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.	$10,000 per year	1	NIOC Only
	Fee charged to NIOC for the dedicated hardware security module used for the PCA.	$2,300 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

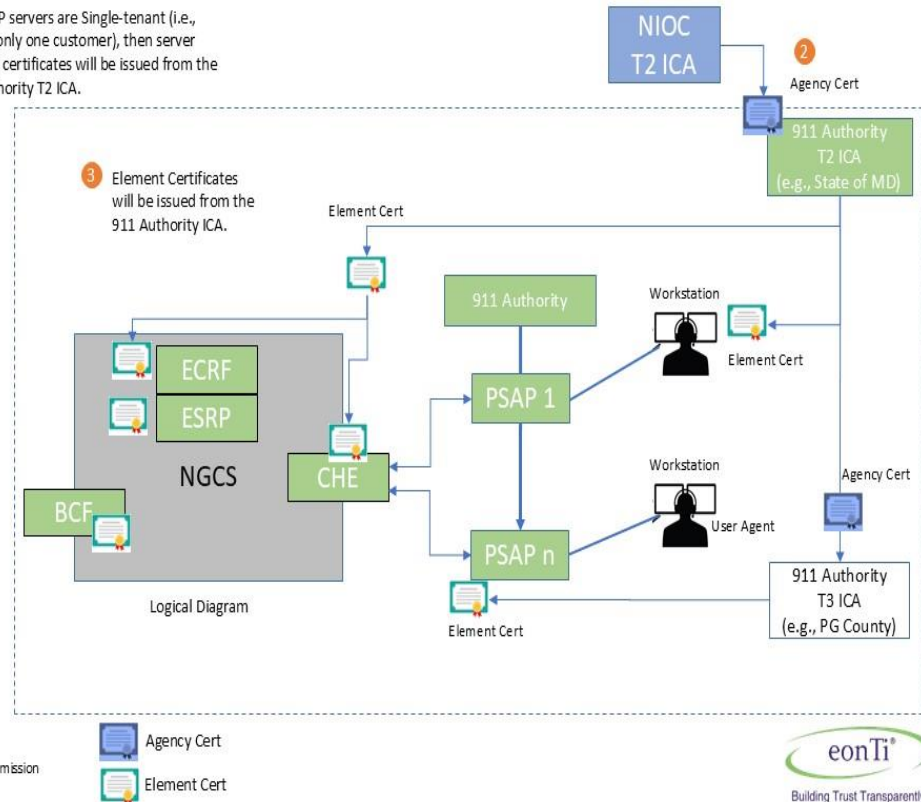| Owned & Operated by SSP	Owned & Operated by SSP	Owned by the 9-1-1 Authority	Owned & Operated by the 9-1-1 Authority
Services Offered to 9-1-1 Authority	Services offered to 9-1-1 Authority		
Servers shared by multiple 9-1-1 Authorities	Servers dedicated to one 9-1-1 Authority		
Multitenant	**Single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

PCA Architecture Examples
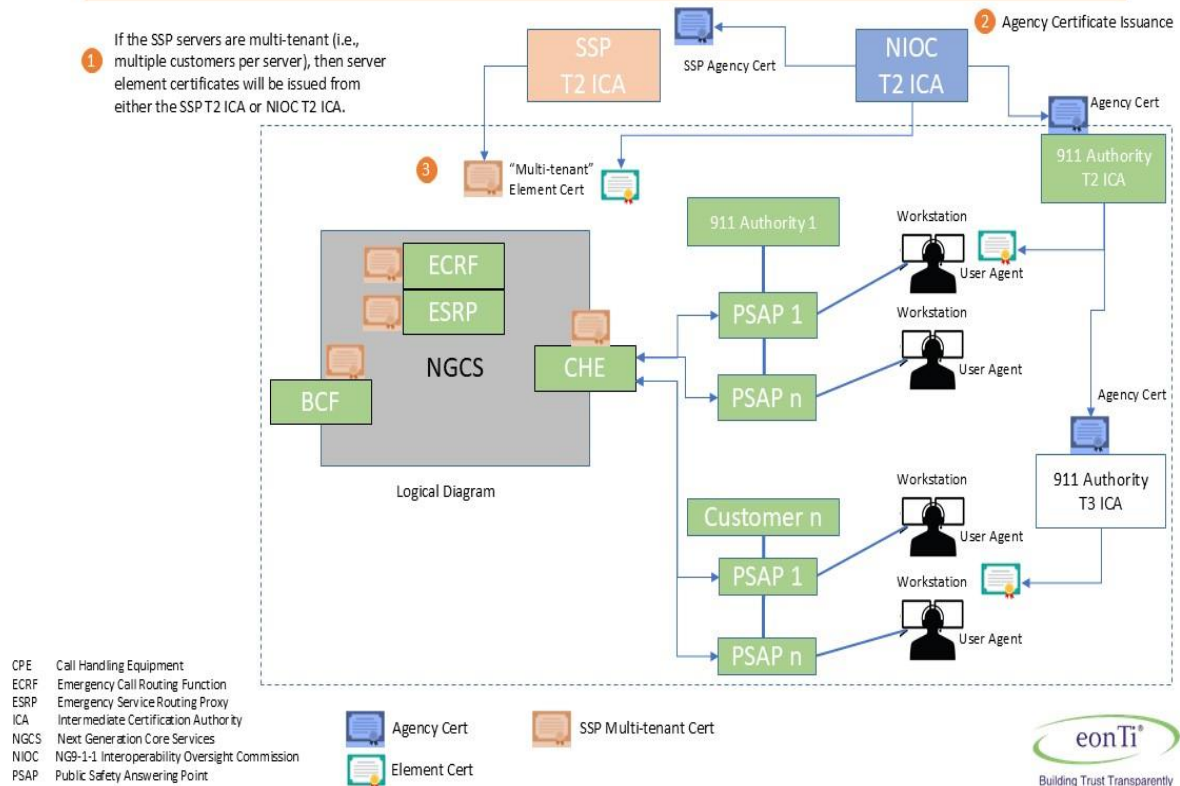

PCA Architecture - Overview
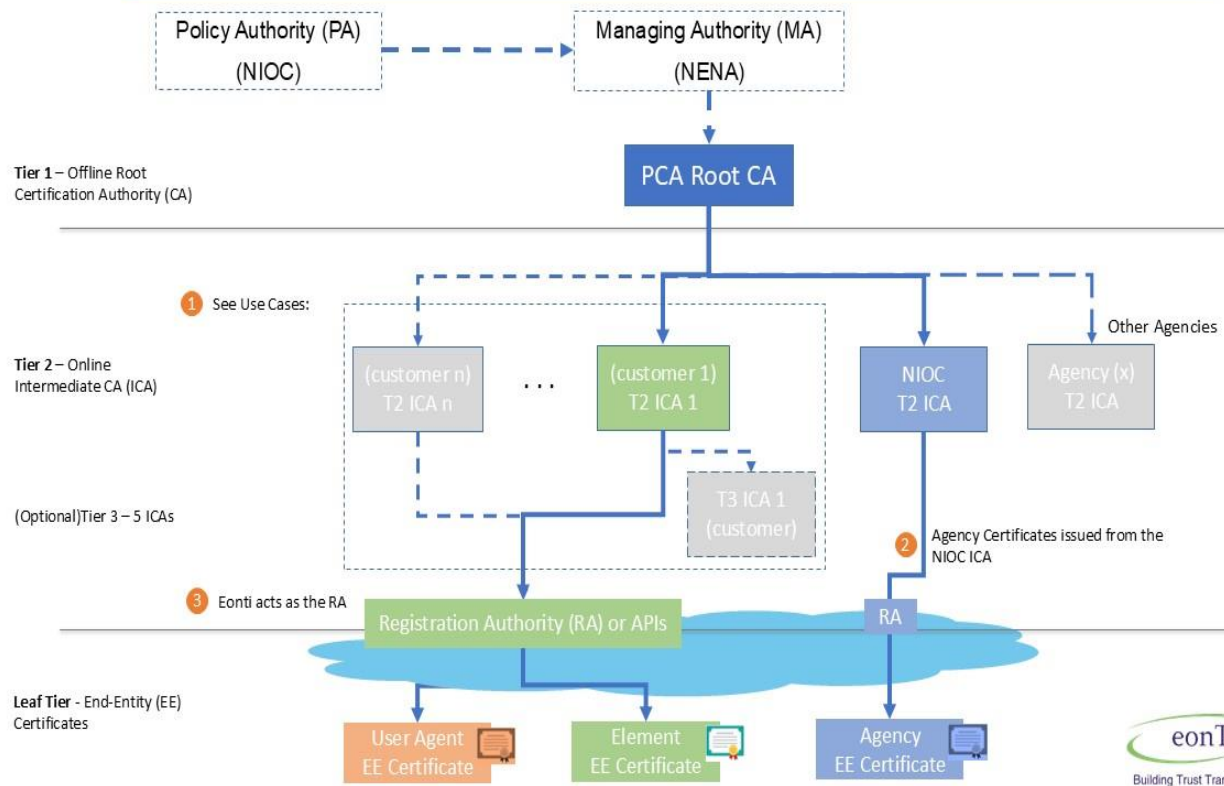
Use Case: Single-tenant (Regional, State, Local Authority)

① If the SSP servers are Single-tenant (i.e., serving only one customer), then server element certificates will be issued from the 911 Authority T2 ICA.

③ Element Certificates will be issued from the 911 Authority ICA.

NIOC T2 ICA

② Agency Cert

911 Authority T2 ICA (e.g., State of MD)

Element Cert

911 Authority

Workstation

ECRF

ESRP

NGCS

Element Cert

PSAP 1

CHE

BCF

Logical Diagram

Workstation

User Agent

PSAP n

Agency Cert

911 Authority T3 ICA (e.g., PG County)

Element Cert

CHE	Call Handling Equipment
ECRF	Emergency Call Routing Function
ESRP	Emergency Service Routing Proxy
ICA	Intermediate Certification Authority
NGCS	Next Generation Core Services
NIOC	NG9-1-1 Interoperability Oversight Commission
PSAP	Public Safety Answering Point

Agency Cert

Element Cert

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Use Case: Multi-tenant Servers

1 If the SSP servers are multi-tenant (i.e., multiple customers per server), then server element certificates will be issued from either the SSP T2 ICA or NIOC T2 ICA.

2 Agency Certificate Issuance

SSP T2 ICA

SSP Agency Cert

NIOC T2 ICA

Agency Cert

911 Authority T2 ICA

3 "Multi-tenant" Element Cert

911 Authority 1

Workstation
User Agent

PSAP 1

Workstation
User Agent

PSAP n

Agency Cert

ECRF

ESRP

NGCS

BCF

CHE

Logical Diagram

911 Authority T3 ICA

Workstation
User Agent

Customer n

PSAP 1

Workstation
User Agent

PSAP n

CPE   Call Handling Equipment
ECRF   Emergency Call Routing Function
ESRP   Emergency Service Routing Proxy
ICA   Intermediate Certification Authority
NGCS   Next Generation Core Services
NIOC   NG9-1-1 Interoperability Oversight Commission
PSAP   Public Safety Answering Point

Agency Cert

Element Cert

SSP Multi-tenant Cert

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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