## Instruments Used & Data to Read

Siemens SIMATIC S7-1500



Fig:1

This device uses PROFINET IO IRT interface (2-port switch), X1: 192.168.0.1 & X2: 192.168.1.1 integrated in the CPU for defined response times and high-precision plant behaviour.

1. Create a project in Siemens TIA – V18 (fig2) project.



Fig:2



Fig:3

- 2. Start a project(fig2) use the TIA V18 portal for uploading your project onto the PLC.
- 3. Create various tags based on various node data types such as String, Boolean, INT, Word, Byte with start value of 1 or 2 and add it to your Program Blocks module, In the Access level Enable - Read/Write - RD/WR for all nodes(fig:4)
- 4. This is the Data we will be Reading for our PyScada, Create a server interface under the server interfaces, within the OPC UA Communication section(fig:5)

Project tree	ру	scad	la_tes	t > PLC_1	1 [CPU 1515-2 PN]	► Pr	ogram l	olocks 🕨 SER	VER [DB1]							_ # =×
Devices																1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	· 🚽	) <sub>10</sub>	8.,	r 🗉 🤋	Keep actual value	: 🔒	Snaps	hot the test	Copysnapshots	to start values	8. B.	Load start	values as a	ctual values 🛛 🕮 🛛	h	<b>3</b>
5		SER	VER						/							
🔻 🔄 pyscada_test	^		Name		Data type		Offset	Start value	Retain	Accessible f	Writa	Visible in	Setpoint	Supervision	Comment	
Add new device	1		▼ Sta	tic												
Devices & networks	2	-		TEST	Bool		0.0	TRUE		<b></b>						
PLC_1 [CPU 1515-2 PN]	3	-	•	TEST_1	Int		2.0	3		<b></b>						
Device configuration	4	-		TEST_2	Word		4.0	3								
Section 2 Contine & diagnostics	5			TEST_3	DWord		6.0	3		<b></b>						
Software units	6	-		TEST_4	Byte		10.0	3								
🔻 🔜 Program blocks	7			TEST_5	Real		12.0	3.0		<b></b>						
Add new block																
🖀 Main (OB1)																
SERVER [DB1]																



Image: Server Interface       Image: Server Interface       Options         Image: Server Interface       Image: Server Interface         Image: Server Interface       Image: Serve	Project Edit View Insert Online (	Options Tools V	Mindow Help					
Project tree       pyscada_test > PLC_1 (CPU 1515-2 PN) > OPC UA communication > Server Interfaces > SERVER       Image: The State interface > SERVER       Image: The State interface > SERVER       Image: The State interface > SERVER       Options         Image: The State interface       Image: The State interface > SERVER       Image: The State > SERVER       Image: The	🕑 🎦 🖓 Save project 🔠 🗶 🖽 🗊	X 15 ± (21 ±	🔠 🔃 🔛 🔛 🍠 Go online 🧬 Go offi		15 15 Gearch	n in project>		otally Integrated Automation PORT
Devices     Options       W     Exercise local data     Consistency check     Export interface       V     Online & diagnostics     OPLUA server interface     V       V     Online & diagnostics     Image: Status interface     V       V     Schware units     V     Schware View     Devices       V     Schware View     Schware View     Schware View     Devices       V     Schware View     Schware View     Schware View     Devices       V     Schware View     Schware View     Schware View     Schware View       V     Schware View     Schware View     Schware View     Schware View       V     Schware View     Schware View     Schware View     Schware View       V     Schware View     Schware View     Schware View     Schware View       V     Schware View     Schware View     Schware View     Schware View <th>Project tree</th> <th>Π (</th> <th>pyscada_test &gt; PLC_1 [CPU 1515-2 PN</th> <th>I] • OPC UA communicati</th> <th>on ► Server inter</th> <th>faces + SERVER</th> <th>_ * *</th> <th>🗙 Tasks 📰 🗊</th>	Project tree	Π (	pyscada_test > PLC_1 [CPU 1515-2 PN	I] • OPC UA communicati	on ► Server inter	faces + SERVER	_ * *	🗙 Tasks 📰 🗊
Image: Second	Devices							Options
W. Online & diagnostics       A         W. Extent (DB1)       B         W. Extent (DB1)       B         W. Extent (DB1)       B         W. Extent (DB1)       B	臣	III 🔿	🕈 💣 🔮 🔚 🧧 Generate local data 📑 C	Consistency check 🍃 Export in	terface			
Browne name     Note by a Accessivel     Local data     Data type       Image: Server units     Image: Server name     Image: Server name<	D		OPC UA server interface					<ul> <li>Find and replace</li> </ul>
Image: Solution with and force shales         Image: Solution with and force shales <td< td=""><td>🛂 Online &amp; diagnostics</td><td>~</td><td>Browse name</td><td>Node type</td><td>Access level</td><td>Local data</td><td>Data type</td><td></td></td<>	🛂 Online & diagnostics	~	Browse name	Node type	Access level	Local data	Data type	
Image: molecks       Image: moleck	<ul> <li>Software units</li> </ul>		1 SERVER	Interface	***			Find:
Image: Add new block       Image: Add new block         Image: Add ne	🔻 🛃 Program blocks		2 • 40 TEST	BOOL	RD/WR	SERVER"."TEST"		
** Advin (GB1)       4       • Q1 TST_2       WORD       FD/MR       Q1 SERVER (**TST_2*)         ** Advin (GB1)       5       • Q1 TST_3       DWORD       FD/MR       Q1 SERVER (**TST_2*)         ** Advin (GB1)       5       • Q1 TST_3       DWORD       FD/MR       Q1 SERVER (**TST_2*)         ** Advin (GB1)       5       • Q1 TST_4       BYTE       FD/MR       Q1 SERVER (**TST_2*)         ** Advin (GB1)       2       • Q1 TST_5       REAL       RD/MR       Q1 SERVER (**TST_2*)         ** Advin (GB1)       2       • Q1 TST_5       REAL       RD/MR       Q1 SERVER (**TST_5*)         ** Advin (GB1)       2       • Q1 TST_5       REAL       RD/MR       Q1 SERVER (**TST_5*)         ** Advin (GB1)       2       • Q1 TST_5       REAL       RD/MR       Q1 SERVER (**TST_5*)         ** Advin (GB1)       2       • Q1 TST_5       REAL       RD/MR       Q1 SERVER (**TST_5*)         ** Advin (GB1)       2       • Q1 TST_5       REAL       RD/MR       Q1 SERVER (**TST_5*)       Q1 Ute value adving (**TST_5*)         ** Advin (GB1)       2       • Q1 TST_5       REAL       RD/MR       Q1 SERVER (**TST_5*)       Q1 Ute value adving (**TST_5*)         ** Q1 Online backups       2       • Q1 TST_	Add new block		3 • 40 TEST_1	INT	RD/WR	*SERVER*.*TEST_1*		Whole words only
SRMER[01]       5       Q TEST_3       DV0RD       RDVR       Q'SERVER', 'TEST_3'         Image: SRMER[01]       5       Q TEST_3       DV0RD       RDVR       Q'SERVER', 'TEST_3'         Image: SRMER[01]       5       Q TEST_4       BYTE       RDVR       Q'SERVER', 'TEST_4'         Image: SRMER[01]       2       Q TEST_5       REAL       RDVR       Q'SERVER', 'TEST_4'         Image: SRMER[02]       3       widd news       3       widd news       Image: SRMER[02]       Image: SRMER[02]         Image: SRMER[02]       3       widd news       3       With and fonce tables       3       widd news       1       <	Main [OB1]	1.1	4 • • TEST_2	WORD	RD/WR	*SERVER*.*TEST_2*		interesting only
Implementation     Implementatio	SERVER [DB1]	~	5 • 40 TEST_3	DWORD	RD/WR	SERVER*.*TEST_3*		Match case
A General source files     7     A GENERAL STATE ST, S     REAL RDWR     G'SERVER', "TEST, S"     OF Class     Clas     C	Technology objects			BYTE	RD/WR	*SERVER".*TEST_4"		Find in substructures
Image: Constraint of the constr	External source files		7 • • TEST_5	REAL	RD/WR	SERVER"."TEST_5"		S. Find in hidden texts
Carl C data types     Communication     Com	PLC tags		8 <add news<="" td=""><td></td><td></td><td></td><td>-</td><td></td></add>				-	
Watch and force tables     Dig Online backups     Grown     One     One	PLC data types							in the model of
Dig Online backups     Dim reces     ODC UA communication     Dim reces	<ul> <li>Watch and force tables</li> </ul>						E	Use regular expressions
Commission	Online backups							(a) Dama
Concurrent and a second an	🕨 🔛 Traces							C Dumi
T Canazinterfazer	<ul> <li>OPC UA communication</li> </ul>							Oup
	<ul> <li>Server interfaces</li> </ul>							Find
if Add new server interface	Add new server interf	ace						
Replace with:	SERVER							Replace with:

Fig:5

5. Under the Properties section of General Section of Device, Select the security with user authentication Enable option and add User id and Password (fig6).

pyscada_test → PLC_1 [CPU 1515-2 PN] _ ■ ■ X														
							6	P To	opolo	ogy view	🔒 Netwo	ork view	Dev	vice view
HC_1 [CPU 1515-2 PN]	-			€ ±										
100	0	1	2	3 4	4	5 6	14	22	31					^
Rail_0	Ď						7 - 14	15 - 22	23 - 31					
<										> 10	0%		<b>•</b>	- 7 <del></del> 🔳
					D	evice data								
PLC_1 [CPU 1515-2 PN]								Q	Pro	perties	Info	🞖 Dia	gnostics	
General IO tags	System co	onstants	Tex	xts										
PLC alarms	~					Enable	guest a	uthe	nticat	tion				^
Web server														
Display		User na	ame and	d passwo	ord aut	thenticati	on							
Multilingual support														
Time of day					Note:	Enabling	this opti	ion all	lows	users to auther	nticate the	mselves b	y providing a	valid
Protection & Security						user nam	e and p	asswo	ord.					
✓ OPC UA														
General														
✓ Server	4					-						/		
General						🛃 Enable	user na	ame a	nd pa	assword auther	ntication			
Options	-	User	manage	ement										
▼ Security														
Secure channel														
Certificates			Name			Pacow	ard							_
User authentication						*****	*****	***	[	-				
Diagnostics			< Add						1					
Export			-//001	new users										

Fig:6

#### Set your IP address and subnet mask (fig:7) on the PLC as required for the ports X1/X2

pyscada_test → PL	.C_1 [CP	U 1515-	2 PN]															- •	■×
									[	Р Т	opol	ogy viev	v	h Net	work vie	w	Y Dev	/ice vie	w
HC_1 [CPU 1515	5-2 PN]	•				Ł													
	100	0	1	2	3	4	5	6	14	22	31								^
Pall	100	U		2	3	-		0		2.6									=
Nail_			-																
									7		23								
									107										
			10						14										
				_	_		_	_											
													> 10	0%					
								1 + 1			_								, –
						_	Devic	e data	_		7								
PLC_1 [CPU 1515-2	PNJ										Q Pr	operties	2	Info	<u>&amp;</u> D	iagnos	tics		
General IO t	ags	System	constants	Te	exts														
General		^						Add	new	ubne	et								^
<ul> <li>PROFINET interface [</li> </ul>	X1]																		
General	General Internet protocol version			rsion	4 (IPv4)	)													
Ethernet address	es	_					0	Cot IR ou	Idroc	in th		inct							
Advanced option	Operating mode =					setirat	idres:	, in u	ie pro	ject									
Interface optic	ons							IF	addr	ess:	19	2.168.	10 .	58					
Media redunda		Subnet mask: 255 . 255 . 254 . 0																	

Fig:7

- 6. After the project is set up, compile it, upload it on your Device and hit Go Online.
- 7. Connect the Device with your laptop/desktop using an ethernet cable, the Device Will Have green blinker (fig:9) light once the Project is upload and it is running online without any errors.



Fig:8,9



# Configuring In PyScada

1. Add your Device in the pyscada dashboard

	PyScada Administration welcome. FERB VIEW STIE / CHANGE PASSWORD / LOG OUT O										
_	Home > PyScada Core > Devices	opcua-1515-2PN									
	Change device										
	opcua-1515-2PN		HISTORY								
	Short name:	1515-2PN									
	Description:	SIMATIC 57-1500, CPU 1515-2 PN, central processing unit with work memory 1 MB for program and 4.5 MB for data, 1st interface: PROFINET IRT with 2-port switch, 2nd interface: PROFINET RT, 6 ns bit performance, SIMATIC Memory Card required approvals and certificates according to entry 109817466 at support.industry.siemens.com to be considered!									
»	Active										
	Byte order:	0-1-2-3 V									
	Polling interval:	5 Minutes V									
	Protocol:	орсиа 🗸									
	Instrument handler:										

Fig:1.1

#### Configure OPCUA

OPCUA DEVICE		
Opcua device: 1515-2PN		Delete
Protocol:	τερ <b>ν</b>	
IP address:	192.168.10.58 Example: 192.168.0234	
Port:	4840	
Path:	//192.168.10.5848400 Example: /hbk/dipx	
User:	User	
Password:	Us+@123	
Remote devices objects:	After creating a remote device, refresh the page until you see the result	

Fig:1.2

2. After the device is online, check by using Ping in the Terminal or an application called free OPCUA-CLIENT, and this will also help you see Namespace Index (ns) and Identifier (i) values for each node.

For Ping using Terminal: (fig:1.3) For using FreeOpcuaClient (fig:1.4)

_					
st P1	hreyansh@AA-INFO-EQPT0385:-\$ ping 192.168.10.58 ING 192.168.10.58 (192.168.10.58) 56(84) bytes of data.				
64	4 bytes from 192.168.10.58: icmp seq=1 ttl=255 time=1.50 ms				
64	4 bytes from 192.168.10.58: icmp_seq=2 ttl=255 time=4.03 ms				
64	4 bytes from 192.168.10.58: icmp_seq=3 ttl=255 time=1.56 ms				
64	4 bytes from 192.168.10.58: icmp_seq=4 ttl=255 time=2.85 ms				
64	4 bytes from 192.168.10.58: icmp_seq=5 ttl=255 time=3.10 ms				
64	4 bytes from 192.168.10.58: icmp_seq=6 ttl=255 time=3.72 ms				
64	4 bytes from 192.168.10.58: icmp_seq=7 ttl=255 time=2.97 ms				
64	4 bytes from 192.168.10.58: icmp_seq=8 ttl=255 time=5.32 ms				
64	4 bytes from 192.108.10.58: 1CMD_Sed=9 ttl=255 ttme=2.8/ MS				
04	4 bytes from 192.108.10.58: 1Cmp_seq=10 ttl=255 time=2.92 ms				
64	4 bytes from 192.108.10.58; [cmp_seq=1] t(l=25) [lme=2.80 ms				
6/	4 bytes from 192.106.10.30. tcmp_seq=12 tct=235 tcm=2.60 ms				
64	$f$ bytes from 192.106.10.50. tcmp_scq=15 tctc=25.5 time=4.03 ms				
64	bytes from 192.168.10.58: icmp_seq=15 titl=255 time=2.85 ms				
64	bytes from 192.168.10.58: icmp sed=16 ttl=255 time=4.75 ms				
64	4 bytes from 192.168.10.58: lcmp seq=17 ttl=255 time=2.65 ms				
64	4 bytes from 192.168.10.58: icmp_seq=18 ttl=255 time=3.54 ms				
64	4 bytes from 192.168.10.58: icmp_seq=19 ttl=255 time=44.8 ms				
64	4 bytes from 192.168.10.58: icmp_seq=20 ttl=255 time=2.87 ms				
64	4 bytes from 192.168.10.58: icmp_seq=21 ttl=255 time=2.98 ms				
64	4 bytes from 192.168.10.58: icmp_seq=22 ttl=255 time=10.1 ms				
64	4 bytes from 192.168.10.58: icmp_seq=23 ttl=255 time=3.63 ms				
64	4 bytes from 192.168.10.58: icmp_seq=24 ttl=255 time=6.97 ms				
64	4 bytes from 192.168.10.58: {cmp_seq=25 ttl=255 time=3.93 ms				
64	4 bytes from 192.168.10.58: tcmp_seq=26 ttl=255 ttme=9.88 ms				
04	4 bytes from 192.108.10.58: 1Cmp_sed=2/ ttl=255 time=2.82 ms				
04	4 bytes from 192.108.10.58: tcmp_seq=28 tct=255 tcme=2.74 ms				
6/	4 bytes from 192.100.10.30; ltmp_seq=29 ltf=23 ltme=3.43 MS				
64	$f$ bytes from 192.106.10.50. tcmp_seq=50 ctc=255 ctme=4.05 ms				
64	bytes from 192.168.10.58: icmp_seq=32 ttt=255 time=2.93 ms				
64	bytes from 192.168.10.58: icmp seq=33 ttl=255 time=1.55 ms				
	Fig.1 3				
	11g.1.5				
_					
	FreeOpcUa Client				8
A	Actions Settings				
Γ	opc.tcp://192.168.10.58:4840		Connect options C	onnect Disconnec	
Г	BrowseName Nadeld	&Attributes			

DisplayName	BrowseName	Nodeld			
DisplayName ▼ Root ▼ Objects + Obje	0:Root 0:Root 0:Objects 0:Server 2:DeviceServer 2:DeviceServer 2:DeviceServer 2:DeviceServer 3:ServerInte 4:Server 4:TEST 4:TEST 4:TEST 4:TEST 0:Types 0:Views	Noded i=84 i=85 i=233 i=233 i=235-5001 ns=33-5400000000000000000000000000000000000	Attribute         > Value           AccessLevel         CurrentR           AccessLevel         CurrentR           Browsename 4:15511         DataType ms-3-10           DataType ms-3-10         Inductation (ms-4,1)           ModeClass 2         NodeClass 2           NodeClass 2         NodeClass 2           NodeClass 2         NodeClass 2           NodeClass 2         Address           Value         0           6References         ReferenceType           1         HaSTypeOnt i=63	DataType ead, Byte Unrt2 QualifiedName 0002 Nodeld TextitoLocalizedText Boolean Double Int32 B Nodeld Unrt26 Unrt26 Unrt26 Unrt26 Unrt26 S OrBaseD	6 Refresh ∘ owseName
uaclient usclient - NRO - Connecting to ope top://132/168.10.58c asyncus aclient client - WARNING - Requested assiss tomeout to asyncus acminis natructure:104 - WARNING - renamed DDraftesi asyncus acminis natructure:104 - WARNING - renamed DDraftesi asyncus acminis natructure:104 - WARNING - renamed DDraftesi asyncus acminis natructure:104 - WARNING - Draftesi asyncus acminis natructure:104 - Draftesi asyncus actionat client - WARNING - Deprecated since spec 1.04.c asyncus action.tclient - WARNING - Deprecated since spec 1.04.c	1840 with param e 3600000ms, g anCoordinates to to _3DFrame due to _3DVector due ll load_data_type Il load_data_type	ters None, None, None None') * 3000miss introad') 30Cartesian Coolinates due to Python syntax') to Python syntax') do Python syntax') do Python syntax') definitions')	Events Subscriptions Re	ferences Graph	

Fig:1.4

3. Add opcua Variable (fig:1.5)

OPCUA VARIABLE	
Opcua variable: 13-TEST	
NamespaceIndex:	4 "ns" value used in asyncua library
Identifier:	2 "i" value used in asyncua library

Fig:1.5

# 4. Add Variable and Variable Properties (fig:1.6 & fig:1.7)

PyScada Administr	ation									
Home > PyScada Core > Variab	Home > PyScada Core > Variables > 14 - TEST									
Change variable										
14 - TEST										
Variable name:	TEST									
Description:	for Bool Values.									
Device:	opcua-1515-2PN 🗸 🖌 👁									
Active										
Unit:	- 🗸 / + x 👁									
🖉 Readable 🗸										
🖉 Writeable 🗸										
Scaling:	······································									
Value_class:	BOOL or BOOLEAN ~									
COV:	0.0									
Variable short name:	test									

Fig:1.6

Ру	Scada Administrat	tion						
Hon	e > PyScada Core > Variable properties > other or no Class specified: test-prop							
	Change variable property							
	other or no Class specified: test-prop							
	Variable:	14 Q 14 - TEST						
	Property class:	other or no Class specified 🗸						
	Value_class:	BOOL (BOOLEAN) 🗸						
	Name:	test-prop						
	🗹 Value boolean							
<b>&gt;</b>	Value int16:							
	Value int32:							

Fig:1.7

5. Create Device Read Tasks and Device Write Tasks (fig:1.8 & fig1.9)

	PyScada Administra	yScada Administration							
	Home > PyScada Core > Device re	ad tasks > TEST							
	Change device read t	ask							
	TEST								
	Device:	opcua-1515-2PN 🗸 🎸 🕇 🗙 👁							
	Variable:	14 Q 14 - TEST							
	Variable property:	other or no Class specified: test-prop 🖌 🤌 🕇 🗶 👁							
	User:	ferb 🗸 🤌 + 🗙 👁							
»	Start:	0							
	Finished:	10.0							
	Done								

Fig:1.8

PyScada Administration				
Home > PyScada Core > Device \	write tasks > TEST			
Change device write	task			
TEST				
Variable:	14 Q 14 - TEST			
Variable property:	other or no Class specified: test-prop 💙 🤌 🕂 🗶 💿			
Value:	5.0			
User:	ferb 🗸 🤞 + 🗙 💿			
Start:	2.0			
Finished:	20.0			
Done				

Fig:1.9

### Results

To check results run the following command in your terminal

\$ sudo tail -n1000 /var/log/pyscada/pyscada\_debug.log

There will be output like this if the device is connected (fig:1.10, fig:1.11)

[11/Dec/2024 06:24:21] INFO [pyscada.device:57] Connected to device : opcua-1515-2PN [11/Dec/2024 06:24:21] INFO [pyscada.device:57] Connected to device : opcua-1515-2PN

Fig:1	.10
-------	-----

R	administrator@aa-pyscada-testing2: ~	Q = _ ø 😣
, 3642443196159492113 17, 3642443196190949393 17, 3642443196220309521 17,	3642443196100771859 19, 3642443196132229139 19, 3642443196159492115 19, 36	42443196190949395 19, 364244
3196220309523 19		
<pre>[14/Jan/2025 11:33:54] DEBUG [pyscada.models:2015] 14 - TEST updated 5 - :</pre>	l values	
<pre>[14/Jan/2025 11:33:54] DEBUG [pyscada.models:2015] 14 - TEST updated 5 - :</pre>	1 values	
<pre>[14/Jan/2025 11:33:54] DEBUG [pyscada.models:2015] 15 - TEST_1 updated 5</pre>	- 1 values	
<pre>[14/Jan/2025 11:33:54] DEBUG [pyscada.models:2015] 15 - TEST_1 updated 5</pre>	- 1 values	
<pre>[14/Jan/2025 11:33:54] DEBUG [pyscada.models:2015] 16 - TEST_2 updated 5</pre>	- 1 values	
<pre>[14/Jan/2025 11:33:54] DEBUG [pyscada.models:2015] 16 - TEST_2 updated 5</pre>	- 1 values	
[14/Jan/2025 11:33:54] DEBUG [pyscada.models:2015] 17 - TEST_3 updated 5	- 1 values	
<pre>[14/Jan/2025 11:33:54] DEBUG [pyscada.models:2015] 17 - TEST_3 updated 5</pre>	- 1 values	
[14/Jan/2025 11:33:54] DEBUG [pyscada.models:2015] 19 - TEST_4 updated 5	- 1 values	
[14/Jan/2025 11:33:54] DEBUG [pyscada.models:2015] 19 - TEST_4 updated 5	- 1 values	
[14/Jan/2025 11:33:54] DEBUG [pyscada.utils.scheduler:828] pyscada.opcua-	5 write multiple variables : [ <variable: -="" 14="" test="">, <variable: -="" 15="" td="" test_1<=""><td>&gt;, <variable: -="" 16="" test_2="">,</variable:></td></variable:></variable:>	>, <variable: -="" 16="" test_2="">,</variable:>
<variable: -="" 17="" test_3="">, <variable: -="" 19="" test_4="">]</variable:></variable:>		
[14/Jan/2025 11:33:54] DEBUG [pyscada.utils.scheduler:828] pyscada.opcua-	5 write multiple variables : [ <variable: -="" 14="" test="">, <variable: -="" 15="" td="" test_1<=""><td>&gt;, <variable: -="" 16="" test_2="">,</variable:></td></variable:></variable:>	>, <variable: -="" 16="" test_2="">,</variable:>
<variable: -="" 17="" test_3="">, <variable: -="" 19="" test_4="">]</variable:></variable:>		
[14/Jan/2025 11:33:54] DEBUG [pyscada.models:162/] 14 - TEST has 5 to write	te.	
[14/Jan/2025 11:33:54] DEBUG [pyscada.models:1627] 14 - TEST mas 5 to wrth	te.	
[14/Jan/2025 11:33:54] DEBUG [pyscada.models:162/] 15 - TEST_1 has 5 to wi	rite.	
[14/Jan/2025 11:33:54] DEBUG [pyscada.models:1627] 15 - TEST_1 has 5 to wi	rite.	
[14/Jan/2025 11:33:54] DEBUG [pyscada.Models:162/] 16 - TEST_2 has 5 to wi	rite,	
[14/Jan/2025 11:33:54] DEBUG [pyscada.Models:162/] 16 - TEST_2 has 5 to wi	rite.	
[14/Jan/2025 11:33:54] DEBUG [pyscada.models:162/] 1/ - TEST_3 has 5 to w	ruce.	
[14/Jan/2025 11:33:54] UEBUG [Pyscada.models:1027] 17 - TEST_3 has 5 to w	rtte.	
[14/Jan/2025 11:33:54] DEBUG [pyscada.models:102/] 19 - TEST_4 has 5 to wi		
[14/Jan/2025 11:33:54] DEBUG [pyscada.models:162/] 19 - TEST_4 has 5 to w	rite. Landu suiste astruise issuise sufficte for a 20020000770074.04 oc	
[14/Jan/2025 11:33:54] DEBUG [Dyscada.Models:1052] Recordeduata objects a	tready exists, retrying ignoring conflicts for : 3042443190100//1854 14, 30	42443196132229134 14, 364244
3190159492110 14, 3042443190190949390 14, 3042443190220309518 14, 3042443	190100//1855 15, 3042443190132229135 15, 3042443190159492111 15, 3042443190	190949391 15, 30424431902203
09519 15, 5042445190100//1850 10, 5042445190152229150 10, 504244519015949,	2112 10, 3042443190190949392 10, 3042443190220309520 10, 30424431901007/183	17 17, 3042443190132229137 17
, 3042443190139492113 17, 3042443190190949393 17, 3042443190220309521 17,	3042443130100//1859 19, 3042443130132223139 19, 30424431301534492115 19, 30	42443190190949395 19, 304244
5190220309523 19 [14/]ap/2025 11:22:54] DEBUG [overada modele:1652] RecordedData objects a	Iready exists retrying imporing conflicts for : 2642442196188771854 14 26	42442106122220124 14 264244
[14/Jan/2025 11:55:54] DEBUG [pyscada.models:1052] RecordedData objects a	106400771055 15 2642442106122220125 15 2642442106150402111 15 2642442106	42443190132229134 14, 304244
5150155452110 14, 5042445150170545550 14, 5042445150220505516 14, 5042445		7 17 2642442106122203
2642442196150402112 17 26424421961064060202 17 264244219622829130 10		42442106108040205 10 264244
, 3042443190135492113 17, 3042443190190949393 17, 3042443190220309321 17,	3042443130100771833 13, 3042443130132223133 13, 3042443130133432113 13, 30	42443130130343333 19, 304244
[14/Jan/2025 11-32:50] DEBUG [overada mode]: 2015] 14 - TEST undated 5 - 1	t values	
[14/Jan/2025 11:33:59] DEBUG [pyscada models:2015] 14 - TEST updated 5 - 1	l values	
[14/Jan/2025 11:33:59] DEBUG [pyscada.models:2015] 14 - TEST 1 updated 5	1 values	
[14/Jan/2025 11:33:59] DEBUG [pysedda.models:2015] 15 - TEST 1 updated 5	1 values	
[14/Jan/2025 11:33:59] DEBUG [pysedda.models:2015] 15 - TEST 2 updated 5	1 values	
[14/Jan/2025 11:33:59] DEBUG [pyscada models:2015] 16 - TEST 2 updated 5	1 values	
[14/Jan/2025 11:33:59] DEBUG [pyscada.models:2015] 17 - TEST 3 updated 5	1 values	
[14/Jan/2025 11:33:59] DEBUG [pyscada.models:2015] 17 - TEST 3 updated 5	1 values	
[14/Jan/2025 11:33:59] DEBUG [pyscada.models:2015] 19 - TEST 4 updated 5	1 values	

Fig:1.11

## Admin Panel of PyScada

Changes will be reflected in Variable States of our user interface (fig:1.12)

PyScada Administration			WELCOME, PYSCADA VIEW SITE / CHANGE PASSWORD / LOG OUT	
Home > PyScada Core > Var	riable states			
Authentication and Select variable state to change		ADD VARIABLE STATE +		
AUTHORIZATION	+ Add		Search	FILTER
Users	+ Add	Action:	✓ Go 0 of S selected	; By short name All
PYSCADA CORE		VARIABLE NAME	LAST VALUE	i By active
Complex events	+ Add	TEST_4	2025-01-14 11:43:32 : 2.0 - 2025-01-14 11:43:32 : 2.0 -	All Yes
Data sources	+ Add	TEST_2	2025-01-14 11:43:32 : 2 -	
Device read tasks	+ Add	TEST_1	2025-01-14 11:43:32 : 2 -	i By Unit
Devices	+ Add		2023/01/14 11:43:32 : If UE *	

