DNSSEC Key Ceremony Script
Wednesday, August 17, 2016

Sign In to Facility

Step	Activity	Initial	Time (PDT)
1	FO has all participants sign in on Facility Sign-In Sheet before entering the Key Management Facility.	*dCh*	9:11
2	FO reviews emergency evacuation procedures and other relevant information with participants.	*dCL*	9:11
3	FO collects and stores participants' cell phones and computers outside the Key Management Facility. Cameras and other recording devices are permitted in the Key Management Facility. SC may retain and use a computer during the ceremony.	*dCh*	9:11
4	FO verifies the functioning of audio and video recording.	*dCh*	9:11

Enter the Key Management Facility

Step	Activity	Initial	Time (PDT)
5	As the participants enter the Key Management Facility, the EW verifies the identity of each by examining a government-issued photo identification, notes the type and number of each piece of identification, and the participant's entry time on the Participant Signature Sheet. Participants should not sign the sheet until the end of the ceremony. As the participants are identified each is issued an identification vest.	*dCh*	9:25

Ground Rules

Step	Activity	Initial	Time (PDT)
6	CA previews ground rules and break procedures with participants. - We follow the script step by step. - Each step is read aloud by CA prior to its performance. Text in ((double parenthesis)) does not have to be read aloud. - Upon the completion of each step, its completion and the time of completion are announced for the record, and the EW records the completion time and initials the EW copy of the script. - If any participant notices a problem or believes that an error has occurred, that participant should interrupt immediately, and the participants should agree upon a resolution prior to proceeding. - Any significant discrepancies or deviations from the script will be recorded by the EW on the provided Exception Sheets. - CA and anybody handling items removed from a TEB or items on the work surface should have rolled up sleeves or, preferably, short sleeves. - Ask if anybody is not known to other attendees. If not, they should be introduced. - Questions and suggestions for improvement are welcome at any time, will be incorporated into the record, and contribute to the quality of this and future ceremonies.	*AA*	9:27

Verify Time and Date

Step	Activity	Initial	Time (PDT)
7	EW reads aloud and records the date (month/day/year) and time (UTC) using an NTP-synchronized clock visible to all. Participants verify that the time is correct. Date: _8/17/16_ Time: _16:28_ While this and previous steps are recorded using local time, subsequent steps and any associated logs follow this common source of time and are recorded in UTC.	ACh	9:28 ~~16:28~~ ACh

Verify UPS

Step	Activity	Initial	Time (UTC)
8	If there is a UPS (uninterruptible power supply), then - CA verifies that the UPS is connected to and receiving power from the electric grid and that it is charged. - CA verifies that the audio recorder is receiving power from the UPS.	ACh	16:29

Remove Equipment from Safe

Step	Activity	Initial	Time (UTC)
9	SC opens the safe and records this action as an entry in the safe's log sheet.	ACh	16:31

10	SC collects the following items from the safe: - KSK-HSM-02-BRK HSM - boot-DVD - laptop ...and any other items that may be required, indicating removal of each with any applicable TEB or serial numbers in the safe's log sheet. SC also provides any necessary power supplies and cables. Equipment is placed on the work surface visible to all partipants. If the immediately preceeding key ceremony was also held in this same facility, the HSMFD is also collected from the safe. If the preceeding key ceremony was performed in a different facility, any HSMFD from the preceeding key ceremony may be used, provided it's still in its TEB and the TEB number and integrity are verified.	*dCL*	16:33
11	CA reads out KSK-HSM-02-BRK HSM TEB and serial numbers while EW checks that they match those recorded in the script from the most recent key ceremony performed at this site. TEB# A4128467 Serial# H1411035	*dCL*	16:35
12	CA reads out boot-DVD, laptop, and HSMFD TEB numbers while EW checks that they match those recorded in the script from the most recent key ceremony performed at this site. DVD TEB# A28410714 Laptop TEB# A4128463 HSMFD TEB# A28410688	*dCL*	16:46

Collect OP Cards

Step	Activity	Initial	Time (UTC)
13	CA collects OP cards from COs, reading out and comparing TEB numbers with those recorded in the most recent ceremony each participated in, reproduced for convenience in the appendices of this document. Different COs may appear on different pages. Note any discrepancies. CA places the cards in plain view on the work surface, removing cards from TEBs, discarding used TEBs but saving warning slips for reuse.	*(initialed)*	16:50

Set Up Laptop

Step	Activity	Initial	Time (UTC)
14	CA removes the boot-DVD and laptop from their TEBs, showing participants that the laptop contains no boot devices. CA places the boot-DVD and the laptop on the work surface, connects laptop power to the UPS. Any external monitor or projector may be powered from either the grid (or the UPS if it has sufficient capacity). Power the laptop on, booting it from the DVD or another boot medium. CA makes sure the output on the laptop screen is visible on any external monitor or projector. ((Use the function + F8 keys to cycle through until the display shows only on the external monitor or projector. This must be done before Linux start booting. Boot warnings may be ignored if it continues to boot.))	*(initialed)*	16:57
15	CA logs in as root.	*(initialed)*	16:58
16	CA opens a terminal window via the Menu: "Applications", "Accessories", "Terminal"	*(initialed)*	16:58

Step	Activity	Initial	Time (UTC)

17	CA sets the timezone on the laptop to UTC:
	
	`cd /etc/`
	
	`rm localtime`
	
	`ln -s /usr/share/zoneinfo/UTC localtime`
	
	Set time to match the wall clock:
	
	`date mmddHHMMYYYY`
	
	Verify:
	
	`date`
		[signature]	17:00

18	If the boot medium came from the above mentioned TEB, then the rest of this step can be skipped. If a boot medium which was not in the TEB, was used to boot the laptop, then we must verify that its sha256 checksum matches the checksum from key ceremony 6. CA opens a terminal window, which we will refer to as the "checksum window". In this window the CA starts the calculation of the sha256 checksum of the boot device. The appropriate device must be specified if the correct device is not /dev/cdrom. The calculation takes about 9 minutes to complete for a DVD. The results will be verified in a later step; this step is considered complete as soon as the command is issued. `sha256sum < /dev/cdrom`	*[signature]*	17:00
19	CA connects USB hub to laptop. CA removes HSMFD from its TEB, connects it to the laptop, and waits for operating system to recognize the FD. CA ensures this HSMFD is from the prior KC, regardless of location. CA lets participants view contents of HSMFD then closes FD window.	*[signature]*	17:02

Start Logging Terminal Session

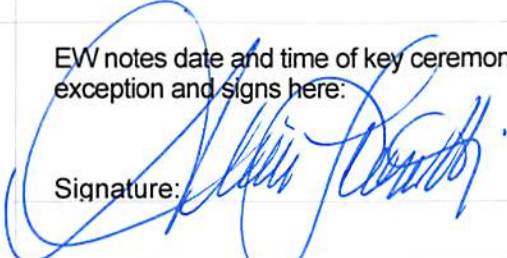| Step	Activity	Initial	Time (UTC)

20	CA opens a new terminal window, which we will refer to as the "command window". In this window the CA will change the default directory to the HSMFD and start capture of terminal output to a file:
	
	`cd /media/HSMFD`
	
	`script script-20160817.log`
		[signature]	17:03

Start Logging HSM Output

Step	Activity	Initial	Time (UTC)
21	CA inspects the HSM TEB for evidence of tampering and removes the HSM from its TEB; discards the TEB and connects the ttyUSB0 null modem serial adaptor and cable. CA connects the ttyUSB0 null modem serial adaptor and cable to the laptop, completing the serial connection between laptop and HSM.	*[signature]*	17:05

22	CA opens a new terminal window, which we will refer to as the "ttyaudit window". In this window the CA will start logging HSM serial output by executing
	
	`cd /media/HSMFD`
	
	`ttyaudit /dev/ttyUSB0`
	
	((Do not unplug USB serial port adaptor from the laptop until instructed, as this would cause logging to stop.))
		[signature]	17:10

Verify DVD checksum

Step	Activity	Initial	Time (UTC)
23	If no checksum calculation was started for the boot medium earlier, then the rest of this step can be skipped. CA will read the checksum aloud, four digits at a time. EW verifies that the checksum of the boot-DVD is: 7DE4 31F9 C33D DFEF 9089 AB56 13A3 8126 708A 3AC1 A784 38A7 B9C9 2A4F 52A1 F87C Participants may compare this with the boot-DVD checksum calculated during Key Ceremony 6, reproduced for convenience in the appendices of this document. CA closes the terminal window by typing `exit`	*[signature]*	*[initials]* 17:12

PCH DNSSEC Key Ceremony Script Exception Form

Ste	Activity	Initial	Time
1	EW Describes exception and action here: Step 22 — after cd /media/HSMFD Add: stty -F /dev/ttyUSB0 115200 ~~#~~ ACM Setting baud rate for serial interface deh 17:10		
2	EW notes date and time of key ceremony exception and signs here: Signature: *[signature]*		

* End of DNSSEC Key Ceremony Script Exception *

Packet Clearing House

Prepare new scripts

Step	Activity	Initial	Time (UTC)
24	CA inserts the flash drive labeled "SCRIPTS" into a free USB slot and waits for operating system to recognize the FD. When the new window for the mounted device appears, close that window.	*[signature]*	17:13
25	CA copies the compressed scripts and input files from the drive labeled "SCRIPTS" ((into the current directory on the HSMFD)). ls /media/SCRIPTS cp -p /media/SCRIPTS/scripts-20160817.tar.gz . sha256sum scripts-20160817.tar.gz tar -xzvf scripts-20160817.tar.gz sh copystuff	*[signature]*	17:16

Connecting offline HSM (KSK-HSM-02-BRK)

Step	Activity	Initial	Time (UTC)
26	CA connects UPS power to the HSM. Status information will appear in the "ttyaudit window" and the "Ready" LED on the will HSM blink. After its self-test the HSM will display the text "Set Online" indicating that the HSM is in the initialized state and the "Ready" LED will be off.	*[signature]*	17:17

Activate HSM

Step	Activity	Initial	Time (UTC)
27	CA sets HSM online using the "Set Online" menu item and three (3) OP cards. The "Ready" LED should illuminate. Use OP cards 1, 4 and 5 ((All cards have PIN 11223344)) ((The HSM will always refer to cards 1, 2 and 3, regardless of our numbering (possibly) being different.))	*[signature]*	17:19

28	CA connects Ethernet cable between laptop and HSM and sets the HSM IP in the laptop config by entering
	
	`ipadd`
	
	`set-hsm-env`
		[signature]	17:21

Start generating Keys and Keybundles

Step	Activity	Initial	Time (UTC)
29	CA disables screen saver by typing `disable-screensaver` Now, using the GUI menu, in "System", "Preferences", "Screensaver" uncheck "activate screen saver when computer is idle" Click "Close". In "System", "Preferences", "More Preferences", "Power Management" Ensure both sliders in "Running on AC" are set to "never". Click "Close".	*[signature]*	17:22

30	CA copies the encrypted backups of the ZSKs by executing:
	
	`cd /tmp/pch`
	
	`makeallhsmfiles`
		[signature]	17:22

| 31 | CA starts key and signature generation by executing:

`key-and-sig-gen`

This step is considered complete as soon as the command is issued.

((The data file contains a line for each zone for which ZSKs will be rolled or generated. The process of generating ZSKs and KSKs and creating keybundles (KSK signed DNSKEY RRsets) will take some time. KSKs and ZSKs will automatically be received by the laptop in encrypted form and deleted from HSM as each zone is completed. The keys are stored in /tmp, which is a memory based file system.)) | *[signature]* | 17:23 |
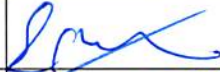
Re-Package OP Cards

Step	Activity	Initial	Time (UTC)
32	CA places each OP card with pre-printed warning slip in its own new TEB and reads the TEB number aloud. The EW records each TEB number in the smart card sign out sheet in the EW copy of the script, reading it aloud for verification.	*(signature)*	17:34

Re-Distribution of Cards

Step	Activity	Initial	Time (UTC)
33	CA calls each CO to retrieve their smart cards. As each CO receives and inspects their cards, they verify, date and sign the EW's copy of the sign out sheet and the EW initials each entry.	*(signature)*	17:36

Smart Card Sign Out Sheet

CO#	Card Type	TEB #	Printed Name	Signature	Date	Time	EW
CO1	OP 1 of 7	BB71170519	Steve FELDMAN	*(signature)*	8/17/16	17:35	*(initials)*
CO4	OP 4 of 7	BB71705191	Eric ALLMAN	*(signature)*	8/17/16	17:36	*(initials)*
CO5	OP 5 of 7	BB71705192	Stephan SOMOGYI	*(signature)*	8/17/16	17:36	*(initials)*

Optionally leave facility

Step	Activity	Initial	Time (UTC)
34	Optionally, all participants can now leave the room if the room is closed and sealed until everyone's return.	*(signature)*	17:45

Pack and store Keys and Keybundles

Step	Activity	Initial	Time (UTC)
35	When the key generation script is complete, CA generates the archive destined for the signing HSMs by executing: `pack-today-kb`	*[signature]*	17:45/17:50
36	CA archives all results including encrypted KSKs for future use by executing: `pack-today-session`	*[signature]*	17:46/17:51

37	CA creates a snapshot of any changes to DB files by executing:
	
	`cd /media/HSMFD`
	
	`pack-snapshot-db KSK-HSM-02-BRK`
		[signature]	17:51

38	CA calculates checksums of all files on the HSMFD: `find . -type f -print0	xargs -0 -n 50 sha256sum`  To keep an eye on available space on the HSMFD, execute:  `df -h`	*[signature]*	17:52

39	CA deletes the files on the SCRIPTS FD and unmounts by executing:
	
	`rm -rf /media/SCRIPTS/*`
	
	`umount /media/SCRIPTS`
	
	and removes the SCRIPTS FD for reuse.
		[signature]	17:53

Exception (handwritten margin note pointing to steps 35 and 36)

Return HSM to a Tamper Evident Bag

Step	Activity	Initial	Time (UTC)
40	CA presses the RESTART button on the HSM and waits for the self-test to complete. CA then disconnects the HSM from power and laptop (serial and Ethernet), placing the HSM into a new TEB and sealing it.	*[signature]*	18:02

PCH DNSSEC Key Ceremony Script Exception Form

Ste	Activity	Initial	Time
1	EW Describes exception and action here: Redoing Steps 35 & 36. Reason: done outside of the logging window. Confirm scripts have no problem being re-run.	*(initialed)*	17:50
2	EW notes date and time of key ceremony exception and signs here: Signature: *(signature)*		

* End of DNSSEC Key Ceremony Script Exception *

| 41 | CA reads out TEB number and HSM serial number and allows participants to verify them while the EW records the TEB and HSM serial numbers here:

TEB# _BB69600417_

HSM Serial#: _H1411035_ | *(signature)* | 18:04 |

Stop Recording Serial Port Activity

Step	Activity	Initial	Time (UTC)
42	CA terminates HSM serial output capture by disconnecting the USB serial adaptor from the laptop. CA then exits out of the "ttyaudit window". `exit`	*(signature)*	18:04

Display HSM Flash Drive Contents

Step	Activity	Initial	Time (UTC)
43	CA displays contents of HSMFD by executing: `ls -ltr`	*(signature)*	18:05

Stop Logging and create archive

Step	Activity	Initial	Time (UTC)
44	CA stops logging terminal output by typing "exit" in the "command window": `exit`	*(initialed)*	18:05
45	Pack it all up into a single archive: `pack-hsmfd`	*(initialed)*	18:06
46	CA calculates sha256 checksum of the archive by executing: `sha256sum HSMFD-20160817.tar.gz` CA reads the hash of the checksum aloud. EW records the sixty-four digit hash: 50FB ~~5E0F~~ D120 13DD 8D7A 7677 1ED4 7A25 0503 1763 7237 755C 035B 3C90 D310 5D7A 4E73	*(initialed)*	18:08

Backup HSM Flash Drive Contents

Step	Activity	Initial	Time (UTC)

47	CA plugs a blank FD labeled "HSMFD" into the laptop waits for it to be recognized by the operating system as HSMFD_ and copies the contents of the HSMFD to the blank drive by executing:
	
	`cp -Rp * /media/HSMFD_`
	
	CA then unmounts new FD using
	
	`umount /media/HSMFD_`
	
	CA then removes HSMFD_ from the laptop and places it a new TEB and seals; reads out TEB number and shows item to participants while the EW records the TEB number here:
	
	TEB# BB71705285
	
	This copy will later be stored in the on-site audit bundle.
		(initialed)	18:12

48	CA performs this activity a second time to create a second copy. TEB# BB717Ø5283 This copy will later be stored in the off-site audit bundle.		18:15
49	CA performs this activity a third time to create a third copy. TEB# BB717Ø5282 This copy will later be stored in the EW audit bundle.		18:16
50	CA performs this activity a fourth time to create a fourth copy. TEB# BB717Ø5281 This copy will later be placed in the safe.		18:18
51	CA performs this activity a fifth time to create a fifth copy. TEB# BB717Ø5280 This copy will later be sent to the other KSK generating country.		18:20
52	CA performs this activity a sixth time to create a sixth copy. TEB# BB717Ø5279 This copy will later be CA's copy. CA will later upload the contents to the published archive.		18:21

Return HSMFD to a Tamper Evident Bag

Step	Activity	Initial	Time (UTC)

53	CA unmounts HSMFD by executing:
	
	`cd /tmp`
	
	then
	
	`umount /media/HSMFD`
			18:25

| 54 | CA removes HSMFD and places it in a new TEB and seals; reads out TEB number and shows item to participants.

EW records TEB # here.

TEB# BB71705278 | _(signature)_ | 18:28 |

Return Boot-DVD to a Tamper Evident Bag

Step	Activity	Initial	Time (UTC)
55	CA executes: `shutdown -h now` removes DVD and turns off laptop. To remove DVD, CA may need to breifly power on laptop, press eject button, and power off.	_(signature)_	18:29
56	CA places boot-DVD in new TEB and seals; reads out TEB number and shows item to participants. EW records TEB number here: TEB# BB71705277	_(signature)_	18:31

Return Laptop to a Tamper Evident Bag

Step	Activity	Initial	Time (UTC)
57	CA disconnects power and any other connections from laptop and puts laptop in new TEB and seals; reads out TEB number and shows item to participants. EW records TEB number here: TEB# BB9569600415	_(signature)_	18:33

Return Power Supplies, USB Hub, and Cables

Step	Activity	Initial	Time (UTC)
58	CA places HSM power supply and laptop power supply, USB hub, serial cable, USB serial adapter, power and networking cables in a bag. This need not be a TEB as it is only used for convenience.	_(signature)_	18:36

| 59 | SC returns items to the safe. SC records return of each item on the safe's log with TEB number, name of item, date, time, and signature with a second participant initialing each entry.

- KSK-HSM-02-BRK HSM

- laptop

- original HSMFD above

- fourth HSMFD backup

- DVD

Power supplies and cables need not be stored in the safe if space is constrained.

SC records a closing action as an entry in the safe's log sheet and returns the log sheet to the safe. SC closes safe. EW verifies that it is locked. | *(signature)* | 18:43 |
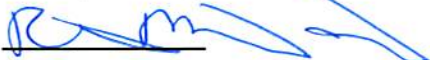
Sign-Out on Participant Signature Sheet

Step	Activity	Initial	Time (UTC)
60	All participants leave the Key Management Facility, and on the Participant Signature Sheet note their exit time and sign.	*(signature)*	18:45

Stop Audio-Visual Recording

Step	Activity	Initial	Time (PDT)
61	FO stops audio and video recording.	*(signature)*	18:46

Script review

Step	Activity	Initial	Time (UTC)
62	CA reviews EWs script and signs it: CA Signature _____	*(signature)*	18:50

Sign Out of Facility

Step	Activity	Initial	Time (PDT)
63	FO returns phones, computers, and any other items to participants and logs their exit times on the facility sign-in sheet. Participants return identification vests to the FO. Participants are now free to depart.	*[signature]*	11:52

Copy and Store the Script

Step	Activity	Initial	Time (PDT)
64	FO makes at least three color copies of the EW's script: one for the off-site audit bundle, one for the on-site audit bundle, one for the EW, copies for other participants as requested, and delivers the original to the SC. The two audit bundles each contain hard copies and soft copies on an SD card: - output of signer system - HSMFD - copy of EWs key ceremony script - audio-visual recording - logs from the Facility Physical Access Control - SC attestation (A.2 below) - the EW attestation (A.1 below) all in a TEB labeled "Key Ceremony 08/17/2016", dated and signed by CA. One bundle will be stored by the SC along with equipment. The second bundle will be kept securely offsite. CA will upload soft copies of all of the above to pch.net. The fifth copy of the HSMFD will be sent to the other key signing facility. CA retains any remaining materials (e.g. extra HSMFD) for next key ceremony preparation and analysis.	Bob NA MUST follow NOTARY STEP *[signature]*	

Appendix B:

Access Control System Attestation

(by SC)

I have reviewed the physical access control system and not found any discrepancies or anything else out of the ordinary.

Attached is the audited physical access log.

Printed Name: _Robert Arasmith_

Signature: _[signature]_

Date: _8/17/16_

Appendix A:

Key Ceremony Script Attestation

(by EW)

I hereby attest that the Key Ceremony was conducted in accordance with this script and that any excpetions which may have occurred were accurately and properly documented on the attached Script Exception Forms.

Printed Name: _____ Aimee Leonetti _____

Signature: _____

Date: _____ 8/17/16 _____

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1189
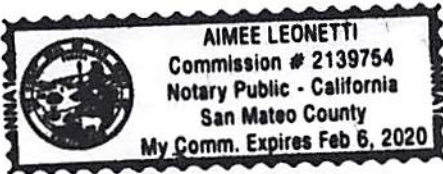
State of California)

County of _Alameda_)

On _8/17/16_ before me, _Aimee Leonetti, Notary Public,_
Date — *Here Insert Name and Title of the Officer*

personally appeared _Robert Edward Avasmith_
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____
Signature of Notary Public

AIMEE LEONETTI
Commission # 2139754
Notary Public - California
San Mateo County
My Comm. Expires Feb 6, 2020

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document
Title or Type of Document: _DNSSEC Key Ceremony Script_ Document Date: _8/17/16_
Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____	Signer's Name: _____
☐ Corporate Officer — Title(s): _____	☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General	☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact	☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator	☐ Trustee ☐ Guardian or Conservator
☐ Other: _____	☐ Other: _____
Signer Is Representing: _____	Signer Is Representing: _____

Insert Notary Acknowledgement Here

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San Francisco, California
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1600 Shattuck Avenue
Facilities Sign-In Sheet

Role	Name	Signature	Date	Entry Time PDT	Exit Time PDT
FO3	Mimi RAUSCHENDORF		8/17/16	8:15	11:50
CA	Robert MARTIN-LEGENE		8/17/16	8:15	11:50
EW	Aimee LEONETTI		8/17/16	9:00	11:50
CO1	Steve FELDMAN	Personally identifiable information redacted	8/17/16	9:00	11:50
CO4	Eric ALLMAN		8/17/16	9:02	11:50
CO5	Stephan SOMOGYI		8/17/16	9:00	11:50
SC2	Bob ARASMITH		8/17/16	9:00	11:50

Appendix C:
Abbreviations Used in This Document
Roles
CA   Ceremony Administrator
EW   External Witness
SC   Security Controller
CO   Crypto Officers
FO   Facilities Officer
R   Registry Representative

Other Abbreviation
TEB   Tamper Evident Bag
        (MMF Industries, item #2362010N20 small or #2362011N20 large)
HSM   Hardware Security Module
FD   Flash Drive
AAK   Adapter Authorization Key
SMK   Storage Master Key
OP   Operator
SO   Security Operator

Appendix D:
Letter and Number Pronunciation

Character	Call Sign	Pronunciation
A	Alfa	AL-FAH
B	Bravo	BRAH-VOH
C	Charlie	CHAR-LEE
D	Delta	DELL-TAH
E	Echo	ECK-OH
F	Foxtrot	FOKS-TROT
G	Golf	GOLF
H	Hotel	HOH-TEL
I	India	IN-DEE-AH
J	Juliet	JEW-LEE-ETT
K	Kilo	KEY-LOH
L	Lima	LEE-MAH
M	Mike	MIKE
N	November	NO-VEM-BER
O	Oscar	OSS-CAH
P	Papa	PAH-PAH
Q	Quebec	KEH-BECK
R	Romeo	ROW-ME-OH
S	Sierra	SEE-AIR-RAH
T	Tango	TANG-GO
U	Uniform	YOU-NEE-FORM
V	Victor	VIK-TAH
W	Whiskey	WISS-KEY
X	Xray	ECKS-RAY
Y	Yankee	YANG-KEY
Z	Zulu	ZOO-LOO
1	One	WUN
2	Two	TOO
3	Three	TREE
4	Four	FOW-ER
5	Five	FIFE
6	Six	SIX
7	Seven	SEV-EN
8	Eight	AIT
9	Nine	NIN-ER
0	Zero	ZEE-RO

Appendix: E
Card Distribution from Key Ceremony 1

DNSSEC Key Ceremony Script   Tuesday, April 26, 2011

Distribute Cards

Step	Activity	Initial	Time
103	Due to limited number of personnel at this key ceremony, cards will be distributed in groups that maintain multi-person control requirements. A subsequent key ceremony will redistribute cards to their final holders. Each group of cards shall be placed in another TEB whose numbers are recorded below on the EW's script.		8:37 PM
104	SMK1, SO1, OP1 TEB# _A21094986_ go to CO1, Steve FELDMAN.		8:39 PM
105	SMK5, SO5, OP5 TEB# _A21094983_ are entrusted to CO1, Steve FELDMAN, for conveyance to CO5, Stephan SOMOGYI.		8:43 PM
106	SMK2, SO2, OP2 TEB# _A21094985_ go to CO2, Michael SINATRA.		8:45 PM
107	SMK3, SO3, OP3 TEB# _A21094984_ go to CO3, Kim DAVIES		8:46 PM
108	SMK6, SO6, OP6 TEB# _A21094982_ are entrusted to CO3, Kim DAVIES, for conveyance to CO6, LEONG Keng Thai.		8:48 PM
109	SMK 4, SO4, OP4 TEB# _A21094980_ go to CO4, Jonny MARTIN.		8:49 PM
110	SMK7, SO7, OP7 TEB# _A21094981_ are entrusted to CO4, Jonny MARTIN, for conveyance to CO7, Gaurab UPADHAYA		8:50 PM

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Appendix: F
Smart Card Sign Out Sheet from Key Ceremony 1

DNSSEC Key Ceremony Script   Tuesday, April 26, 2011

Smart Card Sign Out Sheet

CO#	Card Type	TEB #	Printed Name	Signature	Date	Time	EW
CO1	OP 1 of 7	A21095013	Steve FELDMAN		4/25/11	10.56	
CO1	SO 1 of 7	A21095012	Steve FELDMAN		4/25/11	20.56	
CO1	SMK 1 of 7	A21095011	Steve FELDMAN		4/25/11	20.56	
CO2	OP 2 of 7	A21095010	Michael SINATRA		4/25/11	20.55	
CO2	SO 2 of 7	A21095009	Michael SINATRA		4/25/11	20.55	
CO2	SMK 2 of 7	A21095008	Michael SINATRA		4/25/11	20.55	
CO3	OP 3 of 7	A21095007	Kim DAVIES		4/25/11	8.52	
CO3	SO 3 of 7	A21095006	Kim DAVIES		4/25/11	8.52	
CO3	SMK 3 of 7	A21095004	Kim DAVIES		4/25/11	8.52	
CO4	OP 4 of 7	A21095005	Jonny MARTIN		4/25/11	8.58	
CO4	SO 4 of 7	A21095003	Jonny MARTIN		4/25/11	8.58	
CO4	SMK 4 of 7	A21095002	Jonny MARTIN		4/25/11	8.58	
CO5	OP 5 of 7	A21095001	Steve FELDMAN		4/25/11	20.56	
CO5	SO 5 of 7	A21095000	Steve FELDMAN		4/25/11	20.56	
CO5	SMK 5 of 7	A21094999	Steve FELDMAN		4/25/11	20.56	
CO6	OP 6 of 7	A21094998	Kim DAVIES		4/25/11	8.53	
CO6	SO 6 of 7	A21094997	Kim DAVIES		4/25/11	8.53	
CO6	SMK 6 of 7	A21094996	Kim DAVIES		4/25/11	8.53	
CO7	OP 7 of 7	A21094995	Jonny MARTIN		4/25/11	8.58	
CO7	SO 7 of 7	A21094994	Jonny MARTIN		4/25/11	8.58	
CO7	SMK 7 of 7	A21094993	Jonny MARTIN		4/25/11	8.58	

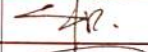Packet Clearing House   Page 30 of 34

Appendix: G

Smart Card Sign Out Sheet from Key Ceremony 2

DNSSEC Key Ceremony Script   Monday, May 30, 2011

Smart Card Sign Out Sheet

CO#	Card Type	TEB #	Printed Name	Signature	Date	Time	EW
CO1	OP 1 of 7	A19204935	Steve FELDMAN		5/30/11	0047	
CO1	SO 1 of 7	A19204934	Steve FELDMAN		5/30/11	0047	
CO1	SMK 1 of 7		Steve FELDMAN		5/30/11		
CO2	OP 2 of 7	A19204933	Michael SINATRA		5/30/11	0043	
CO2	SO 2 of 7	A19204931	Michael SINATRA		5/30/11	0047	
CO2	SMK 2 of 7		Michael SINATRA		5/30/11		
CO4	OP 4 of 7	A19204932	Jonny MARTIN		5/30/11	0050	
CO4	SO 4 of 7	A19204930	Jonny MARTIN		5/30/11	0052	
CO4	SMK 4 of 7		Jonny MARTIN		5/30/11		
CO5	OP 5 of 7	A19204929	Steffen SOMOGYI		5/30/11	0051	
CO5	SO 5 of 7	A19204928	Steffen SOMOGYI		5/30/11	0051	
CO5	SMK 5 of 7		Steffen SOMOGYI		5/30/11		
CO7	OP 7 of 7		Jonny MARTIN		5/30/11		
CO7	SO 7 of 7		Jonny MARTIN		5/30/11		
CO7	SMK 7 of 7		Jonny MARTIN		5/30/11		

Handwritten annotations in left margin:
A19204943
A19204942
A19204944
A19204941

Handwritten at bottom:
A19204944 - C04
A19204943 - C01
A19204942 - C02
A19204941 - C05

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Appendix: H

Smart Card Sign Out Sheet from Key Ceremony 3

DNSSEC Key Ceremony Script   Monday, June 20, 2011

Smart Card Sign Out Sheet

CO#	Card Type	TEB #	Printed Name	Signature	Date	Time	EW
CO1	OP 1 of 7	A19204656	Steve FELDMAN		6/20/11	07.51	
CO3	OP 3 of 7	A19204874	Kim DAVIES		6/20/11	0751	
CO4	OP 4 of 7	A19204872	Jonny MARTIN		6/20/11	07:49	
CO6	OP 6 of 7	AK204870	LIM Choon Sai		6/20/11	07.50	
CO7	OP 7 of 7	A19204868	Gaurab UPADHAYA		6/20/11	07.49	

ENCLOSING BAGS:

CO1: A19204875

CO3: A19204873

CO4: A19204871

CO6: A19204869

CO7: A19204867

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Appendix: I

Smart Card Sign Out Sheet from Key Ceremony 4

DNSSEC Key Ceremony Script   Friday, January 20, 2012

Re-Package OP Cards

Step	Activity	Initial	Time (UTC)
60	CA places each OP card with instruction slip in its own new TEB and records the number in the smart card sign out sheet below	1/	20:43

Re-Distribution of Cards

Step	Activity	Initial	Time (UTC)
61	CA calls each CO to return their smartcards. As each CO receives and inspects their cards, they fill out the sign out sheet below and EW initials their entry. Note new outer bags in sheet below.	1/	20:51

Smart Card Sign Out Sheet

CO#	Card Type	TEB #	Printed Name	Signature	Date	Time	EW
CO2	OP 2 of 7	A19204950	Michael SINATRA	*signature*	1/20/12	2051	*initial*
CO2	SO 2 of 7	A19204952	Michael SINATRA	*signature*	1/20/12	2051	*initial*
CO4	OP 4 of 7	A19204949	Jonny MARTIN	*signature*	1/20/12	2049	*initial*
CO4	SO 4 of 7	A19204953	Jonny MARTIN	*signature*	1/20/12	2049	*initial*
CO5	OP 5 of 7	A19204951	Stephan SOMOGYI	*signature*	1/20/12	2046	*initial*
CO5	outside bag SO 5 of 7	A19204954	Stephan SOMOGYI	*signature*	1/20/12	2046	*initial*

OUTSIDE BAG
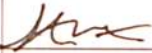
Appendix: J

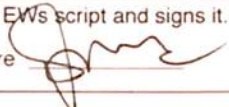# Smart Card Sign Out Sheet from Key Ceremony 5

DNSSEC Key Ceremony Script   Friday, April 27, 2012

Smart Card Sign Out Sheet

CO#	Card Type	TEB #	Printed Name	Signature	Date	Time	EW
CO1	OP 1 of 7	A19204955	Steve FELDMAN		4/27/12	1844	
CO1	Outer bag 1 of 7	3112567	Steve FELDMAN		4/27/12	1844	
CO3	OP 3 of 7	A3112566	Kim DAVIES		4/27/12	18:46	
CO3	Outer Bag 3 of 7	A3112572	Kim DAVIES		4/27/12	18:46	
CO4	OP 4 of 7	A3112565	Jonny MARTIN		4/27/12	18:47	
CO4	Outer bag 4 of 7	A3112593	Jonny MARTIN		4/27/12	18:47	

Sign-Out on Participant Signature Sheet

Step	Activity	Initial	Time (UTC)
60	All participants leave the Key Management Facility, sign the Participant Signature Sheet, and note their exit time.		18:50
61	CA reviews EWs script and signs it. CA Signature		18:52

Sign Out of Facility

Step	Activity	Initial	Time (UTC)
62	FO returns phones, laptops, and other items to participants and logs their exit times. Participants are now free to depart.		18:53

Stop Audio-Visual Recording

Step	Activity	Initial	Time (UTC)
63	SA stops audio and video recording.		18:53

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Appendix: K

Smart Card Sign Out Sheet from Key Ceremony 5-1

Re-Distribution of Cards

Step	Activity	Initial	Time (UTC)
63	CA calls each CO to return their smartcards. As each CO receives and inspects their cards, they fill out the sign out sheet below and EW initials their entry. Note new outer bags in sheet below.	*(initialed)*	19:14

Smart Card Sign Out Sheet

CO#	Card Type	TEB #	Printed Name	Signature	Date	Time	EW
CO1	OP 1 of 7	A28410829	Steve FELDMAN	*(signed)*	5/30/12	19:11	*(initialed)*
CO1	outer SO 1 of 7	A28410826	Steve FELDMAN	*(signed)*	5/30/12	19:11	*(initialed)*
CO2	OP 2 of 7	A28410828	Michael SINATRA	*(signed)*	5/30/12	19:12	*(initialed)*
CO2	Outer SO 2 of 7	A28410825	Michael SINATRA	*(signed)*	5/30/12	19:12	*(initialed)*
CO4	OP 4 of 7	A28410827	Jonny MARTIN	*(signed)*	5/30/12	19:14	*(initialed)*
CO4	Outer SO 4 of 7	A28410823	Jonny MARTIN	*(signed)*	5/30/12	19:14	*(initialed)*

Appendix: L

Smart Card Sign Out Sheet from Key Ceremony 6

DNSSEC Key Ceremony Script   Friday, July 27, 2012

Re-Distribution of Cards

Step	Activity	Initial	Time (UTC)
67	CA calls each CO to return their smartcards. As each CO receives and inspects their cards, they fill out the sign out sheet below and EW initials their entry. Note new outer bags in sheet below.	//	20:20

Smart Card Sign Out Sheet

CO#	Card Type	TEB #	Printed Name	Signature	Date	Time	EW
CO1	OP 1 of 7	A284/0816	Steve FELDMAN		7/27/12	2014	/
CO1	Outer 1 of 7		Steve FELDMAN		7/27/12		
CO4	OP 4 of 7	A284/0814	Jonny MARTIN	J.M.	7/27/12	2019	//
CO4	Outer 4 of 7		Jonny MARTIN		7/27/12		
CO5	OP 5 of 7	A284/0817	Stephan SOMOGYI		7/27/12	2019	//
CO5	Outer 5 of 7		Stephan SOMOGYI		7/27/12		

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Appendix: M

Smart Card Sign Out Sheet from Key Ceremony 7

DNSSEC Key Ceremony Script   Friday, December 14, 2012

Re-Package OP Cards

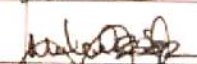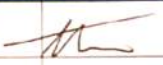| Step	Activity	Initial	Time (UTC)
65	The CA places each OP card with pre-printed warning slip in its own new TEB and seals TEB, hands the EW the tear-off strip from the TEB to record.	*(initialed)*	20:44

Re-Distribution of Cards

Step	Activity	Initial	Time (UTC)
66	The CA calls each CO to return their smartcards. As each CO receives and inspects their cards, they fill out the sign out sheet below and the EW initials their entry.	*(initialed)*	20:46

Smart Card Sign Out Sheet

CO#	Card Type	TEB #	Printed Name	Signature	Date	Time	EW
CO1	OP 1 of 7	A28410805	Steve FELDMAN	*(signature)*	12/14/12	2045	*(initialed)*
CO2	OP 2 of 7	A2841080 4	Michael SINATRA	*(signature)*	12/14/12	2046	*(initialed)*
CO4	OP 4 of 7	A28410803	Jonny MARTIN	*(signature)*	12/14/12	2046	*(initialed)*

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Appendix: N

Smart Card Sign Out Sheet from Key Ceremony 8

DNSSEC Key Ceremony Script   Thursday, September 12, 2013

Re-Distribution of Cards

Step	Activity	Initial	Time (UTC)
63	CA calls each CO to retrieve their smartcards. As each CO receives and inspects their cards, they verify, date and sign the EW's copy of the sign out sheet below and EW initials their entry.	*(initialed)*	18:20

Smart Card Sign Out Sheet

CO#	Card Type	TEB #	Printed Name	Signature	Date	Time	EW
CO1	OP 1 of 7	A28410802	Steve FELDMAN	*(signed)*	9/12/13	1712	*(initialed)*
CO2	OP 2 of 7	A28410801	Michael SINATRA	*(signed)*	9/12/13	1816	*(initialed)*
CO3	OP 3 of 7	A28410800	Kim DAVIES	*(signed)*	9/12/13	1819	*(initialed)*

Sign-Out on Participant Signature Sheet

Step	Activity	Initial	Time (UTC)
64	All participants leave the Key Management Facility, sign the Participant Signature Sheet, and note their exit time.	*(initialed)*	22:53
65	CA reviews EWs script and signs it. CA Signature *(signed)*	*(initialed)*	22:55

Sign Out of Facility

Step	Activity	Initial	Time (PDT)
66	FO returns phones, laptops, and other items to participants and logs their exit times. Participants return identification vests to the FO. Participants are now free to depart.	*(initialed)*	3:58pm

Stop Audio-Visual Recording

Step	Activity	Initial	Time (PDT)
67	SA stops audio and video recording.	*(initialed)*	4:00pm

Appendix: O

Smart Card Sign Out Sheet from Key Ceremony 9

DNSSEC Key Ceremony Script   Friday, January 10, 2014

Re-Package OP Cards

Step	Activity	Initial	Time (UTC)
35	CA places each OP card with pre-printed warning slip in its own new TEB and records the TEB # in the EW's copy of the smart card sign out sheet below, reading it aloud for verification and giving the TEB tear-off strip to the EW.	*(initialed)*	18:15

Re-Distribution of Cards

Step	Activity	Initial	Time (UTC)
36	CA calls each CO to retrieve their smartcards. As each CO receives and inspects their cards, they verify, date and sign the EW's copy of the sign out sheet below and EW initials their entry.	*(initialed)*	18:18

Smart Card Sign Out Sheet

CO#	Card Type	TEB #	Printed Name	Signature	Date	Time	EW
CO1	OP 1 of 7	A28410774	Steve FELDMAN	*(signature)*	1/10/14	18:16	*(initialed)*
CO2	OP 2 of 7	A28410773	Michael SINATRA	*(signature)*	1/10/14	18:17	*(initialed)*
CO5	OP 5 of 7	A28410772	Stephan SOMOGYI	*(signature)*	1/10/14	18:17	*(initialed)*

Optionally leave facility

Step	Activity	Initial	Time (UTC)
37	Optionally, all participants can now leave the room if the room is closed and sealed until everyone's return.	*(initialed)*	N/A

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Appendix: P

Smart Card Sign Out Sheet from Key Ceremony 10

DNSSEC Key Ceremony Script   Wednesday, March 26, 2014
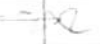
Re-Package OP Cards

Step	Activity	Initial	Time (UTC)
35	CA places each OP card with pre-printed warning slip in its own new TEB and records the TEB # in the EW's copy of the smart card sign out sheet below, reading it aloud for verification and giving the TEB tear-off strip to the EW	*(signed)*	0844

Re-Distribution of Cards

Step	Activity	Initial	Time (UTC)
36	CA calls each CO to retrieve their smartcards. As each CO receives and inspects their cards, they verify, date and sign the EW's copy of the sign out sheet below and EW initials their entry.	*(signed)*	0845

Smart Card Sign Out Sheet

CO#	Card Type	TEB #	Printed Name	Signature	Date	Time	EW
CO3	OP 3 of 7	Jaap AKKERHUIS	A28410778	*(signed)*	3/26/14	0846	*(init)*
CO6	OP 6 of 7	LIM Choon Sai	A28410777	*(signed)*	3/26/14	0846	*(init)*
CO7	OP 7 of 7	Gaurab UPADHAYA	A28410779	*(signed)*	3/26/14	0846	*(init)*

Optionally leave facility

Step	Activity	Initial	Time (UTC)
37	Optionally, all participants can now leave the room if the room is closed and sealed until everyone's return.		

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Appendix: Q

Smart Card Sign Out Sheet from Key Ceremony 11

DNSSEC Key Ceremony Script   Friday, December 12, 2014

Re-Package OP Cards

Step	Activity	Initial	Time (UTC)
36	CA places each OP card with pre-printed warning slip in its own new TEB and records the TEB # in the EW's copy of the smart card sign out sheet below, reading it aloud for verification and giving the TEB tear-off strip to the EW.	*11*	19:17

Re-Distribution of Cards

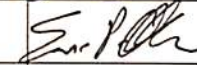| Step	Activity	Initial	Time (UTC)
37	CA calls each CO to retrieve their smartcards. As each CO receives and inspects their cards, they verify, date and sign the EW's copy of the sign out sheet below and EW initials their entry.	*1*	19:19

Smart Card Sign Out Sheet

CO#	Card Type	TEB #	Printed Name	Signature	Date	Time	EW
CO1	OP 1 of 7	A28410734	Steve FELDMAN	*(signature)*	12/12/14	19:17	*(initials)*
CO2	OP 2 of 7	A28410735	Michael SINATRA	*(signature)*	12/12/14	19:18	*(initials)*
CO4	OP 4 of 7	A28410736	Eric ALLMAN	*(signature)*	12/12/14	19:18	*(initials)*

Optionally leave facility

Step	Activity	Initial	Time (UTC)
38	Optionally, all participants can now leave the room if the room is closed and sealed until everyone's return.	*1*	

Appendix: R
Smart Card Sign Out Sheet from Key Ceremony 12

DNSSEC Key Ceremony Script   Monday, February 9, 2015

Re-Package OP Cards

Step	Activity	Initial	Time (UTC)
35	CA places each OP card with pre-printed warning slip in its own new TEB and records the TEB # in the EW's copy of the smart card sign out sheet below, reading it aloud for verification and giving the TEB tear-off strip to the EW.	*signature*	0746

Re-Distribution of Cards

Step	Activity	Initial	Time (UTC)
36	CA calls each CO to retrieve their smartcards. As each CO receives and inspects their cards, they verify, date and sign the EW's copy of the sign out sheet below and EW initials their entry.	*signature*	0751

Smart Card Sign Out Sheet

CO#	Card Type	TEB #	Printed Name	Signature	Date	Time	EW
CO3	OP 3 of 7	A28410768	Kim DAVIES	*signature*	2/9/15	0747	*initial*
CO6	OP 6 of 7	A28410767	LEE Han-Chuan	*signature*	2/9/15	0747	*initial*
CO7	OP 7 of 7	A28460766	Gaurab UPADHAYA	*signature*	2/9/15	0748	*initial*

Optionally leave facility

Step	Activity	Initial	Time (UTC)
37	Optionally, all participants can now leave the room if the room is closed and sealed until everyone's return.	*signature*	0748

Appendix: S

Smart Card Sign Out Sheet from Key Ceremony 13

Re-Package OP Cards

Step	Activity	Initial	Time (UTC)
35	CA places each OP card with pre-printed warning slip in its own new TEB and records the TEB # in the EW's copy of the smart card sign out sheet below, reading it aloud for verification and giving the TEB tear-off strip to the EW.	*W*	19:14

Re-Distribution of Cards

Step	Activity	Initial	Time (UTC)
36	CA calls each CO to retrieve their smartcards. As each CO receives and inspects their cards, they verify, date and sign the EW's copy of the sign out sheet below and EW initials their entry.	*// *	19:20

Smart Card Sign Out Sheet

CO#	Card Type	TEB #	Printed Name	Signature	Date	Time	EW
CO1	OP 1 of 7	A28410724	Steve FELDMAN	*(signature)*	9/25/15	1915	*(initial)*
CO4	OP 4 of 7	A28410725	Eric ALLMAN	*(signature)*	9/25/15	19:16	*(initial)*
CO5	OP 5 of 7	A28410726	Stephan SOMOGYI	*(signature)*	9/25/15	19:16	*(initial)*

Optionally leave facility

Step	Activity	Initial	Time (UTC)
37	Optionally, all participants can now leave the room if the room is closed and sealed until everyone's return.	*// *	20:34

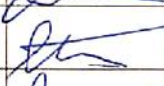## Appendix: T

Smart Card Sign Out Sheet from Key Ceremony 14

DNSSEC Key Ceremony Script   Monday, November 23, 2015

Re-Package OP Cards

Step	Activity	Initial	Time (UTC)
35	CA places each OP card with pre-printed warning slip in its own new TEB and reads the TEB number aloud. The EW records each TEB number in the smart card sign out sheet in his copy of the script, reading it aloud for verification and taking the TEB tear-off strip for his records.		19:37

Re-Distribution of Cards

Step	Activity	Initial	Time (UTC)
36	CA calls each CO to retrieve their smart cards. As each CO receives and inspects their cards, they verify, date and sign the EW's copy of the sign out sheet and the EW initials each entry.		19:38

Smart Card Sign Out Sheet

CO#	Card Type	TEB #	Printed Name	Signature	Date	Time	EW
CO1	OP 1 of 7	A28410764	Steve FELDMAN		11/23/15	1938	
CO4	OP 4 of 7	A28410763	Eric ALLMAN		11/23/15	1938	
CO7	OP 7 of 7	A28410762	Gaurab UPADHAYA		11/23/15	1938	

Optionally leave facility

Step	Activity	Initial	Time (UTC)
37	Optionally, all participants can now leave the room if the room is closed and sealed until everyone's return.		19:40

Appendix: U

Smart Card Sign Out Sheet from Key Ceremony 15
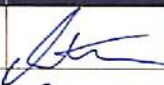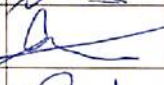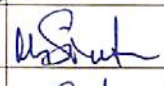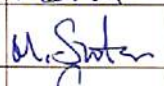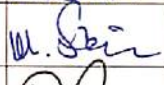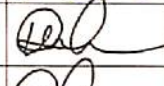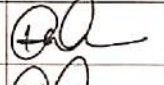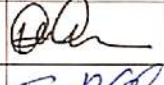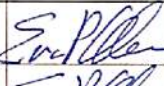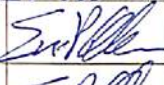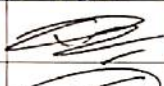
PCH DNSSEC Key Ceremony Script Exception Form

The Smart Card Sign Out Sheet automatically generated on page 27 of 62 of this script included only rows for OP cards, but needs rows for SO and SMK cards as well. APP cards are separately bagged in a different step, and AAK cards will be destroyed before the end of the ceremony.

Smart Card Sign Out Sheet

| CO#	Card Type	TEB #	Printed Name	Signature	Date	Time	EW
CO1	OP 1 of 7	A 28410760	Steve FELDMAN		7/8/16	00:27 UTC	
CO1	SO 1 of 7	A 28410759	Steve FELDMAN		7/8/16	00:27 UTC	
CO1	SMK 1 of 7	A28410761	Steve FELDMAN		7/8/16	00:27 UTC	
CO2	OP 2 of 7	A28410753	Michael SINATRA		7/8/16	00:29 UTC	
CO2	SO 2 of 7	A28410752	Michael SINATRA		7/8/16	00:29 UTC	
CO2	SMK 2 of 7	A28410751	Michael SINATRA		7/8/16	00:29 UTC	
CO3	OP 3 of 7	A28410749	Kim DAVIES		7/8/16	20:39 UTC	
CO3	SO 3 of 7	A 28410748	Kim DAVIES		7/8/16	20:39 UTC	
CO3	SMK 3 of 7	A28410747	Kim DAVIES		7/8/16	20:39 UTC	
CO4	OP 4 of 7	A 28410750	Eric ALLMAN		7/8/16	00:33 UTC	
CO4	SO 4 of 7	A 28410737	Eric ALLMAN		7/8/16	00:33 UTC	
CO4	SMK 4 of 7	A28410742	Eric ALLMAN		7/8/16	00:33 UTC	
CO7	OP 7 of 7	A 28410746	Gaurab UPADHAYA		7/8/16	20:40 UTC	
CO7	SO 7 of 7	A 28410745	Gaurab UPADHAYA		7/8/16	20:40 UTC	
CO7	SMK 7 of 7	A28410744	Gaurab UPADHAYA		7/8/16	20:40 UTC	

Appendix: V
Boot-DVD Checksum from Key Ceremony 6
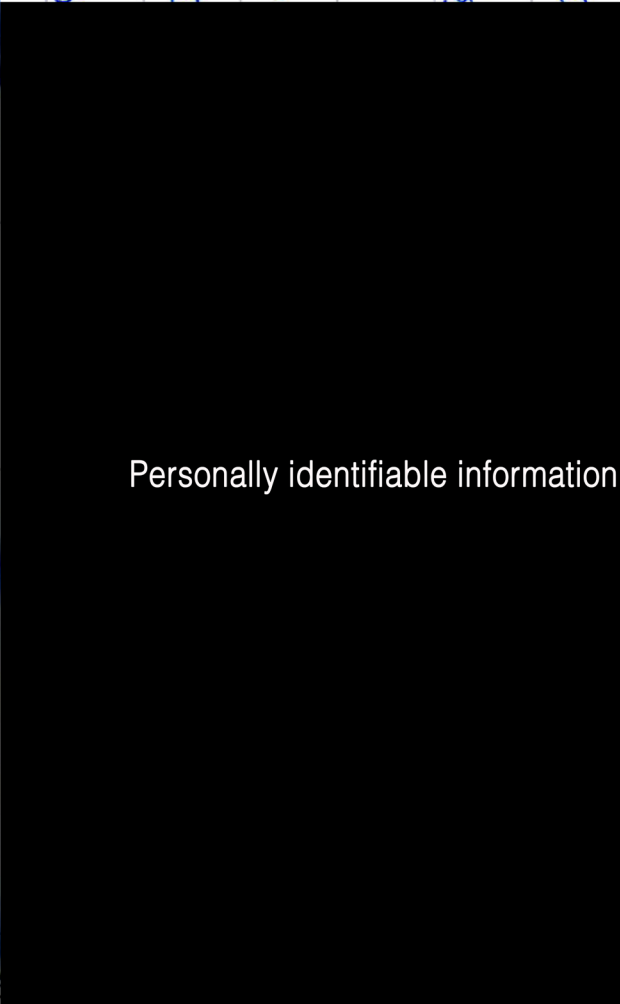
16	CA opens a terminal window.	🖊	17:18

17	CA verifies the time zone, date, and time on the laptop and synchronizes it if necessary.
	
	Display the current time and timezone:
	
	`date`
	
	If the timezone is not set to UTC:
	
	`cd /etc/`
	
	`rm localtime`
	
	`ln -s /usr/share/zoneinfo/UTC localtime`
	
	Set time to match the wall clock:
	
	`date mmddHHMMYYYY`
	
	Verify:
	
	`date`
		🖊	17:20

18	CA calculates sha256 checksum of the boot-DVD. CA may proceed with additional steps while this process completes. When the checksum is complete, CA reads it aloud, four digits at a time. `sha256sum /dev/cdrom`	🖊	17:34
19	EW records the sixty-four digit boot-DVD checksum 7DE4 31F9 C33D 0FEF 9089 ABS6 13A3 8126 208A 3AC1 A784 38A7 B9C9 2A4F 52A1 F87C Other participants may compare this with the boot-DVD checksum calculated during Key Ceremony 1, reproduced for convenience in the appendices of this document.	🖊	17:34
20	CA connects USB hub to laptop.	🖊	17:21
21	CA removes HSMFD KSK-HSM-01B-SJC from TEB and plugs into a free USB slot on the laptop; waits for O/S to recognize the FD. CA lets participants view contents of HSMFD then closes FD window.	🖊	17:29

Handwritten note (left margin near row 20): ROTATING SCHADUL3 FOR FLASH DRIVES

PCH DNSSEC Key Ceremony Entry/Exit Log

Name	Enter	Exit	Initial	Time
Eric Allman	17:44	17:42	_(initials)_	17:44

Participant Signature Sheet

Role	Name	Citizenship	Signature	Form of Identification	Identification Number	Date	Entry Time UTC	Exit Time UTC
FO	Mimi RAUSCHENDORF	US				8/17/16		
CA1	Robert MARTIN-LEGÈNE					8/17/16	18:20	18:45
EW	Aimee LEONETTI					8/17/16	16:24	18:45
CO1	Steve FELDMAN					8/17/16	18:21	18:44
CO5	Stephan SOMOGYI					8/17/16	18:22	18:44
CO4	Eric ALLMAN					8/17/16	18:23	18:45
SC2	Bob ARASMITH					8/17/16	16:23	18:44

Personally identifiable information redacted