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## Mozilla - CA Program

### Case Information

Case Number	00000063	Case Record Type	CA Owner/Root Inclusion Request
CA Owner/Certificate Name	Amazon	Request Status	Ready for Public Discussion

### Additional Case Information

Subject	Include Amazon Root Certificates	Case Reason
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### Bugzilla Information

Link to Bugzilla Bug	<a href="https://bugzilla.mozilla.org/show_bug.cgi?id=1172401">https://bugzilla.mozilla.org/show_bug.cgi?id=1172401</a>
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### General information about CA's associated organization

CA Email Alias 1	amazontrust@amazon.com		
CA Email Alias 2			
Company Website	<a href="https://www.amazontrust.com/">https://www.amazontrust.com/</a>	Verified?	Verified
Organizational Type	Commercial Organization	Verified?	Verified
Organizational Type (Others)		Verified?	Not Applicable
Geographic Focus	USA, Global	Verified?	Verified
Primary Market / Customer Base	The Amazon PKI is run by Amazon Trust Services ("Amazon"). Customers of the Amazon PKI are the general public. We do not require that customers have a domain registration with Amazon, use domain suffixes where Amazon is the registrant, or have other services from Amazon.	Verified?	Verified
Impact to Mozilla Users	This application includes four new root CAs. It also includes one additional root CA already in the Mozilla program which we wish to have enabled for EV certificate issuance.	Verified?	Verified

### Response to Mozilla's list of Recommended Practices

Recommended Practices	<a href="https://wiki.mozilla.org/CA:Recommended_Practices#CA_Recommended_Practices">https://wiki.mozilla.org/CA:Recommended_Practices#CA_Recommended_Practices</a>	Recommended Practices Statement	I have reviewed Mozilla's list of Recommended Practices, and confirm that we follow those practices, with exceptions and clarifications noted in the text box below.
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**CA's Response to Recommended Practices**

Comment #9: We have reviewed the "Potentially problematic CA practices". We fully comply with the Mozilla CA program requirements, including complying with the CA/Browser Forum Guidelines.

Verified? Verified

**Response to Mozilla's list of Potentially Problematic Practices****Potentially Problematic Practices**

[https://wiki.mozilla.org/CA:Problematic\\_Practices#Potentially\\_problematic\\_CA\\_practices](https://wiki.mozilla.org/CA:Problematic_Practices#Potentially_problematic_CA_practices)

**Problematic Practices Statement**

I have reviewed Mozilla's list of Potentially Problematic Practices, and confirm that we do not do those practices, with exceptions and clarifications noted in the text box below.

**CA's Response to Problematic Practices**

Comment #9:  
 \* Amazon allows externally operated subordinate CAs as documented in section 4.2.2 of the ATS CPS.  
 \* Third parties cannot directly cause the issuance of certificates from Amazon operated CAs.

Verified? Verified

**Root Case Record # 1****Root Case Information**

Root Certificate Name	Amazon Root CA 1	Root Case No	R00000083
Request Status	Ready for Public Discussion	Case Number	00000063

**Additional Root Case Information**

Subject Include Amazon Root CA 1 -- SHA-256

**Technical Information about Root Certificate**

O From Issuer Field	Amazon	Verified?	Verified
OU From Issuer Field		Verified?	Verified
Certificate Summary	The Amazon Root CAs will have internally-operated subordinate CAs that will issue certs for SSL, Code Signing, Email, etc. There will be separate subCAs for EV certificate issuance. Externally-operated subCAs are permitted according to the CPS.	Verified?	Verified
Root Certificate Download URL	<a href="https://www.amazontrust.com/repository/AmazonRootCA1.cer">https://www.amazontrust.com/repository/AmazonRootCA1.cer</a>	Verified?	Verified
Valid From	2015 May 26	Verified?	Verified
Valid To	2038 Jan 17	Verified?	Verified
Certificate Version	3	Verified?	Verified
Certificate Signature Algorithm	SHA-256	Verified?	Verified
Signing Key Parameters	2048	Verified?	Verified

Test Website URL (SSL) or Example Cert	https://good.sca1a.amazontrust.com/	Verified?	Verified
CRL URL(s)	<a href="http://crl.rootca1.amazontrust.com/rootca1.crl">http://crl.rootca1.amazontrust.com/rootca1.crl</a> CP section 4.9.7: CRL issuing frequency for subscriber certificates is at least once every seven days	Verified?	Verified
OCSP URL(s)	<a href="http://ocsp.rootca1.amazontrust.com/">http://ocsp.rootca1.amazontrust.com/</a> <a href="http://ocsp.sca1a.amazontrust.com">http://ocsp.sca1a.amazontrust.com</a> CP section 4.9.10: OCSP responses from this service MUST have a maximum expiration time of ten days	Verified?	Verified
Trust Bits	Email; Websites	Verified?	Verified
SSL Validation Type	DV; OV; EV	Verified?	Verified
EV Policy OID(s)	2.23.140.1.1	Verified?	Verified
Root Stores Included In		Verified?	Verified
Mozilla Applied Constraints	None	Verified?	Verified

### Test Results (When Requesting the SSL/TLS Trust Bit)

Revocation Tested	<a href="https://certificate.revocationcheck.com/good.sca1a.amazontrust.com">https://certificate.revocationcheck.com/good.sca1a.amazontrust.com</a> no errors	Verified?	Verified
CA/Browser Forum Lint Test	Tested. No Errors.	Verified?	Verified
Test Website Lint Test	Tested. No Errors.	Verified?	Verified
EV Tested	// CN=Amazon Root CA 1,O=Amazon,C=US "2.23.140.1.1", "Amazon EV OID", SEC_OID_UNKNOWN, { 0x8E, 0xCD, 0xE6, 0x88, 0x4F, 0x3D, 0x87, 0xB1, 0x12, 0x5B, 0xA3, 0x1A, 0xC3, 0xFC, 0xB1, 0x3D, 0x70, 0x16, 0xDE, 0x7F, 0x57, 0xCC, 0x90, 0x4F, 0xE1, 0xCB, 0x97, 0xC6, 0xAE, 0x98, 0x19, 0x6E }, "MDkxCzAJBgNVBAYTAIVTMQ8wDQYDVQQKEwZBbWF6b24xGTAXBgNVBAMTEEFtYXpv" "biBSb290IENBIDE=", "Bmyfz5m/jAo54vB4ikPmljZbyg==", Success!	Verified?	Verified

### Digital Fingerprint Information

SHA-1 Fingerprint	8D:A7:F9:65:EC:5E:FC:37:91:0F:1C:6E:59:FD:C1:CC:6A:6E:DE:16	Verified?	Verified
SHA-256 Fingerprint	8E:CD:E6:88:4F:3D:87:B1:12:5B:A3:1A:C3:FC:B1:3D:70:16:DE:7F:57:CC:90:4F:E1:CB:97:C6:AE:98:19:6E	Verified?	Verified

### CA Hierarchy Information

CA Hierarchy	We will have separate subordinate CAs to issue the following types of certificates: - Extended Validation Server Authentication - Code Signing	Verified?	Verified
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- Other types of certificates as covered by our CP and CPS (including Server Authentication and Email Protection)  
We will not issue EV certificates from subordinates used to issue non-EV certificates and we will not issue code signing certificates from subordinates used to issue non-code signing certificates.

<b>Externally Operated SubCAs</b>	<p>Amazon allows externally operated subordinate CAs.</p> <p>CPS section 4.2.2: For Applications for a Subordinate CA where the Subordinate CA will not be controlled by Amazon, Amazon ensures that all the following are true:</p> <ul style="list-style-type: none"> <li>• The APPMA has approved the Subordinate CA</li> <li>• There is a contract in place requiring the Subordinate CA to comply with CA/Browser Forum guidelines</li> <li>• The CA generated and stores its keys on a HSM that meets the requirements in the CP</li> <li>• The CA had the key generation audited by a qualified auditor. This is not required to be a WebTrust licensed auditor, but the auditor must meet items 1, 3, 6, and 7 of section 8.2 of the CP.</li> <li>• If the Subordinate CA certificate is not technically constrained, then the contract requires the Subordinate CA operator to provide evidence of a WebTrust audit with a period ending not more than one year prior to application or a WebTrust point in time readiness assessment that occurred no more than one year prior to application...</li> </ul>	<b>Verified?</b>	<b>Verified</b>
<b>Cross Signing</b>	<p>Yes. Starfield Services Root Certificate Authority - G2 issued a cross certificate with this root as the subject.</p>	<b>Verified?</b>	<b>Verified</b>
<b>Technical Constraint on 3rd party Issuer</b>	<p>Third parties cannot directly cause the issuance of certificates from Amazon operated CAs.</p> <p>CPS section 4.2.2 regarding externally-operated subCAs: If the Subordinate CA certificate is not technically constrained, then the contract requires the Subordinate CA operator to provide evidence of a WebTrust audit with a period ending not more than one year prior to application or a WebTrust point in time readiness assessment that occurred no more than one year prior to application. Additionally, the CA must have WebTrust audits covering periods no longer than one year in duration where each audit period must immediately start after the previous period end with no gaps.</p> <p>Amazon will post links to Subordinate CA certificates, CP, CPS, and audit options (if applicable) in its repository.</p>	<b>Verified?</b>	<b>Verified</b>

## Verification Policies and Practices

<b>Policy Documentation</b>		<b>Verified?</b>	Verified
<b>CA Document Repository</b>	<a href="https://www.amazontrust.com/">https://www.amazontrust.com/</a>	<b>Verified?</b>	Verified
<b>CP Doc Language</b>	English		
<b>CP</b>	<a href="http://www.amazontrust.com/repository/cp.pdf">http://www.amazontrust.com/repository/cp.pdf</a>	<b>Verified?</b>	Verified
<b>CP Doc Language</b>	English		
<b>CPS</b>	<a href="http://www.amazontrust.com/repository/cps.pdf">http://www.amazontrust.com/repository/cps.pdf</a>	<b>Verified?</b>	Verified
<b>Other Relevant Documents</b>	Subscriber Agreement: <a href="https://www.amazontrust.com/repository/sa-1.1.pdf">https://www.amazontrust.com/repository/sa-1.1.pdf</a>	<b>Verified?</b>	Verified
<b>Auditor Name</b>	EY	<b>Verified?</b>	Verified
<b>Auditor Website</b>	<a href="http://www.ey.com/">http://www.ey.com/</a>	<b>Verified?</b>	Verified
<b>Auditor Qualifications</b>	<a href="http://www.webtrust.org/licensed-webtrust-practitions-international/item64419.aspx">http://www.webtrust.org/licensed-webtrust-practitions-international/item64419.aspx</a>	<b>Verified?</b>	Verified
<b>Standard Audit</b>	<a href="https://cert.webtrust.org/SealFile?seal=1998&amp;file=pdf">https://cert.webtrust.org/SealFile?seal=1998&amp;file=pdf</a>	<b>Verified?</b>	Verified
<b>Standard Audit Type</b>	WebTrust	<b>Verified?</b>	Verified
<b>Standard Audit Statement Date</b>	2/24/2016	<b>Verified?</b>	Verified
<b>BR Audit</b>	<a href="https://cert.webtrust.org/SealFile?seal=1999&amp;file=pdf">https://cert.webtrust.org/SealFile?seal=1999&amp;file=pdf</a>	<b>Verified?</b>	Verified
<b>BR Audit Type</b>	WebTrust	<b>Verified?</b>	Verified
<b>BR Audit Statement Date</b>	2/24/2016	<b>Verified?</b>	Verified
<b>EV Audit</b>	<a href="https://cert.webtrust.org/SealFile?seal=2000&amp;file=pdf">https://cert.webtrust.org/SealFile?seal=2000&amp;file=pdf</a>	<b>Verified?</b>	Verified
<b>EV Audit Type</b>	WebTrust	<b>Verified?</b>	Verified
<b>EV Audit Statement Date</b>	2/24/2016	<b>Verified?</b>	Verified
<b>BR Commitment to Comply</b>	CP section 1.1.1, CPS section 1.1	<b>Verified?</b>	Verified
<b>SSL Verification Procedures</b>	CPS section 3.2.2 and CP section 3.2.2.4: Amazon uses the following methods to confirm that the Applicant has control of or right to use Domain Names: 1. Confirming the Applicant as the Domain Name Registrant directly with the Domain Name Registrar; or 2. Confirming authorization of the Certificate's issuance directly with the Domain Name Registrant using a Reliable Method of Communication verified by either (i) communication with the Domain Name Registrar or (ii) being listed as the contact information for "registrant", "technical", or "administrative" contacts listed in the WHOIS record for the Base Domain; or	<b>Verified?</b>	Verified

3. Confirming authorization for the Certificate's issuance through an email address created by prepending 'admin', 'administrator', 'webmaster', 'hostmaster', or 'postmaster' in the local part, followed by the at-sign ("@"), followed by the Domain Name, which may be formed by pruning zero or more components from the requested FQDN; or
4. Relying upon a Domain Authorization Document that meets the requirements listed below; or
5. Having the Applicant demonstrate control over the FQDN or Base Domain by making an agreed-upon change
- ...

<b>EV SSL Verification Procedures</b>	CP section 3.2	<b>Verified?</b>	Verified
<b>Organization Verification Procedures</b>	CP section 3.2.2, 3.2.3, 3.2.5	<b>Verified?</b>	Verified
<b>Email Address Verification Procedures</b>	CPS section 3.2.2: Amazon uses the following methods to confirm the Applicant has control of or right to use Email Addresses: 1. Confirming authorization of the Certificate's issuance by contacting the requested email address, or 2. Confirming control of the FQDN in the Domain portion of the Email address using methods 1, 2, 5, 7, or 8 above.	<b>Verified?</b>	Verified
<b>Code Signing Subscriber Verification Pro</b>	Mozilla is no longer accepting requests to enable the Code Signing trust bit, because we plan to remove the Code Signing trust bit in the next version of Mozilla's CA Certificate Policy.	<b>Verified?</b>	Not Applicable
<b>Multi-Factor Authentication</b>	CP section 5.3.7 and 6.5.1.1	<b>Verified?</b>	Verified
<b>Network Security</b>	CP section 6.7	<b>Verified?</b>	Verified

#### Link to Publicly Disclosed and Audited subordinate CA Certificates

<b>Publicly Disclosed &amp; Audited subCAs</b>	<a href="https://www.amazontrust.com/repository/">https://www.amazontrust.com/repository/</a>	<b>Verified?</b>	Verified
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## Root Case Record # 2

#### Root Case Information

<b>Root Certificate Name</b>	Amazon Root CA 3	<b>Root Case No</b>	R00000084
<b>Request Status</b>	Ready for Public Discussion	<b>Case Number</b>	00000063

#### Additional Root Case Information

<b>Subject</b>	Include Amazon Root CA 3 -- ECC P-256
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**Technical Information about Root Certificate**

<b>O From Issuer Field</b>	Amazon	<b>Verified?</b>	Verified
<b>OU From Issuer Field</b>		<b>Verified?</b>	Verified
<b>Certificate Summary</b>	New root certificate that will sign intermediate certificates that will issue certs for SSL, Code Signing, Email, etc.	<b>Verified?</b>	Verified
<b>Root Certificate Download URL</b>	<a href="http://www.amazontrust.com/repository/AmazonRootCA3.cer">http://www.amazontrust.com/repository/AmazonRootCA3.cer</a>	<b>Verified?</b>	Verified
<b>Valid From</b>	2015 May 26	<b>Verified?</b>	Verified
<b>Valid To</b>	2040 May 26	<b>Verified?</b>	Verified
<b>Certificate Version</b>	3	<b>Verified?</b>	Verified
<b>Certificate Signature Algorithm</b>	ECC	<b>Verified?</b>	Verified
<b>Signing Key Parameters</b>	ECC P-256	<b>Verified?</b>	Verified
<b>Test Website URL (SSL) or Example Cert</b>	<a href="https://good.sca3a.amazontrust.com/">https://good.sca3a.amazontrust.com/</a>	<b>Verified?</b>	Verified
<b>CRL URL(s)</b>	<a href="http://crl.rootca3.amazontrust.com/rootca3.crl">http://crl.rootca3.amazontrust.com/rootca3.crl</a> CP section 4.9.7: CRL issuing frequency for subscriber certificates is at least once every seven days	<b>Verified?</b>	Verified
<b>OCSP URL(s)</b>	<a href="http://ocsp.rootca3.amazontrust.com/">http://ocsp.rootca3.amazontrust.com/</a> <a href="http://ocsp.sca3a.amazontrust.com">http://ocsp.sca3a.amazontrust.com</a> CP section 4.9.10: OCSP responses from this service MUST have a maximum expiration time of ten days	<b>Verified?</b>	Verified
<b>Trust Bits</b>	Email; Websites	<b>Verified?</b>	Verified
<b>SSL Validation Type</b>	DV; OV; EV	<b>Verified?</b>	Verified
<b>EV Policy OID(s)</b>	2.23.140.1.1	<b>Verified?</b>	Verified
<b>Root Stores Included In</b>		<b>Verified?</b>	Verified
<b>Mozilla Applied Constraints</b>	None	<b>Verified?</b>	Verified

**Test Results (When Requesting the SSL/TLS Trust Bit)**

<b>Revocation Tested</b>	<a href="https://certificate.revocationcheck.com/good.sca3a.amazontrust.com">https://certificate.revocationcheck.com/good.sca3a.amazontrust.com</a> no errors	<b>Verified?</b>	Verified
<b>CA/Browser Forum Lint Test</b>	Tested. No Errors.	<b>Verified?</b>	Verified
<b>Test Website Lint Test</b>	Tested. No Errors.	<b>Verified?</b>	Verified
<b>EV Tested</b>	// CN=Amazon Root CA 3,O=Amazon,C=US "2.23.140.1.1", "Amazon EV OID", SEC_OID_UNKNOWN, { 0x18, 0xCE, 0x6C, 0xFE, 0x7B, 0xF1, 0x4E, 0x60, 0xB2, 0xE3, 0x47, 0xB8, 0xDF, 0xE8, 0x68, 0xCB, 0x31, 0xD0, 0x2E, 0xBB, 0x3A, 0xDA, 0x27, 0x15, 0x69, 0xF5, 0x03, 0x43, 0xB4, 0x6D, 0xB3, 0xA4 },	<b>Verified?</b>	Verified

"MDkxCzAJBgNVBAYTAIVTMQ8wDQYDVQQKEwZBbWF6b24xGTAXBgNVBAMTEEFtYXpv"  
 "biBSb290IENBIDM=",  
 "Bmyf1XSXNmY/Owua2eiedgPySg==",  
 Success!

### Digital Fingerprint Information

<b>SHA-1 Fingerprint</b>	0D:44:DD:8C:3C:8C:1A:1A:58:75:64:81:E9:0F:2E:2A:FF:B3:D2:6E	<b>Verified?</b>	Verified
<b>SHA-256 Fingerprint</b>	18:CE:6C:FE:7B:F1:4E:60:B2:E3:47:B8:DF:E8:68:CB:31:D0:2E:BB:3A:DA:27:15:69:F5:03:43:B4:6D:B3:A4	<b>Verified?</b>	Verified

### CA Hierarchy Information

<b>CA Hierarchy</b>	We will have separate subordinate CAs to issue the following types of certificates: - Extended Validation Server Authentication - Code Signing - Other types of certificates as covered by our CP and CPS (including Server Authentication and Email Protection) We will not issue EV certificates from subordinates used to issue non-EV certificates and we will not issue code signing certificates from subordinates used to issue non-code signing certificates.	<b>Verified?</b>	Verified
<b>Externally Operated SubCAs</b>	Amazon allows externally operated subordinate CAs. CPS section 4.2.2: For Applications for a Subordinate CA where the Subordinate CA will not be controlled by Amazon, Amazon ensures that all the following are true: • The APPMA has approved the Subordinate CA • There is a contract in place requiring the Subordinate CA to comply with CA/Browser Forum guidelines • The CA generated and stores its keys on a HSM that meets the requirements in the CP • The CA had the key generation audited by a qualified auditor. This is not required to be a WebTrust licensed auditor, but the auditor must meet items 1, 3, 6, and 7 of section 8.2 of the CP. • If the Subordinate CA certificate is not technically constrained, then the contract requires the Subordinate CA operator to provide evidence of a WebTrust audit with a period ending not more than one year prior to application or a WebTrust point in time readiness assessment that occurred no more than one year prior to application...	<b>Verified?</b>	Verified
<b>Cross Signing</b>	Yes. Starfield Services Root Certificate Authority - G2 issued a cross certificate with this root as the subject.	<b>Verified?</b>	Verified



<b>Technical Constraint on 3rd party Issuer</b>	Third parties cannot directly cause the issuance of certificates from Amazon operated CAs.	<b>Verified?</b>	Verified
	CPS section 4.2.2 regarding externally-operated subCAs: If the Subordinate CA certificate is not technically constrained, then the contract requires theSubordinate CA operator to provide evidence of a WebTrust audit with a period ending not more than one year prior to application or a WebTrust point in time readiness assessment that occurred no more than one year prior to application. Additionally, the CA must have WebTrust audits covering periods no longer than one year in duration where each audit period must immediately start after the previous period end with no gaps. Amazon will post links to Subordinate CA certificates, CP, CPS, and audit options (if applicable) in its repository.		

### Verification Policies and Practices

<b>Policy Documentation</b>		<b>Verified?</b>	Verified
<b>CA Document Repository</b>	<a href="https://www.amazontrust.com/">https://www.amazontrust.com/</a>	<b>Verified?</b>	Verified
<b>CP Doc Language</b>	English		
<b>CP</b>	<a href="http://www.amazontrust.com/repository/cp.pdf">http://www.amazontrust.com/repository/cp.pdf</a>	<b>Verified?</b>	Verified
<b>CP Doc Language</b>	English		
<b>CPS</b>	<a href="http://www.amazontrust.com/repository/cps.pdf">http://www.amazontrust.com/repository/cps.pdf</a>	<b>Verified?</b>	Verified
<b>Other Relevant Documents</b>	Subscriber Agreement: <a href="https://www.amazontrust.com/repository/sa-1.1.pdf">https://www.amazontrust.com/repository/sa-1.1.pdf</a>	<b>Verified?</b>	Verified
<b>Auditor Name</b>	EY	<b>Verified?</b>	Verified
<b>Auditor Website</b>	<a href="http://www.ey.com/">http://www.ey.com/</a>	<b>Verified?</b>	Verified
<b>Auditor Qualifications</b>	<a href="http://www.webtrust.org/licensed-webtrust-practitions-international/item64419.aspx">http://www.webtrust.org/licensed-webtrust-practitions-international/item64419.aspx</a>	<b>Verified?</b>	Verified
<b>Standard Audit</b>	<a href="https://cert.webtrust.org/SealFile?seal=1998&amp;file=pdf">https://cert.webtrust.org/SealFile?seal=1998&amp;file=pdf</a>	<b>Verified?</b>	Verified
<b>Standard Audit Type</b>	WebTrust	<b>Verified?</b>	Verified
<b>Standard Audit Statement Date</b>	2/24/2016	<b>Verified?</b>	Verified
<b>BR Audit</b>	<a href="https://cert.webtrust.org/SealFile?seal=1999&amp;file=pdf">https://cert.webtrust.org/SealFile?seal=1999&amp;file=pdf</a>	<b>Verified?</b>	Verified
<b>BR Audit Type</b>	WebTrust	<b>Verified?</b>	Verified
<b>BR Audit Statement Date</b>	2/24/2016	<b>Verified?</b>	Verified
<b>EV Audit</b>	<a href="https://cert.webtrust.org/SealFile?seal=2000&amp;file=pdf">https://cert.webtrust.org/SealFile?seal=2000&amp;file=pdf</a>	<b>Verified?</b>	Verified
<b>EV Audit Type</b>	WebTrust	<b>Verified?</b>	Verified
<b>EV Audit Statement Date</b>	2/24/2016	<b>Verified?</b>	Verified

<b>BR Commitment to Comply</b>	CP section 1.1.1, CPS section 1.1	<b>Verified?</b>	Verified
<b>SSL Verification Procedures</b>	CPS section 3.2.2 and CP section 3.2.2.4: Amazon uses the following methods to confirm that the Applicant has control of or right to use Domain Names: 1. Confirming the Applicant as the Domain Name Registrant directly with the Domain Name Registrar; or 2. Confirming authorization of the Certificate's issuance directly with the Domain Name Registrant using a Reliable Method of Communication verified by either (i) communication with the Domain Name Registrar or (ii) being listed as the contact information for "registrant", "technical", or "administrative" contacts listed in the WHOIS record for the Base Domain; or 3. Confirming authorization for the Certificate's issuance through an email address created by prepending 'admin', 'administrator', 'webmaster', 'hostmaster', or 'postmaster' in the local part, followed by the at-sign ("@"), followed by the Domain Name, which may be formed by pruning zero or more components from the requested FQDN; or 4. Relying upon a Domain Authorization Document that meets the requirements listed below; or 5. Having the Applicant demonstrate control over the FQDN or Base Domain by making an agreed-upon change ...	<b>Verified?</b>	Verified
<b>EV SSL Verification Procedures</b>	CP section 3.2	<b>Verified?</b>	Verified
<b>Organization Verification Procedures</b>	CP section 3.2.2, 3.2.3, 3.2.5	<b>Verified?</b>	Verified
<b>Email Address Verification Procedures</b>	CPS section 3.2.2: Amazon uses the following methods to confirm the Applicant has control of or right to use Email Addresses: 1. Confirming authorization of the Certificate's issuance by contacting the requested email address, or 2. Confirming control of the FQDN in the Domain portion of the Email address using methods 1, 2, 5, 7, or 8 above. Item 4 of <a href="https://wiki.mozilla.org/CA:Information_checklist#Verification_Policies_and_Practices">https://wiki.mozilla.org/CA:Information_checklist#Verification_Policies_and_Practices</a>	<b>Verified?</b>	Verified
<b>Code Signing Subscriber Verification Pro</b>	EV Code Signing Certs: CP section 3.2	<b>Verified?</b>	Not Applicable
<b>Multi-Factor Authentication</b>	CP section 5.3.7 and 6.5.1.1	<b>Verified?</b>	Verified
<b>Network Security</b>	CP section 6.7	<b>Verified?</b>	Verified

#### Link to Publicly Disclosed and Audited subordinate CA Certificates

<b>Publicly Disclosed &amp; Audited subCAs</b>	<a href="https://www.amazontrust.com/repository/">https://www.amazontrust.com/repository/</a>	<b>Verified?</b>	Verified
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## Root Case Record # 3

#### Root Case Information

<b>Root Certificate Name</b>	Amazon Root CA 2	<b>Root Case No</b>	R00000085
<b>Request Status</b>	Ready for Public Discussion	<b>Case Number</b>	00000063

**Additional Root Case Information**

**Subject** Include Amazon Root CA 2 -- SHA-384

**Technical Information about Root Certificate**

<b>O From Issuer Field</b>	Amazon	<b>Verified?</b>	Verified
<b>OU From Issuer Field</b>		<b>Verified?</b>	Verified
<b>Certificate Summary</b>	The Amazon Root CAs will have internally-operated subordinate CAs that will issue certs for SSL, Code Signing, Email, etc. There will be separate subCAs for EV certificate issuance. Externally-operated subCAs are permitted according to the CPS.	<b>Verified?</b>	Verified
<b>Root Certificate Download URL</b>	<a href="http://www.amazontrust.com/repository/AmazonRootCA2.cer">http://www.amazontrust.com/repository/AmazonRootCA2.cer</a>	<b>Verified?</b>	Verified
<b>Valid From</b>	2015 May 26	<b>Verified?</b>	Verified
<b>Valid To</b>	2040 May 26	<b>Verified?</b>	Verified
<b>Certificate Version</b>	3	<b>Verified?</b>	Verified
<b>Certificate Signature Algorithm</b>	SHA-384	<b>Verified?</b>	Verified
<b>Signing Key Parameters</b>	4096	<b>Verified?</b>	Verified
<b>Test Website URL (SSL) or Example Cert</b>	<a href="https://good.sca2a.amazontrust.com/">https://good.sca2a.amazontrust.com/</a>	<b>Verified?</b>	Verified
<b>CRL URL(s)</b>	<a href="http://crl.rootca2.amazontrust.com/rootca2.crl">http://crl.rootca2.amazontrust.com/rootca2.crl</a> CP section 4.9.7: CRL issuing frequency for subscriber certificates is at least once every seven days	<b>Verified?</b>	Verified
<b>OCSP URL(s)</b>	<a href="http://ocsp.rootca2.amazontrust.com/">http://ocsp.rootca2.amazontrust.com/</a> <a href="http://ocsp.sca2a.amazontrust.com">http://ocsp.sca2a.amazontrust.com</a> CP section 4.9.10: OCSP responses from this service MUST have a maximum expiration time of ten days	<b>Verified?</b>	Verified
<b>Trust Bits</b>	Email; Websites	<b>Verified?</b>	Verified
<b>SSL Validation Type</b>	DV; OV; EV	<b>Verified?</b>	Verified
<b>EV Policy OID(s)</b>	2.23.140.1.1	<b>Verified?</b>	Verified
<b>Root Stores Included In</b>		<b>Verified?</b>	Verified
<b>Mozilla Applied Constraints</b>	None	<b>Verified?</b>	Verified

**Test Results (When Requesting the SSL/TLS Trust Bit)**

<b>Revocation Tested</b>	<a href="https://certificate.revocationcheck.com/good.sca2a.amazontrust.com">https://certificate.revocationcheck.com/good.sca2a.amazontrust.com</a> no errors	<b>Verified?</b>	Verified
<b>CA/Browser Forum Lint Test</b>	Tested. No Errors.	<b>Verified?</b>	Verified

<b>Test Website Lint Test</b>	Tested. No Errors.	<b>Verified?</b>	Verified
<b>EV Tested</b>	// CN=Amazon Root CA 2,O=Amazon,C=US "2.23.140.1.1", "Amazon EV OID", SEC_OID_UNKNOWN, { 0x1B, 0xA5, 0xB2, 0xAA, 0x8C, 0x65, 0x40, 0x1A, 0x82, 0x96, 0x01, 0x18, 0xF8, 0x0B, 0xEC, 0x4F, 0x62, 0x30, 0x4D, 0x83, 0xCE, 0xC4, 0x71, 0x3A, 0x19, 0xC3, 0x9C, 0x01, 0x1E, 0xA4, 0x6D, 0xB4 }, "MDkxCzAJBgNVBAYTAIVTMQ8wDQYDVQQKEwZBbWF6b24xGTAXBgNVBAMTEEFtYXpv" "biBSb290IENBIDI=", "Bmyf0pY1hp8KD+WGePhbJruKNw==", Success!	<b>Verified?</b>	Verified

### Digital Fingerprint Information

<b>SHA-1 Fingerprint</b>	5A:8C:EF:45:D7:A6:98:59:76:7A:8C:8B:44:96:B5:78:CF:47:4B:1A	<b>Verified?</b>	Verified
<b>SHA-256 Fingerprint</b>	1B:A5:B2:AA:8C:65:40:1A:82:96:01:18:F8:0B:EC:4F:62:30:4D:83:CE:C4:71:3A:19:C3:9C:01:1E:A4:6D:B4	<b>Verified?</b>	Verified

### CA Hierarchy Information

<b>CA Hierarchy</b>	We will have separate subordinate CAs to issue the following types of certificates: - Extended Validation Server Authentication - Code Signing - Other types of certificates as covered by our CP and CPS (including Server Authentication and Email Protection) We will not issue EV certificates from subordinates used to issue non-EV certificates and we will not issue code signing certificates from subordinates used to issue non-code signing certificates.	<b>Verified?</b>	Verified
<b>Externally Operated SubCAs</b>	Amazon allows externally operated subordinate CAs. CPS section 4.2.2: For Applications for a Subordinate CA where the Subordinate CA will not be controlled by Amazon, Amazon ensures that all the following are true: • The APPMA has approved the Subordinate CA • There is a contract in place requiring the Subordinate CA to comply with CA/Browser Forum guidelines • The CA generated and stores its keys on a HSM that meets the requirements in the CP • The CA had the key generation audited by a qualified auditor. This is not required to be a WebTrust licensed auditor, but the auditor must meet items 1, 3, 6, and 7 of section 8.2 of the CP. • If the Subordinate CA certificate is not technically constrained, then the contract requires the Subordinate CA operator to provide evidence of a WebTrust audit with a period ending not more than one year	<b>Verified?</b>	Verified

prior to application or a WebTrust point in time readiness assessment that occurred no more than one year prior to application...

<b>Cross Signing</b>	Yes. Starfield Services Root Certificate Authority - G2 issued a cross certificate with this root as the subject.	<b>Verified?</b>	Verified
<b>Technical Constraint on 3rd party Issuer</b>	Third parties cannot directly cause the issuance of certificates from Amazon operated CAs.  CPS section 4.2.2 regarding externally-operated subCAs: If the Subordinate CA certificate is not technically constrained, then the contract requires theSubordinate CA operator to provide evidence of a WebTrust audit with a period ending not more than one year prior to application or a WebTrust point in time readiness assessment that occurred no more than one year prior to application. Additionally, the CA must have WebTrust audits covering periods no longer than one year in duration where each audit period must immediately start after the previous period end with no gaps. Amazon will post links to Subordinate CA certificates, CP, CPS, and audit options (if applicable) in its repository.	<b>Verified?</b>	Verified

### Verification Policies and Practices

<b>Policy Documentation</b>		<b>Verified?</b>	Verified
<b>CA Document Repository</b>	<a href="https://www.amazontrust.com/">https://www.amazontrust.com/</a>	<b>Verified?</b>	Verified
<b>CP Doc Language</b>	English		
<b>CP</b>	<a href="http://www.amazontrust.com/repository/cp.pdf">http://www.amazontrust.com/repository/cp.pdf</a>	<b>Verified?</b>	Verified
<b>CP Doc Language</b>	English		
<b>CPS</b>	<a href="http://www.amazontrust.com/repository/cps.pdf">http://www.amazontrust.com/repository/cps.pdf</a>	<b>Verified?</b>	Verified
<b>Other Relevant Documents</b>	Subscriber Agreement: <a href="https://www.amazontrust.com/repository/sa-1.1.pdf">https://www.amazontrust.com/repository/sa-1.1.pdf</a>	<b>Verified?</b>	Verified
<b>Auditor Name</b>	EY	<b>Verified?</b>	Verified
<b>Auditor Website</b>	<a href="http://www.ey.com/">http://www.ey.com/</a>	<b>Verified?</b>	Verified
<b>Auditor Qualifications</b>	<a href="http://www.webtrust.org/licensed-webtrust-practitioners-international/item64419.aspx">http://www.webtrust.org/licensed-webtrust-practitioners-international/item64419.aspx</a>	<b>Verified?</b>	Verified
<b>Standard Audit</b>	<a href="https://cert.webtrust.org/SealFile?seal=1998&amp;file=pdf">https://cert.webtrust.org/SealFile?seal=1998&amp;file=pdf</a>	<b>Verified?</b>	Verified
<b>Standard Audit Type</b>	WebTrust	<b>Verified?</b>	Verified
<b>Standard Audit Statement Date</b>	2/24/2016	<b>Verified?</b>	Verified
<b>BR Audit</b>	<a href="https://cert.webtrust.org/SealFile?seal=1999&amp;file=pdf">https://cert.webtrust.org/SealFile?seal=1999&amp;file=pdf</a>	<b>Verified?</b>	Verified

<b>BR Audit Type</b>	WebTrust	<b>Verified?</b>	Verified
<b>BR Audit Statement Date</b>	2/24/2016	<b>Verified?</b>	Verified
<b>EV Audit</b>	<a href="https://cert.webtrust.org/SealFile?seal=2000&amp;file=pdf">https://cert.webtrust.org/SealFile?seal=2000&amp;file=pdf</a>	<b>Verified?</b>	Verified
<b>EV Audit Type</b>	WebTrust	<b>Verified?</b>	Verified
<b>EV Audit Statement Date</b>	2/24/2016	<b>Verified?</b>	Verified
<b>BR Commitment to Comply</b>	CP section 1.1.1, CPS section 1.1	<b>Verified?</b>	Verified
<b>SSL Verification Procedures</b>	<p>CPS section 3.2.2 and CP section 3.2.2.4: Amazon uses the following methods to confirm that the Applicant has control of or right to use Domain Names:</p> <ol style="list-style-type: none"> <li>1. Confirming the Applicant as the Domain Name Registrant directly with the Domain Name Registrar;</li> <li>or</li> <li>2. Confirming authorization of the Certificate's issuance directly with the Domain Name Registrant using a Reliable Method of Communication verified by either (i) communication with the Domain Name Registrar or (ii) being listed as the contact information for "registrant", "technical", or "administrative" contacts listed in the WHOIS record for the Base Domain; or</li> <li>3. Confirming authorization for the Certificate's issuance through an email address created by prepending 'admin', 'administrator', 'webmaster', 'hostmaster', or 'postmaster' in the local part, followed by the at-sign ("@"), followed by the Domain Name, which may be formed by pruning zero or more components from the requested FQDN; or</li> <li>4. Relying upon a Domain Authorization Document that meets the requirements listed below; or</li> <li>5. Having the Applicant demonstrate control over the FQDN or Base Domain by making an agreed-upon change</li> </ol> <p>...</p>	<b>Verified?</b>	Verified
<b>EV SSL Verification Procedures</b>	CP section 3.2	<b>Verified?</b>	Verified
<b>Organization Verification Procedures</b>	CP section 3.2.2, 3.2.3, 3.2.5	<b>Verified?</b>	Verified
<b>Email Address Verification Procedures</b>	<p>CPS section 3.2.2: Amazon uses the following methods to confirm the Applicant has control of or right to use Email Addresses:</p> <ol style="list-style-type: none"> <li>1. Confirming authorization of the Certificate's issuance by contacting the requested email address, or</li> <li>2. Confirming control of the FQDN in the Domain portion of the Email address using methods 1, 2, 5, 7, or 8 above.</li> </ol>	<b>Verified?</b>	Verified
<b>Code Signing Subscriber Verification Pro</b>		<b>Verified?</b>	Not Applicable

Multi-Factor Authentication	CP section 5.3.7 and 6.5.1.1	Verified?	Verified
Network Security	CP section 6.7	Verified?	Verified

#### Link to Publicly Disclosed and Audited subordinate CA Certificates

Publicly Disclosed & Audited subCAs	<a href="https://www.amazontrust.com/repository/">https://www.amazontrust.com/repository/</a>	Verified?	Verified
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## Root Case Record # 4

#### Root Case Information

Root Certificate Name	Amazon Root CA 4	Root Case No	R00000086
Request Status	Ready for Public Discussion	Case Number	00000063

#### Additional Root Case Information

Subject	Include Amazon Root CA 4 -- ECC P-384
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#### Technical Information about Root Certificate

O From Issuer Field	Amazon	Verified?	Verified
OU From Issuer Field		Verified?	Verified
Certificate Summary	The Amazon Root CAs will have internally-operated subordinate CAs that will issue certs for SSL, Code Signing, Email, etc. There will be separate subCAs for EV certificate issuance. Externally-operated subCAs are permitted according to the CPS.	Verified?	Verified
Root Certificate Download URL	<a href="http://www.amazontrust.com/repository/AmazonRootCA4.cer">http://www.amazontrust.com/repository/AmazonRootCA4.cer</a>	Verified?	Verified
Valid From	2015 May 26	Verified?	Verified
Valid To	2040 May 26	Verified?	Verified
Certificate Version	3	Verified?	Verified
Certificate Signature Algorithm	ECC	Verified?	Verified
Signing Key Parameters	ECC P-384	Verified?	Verified
Test Website URL (SSL) or Example Cert	<a href="https://good.sca4a.amazontrust.com/">https://good.sca4a.amazontrust.com/</a>	Verified?	Verified
CRL URL(s)	<a href="http://crl.rootca4.amazontrust.com/rootca4.crl">http://crl.rootca4.amazontrust.com/rootca4.crl</a> CP section 4.9.7: CRL issuing frequency for subscriber certificates is at least once every seven days	Verified?	Verified
OCSP URL(s)	<a href="http://ocsp.rootca4.amazontrust.com/">http://ocsp.rootca4.amazontrust.com/</a> <a href="http://ocsp.sca4a.amazontrust.com">http://ocsp.sca4a.amazontrust.com</a> CP section 4.9.10: OCSP responses from	Verified?	Verified

this service MUST have a maximum  
expiration time of ten days

<b>Trust Bits</b>	Email; Websites	<b>Verified?</b>	Verified
<b>SSL Validation Type</b>	DV; OV; EV	<b>Verified?</b>	Verified
<b>EV Policy OID(s)</b>	2.23.140.1.1	<b>Verified?</b>	Verified
<b>Root Stores Included In</b>		<b>Verified?</b>	Verified
<b>Mozilla Applied Constraints</b>	None	<b>Verified?</b>	Verified

### Test Results (When Requesting the SSL/TLS Trust Bit)

<b>Revocation Tested</b>	<a href="https://certificate.revocationcheck.com/good.sca4a.amazontrust.com">https://certificate.revocationcheck.com/good.sca4a.amazontrust.com</a> no errors	<b>Verified?</b>	Verified
<b>CA/Browser Forum Lint Test</b>	Tested. No Errors.	<b>Verified?</b>	Verified
<b>Test Website Lint Test</b>	Tested. No Errors.	<b>Verified?</b>	Verified
<b>EV Tested</b>	// CN=Amazon Root CA 4,O=Amazon,C=US "2.23.140.1.1", "Amazon EV OID", SEC_OID_UNKNOWN, { 0xE3, 0x5D, 0x28, 0x41, 0x9E, 0xD0, 0x20, 0x25, 0xCF, 0xA6, 0x90, 0x38, 0xCD, 0x62, 0x39, 0x62, 0x45, 0x8D, 0xA5, 0xC6, 0x95, 0xFB, 0xDE, 0xA3, 0xC2, 0x2B, 0x0B, 0xFB, 0x25, 0x89, 0x70, 0x92 }, "MDkxCzAJBgNVBAYTAIVTMQ8wDQYDVQQKEwZBbWF6b24xGTAXBgNVBAMTEEFtYXpv" "biBSb290IENBIDQ=", "Bmyf18G7EEwpQ+Vxe3ssyBrBDg==", Success!	<b>Verified?</b>	Verified

### Digital Fingerprint Information

<b>SHA-1 Fingerprint</b>	F6:10:84:07:D6:F8:BB:67:98:0C:C2:E2:44:C2:EB:AE:1C:EF:63:BE	<b>Verified?</b>	Verified
<b>SHA-256 Fingerprint</b>	E3:5D:28:41:9E:D0:20:25:CF:A6:90:38:CD:62:39:62:45:8D:A5:C6:95:FB:DE:A3:C2:2B:0B:FB:25:89:70:92	<b>Verified?</b>	Verified

### CA Hierarchy Information

<b>CA Hierarchy</b>	We will have separate subordinate CAs to issue the following types of certificates: - Extended Validation Server Authentication - Code Signing - Other types of certificates as covered by our CP and CPS (including Server Authentication and Email Protection) We will not issue EV certificates from subordinates used to issue non-EV certificates and we will not issue code signing certificates from subordinates used to issue non-code signing certificates.	<b>Verified?</b>	Verified
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<b>Externally Operated SubCAs</b>	<p>Amazon allows externally operated subordinate CAs.</p> <p>CPS section 4.2.2: For Applications for a Subordinate CA where the Subordinate CA will not be controlled by Amazon, Amazon ensures that all the following are true:</p> <ul style="list-style-type: none"> <li>• The APPMA has approved the Subordinate CA</li> <li>• There is a contract in place requiring the Subordinate CA to comply with CA/Browser Forum guidelines</li> <li>• The CA generated and stores its keys on a HSM that meets the requirements in the CP</li> <li>• The CA had the key generation audited by a qualified auditor. This is not required to be a WebTrust licensed auditor, but the auditor must meet items 1, 3, 6, and 7 of section 8.2 of the CP.</li> <li>• If the Subordinate CA certificate is not technically constrained, then the contract requires the Subordinate CA operator to provide evidence of a WebTrust audit with a period ending not more than one year prior to application or a WebTrust point in time readiness assessment that occurred no more than one year prior to application...</li> </ul>	<b>Verified?</b>	Verified
<b>Cross Signing</b>	Yes. Starfield Services Root Certificate Authority - G2 issued a cross certificate with this root as the subject.	<b>Verified?</b>	Verified
<b>Technical Constraint on 3rd party Issuer</b>	<p>Third parties cannot directly cause the issuance of certificates from Amazon operated CAs.</p> <p>CPS section 4.2.2 regarding externally-operated subCAs: If the Subordinate CA certificate is not technically constrained, then the contract requires theSubordinate CA operator to provide evidence of a WebTrust audit with a period ending not more than one year prior to application or a WebTrust point in time readiness assessment that occurred no more than one year prior to application. Additionally, the CA must have WebTrust audits covering periods no longer than one year in duration where each audit period must immediately start after the previous period end with no gaps.</p> <p>Amazon will post links to Subordinate CA certificates, CP, CPS, and audit options (if applicable) in its repository.</p>	<b>Verified?</b>	Verified

### Verification Policies and Practices

<b>Policy Documentation</b>		<b>Verified?</b>	Verified
<b>CA Document Repository</b>	<a href="https://www.amazontrust.com/">https://www.amazontrust.com/</a>	<b>Verified?</b>	Verified
<b>CP Doc Language</b>	English		

CP	<a href="http://www.amazontrust.com/repository/cp.pdf">http://www.amazontrust.com/repository/cp.pdf</a>	Verified?	Verified
CP Doc Language	English		
CPS	<a href="http://www.amazontrust.com/repository/cps.pdf">http://www.amazontrust.com/repository/cps.pdf</a>	Verified?	Verified
Other Relevant Documents	Subscriber Agreement: <a href="https://www.amazontrust.com/repository/sa-1.1.pdf">https://www.amazontrust.com/repository/sa-1.1.pdf</a>	Verified?	Verified
Auditor Name	EY	Verified?	Verified
Auditor Website	<a href="http://www.ey.com/">http://www.ey.com/</a>	Verified?	Verified
Auditor Qualifications	<a href="http://www.webtrust.org/licensed-webtrust-practitions-international/item64419.aspx">http://www.webtrust.org/licensed-webtrust-practitions-international/item64419.aspx</a>	Verified?	Verified
Standard Audit	<a href="https://cert.webtrust.org/SealFile?seal=1998&amp;file=pdf">https://cert.webtrust.org/SealFile?seal=1998&amp;file=pdf</a>	Verified?	Verified
Standard Audit Type	WebTrust	Verified?	Verified
Standard Audit Statement Date	2/24/2016	Verified?	Verified
BR Audit	<a href="https://cert.webtrust.org/SealFile?seal=1999&amp;file=pdf">https://cert.webtrust.org/SealFile?seal=1999&amp;file=pdf</a>	Verified?	Verified
BR Audit Type	WebTrust	Verified?	Verified
BR Audit Statement Date	2/24/2016	Verified?	Verified
EV Audit	<a href="https://cert.webtrust.org/SealFile?seal=2000&amp;file=pdf">https://cert.webtrust.org/SealFile?seal=2000&amp;file=pdf</a>	Verified?	Verified
EV Audit Type	WebTrust	Verified?	Verified
EV Audit Statement Date	2/24/2016	Verified?	Verified
BR Commitment to Comply	CP section 1.1.1, CPS section 1.1	Verified?	Verified
SSL Verification Procedures	CPS section 3.2.2 and CP section 3.2.2.4: Amazon uses the following methods to confirm that the Applicant has control of or right to use Domain Names: 1. Confirming the Applicant as the Domain Name Registrant directly with the Domain Name Registrar; or 2. Confirming authorization of the Certificate's issuance directly with the Domain Name Registrant using a Reliable Method of Communication verified by either (i) communication with the Domain Name Registrar or (ii) being listed as the contact information for "registrant", "technical", or "administrative" contacts listed in the WHOIS record for the Base Domain; or 3. Confirming authorization for the Certificate's issuance through an email address created by prepending 'admin', 'administrator', 'webmaster', 'hostmaster', or 'postmaster' in the local part, followed by the at-sign ("@"), followed by the Domain Name, which may be formed by pruning zero or more components from the requested FQDN; or 4. Relying upon a Domain Authorization Document that meets the requirements listed below; or 5. Having the Applicant demonstrate control over the FQDN or Base Domain by making an agreed-upon change ...	Verified?	Verified
EV SSL Verification Procedures	CP section 3.2	Verified?	Verified
Organization Verification Procedures	CP section 3.2.2, 3.2.3, 3.2.5	Verified?	Verified

<b>Email Address Verification Procedures</b>	CPS section 3.2.2: Amazon uses the following methods to confirm the Applicant has control of or right to use Email Addresses: 1. Confirming authorization of the Certificate's issuance by contacting the requested email address, or 2. Confirming control of the FQDN in the Domain portion of the Email address using methods 1, 2, 5, 7, or 8 above. Item 4 of <a href="https://wiki.mozilla.org/CA:Information_checklist#Verification_Policies_and_Practices">https://wiki.mozilla.org/CA:Information_checklist#Verification_Policies_and_Practices</a>	<b>Verified?</b>	Verified
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<b>Code Signing Subscriber Verification Pro</b>		<b>Verified?</b>	Not Applicable
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<b>Multi-Factor Authentication</b>	CP section 5.3.7 and 6.5.1.1	<b>Verified?</b>	Verified
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<b>Network Security</b>	CP section 6.7	<b>Verified?</b>	Verified
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#### Link to Publicly Disclosed and Audited subordinate CA Certificates

<b>Publicly Disclosed &amp; Audited subCAs</b>	<a href="https://www.amazontrust.com/repository/">https://www.amazontrust.com/repository/</a>	<b>Verified?</b>	Verified
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## Root Case Record # 5

#### Root Case Information

<b>Root Certificate Name</b>	Starfield Services Root Certificate Authority - G2	<b>Root Case No</b>	R00000105
<b>Request Status</b>	Ready for Public Discussion	<b>Case Number</b>	00000063

#### Additional Root Case Information

<b>Subject</b>	Enable EV for Starfield Services Root Certificate Authority - G2
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#### Technical Information about Root Certificate

<b>O From Issuer Field</b>	Starfield Technologies, Inc.	<b>Verified?</b>	Verified
<b>OU From Issuer Field</b>		<b>Verified?</b>	Verified
<b>Certificate Summary</b>	Enable EV treatment for the "Starfield Services Root Certificate Authority - G2" certificate that was included via Bugzilla Bug #527056 when owned by GoDaddy. Ownership of this root changed in June 2015, and was witnessed and documented by auditors.	<b>Verified?</b>	Verified
<b>Root Certificate Download URL</b>	<a href="https://www.amazontrust.com/repository/SFSRootCAG2.cer">https://www.amazontrust.com/repository/SFSRootCAG2.cer</a>	<b>Verified?</b>	Verified
<b>Valid From</b>	2009 Sep 01	<b>Verified?</b>	Verified
<b>Valid To</b>	2037 Dec 31	<b>Verified?</b>	Verified
<b>Certificate Version</b>	3	<b>Verified?</b>	Verified

Certificate Signature Algorithm	SHA-256	Verified?	Verified
Signing Key Parameters	2048	Verified?	Verified
Test Website URL (SSL) or Example Cert	https://good.sca0a.amazontrust.com/	Verified?	Verified
CRL URL(s)	<a href="http://crl.rootg2.amazontrust.com/rootg2.crl">http://crl.rootg2.amazontrust.com/rootg2.crl</a> CP section 4.9.7: CRL issuing frequency for subscriber certificates is at least once every seven days	Verified?	Verified
OCSP URL(s)	<a href="http://ocsp.rootg2.amazontrust.com">http://ocsp.rootg2.amazontrust.com</a> <a href="http://ocsp.sca0a.amazontrust.com">http://ocsp.sca0a.amazontrust.com</a> CP section 4.9.10: OCSP responses from this service MUST have a maximum expiration time of ten days	Verified?	Verified
Trust Bits	Websites	Verified?	Verified
SSL Validation Type	DV; OV; EV	Verified?	Verified
EV Policy OID(s)	2.23.140.1.1	Verified?	Verified
Root Stores Included In	Apple; Microsoft; Mozilla	Verified?	Verified
Mozilla Applied Constraints	None	Verified?	Verified

### Test Results (When Requesting the SSL/TLS Trust Bit)

Revocation Tested	<a href="https://certificate.revocationcheck.com/good.sca0a.amazontrust.com">https://certificate.revocationcheck.com/good.sca0a.amazontrust.com</a> no errors	Verified?	Verified
CA/Browser Forum Lint Test	Tested. No Errors.	Verified?	Verified
Test Website Lint Test	Tested. No Errors.	Verified?	Verified
EV Tested	// CN=Starfield Services Root Certificate Authority - G2,O="Starfield Technologies, Inc.",L=Scottsdale,ST=Arizona,C=US "2.23.140.1.1", "Amazon EV OID", SEC_OID_UNKNOWN, { 0x56, 0x8D, 0x69, 0x05, 0xA2, 0xC8, 0x87, 0x08, 0xA4, 0xB3, 0x02, 0x51, 0x90, 0xED, 0xCF, 0xED, 0xB1, 0x97, 0x4A, 0x60, 0x6A, 0x13, 0xC6, 0xE5, 0x29, 0x0F, 0xCB, 0x2A, 0xE6, 0x3E, 0xDA, 0xB5 }, "MIGYMQswCQYDVQQGEwJVUzEQMA4GA1UECBMHQXJpem9uYTETMBEGA1UEBxMKU2Nv" "dHRzZGFsZTEIMCMGA1UEChMcU3RhcmZpZWxkIFRIY2hub2xvZ2llcywgSW5jLjE7" "MDkGA1UEAxMyU3RhcmZpZWxkIFNlcnZpY2VzIFJvb3QgQ2VydGhmaWNhdGUgQXV0" "aG9yaXR5IC0gRzI=", "AA==", Success!	Verified?	Verified

### Digital Fingerprint Information

SHA-1 Fingerprint	92:5A:8F:8D:2C:6D:04:E0:66:5F:59:6A:FF:22:D8:63:E8:25:6F:3F	Verified?	Verified
SHA-256 Fingerprint	56:8D:69:05:A2:C8:87:08:A4:B3:02:51:90:ED:CF:ED:B1:97:4A:60:6A:13:C6:E5:29:0F:CB:2A:E6:3E:DA:B5	Verified?	Verified

## CA Hierarchy Information

<b>CA Hierarchy</b>	<p>We will have separate subordinate CAs to issue the following types of certificates:</p> <ul style="list-style-type: none"> <li>- Extended Validation Server Authentication</li> <li>- Code Signing</li> <li>- Other types of certificates as covered by our CP and CPS (including Server Authentication and Email Protection)</li> </ul> <p>We will not issue EV certificates from subordinates used to issue non-EV certificates and we will not issue code signing certificates from subordinates used to issue non-code signing certificates.</p>	<b>Verified?</b>	Verified
<b>Externally Operated SubCAs</b>	<p>Amazon allows externally operated subordinate CAs.</p> <p>CPS section 4.2.2: For Applications for a Subordinate CA where the Subordinate CA will not be controlled by Amazon, Amazon ensures that all the following are true:</p> <ul style="list-style-type: none"> <li>• The APPMA has approved the Subordinate CA</li> <li>• There is a contract in place requiring the Subordinate CA to comply with CA/Browser Forum guidelines</li> <li>• The CA generated and stores its keys on a HSM that meets the requirements in the CP</li> <li>• The CA had the key generation audited by a qualified auditor. This is not required to be a WebTrust licensed auditor, but the auditor must meet items 1, 3, 6, and 7 of section 8.2 of the CP.</li> <li>• If the Subordinate CA certificate is not technically constrained, then the contract requires the Subordinate CA operator to provide evidence of a WebTrust audit with a period ending not more than one year prior to application or a WebTrust point in time readiness assessment that occurred no more than one year prior to application...</li> </ul>	<b>Verified?</b>	Verified
<b>Cross Signing</b>	<p>Yes. Starfield Services Root Certificate Authority - G2 issued cross certificates with:</p> <ul style="list-style-type: none"> <li>- Amazon Root CA 1 (RSA key with a 2048 bit long modulus)</li> <li>- Amazon Root CA 2 (RSA key with a 4096 bit long modulus)</li> <li>- Amazon Root CA 3 (EC key on the NIST P-256 curve)</li> <li>- Amazon Root CA 4 (EC key on the NIST P-384 curve)</li> </ul>	<b>Verified?</b>	Verified
<b>Technical Constraint on 3rd party Issuer</b>	<p>Third parties cannot directly cause the issuance of certificates from Amazon operated CAs.</p> <p>CPS section 4.2.2 regarding externally-operated subCAs: If the Subordinate CA certificate is not technically constrained, then the contract requires theSubordinate CA operator to provide evidence of a</p>	<b>Verified?</b>	Verified

WebTrust audit with a period ending not more than one year prior to application or a WebTrust point in time readiness assessment that occurred no more than one year prior to application. Additionally, the CA must have WebTrust audits covering periods no longer than one year in duration where each audit period must immediately start after the previous period end with no gaps.

Amazon will post links to Subordinate CA certificates, CP, CPS, and audit options (if applicable) in its repository.

## Verification Policies and Practices

<b>Policy Documentation</b>		<b>Verified?</b>	Verified
<b>CA Document Repository</b>	<a href="https://www.amazontrust.com/">https://www.amazontrust.com/</a>	<b>Verified?</b>	Verified
<b>CP Doc Language</b>	English		
<b>CP</b>	<a href="http://www.amazontrust.com/repository/cp.pdf">http://www.amazontrust.com/repository/cp.pdf</a>	<b>Verified?</b>	Verified
<b>CP Doc Language</b>	English		
<b>CPS</b>	<a href="http://www.amazontrust.com/repository/cps.pdf">http://www.amazontrust.com/repository/cps.pdf</a>	<b>Verified?</b>	Verified
<b>Other Relevant Documents</b>	Subscriber Agreement: <a href="https://www.amazontrust.com/repository/sa-1.1.pdf">https://www.amazontrust.com/repository/sa-1.1.pdf</a>	<b>Verified?</b>	Verified
<b>Auditor Name</b>	EY	<b>Verified?</b>	Verified
<b>Auditor Website</b>	<a href="http://www.ey.com/">http://www.ey.com/</a>	<b>Verified?</b>	Verified
<b>Auditor Qualifications</b>	<a href="http://www.webtrust.org/licensed-webtrust-practitions-international/item64419.aspx">http://www.webtrust.org/licensed-webtrust-practitions-international/item64419.aspx</a>	<b>Verified?</b>	Verified
<b>Standard Audit</b>	<a href="https://cert.webtrust.org/SealFile?seal=1998&amp;file=pdf">https://cert.webtrust.org/SealFile?seal=1998&amp;file=pdf</a>	<b>Verified?</b>	Verified
<b>Standard Audit Type</b>	WebTrust	<b>Verified?</b>	Verified
<b>Standard Audit Statement Date</b>	2/24/2016	<b>Verified?</b>	Verified
<b>BR Audit</b>	<a href="https://cert.webtrust.org/SealFile?seal=1999&amp;file=pdf">https://cert.webtrust.org/SealFile?seal=1999&amp;file=pdf</a>	<b>Verified?</b>	Verified
<b>BR Audit Type</b>	WebTrust	<b>Verified?</b>	Verified
<b>BR Audit Statement Date</b>	2/24/2016	<b>Verified?</b>	Verified
<b>EV Audit</b>	<a href="https://cert.webtrust.org/SealFile?seal=2000&amp;file=pdf">https://cert.webtrust.org/SealFile?seal=2000&amp;file=pdf</a>	<b>Verified?</b>	Verified
<b>EV Audit Type</b>	WebTrust	<b>Verified?</b>	Verified
<b>EV Audit Statement Date</b>	2/24/2016	<b>Verified?</b>	Verified
<b>BR Commitment to Comply</b>	CP section 1.1.1, CPS section 1.1	<b>Verified?</b>	Verified
<b>SSL Verification Procedures</b>	CPS section 3.2.2 and CP section 3.2.2.4: Amazon uses the following methods to confirm that the Applicant has control of or	<b>Verified?</b>	Verified

right to use Domain Names:

1. Confirming the Applicant as the Domain Name Registrant directly with the Domain Name Registrar;
- or
2. Confirming authorization of the Certificate's issuance directly with the Domain Name Registrant using a Reliable Method of Communication verified by either (i) communication with the Domain Name Registrar or (ii) being listed as the contact information for "registrant", "technical", or "administrative" contacts listed in the WHOIS record for the Base Domain; or
3. Confirming authorization for the Certificate's issuance through an email address created by prepending 'admin', 'administrator', 'webmaster', 'hostmaster', or 'postmaster' in the local part, followed by the at-sign ("@"), followed by the Domain Name, which may be formed by pruning zero or more components from the requested FQDN; or
4. Relying upon a Domain Authorization Document that meets the requirements listed below; or
5. Having the Applicant demonstrate control over the FQDN or Base Domain by making an agreed-upon change
- ...

<b>EV SSL Verification Procedures</b>	CP section 3.2	<b>Verified?</b>	Verified
<b>Organization Verification Procedures</b>	CP section 3.2.2, 3.2.3, 3.2.5	<b>Verified?</b>	Verified
<b>Email Address Verification Procedures</b>	CPS section 3.2.2: Amazon uses the following methods to confirm the Applicant has control of or right to use Email Addresses: 1. Confirming authorization of the Certificate's issuance by contacting the requested email address, or 2. Confirming control of the FQDN in the Domain portion of the Email address using methods 1, 2, 5, 7, or 8 above.	<b>Verified?</b>	Verified
<b>Code Signing Subscriber Verification Pro</b>	Mozilla is no longer accepting requests to enable the Code Signing trust bit, because we plan to remove the Code Signing trust bit in the next version of Mozilla's CA Certificate Policy.	<b>Verified?</b>	Verified
<b>Multi-Factor Authentication</b>	CP section 5.3.7 and 6.5.1.1	<b>Verified?</b>	Verified
<b>Network Security</b>	CP section 6.7	<b>Verified?</b>	Verified

#### Link to Publicly Disclosed and Audited subordinate CA Certificates

<b>Publicly Disclosed &amp; Audited subCAs</b>	<a href="https://www.amazontrust.com/repository/">https://www.amazontrust.com/repository/</a>	<b>Verified?</b>	Verified
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