## Root CA Bugzilla ID: 335197 Root CA Company/Organization Name: Staat der Nederlanden

This document summarizes the information gathered and verified for subordinate CAs for companies who use their sub-CA to sign other sub-CAs or certificates for other companies or individuals not affiliated with their company. For instance, this document is necessary when the root issues sub-CAs that are used by Certificate Service Providers (CSP). For more background information, see

- https://wiki.mozilla.org/CA:How to apply
- <u>https://wiki.mozilla.org/CA:SubordinateCA\_checklist</u>

	g the sub-
CA.	

List or Description of all of the Subordinate CA's operated by third parties government	Jederlanden Root CA - G2 governmental PKI (hereafter PKIoverheid) is the name for the Public Key	COMPLETE
Subordinate CA's operated by Infrastructu third parties government	governmental PKI (hereafter PKIoverheid) is the name for the Public Key	GOL (DY DEE
The CSPs authenticat employees organizatio certificates have been The PKIov Relations i Dutch Min system. The PKIov Nederlande Governmen several CS	ure designed for trustworthy electronic communication within and with the Dutch at. To reach the latter goal a national PKI certificate hierarchy has been realised. This consists of 2 roots and 4 domains. (commercial and governmental organizations) issue several types of certificates (e.g. tion, encryption, non-repudiation, service (SSL)) to end-users. End-users can be (or in the case of service/SSL certificates: a server) within governmental ons or employees working at commercial companies ((or in the case of service/SSL as server). In theory end-users can also be civilians. However, so far no certificates issued directly to civilians and this will probably not happen in the coming years. verheid only issues certificates to CSPs. The Ministry of Interior and Kingdom s the owner of the PKIoverheid. The Policy Authority PKIoverheid supports the ister of Interior and Kingdom Relations with the management and control of the PKI verheid hierarchy consists of a root based on the SHA-1 algorithm (Staat der en Root CA) and two subordinate domain-CAs (a domain-CA for Government- nt and Government-Business and a domain-CA for Government-Citizen), with Ps underneath, and of a root based on the SHA-256 algorithm (Staat der Nederlanden •G2) and two subordinate domain-CAs (a domain-CA for Government-Organization	COMPLETE (translations verified using Google Translate)

Note: "Staat der Nederlanden Root CA" is already included in NSS. This request is to include "Staat der Nederlanden Root CA – G2", which is the next generation of the root.	
Both our roots and our 4 domains have been evaluated by the Dutch General Intelligence and Security Service and are classified as Stg. Confidentieel (Nato Confidential). The private key of both our roots and our 4 domains are held at a location which is classified by the Dutch General Intelligence and Security Service as Stg. Geheim (Nato Secret). So Mozilla customers can have full confidence that the private key of our roots and 4 domains will not be compromised.	
CSPs only issue certificates to end-users working within governmental organizations or end- users working at commercial companies.	
CSPs will always conclude a contract with (a representative of) a subscriber before issuing any end-entity certificate. This means that a request for a certificate always takes place by (a representative of) a subscriber. So it is not possible that an employee from a government organization or commercial company can directly request a certificate from a CSP. Furthermore (the representative of) the subscriber is responsible for the accuracy and completeness of the request for a certificate.	
The only exception is the CSP Defensie. They only issue certificates to their own employees. So the conclusion of a contract with a subscriber is not applicable here.	
<ul><li>Before a CSP may provide a certificate to (a representative of) a subscriber they have to verify that the subscriber:</li><li>1. is an existing organization and;</li><li>2. provides an organization name, to be included in the certificate, which is accurate and complete.</li></ul>	
<ul> <li>This is stated in our CP:</li> <li>part 3a; in paragraph 3.2.1 and 3.2.2. on page 8 and nr. 3.2.3 on page 40 and;</li> <li>part 3b; in paragraph 3.2.2.1 and 3.2.2.2 on page 9.</li> </ul>	
When the subscriber is a natural person (civilian) the CSP has to verify that the name, which will be included in the certificate, is complete and correct, including surname, first name, initials or other forename(s)(if applicable).	

		,
	This is stated in our CP:	
	- part 3c; in paragraph 3.2.3.1 on page 8.	
	In addition the CSPs also have to verify the identity of an end-user.	
Requirements (technical and	In the CPSs of the CSPs is described how the verification of the identity of (the representative of) the subscriber and the verification of the identity of the end-user takes place. See below. Exception to this is the situation if the subscriber is a natural person (CP part 3c). This can not be found in the CPSs of the CSPs because so far no certificates have been issued directly to civilians and this will probably not happen in the coming years. Sub-CAs within the PKIoverheid who issue end-entity certificates can only be created	COMPLETE
contractual) for subordinate CAs in regards to whether or not subordinate CAs are constrained to issue certificates only within certain domains, and whether or not subordinate CAs can create their own subordinates.	underneath and signed by CSPs within the PKIoverheid hierarchy. So Sub-CAs can only issue certificates within the same domains as where the CSPs issue their certificates. Sub-CAs can not create their own subordinates. The only reason that a CSP within the PKIoverheid creates a Sub-CA is to differentiate between the different usages of certificates. This means that, if applicable, a Sub-CA is created for certificates meant for personal use (authentication, encryption and non-repudiation) and a Sub-CA for certificates meant for services (e.g. SSL). Before a CSP can create a Sub-CA they have to have permission from the Policy Authority (PA) of PKIoverheid, as is stated in our CP part 3a and 3c in paragraph 9.12.2.2 on page 25 and in part 3b in paragraph 9.12.2.2 on page 27. The PA grants its permission by assigning a separate OID for the Sub-CA.	
Requirements for sub-CAs to take reasonable measures to verify the ownership of the domain name and email address for end-entity certificates chaining up to the root, as per section 7 of http://www.mozilla.org/projects/s ecurity/certs/policy/. a) domain ownership/control b)email address ownership/control c) digitally signing code objects entity submitting the certificate signing request is the same entity referenced in the certificate	<ul> <li>All CSPs perform an extensive identity validation check and organizational validation che regarding the (representative of the) subscriber (governmental organization or commercial company) and the end-user.</li> <li>All CSPs perform an extensive identity validation check and organizational validation che regarding the (representative of the) subscriber (governmental organization or commercial company) and the end-user.</li> <li>See the tables below for further information about how each CSP's CP/CPS addresses the ownership/control of domain name and email address.</li> <li>Each application form is signed by the representative of the government organization or commercial company of the end-user. Each CSP performs an extensive identity validation check and organizational validation check. So there can be absolutely no doubt that the employee is working within that specific organization and that the employee is the one who he/she claims to be.</li> <li>CP Part 3b page 31 underneath the attribute Subject.commonName declares that the subscriber is responsible for the correctness of the FODN.</li> </ul>	

	<ul> <li>domain name" (FQDN). For example if a certificate is requested for pkioverheid.nl than the certificate is not valid for secure.pkioverheid.nl."</li> <li>CP Part 3a page 33 (SubjectAltName.rfc822Name) does not recommend the use of an email address for applicants: "The use of email addresses for PKIoverheid certificates within the domain Government and Companies is not recommended, because email addresses of applicants change a lot and it can harm the privacy of the applicants (spam)."</li> <li>Nevertheless some CSPs include an email address. This is sometimes necessary for authentication (access control) purposes within government organizations or commercial companies.</li> <li>In the CPSs of the CSPs DigiNotar, Getronics and ESG no real statement is made about the verification of the email address of the end-user. However, each application form is signed by the representative of the government organizational validation check. So there can be absolutely no doubt that the employee is working within that specific organization and that the employee is the one who he/she claims to be. This means that the CSP can trust the</li> </ul>	
CRL	submitted email address on the application form. CP Part 3a and 3c in paragraph 4.9.5.1 (Tijdsduur voor verwerking intrekkingsverzoek) on page 11 indicates that the CRL and OCSP update frequency for end-entity certificates has to take place at least every 4 hours. The same statement is made in CP Part 3b in paragraph 4.9.5.1 (Tijdsduur voor verwerking intrekkingsverzoek) on page 13.	COMPLETE
OCSP	CP Part 3a and 3c in paragraph 4.9.5.1 (Tijdsduur voor verwerking intrekkingsverzoek) on page 11 indicates that the CRL and OCSP update frequency for end-entity certificates has to take place at least every 4 hours. The same statement is made in CP Part 3b in paragraph 4.9.5.1 (Tijdsduur voor verwerking intrekkingsverzoek) on page 13.	COMPLETE
Description of audit requirements for sub-CAs (typically in the CP or CPS)	The CSPs within the PKIoverheid hierarchy also have to comply with the ETSI TS 101 456 standard. This is audited annually by the auditor. When a CSP uses a RA or LRA for e.g. an identity check than this process will also be included in the audit. PKIoverheid has a number of additional requirements for the CSPs which are also annually reviewed by the auditor.	COMPLETE
<ul><li>a) Whether or not the root CA audit includes the sub-CAs.</li><li>b) Who can perform the audits for</li></ul>	See the tables below for the audit certificates for each CSP.	

sub-CAs.	
c) Frequency of the audits for sub-	
CAs.	

5 CSP are evaluated below. The first table contains the 3 CSPs that issue SSL certificates. The second table contains the 2 CSPs that do not currently issue SSL certificates. The sub-CAs for these CSPs are currently signed by the "Staat der Nederlanden Root CA" which is already included in NSS. They are evaluated here because they will be migrated to the new root, "Staat der Nederlanden Root CA – G2", which is under evaluation for inclusion.

Table of CSP's that issue SSL certificates

Info	Data	Data	Data
Needed			
Sub-CA	DigiNotar	GetronicsPinkRoccade	CIBG/UZI-register
Name			
Sub-CA	http://www.diginotar.nl	http://www.getronicspinkroccade.nl/	http://www.cibg.nl/
URL			
Sub-CA	CPS:	http://www.pinkroccadecsp.nl/website/files	https://www.uzi-
CP/CPS	https://www.diginotar.nl/Portals/7/Voorwa	/Getronics_PinkRoccade_PKIoverheid_CP	register.nl/pdf/20081001_CPS_UZI-
	arden/CPS%20DigiNotar%20PKIoverheid	<u>S_v4.2.pdf</u>	register 4.1d.pdf
	%20domein%20overheid%20v1.2.3.pdf		
	CPS services:		
	https://www.diginotar.nl/Portals/7/Voorwa		
	arden/CPS%20DigiNotar%20PKIoverheid		
	<u>%20Services%20v1.2.2.pdf</u>		
Subscriber	No statement is made in the CPS services	In CPS paragraph 3.2.3.2.2 on page 20 it is	In CPS paragraph 3.2.3 on page 21 it is
verification	from CSP DigiNotar about the verification	stated that "the subscriber has to provide	stated that "At the request of
	of a domain name. However in the	evidence about the identifier (aka the	server certificates UZI Register will verify
Section 7 of	application form for PKIoverheid SSL	domain name) of the server. Getronics will	the records of the SIDN (aka
Mozilla	certificates the subscriber has to fill in who	then assess if the supplied evidence is	www.domain-registry.nl more info can be
Policy	is the domain owner. In paragraph 2 of the	accurate and complete".	found here:
	form it is stated that "a proof of ownership		http://www.sidn.nl/ace.php/c,728,122,,,,Ho
	of the domain name of the organization is	In CPS paragraph 3.2.2 on pages 16 and 17	me.html) or the Internet Assigned
	required. The subscriber has to fulfil this	it is stated that a (representative of a)	Numbers Authority (IANA)) whether the
	request by handing over evidence of this	subscriber has to fill in a form to become	subscriber is the owner of the domain
	ownership which can be obtained at	registered as a subscriber.	name."
	www.domain-registry.nl" (English:	This form can be found here:	

Problematic	See 436056-InfoGathering for info about	See 436056-InfoGathering for info about	See 436056-InfoGathering for info
Practices	all potentially problematic practices. The	all potentially problematic practices. The	about all potentially problematic
	one particular to DigiNotar is	one particular to Getronics is	practices. There are none that are
	1.3 Delegation of Domain / Email	1.3 Delegation of Domain / Email	specific to CIBG/UZI-register.
	validation to third parties	validation to third parties	
	DigiNotar has delegated parts of their	Getronics has delegated parts of their	
	process regarding the organization and	process regarding the organization and	
	end-user identity check to third parties.	end-user identity check to third parties.	
	Nevertheless when a CSP within the	Nevertheless when a CSP within the	
	PKIoverheid hierarchy uses a RA or	PKIoverheid hierarchy uses a RA or LRA	
	LRA for e.g. an identity check than this	for e.g. an identity check than this	
	process will also be included in the audit.	process will also be included in the audit.	
Audit	Auditor: PricewaterhouseCoopers	Auditor: BSI Management Systems	Auditor: BSI Management Systems
	Statement of Audit based on ETSI 101 456 criteria:	Statement of compliance with ETSI 101 456 criteria:	Statement of compliance with ETSI 101 456 criteria:
	http://www.diginotar.nl/Portals/7/ETSI/Cer	https://www.pki.getronicspinkroccade.nl/w	https://bugzilla.mozilla.org/attachment.cgi?
	tificate.pdf	ebsite/files/Getronics%20-	<u>id=360053</u>
		%20ETSI%20certificate%20by%20BSI.pd	
		<u>f.pdf</u>	
CRL	In CPS paragraph 5.6.8 on page 32 it is	In CPS paragraph 4.9.6 on page 32 it is	In CPS paragraph 4.10 on page 31 it is
	stated that "The Revocation status	stated that "CRL issuance frequency is	stated that "UZI-register issues a new CRL
	information is updated at least every half	once every four hours"	every 3 hours"
	hour."		
	In CPS services paragraph 5.7.7 on page		
	33 it is stated that "The Revocation status		
	information is updated at least every half		
0.000	hour."		
OCSP	http://validation.diginotar.nl/	http://ocsp.pinkroccade.com/	http://ocsp.uzi-register.nl
	In CPS paragraph 5.5.3 on page 26 it is	In CPS paragraph 4.9.8 on page 32 it is	In CPS paragraph 4.9.9 on page 31 it is
	stated that "the OCSP validation	stated that "the OCSP validation	stated that "the OCSP validation
	information is at least equal to, and as	information is as current as the information	information is as current as the information
	current as the information provided on the	provided on the basis of CRL validation	provided on the basis of CRL
	basis of CRL validation".	but it can be more accurate than the	validation but it can be more accurate than

In CPS services paragraph 5.6.2 on page 27 and 28 it is stated that "the OCSP validation information is at least equal to, and as current as the information provided on the basis of CRL validation".	information that is communicated through the CRL. This is only the case if a withdrawal of a certificate has taken place and the regular renewal of the CRL has not yet taken place".	the information that is communicated through the CRL. This is only the case if a withdrawal of a certificate has taken place and the regular renewal of the CRL has not yet taken place".

Info Needed	Data	Data
Sub-CA Name	ESG	Defensie
Sub-CA URL	http://www.de-electronische-signatuur.nl/cms/	http://www.mindef.nl/en/
Sub-CA CP/CPS	http://www.de-electronische-	http://cps.dp.ca.mindef.nl/mindef-ca-dp-
	signatuur.nl/downloads/CPS_080213.pdf	cps/CPS%20Certificatie%20Autoriteit%20Defensie%20v.1.2.pdf
Subscriber	At this moment the CSP ESG does not issue server	The CSP Defensie does not issue server certificates (e.g. SSL
verification	certificates (e.g. SSL certificates). They only issue	certificates). They only issue certificates for personal use
	certificates for personal use (authentication, encryption and	(authentication, encryption and non-repudiation) to end users.
Section 7 of Mozilla	non-repudiation) to end users.	
Policy		CPS Paragraph 9.4.2 on page 47 and 48 describes which attributes
	In CPS paragraph 2.3 on page 9 it is stated that (a	are included in the certificates issued by the CSP Defensie. The
	representative of) a subscriber has to fill in a form. In this	attributes are: surname, initials, name, employee number, public
	form (the representative of) the subscriber (government	encryption key, public authentication and signing key. So no
	organization or commercial company) has to fill in the	email address is included in the certificate.
	registration number of The Dutch Trade Register (KvK	
	nummer).	In CPS paragraph 3.2.2 it is stated that only the system used for
	The form can be found here:	HRM purposes within the Ministery of Defense organization
	http://www.de-electronische-	(PeopleSoft that is) can be used to request a certificate. It is not
	signatuur.nl/downloads/reg_formulieren/OCD.pdf	possible to request a certificate without the use of the PeopleSoft system.
	The form and the supplied information are checked by a	
	Local Registration Authority (LRA).	In paragraph 3.2.3 on page 15 it is stated that CSP Defensie
		checks the identity of the end-user. Evidence of the identity is
	In the same paragraph of the CPS from ESG it is stated that	checked on the basis of physical appearance of the end-user.
	ESG checks the identity of the end-user. Evidence of the	
	identity is checked by the LRA on the basis of physical	

	appearance of the end-user.	
	A list of LRAs used by CSP ESG can be found here:	
	http://www.de-electronische-signatuur.nl/cms/nl/lrao-	
	partneroverzicht.html	
DV or OV?	OV	OV
Problematic	See 436056-InfoGathering for info about all potentially	See 436056-InfoGathering for info about all potentially
Practices	problematic practices. There are two that are particular to	problematic practices. There are none that are specific to
	ESG:	Defensie.
	1.2 Delegation of Domoin / Empilyabilitation to third	
	<u>1.3 Delegation of Domain / Email validation to third</u> parties	
	ESG has delegated parts of their process regarding the organization and end-user identity check to third parties.	
	Nevertheless when a CSP within the PKIoverheid	
	hierarchy uses a RA or LRA for e.g. an identity check	
	than this process will also be included in the audit.	
	1.8 CRL with critical CIDP Extension	
	Only the CSP ESG uses this attribute. We will inform	
	them about Mozilla's recommendation.	
Audit	Auditor: BSI Management Systems	Auditor: BSI Management Systems
nuan	Auditor. Dor Management bystems	Auditor. Dor Munagement bystems
	Statement of compliance with ETSI 101 456 criteria:	Statement of compliance with ETSI 101 456 criteria:
	http://www.de-electronische-	https://bugzilla.mozilla.org/attachment.cgi?id=360055
	signatuur.nl/downloads/BSI%20Certificaat.pdf	
CRL	In CPS paragraph 4.1.2.2 on page 15 it is stated that "The	In CPS paragraph 4.9.7 on page 23 it is stated that "The CRL is
	CRL is renewed every 4 hours."	issued once every 4 hours"
OCSP	http://pks.esg4.eu/ocspesgnl	http://ocsp.dp.ca.mindef.nl
	In the CPS from ESG no real statement is made about the	In the CPS from Defensie no real statement is made about the
	update frequency from the OCSP. Nevertheless ESG has to	update frequency from the OCSP. Nevertheless Defensie has to
	comply with the requirement as described in the	comply with the requirement as described in the PKIoverheid CP.
	PKIoverheid CP. Furthermore the auditor will check this	Furthermore the auditor will check this during the annual
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during the annual audit. The auditor has stated that ESG meets the additional requirements from PKIoverheid.	Audit. The auditor has stated that Defensie meets the additional requirements from PKIoverheid.