



SECURITIES INDUSTRY AUTOMATION CORPORATION

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# **CTA Pillar SIP OPRA Pillar SIP**

## **CERT Environment Guide**

Version: 1.0d  
Date: January 21, 2021

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## Document History

Version	Date	Description
1.0	Feb 11, 2020	Initial document for publication
1.0a	Feb 19, 2020	Minor updates to Appendix A tables and formatting
1.0b	Feb 25, 2020	Multicast Retrans B added to Appendix A tables
1.0c	Apr 13, 2020	Clarified VLAN assignments for various access
1.0d	Jan 21, 2021	Added information pertaining to OPRA Pillar SIP

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# 1. Introduction

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## 1.1 Purpose of this Document

This document provides developers, programmers, analysts, IT Managers, and existing and potential users of the Consolidated Tape System (CTS), Consolidated Quotation System (CQS), and Options Price Reporting Authority (OPRA) with the necessary information to access and use the CTA & OPRA Pillar SIP Certification environment. Contained herein:

1. System Description
  2. Connectivity Requirements and Procedures
  3. Operational Guidelines
  4. Testing Guidelines
  5. Contact Information
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## 1.2 Purpose of CTA & OPRA Pillar SIP Cert Environment

The CTA and OPRA Pillar SIP Cert environment is designed to provide an intraday functional test environment for:

- Input Participants (Exchanges)
- Output Subscribers (data recipients)

This includes Input data, Output data, and Retransmissions for:

- CTS
- CQS
- OPRA

The environment is available to Participants and Subscribers for both day-to-day software development testing, as well as one-on-one initial certification testing with the Technology Member Services (TMS) Team.

Reference documents, including Input and Output technical specifications, important testing and migration dates, FAQs, and other forms, can be found on the following websites:

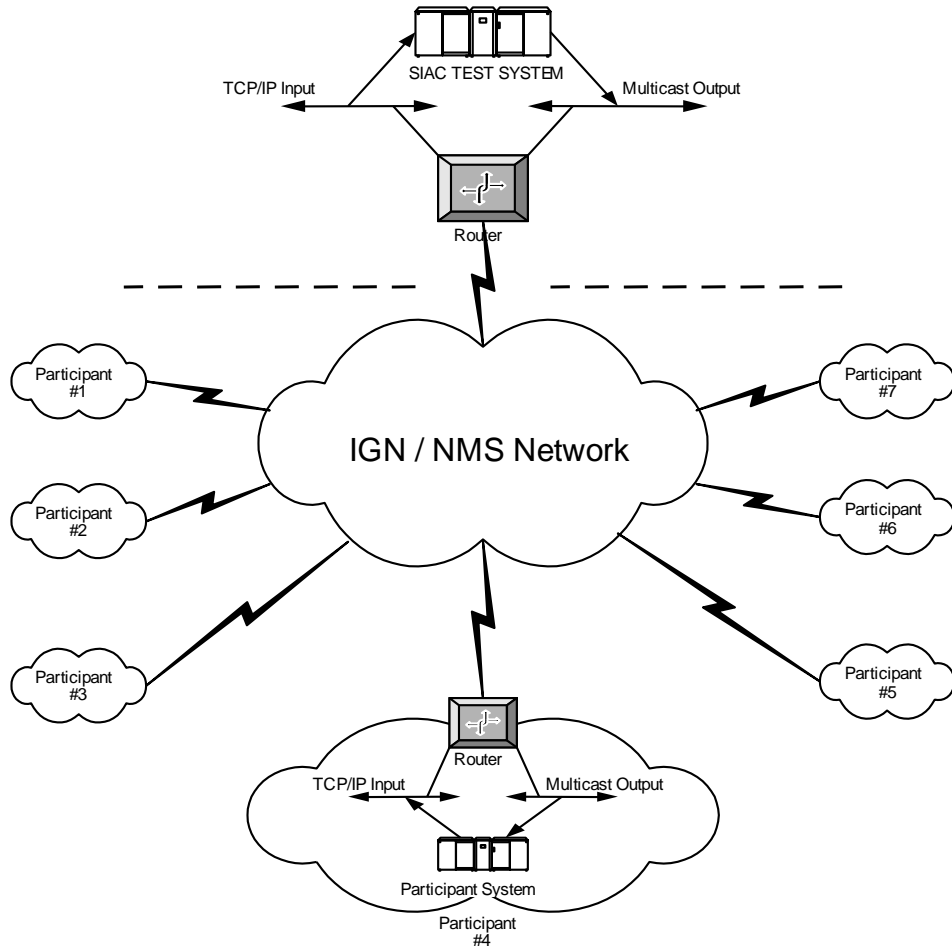
- CTA: <https://www.ctaplan.com/pillar>
  - OPRA: <https://www.opraplan.com/pillar>
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## 2. CTA & OPRA Pillar SIP Cert Environment Setup

### CTA & OPRA Pillar SIP Network Overview

The following diagram illustrates the test system design for CTA & OPRA Pillar SIP



The Cert environment supports TCP/IP input and IP Multicast output for Participants who want to perform functional testing. There are separate LANS for TCP/IP and IP Multicast. This environment can be expanded to include additional connections for new and existing Participants as needed.

The design of this system is not intended for performance or failure redundancy testing. Retransmission requests in small numbers will be supported.

Each Participant is connected to SIAC via ICE Global Client Networks (IGN; formerly, the Secure Financial Transaction Infrastructure (SFTI)) or via NMS Network. The input protocol is TCP/IP and the output protocol is IP Multicast.

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### 3. Procedures to Establish Connectivity

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Participants and Subscribers connecting to the test system must support a Transmission Control Protocol / Internet Protocol (TCP/IP) interface on input to SIAC. In addition, Participants and Subscribers need to have the ability to subscribe to multicast IP groups to receive output data from the SIAC host.

Access to the CTA & OPRA Pillar SIP Cert environment will require connectivity to:

- VLAN 17 (Participant Input, Participant & Subscriber Retrans Requests)
- VLAN 10 (Multicast & Retrans Output Data)

Below are two ways to facilitate the provisioning request.

1. Submit a request by logging into the [Data Services Dashboard](#) portal. Create an account if you have not been previously registered for access to the Data Services Dashboard portal or contact the ICE Global Networks team at the number or email address listed in Appendix B of this document.
2. Alternatively, you may contact ICE Global Client Networks ([clientprovisioning@theice.com](mailto:clientprovisioning@theice.com)) for a “Request Service Change”.
3. If you have already made a request to have the input connections provisioned but did not request to have the test data feeds enabled, please submit an email to [clientprovisioning@theice.com](mailto:clientprovisioning@theice.com) with the Peering IP of the connection you would like provisioned and the technical contact to communicate the change on your end.

**Note:** *Be advised that up to ten (10) business days are required to establish connectivity to the service after your request has been accepted by ICE Global Client Networks.*

4. To request CERT Input or Retransmission lines, fill out and submit the relevant request form, found on the following sites in the **Forms** section:
  - CTA: <https://www.ctaplan.com/pillar>
  - OPRA: <https://www.opraplan.com/pillar>

Once submitted, the form will automatically be sent to the Technology Member Services team, who will reply to you with details via e-mail.

There is no charge for application access and usage.  
The only associated costs are for IGN network access.

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## 4. Operational Procedures

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### 4.1 Scope of SIACSupport

The following support is provided for Participants and Subscribers on the test system:

1. Initial contact for certification and testing-related questions
2. Input Line provisioning
3. Validation of Retransmission requests, if needed

**Note: Capacity/Volume testing is *not* supported**

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### 4.2 Hours of Operation

The test environment is available on weekdays:

- 1:30am–8:20pm EST
  - 9:00am–5:00pm EST (with support)
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### 4.3 Participant and Subscriber Testing Requirements/Guidelines

- Participants and Subscribers should contact Technology Member Services at [tms@siac.com](mailto:tms@siac.com) for technology-related inquiries.
- ICE Global Client Networks at [clientnetworks@theice.com](mailto:clientnetworks@theice.com) for network-related troubleshooting.

All contact information can be found in Appendix B of this document.

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## Appendix A: CTA & OPRA Pillar SIP Cert Input & Output IPs/ports

### Rendezvous Points (RP) Addresses

Network Connection	RP ADDRESS - A STREAMS	RP ADDRESS - B STREAMS
ICE Global Network (IGN)	198.140.33.2	198.140.33.5
NMS Network	159.125.52.194	159.125.52.195

### Input Line IP & Port Ranges (Participants [Exchanges] only)

#### VLAN 17

##### CTA

Input Line	IP Ranges	Port Ranges
A	198.140.50.0/25	35000-38999
B	198.140.50.128/25	35000-38999

##### OPRA

Input Line	IP Ranges	Port Ranges
A	198.140.46.0/25	35000-38999
B	198.140.46.128/25	35000-38999

### Output Publisher Retransmission & Multicast Channels (Output Subscribers)

#### VLAN 17 (Retrans) & VLAN 10 (Multicast)

##### CTA

Retrans Line	IP Ranges	Port Ranges
A	198.140.50.0/25	39000-39799
B	198.140.50.128/25	39000-39799

##### OPRA

Retrans Line	IP Ranges	Port Ranges
A	198.140.46.0/25	39000-39799
B	198.140.46.128/25	39000-39799

Multicast Line	Source IPs
A	198.140.51.0/25
B	198.140.51.128/25

Multicast Line	Source IPs
A	198.140.47.0/25
B	198.140.47.128/25

##### CTA

Tape A		Multicast Channel			Retransmission Channel		
User Type	Symbol Range	Port	Publisher A	Publisher B	Port	Retrans A	Retrans B
CQS	A-G	40001	224.0.91.1	224.0.91.128	41001	224.0.91.32	224.0.91.160
CQS	H-M	40002	224.0.91.2	224.0.91.129	41002	224.0.91.33	224.0.91.161
CQS	N-T	40003	224.0.91.3	224.0.91.130	41003	224.0.91.34	224.0.91.162
CQS	U-Z	40004	224.0.91.4	224.0.91.131	41004	224.0.91.35	224.0.91.163
CTS	A-G	40009	224.0.91.9	224.0.91.136	41009	224.0.91.40	224.0.91.168
CTS	H-M	40010	224.0.91.10	224.0.91.137	41010	224.0.91.41	224.0.91.169
CTS	N-T	40011	224.0.91.11	224.0.91.138	41011	224.0.91.42	224.0.91.170
CTS	U-Z	40012	224.0.91.12	224.0.91.139	41012	224.0.91.43	224.0.91.171

Tape B		Multicast Channel			Retransmission Channel		
User Type	Symbol Range	Port	Publisher A	Publisher B	Port	Retrans A	Retrans B
CQS	A-G	40005	224.0.91.5	224.0.91.132	41005	224.0.91.36	224.0.91.164
CQS	H-M	40006	224.0.91.6	224.0.91.133	41006	224.0.91.37	224.0.91.165
CQS	N-T	40007	224.0.91.7	224.0.91.134	41007	224.0.91.38	224.0.91.166
CQS	U-Z	40008	224.0.91.8	224.0.91.135	41008	224.0.91.39	224.0.91.167
CTS	A-G	40013	224.0.91.13	224.0.91.140	41013	224.0.91.44	224.0.91.172
CTS	H-M	40014	224.0.91.14	224.0.91.141	41014	224.0.91.45	224.0.91.173
CTS	N-T	40015	224.0.91.15	224.0.91.142	41015	224.0.91.46	224.0.91.174
CTS	U-Z	40016	224.0.91.16	224.0.91.143	41016	224.0.91.47	224.0.91.175

Index Feed		Multicast Channel			Retransmission Channel		
User Type	Symbol Range	Port	Publisher A	Publisher B	Port	Retrans A	Retrans B
Index Range	A-M	40017	224.0.91.17	224.0.91.144	41017	224.0.91.48	224.0.91.176
Index Range	N-Z	40018	224.0.91.18	224.0.91.145	41018	224.0.91.49	224.0.91.177

## OPRA

User Type	Symbol Range	Multicast Channel			Retransmission Channel		
		Port	Publisher A	Publisher B	Port	Retrans A	Retrans B
OPRA	A - BZZZZ	40001	224.0.91.64	224.0.91.192	41001	224.0.91.76	224.0.91.204
OPRA	C - DZZZZ	40002	224.0.91.65	224.0.91.193	41002	224.0.91.77	224.0.91.205
OPRA	E - FZZZZ	40003	224.0.91.66	224.0.91.194	41003	224.0.91.78	224.0.91.206
OPRA	G - HZZZZ	40004	224.0.91.67	224.0.91.195	41004	224.0.91.79	224.0.91.207
OPRA	I - JZZZZ	40005	224.0.91.68	224.0.91.196	41005	224.0.91.80	224.0.91.208
OPRA	K - LZZZZ	40006	224.0.91.69	224.0.91.197	41006	224.0.91.81	224.0.91.209
OPRA	M - NZZZZ	40007	224.0.91.70	224.0.91.198	41007	224.0.91.82	224.0.91.210
OPRA	O - PZZZZ	40008	224.0.91.71	224.0.91.199	41008	224.0.91.83	224.0.91.211
OPRA	Q - RZZZZ	40009	224.0.91.72	224.0.91.200	41009	224.0.91.84	224.0.91.212
OPRA	S - TZZZZ	40010	224.0.91.73	224.0.91.201	41010	224.0.91.85	224.0.91.213
OPRA	U - VZZZZ	40011	224.0.91.74	224.0.91.202	41011	224.0.91.86	224.0.91.214
OPRA	W - ZZZZZ	40012	224.0.91.75	224.0.91.203	41012	224.0.91.87	224.0.91.215



## OPRA - Extended Hours

User Type	Begin Range Security Symbol	Begin Range Expiration Code	End Range Security Symbol	End Range Expiration Code	Multicast Channel			Retransmission Channel		
					Port	Publisher A	Publisher B	Port	Retrans A	Retrans B
OPRA	A		SPX	L (Calls Dec)	43001	224.0.91.100	224.0.91.228	44001	224.0.91.104	224.0.91.232
OPRA	SPX	M (Puts Jan)	TZZZ	X (Puts Dec)	43002	224.0.91.101	224.0.91.229	44002	224.0.91.105	224.0.91.233
OPRA	U		VIX	L (Calls Dec)	43003	224.0.91.102	224.0.91.230	44003	224.0.91.106	224.0.91.234
OPRA	VIX	M (Puts Jan)	ZZZZ	X (Puts Dec)	43004	224.0.91.103	224.0.91.231	44004	224.0.91.107	224.0.91.235

## OPRA - Global Trading Hours

User Type	Begin Range Security Symbol	Begin Range Expiration Code	End Range Security Symbol	End Range Expiration Code	Multicast Channel			Retransmission Channel		
					Port	Publisher A	Publisher B	Port	Retrans A	Retrans B
OPRA	A		SPX	L (Calls Dec)	43001	224.0.91.112	224.0.91.240	44001	224.0.91.116	224.0.91.244
OPRA	SPX	M (Puts Jan)	TZZZ	X (Puts Dec)	43002	224.0.91.113	224.0.91.241	44002	224.0.91.117	224.0.91.245
OPRA	U		VIX	L (Calls Dec)	43003	224.0.91.114	224.0.91.242	44003	224.0.91.118	224.0.91.246
OPRA	VIX	M (Puts Jan)	ZZZZ	X (Puts Dec)	43004	224.0.91.115	224.0.91.243	44004	224.0.91.119	224.0.91.247

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## Appendix B: Contact Information

Name	Phone	E-mail	Functional Area
Technology Member Services	US +1-212-896-2825	<a href="mailto:tms@siac.com">tms@siac.com</a>	Application/Technical support
Customer Engineering / ICE Global Networks (IGN)	US +1-212-894-5488 EU +44 (0)207-429-4530	<a href="mailto:clientprovisioning@theice.com">clientprovisioning@theice.com</a>	Network Provisioning
Network Operations 24x7	US +1-770-661-0010 x1 EU +44 (0)203-808-6638 x1 APAC +61-3-8593-5999 x1	<a href="mailto:clientnetworks@theice.com">clientnetworks@theice.com</a>	Network Support Troubleshooting