

NG9-1-1 Interoperability Oversight Commission
Conference Call
Wednesday, December 11, 2024
Minutes
(All Times Eastern)

- *Chair McMurrer called the meeting to order at 12:00pm.*
- *Chair McMurrer read the Conflict of Interest Policy to the Commission.*
- *Attendance is recorded in video conferencing software logs.*
 - In attendance (Six voting members required for quorum):
 - **Steve McMurrer, Chair¹**
 - **Maria Jacques¹**
 - **Dave Sehnert¹**
 - **Brooks Shannon¹**
 - **Amy McDowell¹**
 - **Steve O’Conor¹**
 - **Ian Stephenson¹**
 - **John Holloway**
 - **Etienne Robelin (joined at 12:04pm)**
 - **Michelle Melancon (staff)**
 - Absent:
 - Darlene Pankonie¹
 - Senator Cheryl Kagan¹
 - Matthew Ambs
 - Brian Tegtmeyer
 - FCC Representative
 - Guest(s):
 - None
- *Approval of Minutes*
 - Amended November Meeting Minutes
 - Mr. O’Conor moved to approve the Amended November meeting minutes
 - Ms. Jacques seconds
 - On a voice vote the **motion passes**
- *PCA*
 - *Follow Up on Discussion from the i3 Working Group*
 - Several Board members met with the NENA i3 Core Services Working Group last week to review the proposal to extend the root certificate validity period from 3 to 10 years
 - Some concerns voiced, but the Core Services Providers were in support of the extended 10-year validity period
 - Mr. O’Conor shared that two individuals shared that 5-years may be more advisable, but those individuals ultimately did not object to a 10 year validity period

¹ Denotes NIOC voting member

- ***Discuss / Vote on Extending the Root Certificate Validity Period***
 - Mr. O’Conor moved to approve making a recommendation to the NENA Board to extend the root certificate validity period from 3 to 10 years
 - Ms. Jacques seconds
 - Discussion: Ms. Jacques shared that she feels this will help with adoption of the PCA
 - Mr. O’Conor was encouraged by the volume of Core Services Providers that were in support of the extended validity period and that a suggestion was made during the Working Group meeting that ICE testing include re-issuance of a root certificate
 - On a voice vote, the **motion passes**
- ***NIOC Price Sheet Update***
 - Mr. O’Conor moved to approve making a recommendation to the NENA Board approve the updated NOIC Pricesheet_v3
 - Ms. Jacques seconds
 - Discussion: Ms. Melancon shared that the updated pricing demonstrates that NIOC has skin in the game and reaffirms the position that the NIOC is not a for-profit entity
 - On a voice vote, the **motion passes**
- ***Forest Guide Update***
 - Ms. Melancon shared insights from recent meetings with Intrado where they have sought confirmation of the requirement for utilization of the PCA for implementation of the Forest Guide
 - Next round of ICE testing is in planning stages with multiple ECRF testing with the Forest Guide
 - As a result, there is a sense of urgency from Intrado to get their PCA credentials to prepare for testing
- ***Bylaw Modifications - Discussion and Vote***
 - Mr. O’Conor moved to make a recommendation to the NENA Board to approve the Summary Bylaw Changes that were reviewed at the November 2024 NIOC meeting
 - Ms. McDowell seconds
 - Discussion: Ms. Melancon shared that the updates should make the Bylaws easier to understand and appreciates the consideration of the NIOC
 - On a voice vote, the **motion passes**
- ***Commission Member Announcements / Concerns***
 - No announcements / concerns
- ***Motion to Adjourn***
 - Ms. McDowell moved to adjourn; Mr. Sehnert seconds.
 - On a voice vote, the **motion passes**
 - Meeting adjourned at 12:17pm

[Remainder of the page intentionally blank]

NIOC Price Sheet

PCA PKI

Subscription Fees (NIOC)				
Item	Description	Fee	Anticipated Volume	Fee Paid By
Annual Subscription Fee per Agency	9-1-1 Authorities	\$5,000 each	50-100	Agency
Annual Subscription Fee per Multitenant Agency	NGCS Core Service Providers	\$5,000 each	10	Agency
Annual Subscription Fee per Commercial / For Profit Agency	Commercial entities involved in 9-1-1 call handling	\$5,000 each	10	Agency
Annual Certificate Fee per certificate	End-entity certificates issued to entities directly from the NIOC Tier 2 ICA	\$200 per certificate per year		Agency
PCA PKI Fees				
Item	Description	Fee		Fee Paid By
All Agencies/Subscribers				
Agency & Principal Individual Evaluation	Extended validation per Agency, that includes the Agency and Principal Individual's validation. If the Agency uses a Delegated Authority (DA) from a separate organization, the DA organization and DA Principal Individual must also be validated. This incurs a second validation fee. Generally, the extended validation will occur every three (3) years, unless there is a change to the Agency or Principal Individual.	\$1,200 per validation		Agency
Agency Certificate	A certificate issued to an agency. Agencies cannot be issued ICAs or agent certificates until the agency has received an agency certificate through full validation.	\$300 for up to 3-year validity		Agency

CPS Review	All Tier-2 ICAs are subject to this fee for Eonti to review their CPS prior to ICA issuance. This fee is assessed after any published changes to the Certificate Policy.	\$1,500 per review		Agency
Consulting Services	Agencies/PKI Participants that need extra assistance with the onboarding requirements (CPS development, Registration Authority Services, PKI hierarchy, etc.), please contact Eonti directly @ pkiservices@eonti.com to set up an introductory call.	Price varies		Agency
PCA Hosted CA (paid only by NIOC)	Description	Fee	Anticipated Volume	Fee Paid By
	Offline root CA; root of trust for PKI. NIOC is the owner of the root of trust and pays the PCA Hosted CA fees in their entirety. There is only one root of trust for the PCA.	\$30,000 every 3 years (estimated)	1	NIOC Only
	Fee charged to NIOC for the dedicated hardware security module used for the PCA.	\$1,200 per year/HSM		NIOC Only
Tier 2 Hosted ICA:	Description	Fee	Anticipated Volume	Fee Paid By
Hosted ICA Issuance	An ICA signed by the PCA and hosted at DigiCert per the terms of the agreement between NIOC/NENA and DigiCert.	\$15,000 per issuance	50-100	Agency
ICA Annual Fee	Annual hosting per ICA	\$6,000 per year		Agency
Element/Service/Agent Certificates	End-Entity certificates held by most members of the PKI. This includes call handling equipment, 9-1-1 telecommunicators and groups of servers that comprise NG9-1-1 Core Services.	\$300 for > 2-yr validity \$200 for > 1-yr validity \$100 for up to 1-yr validity	Tens of thousands and up	Agency
Tier 2 Discrete ICA	Description	Fee	Anticipated Volume	Fee Paid By

Discrete ICA Issuance	An ICA signed by the PCA but hosted by the holder of the certificate. Discrete ICAs are subject to the same audits and requirements as any CA.	\$50,000 per issuance	Few, if any	Agency
Tier 3 Hosted ICA	Description	Fee	Anticipated Volume	Fee Paid By
Hosted ICA Issuance	An ICA at a county or other local level, hosted by DigiCert per the terms of the agreement between NIOC/NENA and DigiCert	\$10,000 per issuance	Few, if any	Agency
ICA Annual Fee	Annual hosting fee per ICA	\$3,000 per year		Agency
Element/Service/Agent Certificate	End-Entity certificates held by most members of the PKI. The includes call-handling equipment, 9-1-1 telecommunicators and groups of servers that comprise NG9-1-1 Core Services.	\$300 for > 2-yr validity \$200 for > 1-yr validity \$100 for up to 1-yr validity	Tens of thousands	Agency
Tier 3 Discrete ICA	Description	Fee	Anticipated Volume	Fee Paid By
Discrete ICA Issuance	An ICA hosted by the holder of the certificate. Discrete ICAs are subject to the same audits and requirements as any CA.	\$30,000 per issuance	Few, if any	Agency

See Appendix A for PKI Roles and Definitions

PCA Implementation Options

Implementation Configurations			
Owned & Operated by SSP	Owned & Operated by SSP	Owned by the 9-1-1 Authority	Owned & Operated by the 9-1-1 Authority
Services Offered to 9-1-1 Authority	Services offered to 9-1-1 Authority		
Servers shared by multiple 9-1-1 Authorities	Servers dedicated to one 9-1-1 Authority		
Multitenant	Single Tenant	Single Tenant	Single Tenant

PCA Architecture Examples

Forest Guide

A subscription for Forest Guide access is optional and can be added for an additional fee.

Forest Guide Fees				
Annual Subscription Fee by Tier	Population Tiers		Annual Subscription Fee	
	Minimum	Maximum	MRF / Month	OTF
1	-	200,000	\$600.00	\$1,000.00
2	200,001	750,000	\$1,000.00	\$1,000.00
3	750,001	2,000,000	\$2,000.00	\$2,000.00
4	2,000,001	5,000,000	\$3,600.00	\$2,500.00
5	5,000,001	25,000,000	\$5,000.00	\$3,500.00
6	25,000,001	50,000,000	\$6,000.00	\$5,000.00
7	50,000,001	100,000,000	\$7,000.00	\$5,000.00
8	100,000,001	>100,000,001	\$8,000.00	\$5,000.00

Access to the Forest Guide is provided on an annual basis. The first year of access includes an initial one-time setup fee and an annual subscription fee based on population served by the NG9-1-1 Interoperability Services subscriber. In subsequent years, subscribers only pay the annual subscription fee.

The Forest Guide subscription fees represent wholesale pricing from Intrado. The NIOC does not add any additional fees on top of the wholesale pricing; it is passed through as-is to subscribers.

The NIOC is the independent oversight governance body for the NG9-1-1 Public Key Infrastructure (PKI), Forest Guide, and other technical-interoperability services necessary for interoperability and security in NG9-1-1.

Appendix A

Agency	A Public Safety Entity that is eligible to hold an Agency Certificate. After the RA has Authenticated the Agency, the Agency may then designate an Agency Representative to act on its behalf
Agency Certificate	An End-Entity Certificate issued to an Agency.
Agent Certificate	An End-Entity Certificate issued to a person.

CA (Certification Authority)	The CA is the collection of hardware, software, and operating personnel that create, sign, and issue Public Key Certificates to Subscribers.
CPS (Certificate Practice Statement)	A statement of the practices which a CA employs in issuing Certificates
Discrete ICA	An ICA operated by the Subscriber or a third-party PKI service provider on behalf of the Subscriber.
Element Certificate	A Certificate issued to a physical or virtual entity that is addressable and has a unique ID.
End Entity Certificate	A Certificate issued to a physical or virtual entity that is addressable and has a unique ID.
Hosted ICA	An ICA that is hosted by DigiCert in its PKI facilities.
HSM (Hardware Security Module)	A physical computing device that safeguards and manages digital keys for strong Authentication and provides crypto processing.
ICA (Intermediate CA)	A CA subordinate to the PCA or another ICA and operates in accordance to the CP.
ICA PA – Tier 2 and beyond	A PA assigned by the ICA owner to be responsible for setting up and approving policies and practices that apply to their ICA. The authority for the ICA PA is defined the ICA's CPS
MA (Management Authority)	The PA oversees the MA to provide trust management services to support the NG9-1-1 ecosystem in meeting its security goals in using the PCA PKI.
PA (Policy Authority)	The body established to oversee the creation and update of Certificate Policies, review CPSs, review the results of CA Audits for policy compliance, evaluate non-domain policies for acceptance within the domain, and generally oversee and manage the PKI Certificate Policies
RA (Registration Authority)	The RA is an authority that performs Certificate Management functions on behalf of the CA, such as collection and verification of a Prospective Subscriber's identity and information that is to be entered into the Subscriber's Public Key Certificates.
Relying Parties	A Relying Party is an entity that relies on the validity of the Binding of the Subscriber's name to a Public Key. The Relying Party uses a Subscriber's Certificate to verify or establish the identity and status of the Subscriber.
Service Certificate	An End-Entity Certificate issued to a service.

Subscribers	A Subscriber is the entity whose name appears as the Subject in an End Entity Certificate who agrees to use its Private Key and Certificate in accordance with the CP asserted in the Certificate and that does not itself issue Certificates
--------------------	---

[Remainder of the page intentionally blank]

Proposed NIOC Bylaw Changes

Section 2 Nomination and Selection

Subsection 2: Selection

The following items were added for clarity:

E. After the Board's vote, all nominees will be notified in writing of the Board's decision. Notice may be sent by the Chair of the Commission or the NIOC Program Manager.

F. All newly elected and re-elected Commission members will be administered the Oath of Office at the Commission's next regular meeting, or at the Commission's earliest convenience.

Section 3: Tenure and Succession

Subsection 1: Tenure

The following language was added to facilitate the nomination process:

Commissioners who wish to seek another term shall provide written notice and supporting documentation to the NIOC Program Manager by the last day of February. If notice is not received by the last day of February, the Commissioner(s) will not be presented to the Board for consideration for a subsequent term.

Subsection 2: Departure from the Commission

Letter C has been modified to provide clarity for the removal of a Commissioner.

A commissioner may be removed at any time. The reason for removal must be documented in writing and notice provided to the affected individual. A vote will be taken at the Commission's next regularly scheduled meeting, or by a special meeting called by the Chair or by any six members of the Commission. The commissioner will be removed upon a 2/3 vote of Commission's standing members not including the commissioner proposed for removal. In the event the Commission cannot achieve a 2/3 vote, the matter will be presented to the Board for consideration. The Board will vote and the commissioner will be removed upon a 2/3 vote.

Article 7: Officers:

Language Modifications for all Officer positions on the Commissions, allowing self-nominations.

Any voting member in good standing may nominate a candidate, including his or her self for any post for which they qualify.

Section 5: Election and Terms of Office

B. has been modified to remove term limits for Officers of the Commission. This is only for Officers, and all other term limits remain in effect.

Each Officer of the Commission shall serve a term of one (1) full year. Officers of the Commission may serve unlimited consecutive terms, at the discretion of the Voting Members of the Commission.

Article 13: Conflict of Interest Policy**

Section 1: Policy

Added B, C, and D to this section as follows:

1. At the first meeting of a Commission meeting held following a change to this policy, the Chair shall read a summary of all changes to this policy.
2. Whenever practical, when the Commission meets electronically, meeting attendees shall be compelled to electronically confirm that they are familiar with this policy and agree to abide by it prior to being accepted into the meeting.
C. At meetings of the Commission, the Chair shall ask whether anyone present has not received or does not agree to this conflict of interest policy, and, after offering any person responding in the affirmative an opportunity to withdraw from the meeting. The minutes shall record the fact that the question was asked, along with the name and affiliation of any person responding in the affirmative

****These were pending changes proposed before Michelle came on board as the NIOC Program Manager. Uncertain if these are still relevant. ****

[Remainder of the page intentionally blank]