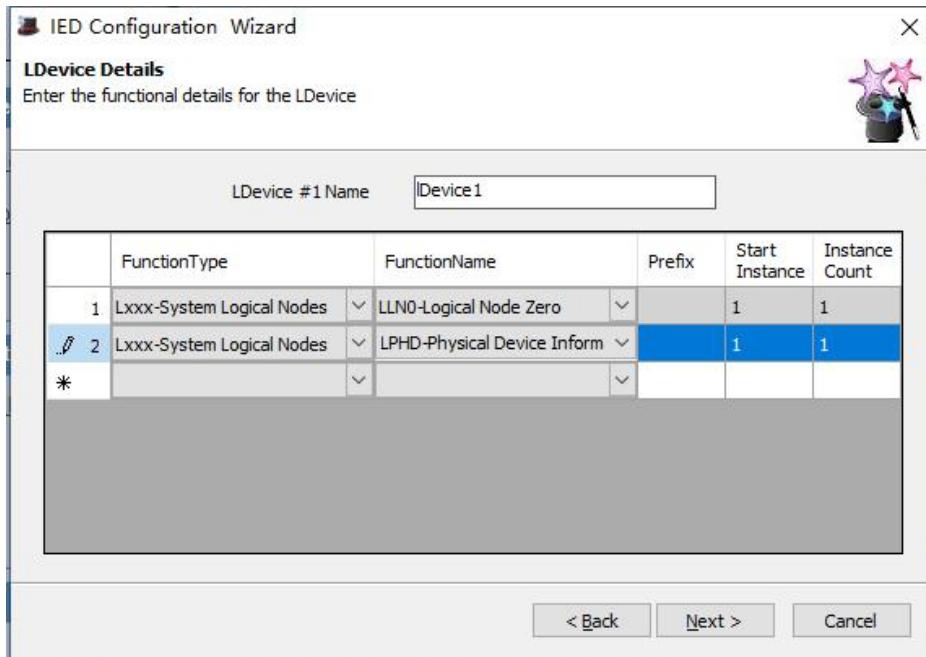
OSI-TSEL:

OSI-PSEL:

OSI-SSEL:

< Back Next > Cancel

Step 4: Configue LDevice



IED Configuration Wizard
LDevice Details
 Enter the functional details for the LDevice

LDevice #1 Name:

	FunctionType	FunctionName	Prefix	Start Instance	Instance Count
1	Lxxx-System Logical Nodes	LLN0-Logical Node Zero		1	1
2	Lxxx-System Logical Nodes	LPHD-Physical Device Inform		1	1
*					

< Back Next > Cancel

Add LD function, for example: the GGIO model of Generic Function

SCL Manager Instructions

IED Configuration Wizard

LDevice Details
Enter the functional details for the LDevice

LDevice #1 Name:

	FunctionType	FunctionName	Prefix	Start Instance	Instance Count
1	Lxxx-System Logical Nodes	LLN0-Logical Node Zero		1	1
2	Lxxx-System Logical Nodes	LPHD-Physical Device Inf...		1	1
3	Gxxx-Generic Functions	GGIO-Generic Process I/O		1	1
*					

< Back Next > Cancel

Step 5: Add DO (Add new property for Class)

SCL Manager - project1

Project Explorer: project1, project1.scd, IED1

SCL Features: Substation, Voltage Level, Bay, Connectivity Node, Electrical Connection, Power Transformer, Switching Equipment, Measuring Elements, Battery, Generator, Rotating Reactor, Reactor

IED Data Model - project1: IED1

Accesspoint: accessPoint1

Communication Details: Logical Node Data (8)

Logical Device: Device1

Logical Node List:

Logical Node	Desc
LLN0	
LPHD1	
GGIO1	
GGIO2	
GGIO3	
GGIO4	
MB001	
MB002	

Services Available:

- Automatic Control (5)
- Supervisory Control (6)
- Functional blocks (9)
- Generic Functions (4)
 - Generic Automatic Process Control
 - Generic Process I/O
 - Generic Security Application
 - Generic log
- Interfacing/Archiving (6)
- Mechanical and non-electrical primary equipment (5)
- System Logical Nodes (8)
- Metering & Measurement (13)
- Protection (30)
- power quality events (6)
- Protection Related (11)
- Supervision and Monitoring (11)
- Transducers and instrument transformers (21)
- Switchgear (2)
- Power Transformers (4)
- Power system equipment (18)

Map Set Value Delete Value

IED Data Model - project1: IED1

Accesspoint: accessPoint1

Communication Details: Logical Node Data (8)

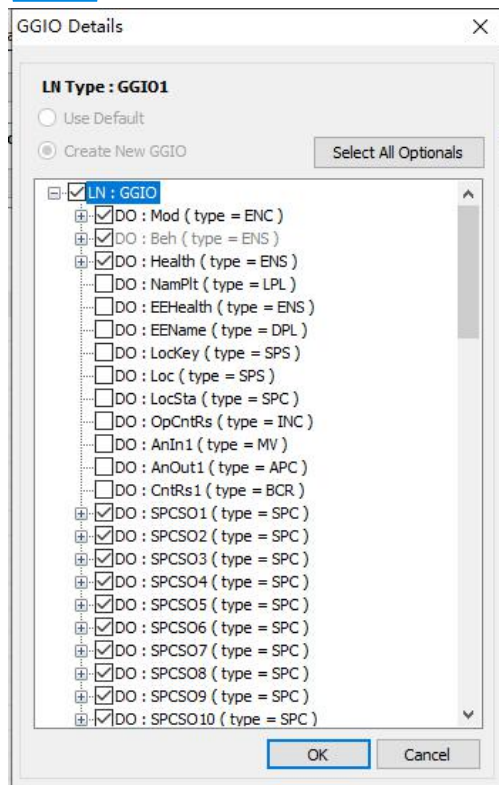
Logical Device: Device1

Logical Node List:

Logical Node	Desc
LLN0	
LPHD1	
GGIO1	
GGIO2	
GGIO3	
GGIO4	
MB001	
MB002	

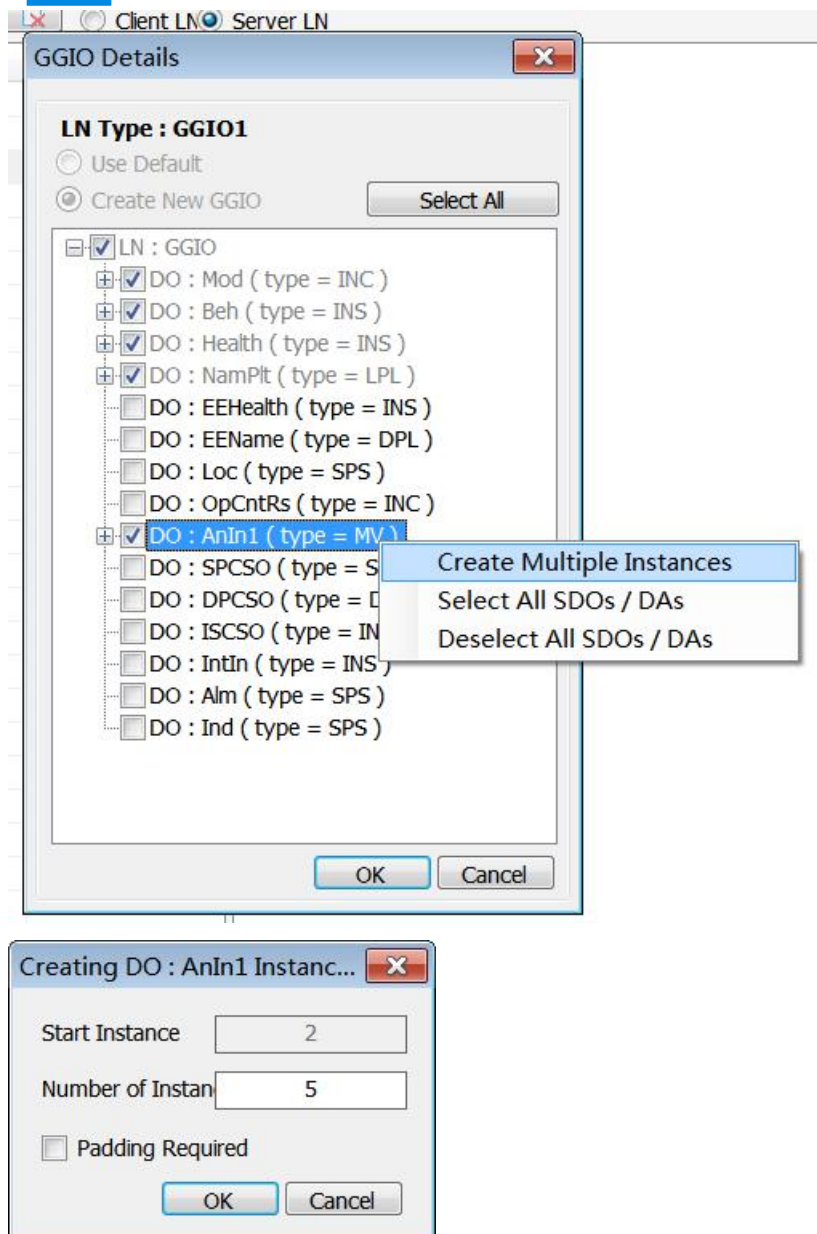
Map Set Value Delete Value

SCL Manager Instructions



Or create multiple instances:

SCL Manager Instructions



Step 6: Add DataSet (DataSet is used for generating the Report)

SCL Manager Instructions

DataSet Information

Dataset

Name: dataset2

Description:

LDevice: Device1

LNode: GGIO1

Data Tags

- ST
- CF
- DC
- MX
 - AnIn1
 - AnIn2
 - AnIn3
 - AnIn4
 - AnIn5
 - AnIn6

FCDA / FCDA List

FCDA Tags

- IDevice1/GGIO1\$MX\$AnIn1
- IDevice1/GGIO1\$MX\$AnIn2
- IDevice1/GGIO1\$MX\$AnIn3
- IDevice1/GGIO1\$MX\$AnIn4
- IDevice1/GGIO1\$MX\$AnIn5
- IDevice1/GGIO1\$MX\$AnIn6

OK Cancel

Step 7: Add RCD (Report Control Block)

SCL Manager Instructions

Communication Details Logical Node Data (4) Datasets (1) GOOSE (0) **Reports (1)** Sampled Value (0) Logs (0) Log Controls (0) External Signals (0) Setting Groups (0)

Logical Dev: [All] Logical Node: [All]

Report Control Block Name	Data Set	Report ID	Type	Integrity Peri...	Buffer Time ...	No of Instan...	Desc
Device1.GGIO1.rcb1	dataset1	ID	Buffered	0	0	1	

Select

Logical Dev: [Device1]

Logical Node: [GIO1]

- LN0
- LN1**
- LN2
- LN3

Report Control

Report Control Block Details

* Name:

Configuration Revision:

* Report ID:

DataSet:

Buffered:

Integrity Period:

Buffer Time:

Description:

☒ **Trigger Options**

☒ Data Change
 ☐ Quality Change

☒ Data Update
 ☐ Period

Fields marked * are mandatory

Optional Fields

☒ Sequence Number
 ☒ Time Stamp

☒ DataSet
 ☐ Reason Code

☐ Data Attribute Reference
 ☐ Entry ID

☐ Configuration Revision

☒ **Report Enabled**

Max:

Description:

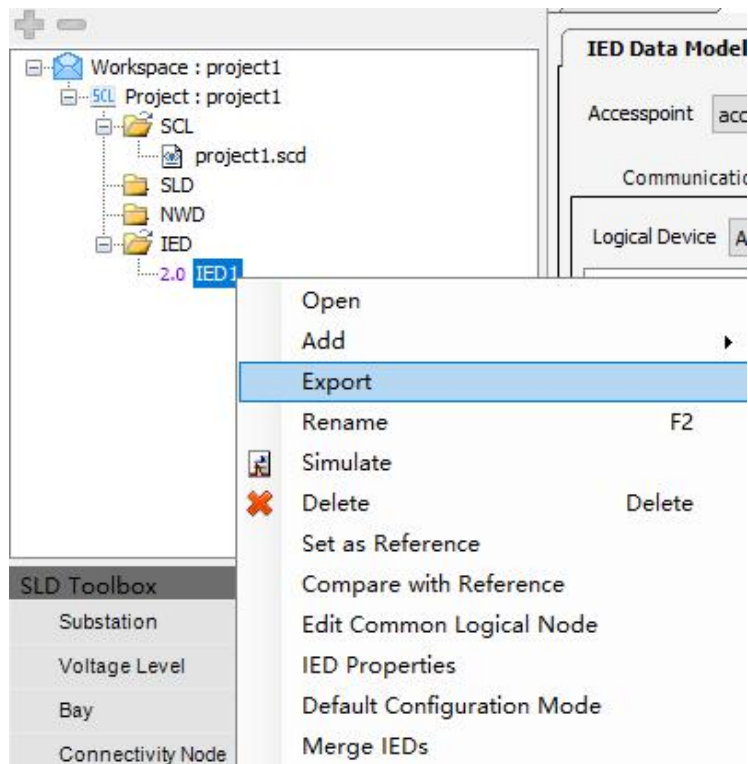
Client LN

IED Name	Logical D...	Logical N...

The time interval in milliseconds for the buffering of internal events in server

Step 8: Export ICD file

SCL Manager Instructions



Step 9: Modeling finish.