Root DNSSEC KSK Ceremony 53-1

Thursday 25 April 2024

Root Zone KSK Operator Key Management Facility 18155 Technology Drive, Culpeper, VA 22701, USA

This ceremony is executed in accordance with the DNSSEC Practice Statement for the Root Zone KSK Operator 7th Edition (2024-03-15)

Abbreviations

- AUD = Third Party Auditor
- EW = External Witness
- IW = Internal Witness
- MC = Master of Ceremonies
- RKSH = Recovery Key Share Holder = System Administrator SA
- SO = Security Officer
- SW
- = Staff Witness
- = Ceremony Administrator CA FD = Flash Drive
- KMF = Key Management Facility
- OP = Operator
- RKOS = RZ KSK Operations Security SKR = Signed Key Response
- SSC = Safe Security Controller
- TCR = Trusted Community Representative
- CO = Crypto Officer
- HSM = Hardware Security Module
- KSR = Key Signing Request
- PTI = Public Technical Identifiers
- RZM = Root Zone Maintainer
- SMK = Storage Master Key
- STM = Secure Transport Mode

TEB = Tamper Evident Bag (AMPAC: #GCS1013, #GCS0912, #GCS1216 or MMF Industries: #2362010N20, #2362011N20)

Participants

Key Ceremony roles are described on https://www.iana.org/help/key-ceremony-roles Instructions: At the end of the ceremony, participants sign IW's script. IW records time of completion.

Title / Roles	Printed Name	Signature	Date	Time
CA	David Huberman / ICANN	D4-		
IW	Andy Newton / ICANN	14.1	1	
SSC1	Fernanda lunes / ICANN	Bana		
SSC2	Hope Shafer / ICANN	2		
CO1	Frederico Neves	1.0.		
CO2	Pia Gruvö	1 and		
CO3	Ondrej Filip	Marth		
CO4	Robert Seastrom	sta		
CO5	Nomsa Mwayenga	and the		
CO6	Hugo Salgado	1 Des		
CO7	Dileepa Lathsara	The		
RKSH1	Sebastian Castro	Pla	1	
RKSH2	Ondřej Surý	2 mm	0004	
RKSH3	Kristian Ørmen	40	2024 Apr	21.0
RKSH4	Jiankang Yao	Junhun hed	Apr	22,13
RKSH5	Bevil Wooding	annun me		
RKSH6	John Curran	ally tran		-
RKSH7	Dave Lawrence	The state		
RZM	Trevor Davis / Verisign	Al martin		
AUD	Melanie Chen / RSM	hite		
AUD	Grant An / RSM	that the		
SA	Darren Kara / ICANN	Dr. a. in		
RKOS / CA Backup	Andres Pavez / PTI	1220		
RKOS / IW Backup	Aaron Foley / PTI	1 Martin	·	
		(marg		

By signing this script, you are declaring that this document is a true and accurate record of the Root DNSSEC KSK ceremony to the best of your knowledge, and you agree that your personal data will be processed in accordance with the ICANN Privacy Policy available at https://www.icann.org/privacy/policy

Root DNSSEC KSK Ceremony 53-1

Instructions for a Root DNSSEC KSK Ceremony

The Root DNSSEC Key Signing Key (KSK) Ceremony is a scripted meeting where individuals with specific roles generate or access the private key component of the root zone DNSSEC KSK. The process is audited by a third party firm for compliance with SOC 3 framework. The script and recordings are published online for the wider Internet community to review.

Ceremony Guidelines:

- · The CA leads the ceremony
- Only a CA, IW, or SA can enter and escort other participants into Tier 4 (Key Ceremony Room)
- Dual Occupancy is enforced. IW with CA or SA must remain inside Tier 4 (Key Ceremony Room) if participants are present in the room
- During a ceremony a CA, IW, or SA may escort participants out of Tier 4 (Key Ceremony Room) at the CA's discretion if Tier 5 (Safe Room) is not occupied
- All participants are required to sign in and out of Tier 4 (Key Ceremony Room) using the visitor log located in Tier 3
- The SA begins recording with the audit cameras shortly before the ceremony begins
- Ceremony participants follow the script step by step in order to attest to the ceremony's proper performance
- The CA reads each step aloud prior to its performance
- Upon the successful completion of a step, the IW will announce and record its time of completion, and initials that step in their script
- A ceremony participant who has cause for concern or detects an issue is encouraged to interrupt the ceremony for discussion. The issue is brought to resolution before the ceremony resumes
- Questions and suggestions for improvement are welcome and can be discussed at any time or after the ceremony during the ceremony debrief

Unplanned events (exceptions) during the ceremony are evaluated, documented, and acted upon. It is the CA's sole responsibility to decide on proper actions after consulting with the IW. In either case, an exception is regarded as an incident, and incident handling procedures are enacted.

Key Management Facility Tiers:

- Tiers 1-3: Consist of the facility areas between the outside environment and the Key Ceremony
 Room
- Tier 4: Consists of the Key Ceremony Room and is subject to Dual Occupancy
- Tier 5: Consists of the Safe Room (a cage only accessible from the Key Ceremony Room) and is
 subject to Dual Occupancy
- Tier 6: Consists of Safe #1 (Equipment Safe) and Safe #2 (Credentials Safe)
- Tier 7: Consists of the HSMs stored in Safe #1 (Equipment Safe) and the safe deposit boxes installed in Safe #2 (Credentials Safe)

Some steps during the ceremony may require the participants to recite and/or confirm identifiers comprised of numbers and letters. When spelling identifiers, the phonetic alphabet shown below should be used:

Character	Code Word	Pronunciation
А	Alfa	AL-FAH
В	Bravo	BRAH-VOH
С	Charlie	CHAR-LEE
D	Delta	DELL-TAH
E	Echo	ECK-OH
F	Foxtrot	FOKS-TROT
G	Golf	GOLF
Н	Hotel	HOH-TEL
1	India	IN-DEE-AH
J	Juliet	JEW-LEE-ETT
К	Kilo	KEY-LOH
L	Lima	LEE-MAH
М	Mike	MIKE
N	November	NO-VEM-BER
0	Oscar	OSS-CAH
P	Papa	PAH-PAH
Q	Quebec	KEH-BECK
R	Romeo	ROW-ME-OH
S	Sierra	SEE-AIR-RAH
Т	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	Z00-L00
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

Act 1: Initiate Ceremony and Retrieve Materials

The CA initiates the ceremony by performing the steps below:

- · Verify that the audit cameras are recording and the online video streaming is active
- Confirm that all of the ceremony attendees have signed in using the visitor log in Tier 3
- Review emergency evacuation procedures
 Explain the use of personal devices and the purpose of this ceremony
- · Verify the time and date so that all entries into the script follow a common time source
- · Explain the purpose of the ceremony along with a high-level list of tasks to be completed

The CA and IW will then escort the SSCs and COs into Tier 5 (Safe Room) to retrieve required materials from the following locations:

- · Safe #1 containing all equipment: HSMs, laptops, OS media, etc
- · Safe #2 containing all credentials: Crypto Officer credentials are required to operate HSMs

Sign into Tier 4 (Key Ceremony Room)

Step	Activity	Initials	Time
1.1	CA confirms with SA that all audit cameras are recording and online video streaming is active.	100	17:00
1.2	CA confirms that all participants are signed into Tier 4 (Key Ceremony Room), then performs a roll call using the list of participants on page 2.	m	17:02
1.3	CA asks that any first-time ceremony participants in the room introduce themselves.	m	17:03

Emergency Evacuation Procedures and Electronics Policy

Step	Activity	Initials	Time
1.4	CA reviews emergency evacuation procedures with onsite participants.	M	17:03
1.5	CA explains the use of personal electronic devices during the ceremony.	The	
1.6	CA summarizes the purpose of the ceremony.		17:00

Verify the Time and Date

Step	ACTIVITY	Initials	Time
1.7	IW enters UTC date (YYYY-MM-DD) and time (HH:MM) using a reasonably accurate clock visible to all in Tier 4 (Key Ceremony Room): Date and time: $2024/04/25$ $17:0629$ Note: All entries into this script or any logs should follow this common source of time.	M	17:00

Open Safe #2 (Tier 6, Credentials Safe)

Step	Activity	Initials	Time
1.8	CA transports the guard key and flashlight, and with IW escorts SSC2 and the COs into Tier 5 (Safe Room.)	IM	17:08
1.9	SSC2 opens Safe #2 while shielding the combination from the camera. Note: SSC begins by rapidly spinning the dial counter-clockwise 15-20 revolutions in order to charge it before stopping at the first number in the combination.	IM	17:09
1.10	 Perform the following steps to update the safe log: a) SSC2 removes the existing safe log, then shows the most recent page to the audit camera. b) IW provides the pre-printed safe log to SSC2. c) SSC2 writes the date and time, then signs the safe log where "Open Safe" is indicated. d) IW verifies the entry, then initials it. 	M	17:11

COs Access the Credentials in Safe Deposit Boxes (Tier 7)

Step			
Step	Access the Credentials in Safe Deposit Boxes Activity COs perform the following steps sequentially to access the listed TEBs: a) CO announces their box number, then CA operates the guard key in that box's lower lock with the key blade facing downward. b) CO operates their tenant key in that box's upper lock with the key blade facing upward, then opens the safe deposit box. c) CO verifies the box's integrity, then removes the TEBs. d) CO reads aloud the TEB numbers, verifies integrity of TEBs, then presents them to the audit camera above. e) CO performs the actions specified below, locks their safe deposit box, and removes their key. f) CO writes the date and time, then signs the safe log. g) IW verifies the completed safe log entries, then initials them. h) CA locks the safe deposit box, then removes the guard key. CO1: Frederico Neves - Box # 1239 Set # 1 TEB # BB02638669 (Check and Return) Last Verified: KSK Ceremony 45 2023-04-27 CO2: Pia Gruvö - Box # 1264 Set # 1 TEB # BB02633668 (Check and Return) Last Verified: KSK Ceremony 45 2023-01-20 CO3: Ondrej Filip - Box # 1241 Set # 1 TEB # BB02633957 (Check and Return) Last Verified: KSK Ceremony 45 2022-05-12 Set # 2 TEB # BB026339557 (Check and Return) Last Verified: KSK Ceremony 45 2022-05-12 Set # 2 TEB # BB026339557 (Check and Return) Last Verified: KSK Ceremony 45 2022-05-12 CO3: Nontraj Filip - Box # 1243 Set # 1 TEB # BB02633866 (Check and Return) Last Verified: KSK Ceremony 45 2022-05-12 CO5: Nomsa Mwayenga - Box # 1262 Set # 1 TEB # BB02633866 (Check and Return) Last Verified: KSK Ceremony 51 2023-11-30 CO5: Hugo Salgado - Box # 1242 Set # 1 TEB # BB02633866 (Check and Return) Last Verified: KSK Ceremony 51 2023-11-30 CO5: Hugo Salgado - Box # 1242 Set # 1 TEB # BB02633866 (Check and Return) Last Verified: KSK Ceremony 51 2023-11-30 CO5: Hugo Salgado - Box # 1242 Set # 1 TEB # BB02633866 (Check and Return) Last Verified: KSK Ceremony 51 2023-11-30 Set # 2 TEB # BB02633853 (Check and Return) Last Verified: KSK Ceremony 51 2023-11-30 CO6: Hugo Salgado -	Initials	Time

Close Safe #2 (Tier 6, Credentials Safe)

Step	Activity	Initials	Time
1.12	Once all safe deposit boxes are closed and locked, SSC2 writes the date and time, then signs the safe log where "Close Safe" is indicated. IW verifies the entry, then initials it.	M	17:27
1.13	SSC2 returns the safe log to Safe #2, closes the safe door, pulls up on the handle, then ensures it's locked by spinning the dial at least two full revolutions each way, counter-clockwise then clockwise. CA and IW verify that the safe is locked and the "WAIT" light indicator adjacent to the Tier 5 (Safe Room) exit door is off.	M	17:26
1.14	CA, IW, SSC2, and COs leave Tier 5 (Safe Room) with TEBs, returning to Tier 4 (Key Ceremony Room).	m	17:29

Open Safe #1 (Tier 6, Equipment Safe)

Step	Activity	Initials	Time
1.15	CA and IW transport a cart and escort SSC1 into Tier 5 (Safe Room.)	an	17:30
1.16	SSC1 opens Safe #1 while shielding the combination from the camera. Note: SSC begins by rapidly spinning the dial counter-clockwise 15-20 revolutions in order to charge it before stopping at the first number in the combination.	In	גירן
1.17	 Perform the following steps to update the safe log: a) SSC1 removes the existing safe log, then shows the most recent page to the audit camera. b) IW provides the pre-printed safe log to SSC1. c) SSC1 writes the date and time, then signs the safe log where "Open Safe" is indicated. d) IW verifies the entry, then initials it. 	W	17:32

Access Equipment in Safe #1 (Tier 6, Equipment Safe)

Step		Initials	Time
1.18	CA performs the indicated action for each item listed below with the following steps: a) CAREFULLY remove each equipment TEB from the safe. b) Read aloud the TEB number, verify its integrity, then present it to the audit camera above. c) Place the equipment TEB on the cart as specified in the list below. d) Write the date and time, then sign the safe log. e) IW verifies the completed safe log entries, then initials them. HSM5E: TEB # BB51184250 (Place on Cart) Last Verified: KSK Ceremony 51 2023-11-30 HSM6E: TEB # BB51184251 (Place on Cart) Last Verified: KSK Ceremony 51 2023-11-30 HSM8E: TEB # BB51184252 (Check and Return) Last Verified: KSK Ceremony 51 2023-11-30 HSM8E: TEB # BB97448418 (Place on Cart) Last Verified: KSK Ceremony 49 2023-04-27 HSM7E: TEB # BB9748418 (Place on Cart) Last Verified: KSK Ceremony 51 2023-11-30 Captop3: TEB # BB9748418 (Place on Cart) Last Verified: KSK Ceremony 51 2023-11-30 KSK-2017: TEB # BB9748618 (Check and Return) Last Verified: KSK Ceremony 51 2023-11-30 CS media (release coen-1.0.0) + HSMFD: TEB # BB02638663 (Place on Cart) Last Verified: KSK Ceremony 51 2023-11-30 KSK-2017: TEB # BB02638662 (Check and Return) Last Verified: KSK Ceremony 51 2023-11-30 KSK-2023: TEB # BB02638661 (Place on Cart) Last Verified: KSK Ceremony 51 2023-11-30 KSK-2023: TEB # BB02638661 (Place on Cart) Last Verified: KSK Ceremony 51 2023-11-30 Note: "Last verified: indicates the most recent time materials were placed in a new TEB during a ceremony. It is listed here for audit tracking purposes. The shelves in the equipment stafe can silde in and out for ease of use.	M	17:4

Close Safe #1 (Tier 6, Equipment Safe) Exit Tier 5 (Safe Room)

Step	Activity	Initials	Time
1.19	SSC1 writes the date and time, then signs the safe log where "Close Safe" is indicated. IW verifies the safe log entry then initials it.	IN	12:41
1.20	SSC1 returns the safe log to Safe #1, closes the safe door, pulls up on the handle, then ensures it's locked by spinning the dial at least two full revolutions each way, counter-clockwise then clockwise. CA and IW verify that the safe is locked and the "WAIT" light indicator adjacent to the Tier 5 (Safe Room) exit door is off.	MAI	17:42
1.21	CA, IW, and SSC1 leave Tier 5 (Safe Room) with the cart, returning to Tier 4 (Key Ceremony Room).	m	17:42

Root DNSSEC Script Exception

Exception Details

Activity Initials Time IW writes the details of the ceremony exception: Act: 2 Step(s): 2.4 2.5 Page(s): 1D Date and time of the exception: 2024-04-25 17:57 Note: IW describes the exception(s) and action(s) below. Laptop would not boot. CA with assistance of Aaron accessed the laptop BIDS and accepted the date and time. The laptop then booted Suggesfully.

Act 2: Introduce New OS Media

The CA will introduce new OS media by performing the following steps:

- · Verify the new OS media matches the checksum published online at https://github.com/iana-org/ coen
- Calculate new OS media checksums using the current OS media. Once the new OS media hash has been verified it will be ready to use in production Discard previous OS media after new OS media has been verified
- .

Laptop3 Setup

Step	Activity	Initials	Time
2.1	 CA performs the following steps to prepare each item listed below: a) Remove the TEB from the cart, then place it on the ceremony table. b) Inspect the equipment TEB for tamper evidence. c) Read aloud the TEB number and the serial number (if applicable) while IW verifies the information using the previous ceremony script where it was last used. d) Remove and discard the TEB, then place the equipment on its designated area of the ceremony table. Laptop3: TEB # BB97448418 / Service Tag # J8SVSG2 Last Verified: KSK Ceremony 49 2023-04-27 OS media (release coen-1.0.0) + HSMFD: TEB # BB02638663 Last Verified: KSK Ceremony 51 2023-11-30 Note: "Last verified" indicates the most recent time materials were placed in a new TEB during a ceremony. It is listed here for audit tracking purposes. 	M	17:46
2.2	CA performs the following steps to confirm that no hard drive and battery are in the laptop:a) Open the latch on the right side of the laptop to confirm that the hard drive slot is empty.b) Open the latch on the left side of the laptop to confirm that the battery slot is empty.	m	17:47
2.3	CA ensures the lock switch on the left side of the listed SD card is slid down to the lock position: OS media release coen-1.0.0 Copy # 1	m	17:48
2.4	 CA performs the following steps to boot the laptop: a) Connect the external HDMI display cable. b) Connect the power supply. c) Insert the OS media release coen-1.0.0 Copy # 1. d) Switch it ON. 	ph	17;50
2.5	CA verifies functionality of the external display and performs adjustments if necessary: To change the font size of the terminal: Click the View menu and select Zoom In or Zoom Out To change the resolution of each screen: Go to Applications > Settings > Display	M	17:54

OS Media coen-1.0.0 Checksum Verification

Step	Activity	Initials	Time
	Using the Commands terminal window, CA executes the following steps:		
	 a) Verify the byte count of the SD card matches the OS media release coen-1.0.0 ISO size 375431168 by running the following command: df -B1 /dev/sda 		
	b) Calculate the SHA-256 hash by executing:		
	head -c 375431168 /dev/sda sha2wordlist		
	c) IW and participants confirm the result matches the PGP Wordlist of the SHA-256 hash.		
2.6	Note: CA assigns half of the participants to confirm the hash displayed on the TV screen while the other half confirm the hash from the ceremony script.	-	
	SHA-256 hash:		17.1
	405d7c76c114feb93fcc5345e13850e59d86341a08161207d8eb8c395410c13a PGP Words:	M	1 (:>)
	crackdown filament kiwi impetus snapline belowground woodlark proximate cowbell revolver dwelling detector tempest consulting drumbeat travesty quadrant letterhead choking Bradbury aimless bodyguard atlas amusement stormy underfoot offload corporate eating autopsy snapline corrosion	100	
	Note: The SHA-256 hash of the OS media release coen-1.0.0 is also published on the IANA website https://www.iana.org/dnssec/ceremonies/53-1		

OS Media coen-1.1.0 Acceptance Test

Step	Activity	Initials	Time
2.7	CA connects the external SD card reader to a USB port in the laptop.	IAAA	17:57
2.8	CA ensures the lock switch on the left side of the SD card is slid down to the lock position.	MI	17:58
2.9	CA inserts the new OS media release coen-1.1.0 SD card into the external SD card reader, then using the Commands terminal window performs the following steps: Note: The SD card should be inserted upside-down with the writing on top of the SD card reader visible. a) Confirm the external SD card ID of /dev/sdb by executing: 1sb1k b) Mount the external SD card by executing: mount /dev/sdb /mnt c) Verify the byte count of the SD card matches the OS media release coen-1.1.0 ISO size 602406912 by running the following command: df -B1 /dev/sdb d) Calculate the SHA-256 hash by executing: head -c 602406912 /dev/sdb sha2wordlist e) IW and participants confirm that the result matches the PGP Wordlist of the SHA-256 hash. Note: CA assigns half of the participants to confirm the hash displayed on the TV screen while the other half confirms the hash from the ceremony script. f) Unmount the external SD card by executing: umount /dev/sdb SHA-256 hash: 2363d9c484e919b58bd45f413dedaed364712d72b3b7858c0fec5e3c529390d8 PGP Words: blowtorch Galveston sugar reproduce mural ultimate bediamp positive obtuse souvenir eyetooth decadence commence unify robust sociable flytrap hideaway button holiness scallion processor music megaton artist unicorn eyeglass crossover Dupont molasses peachy stupendous	M	18:0
2.10	CA removes the new OS media SD card, then places it on the ceremony table. Note: The tested OS media must be placed on the ceremony table where it is visible to the audit camera and the participants	pu	18:01
2.11	CA repeats steps 2.8 to 2.10 for the 2 nd copy of the new OS media release coen-1.1.0 SD card.	m	18:04
2.12	CA disconnects the external SD card reader from the laptop.	11.	10,011

Retire Previous OS Media coen-1.0.0

Step		Initials	Time
2.13	c) Disconnect an connections from the laptop.	M	
-	 d) Discard all copies of the OS media release coen-1.0.0. 		

Root DNSSEC Script Exception

Exception Details

Activity Initials Time IW writes the details of the ceremony exception: Act: 3 Step(s): 3.3 Page(s): Date and time of the exception: 2024-04-25 16:1 Note: IW describes the exception(s) and action(s) below. Laptop did not boot into DS. CA booted laptop into BIOS, observed the time and date, exited the BIOS, The laptop then booted into the OS.

Act 3: Equipment Setup

The CA will set up the equipment by performing the following steps:

- Boot the laptop using the OS media (the laptop has no permanent storage device)
- Set up the printer
 Synchronize the laptop date and time
 Connect the HSMFD
 Start the log sessions
 Power ON the HSM (Tier 7)

Laptop3 Setup

Step	Addivity	Initials	Time
3.1	 CA performs the following steps to prepare each item listed below: a) Remove the TEB from the cart, then place it on the ceremony table. b) Inspect the equipment TEB for tamper evidence. c) Read aloud the TEB number and the serial number (if applicable) while IW verifies the information using the previous ceremony script where it was last used. d) Remove and discard the TEB, then place the equipment on its designated area of the ceremony table. HSM7E: TEB # BB51184251 / Serial # H2110009 Last Verified: KSK Ceremony 51 2023-11-30 Note: "Last verified" indicates the most recent time materials were placed in a new TEB during a ceremony. It is listed here for audit tracking purposes.	An	18:09
3.2	CA ensures the lock switch on the left side of the listed SD card is slid down to the lock position: OS media release coen-1.1.0 Copy # 1	An	18:10
3.3	CA performs the following steps to boot the laptop: a) Connect the USB printer cable into the rear USB port of the laptop. b) Connect the null modem cable into a USB port of the laptop.	M	18:15
3.4	CA verifies functionality of the external display and performs adjustments if necessary: To change the font size of the terminal: Click the View menu and select Zoom In or Zoom Out To change the resolution of each screen: Go to Applications > Settings > Display	M	18:15

OS Media coen-1.1.0 Checksum Verification

Using the Commands terminal window, CA executes the following steps: a) Verify the byte count of the SD card matches the OS media release coen-1.1.0 ISO size 602406912 by running the following		
 a. a. a	Au	18:17

Printer Setup

Step	Activity	Initials	Time
3.6	CA confirms that the printer is switched ON:	M	14.17
3.7	Using the Commands terminal window, CA executes the command below to configure the printer and print a test page: configure-printer	n	18:18

Date Setup

Step	Activity	Initials	Time
	Using the Commands terminal window, CA executes the command below to verify the date/time reasonably matches the ceremony clock. date	,	
3.8	If the date/time do not match, perform the following steps: a) Execute date -s "20240425 HH:MM:SS" to set the time. where HH is two-digit hour, MM is two-digit minutes and ss is two-digit seconds. b) Execute date to confirm the date/time matches the clock.	M	16:19

Connect the Ceremony 51 HSMFD

Step		Initials	Time
3.9	 CA plugs the Ceremony 51 HSMFD into a USB slot, then performs the steps below: a) Wait for the file system window to appear. b) Display the HSMFD contents to all participants. c) Close the file system window. 	An	18:20
3.10	Using the Commands terminal window, CA executes the command below to calculate the SHA-256 hash of the HSMFD: hsmfd-hash -c CA assigns half of the participants to confirm the hash displayed on the TV screen while the other half confirm the hash with the following image from the previous ceremony script. HEMPO SHA-256 HASH 2023/11/30 * find -P /media/HEMPD/ -type f -print0 LC_COLLATE-POSIX sort -z xargs -0 cat sha2wo SHA-256: Sc9ad14c6628b3176a84137979cf1d7c37213a8667b69d6dabecr77292e53c37 PGF Words: escape newsletter stairway diabelief mechace cellulose scallion bookseller Gel rhead gazelle potato quadrant hazardous rhythm unicorn virus holiness physique travesty cob IW confirms that the result matches the SHA-256 hash of the HSMFD using the printed HSMFD hash from the Ceremony 51 OS Media bundle.	M	18:22

Distribute Unused Ceremony 51 HSMFD

Step	riotrity	Initials	Time
3.11	CA gives the unused Ceremony 51 HSMFD and the sheet of paper with the printed HSMFD hash to RKOS.	Mu	18:22

Start the Terminal Session Logging

Step	riotivity	Initials	Time
3.12	Using the Commands terminal window, CA executes the command below to change the working directory to HSMFD: cd /media/HSMFD	N	A:23
3.13	Using the Commands terminal window, CA executes the command below to log activities of the terminal window: script script-20240425.log	An	18:23

Start the HSM Output Logging

Step	Activity	Initials	Time
3.14	 Using the HSM Output terminal window, CA performs the following steps to capture the activity logs of the HSM: a) Change the working directory to HSMFD by executing: cd /media/HSMFD b) Set the serial port baud rate by executing: stty -F /dev/ttyUSB0 115200 c) Start logging the serial output by executing: ttyaudit /dev/ttyUSB0 	An	
	Note: DO NOT unplug the null modem cable from the laptop as this will stop capturing activity logs from the HSM.		

Power ON HSM7E (Tier 7)

Step	Activity	Initials	Time
3.15	CA performs the following steps to prepare the HSM: a) Verify the label on the HSM reads HSM7E . b) Plug the null modem cable into the serial port of the HSM. c) Connect the power to the HSM, then switch it ON. Note: Status information should appear in the HSM output terminal window. d) Scroll up on the terminal window while IW verifies the displayed HSM serial number on the screen reads H2110009 . e) Scroll down to the end of the terminal window. HSM7E: Serial # H2110009	M	2

Act 4: Activate HSM7E (Tier 7) and Generate Signatures

Using the ksr signer application, the CA uses the Key Signing Requests (KSRs) in conjunction with the HSM to generate the Signed Key Responses (SKRs) by performing the steps below:

- The CA activates the HSM using the Crypto Officers' credentials
 After connectivity is confirmed, the flash drive containing the KSRs is inserted into the laptop
 The ksr signer application uses the private key stored in the HSM to generate the SKRs containing the digital signatures of the ZSK slated for future Root Zone signing
 The CA prints the signer log, backs up the newly generated SKRs, then deactivates the HSM

Crypto Officer Credentials Verification

Step	Activity	Initials	Time
	 The CA calls each of the COs listed below sequentially to perform the following steps: a) CO reads aloud the TEB number, then CA inspects it for tamper evidence while the IW verifies its "last verified" information using the specified previous ceremony script. b) CO and CA open the TEB, then the CA removes the credential case to perform the action specified below. 		
4.1	CO2: Pia Gruvö Set # 2 TEB # BB02639498 (CO places cards on their designated card holders) Last Verified: KSK Ceremony 47 2022-11-03		
	CO4: Robert Seastrom Set # 2 TEB # BB02639551 (CO places cards on their designated card holders) Last Verified: KSK Ceremony 45 2022-05-12	Au	18:31
	CO7: Dileepa Lathsara Set # 2 TEB # BB02638529 (CO places cards on their designated card holders) Last Verified: KSK Ceremony 49 2023-04-27		
	Note: "Last verified" indicates the most recent time materials were placed in a new TEB during a ceremony. It is listed here for audit tracking purposes.		

Enable/Activate HSM7E (Tier 7)

Step	. total they	Initials	Time
4.2	CA performs the following steps to activate the HSM: a) Utilize the HSM's keyboard to scroll through the menu using <> b) Select "1.Set Online", press ENT to confirm. c) When "Set Online?" is displayed, press ENT to confirm. d) When "Insert Card OP #X?" is displayed, insert a randomly selected OP card. e) When "PIN?" is displayed, enter "11223344", then press ENT. f) When "Remove Card?" is displayed, remove the OP card. g) Repeat steps d) to f) for the 2 nd and 3 rd OP cards. Confirm the "READY" LED on the HSM is ON. IW records which cards were used below. Each card is returned to its designated card holder after use. Set # 2 1 st OP card 4 of 7 2 nd OP card 5 of 7 Note: If a card is unreadable, gently wipe its metal contacts and try again. Use credentials that haven't been used previously during this ceremony when possible. For a summary of credential roles and their purpose see Appendix A number [14] and [15] on page 41.	Au	

Check the Network Connectivity Between Laptop and HSM

Step	Addivity	Initials	Time
4.3	CA connects the HSM to the laptop using an ethernet cable in the LAN ports.	An	18:34
4.4	CA performs the following steps to test the network connectivity between laptop and HSM: a) Select the Commands terminal window b) Test connectivity by executing: ping hsm c) Wait for responses, then exit by pressing: Ctrl + C	Au	18:34

Insert the KSRFD

Step	Activity	Initials	Time
4.5	CA plugs the KSRFD into an available USB port, then waits for it to be recognized by the OS. CA points out any KSR file that will be signed, then closes the file system window. Note: The KSRFD was transferred to the facility by the RKOS. It contains 1 KSR.		1813

Execute the KSR Signer for KSR 2024 Q3

Step	Activity	Initials	Time
4.6	Using the Commands terminal window, the CA executes the command below to change the working directory: cd /media/KSRFD/KSK53-1/	pu	18:36
4.7	Using the Commands terminal window, the CA executes the command below to sign the KSR file: kskm-ksrsigner	An	18:36



25 April 2024

The SHA256 hash of the 2024 Q3 KSR file is:

ksr-root-2024-q3-0.xml:

51ffea38b7a12484129055c570e17a366408e1b5bff642463e13 b098b254f705

The PGP wordlist for the hash above is:

PGP Words: drunken Yucatan Trojan consulting seabird outfielder bluebird Jupiter atlas millionaire edict resistor guidance tolerance keyboard congregate flytrap antenna tempest positive slingshot vocalist crowfoot detergent concert barbecue ruffled narrative sawdust equation virus almighty

Attested on behalf of VeriSign by:

Trevor Davis Senior Manager Cryptographic Business Operations VeriSign, Inc.

12061 Bluemont Way, Reston, VA 20190 t: 703-948-3200 verisign.com February 12, 2024



To Whom It May Concern:

This is a letter of Verification of Employment for Trevor Davis. VeriSign, Inc. ("Verisign") has employed Trevor Davis full-time/40 hours per week since September 29, 2014, currently as a Senior Manager - Engineering in Verisign's Production Operations department.

Should you have further questions, please contact me at <u>dcarney@verisign.com</u> or (571) 328-8057.

Sincerely,

we may February 12, 2024

Dave Carney Sr. HR Specialist

Dave Carney | Sr. HR Specialist | <u>dcarney@verisign.com</u> | <u>www.Verisign.com</u>

kskm-ksrsigner-20240425-183615-13267.log

Loaded configuration from file ksrsigner.yaml SHA-256 962c515dd68bee5380fd50e2ec98dfe0c971f6634c3b211 e9444a3b2ffe179f9 WORDS prefer Chicago drunken filament stockman Medusa tycoon enterprise merit Wyomi ng drumbeat tomorrow tumor narrative talon tobacco spearhead hideaway village Galveston drainage coun cilman blackjack Burlington Pluto designing reform pioneer Zulu tolerance jawbone Waterloo

Loaded SKR from file skr-root-2024-q2-0.xml SHA-256 d6b445c09306a9cb44d99cb77321085b53b1fd68b6d73d488 f958571f631dd62 WORDS stockman politeness crusade recipe playhouse amulet revenge revival crumpled su portive python processor hockey Camelot aimless exodus dwelling photograph willow gravity Scotland s tethoscope commence dictator payday Montana music hideaway village company swelter gadgetry Previous SKR:

```
Inception
                        Expiration
                                              ZSK Tags
                                                           KSK (CKA_LABEL)
    2024-04-01T00:00:00 2024-04-22T00:00:00 30903,5613
                                                           20326(Klajeyz)/S
 2 2024-04-11T00:00:00 2024-05-02T00:00:00 5613
                                                           20326(Klajeyz)/S
 3 2024-04-21T00:00:00 2024-05-12T00:00:00
                                             5613
                                                            20326(Klajeyz)/S
   2024-05-01T00:00:00 2024-05-22T00:00:00 5613
 4
                                                           20326(Klajeyz)/S
   2024-05-11T00:00:00 2024-06-01T00:00:00 5613
 5
                                                           20326(Klajeyz)/S
 6 2024-05-21T00:00:00 2024-06-11T00:00:00 5613
                                                           20326(Klajeyz)/S
 7
   2024-05-31T00:00:00 2024-06-21T00:00:00 5613
                                                           20326(Klajeyz)/S
8 2024-06-10T00:00:00 2024-07-01T00:00:00 5613
                                                           20326(Klajeyz)/S
   2024-06-20T00:00:00 2024-07-11T00:00:00 20038,5613
                                                           20326(Klajeyz)/S
Loaded KSR from file ksr-root-2024-q3-0.xml SHA-256 51ffea38b7a12484129055c570e17a366408e1b5bff642463
e13b098b254f705 WORDS drunken Yucatan Trojan consulting seabird outfielder bluebird Jupiter atlas mil
lionaire edict resistor guidance tolerance keyboard congregate flytrap antenna tempest positive sling
shot vocalist crowfoot detergent concert barbecue ruffled narrative sawdust equation virus almighty
Validating KSR using request policy:
  _dataclass_placeholder: None
  acceptable_domains: ['.']
  approved_algorithms: ['RSASHA256']
  check_bundle_intervals: True
  check_bundle_overlap: True
  check_chain_keys: True
  check_chain_keys_in_hsm: True
  check_chain_overlap: True
  check_cycle_length: True
  check_keys_match_ksk_operator_policy: True
  check_keys_publish_safety: True
  check_keys_retire_safety: True
  dns_ttl: 172800
  enable_unsupported_ecdsa: False
  keys_match_zsk_policy: True
  max_bundle_interval: 11 days, 0:00:00
  max_cycle_inception_length: 81 days, 0:00:00
  min_bundle_interval: 9 days, 0:00:00
min_cycle_inception_length: 79 days, 0:00:00
  num_bundles: 9
  num_different_keys_in_all_bundles: 3
  num_keys_per_bundle: [2, 1, 1, 1, 1, 1, 1, 1, 2]
  rsa_approved_exponents: [65537]
  rsa_approved_key_sizes: [2048]
  rsa_exponent_match_zsk_policy: True
  signature_algorithms_match_zsk_policy: True
  signature_check_expire_horizon: True
  signature_horizon_days: 180
  signature_validity_match_zsk_policy: True
  validate_signatures: True
KSR-DOMAIN: Verified domain '.'
KSR-ID: Will be checked later, when SKR is available
KSR-BUNDLE-UNIQUE: All 9 bundles have unique ids
KSR-BUNDLE-KEYS: All 3 unique keys in the bundles accepted by policy
KSR-BUNDLE-POP: All 9 bundles contain proof-of-possession
KSR-BUNDLE-COUNT: Number of bundles (9) accepted
KSR-BUNDLE-CYCLE-DURATION: The cycle length is in accordance with the KSK operator policy
KSR-POLICY-KEYS: Validated number of keys per bundle, and for all bundles
KSR-POLICY-ALG: All 1 ZSK operator signature algorithms accepted by policy
KSR-POLICY-SIG-OVERLAP: All bundles overlap in accordance with the stated ZSK operator policy
KSR-POLICY-SIG-VALIDITY: All 9 bundles have 21 days <= validity >= 21 days
KSR-POLICY-SIG-HORIZON: All signatures expire in less than 180 days
KSR-POLICY-BUNDLE-INTERVALS: All bundles intervals in accordance with the KSK operator policy
#
  Inception
                       Expiration
                                            ZSK Tags
                                                          KSK (CKA_LABEL)
  2024-07-01T00:00:00 2024-07-22T00:00:00
                                            20038,5613
  2024-07-11T00:00:00 2024-08-01T00:00:00
2
                                            20038
3 2024-07-21T00:00:00 2024-08-11T00:00:00
                                            20038
  2024-07-31T00:00:00 2024-08-21T00:00:00
4
                                            20038
5 2024-08-10T00:00:00 2024-08-31T00:00:00 20038
```

kskm-ksrsigner-20240425-183615-13267.log

6 2024-08-20100:00:00 2024-09-10100:00:00 20038 2024-08-30T00:00:00 2024-09-20T00:00:00 20038 7 8 2024-09-09T00:00:00 2024-09-30T00:00:00 20038 9 2024-09-19T00:00:00 2024-10-10T00:00:00 20038,61050 Initializing PKCS#11 module aep using /opt/Keyper/PKCS11Provider/pkcs11.linux_gcc_4_1_2_glibc_2_5_x86 64.so.5.02 HSM First slot: ICANNKSK HSM ManufacturerID: Ultra Electronics AEP Networks HSM Model: Keyper 9860-2 HSM Serial: H2110009 Checking coherence between SKR(n-1) and this KSR KSR-CHAIN-KEYS: The last keys in SKR(n-1) matches the first keys in this KSR KSR-CHAIN-OVERLAP: Overlap with last bundle in SKR(n-1) 10 days is in accordance with the KSR policy KSR-CHAIN-KEYS: All 1 signatures in the last bundle of the last SKR were made with keys present in th e HSM(s) KSR-POLICY-SAFETY: PublishSafety validated KSR-POLICY-SAFETY: RetireSafety validated Generated SKR: # Inception Expiration ZSK Tags KSK (CKA_LABEL) 2024-07-01T00:00:00 2024-07-22T00:00:00 20038,5613 T. 20326(Klajeyz)/S 2 2024-07-11T00:00:00 2024-08-01T00:00:00 20038 20326(Klajeyz)/S 2024-07-21T00:00:00 2024-08-11T00:00:00 3 20038 20326(Klajeyz)/S 4 2024-07-31T00:00:00 2024-08-21T00:00:00 20038 20326(Klajeyz)/S 5 2024-08-10T00:00:00 2024-08-31T00:00:00 20038 20326(Klajeyz)/S 6 2024-08-20T00:00:00 2024-09-10T00:00:00 20038 20326(Klajeyz)/S 7 2024-08-30T00:00:00 2024-09-20T00:00:00 20038 20326(Klajeyz)/S 8 2024-09-09T00:00:00 2024-09-30T00:00:00 20038 20326(Klajeyz)/S 9 2024-09-19T00:00:00 2024-10-10T00:00:00 20038,61050 20326(Klajeyz)/S

Wrote SKR to file skr-root-2024-g3-0.xml SHA-256 bb9a5163436ff368220e4c7e7b0f69725b9f6484a6dd36780a1f 5e482a992279 WORDS shamrock newsletter drunken Galveston crucial hemisphere upset gravity blockade At lantic drainage insurgent kickoff atmosphere gazelle holiness erase opulent flytrap Jupiter rematch t ambourine Christmas indigo allow businessman eyeglass dictator brickyard nebula blockade inertia

Verify the KSR Hash for KSR 2024 Q3

Step	riotitity	Initials	Time
4.8	 When the hash of the KSR is displayed in the terminal window, perform the following: a) CA asks the Root Zone Maintainer (RZM) representative to identify themselves. The IW verifies their employment documents and identification off camera for the purpose of authentication while maintaining privacy. Note: If the RZM representative is not physically present in the room, write the representative's name and "Remote Participant" next to the name on the signature line. b) IW retains the hash and PGP word list for the KSR(s), and employment verification letter provided by the RZM representative and writes their name on the following line: Note: If the RZM representative is not physically present in the room, the documents will be provided to RKOS in advance to be included in the final annotated script and audit bundle. C) The CA asks some participants to compare the hash in the email sent by the RZM representative prior to the ceremony and some participants to compare the hash in the terminal window, then asks the RZM representative to read aloud the PGP word list SHA-256 hash of the KSR file being used. 	Au	18:3
4.9	Participants confirm that the hash matches with the RZM representative's discourse, then CA asks "are there any objections?"	M	18:39
4.10	CA enters Yes in response to "Sign KSR?" to complete the KSR signing operation. The SKR is located at: /media/KSRFD/KSK53-1/skr-root-2024-q3-0.xml	Am	18:39

Print Copies of the KSR Signer Log(s)

Step	Addivity	Initials	Time
4 4 4	Using the Commands terminal window, the CA executes the commands below to print the KSR Signer log:		
4.11	a) printlog kskm-ksrsigner-202404*.log X Note: Replace "X" with the quantity of copies needed for the participants.	w	18:40
4.12	IW attaches a copy of the required ksr signer log to their script.	AN	16:42
	Using the Commands terminal window, the CA executes the command below to change the working directory: cd /media/HSMFD	M	18:42

Root DNSSEC Script Exception

Exception Details

Activity	Initials	Time
IW writes the details of the ceremony exception:		
Act: <u>4</u> Step(s): <u>4,14</u> Page(s): <u>20</u>		
Date and time of the exception: 2024-04-25 A:47	Mu	18:50
Note: IW describes the exception(s) and action(s) below.		
The CA executed the copy command	with	test
the trailing period resulting int	Ba	COPY
of the files in a subdirectory. Aft	ler e	tewting
the copy command with the tr	<i>ceild</i>	is.
period character, the CA eterny	hed -	the
necessary steps to remove the	e ac	ciden tally
created files under consultation	101	lthe
Linux experts present in the	100	M.

Copy the Newly Generated SKR(s)

Step	Activity	Initials	Time
4.14	 CA executes the following commands using the terminal window: a) List the contents of the KSRFD by executing: ls -ltrR /media/KSRFD b) Copy the contents of the KSRFD to the HSMFD by executing: cp -pR /media/KSRFD/* . Note: Confirm overwrite by entering "y" if prompted. c) List the contents of the HSMFD by executing: ls -ltrR d) Verify it has been copied successfully by executing: diff -qr /media/HSMFD/KSK53-1/ /media/KSRFD/KSK53-1/ e) Unmount the KSRFD by executing: umount /media/KSRFD Note: When executing a diff command, a return of no output indicates a match.	M	16:50
4.15	CA removes the KSRFD containing the SKR files, then gives it to the RZM representative. Note: If the RZM representative is participating remotely, RKOS will take custody of the KSRFD instead.	M	13:51

Disable/Deactivate HSM7E (Tier 7)

Step	Activity	Initials	Time
4.16	CA deactivates the HSM by performing the following steps: Note: CA will use OP cards not previously utilized in this ceremony if available. a) CA selects the HSM Output terminal window. b) Utilize the HSM's keyboard to scroll through the menu using <> c) Select "2.Set Offline", press ENT to confirm. d) When "Set Offline?" is displayed, press ENT to confirm. e) When "Insert Card OP #X?" is displayed, insert a randomly selected OP card. f) When "PIN?" is displayed, enter "11223344", then press ENT. g) When "Remove Card?" is displayed, remove the OP card. h) Repeat steps e) to g) for the 2 nd and 3 rd OP cards. Confirm the "READY" LED on the HSM is OFF. IW records which cards were used below. Each card is returned to its designated card holder after use. Set # 2 1 st OP card 7 of 7 2 nd OP card 7 of 7 3 rd OP card 9 of 7 Note: If a card is unreadable, gently wipe its metal contacts and try again. Use credentials that haven't been used previously during this ceremony when possible. For a summary of credential roles and their purpose see Appendix A number [14] and [15] on page 41.	M	18:53

Place HSM7E (Tier 7) into a TEB

Step	Activity	Initials	Time
4.17	CA switches the HSM power OFF , then disconnects the power, serial, and ethernet connections. Note: DO NOT unplug the cable connections on the laptop.	An	18:54
4.18	 CA performs the following steps to prepare the HSM for storage: a) Ask the IW for the HSM's designated new TEB, then read the TEB number aloud while IW verifies it matches the information below. b) Read aloud the HSM serial number while the IW verifies it matches the information below. c) Place the HSM into its designated new TEB, then seal it. d) Give IW the sealing strips for post-ceremony inventory. e) Place the HSM onto its designated space on the ceremony table visible to the audit camera. f) Initial the TEB along with IW using a ballpoint pen. g) Place the HSM TEB on the cart. HSM7E: TEB # BB51184553 / Serial # H2110009 	An	18456

OS Media coen-1.1.0 Checksum Verification

Step	Activity	Initials	Time
4.19	Using the Commands terminal window, CA executes the following steps: a) Verify the byte count of the SD card matches the OS media release coen-1.1.0 ISO size 602406912 by running the following command: df -B1 /dev/sda b) Calculate the SHA-256 hash by executing: head -c 602406912 /dev/sda sha2wordlist c) IW and participants confirm the result matches the PGP Wordlist of the SHA-256 hash. Note: CA assigns half of the participants to confirm the hash displayed on the TV screen while the other half confirm the hash from the ceremony script. SHA-256 hash: 2363d9c484e919b58bd45f413dedaed364712d72b3b7858c0fec5e3c529390d8 PGP Words: blowtorch Galveston sugar reproduce mural ultimate bedIamp positive obtuse souvenir eyetooth decadence commence unify robust sociable flytrap hideaway button holiness scallion processor music megaton artist unicorn eyeglass crossover Dupont molasses peachy stupendous Note 1: The SHA-256 hash of the OS media is being calculated a second time to ensure the contents of the SD card have not been modified during the previous steps. Note 2: The SHA-256 hash of the OS media release coen-1.1.0 is also published on the IANA website https://www.iana.org/dnssec/ceremonies/53-1	A	/18:56

Ceremony Break

Step	riotivity	Initials	Time
4.20	 CA divides the participants who desire a ceremony break into groups and ensures the following: a) Remaining participants are sufficient to maintain dual occupancy guidelines for the ceremony room. b) Audit Cameras are never obstructed. c) Live stream audio is muted until the ceremony resumes. RKOS will escort each group of participants out of the ceremony room for the ceremony break. 	М	19:13
4.21	Once all of the groups have returned to Tier 4 (Ceremony Room) from the break, CA ensures live stream audio is enabled, all participants are present by performing a roll call, then resumes the ceremony.	M	19:14

Act 5: Test and Replace Recovery Key Share Holders' (RKSHs) Storage Master Key (SMK) Cards

The currently-issued Recovery Key Share Holders' Storage Master Key Cards were generated in 2010, and should be tested for functionality, then replaced due to age. This will be achieved by performing the following steps:

- · Generate a new temporary SMK on the HSM
- Attempt to import an APP key backup encrypted with the production SMK (with an expected failed
- result). This will demonstrate incompatibility between the temporary SMK and the APP key backup Import the production SMK to the HSM using the 2010-era RKSH SMK Cards and successfully import the APP key backup. This will demonstrate compatibility between the production SMK and APP key Backup as well as functionality of the 2010-era RKSH SMK cards
- Generate replacement RKSH SMK cards to replace the existing cards due to age
- Destroy the 2010-era RKSH SMK cards

Note: For a summary of credential roles and their purpose see Appendix A number [14] and [15] on page 41.

HSM5E (Tier 7) Setup

Step	Activity	Initials	Time
5.1	 CA performs the following steps to prepare the HSM: a) Remove the TEB from the cart and place it on the ceremony table. b) Inspect the TEB for tamper evidence. c) Read aloud the TEB number and the serial number while IW verifies the information using the previous ceremony script where it was last used. d) Remove and discard the TEB, then place the equipment on its designated area of the ceremony table. HSM5E: TEB # BB51184250 / Serial # H1903018 Last Verified: KSK Ceremony 51 2023-11-30 Note: "Last verified" indicates the most recent time materials were placed in a new TEB during a ceremony. It is listed here for audit tracking purposes. 	Av	19:17

Power ON HSM5E (Tier 7)

Step	Activity	Initials	Time
5.2	CA selects the HSM Output terminal window.	Mr	1917
5.3	 CA performs the following steps to prepare the HSM: a) Verify the label on the HSM reads HSM5E. b) Plug the null modem cable into the serial port of the HSM. c) Connect the power to the HSM, then switch it ON. Note: Status information should appear in the HSM output terminal window. d) Scroll up on the terminal window while IW verifies the displayed HSM serial number on the screen reads H1903018. e) Scroll down to the end of the terminal window. HSM5E: Serial # H1903018 Note: The date and time on the HSM is not used as a reference for logging and timestamp.	An	19:19

Root DNSSEC Script Exception

Exception Details

Activity Initials Time IW writes the details of the ceremony exception: Act: 5 Step(s): 5,4 Page(s): Date and time of the exception: 2024-04-25 1913 Note: IW describes the exception(s) and action(s) below. The scripts for ceremonies 1 and 45 were not present. Aaron print looked up ceremony I on his phone from the TANA website and all TEBs from revenuency 1 were verified using that information. Andres looked up ceremony 45 on a phone from the JANA website and the single TBS from ceremony 45 was verified using that information. Ceremony 31 was also not printed and Aaron used his phone to find that information Which was used for verification.

Recovery Key Share Holders' (RKSHs) Credentials Verification

Step		Initials	Time
	 The CA calls each of the RKSHs listed below sequentially to perform the following steps: a) RKSH reads aloud the TEB number, then CA inspects it for tamper evidence while the IW verifies its "last verified" information using the specified previous ceremony script. b) RKSH and CA open the TEB, then the CA removes the contents to perform the action specified below. 	R	
	RKSH2: Ondřej Surý TEB # A14377098 (RKSH places cards on their designated card holder) Last Verified: KSK Ceremony 1 2010-06-16		
	RKSH3: Kristian Ørmen TEB # BB46592121 (RKSH places cards on their designated card holder) Last Verified: KSK Ceremony 31 2017-10-18		2
5.4	RKSH4: Jiankang Yao TEB # A14377104 (RKSH places cards on their designated card holder) Last Verified: KSK Ceremony 1 2010-06-16		
	RKSH5: Bevil Wooding TEB # A14377106 (RKSH places cards on their designated card holder) Last Verified: KSK Ceremony 1 2010-06-16	M	14:41
	RKSH6: John Curran TEB # A14377108 (RKSH places cards on their designated card holder) Last Verified: KSK Ceremony 1 2010-06-16		
	RKSH7: Dave Lawrence TEB # BB91951260 (RKSH places cards on their designated card holder) Last Verified: KSK Ceremony 45 2022-05-12		
	Note: "Last verified" indicates the most recent time materials were placed in a new TEB during a ceremony. It is listed here for audit tracking purposes.		

APP Key Backups

Step	Activity	Initials	Time
5.5	 CA performs the following steps to prepare the APP key backups: a) Remove the TEB from the cart and place it on the ceremony table. b) Inspect the TEB for tamper evidence. c) Read aloud the TEB number while IW verifies the information using the previous ceremony script where it was last used. d) Open and discard the TEB, and if not already present, place a corresponding label on the APP key Backup plastic case. e) Remove the APP key cards and place them on the card holder, ensuring their respective backup HSMFDs remain in their plastic case. f) Place the plastic case along with its corresponding sheet of paper with the printed HSMFD hash on its designated area of the ceremony table. KSK-2023: TEB # BB02638661 Last Verified: KSK Ceremony 51 2023-11-30 Note: "Last verified" indicates the most recent time materials were placed in a new TEB during a ceremony. It is listed here for audit tracking purposes. 	An	19:43

Delete the Specified KSK from the HSM

Step	Activity	Initials	Time
5.6	 CA performs the following steps to list the KSK(s) present in the HSM: a) Utilize the HSM's keyboard to scroll through the menu using <> b) Select "5.Key Mgmt", press ENT to confirm. c) When "Insert CO Card #X?" is displayed, insert a randomly selected CO card. d) When "PIN?" is displayed, enter "11223344", then press ENT. e) When "Remove Card?" is displayed, remove the CO card. f) Repeat steps c) to e) for the 2nd and 3rd CO cards. g) Select "2.Key Details", press ENT to confirm. h) When "List Keys?" is displayed, press ENT. i) Select "1.Key Summary", press ENT to confirm. j) When "Key Summary" is displayed, press ENT. IW records which cards were used below. Each card is returned to its designated card holder after use. Set #2 1st CO card Z of 7 2nd CO card Z of 7 3rd CO card Z of 7 Note: If a card is unreadable, gently wipe its metal contacts and try again. Use credentials that haven't been used previously during this ceremony when possible. For a summary of credential roles and their purpose see Appendix A number [14] and [15] 		D:45
5.7	CA matches the displayed KSK label(s) in the HSM Output terminal window. KSK-2017: Klajeyz KSK-2023: Kmrfl3b	M	19:46
5.8	 CA performs the following steps to delete the specified KSK(s) from the HSM: a) Utilize the HSM's keyboard to scroll through the menu using <> b) Select "3.App Keys" from the same menu "Key Mgmt", press ENT to confirm. c) Select "7.Erase App Keys", press ENT to confirm. d) When "Erase App Keys?" is displayed, press ENT to confirm. e) Select "2.Specify Key", press ENT to confirm. f) Select the Kmrfl3b key by pressing > to move it to the top of the HSM's display, then press "A" to select Kmrfl3b, then press < to see the key list. Verify the (*) asterisk is next to Kmrfl3b then press ENT to confirm. g) When Done is displayed, press ENT to return to the App Keys Menu. h) Press CLR to return to the Key Mgmt menu. 	Ma	19:48
5.9	 CA performs the following steps to list the KSK from the HSM: a) Utilize the HSM's keyboard to scroll through the menu using <> b) Select "2.Key Details" from the same menu "Key Mgmt", press ENT to confirm. c) When "List Keys?" is displayed, press ENT. d) Select "1.Key Summary", press ENT to confirm. e) When "Key Summary?" is displayed, press ENT. CA confirms that the KSK-2023: Kmrfl3b has been deleted 	M	19:46

Generate a Temporary SMK

Step	Activity	Initials	Time
5.10	 CA performs the following steps to generate a temporary SMK: a) Utilize the HSM's keyboard to scroll through the menu using <> b) Select "4.SMK" from the current "Key Mgmt" menu, press ENT to confirm. c) Select "1.Generate SMK", press ENT to confirm. d) When "Generate SMK?" is displayed, press ENT to confirm. e) When "SMK Generated" is displayed, press ENT to confirm. f) Press CLR once to return to the menu "Key Mgmt". 	M	19:49

Attempt to Import the APP Key Backup (Anticipating a Failed Result)

Step	Activity	Initials	Time
5.11	 CA performs the following steps to attempt to import the specified key to demonstrate incompatibility between the temporary SMK and the APP key backup: a) Utilize the HSM's keyboard to scroll through the menu using <> b) Select "3.App Keys" from the current "Key Mgmt" menu, press ENT to confirm. c) Select "2.Restore", press ENT to confirm. d) When "Restore?" is displayed, press ENT to confirm. e) When "Which Media?" is displayed, select "2. From Card", press ENT to confirm. f) When "Insert Card #X?" is displayed, insert the required APP key card. g) When "Remove Card?" is displayed, press ENT to confirm. i) When "Restore failed Error code 120D" is displayed, press ENT to confirm. j) Press CLR once to return to the menu "Key Mgmt". CA uses the card listed below. Card is returned to its designated card holder after use. KSK-2023: Kmrfl3b APP Key card # 2 Note: If a card is unreadable, gently wipe its metal contacts and try again. Use credentials that haven't been used previously during this ceremony when possible. For a summary of credential roles and their purpose see Appendix A number [14] and [15] on page 41. 	M	19:51
5.12	 CA performs the following steps to list the KSK from the HSM: a) Utilize the HSM's keyboard to scroll through the menu using <> b) Select "2.Key Details" from the same menu "Key Mgmt", press ENT to confirm. c) When "List Keys?" is displayed, press ENT. d) Select "1.Key Summary", press ENT to confirm. e) When "Key Summary?" is displayed, press ENT. 	M	19:52

Import the Production SMK Using 2010-era RKSH SMK Cards

Step		Initials	Time
5.13	 CA performs the following steps to import the production SMK: a) Utilize the HSM's keyboard to scroll through the menu using <> b) Select "4.SMK" from the current "Key Mgmt" menu, press ENT to confirm. c) Select "3.Restore SMK", press ENT to confirm. d) When "Restore SMK?" is displayed, press ENT to confirm. e) When "Insert Card SMK #X?" is displayed, insert a randomly selected RKSH SMK card. f) When "Remove Card?" is displayed, remove the RKSH SMK card. g) Repeat steps e) to f) for the 2nd, 3rd, 4th, and 5th RKSH SMK cards. h) When "SMK Restored" is displayed, press ENT to confirm. 	M	

Import the APP key Backup (Anticipating a Successful Result)

Step	Activity	Initials	Time
5.14	CA performs the following steps to import the specified key to demonstrate compatibility between the production SMK and the APP key backup: a) Utilize the HSM's keyboard to scroll through the menu using <> b) Select "3.App Keys" from the current "Key Mgmt" menu, press ENT to confirm. c) Select "2.Restore", press ENT to confirm. d) When "Restore?" is displayed, press ENT to confirm. e) When "Which Media?" is displayed, select "2. From Card", press ENT to confirm. f) When "Insert Card #X?" is displayed, insert the required APP key card. g) When "Remove Card?" is displayed, remove the APP key card. h) When "Restore Complete" is displayed, press ENT to confirm. i) Press CLR once to return to the menu "Key Mgmt". CA uses the card listed below. Card is returned to its designated card holder after use. KSK-2023: Kmrfl3b APP Key card # 2 Note: If a card is unreadable, gently wipe its metal contacts and try again. Use credentials that haven't been used previously during this ceremony when possible. For a summary of credential roles and their purpose see Appendix A number [14] and [15] on page 41.	A	19:57

List the KSKs present in the HSM

Step	Activity	Initials	Time
5.15	 CA performs the following steps to list the KSK from the HSM: a) Utilize the HSM's keyboard to scroll through the menu using < > b) Select "2.Key Details" from the same menu "Key Mgmt", press ENT to confirm. c) When "List Keys?" is displayed, press ENT. d) Select "1.Key Summary", press ENT to confirm. e) When "Key Summary?" is displayed, press ENT. 		
5.16	CA matches the displayed KSK label(s) in the HSM Output terminal window. KSK-2017: Klajeyz KSK-2023: Kmrfl3b	M	20:00

Remove the 2010-era RKSH SMK Cards from the Card Holder for Pending Destruction

	Initials	Time
 CA performs the following steps to prepare the 2010-era RKSH SMK cards for destruction: a) Gather set 1 of the 2010-era RKSH SMK cards and place them in an available empty plastic case. b) Set the plastic case aside on the ceremony table for pending destruction. c) Gather set 2 of the 2010-era RKSH SMK cards and place them in an available empty plastic case. d) Set the plastic case aside on the ceremony table for pending destruction. 		20:02
	 a) Gather set 1 of the 2010-era RKSH SMK cards and place them in an available empty plastic case. b) Set the plastic case aside on the ceremony table for pending destruction. c) Gather set 2 of the 2010-era RKSH SMK cards and place them in 	 a) Gather set 1 of the 2010-era RKSH SMK cards and place them in an available empty plastic case. b) Set the plastic case aside on the ceremony table for pending destruction. c) Gather set 2 of the 2010-era RKSH SMK cards and place them in an available empty plastic case. d) Set the plastic case aside on the ceremony table for pending.

Root DNSSEC Script Exception

Exception Details

Activity	Initials	Time
IW writes the details of the ceremony exception:		
Act: 5 Step(s): $5,19$ Page(s): 29	AL	20:30
Date and time of the exception: 2024-04-25 20:30	pa	-
Note: IW describes the exception(s) and action(s) below.		
Step f says to use "7" when e the number of carols, but only sit were present and we entered "	uter care	ins
were present and we entered "a	5 ",	
Card 3 of 7 of Set Z did not re	ad p	reparty.
CA wheed the contacts, and the	proc	ess
was repeated from card 3 with	card	5
4,5,6, and 7.		

Generate Two New Sets of RKSH SMK Cards

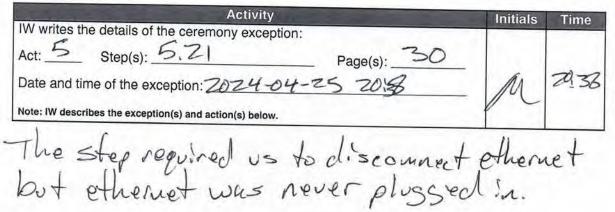
Step	Activity	Initials	Time
5.18	 CA performs the following steps to issue Recovery Key Share Holder (RKSH) Storage Master Key (SMK) cards: a) Utilize the HSM's keyboard to scroll through the menu using <> b) Select "4.SMK" from the same menu "Key Mgmt", press ENT to confirm. c) Select "2.Backup SMK", press ENT to confirm. d) When "Backup SMK?" is displayed, press ENT to confirm. e) When "Num Cards?" is displayed, enter "7", then press ENT. f) When "Num Req Cards?" is displayed, enter "5", then press ENT. g) When "Insert Card #X?" is displayed, insert the required RKSH SMK card. h) When "Remove Card?" is displayed, remove the RKSH SMK card. i) Repeat steps g) to h) until all the SMK cards have been issued. j) When "Remove Card?" is displayed, insert the required RKSH SMK card. k) When "Remove Card?" is displayed, insert the required RKSH SMK card. i) Repeat steps g) to h) until all the SMK cards have been issued. j) When "Remove Card?" is displayed, remove the RKSH SMK card. k) When "Remove Card?" is displayed, insert the required RKSH SMK card. m) When "Remove Card?" is displayed, remove the RKSH SMK (ard. m) Repeat steps j) to k) until all the RKSH SMK cards have been verified. m) When "SMK Backed Up" is displayed, press ENT to confirm. n) Repeat steps c) to m) to create a 2nd SMK card set. o) Press CLR once to return to the menu "Key Mgmt". 	Au	

Clear and Destroy 2010-era RKSH SMK Cards

Step	Activity	Initials	Time	P.
5.19	 CA performs the following steps to clear the 2010-era RKSH SMK Cards: a) Utilize the HSM's keyboard to scroll through the menu using <> b) Select "4.SMK" from the same menu "Key Mgmt", press ENT to confirm. c) Select "4.Clear Cards", press ENT to confirm. d) When "Clear Cards?" is displayed, press ENT to confirm. e) When "Insert Card SMK #X?" is displayed, take the SMK #X card, show the SMK #X card to the audit camera and then insert the SMK #X card into the HSM's card reader. f) When "Num Cards?" is displayed, enter "7", then press ENT. g) When "Clearing Card Are you sure?" is displayed, press ENT to confirm. h) When "Remove Card?" is displayed, remove the SMK card. i) Repeat steps e) to h) skipping f) for the remaining cards in this SMK set. k) Press CLR twice to return to the main menu "Secured". 			Carle 30A7 malfunctioned
5.20	CA uses the shredder to destroy the cleared 2010-era RKSH SMK Cards. Use scissors to slice through the center of the chip before inserting cards into the shredder.	M	20:51	

Root DNSSEC Script Exception

Exception Details



Place HSM5E (Tier 7) into a TEB

Step	Activity	Initials	Time
5.21	CA switches the HSM power OFF , then disconnects the power, serial, and ethernet connections. Note: DO NOT unplug the cable connections on the laptop.	M	20,30
5.22	 CA performs the following steps to prepare the HSM for storage: a) Ask the IW for the HSM's designated new TEB, then read the TEB number aloud while IW verifies it matches the information below. b) Read aloud the HSM serial number while the IW verifies it matches the information below. c) Place the HSM into its designated new TEB, then seal it. d) Give IW the sealing strips for post-ceremony inventory. e) Place the HSM onto its designated space on the ceremony table visible to the audit camera. f) Initial the TEB along with IW using a ballpoint pen. g) Place the HSM TEB on the cart. HSM5E: TEB # BB51184554 / Serial # H1903018 	M	20:41

Return the APP key backup into a TEB

Step	Activity	Initials	Time
5.23	 CA performs the following steps to prepare the APP key backup for storage: a) Ask the IW for the APP key backup's designated new TEB, then read the TEB number aloud while IW verifies it matches the information below. b) Place the APP key backup into its plastic case along with the backup HSMFD c) Place the the plastic case and 1 sheet of paper with the printed HSMFD hash into its designated new TEB, then seal it. d) Give IW the sealing strips for post-ceremony inventory. e) Place the APP key backup TEB onto the HSM designated space of the ceremony table visible to the audit camera. f) Initial the TEB along with IW using a ballpoint pen. g) Place the APP key backup TEB on the cart. KSK-2023: TEB # BB02639665 	M	20:45

Root DNSSEC Script Exception

Exception Details

Activity Initials Time IW writes the details of the ceremony exception: Act: 5_ Step(s): 5.24 Page(s): 32 Date and time of the exception: 2024-04-25 21:20 21:20 Note: IW describes the exception(s) and action(s) below. The set of bass for RESHI were incorrectly marted, and recorded in the script. We modified the script to have the new Dag numbers. For RESH4 the primary bog was accidently placed in the backup bug. The backup bug had to be destroyed and replaced. The new TEB was recorded in the script. An extra TEB strip was collected due to thes prior.

Place Recovery Key Share Holders' Credentials into TEBs

Step	Activity	Initials	Time
5.24	 The CA calls each of the RKSHs listed below sequentially to the ceremony table to perform the following steps: a) CA asks the IW for the RKSHs designated new primary TEB, then reads the TEB number and description aloud while IW verifies it matches the information below. b) CA asks the IW for the RKSH's designated new backup TEB, then reads the TEB number and description aloud while IW verifies it matches the information below. c) CA places the Bucker and description aloud while IW verifies it matches the information below. c) CA places the backup TEB inside of the primary TEB in case the primary TEB is compromised in the future. d) CA places the BKSH note inside of the primary TEB, ensuring it's still legible through the bag. e) RKSH removes their credentials from the card holder, then hands them to the CA. f) CA verifies the credentials, then places them into an available plastic case. g) CA places the plastic case into its designated new TEB, then seals it. h) CA glaces the TEB onto the HSM designated space of the ceremony table visible to the audit camera. j) CA initials the TEB, confirms the TEB number with the list below, then initials it with a ballpoint pen. k) Winspects the TEB containing the cards to the RKSH. m) RKSH writes the date and time, signs the credential table of the IW's script, then the IW initials the entry. o) RKSH returns to their seat with their TEB. p) Repeat steps for all the remaining RKSHs' credentials on the list. RKSH1: Sebastian Castro Keyper Credential Primary TEB # BB02639663 & & D 2 6 3 2 6 4 4 & Keyper Credential Primary TEB # BB02639663 Keyper Credential Primary TEB # BB02639663 Keyper Credential Primary TEB # BB02639664 Keyper Credential Primary TEB # BB02639663 Keyper Credential Primary TEB # BB02639663 Keyper Credential Primary TEB # BB026396658 Keyper Credential Prima	Initials	Time
	RKSH5: Bevil Wooding		

Act 5: Test and Replace Recovery Key Share Holders' (RKSHs) Storage Master Key (SMK) Cards

TCR	TEB #	Printed Name	Signature	Date	Time	IN Initials
RKSH1	TEB # BB02639664 6649	Sebastian Castro	flardneed	2024 Apr 25 20; 52	20:52	A
RKSH2	TEB # BB02639662	Ondřej Surý	Carl	2024 Apr 25 20.57	25:02	Jel .
RKSH3	TEB # BB02639660	Kristian Ørmen	ron	2024 Apr 25	10:00	M
RKSH4	TEB # BB02639658	Jiankang Yao	I nuller yes	2024 Apr 35	2/:10	la solo
RKSH5	TEB # BB02639656	Bevil Wooding		2024 Apr 35 21:13	21:13	10C
RKSH6	TEB # BB02639654	John Curran	alle how	2024 Apr 25	21:16	M
RKSH7	TEB # BB02639652	Dave Lawrence	and Cha	2024 Apr 20	2148	M

Root DNSSEC KSK Ceremony 53-1

Page 32 of 45

<pre>136(115, 993) Abb. Ast validate: TWO 136(115, 993) Abb. Ast validate: TWO 136(115, 994) Abb. Ast validate: TWO 136(11</pre>	0425/24 21:19:56 script-202	script-20240425.log
	56color" Try="/dev/	3:36:15,953: kskn.ksr.validate: INFO 3:36:15,953: kskn.ksr.validate: INFO
$ \begin{array}{c} transformerational control of the second se$	R086[#8804192.168.0.2] 56(84) bytes of data. 64 bytes from ham (192.168.0.2) itomp_seq=1 ttl=255 time=0.901 ms 64 bytes from ham (192.168.0.2): itomp_seq=2 ttl=255 time=0.608 ms 64 bytes from ham (192.168.0.2): itomp_seq=3 ttl=255 time=0.608 ms 64 bytes from ham (192.168.0.2): itomp_seq=3 ttl=255 time=0.616 ms	18:36:15,953: kakm.ksr.validate: TNFO 18:36:15,954: kskm.ksr.validate: INFO 18:36:15,954: kskm.ksr.validate: INFO 18:36:15,954: kskm.ksr.validate: INFO 18:36:15,954: kskm.ksr.validate: INFO
 M. M. M	C ham ping statistics 4 packets transmitted, 4 received, 0% packet losa, time 3004ms	18:36:15,954: kskm.ksr.validate: INFO min_bundle_interval: 9 days, 0: 18:36:15,954: kskm.ksr.validate: INFO min_cycle_inception_length: 79
$ \begin{array}{c} W. A for the entropy of the $	<pre>Cut min/avg/max/mdev = 0.608/0.117/0.901/0.119 ms N033172004h(kakm) root@coen:/madia/KSWEVFs.cd /media/xSRPD/KSRND753-1 N033172094h(kakm) root@coen:/madia/KSWEVFSS3-1 kakm-ssrsigner N033172094h(kakm) root@coen:/madia/KSKEVFSS3-1 kakm-ssrsigner N03317204h(kakm) root@coen:/madia/KSKEVFSS3-1 kakm-ssrsigner N0334504KS55 N034504KS55 N034504KS55 N034504KS55 N034504KS55 N034504KS555 N034504504 N034504 N0345 N034504 N0345 N0345 N0345 N0345 N0345 N0345 N0345 N0345 N034 N034 N034 N034 N034 N034 N034 N03 N034 N03 N034 N03 N034 N03 N034 N03 N034 N03 N03 N03 N03 N03 N03 N03 N03 N03 N03</pre>	19:36:15,954: kskm.ksr.validate: INFO num.bundles: 9 18:36:15,954: kskm.ksr.validate: INFO num.different.keys.in_all bundles: 18:36:15,954: kskm.ksr.validate: INFO num.keys.per.bundle: [2, 1, 1, 1, 1
 The control of the control of the second set of the s	r.ymml SHA-256 962c515dd68bee5380fd50e2ac98dfe0c971f6634c3b21fe944435b2ffe379f9 %RbS pre fer Chicago drunken filament stockman Medusa tycoon enterprise merit Wyoming drumbeat tom orrow tumor narrative Lalon tobacco spearhead hideaway village Galveston drainage council man blackjack Burlington Pluto designing reform pioneer zulu tolerance jawbone Waterloo 2024-04-25 19:36:15/706; kskm.common.config: INFO Configuration validated	18:36:15,954: kskm.ksr.validate: INFO 18:36:15,954: kskm.ksr.validate: INFO 18:36:15,954: kskm.ksr.validate: INFO 18:36:15,954: kskm.ksr.validate: INFO 18:36:15,954: kskm.ksr.validate: INFO
 Statisti, System Statistics, 1980 School, Statisti, System Statisti, Statisti, Statisti, System Statisti, System Statisti, Statisti, Statisti, System Statisti, Statisti, Statisti, Statisti, Statisti, Statisti, Statisti, System Statisti, Statisti	2024-04-25 18:36:15,708; kskm.skr.load: INFO Loaded SKR from File skr-root-2024-q2-0.xml SHA-256 fb646509306a9cb4409cb77321083b5351fd68b64734881958571165146428479858 stockman p oliteness crustade recipe playhoure amult revenge revival crumpled supportive python proc esor horsey Carelot ainless exodus dwelling photograph willow gravity Sociland stethosco	kskm.ksr.validate: INFO kskm.ksr.validate: INFO kskm.ksr.validate: INFO
<pre>3.313.15. 939.1 Month Analysis and Anal</pre>	llage company swelter revious SKR: Inception	2024-04-25 18:36:15,954: kskm.ksr.validate: INFO validate.signatures: True 2024-04-25 18:36:15,954: kakm.ksr.validate: INFO XSR-DOMAIN: Verified domain '.' 2024-04-25 18:36:15,954: kakm.ksr.validate: INFO XSR-ID: Will be checked later, when SKR is available
5 18:36:15, 993: Kahm. Koola. Karsigner: INFO 3 2024-04-221700:00:00 2024-05-12700: 20236(Klajøyz)/s 5 18:36:15, 993: Kahm. Foola. Karsigner: INFO 4 2024-05-01700:00:00 2024-06-01700: 303 20236(Klajøyz)/s 5 18:35:15, 999: Kahm. Foola. Karsigner: INFO 5 2024-05-31700:00:00 2024-06-11700: 5 18:35:15, 999: Kahm. Foola. Karsigner: INFO 6 2024-05-311700:00:00 2024-06-21700: 5 18:35:15, 999: Kahm. Foola. Karsigner: INFO 6 2024-05-311700:00:00 2024-06-21700: 5 18:35:15, 999: Kahm. Foola. Karsigner: INFO 7 2024-05-311700:00:00 2024-06-21700: 5 18:35:15, 999: Kahm. Foola. Karsigner: INFO 8 2024-05-01700:00:00 2024-07-11700: 5 18:35:15, 999: Kahm. Foola. Karsigner: INFO 8 2024-05-01700:00:00 2024-07-11700: 5 18:35:15, 999: Kahm. Foola. Karsigner: INFO 9 2024-05-000:00:00 2024-07-11700: 5 18:35:15, 999: Kahm. Foola. Karsigner: INFO 9 2024-05-000:00:00 2024-07-11700: 18:35:15, 999: Kahm. Foola. Karol Localed KSR from file kar-root-2024-q3-0. xml ffea38b7al249129055c70c17936(008c1b)bff64/3658199099b234f705 Works duraken Yu ffea38b7al249129055c70c17936(008c1b)bff64/3658199099b234f705 Works duraken Yu ffea38b7al249129055c70c17936(008c1b)bff64/3658199099b234f705 Works duraken Yu ffea38b7al249129055c70c17936(008c1b)bff64/3658199099b234f705 Works duraken Yu ffea38b7al249129055c70c17936(008c1b)bff64/3658199099b234f705 Works and ffoot detergent congret INFO data KSR una tempest polity: 18:36:15, 953: Kakm. Ksr. Validate: INFO data KSR una tempest polity: 18:36:15, 953: Kakm. Ksr. Validate: INFO data KSR una tempest polity: 18:36:15, 953: Kakm. Ksr. Validate: INFO dheck. Chain. Keys. True 18:36:15, 953: Kakm. Ksr. Validate: INFO dheck. Chain. Keys. True 18:36:15, 953: Kakm. Ksr. Validate: INFO dheck. Chain. Keys. True 18:36:15, 953: Kakm. Ksr. Validate: INFO dheck. Chain. Keys. True 18:36:15, 953	2024-04-01T00:00:00 2024-04-11T00:00:00	2024-04-25 18:36:15,954: kakm.ksr.validate: INFO KSR-BUNDLE-UNIQUE: All 9 bundles have un ique id 2024-04-25 18:36:15,955: kakm.ksr.validate: IMFO KSR-HUNDLE-EVVV. All 9 bundles have un
3 18:36:15,949: ks/m.tools.karsigner: INFO 4 2024-05-01700:00:00 2024-05-27700: 3 20326(Klajøys)/S 2024-06-11700:00:00 2024-06-11700: 5 18:35:15,949: ks/m.tools.karsigner: INFO 5 2024-05-21700:00:00 2024-06-11700: 3 18:35:15,949: ks/m.tools.karsigner: INFO 6 2024-05-21700:00:00 2024-06-21700: 3 18:35:15,949: ks/m.tools.karsigner: INFO 8 2024-05-01700:00:00 2024-07-01700: 3 18:35:15,949: ks/m.tools.karsigner: INFO 8 2024-05-01700:00:00 2024-07-01700: 3 18:35:15,949: ks/m.tools.karsigner: INFO 8 2024-05-10700:00:00 2024-07-01700: 3 18:35:15,949: ks/m.tools.karsigner: INFO 8 2024-05-10700:00:00 2024-07-01700: 3 18:35:15,949: ks/m.tools.karsigner: INFO 9 2024-06-20700:00:00 2024-07-01700: 3 18:35:15,949: ks/m.ksr.load: INFO 1caded KSR from file ksr-root-2024-q3-0.xml an consulting suzabled outfielded harmatike and file ksr-root-2024-q3-0.xml an consulting suzabled outfielded harmatike substration virus almigh an consulting suzabled outfielded intervala. 18:36:15,953: ks/m.ksr.validate: INFO check.chain ks/s_info request policy: 18:36:15,953: ks/m.ksr.validate: INFO check.chain ks/s_info request policy: 18:36:15,953: ks/m.ksr.validate: INFO check.chain ks/s_info request policy: 18:36:15,953: ks/m.ksr.validate: INFO check.chain ks/s_info request policy: 18:	2024-04-21700:00:00	e bundles accepted by policy 2004-01-25 11:36115,956; Kakm.ksr.validate: INFO KSR-BUNDLE-POP: All 9 bundles contain pr nof-6-rossession
<pre>18:36:15,993: kshm.tools.ksrsigner: INFO 5 2024-05-11T00:00:00 2024-06-01T00: 13 20236(Klajøyz)/S 5 18:36:15,949: kshm.tools.ksrsigner: INFO 6 2024-05-31T00:00:00 2024-06-21T00: 2 03:6(Klajøyz)/S 5 18:36:15,949: kshm.tools.ksrsigner: INFO 7 2024-05-01T00:00:00 2024-06-21T00: 13 20236(Klajøyz)/S 5 18:36:15,949: kshm.tools.ksrsigner: INFO 9 2024-06-01T00:00:00 2024-07-01T00: 13 20326(Klajøyz)/S 5 18:36:15,949: kshm.tools.ksrsigner: INFO 9 2024-06-20T00:00:00 2024-07-01T00: 13 20326(Klajøyz)/S 5 18:36:15,949: kshm.tools.ksrsigner: INFO 9 2024-06-20T00:00:00 2024-07-01T00: 13 20326(Klajøyz)/S 5 18:36:15,949: kshm.tsoils.ksrsigner: INFO 9 2024-06-20T00:00:00 2024-07-01T00: 13 20326(Klajøyz)/S 5 18:36:15,949: kshm.tsoils.ksrsigner: INFO 9 2024-06-20T00:00:00 2024-07-01T00: 13 20326(Klajøyz)/S 5 18:36:15,949: kshm.tsoils.ksrsigner: INFO 9 2024-06-20T00:00:00 2024-07-01T00: 14 20326(Klajøyz)/S 5 18:36:15,949: kshm.tsoils.ksrsigner: INFO 9 2024-06-20T00:00:00 2024-07-01T00: 15 18:36:15,949: kshm.tsoils.ksrsigner: INFO 0 2024-05-20T00:00:00 2024-07-01T00: 18:36:15,950: kshm.ksr.validate: INFO 0 2024-05-20T00:00:00 2024-07-01T00: 18:36:15,950: kshm.ksr.validate: INFO 0 actechale apolitive alingphit voc 18:36:15,950: kshm.ksr.validate: INFO 0 actechals apolitive alingphit voc 18:36:15,950: kshm.ksr.validate: INFO 0 actechals apolitive alingphit voc 18:36:15,950: kshm.ksr.validate: INFO 0 actechals aporthims: (''') 18:36:15,950: kshm.ksr.validate: INFO 0 acteck bundle intervala: True 18:36:15,953: kshm.ksr.validate: INFO 0 acteck chain.ksys.intervala: True 18:36:15,953: kshm.ksr.validate: INFO 0 acteck chain.ksys.intervala: True 18:36:15,953: kshm.ksr.validate: INFO 0 acteck chain.ksys.interval 18:36:15,953: kshm.ksr.valida</pre>	2024-05-01700:00:00	2024-04-25 18:36:15,956: kskm.ksr.validate: INFO KSR-BUNDIE-COUNT: Number of bundles (9) accepted
<pre>13 2035(15,949; kKm.tools.ksraigner: INFO 7 2024-05-31700:00:00 2024-06-21700: 18:35(15,949; kKm.tools.ksraigner: INFO 7 2024-05-10700:00:00 2024-07-11700: 18:35(15,949; kkm.tools.ksraigner: INFO 8 2024-06-20700:00:00 2024-07-11700: 19:35(15,949; kkm.tools.ksraigner: INFO 9 2024-06-20700:00:00 2024-07-11700: 19:35(15,949; kkm.tsr.tood: NFO 10 2024-06-20700:00:00 2024-07-11700: 19:35(15,950; kkm.tsr.tood: NFO 10 2024-06-20700:00:00 2024-07-11700: 19:35(15,950; kkm.tsr.tood: NFO 10 2024-06-20700:00:00 2024-07-11700: 18:35(15,950; ksm.tsr.tood: NFO 10 2024-06-20700:00:00 2024-07-11700: 18:35(15,950; ksm.tsr.validate: NFO Validating KSR using request policy: 18:35(15,950; ksm.tsr.validate: NFO 204able domains: ['.'] 18:35(15,950; ksm.tsr.validate: NFO 204echable domains: ['.'] 18:35(15,950; ksm.tsr.validate: NFO 204echable domains: ['.'] 18:35(15,950; ksm.tsr.validate: NFO 204echable domains: ['.'] 18:35(15,950; ksm.tsr.validate: NFO 204eck.chain.ksy.in.mr: True 18:35(15,950; ksm.tsr.validate: NFO 204eck.chain.ksy.in.mr: True 18:35(15,950; ksm.tsr.validate: NFO 204eck.chain.ksy.in.mr: True 18:35(15,950; ksm.tsr.validate: NFO 204eck.chain.ksy.in.mr: True 18:35(15,950; ksm.tsr.validate: NFO 204eck.chain.ksy.in.hmr: True 18:35(15,950; ksm.tsr.validate: NFO 204eck.chain.ksy.in.tsr.ksm.tsr.validate: NFO 204eck.ksv.jetch.ksy.jetc</pre>	4-2. 18:36:15,949: kskm.tools.ksrsigner: INFO 5 5613 20326(Klajeyz)/S 4-25 18:36:15,949: kskm.tools.ksrsigner: INFO 6	INFO KSR-BUNDLE-CYCLE-DURATION: The eye
5 18:36:15, 993: kakm.tor.s.ksrsigner: INFO 8 2024-06-10T00:000 2024-07-01T00: 20326(KiaJevy)/s 20326(KiaJevy)/s 20326(KiaJevy)/s 2032,5613 20326(KiaJevy)/s 18:36:15,949: kakm.ksr.load: INFO 10 9 2024-06-20T00:000 2024-07-01T00: 218,5613 20326(KiaJevy)/s 18:36:15,950: kakm.ksr.load: INFO Loaded KSR from file ksr-root-2024-q3-0.xml ffea38D7a124812905557001733664036159564139099524f705 WORDS atunken Yu an consulting seabled outfielder bluebhiffd4Jaf6a130999524f705 WORDS atunken Yu an consulting seabled outfielder bluebhiffd4Jaf6a130999524f705 WORDS atunken Yu an consulting seabled outfielder bluebhiffd4Jaf6a130999524f705 WORDS atunken Yu ffea38D7a12481299555700173366403615915956461306167 resis foot detergent concert barbecue ruffled narrative savdust equation virus almigh 18:36:15,953: kskm.ksr.validate: INFO acceptable_domains: [r.] 18:36:15,953: kskm.ksr.validate: INFO acceptable_formins: [r.] 18:36:15,953: kskm.ksr.validate: INFO acceptabl	5613 50326(Klajeyz)/S 4-25 18:36:15,949: kskm.tools.ksrsigner: INFO 7 5613 20326/2012/2012/2012/2012/2012/2012/2012/20	s per buddle, and for all buddles 2024-04-25 18:36:15,956: Rakm.ker.validate: INFO KSR-POLICY-KEVS: Validated number of key
<pre>3 18:36:15,939: kakm.codisi.krssigner: NPO 9 2024-06-20T00:00100 2024-07-11T00: 129.5613 2025(fislogys)/s 129.5613 2025(fislogys)/s 129.5613 2025(fislogys)/s ffea38b7a12484129055c570e179366408e1b5bff642465e15b09b524705 would are ffea38b7a12484129055c570e179366408e1b5bff642465e15b09b524705 would are ffea38b7a12484129055c570e179366408e1b5bff642465e15b09b524705 would are ffea38b7a12484129055c570e179366408e1b5bff642465e15b09b524705 would are ffea38b7a12484129055c570e179366408e1b5bff642465e15b09b524705 would are ffea38b7a12484129055c570e179366408e1b5bff642465e15b09b524705 would are iffea38b7a12484129055c570e179366408e1b5bff642465e15b09b524705 would are consulting sebility outfeader bubbied uppleter atlas millionaice edict resis a consulting sebility 957; kakm.ksr.validate: ffoot detergent connect barbened with the statement ass65115,953; kakm.ksr.validate: NFO acceptable domains: ['.'] ass65115,953; kakm.ksr.validate: NFO acceptable formins: ['.'] ass65115,953; kakm.ksr.validate: NFO accel.chain.ksr.intue ass65115,953; kakm.ksr.validate: NFO accel.chain.ksr.intue ass65115,953; kakm.ksr.validate: NFO accel.chain.ksr.intue ass65115,953; kakm.ksr.validate: NFO accel.ksr.intue ass65115,953; kakm.ksr.validate: NF</pre>		ture algorithms accepted by policy 2024-04-25 18:36:15,956: kskm.ksr.validate: INFO KSR-POLICY-SIG-OVERLAP: All bundles over
11:35:15,950: kskm.ksr.load: NFO Loaded KSR from file ksr-root-2024-q3-0.xml ffea38D7a1248129055570017a366408nbbif6445813b098b2547705 w0805 drunken Yu an consulting seabief outfielde bluebif6445813b098b2547705 w0805 drunken Yu fea38D7a1248129055570017a366408nbbif6445813b098b2547705 w0805 drunken Yu an consulting seabief outfielde bluebif6445813b098b2547705 w0805 drunken Yu 5000 detergent concert barbecue ruffled narrative sawdust equation virus almigh 18:36115,953: kskm.ksr.validate: NFO dataclass placenhater: None 18:36515,953: kskm.ksr.validate: NFO dataclass placenhater: None 18:36515,953: kskm.ksr.validate: NFO dataclass placenhater: None 18:36515,953: kskm.ksr.validate: NFO check bundle_overlap: True 18:36515,953: kskm.ksr.validate: NFO check.chin.keys.in hsm: True 18:36515,953: kskm.ksr.validate: NFO check.chin.keys.nceidet.rue 18:36515,953: kskm	2024-04-25 18:36:15,949: kski.cojs/ksrsigner: INFO 9 2024-06-20100:00:00 2024-07-11700: 00:00 20038,5613 20326(Kiajeyz/S/)	140 In accordance with the stated ZSK operator policy 2024-04-25 18:38:15,957: kskn.kar.validate: INFO KSR-POLICY-SIG-VALIDITY: All 9 bundles h
<pre>m donsulting sebilid outfielder bluchisd Jupiter athsa militonaire edicit resis coe tolerance keyboard outfielder livitag antenna tempest positive slingshot voc floot detergent concert barbeue rifited marative sawdust equation virus aimigh 18:36:15,953; kskm.ksr.validate: NNFO Validating KSR using request policy: 18:36:15,953; kskm.ksr.validate: NNFO Validating KSR using request policy: 18:36:15,953; kskm.ksr.validate: NNFO dataclass placeholder: None 18:36:15,953; kskm.ksr.validate: NNFO acceptable_domains: ['.'] 18:36:15,953; kskm.ksr.validate: NNFO acceptable_domains: ['.'] 18:36:15,953; kskm.ksr.validate: NNFO check bundle_intervala: ['rsSSNA256'] 18:36:15,953; kskm.ksr.validate: NNFO check bundle_intervala: ['rsSSNA256'] 18:36:15,953; kskm.ksr.validate: NNFO check.chain.keys: n.hsm: frue 18:36:15,953; kskm.ksr.validate: NNFO check.chain.keys.n.hsm: frue 18:36:15,953; kskm.ksr.validate: NNFO check.chain.keys.n.hsm?</pre>	2024-04-25 18:36:15,950: kakm.ksr.load: INFO Loaded KSR from file ksr-root-2024-q3-0.xml SHA-256 51ffea38b7a124841290555570e17a366408e1b5bff642463e13b098b254f705 WORDS drunken Yu	ave zi days <= Validity >= zi days 2024-01-25 18:36:15,957; kskm.ksr.validate: INFO KSR-POLICY-SIG-HORIZON: All signatures e xeire in less than 180 dave
<pre>18:36:15,933: kskm.ksr.validate: INFO dataclass placeholder: None 18:36:15,933: kskm.ksr.validate: INFO dataclass placeholder: None 18:36:15,933: kskm.ksr.validate: INFO dataclass placeholder: None 18:36:15,933: kskm.ksr.validate: INFO acceptable.domains: ['.'] 18:36:15,933: kskm.ksr.validate: INFO check.chain.everlab: True 18:36:15,933: kskm.ksr.validate: INFO check.chain.everlab: True 18:36:15,933: kskm.ksr.validate: INFO check.chain.everlap: True 18:36:15,933: kskm.ksr.validate: INFO check.kevs.match.ksk.operator.policy: 18:36:15,933: kskm.ksr.validate: INFO check.kevs.match.ksk.operator.policy: 18:36:15,933: kskm.ksr.validate: INFO check.kevs.match.ksk.operator.policy: 18:36:15,933: kskm.ksr.validate: INFO check.kevs.match.ksk.operator.policy: 18:</pre>	uctain recond consulting seathird outfielder blueblird Jupiter atlas millionaire edict resis tor guidance tolerance keyboard congregate flyttap antenna tenpest positive slingshot voc alist crewfoot detergent concert laftberge riffied harrative sawdret accestion virtue and	2024-04-25 18:36:15,957; kskm.ksr.validate: INFO KSR-POLICY-BUNDLE-INTERVALS: All bundles intervals in accordance with the KSK operator policy
<pre>18:36:11, 933: kskm.ksr.validate: INFO detaclass_placeholder: None 18:36:11, 933: kskm.ksr.validate: INFO acceptable domains: [*.4] 18:36:15, 933: kskm.ksr.validate: INFO acceptable domains: [*.4] 18:36:15, 933: kskm.ksr.validate: INFO acceptable intervals: [*.858Hi256'] 2024-04-25: 18:36:15, 937: kskm.tools.ksrsigner: INFO 2 18:36:15, 933: kskm.ksr.validate: INFO check_bundle_intervals: [*.858Hi256'] 2024-04-25: 18:36:15, 937: kskm.tools.ksrsigner: INFO 2 18:36:15, 933: kskm.ksr.validate: INFO check_bundle_intervals: True 18:36:15, 933: kskm.ksr.validate: INFO check_chain_keys: Informer 18:36:15, 933: kskm.ksr.validate: INFO check_chain_keys: True 18:36:15, 933: kskm.ksr.validate: INFO check_chain_keys: True 18:36:15, 933: kskm.ksr.validate: INFO check_chain_keys: Infor 18:36:15, 933: kskm.ksr.validate: INFO check_keys_match_ksk_operator_policy: 18:36:15, 933: kskm.ksr.validate: INFO check_keys_match_ksk_operator_pol</pre>	18:36:15, 953: kskm.ksr.valīdate: INFO Validating	INFO Request: INFO # Inception
<pre>18:36:15,953: kskm.ksr.validate: INFO check.bundle_intervals: True 18:36:15,953: kskm.ksr.validate: INFO check.bundle_intervals: True 18:36:15,953: kskm.ksr.validate: INFO check.chain.ksys: True 18:36:15,953: kskm.ksr.validate: INFO check.chain.ksys.atch.ksk.operator.policy: 18:36:15,953: kskm.ksr.validate: INFO check.chain.ksys.atch.ksk.operator.policy: 18:36:15,953: kskm.ksr.validate: INFO check.chain.ksys.atch.ksk.operator.policy: 18:36:15,953: kskm.ksr.validate: INFO check.chain.ksk.operator.policy: 18:36:15,953: kskm.ksr.validate: INFO check.chain.overlap.rue 18:36:15,953: kskm.ksr.validate: INFO check.chain.overlap.rue 18:36:15,953: kskm.ksr.validate: INFO check.chain.overlap.rue 18:36:15,953: kskm.ksr.validate: INFO check.chain.overlap.rue 18:36:15,953: kskm.ksr.validate: INFO check.ksya.match.ksk.operator.policy: 18:36:15,953: kskm.ksr.validate: INFO check.ksya.match.ksk.operator.policy: 18:36:15,953: kskm.ksr.validate: INFO check.ksya.match.ksk.operator.policy: 18:36:15,953: kskm.ksr.validate: INFO check.ksya.match.ksk.operator.policy: 18:36:15,953: kskm.ksr.validate: INFO check.ksya.match.ksk.operator.policy:</pre>	18:36:13, 953: Kskm.ksr.validate: INFO dataclas 18:36:15, 953: kskm.ksr.validate: INFO acceptabl 18:36:15, 953: kskm.ksr.validate: INFO acceptabl	
<pre>18:36:15,933: kskm.ksr.validate: INPO check_chain_ksys: True 00:00 20038 00:00 20038 00:00 20038 00:00 20038 00:00 20038 00:00 20038 00:00 4 00:00 20038 00:00 4 00:00 20038 00:00 4 00:00 4 00:00 20038 00:00 4 00:00 4 00:00 20038 00:00 4 00:00 4 00:00 20038 00:00 4 00:00 4 00:00 20038 00:00 4 00:00 4 00:00 4 00:00 4 00:00 20038 00:00 4</pre>	18:36:15,953: ksfm.ksr.validate: 1NVO approved_algorithms: ('RAASHA256') 18:36:15,953: ksfm.ksr.validate: INVO check bundle intervals: True 18:36:15,953: ksfm.ksr.validate: INVO check bundle overlap: True	N
18:36:15,953: kskm.ksr.validate: INPO check_cayle_length: True 2024-04-25 18:36:15,957: kskm.tools.ksrsigner: INPO 5 18:36:15,957: kskm.tools.ksrsigner: INPO 5 18:36:15,953: kskm.tsr.validate: INPO check_cayle_length: True 2024-04-25 18:36:15,957: kskm.tools.ksrsigner: INPO 5 18:36:15,957: kskm.tools.ksrsigner: INPO 5 2024-04-25 18:36:15,957: kskm.tools.ksrsigner: INPO 5 2024-04-25 18:36:15,957: kskm.tools.ksrsigner: INPO 6 20058 2024-04-25 18:36:15,957: kskm.tools.ksrsigner: INPO 5 2024-04-25 18:36:15,957: kskm.tools.ksrsigner: INPO 6 20058 2005	18:36:15,953: kakm.ksr.validate: INFO check_chain_keys: True 18:36:15,950: kskm.ksr.validate: INFO check_chain_keys_in_hsm: True 18:36:15,053: helm is the second	-
2024-04-25 18:36:15,957± kakm.tools.kstsigner: INFO 6	18:56:11,955: kskn.ksr.validate: INFO check.cycle_hength: True 18:36:15,953: kskn.ksr.validate: INFO check.cycle_hength: True 18:36:15,953: kskn.ksr.validate: INFO check.keys.match.ksk one-aftor policy:	20038 1-25 18:36:19,957: kskm.tools.ksrsigner: INFO 5 20038
		-25 18:36:15,957: kskm.tools.ksrsigner: INFO 6

	-	~			
ž		88	88		
\$		88	223	88	88
8	88	88	88	88	88
33	*	21	2	1	
8	88	2	88.	16	
38	8	2	88	æ	×
88	8.	×	88	28	88
3	8.	х.	88.		œ
33	82	23	88	88	68
33	≫	38	88	80	
3	82		83.	s.	88
		88	88	88	2
X		88	88	88	

script-20240425.log

2024-01-25 18:36:15,957: kskm.tools.ksrsigner: INFO 7 2024-08-30700:00:00 2024-09-20700: 20038 00:00 20038 00:00

2024-04-25 18:36:15,957: kskm.toois.ksrsigner: INFO 9 2024-09-09700:00:00 2024-09-30700: 20038 00:00

2024-04-25 18;36:15,957: kakm.tools.ksrsigner: INFO 9 2024-09-19700:00:00 2024-10-10700; 20038, 61050 00:00

2024-04-25 18:36:15,957: kakm.misc.ham: INFO Initializing FXCS#11 module aep using /opt/K eyper/FXCS11Provider/PKca11.linux_gcc_4_1.2_glibc_2.5_x86_64.so.5.02 2024-04-25 18:36:16,214: kskm.misc.hsm: INFO HSM First slot:

ICANNKSK

z 2024-04-25 18:36:16,214: kskm.mísc.hsm: INFO HSM ManufacturerID: Ultra Electronics ABP 2024-04-25 18:36:16,214: kskm.misc.hsm: etworks

2024-04-25 18:36:16,214: какш.шізс.нэш: INFO HSM Serial: H2110009 2024-04-25 18:36:16,214: kskm.signer.verify_chain: INFO Checking coherence between SKR(n-Keyper 9860-2 INFO HSM Model: INFO HSM Serial:

2024-04-25 18:36:16,215: kskm.signer.verify_chain: INFO KSR-CHAIN-KEYS: The last keys in

SKR(n-1) matches the first keys in this SSR 2024-04-25 18:36:16,215: kskm.signer.verify_chain: INFO KSR-CHAIN-OVERLAF: Overlap with 1 ast bundle in SKR(n-1) 10 days is in accordance with the KSR policy 2024-04-25 18:36:16,216: kskm.signer.verify_chain: INFO KSR-CHAIN-EXPS: All 1 signatures

in the last bundle of the last SKR were made with keys present in the HSM(s)

ksr-root-2024-q3-0.xml FILENAME:

SHA-256 HEX: 51ffea39b7a12484129055c570e17a366408e1b5bff642463e13b099b254f705 SHA-256 WORDS: drunken Yucatan Trojan consulting seabird outfielder bluebird Jupiter atl as millionaire edict resistor guidance tolerance keyboard congregate flytrap antenna temp est positive slingshot vocalist crowfoot detergent concert barbecue ruffled narrative saw

dust equation virus almighty

Sign KSR? Confirm with "Yes" (exactly) or anything else to abort: Yes 2024-04-25 18:39:32,026: kskm.signer.policy: INFO KSR-POLICY-SAFETY: PublishSafety valida

2024-04-25 18:39:32,026: kakm.signer.policy: JNFO KSR-POLICY-SAFETY: RetireSafety validat pa

2024-04-25 18:39:32,026: kskm.tools.ksrsigner: INFO Generated SKR: 2024-04-25 18:39:32,026: kakm.tools.ksrsigner: INFO + Inception

Expiration KSK (CKA_LABEL) ZSK Tags

2024-04-25 19:39:37,027; kskm.tools.ksrsigner: INFO 1 2024-07-01100:00:00 2024-07-22100: 00:00 20038,5613 20326(Kiajeyr)/S

2024-04-25 18:39:32,027: kskm.tools.ksrsigner: INFO 2 2024-07-11T00:00:00 2024-08-01T00: 00:00

20326 (Klajeyz) /S 20038

2024-04-25 18:39:32,027: kskm.tools.ksrsigner: INEO 3 2024-07-21700:00:00 2024-08-11700; 20038 00:00

20326 (Klajeyz) /S

2024-04-25 18:39:32,027: kekm.toole.ksrsigner: INFO 4 2024-07-31700:00:00 2024-08-21700: 00:00 20038 20038 (Klajeyri/S

2024-08-10T00:00:00 2024-08-31T00; 2024-04-25 18:39:32,027: kskm.tools.karsigner: INFO 5 00:00 20038

20326(Klajeyz)/S

2024-04-25 18:39:32,027: kskm.tools.ksrsigner: INFO 6 2024-09-20TD0:00:00 2024-09-10TD0: 00:00 20038 20326(Klajeyz)/S

2024-04-25 18:39:32,027; kskm.tools.ksrsigner: INFO 7 2024-08-30700:00:00 2024-09-20700: 00:00 20039 20326(Klajeyz)/S 2024-04-25 18:39:32,027: Kskm.tools,ksrsigner: INFO 8 2024-09-09700:00:00 2024-09-30700: 00:00 20038 20326(ksm.tools,ksrsigner: INFO 8 2024-09-09700:00:00 2024-09-30700:

2024-04-25 18:39:32,027: kskm.tools.ksrsigner: INFO 9 2024-09-19T00:00:00 2024-10-10T00: 00:00 20038,61050 20326(Klapyz)/S 20326(Klajeyz)/S

20326(Klajeyz)/S

2024-04-25 19:39:32,155: ks/m.jorner: INFO Wrote SKR to file skr-root-2024-q3-0.xml SHA-2 56 bb9a5163436ff368220e4c7e7b0f69725b9f648466d36780a15se482a92279 W0ROS sharrock newsle ther durnken disreston crucial hemisphere upset gravity blockade Atlantic drainage insurg ent kickoff atmosphere gazelle holiness erase optient frytrap Jupiter romatch tambourine 1038[9980387tkbb]1800t@coen:/media/KSRFb/KSK53-i# printlog kskm-ksrsigner-20240425-1 Y023\$d80841 1 copy | sent to printer

-rwwr-rr-1 root ront 2424 Apr 16 18:27 skr-root-2024-q2-0.xml -rwr-r-r-1 root root 11501 Apr 16 18:27 skrsigner.yml -rwr-r-r-1 root root 1598 Apr 16 18:27 ksrsigner.yml -rwr-r--1 root root 19598 Apr 16 18:27 ksrsigner.yml -rwr-r--1 root root 1078 Apr 25 18:39 skr-root-2024-q3-0.xml -33312204h (kskm) root@conri/media/HSKPB 4 PPR /media/KSREP/+ -03312204h (kskm) root@conri/media/HSKPB 4 PPR /media/KSREP/+ 9 2010 West-2010517-172700.log 6 2010 KKS1et0B.config.db 6 2010 Kygen-2010616-211906.log 6 2010 Kygmult-ttyUSB1-20100616-182157.log 6 2010 ttyaudit-ttyUSB1-20100616-182157.log 6 2010 ttyaudit-ttyUSB2-20100616-182157.log 6 2010 shr-root-2010616.log 6 2010 script-2010616.log 6 2010 script-2010616.log 7 2010 skr.mnl.20101101191303 1 2010 ksr-root-2011-q1-0.xml ksrsigner-20101101-181303.log ttyaudit-ttyUSB0-20101101-175457.log ksrsigner-20110511-181632.10g ttyaudit-tty0580-20110511-180559.10g ksrsigner-20110930-181607.10g ttyaudit-tty0580-20110930-180703.10g 2012 ksrsigner-20120522-151741.log 2012 ttyaudit-ttyUSB0-20120522-150621.log 16384 Apr 16 18:27 \03310m\033101;34mKsK53-2\033(0m 16384 Apr 25 18:39 \033101;34mKsK53-1\03310m ksrsigner-20110511-191351.1og ksrsigner-20121112-155152.log 6 lines were wrapped \033[72004h(kskm) root@coen:/media/KSRED/KSR53-1* cd /media/HSWED/ \033[7204B(kskm) root@coen:/media/HSKED* 1s -ltrR /media/KSRED/ script-20110511.log skr.xml.20110930181607 2010 ksr-root-2010-q3-2.xmJ skr.xml.20110511181632 skr-root-2011-q3-0.xml ksr-root-2012-q1-0.xml skr-root-2011-q1-0.xm] ksr-root-2011-q3-0.xml skr.xml.20120522151741 2012 skr.xml.20121112155152 skr-root-2012-q1-0.xml 2012 ksr-root-2012-q3-0.xml 2012 skr-root-2012-q3-0.xml 2012 ksr-root-2013-q1-0.xml 2012 skr-root-2013-q1-0.xml acript-20101101.100 script-20110930.109 2012 script-20120522.1og -rw-r--r-- 1 root root 11188 Apr 16 19:27 Ksrsigner.yam1 2010 2010 2010 1102 1102 ITO2 2011 2012 1102 I LOZ 2011 2011 2011 1102 1102 2012 2011 2011 2668 Jun 16 765 Jun 16 36864 Jun 16 45056 Jun 16 18364 Jun 16 18364 Jun 16 195608 Jun 16 15547 Jun 9 40555 Jun 9 190 Jun 16 1400 May 11 18402 May 11 5510 May 11 14374 May 11 7674 Jun 16 18364 Oct 31 15547 Oct 31 May 22 May 22 May 22 Sep 23 Apr 25 1 20 DE 30 30 NO 22 NON NON NON Nov Peb Yay Sep Nay. Jul. Nov Nov Sep Sep Sep Peb 18402 5504 14005 18402 15587 5609 5528 15547 EE 16 18404 15571 2034 5529 1161 12034 7270 18424 51587 8324 175371 11881 drwxr-xr-x 2 root root drwxr-xr-x 2 root root /media/KSRFD/KSK53-1; root root root root /media/KSRFD/KSK53-2: root root. root root root root. root root root root root root root root root. root root root root root root root root TOOL root root root COOL Coot root root. root root root root root root root. root. root root root root Coot COOL TOOL root. root. root root COOL Coot root Cot root root TOOL I -- I--- I-MI-1833[22004] -- I-M-I-M-I-total 3472 total 128 -- I-- I-MI-------total 32 total 16 -I--I-MJ--- J-- J-MJ---J--J-MJ---J--J-MJ--- I-- I-M.I--- J-- J-MJ---------- I-- I-MI--I--I-MJ.

72

Contraction	:56	script-	script-20240425.log
 	- 1 root root 12044 Nov 12 2012	udit-ttyUSB0-20121112-154229.log	-rw-rr 1 root
1 1	- 1 FOOL FOOL 12249 NOV 12 2012 - 1 FOOL FOOL 19314 Feb 12 2013	pt-20121112.10g	-
1 1	z I zoot root 15371 Apr 5 2013		~
Free 1 cont 5001 MAX 2 2013 MAX 2 MAX MAX <td>-r 1 root root 4004 May 2 2013</td> <td>igner-20130502-190252.1oa</td> <td>1 1</td>	-r 1 root root 4004 May 2 2013	igner-20130502-190252.1oa	1 1
France Construction Construction Construction Construction France Construction Construction<	-r 1 root root 18314 May 2 2013	root-2013-q3-0. xm1	
1 CODE CO	I root root 5502 May 2 2013	lgner-20130502-190633.log	10
	1 FOOL FOOL 12397 May 2 2013	idit-ttyUSB0-20130502-185222.log	H
1 1	- I root root 18314 And 7 2013	ot-ZUI3U5U2. LOG	4.1
1 1	1 root root 15371 Oct 4 2013	2006-2014-01-0 vm1	
 Frey Front, Cold. 5512 Oct. 24 2013 Marshore-2014-67-0.xml Frey Front, Cold. 5013 Marshore-2014-67-0.xml Frey Frey Frey Frey Frey Frey Frey Frey		root-2014-o1-0.xml	1
1 1	- 1 root root 5512 Oct 24 2013	gner-20131024-184618.100	+ 0
1 1000 517 0013 347 1013 1000	- 1 root root 12044 Oct 24 2013	idit-ttyUSB0-20131024-182843.log	
1 1000 Cold 133 Marrison-201401/119360 1000 Cold	1 root root 9167 Oct 24 2013	st-20131024.1og	10
1 1000.000 133.3 Mpr. 17 2014 Marr.recol0014-q3-0.xml 1000xx-2014-q3-0.xml 1 1000.000 1331. Mpr. 17 2014 Marr.recol0014-q3-0.xml 100xx-2014-q3-0.xml 1 1000.000 1331. Mpr. 17 2014 Marr.recol-0014-q3-0.xml 100xx-2014-q3-0.xml 1 1000.000 1331. Mpr. 17 2014 Marr.recol-0014-q3-0.xml 100xx-2014-q3-0.xml 1 1000.000 1331. Mpr. 17 2014 Marr.recol-0014-q3-0.xml 100xx-2014-q3-0.xml 1 1000.00 1331. Mpr. 17 2014 Marr.recol-0014-q3-0.xml 100xx-2014-q3-0.xml 1 1000.00 1331. Mpr. 10 2014 Marr.recol-2015-q1-0.xml 100xx-2014-q3-0.xml 1 1000.00 1331. Mpr. 10 2014 Marr.recol-2015-q1-0.xml 100xx-2014-q3-0.xml 1 1000.00 1331. Mpr. 1 2014 Marr.recol-2013-q1-0.xml 100xx-2014-q1-0.xml 1 1000.00 1331. Mpr. 1 2015 Marr.recol-2013-q1-0.xml 100xx-2014-q1-0.xml 1 1000.00 1331. Mpr. 1 2015 Marr.recol-2013-q1-0.xml 100xx-2014-q1-0.xml 1 10000.00 20131. Mpr. 1 </td <td></td> <td>cml.20140417183604</td> <td>-</td>		cml.20140417183604	-
1 1 2014 Marrial Terron - 2014 401 - 1364 - 104 Terron - 2014 12 - 1364 - 104 1 1 1 2014 Marrial Terron - 2014 401 - 1364 - 104 Terron - 2014 12 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 110 - 1 - 104 Terron - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 120 - 2014 2014 120 - 2014 2014 120 - 2014 2014 120 - 2014 2014 120 - 2014 2014 2014 2014 2014 2014 2014 2014	1 root root 15353 Apr 3 2014	oot-2014-q3-0.xml	N
1 1 1001 1001	1 root root 18314 Apr 17 2014	oot-2014-q3-0.xml	1
1 1 2013 Mrr. 10 2014 Mrr. 10	-r 1 root root 12034 apr 12 2014	gner-zu14041/-183604.log	drwxr-xr-x 2 root
 1 foot root 1331 Nov 10 2014 Arr-root-2013-91-0.mm. 1 foot root 1331 Nov 12 2014 Arr-root-2013-91-0.mm. 1 foot root 1333 Apr 12 2014 Arr-root-2013-91-0.mm. 1 foot root 1333 Apr 12 2014 Arr-root-2013-91-0.mm. 1 foot root 1333 Apr 12 2015 Arr-root-2013-91-0.mm. 1 foot root 1333 Apr 12 2015 Arr-root-2013-91-0.mm. 1 foot root 1333 Apr 12 2015 Arr-root-2013-91-0.mm. 1 foot root 1337 Apr 12 2015 Arr-root-2015-91-0.mm. 1 foot root 1337 Apr 12 2015 Arr-root-2015-91-0.mm. 1 foot root 1377 Apr 9 2015 Arr-root-2015-91-0.9013 1 foot root 1377 Apr 9 2015 Arr-root-2015-91-0.0013 1 foot root 1377 Nov 4 2015 Arr-root-2015-91-0.001 1 foot root 1371 Nov 4 2015 Arr-root-2015-91-0.001 1 foot root 1371 Nov 4 2015 Arr-root-2015-91-0.001 1 foot root 1371 Nov 12 2015 Arr-root-2015-91-0.001 1 foot root 1371 Nov 12 2015 Arr-root-2015-91-0.001 1 foot root 1371 Apr 2 2016 Arr-root-2016-91-0.001 1 foot root 1371 Apr 2 201		dit-ttyUSBU-ZU140417-182117.log	1
 F. F. Cook. Took. 13313. Nov 10. 2014 Arr-root-2015-91-0. amiliation from the control of 3930 Nov 20. 2014 Arr-root-2015-91-0. amiliation from the control of 3930 Nov 20. 2014 Arr-root-2015-91-0. amiliation from the control of 3930 Nov 20. 2014 Arr-root-2015-91-0. amiliation from the control of 3930 Nov 20. 2015 Arr-root-2015-91-0. amiliation from the control of 3930 Nov 20. 2015 Arr-root-2015-91-0. amiliation from the control of 3930 Nov 20. 2015 Arr-root-2015-91-0. amiliation from the control of 3930 Nov 20. 2015 Arr-root-2015-901-19015. Indextracts a two-recent intervelow of 2013 Arr-root-2015-91-0. amiliation from the control of 2930 Nov 20. 2015 Arr-root-2015-001-19015. Indextracts a two-recent intervelow of 2013 Arr-root-2015-001-9105. Indextracts a two-recent intervelow of 2013 Nov 4. 2013 N	1 root root 18314 Nov 10 2014	CF110202014102 0	
 1 cool: cool: 3930 Nov 20 2014 str=root=2015-g1-0. amil 1 cool: cool: 3582 Nov 20 2014 str=root=2014120-1.04 1 cool: cool: 3582 Nov 20 2014 str=root=2014120-1.04 1 cool: cool: 3582 Nov 20 2015 str=rigne=-20150409-193039 1 cool: cool: 3582 Nov 20 2015 str=root=20156409-193039 1 cool: cool: 3583 Apr 9 2015 str=root=20150409-193039 1 cool: cool: 3533 Apr 9 2015 str=root=20150409-193039 1 cool: cool: 3911 Nov 2 2015 str=root=201504112-193232 1 cool: cool: 3911 Nov 2 2015 str=root=201504112-193232 1 cool: cool: 3911 Nov 2 2015 str=root=20150112-193232 1 cool: cool: 3911 Nov 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	- 1 root root 15371 Nov 10 2014	oot-2015-g1-0.xm1	
 Fronk Fronk 3908 Mov 20 2014 Marshgmer-Z0141120-201132.109 Fronk Fronk 1933 Mor 1 2013 Marshgmer-Z0141120-1.109 Fronk Fronk 1931 Mor 1 2013 Marshgmer-Z0150409-193031.09 Fronk Fronk 1931 Mov 1 2013 Karshgmer-Z0150409-193031.09 Fronk Fronk 1931 Mov 1 2013 Karshgmer-Z0150409-193031.09 Fronk Fronk 1931 Mov 1 2013 Karshgmer-Z01501129232.109 Fronk Fronk 1931 Mov 1 2013 Karshgmer-Z0151112-193232.109 Fronk Fronk 1931 Mov 1 2015 Karshgmer-Z01551112-193232.109 Fronk Fronk 1931 Mov 1 2015 Karshgmer-Z01551112-193232.109 Fronk Fronk 1931 Mov 1 2015 Karshgmer-Z01551112-193232.109 Fron	- 1 root root 18314 Nov 20 2014	oot-2015-q1-0,xm1	
 Frook rook 1933 Apr 1 2015 skr.mi.201504374.100 Frook rook 1934 Apr 9 2015 skr.mi.201504379.0.ml Frook rook 1934 Apr 9 2015 skr.mi.20150439.193034.00 Frook rook 1934 Apr 9 2015 skr.mi.20150409-193034.00 Frook rook 1934 Apr 9 2015 skr.mi.20150409-193034.00 Frook rook 1934 Apr 9 2015 skr.mi.20150409-193037.100 Frook rook 1931 Apr 9 2015 skr.mi.20150409-1056737.100 Frook rook 1931 Apr 9 2015 skr.mi.20150409-102837.100 Frook rook 1931 Nov 4 2015 skr.mi.20151112.19223 Frook rook 1931 Nov 12 2015 skr.mi.20151112.19223 Frook rook 1931 Nov 12 2015 skr.mi.20151112.192323 Frook rook 1931 Nov 12 2015 skr.mi.20151112.109 Frook rook 1931 Nov 12 2015 skr.mi.2015112.109 Frook rook 1931 Nov 12 2015 skr.mi.2015112.109 Frook rook 1931 Apr 29 2016 kar-rook-2016-q-0ml Froo	- 1 root root 5490 Nov 20 2014	gner-20141120-201132.log	
 Fronk rook 1931A Apr 1 2013. Skr:rook-2015-97-0. xml Fronk rook 1931A Apr 9 2015 skr:sultar-2015-000-193039. 199 Fronk rook 1937A Apr 9 2015 skr:sultar-2015-000-193039. 199 Fronk rook 1937A Apr 9 2015 skr:sultar-2015-000-2015-010-100 Fronk rook 1937A Apr 9 2015 skr:sultar-2015-010-2015-010-2015-010-100 Fronk rook 1937A Apr 9 2015 skr:sultar-2015-010-2015-010-2015-010 Fronk rook 1937A Apr 9 2015 skr:sultar-2015-010-2015-010 Fronk rook 1937A Nov 1 2015 skr:sultar-2015-010-100 Fronk rook 1937A Nov 1 2015 skr:sultar-2015-0112-19323 Fronk rook 1937A Nov 1 2015 skr:sultar-2015-0112-19323 Fronk rook 1931A Apr 2 2015 skr:sultar-2015-0112.103 Fronk rook 1931A Apr 2 2016 skr:sml. 2016512192325 Fronk rook 1931A Apr 2 2016 skr:sml. 2016512192325 Fronk rook 1931A Apr 2 2016 skr:sml. 2016512192325 Fronk rook 1931A Apr 2 2016 skr:sml. 201651219323 Fronk rook 1931A Apr 2 2016 skr:sml. 20165121933 Fronk rook 1931A Apr 2 2016 skr:sml. 201651219303 Fronk rook 1931A Apr 2 2016 skr:sml. 201651219303 Fronk rook 1931A Apr 2 2016 skr:sml. 201651219303 Fronk rook 1931A Apr 2 2016 skr:sml. 20165021219303 Fronk rook 1931A Apr 2 2016 skr:sml. 20165021219303 Fronk rook 1931	I root root 12042 Nov 20 2014	dit-ttyUSB0-20141120-200407,log	N
 1 rook rook 1911 Apr 1 zup Art rook-2015-03-0.mml 1 rook rook 1911 Apr 1 zup Art rook-2015-03-0.mml 1 rook rook 1911 Apr 1 zup Art rook-2015-03-0.mml 1 rook rook 1911 Apr 1 zup Art 2015-03-03.109 1 rook rook 1911 Apr 1 zup Art 2015-03-03.109 1 rook rook 1911 Apr 1 zup Art 2015-030-190117.109 1 rook rook 1912 Apr 9 z015 kreatore-2015-030-190117.109 1 rook rook 1911 Apr 1 zup Art 2015-0409-2015-0309-190117.109 1 rook rook 1911 Apr 9 z015 kreatore-2015-0409-2015-0409-2015-0409-190117.109 1 rook rook 1911 Apr 9 z015 kreatore-2015-0409-2015-0409-109117.109 1 rook rook 1911 Apr 9 z015 kreatore-2015-0409.109 1 rook rook 1931 Nov 1 z 2015 kreatore-2015-0410.mml 1 rook rook 1931 Nov 1 z 2015 kreatore-2015-0410.mml 1 rook rook 1931 Nov 1 z 2015 kreatore-2015-0410.mml 1 rook rook 1931 Apr 2 z015 kreatore-2015-0410.mml 1 rook rook 1931 Apr 2 z015 kreatore-2015-0410.mml 1 rook rook 1931 Apr 2 z015 kreatore-2015-0410.mml 1 rook rook 1931 Apr 2 z016 kreatore-2016-0410.mml 1 rook rook 1931 Apr 2 z016 kreatore-2016-0410.mml		t-20141120-1.1og	-
 1 (colt cont 1831 Apr 9 2015 Arr-cot-2015-070-19373). 109 1 (colt cont 1871 Apr 9 2015 Krenigner-2015009-19373. 109 1 (colt cont 1971 Apr 9 2015 Krenigner-2015009-19373. 109 1 (colt cont 3396 Apr 9 2015 Krenigner-2015009-19373. 109 1 (colt cont 3396 Apr 9 2015 Krenigner-2015009-205277. 109 1 (colt cont 3396 Apr 9 2015 Krenigner-2015009-205277. 109 1 (colt cont 3936 Apr 9 2015 Krenigner-2015000-205277. 109 1 (colt cont 1931 Nov 4 2015 Krenigner-2015000-205277. 109 1 (colt cont 1931 Nov 4 2015 Krenigner-20150010-20237. 109 1 (colt cont 1931 Nov 1 2015 Krenigner-20150112. 193232. 109 1 (colt cont 1831 Nov 1 2015 Krenigner-20150112. 193232. 109 1 (colt cont 1831 Nov 1 2015 Krenigner-20150112. 193232. 109 1 (colt cont 1831 Nov 1 2015 Krenigner-20150112. 193232. 109 1 (colt cont 1331 Nov 1 2015 Krenigner-20150112. 193232. 109 1 (colt cont 1331 Nov 1 2015 Krenigner-20150112. 193232. 109 1 (colt cont 1331 Nov 1 2015 Krenigner-20150112. 193232. 109 1 (colt cont 1331 Nov 1 2 2015 Krenigner-20150112. 193232. 109 1 (colt cont 1331 Nov 1 2 2015 Krenigner-20150112. 193232. 109 1 (colt cont 1331 Nov 1 2 2015 Krenigner-20150112. 193235. 109 1 (colt cont 1391 Apr 2 9 2016 Krenigner-20150112. 19323. 109 1 (colt cont 1391 Apr 2 9 2016 Krenigner-20150112. 19323. 109 1 (colt cont 1391 Apr 2 9 2016 Krenigner-20150112. 19323. 109 1 (colt cont 1391 Apr 2 9 2016 Krenigner-2015012. 19325. 109 1 (colt cont 1399 Apr 2 9 2016 Krenigner-2015012. 19325. 109 1 (colt cont 1399 Apr 2 9 2016 Krenigner-2015012. 19325. 109 1 (colt cont 1399 Apr 2 9 2016 Krenigner-2015012. 19325. 109 1 (colt cont 1399 Apr 2 9 2016 Krenigner-2015012. 19325. 109 1 (colt cont 1399 Apr 2 9 2016 Krenigner-2015012	1 root root 18314 Apr 1 2015	acceduaterory	N I
 I rook rook 561 Apr 9 2015 karsigner-20150409-193035.109 I rook rook 1563 Apr 9 2015 kryaudit-try0580-20150409-19305.109 I rook rook 1563 Apr 9 2015 kryaudit-try0580-20150409-2025837.109 I rook rook 1931 Nov 4 2015 kryaudit-try0580-20150409-2025837.109 I rook rook 1931 Nov 4 2015 kryaudit-try0580-20150409-2025837.109 I rook rook 1831 Nov 4 2015 kryaudit-try0580-20150409-103 I rook rook 1831 Nov 4 2015 kryaudit-try0580-20150409-103 I rook rook 1831 Nov 4 2015 kr.akl.201541219323 I rook rook 1831 Nov 4 2015 kr.akl.201541219323 I rook rook 1831 Nov 12 2015 str.akl.2015412.103 I rook rook 1831 Nov 12 2015 str.akl.2015412.103 I rook rook 1831 Nov 12 2015 str.akl.2015412.103 I rook rook 1831 Nov 12 2015 str.akl.20155121.093 I rook rook 1831 Nov 12 2016 str.akl.20155121.093 I rook rook 1831 Apr 22 2016 str.akl.20155121.093 I rook rook 1831 Apr 22 2016 str.akl.20155121.051 I rook rook 1393 May 12 2016 str.akl.201551219332.109 I rook rook 1393 May 12 2016 str.akl.201551219353.109 I rook rook 1393 May 12 2016 str.akl.2015601219332.109 I rook rook 1393 May 12 2016 str.akl.20156012190332.109 I rook rook 1393	-r 1 root root 18314 Apr 9 2015	oot-2015-03-0.xml	
 Front Front 1714 Apr 9 2015 (Lyaudit-LtyU0500-20150409-190743.log Front Front Front 1714 Apr 9 2015 (Lyaudit-LtyU0500-20153727.log Front Front 1700 13396 Apr 9 2015 (Lyaudit-LtyU0500-2015377.log Front Front 1700 13371 Nov 4 2015 Abr.12015112.193222 Front Front 13371 Nov 4 2015 Abr.12015112.193222 Front Front 13371 Nov 4 2015 Abr.12015112.193222 Front Front 13371 Nov 4 2015 Abr.12015.log Front Front 13371 Nov 4 2015 Abr.12015.log Front Front 13371 Nov 4 2015 Abr.12015.log Front Front 13371 Nov 12 2015 Strandog-2015112-193222.log Front Front 12215 Nov 12 2015 Karsigner-2015112.193223.log Front Front 12215 Nov 12 2015 Karsigner-2015112.193223.log Front Front 12215 Nov 12 2015 Karsigner-2015112.193223.log Front Front 13371 Apr 29 2016 Str.ront.2016-67-0.xml Front Front 13371 Apr 29 2016 Str.ront.2016-69-0.xml Front Front 13391 Apr 29 2016 Str.ront.2016-69-0.xml Front Front 13391 Apr 29 2016 Str.ront.2016-91.log Front Front 13391 Apr 2016 Str.ront.2016-91.log Front Front 1399 May 12 2016 Str.ront.2016-92.log Front F	r 1 root root. 5621 Apr 9 2015	gner-20150409-183038, log	N
 T. Took Fool 3396 Apr 9 2013 Karsigner-20150409-190117.10g T. Fook Fool 3396 Apr 9 2015 Karsigner-20150409-202837.10g T. Fook Fook 19713 Apr 9 2015 Karsigner-20150409-202837.10g T. Fook Fook 19713 Apr 9 2015 Karsigner-20150409.10g T. Fook Fook 19713 Nov 4 2015 Karsigner-20150410xml T. Fook Fook 19713 Nov 4 2015 Karsigner-2015641-0.xml T. Fook Fook 19713 Nov 12 2015 Karsigner-20156112-193232.10g T. Fook Fook 19314 Apr 2 2015 Karsigner-2015671-0.xml T. Fook Fook 13213 Nov 12 2015 Karsigner-2015671-0.xml T. Fook Fook 13214 Apr 2 2015 Karsigner-2015671-0.xml T. Fook Fook 13314 Apr 2 2016 Kar-multi-tuy090-20151112-1931111.10g T. Fook Fook 13314 Apr 2 2016 Kar-multi-tuy090-20156112-191111.10g T. Fook Fook 13314 Apr 2 2016 Kar-multi-tuy090-2016619 T. Fook Fook 13314 Apr 2 2016 Kar-multi-tuy090-2016619 T. Fook Fook 13314 Apr 2 2016 Kar-multi-tuy090-2016619 T. Fook Fook 13314 Apr 2 2016 Kar-multi-tuy090-2016019 T. Fook Fook 13334 Apr 2 2016 Kar-multi-tuy090-2016019 T. Fook Fook 13334 Apr 2 2016 Kar-multi-tuy090-2016019 T. Fook Fook 13394 Apr 2 2016 Kar-multi-tuy090-2016019 T. Fook Fook 13990 Apr 2 2016 Kar-multi-tuy090-2016919 T. Fook Fook 13990 Apr 2 2016 Kar-multi-tuy090-2016019 T. Fook Fook 2019 Sock 2 2016 Kar-multi-2016019 T. Fook Fook 2019 Sock 2 2016 Kar-mu	-r 1 root root 15774 Apr 9 2015	dit-ttyUSB0-20150409-180743.log	I
 1 Front Front 1931 Apr 9 2015 Kreinfare-Lybosho-20150409-19911/1.109 1 Front Front 1931 Nov 4 2015 Kreinfare-Lybosho-20150409-202837.109 1 Front Front 1931 Nov 4 2015 Kreinfare-Lybosho-20150409-202837.109 1 Front Front 1931 Nov 4 2015 Kreinfare-Lybosho-20150409-202837.109 1 Front Front 1931 Nov 12 2015 Kreinfare-Lybosho-20150112.101 1 Front Front 1931 Nov 12 2015 Kreinfare-Lybosho-20151112-191111.109 1 Front Front 1931 Nov 12 2015 Kreinfare-Lybosho-20151112-191111.109 1 Front Front 1931 Nov 12 2015 Kreinfare-Lybosho-20151112-191111.109 1 Front Front 1221 Nov 12 2015 Kreinfare-20151112.109333.109 1 Front Front 1931 Apr 29 2016 Kreinfare-20151112.109333 1 Front Front 1931 Apr 29 2016 Kreinfare-2015112.10933 1 Front Front 1931 Apr 29 2016 Kreinfare-20166-3-0.mml 1 Front Front 1931 Apr 29 2016 Kreinfare-20166-3-0.mml 1 Front Front 1931 Apr 29 2016 Kreinfare-20166-3-0.mml 1 Front Front 1939 Apr 29 2016 Kreinfare-20166-3-0.mml 1 Front Front 1939 Apr 29 2016 Kreinfare-20166312-193235.109 1 Front Front 1939 Apr 29 2016 Kreinfare-20166312-193031 1 Front Front 1939 Apr 29 2016 Kreinfare-20166312-193235.109 1 Front Front 1938 May 12 2016 Kreinfare-20166312-193233.109 1 Front Front 1938 May 12 2016 Kreinfare-20166312-193235.109 1 Front Front 1938 May 12 2016 Kreinfare-20166312-193235.109 1 Front Front 1938 May 12 2016 Kreinfare-20166312-193233.109 1 Front Front 1938 May 12 2016 Kreinfare-20166312-193233.109 1 Front Front 1938 May 12 2016 Kreinfare-20166312-19323.109 1 Front Front 2001 2	1 root root 33966 Apr 9 2015	gner-20150409-193635.log	
 front root 3489 Apr 9 2015 tryandit-try00500-20160410. front root 1917 Apr 9 2015 string-20150409-202837.log front root 1917 Nov 4 2015 string-20150409-202817.log front root 1831 Nov 12 2015 string-20150409-202817.log front root 1831 Nov 12 2015 string-20150409-202817.log front root 1831 Nov 12 2015 string-20150112-193232.log front root 1831 Nov 12 2015 string-root-2016-q1-0.xml front root 1831 Nov 12 2015 string-root-20151112-1931111.log front root 1831 Nov 12 2015 string-root-20151112-193232.log front root 1831 Apr 29 2016 str.xml.2016051219023 front root 1831 Apr 29 2016 str.xml.20160512190619 front root 1891 Apr 29 2016 str.xml.20160512190619 front root 1999 Apr 29 2016 str.xml.20160512190619 front root 1999 Apr 29 2016 str.xml.20160512-1981952.log front root 1999 Apr 29 2016 str.root-20160312-1981919.log front root 1999 Apr 29 2016 str.root-20160312-1981952.log front root 1999 Apr 2015 str.root-20160312-1981952.log front root 1999 Apr 22 2016 str.root-20160312-1981912.log front root 1999 Apr 22 2016 str.root-20160312-1981912.log front root 1999 Apr 22 2016 str.root-20160312-1981912.log front root 1999 Apr 22 2016 str.root-20160312-1981913.log front root 1999 Apr 22 2016 str.root-20160312-198103.log front root 20198 Apr 22 2016 str.root-2016012-10	- 1 root root 5636 Apr 9 2015	ait-tttyusHu-Zul50409-190117.log	~
 Frock foot 1917 Apr 9 2015 script-20150409.log Frook foot 1811 Nov 12 2015 skr.xml.2015112-193232.log Frook foot 1811 Nov 12 2015 skr.xml.2016641-0.xml Frook foot 1811 Nov 12 2015 skr.xml.201691212-193232.log Frook foot 1811 Apr 29 2016 skr.xml.20160512192335 Frook foot 1891 Apr 29 2016 skr.xml.2016051219619 Frook foot 1891 Apr 29 2016 skr.xml.2016051219619 Frook foot 1991 Apr 29 2016 skr.xml.20160512-198135 Frook foot 1991 Apr 29 2016 skr.xml.20160512-199619 Frook foot 1993 Apr 29 2016 skr.xml.20160512-198195 Frook foot 1998 May 12 2016 karsigner-20160512-198195 Frook foot 1998 May 12 2016 karsigner-20160512-199619 Frook foot 1998 May 12 2016 karsigner-20160512-198195 Frook foot 1998 May 12 2016 karsigner-20160512-198195 Frook foot 1998 May 12 2016 karsigner-20160512-198195 Frook foot 1998 May 12 2016 karsigner-20160512-1981932.log Frook foot 1998 May 12 2016 karsigner-20160512-1981952.log Frook foot 1998 May 12 2016 karsigner-20160512-109 Frook foot 1998 May 12 2016 karsigner-20160512-1981952.log Frook foot 1998 May 12 2016 karsigner-20160512-1981952.log Frook foot 1998 May 12 2016 karsigner-20160512-109 Frook foot 1998 May 12 2016 karsigner-20160512-109 Frook foot 1998 May 12 2016 karsigner-20160512-109 Frook foot 2018 06 k2 2 2016 skr.xml Frook foot 21980	r 1 root root 34895 Apr 9 2015	11t-ttv0580-20150409-202837.155	-
 Took rook 1931 Nov 12 2015 ksr-rook-2016-g1-0, xml Frook rook 1931 Nov 12 2015 ksr-rook-2016-g1-0, xml Frook rook 1351 Nov 12 2015 ksr-rook-2015112-193323.10g Frook rook 1351 Nov 12 2015 ksr-rook-2015112-193323.10g Frook rook 1255 Nov 12 2015 ksr-rook-2015112-1932323.10g Frook rook 1321 Apr 29 2015 ksr-rook-2015112.103 Frook rook 1331 Apr 29 2016 ksr-rook-20156-g3-6a11back-1, xml Frook rook 1331 Apr 29 2016 ksr-rook-20156-g3-6a11back-1, xml Frook rook 1331 Apr 29 2016 ksr-rook-20156-g3-0, xml Frook rook 1391 Apr 29 2016 ksr-rook-20156-g3-0, xml Frook rook 1393 Apr 2016 ksr-rook-20156-g3-11back-1, xml Frook rook 1394 May 12 2016 ksr-rook-20156-g3-11back-1, xml Frook rook 1394 May 12 2016 ksr-rook-20156-g3-11back-1, xml Frook rook 1394 May 12 2016 ksr-rook-20156-g3-15back-1, xml Frook rook 1384 May 12 2016 ksr-rook-20156-g3-15back-1, xml Frook rook 1384 May 12 2016 ksr-rook-20156-g1-16g Frook rook 1384 May 12 2016 ksr-rook-2016-g1-0, xml Frook rook 1384 May 12 2016 ksr-rook-2016021-109 Frook rook 2018 00 ct 27 20161027-189493.109 Frook rook 2018 00 ct 27 2016 ksr-rook-20161027-189493.109 Frook rook 2018 00 ct 27 2016 ksr-rook-20161027-189492.109	r 1 root root 19175 Apr 9 2015	:-20150409.log	
 1 FOOK FOOK 1811 NOV 12 2015 KREENGOR-Z015/112-193232.109 1 FOOK FOOK 1821 NOV 12 2015 KREENGOR-Z015/112-193232.109 1 FOOK FOOK 1821 APF 29 2016 KREENGOR-Z015/112-193232.109 1 FOOK FOOK 1821 APF 29 2016 KREENGOR-Z015/112-1931111.109 1 FOOK FOOK 1831 APF 29 2016 KREENGOR-Z015/112-1931111.109 1 FOOK FOOK 1831 APF 29 2016 KREENGOR-Z015/112-193111.109 1 FOOK FOOK 1831 APF 29 2016 KREENGOR-Z015/2192325 1 FOOK FOOK 1831 APF 29 2016 KREENGE-Z015/2192325 1 FOOK FOOK 1891 APF 29 2016 KREENGE-Z015/2192325 1 FOOK FOOK 1899 MAY 12 2016 KREENGE-Z015/6-91-0.xml 1 FOOK FOOK 1899 MAY 12 2016 KREENGE-Z016/512-1982355.109 1 FOOK FOOK 1898 MAY 12 2016 KREENGE-Z016/512-1982355.109 1 FOOK FOOK 1887 MAY 12 2016 KREENGE-Z016/512-1982383.109 1 FOOK FOOK 1888 MAY 12 2016 KREENGE-Z016/512-198393.109 1 FOOK FOOK 2008 MAY 12 2016 KREENGE-Z016/0127-188/05.109 1 FOOK FOOK 2018 MAY 12 2016 KREENGE-Z016/5127-188/05.109 1 FOOK FOOK 2018 MAY 12 2016 KREENGE-Z016/5127-188/05.109 1 FOOK FOOK 2018 MAY 12 2016 KREENGE-Z016/5127-188/05.109 1 FOOK FOOK 2018 MAY 12 2016 KREENGE-Z016/0127-188/05.109 1 FOOK FOOK 2018 MAY 12 2016 KREENGE-Z016/0127-188/05.109 1 FOOK FOOK 2018 MAY 12 2016 KREENGE-Z016/0127-188/05.109 1 FOOK FOOK 2018 MAY 12 2016 KREENGE-Z016/0127-189/05.109 1 FOOK FOOK 2018 MAY 12 2016 KREENGE-Z016/0127-189/05.109 1	r 1 root root 18314 Nov 4 2015	al.20151112193232	N
 T foot root 3547 Nov 12 2015 Kister 2015/112-193232.109 T foot root 12218 Nov 12 2015 Kister 2015/112-191111.109 T foot root 13218 Nov 12 2015 Kister 2015/112-191111.109 T foot root 13914 Apr 29 2016 Kist. mail. 2015/112-19050 T foot root 13914 Apr 29 2016 Kist. mail. 2015/112-190619 T foot root 13914 Apr 29 2016 Kist. mail. 2015/112-190619 T foot root 13914 Apr 29 2016 Kist. mail. 2015/112-190619 T foot root 13914 Apr 29 2016 Kist. mail. 2015/112-190619 T foot root 13914 Apr 29 2016 Kist. mail. 2015/112-190619 T foot root 13914 Apr 29 2016 Kist. mail. 2015/112-190619 T foot root 13994 Apr 29 2016 Kist. mail. 2015/05-01. mail T foot root 13994 Apr 29 2016 Kist. mail. 2016/05-0. mail T foot root 13994 Apr 29 2016 Kist. mail. 2016/05-1. mail T foot root 13994 Apr 29 2016 Kist. mail. 2016/05-1. mail T foot root 13994 Apr 29 2016 Kist. mail. 2016/0512-198475.109 T foot root 13870 May 12 2016 Kist. mail T foot root 138870 May 12 2016 Kist. mail T foot root 138870 May 12 2016 Kist. 100 T foot root 138870 May 12 2016 Kist. mail T foot root 138870 May 12 2016 Kist. 100 T foot root 2008 0ct 27 2016/0512-193803 T foot root 2008 0ct 27 2016 612.1.09 T foot root 2008 0ct 27 2016 612.7.193803 T foot root 2018 0ct 27 2016 1027-183803.109 T foot root 2018 0ct 27 2016 Kist. mail T foot root 2016 Kist. 2016 Kist. 2016 0st. 210 T foot root 2016 Kist. 2016 Kist. 2016 0st. 2109 T foot root 2016 Kist. 2016 Kist. 2016 0st. 2109200.109 T foot root 2018 0ct 27 2016 Kist. 2016 0st. 2109 T foot root 2018 0ct 27 2016 Kist. 2016 Kist. 2016 0st. 2109 T foot root 2018 0ct 27 2016 Kist. 2017 0st. 210920.109 T foot root 2018 0ct 27 20	- 1 root root 18314 Nov 12 2015	301-2016-91-0.×ml	-
 Frock root 12215 Nov 12 2015 ttyaudit-ttyU950-2015112-191111.10g Froot root 13814 Apr 29 2016 ksr.vml. 2016051292325 Froot root 13814 Apr 29 2016 ksr.vml. 20160512192325 Froot root 13814 Apr 29 2016 ksr.vml. 20160512190519 Froot root 13814 Apr 29 2016 ksr.vml. 20160512190519 Froot root 13814 Apr 29 2016 ksr.vml. 20160512190519 Froot root 13819 Apr 29 2016 ksr.vml. 20160512190519 Froot root 13899 May 12 2016 ksr.vml. 20160512190519 Froot root 13899 May 12 2016 ksr.vml. 20160512-190619.10g Froot root 13899 May 12 2016 ksr.sngner-20160512-190619.10g Froot root 13899 May 12 2016 ksr.sngner-20160512-190619.10g Froot root 13899 May 12 2016 ksr.sngner-20160512-190619.10g Froot root 13890 May 12 2016 ksr.sngner-20160512-190719.10g Froot root 13890 May 12 2016 ksr.sngner-20160512-190719.10g Froot root 13870 May 12 2016 ksr.sngl Froot root 23038 Oct 27 2016 ssr.sngl Froot root 2308 Oct 27 2016 ksr.sngl Froot root 2308 Oct 27 2016 ksr.sngl Froot root 2309 Oct 27 2016 ksybackup-20161027-18903.10g Froot root 2310 Cot 27 2016 ksybackup-20161027-18903.10g Froot root	-r 1 root root 5547 Nov 12 2015	Juer-20151112-193932 100	N .
 Trook root 738 Nov 12 2015 script-2015112.log Trook root 18914 Apr 29 2016 skr.xml.20160512192325 Trook root 18914 Apr 29 2016 skr.xml.20160512190515 Trook root 18914 Apr 29 2016 skr.xml.20160512190515 Trook root 18914 Apr 29 2016 skr.xml.20160512190515 Trook root 18914 Apr 29 2016 skr.rook-2016-93-0.xml Trook root 1999 Apr 12 2016 skr.rook-2016-93-0.xml Trook root 1999 May 12 2016 skr.rook-2016-93-0.xml Trook root 1998 May 12 2016 skr.rook-2016-93-0.xml Trook root 1989 May 12 2016 skr.rook-2016-93-0.xml Trook root 1989 May 12 2016 skr.rook-2016-93-0.xml Trook root 1989 May 12 2016 skr.root-2016-93-0.xml Trook root 1989 May 12 2016 skr.root-2016-93-0.xml Trook root 1989 May 12 2016 skr.roml Trook root 2108 0ct 27 2016 skr.roml		lit-ttyUSB0-20151112-191111.100	11
 Took root 1391 Apr 29 2016 skr.xml.20160972192395 Trook root 1391 Apr 29 2016 skr.xml.20160972192395 Trook root 1599 May 12 2016 ksr.rook-2016-93-0.xml Trook root 1599 May 12 2016 ksr-rook-2016-93-0.xml Trook root 1599 May 12 2016 ksr-rook-2016-93-0.xml Trook root 1599 May 12 2016 ksr-rook-2016-93-0.xml Trook root 1999 May 12 2016 ksr-rook-2016-93-0.xml Trook root 1999 May 12 2016 ksr-rook-2016-93-0.xml Trook root 1999 May 12 2016 ksr-rook-2016-93-fallback-1.xml Trook root 1999 May 12 2016 ksr-rook-2016-93-fallback-1.xml Trook root 1998 May 12 2016 ksr-rook-2016-93-fallback-1.xml Trook root 1998 May 12 2016 ksr-rook-2016-93-fallback-1.xml Trook root 12484 May 12 2016 ksr-rook-2016-93-fallback-1.xml Trook root 12484 May 12 2016 ktr-root-2016-93-fallback-1.xml Trook root 12484 May 12 2016 ktr-root-2016-93-fallback-1.xml Trook root 12484 May 12 2016 ktr-root-2016-93-fallback-1.xml Trook rook 1987 May 12 2016 ktr-root-2016-93-fallback-1.xml Trook rook 20188 Oct 27 2016 str-root-20161027-189803.log Trook rook 20188 Oct 27 2016 str-root-20161027-189803.log Trook rook 2018 Oct 27 2016 str-root-20161027-189803.log Trook rook 2018 Oct 27 2016 str-root-20161027-189803.log Trook rook 2018 Oct 27 2016 str-root-20161027-189803.log Trook rook 2108 Oct 27 2016 str-root-20161027-189803.log Trook rook 27 2016 ktr-root-20161027-189803.log Trook rook 2	1 root root 7282 Nov 12 2015	-20151112.1og	2
 Front root 1931 Apr 29 2016 skr.ml.2015-91-30.hml Front root 1939 Apr 29 2016 skr.ml.2015-91-0.hml Front root 1939 May 12 2016 skr.ml.2015-91-0.hml Front root 1989 May 12 2016 skr.ml.2015-91-0.hml Front root 1989 May 12 2016 skr.ml.2016-93-0.hml Front root 1989 May 12 2016 skr.ml.2016-93-1.hml Front root 1980 May 12 2016 skr.ml.2016-93-1.hml Front root 1987 May 12 2016 skr.ml.2016-031-193953.hog Front root 11887 May 12 2016 scr.ph-20160512-193953.hog Front root 1987 May 12 2016 scr.ph-20160512-193953.hog Front root 1987 May 12 2016 scr.ph-20160512-193953.hog Front root 1987 May 12 2016 scr.ph-20160512.hog Front root 1987 May 12 2016 scr.ph-20160512.hog Front root 1983 Oct 27 2016 scr.ph-20160512.hog Front root 2008 Oct 27 2016 skr.ml.20161027189803 Front root 2018 Oct 27 2016 skr.ml.20161027189803 Front root 2018 Oct 27 2016 skr.ml.201610271-183803 Front root 2018 Str.cot 201 2016 skr.ml.201610271-183803 Front root 2018 Oct 27 2016 skr.ml.201610271-183803 Front root 2018 Str.cot 27 2016 skr.ml.201610271-183803 Front root 2018 Str.cot 27 2016 skr.ml.201610271-183803 Front root 2712 Oct 27 2016 skr.ml.201610271-183803 Front root 272 0016 root 27 2016 str.ml.201610271-182492.hog Front root 27 2016 root 27 2016 str.201610271-182492.hog Front root 27 2016 root	- 1 root root 14301 Apr 29 2016	11.20160512192325	H
 Froot root 15994 Apr 29 2016 kar-root-2016-93-0.xml Froot root 15999 Apr 29 2016 kar-root-2016-93-0.xml Froot root 17909 May 12 2016 skr-root-2016-93-0.xml Froot root 17909 May 12 2016 skr-root-2016-93-198452.192355.109 Froot root 18870 May 12 2016 skr-root-2016-93-198452.192355.109 Froot root 19870 May 12 2016 skr-root-2017-91-0.xml Froot root 1983 Oct 27 2016 skr-root-2017-91-0.xml Froot root 2038 Oct 27 2016 skr-root-2016-91-0.xml Froot root 2038 Oct 27 2016 skr-root-2016-01-01-0.xml Froot root 2038 Oct 27 2016 skr-root-2016-01-004 Froot root 2038 Oct 27 2016 skr-root-2016-01-01-00 Froot root 3950 Oct 27 2016 skr-root-2016-01-09 Froot root 3950 Oct 27 2016 skr-root-2016-012-09 Froot root 3950 Oct	- 1 root root 18314 Apr 29 2016	001-20160519190610 1.20160519190610	
	-r 1 root root 15994 Apr 29 2016	ot-2016-q3-0.xml	11
 T cool root 3534 May 12 2016 karsignar-20160512-190619.10g T cool root 19908 May 12 2016 skr-root-20166312-1902305.10g T cool root 19809 May 12 2016 skr-root-20166312-192335.10g T cool root 1870 May 12 2016 skr-root-2016512-184752.10g T cool root 19870 May 12 2016 skr-root-2016512-184752.10g T cool root 19870 May 12 2016 skr-root-20160512-184752.10g T cool root 19870 May 12 2016 skr-root-20160712-10g T cool root 19870 May 12 2016 skr-root-2017-q1-0. T cool root 2008 0ct 27 2016 skr.rml. T cool root 2018 0ct 27 2016 skr.rml. T cool root 2019 0ct 27 2016 ksybackup-20161027-183903.10g T cool root 210 201 0ct 27 2016 ksybackup-20161027-183903.10g T cool root 210 201 0ct 27 2016 ksybackup-20161027-183903.10g T cool root 210 201 0ct 27 2016 ksybackup-20161027-19870.10g T cool root 317 0ct 27 2016 ksybackup-20161027-19820.10g T cool	-r 1 root. root. 18599 May 12 2016	ot-2016-q3-0.xml	
1 root root 1356 May 12 2016 skr-root-2016-q3-fallback-1.xml -rw-r-r-1 1 root root 1566 May 12 2016 str-root-2016-q3-fallback-1.xml -rw-r-r-1 1 root root 1566 May 12 2016 str-root-2016-q3-fallback-1.xml -rw-r-r-1 1 root root 1570 May 12 2016 str-root-2016-0512-193235.log -rw-r-r-1 1 root root 1587 May 12 2016 str-root-2017-q10.ml -rw-r-r-1 1 root root 1597 May 12 2016 str-root-2017-q10.ml -rw-r-r-1 1 root root 2018 Mar.xml.2016-021-193033 -rw-r-r-1 -rw-r-r-1 1 root root 2018 Mar.xml.2016-027-183033.log -rw-r-r-1 -rw-r-r-1 1 root root 2018 Mar.xml.2016-027-183033.log -rw-r-r-1 -rw-r-r-1 1 root root 2018 Mar.xml.2016-027-183833.log -rw-r-r-1 -rw-r-r-1 1 root root 2018 Mar.xml.2016-027-183833.log -rw-r-r-1 -rw-r-r-1 1 root root 2016 skr.wml.2016-027-183833.log -rw-r-r-1 -rw-r-r-1	- 1 root root 5534 May 12 2016	ner-20160512-190619.1og	
- 1 root root 12484 May 12 2016 structured 1000-20160512-194752.log drwsrwsrwsrw 2 1 root root 19570 May 12 2016 struct-1000-20160512-194752.log drwsrwsrwsrw 2 1 root root 19557 Oct 24 2016 structured 1000-20160512-194752.log drwsrwsrwsrw 2 0.000 20183 Oct 24 2016 structured 1000-2016 structured 1000-2	1 root root 5566 May 12 2016	ot-2016-q3-fallback-1.xml	
- 1 foot root 15870 May 12 2016 script-2010/2010 control of 15870 May 12 2016 script-2010/2010 control of 19557 0ct 24 2016 ksr-root-2017-q1-0.xml - 1 root root 20189 0ct 24 2016 ksr-root-2017-q1-0.xml - 1 root root 2038 0ct 27 2016 ksr-xml.20161027183803 - 1 root root 2038 0ct 27 2016 ksr-root-2017-q1-0.xml - 1 root root 2038 0ct 27 2016 ksr-root-2017-q1-0.xml - 1 root root 2038 0ct 27 2016 ksr-root-20161027-183803.log - 1 root root 2018 0ct 27 2016 ksr-root-20161027-183803.log - 1 root root 3501 0ct 27 2016 ksr-root-20161027-183803.log - 1 root root 3570 0ct 27 2016 ksr-root-20161027-182408_log - 1 root root 3570 0ct 27 2016 ks-root-20161027-182408_log - 1 root root 3570 0ct 27 2016 ks-root-20161027-182408_log - rw-rr-1 - 1 root root 3550 0ct 27 2016 ks-root-20161027-182408_log - rw-rr-1 - 1 root root 3550 0ct 27 2016 ks-root-20161027-18240.log - rw-rr-1 - 1 root root 3550 0ct 27 2016 ks-root-20161027-18240.log - rw-rr-1	1 root root 12484 May 12 2016	1+-++ vitebu-20150512-194362	1 -1-1-
	1 root root. 15870 May 12 2016	-20160512.109	2 X-JX-
	1 root root 19557 Oct 24 2016	ot-2017-q1-0.xml	
- 1 coot root 2014 6rt.xml - 1 coot root 2014 0ct 27 2016 karsigner-2015/02.4ml - 1 coot root 2501 0ct 27 2016 karsigner-2016/027-183003.109 - 1 coot root 3501 0ct 27 2016 kasegner-2016/027-184920.109 - 1 coot root 317 0ct 27 2016 kaybackup-2016/027-185705.109 - 1 coot root 337 0ct 27 2016 kaybackup-2016/027-185705.109 - 1 coot root 337 0ct 27 2016 kaybackup-2016/027-185705.109 - 1 coot root 3350 0ct 27 2016 kaybackup-2016/027-185705.109 - 1 coot root 3350 0ct 27 2016 kaybackup-2016/027-182205.009 - 1 coot root 3350 0ct 27 2016 kaybackup-2016/027-20250501.109 - 1 coot root 33508 0ct 27 2016 kaybackup-2016/027-1822408.109 - 1 root root 33568 0ct 27 2016 kaybackup-2016/027-202200.100 - 1 root root 33568 0ct 27 2016 kaybackup-2016/027-202200.100 - 1 root root 33568 0ct 27 2016 kaybackup-2016/027-202200.100 - row-r-r 1	- 1 root root 21083 Oct 24 2016	1.20161027183803	-
- 1 root root 5501 det 27 2016 karsigner-2016/07/-193803.109 - 1 root root 2712 det 27 2016 karsigner-2016/07/-193803.109 - 1 root root 2712 det 27 2016 kaybackup-2016/027/-184920.109 - 1 root root 317 det 27 2016 kaybackup-2016/027/-185795.109 - 1 root root 3370 det 27 2016 kaybackup-2016/027/-185795.109 - 1 root root 3370 det 27 2016 kaybackup-2016/027/-185795.109 - 1 root root 3350 det 27 2016 kaybackup-2016/027/-185795.109 - 1 root root 33508 det 27 2016 kaybackup-2016/027/-022240.109 - 1 root root 2368 det 27 2016 kaybackup-2016/027/-022240.109 - 1 root root 2000 det 27 2016 kaybackup-2016/027/-02240.109 - 1 root root 2000 det 27 2016 kaybackup-2016/027/-02240.109 - 1 root root 2000 det 27 2016 kaybackup-2016/027/-022240.109 - 1 root 2000 det 27 2016 kaybackup-2016/027/-020240.109 - 1 root 2000 det 2000 det 27 2016 kaybackup-2016/027/-020240.109 - 1 root 2000 det 27 2016 kaybackup-2016/027/-020240.109 - 1 root 2000 det 2000 det 27 2000 kaybackup-2016/027/-020240.109 - 1 root 2000 det 2000 det 20		T	~
- 1 root root 2712 Oct 27 2016 kskgen-20161027-184920.169 - 1 root root 2712 Oct 27 2016 kskgen-20161027-184920.169 - 1 root root 317 Oct 27 2016 keybackup-20161027-185905.169 - 1 root root 337 Oct 27 2016 keybackup-20161027-20501.169 - 1 root root 28791 Oct 27 2016 keybackup-20161027-20201.169 - 1 root root 33568 Oct 27 2016 keybackup-20161027-202010.169 - 1 root root 33568 Oct 27 2016 keybalt-ttyU589-20161027-202240.169 - 1 root root 33568 Oct 27 2016 keybalt-ttyU589-20161027-202240.169 - 1 root root 33568 Oct 27 2016 keybalt-ttyU589-20161027-202240.169 - 1 root root 33568 Oct 27 2016 keybalt-ttyU589-20161027-202240.169	-r 1 root root 5501 Oct 27	Der-20161027-183803 100	
- 1 root root 817 Oct 27 2016 Klajeyz.csr - 1 root root 317 Oct 27 2016 Keybackup-20161027-185705.log drwkr-xr-x 2 - 1 root root 357 Oct 27 2016 Keybackup-20161027-20501.log	r I root root. 2712 Oct 27	-20161027-184920.109	
- 1 FOOK FOOK 337 OCK 27 2016 Keybackup-20161027-185705.log - 1 FOOK FOOK 357 OCK 27 2016 Keybackup-20161027-200501.log - 1 FOOK FOOK 28791 OCK 27 2016 Keybackup-20161027-182428.log - 1 FOOK FOOK 33568 OCK 27 2016 Keybaudit-ttyUSB0-20161027-182428.log - Tw-r	-r 1 root root 817 Oct 27 2016	Z.CSF	
- 1 root root 33568 Oct 27 2016 tryaudit-ttyUSBO-20160027-182428.log - 1 root root 33568 Oct 27 2016 tryaudit-ttyUSBO-20160027-182428.log - 1 root root 33568 Oct 27 2016 tryaudit-ttyUSBO-20160027-182428.log - *********	- 1 root root 357 Oct 27 2016	kup-20161027-185705.10g	N
1 root root. 33568 Oct 27 2016 ttyaudit-ttyUSB0-20161027-202240.log	- 1 root root 28791 Oct 27 2016	<pre>cup-zuletuz/-zuletui.log</pre>	1
	1 root root. 33568 Oct 27 2016	Lt-ttyWSB0-20161027+202240.100	

200000		50	CO_U\033	33 (On		HO]	82024.109		1.10		HOLES		13 [0m		2 0	E	75253.109	102.100	0	3[0m	al Ca	0	3[0m	EC I P			m	alon	3 (Om		3[01	3 (Om							0.109			1.109				5. log			2.109	
	5	1.83853.1		01;34mKSK29-1	gner-20170427-18491	3[01;34mKSK29-2-C_to_C\0	audit-ttyUSH0-20170427-1	script-Z01710121.10g	-20177018-1	1.19918	33[01;34mKSK31-0-D_to EV	aner-20171018-182803.	ImKSK31-1-E to D/0	Karsigner-Z0171018-183150.10 \033[01:34mKSK31-2-D +0 D\03	-20171018-183453.1	34mKSK31-3-C_to_C\0	1-810	it-ttyUSB0-20180411-1	igner-20180411-183203.1	\033[01;34mKSK33-0-D_to_E\03	V033(01;34mKSK33-1-E to DV03	ksrsigner-20180411-183814.100	to D	N033[01:34MKSK33-3-C +0 CV033	1		36.10	V033[U1:34mKSK35-0-E to F/03 %srsioner-20181115-195208 125	mKSK35-1-F_to_G	-195448.1	MKSK35-2-E to	D to D/03	-1928	SCT1PC-ZU181115.10g \033[01;34mKSK37\033[0m	20190516-190831.	00518	keybackup-20190516-200726.100	05655.	516-1854	script-20190516.1og ksrsioner-20191114-1901A3 1	39/033 (Om	1	script-20191114.1og ksrsigner-20211014-175632 1	\033[01;34mKSK43\033[0m	90332.1	1014-1	12-1 93033	[01;34mKSK45\033[0m	ys0-20220512-18163	crint-2020612 100
	0 0	2017	2017	B	2017	2017	1102	2017	2017	2017	1.0	~	2017		~				-	8102		27.0	2018	100			2018 4		100	2018 k					0	2019 k			-	2019 4.02			2021 ks		с.	2021 tt	1.01	SN	4	0 60
		12 1				12		20		i yet	-	-	e ,	1 -1		18				15		** 1	==	17	11	11		12	51	5 1		-		191	91	919	91	91	919	7 4	14	5	4 4	2	14	4 4			NO	
		Apr Apr						tube o			Oct	Oct.	Oct	Oct			Dot 100			Apr			Apr	Apr	Apr	Apr	NON	NON	Nov	Nov	Nov	Nov	NON	May	Way	May	Yay	Nay	Way	Nov	NON	NON	Oct	Oct	Oct	Oct Oct	May	May	May	200
	et	0 0	9		62	2618	4.4	•				6698				8192		10002	6775	26183	8192	6776	8192	2619		36029	1019	6449	8192	6775	6765	8192	14444	8192	6271	210	271		86026				6376			43058	100	8192	114456	5965
		root	root	root	root	FOOT	root	root	root	root	root	root	FOOT	root	root	root	root	root	root	root	root.	root	root	root	root	root	FOOT	root	root	LOOL	root	root	root	root	root	root	root	root	root	root	root	root	root	root	root	root	root		root	DOC
	root.	root	root	root	root	1001	root	root	root	root	root	root	TOOL	root	root	root	root	root.	root	root	root	root	root				root			root			root 1	1.00		root r			root r			root r				root r				TOOL
~	-1 -	- 0	-	~		N -	i e		++	-	~	He		N	-	N.		-		NE	N	ы с н с	N FI	N	H .	ч ч н н	H L	i Se	4	4 4	i H	4	ŭ i	i h	Ň.	4 4	ч	H	H i	i n	L		1 1	2	й I	0 0	a n	ů.	0 0	21
2	11	IX	1	×	1	ř l		1	1	1	X-JX	1 3	× I	×	1	X		1	1	1	×	1	× 1	×	1	1 1	*	11	×	1 3	1	×	11	×	1 0	11	-			1	×	1 1	1	×		1.1		N ·	1. A	1
2		X-JXMJ	1	drwxr-xr			. 1	1		1	4	1	IX-IXMIN	- 12	4.7	drwxr-xr	1	1	-ZZ-MZ-	-II-MI-	drwxr-xr-	-IM-IL		X-XE	1		drwxr-xr-		ř	-II-MI-	Ì	×		×	4.1		-JJ-MJ	14		1	×	-11-01-	. [drwxr-xr-y	1	MJ	1	×		1

04/25/24 21:19:56



script-20240425.log

kskm-keymaster-20230427-182232-931.109 kskm-keymaster-20230427-182301-932.109 \033[01:34mKSK47\033[0m ttyaudit-ttys0-20221103-180106.109 ksrsigner-20230427-181450.1og 2017 skr.xml.20170427183853 2017 ksr-root-2017-q3-0-c_to_d.xml 2017 kskschedule.json 2017 skr.xml.2017042/194519 2017 ksr-root-2017-q3-1-d_to_c.xml 2017 kscchedule.json 2017 skr.xml 2017 skr.xml 2017 skr.xml 2017 skr-root-2017-q3-0-c_to_d.xml 2017 akr.xml.20170427194912 2017 kar-root-2017-q3-2-c_to_c.xml 2017 kakschedule.json 2017 akr.xml 2017 akr.xml 2017 skr.xml.20171018181941 2017 ksr-root-2018-qi-0-d_to_e.xml 2017 kskschedule.json 2017 skr.xml.20171018182803 2017 ksr-root-2018-q1-1-e_to_d.xml 2017 kstschedule.json 2017 skr.xml 2017 skr.xml 2017 skr.xml.20171018183150 2017 ksr-root-2018-q1-2-d_to_d.xml 2017 kskschedule.json skr-root-2018-q1-0-d to e.xml skr-root-2018-q1-1-e to d.xml script-20221103.log \033101;34mKSK49\03310m V033[01; 34mtmp/033[0m skr.xml 2022 2023 2022 2023 2023 2017 8192 Nov 3 15909 Nov 3 26616 Nov 3 8192 Apr 27 8192 Apr 27 6274 Apr 27 1072 Apr 27 20347 Apr 20 19556 Apr 20 540 Apr 20 24419 Apr 27 24419 Apr 27 20347 Apr 20 19556 Apr 20 454 Apr 20 20347 Apr 27 20347 Apr 27 20347 Apr 20 19556 Apr 20 454 Apr 20 20347 Apr 27 20347 Apr 27 0ct 13 0ct 13 0ct 13 0ct 18 0ct 18 e e e 24928 Oct 1 19556 Oct 1 1344 Oct 1 24928 Oct 1 24928 Oct 1 root 24928 Oct 1 root 19556 Oct 1 root 1344 Oct 1 root 20347 24928 24928 24928 19556 24928 24928 24928 root. root root root root. root root root root root root. root. root root root root root root root 1 root 1 root root drwxr-xr-x 2 root root drwxr-xr-x 3 root root root. root drwxr-xr-x 2 root root root root -rw-r--r-- 1 root root root root root -EW-F--E-- I root -rw-r--r-- 1 root ./KSX29-0-C to D: root root -rw-r--r-- 1 root root root root root root /KSK29-1-D to CI root root root root root. root root. root -rw-r--r-- 1 root -rw-r--r-- 1 root -rw-r--r-- 1 root /KSK29-2-C to C: /KSK31-0-D to E: -EW-F--T-- 1 KOOL root root /KSK31-1-E to D: /KSK31-2-D_to_D: drwxr-xr-x 2 drwxr-xr-x 2 I ------------drwxr-xr-x ----------M3---- I-- I-MJ---------- I-- I-MI--- I-- I-MJ--- -- -- -- MI--------M.---- -- -- -- -- -- ---total 104 -- J-- J-MJ -------M3total 104 total 104 otal 128 total 128 total 128

2017 skr.xml 2017 skr-root-2018-q1-2-d_to_d.xml skr.xml.20171019183453 ksr-root-2018-q1-3-c_to_c.xml skr-root-2018-q1-3-c_to_c.xml 2018 skr.xml.20180411183203 2018 ksr-root-2018-q3-0-d_to_e.xml 2018 kskchedule.json 2018 skr.xml 2018 skr-root-2018-q3-0-d_to_e.xml 2018 skr.xml.20180411193607 2018 ksr-root-2018-q3-1-e_to_d.xml 2018 kskschedule.json 2018 skr.xml 2018 skr-root-2018-q3-1-e_to_d.xml 2018 skr-root-2018-q3-1-e_to_d.xml 2018 kskachedule.jaon 2018 ksr-root-2019-ql-0-e_to_f.xml 2018 skr.xml.20181115194236 2018 skr.xml 2018 skr-root-2019-ql-0-e_to_f.xml 2018 kskschedule.jaon 2018 ksr-root-2019-qi-Lf to_g.xml 2018 skr.xml.20181115195208 2018 skr.xml 2018 skr-root-2019-qi-i-f_to_g.xml 2018 skr.xml.20180411194001 2018 ksr-root-2018-q3-3-c to c.xml 2018 ksschedule.json 2018 ksr.xml 2018 skr.xml 2018 skr.xml ksr-root-2018-q3-2-d_to_d.xm1 kskschedule.json skr-root-2018-q3-2-d to d.xml skr-root-2018-q3-3-c_to_c.xml 2018 kskschedule.json 2018 ksr-root-2019-q1-2-e_to_e.xml 2018 skr.xml.20181115195448 skr.xml.20180411183814 2017 skr.xml.2017101918: 2017 ksr-rcot-2018-q1-3. 2017 kskschedule.json 2017 skr.xmL 2017 skr-rcot-2018-q1-3. skr.xml 2018 2018 2018 2018 2018 root 24928 Apr 4 2
 root 19554 Apr 4 2
 root 1344 Apr 4 2
 root 24928 Apr 11 2
 root 24928 Apr 11 3 r root 24928 Apr 4 2 1 root 19554 Apr 4 2 2 root 1344 Apr 4 2 2 root 1344 Apr 4 2 2 root 24928 Apr 11 2 2 root 24928 Apr 11 2 234928 Apr 4 2 19554 Apr 4 2 1148 Apr 4 2 20347 Apr 11 2 20347 Apr 11 2 20347 Apr 11 2 E 24928 Apr 4 2 E 19554 Apr 4 2 E 1344 Apr 4 2 E 24928 Apr 11 2 2 24928 Apr 11 2 -tw-r--r-- 1 root root 24928 Oct 18 -rw-r--r-- 1 root root 24928 Oct 18 r root 1678 Oct 12 2 r root 19594 Nev 9 2 r root 24930 Nev 9 2 r root 29640 Nev 15 2 root 29640 Nev 15 2 M M M M M 1148 Oct 12 19594 Nov 9 24930 Nov 9 20367 Nov 15 20367 Nov 15 I345 Oct 12 2 19594 Nov 9 2 24930 Nov 9 2 24928 Oct 1 19556 Oct 1 1148 Oct 1 20347 Oct 1 20347 Oct 1 root root root root root root root root root. root root. root root root. root root root root -rw-r--r-- 1 root root 1 root root root root root root a /KSK31-3-C_to C: root root. root root root -rw-r--r-- 1 root r -rw-r--r-- 1 root r -rw-r--r-- 1 root r /K5K33-0-D to E: root /KSK33-1-E_to_D: /KSK33-2-D to D: root root /KSK33-3-C_LO_C: -rw-r--r-- 1 root root -rw-r--r-- I root root root root -rw-r--r-- 1 root root root root root. 1 root /KSK35-0-E. to F: root /KSK35-1-F_to_G: root /XSK35-2-E_to_E: -- Z--- Z--M.J----------M. -- I--- I-MItotal 112 ---------M---total 128 total 128 ----------------- I--- I-MItotal 128 212 Lotal 128 total 112 total 128 total

¢



script-20240425.log

-rw-r--r-- 1 (aot root 24948 Nov 15 2018 akr.xml -rw-r--r-- 1 root 24948 Nov 15 2018 akr-root-2019-q1-2-e_to_e.xml

./KSK35-3-D_to_D:

	n 1-3-d to d.x	5195652	1-3-d to d.x	619083: [3-0.×ml n 3-0.×ml
	2018 kskschedule.json 2018 ksr-ropt-2019-g1-3-d to d.xml	2018 skr.xml.20181115195652 2018 skr.xml	2018 skr-root2019-q1-3-d to d.xm1	2019 skr.xml.2019051619083: 2019 ksr-root-2019-q3-0.xml 2019 kakschedule.json 2019 skr.xml 2019 skr-root-2019-q3-0.xml
	2018	2018	2018	2019 2019 2019 2019 2019
	12	o in	51	000000
	Oct. Nov	Nov	NON	Мау Мау Мау Мау
	. root root 1344 Oct. 12 . root root 19594 Nov 9	24930 Nov 24948 Nov	root 24948 Nov 15	20369 19600 1148 20369
	root	root	root	root root root root
	root	root	root	root root root root root
		-1 -1	**	
total 128				./KSK37: total 104 -rw-r-r -rw-rr

./KSK39:

	skr.xml.201911419014	ksr-root-2020-q1-0.xm	kskschedule.ison	skr.xml	-rw-rr 1 root root 20369 Nov 14 2019 skr-root-2020-q1-0.xml	
	2019	2019	2019	2019	2019	
	9	9	9	4	14	
	Nov	NON	Nov	NON	NON	
	20369	19600	1148	20369	20369	
	root	root	root	root	root	
	FOOL	root.	root	root	root	
	-	•1	•	÷	+	
total 104						./KSK43:

total 104

20369 Oct 2 2021 skr.xml.20211014175632 19582 Oct 2 2021 ksr-root-2022-q1-0.xml 1148 Oct 2 2021 ksrkschedule.json 20369 Oct 14 2021 skr.xml 20369 Oct 14 2021 skr.xml 1 root root 2 1 root root 1 1 root root 1 1 root root 2 1 root root 2

total 104 ./K5K45:

2022 skr.xml.20220512193033 2022 kkrrroot-2022-q3-0.xml 2022 skr.emledule.json 2022 skr.xml 2022 skr.rml 2019 akr.xml.20221103191923 2018 kar-root-2023-q1-0.xml 2018 kakehedule.jaon 2022 akr.xml 2022 akr-root-2023-q1-0.xml p 20369 Apr 27 2 19600 Apr 27 2 1148 Apr 27 2 20369 May 12 2 20369 May 12 2 1 root root total 104 --------M---/KSK47:

20369 Apr 18 11189 Apr 18 19600 Apr 18 1148 Apr 18 20369 Apr 27 20369 Apr 27 root root 2 root root 1 root root 1 root root 2 root root 2 root root 2 -- Z--- Z-MZtotal 120 ./KSK49:

-- I-- I-MI-

2023 skr.xml.20230427181450 2023 ksrsigner.yaml 2023 ksreteot-2023-q3-0.xml 2023 kskechedule.json 2023 skr.xml 2023 skr.vml

./Lmp: total 90 -rwr-rr- 1 root root 880 May 2 2013 ksrsigner_20130502190252_5048_tmp_skr.xml -rwr-rr- 1 root root 1768 Apr 27 2023 skr.keybundle.8

0	1 foot foot 1392 Apr 27 2023 skr.keybundle.7 1 foot foot 1392 Apr 27 2023 skr.keybundle.6 1 foot foot 1392 Apr 27 2023 skr.keybundle.6 1 foot foot 1392 Apr 27 2023 skr.keybundle.7 1 foot foot 1392 Apr 27 2023 skr.keybundle.2 1 foot foot 1392 Apr 27 2023 skr.keybundle.1 1 foot foot 1392 Apr 27 2023 skr.keybundle.1 1 foot foot 1392 Apr 27 2023 skr.keybundle.1	<pre>K51: 1136 =</pre>	<pre>11/6 11/6 </pre>	<pre>53-1: 120 1 root root 24824 Apr 16 18:27 &srsigner.yam1 1 root root 11501 Apr 16 18:27 &srsigner.yam1 1 root root 11503 Apr 16 18:27 &srsigner.yam1 1 root root 11078 Apr 25 18:39 &kr-root-2024-q3-0.xm1 1 root root 11078 Apr 25 18:39 ks/m-harsigner-202401425-183615-13267.log 55-2: 1 root root 11078 Apr 25 18:39 ks/m-harsigner-202401425-183615-13267.log 1 root root 11078 Apr 16 18:27 ksrsigner.yam1 -xr 1 root root 11188 Apr 16 18:27 ksrsigner.yam1 -xr 2 root root 11188 Apr 25 18:39 (033[01;34mKKs53-1/033[0m</pre>	53-1: 53-1: root root 24824 Apr 16 18:27 root root 1501 Apr 16 18:27 root root 19598 Apr 16 18:27 root root 19538 Apr 25 18:39 root root 24332 Apr 25 18:39 root root 1078 Apr 25 18:39 skm) root@coen:/media/HS&D* ;
	*******	./KSK51: .rwrr-r1 .rw-r1 .rw-r1 .rw-r1 .rw-r	 1. 1	Hall111 8 18	./KSK53-2/KSK total 120 -rw-r-r-1 -rw-r-r-1 -rw-r-r-1 -rw-r-r-1 -rw-r-r-1 ()033[72004h(k /033][72004h(k /033][72004h(k /033]]22004h(k /033]]22004h(k /033]]22004h(k /033]]22004h(k

script-20240425.log	V033[72004b(kskm) root@coent/media/Hswine of .et /acc/rat	<pre>%238\$980811118-blocks Used Available Usek Mounted %238\$98081118-blocks Used Available Usek Mounted /dev/sda 602406912 602406912 0 100% /cun/live/medium /033172004h(kskm) root@coen:/media/HSMFD# head - 602406912 /dev/sda sharwardiiet</pre>	RIM32398C041 236549c498c919b53bd45f413dedaed364712d72b3b7859c7ec553c59390d8 PGP Words: blowtorch Galveslon sugar reproduce mural ultimate bedlamp positive obluse so uvenir evetoch decadence commence unity robust sociable fiytrap hideaway button holiness scallion processor music megaton artist unicorn eveglass crossover bupont molasses peach y stupendous	4838[72004]	Soript done on 2024-04-25 21:19:56+00:00 [COMMAND_BXIT_CODE-*0*]									
	drwxr-xr-x 2 coot root 16384 Apr 25 18:39 \033[0m\033[01;34mKSK53-1\033[0m	urwxr*xf=x 3 root root 16384 Apr 25 18:42 \033(01;34mKSK53-2\033[0m /media/KSRFD/KSK53-1: total 128	-rw-r-r 1 root root 24824 Apr 16 18:27 skr-root-2024-q2-q.xml -rw-rr 1 root root 11501 Apr 16 18:27 ksr-signer.yaml -rw-rr 1 root root 19598 Apr 16 18:27 ksr-root-2024-q3-0.xml -rw-rr 1 root root 24392 Apr 25 18:39 skr-root-2024-q3-0.xml -rw-rr 1 root root 24392 Apr 25 18:39 kskm-ksrsigner-20240425-183615-13267.log	/media/KSRFb/KSK53-2: total 32		/media/KSRFD/KSK53-2/K5K53-1; tctal 128	-rw-r-r 1 root coot 24824 Apr 16 19:27 skr-root-2024-q2-0.xml -rw-rr 1 root coot 1959 Apr 16 19:27 ksr-ston-2024-q2-0.xml -rw-rr 1 root coot 1959 Apr 16 19:27 ksr-root-2024-q3-0.xml -rw-rr 1 root coot 1959 Apr 26 19:39 skr-root-2024-q3-0.xml -rw-rr 1 root coot 2493 Apr 25 18:39 skr-root-2024-q3-0.xml -rw-rr 1 root coot 11078 Apr 25 18:39 kshr-ksrigner-20240435-183611-13267.log ND33230048 (kskm) root@coen./media/HSNPP diff -qr /media/HSNPD/KSKN00753-2 (0331720048 (kskm) root@coen./media/HSNPP/KSK33-2* 16 -1trR ND331720048 (kskm) root@coen./media/KSNPD/KSK73-2* 16 -1trR ND331720048 (kskm) root@coen./media/KSNPD/KSK73-2* 16 -1trR ND331720048 (kskm) root@coen./media/KSNPD/KSK73-2* 16 -1trR ND331720048 (kskm) root@coen./media/KSNPD/KSK73-2* 16 -1trR	-rwr-r 1 root root 11188 Apr 16 18:27 karsigner.yami N031720041 (kakm) root@coen./media/KSRPD (KSK53~2# cd (0331720048 (kakm) root@coen./media/KSRPP cd /media/HSPD/ N033172044 (kakm) root@coen./media/HSRPD cd /media/HSPD/ N033172044 (kakm) root@coen./media/HSRPP cd N0030007 KSK29-0-C_Lo_D/ KSK33-3-C_Lo_C/ KSK49/ KSK29-1-D_Lo_C/ KSK35-0-E_Lo_F/ KSK51/ KSK29-1-O-D_Lo_E/ KSK35-1-F_Lo_G/ KSK53-2/ KSK31-O-D_Lo_E/ KSK35-2-E_Lo_G/ KSK35-2/	KSK35-3-D_to_D/ KSK37/	мыхдлэ-э-с. to. C/ KSK339/ KjgmtYv.csr KSK33-0-D.to.E/ KSK43/ Klajeyz.csr KSK33-2-D/ KSK45/ Klajeyz.csr	n:/med m) roo	-rw-rr 1 root root 11198 Apr 16 18:27 karaignor.yaml drwxr-xr-x 2 root root 8192 Apr 25 18:39 \03310m\033[01;34mKsK53-1\033[0m	444 444 400 411114 444 44 44 44 44 44 44 44 44 44 4	-rw-rr i root root 11188 Apr 16 18:27 ksrsigner.yam1 \033[72094h(kskm) root@coen:/media/HSMFD/KSK53-29 umount /media/KSRFD/

04/25/24 20:29:58

2024-04-25119:25:05+0000 2024-04-25119:25:05+0000 2024-04-25119:25:05+0000 2024-04-25119:25:05+0000 2024-04-25119:25:06+00000 2024-04-25119:25:06+00000 2024-04-25119:25:06+00000 2024-04-25119:25:06+00000 2024-04-25119:25:06+00000 2024-04-25119:25:00+00000 2024-04-25119:25:06+00000 2024-04-25119:25:06+00000 2024-04-25119:25:06+00000 2024-04-25119:255:06+000000 2024-04-25109:25506+000000 2024-04-25119:2506+00000 2024-04

ttyUSBO H2110009 011397 BBL 030 : Factory Software Verification Key : CPLD version 1.9 : Hardware revision 2870-G2 I.... EXT_POWER_DOWN ttyUSBO H2110009 011403 ABL 030 : Tamper Challenge Response Key do 0000x0 ttyUSBO Running applicationBootLoader at 0xEFDC0000 Bitmapped Change Record (most recent first); ttyUSBD Current Tamper Counts (decimal 0-255); -********************* 0×0080 0P ABL tamper records 10 0 ö 0 0 0 a 0 0 ttyUSBO Current tamper bitmaps: ttyUSB0 minstrtempTamperCount: maxstrtempTamperCount: ttyUSBO BBL CRC32: 0xDBC9B9F2 ttyUSBD ABL CRC32: 0xE7E0FA6A extampSMKTamperCount: extampIMKTamperCount: currentTamper bitmap: tempdiffTamperCount: vextoosTamperCount: vintoosTamperCount: restartTamperCount: vbboosTamperCount: lastTamper bitmap: ttyUSB0 meshTamperCount: ttyUSBO pfTamperCount: 444 ttyUSB0 ttyUSB0 ttyUSB0 ttyUSB0 ttyUSB0 t ty USBO ttyUSBO ttyUSBO ttyUSBO **LLYUSBO** ttyUSBO ttyusad ttyUSB0 ttyUSBO ttyUSBO **ttyUSBO L**tyUSB0 ttyUSB0 ttyUSBO tty USBO t ty USBO ttyusbo ttyUSB0 ttyusb0 ttyUSB0 **LLyUSB0** ttyUSB0 tty USBO ttyusBo ttyuseo. ttyUSB0 tty USBO ttyusad **ttyUSBO** ttyusBo ttyUSBC tty USBO LLYUSBO ttyUSB0 ttyUSB0 ttyUSBO tty USBO LEVUSBO ttyUSB0 LEYUSBO LtyUSBO **L**EYUSBO LEYUSBO **EEVUSBO L**tyUSBO **L**EYUSBO

ttyaudit-ttyUSB0-20240425-182359.log

-

04/25/24 20:29:58

ttyaudit-ttyUSB0-20240425-182359.log

ttyUSBO System page at phys:0000b000 user:0000b000 kern:0000b000 ttyUSBO route: writing to routing socket: Network is unreachable ttyUSB0 route: writing to routing socket: Network is unreachable ttyUSB0 tryUSBC add net default: gateway 0.0.0.0; Network is unreachable tryUSBO Cpu_alk-100000000, Sys_alk-10000000, CCB-50000000 ttyUSBO Copyright Ultra Electronics AEP. All Rights Reserved. ttyUSBD add net default: gateway ::: Network is unreachable ttyUSB0 9860 v3.4 Keyper Application - May 19 2017 15:48:58 ttyUSB0 Running oryptoApplication at 0xEBF00000 ttyUSBO Starting next program at v0015183c Starting auditd v2.0 ... started. Jumping to startup @ 0x00103784 Interface 0 configured for IPv6. Interface 0 configured for IPv4. Interface I configured for IPv6. ttyUSBO Interface 1 configured for IPv4. Running Triple DES POST Test ttyUSBO Triple DES POST Test Passed ttyUSB0 Starting K-Series Kernel ttyUSB0 Sat Nov 14 04:55:13 1970 ttyUSB0 board amp_init: 2 cpu Starting USB driver... Running DES POST Test ttyUSBO Running AES POST Test ttyUSB0 DES POST Test Passed ttyUSBO AES POST Test Passed ttyUSBO AES POST Test Passed ttyUSBO Board is P2020RDB **L**tyUSB0 **LLYUSBO** ttyUSB0 tty USBO ttyused t ttyusbo ttyUSBO t ty USBC tty USBO tty USBO ttyUSB0 ttyUSBO **LLYUSBO** LEYUSBO ttyUSB0 LLYUSBO **t**EyUSBO ttyUSBO LLYUSBO ttyUSBC I tty USBO ttyUSBO **ttyUSBO** tty USBO L LYUSBO ttyusa0 t.t.yusB0 LtyUSB0 **ttyUSBO** ttyUSB0 tty05B0 ttyUSBO tty USB0 **ttyUSBO** tty USBO t ty USBO t.tyUSB0 tty USBO tty USBO 2024-04-25T18:25:07+0000 2024-04-25T18:25:07+0000 2024-04-25T18:25:07+0000 2024-04-25T18:25:07+0000 2024-04-25T18:25:07+0000 2024-04-25T18:25:07+0000 2024-04-25T18:25:07+0000 2024-04-25T18:25:07+0000 2024-04-25T18:25:07+0000 2024-04-25T18:25:09+0000 2024-04-25T18:25:10+0000 2024-04-25T18:25:10+00000 2024-04-25T18:25:10+00000 2024-04-25T18:25:10+00000 2024-04-25T18:25:10+00000 2024-04-25T18:25:10+00000 2024-04-25T18:25:10+00000 2024-04-25T18:25:10+00000 2024-04-25T18:25:10+00000 2024-04-25T18:25:10+000000 2024-04-25T18:25:10+0000000000000000 2024-04-25T18:25.06+0000 2024-04-25T18:25.07+0000 2024-04-25T18:25.07+0000 2024-04-25T18:25.07+0000 2024-04-25T18:25.07+0000 2024-04-25T18:25:06+0000 2024-04-25T18:25:12+0000 2024-04-25T18:25:11+0000 2024-04-25T18:25:11+0000 2024-04-25T18:25:11+0000 2024-04-25T18:25:12+0000 2024-04-25T19:25:12+0000 2024-04-25T19:25:12+0000 2024-04-25T18:25:12+0000 2024-04-25T18:25:12+0000 2024-04-25T18:25:12+0000

 \sim



2024-04-25T18:25.12+0000 2024-04-55T18:25.12+0000 2024-04-55T18:25.12+0000 2024-04-25T18:25.12+0000 2024-04-25T18:25.11+0000 2024-04-25T18:25113+0000 2024-04-25T18:25113+0

ttyUSB0 ttyUSB0 Audit on 14/11/1970 04:55:16 00100008 Serial Number H2110009 192Mb/256Mb 127Mb/128Mb 107Kb/128Kb 11.6b 596b 112b ttyUSBO Running RandomGen POST Test ttyUSB0 Running RIPEMD160 POST Test RandomGen POST Test Passed RIPEMD160 POST Test Passed ttyUSB0 Running HMAC POST Tests ttyUSB0 ttyUSBO Running SHA1 POST Test ttyUSBO Running SHAZ POST Test ttyUSBC SHAI POST Test Passed ttyUSBO SHA2 POST Test Passed ttyUSB0 Running SEED POST Test ttyUSBO Running DSA POST Test ttyUSBO ctyUSBO HMAC POST Tests Passed ttyUSBO Running RSA POST Test SEED POST Test. Passed ttyUSB0 RSA FOST Test Passed ttyUSBO DSA POST Test Passed ttyUSBG Running ECC POST Test ECC POST Test Passed ttyUSBO RedStore (free/total) ttyUSBO Flash (free/total) RAM (free/total) ttyUSBO Keyper 9860-2 black store statistics .tyUSHC Memory Usage: other ttyUSB0 tryush0 ttyusad ttyUSB0 ttyUSB0 ttyUSB0 ttyUSB0 i ttyUSB0 i tty USBO **ttyUSBO ttyUSED** ttyUSBO ttyUSB0 1 ttyUSB0 1 **LEYUSBO** t.tyusbo tty USB0 LEYUSBO tyUSB0. tyUSB0 ttyUSB0 ttyUSB0 LLYUSBO LLYUSBO LLYUSBO tryUSB0 LEVUSED ttv0SB0 **LYUSBO** Lty USBO teyUSB0 LtyUSB0 tty USBO ttyUSB0 LEYUSBO



MAC/IF address(es): 00:50:6C:00:C9:4F / 192.168.1.2/24 , 2001::1:2e0:6cff:fe00:c94F/64 MAC/IF address(es): 00:E0:6C:00:C9:4E / 192.168.0.2/24 , 2001::2e0:6cff:fe00:c94e/64 ttyUSB0 Audit on 14/11/1970 05:03:37 0020069 478000007F2D2972 ttyUSB0 Audit on 14/11/1970 05:02:35 00200069 478000007FAD2972 ttyUSB0 Audit on 14/11/1970 05:03:01 00200069 3880000049E32A76 ttyUSBC ttyUSBC HmcListener: Created IPv4 socket 12 on port 3000. ttyUSBC ttyUSBD ttyUSBO TepListener: Created IPv4 socket 19 on port 5000. utyUSBO HmcListener: Created IPv6 socket 13 on port 3000. ttyUSHC Audit on 14/11/1970 04:55:17 00100003 ttyUSB0 ttyUSB0 Default Gateway(s): 0.0.0.0 :: 034 ttyUSBD Network Configuration: tty0SBO SCR Firmware Version: ttyUSBO ttyUSBO BBL 030 ABL 021 App IPv4: enabled IPv4: enabled IPv6: enabled ttyUSBO Software Versions: IPv6: enabled HSM Port D: 05000 HSM Port 1: 03000 ttyUSBC OROS-R2.99-R1.20 Interface 1: Interface 0: ttyUSB0 CPLD Version: ttyUSB0 1.9 ttyUSB0 ttyUSB0 Lty0SB0 Lty0SB0 ttyUSB0 ttyUSB0 ttyUSB0 tty USBO ttyUSB0 tty USB0 tty USB0 ttyUSB0 ttyUSB0 tty0SB0 ttyUSB0 tty USBC **L**tyUSBO LLYUSBO LLYUSBO ttyUSB0 ttyUSB0 **L**LYUSBO ttyusbo ttyUSB0 ttyUSB0 ttyUSBG **L**tyUSB0 *ttyUSBO* LtyUSB0 tty USBO ty USBO **LEVUSBO** tyUSBO **tyUSBO** LYUSBO **ttyuSB0 ttyUSBO** tty USBO **ttvuSBO LEYUSBO** ttyUSBO 2024-04-25T18:25:13+0000 2024-04-25119.25.13+0000 2024-04-25719.25.13+0000 2024-04-25719.25.13+0000 2024-04-25719.25.13+0000 2024-04-25719.25.13+0000 2024-04-25719.25.13+0000 2024-04-25719.25.13+0000 2024-04-25719.25.13+0000 2024-04-25719.25.13+0000 2024-04-25118;25:13+0000 2024-04-25T18:25:13+0000 2024-04-25T18:25:13+0000 2024-04-25T18:25:13+0000 2024-04-25T18:25:13+0000 2024-04-25T18:25:14+0000 2024-04-25T18:25:14+0000 2024-04-25118:25:13+0000 2024-04-25718:25:13+0000 2024-04-25718:25:13+0000 2024-04-25718:25:13+0000 2024-04-25119:25:13+0000 2024-04-25119:25:13+0000 2024-04-25119:25:13+0000 2024-04-25T18:32:31+0000 2024-04-25T18:32:57+0000 2024-04-25T18:32:57+0000 2024-04-25T18:33:33+0000 2024-04-25T18:33:33+0000 2024-04-25T18:33:35+0000 2024-04-25T18:33:35+0000 2024-04-25T18:33:35+0000 2024-04-25T18:33:35+0000 2024-04-25718:32:31+0000 2024-04-25T18:33:35+0000



ttyUSBO ttyUSBO H1903D18 D11397 BBL 030 : Factory Software Verification Key : CPLD version 1.9 : Hardware revision 2870-G2 socket 21 from address 192.168.0.1. ttyUSB0 TopListener: Accepted connection on socket 23 from address 192,168.0.1. CryptoTask: Closing connection on socket 21 from address 192.168.0.1. ttyUSBO CryptoTask: Closing connection on socket 23 from address 192.168.0.1. ttyUSBO H1903018 011403 ABL 030 : Tamper Challenge Response Key ttyUSB0 ttyUSB0 Audit on 14/11/1970 05:22:26 00200069 3880000049£32A76 ttyUSB0 Audit on 14/11/1970 05:22:52 00200069 478000007F2D2972 ttyUSB0 ttyUSBG Audit on 14/11/1970 05:23:16 00200069 478000007FAD2972 tryUSBO Tepliatener: Created IPv6 socket 20 on port 5000. TopListener: Closed IPv4 socket 19 on port 5000. ttyUSBO ttyUSBO Tephistener: Closed IPV6 socket 20 on port 5000. C×EFDC0000 ttyUSB0 Audit on 14/11/1970 05:03:39 00100002 ttyUSBQ Current Tamper Counts (decimal 0-255): ttyUSB0 Audit on 14/11/1970 05:23:20 00100003 ttyUSBO Tophistener: Accepted connection on *************** *** ttryUSBO 穿著穿着的窗窗的复数的复数的现在分词的复数的复数的复数的复数的复数 Running applicationBootLoader at ABL tamper records ttyUSB0 BBL CRC32: 0xDBC9B9F2 ttyUSB0 ttyUSBC ABL CRC32: 0xE7E0FA6A 144 ttyUSB0 ttyUSB0 **EEYUSBO** tty05B0 **t**tyusbo **ttyUSBC** ttyusad tty USB0 ttvUSB0 **ttyUSBO** LLYUSBO t.tyUSBO ttyused ttyUSBO ttyusad ttyusao ttyUSBO tty USBO tty USBO ttyUSBO ttyUSB0 ttyused ttyUSBO ttyUSB0 ttyusao ttyUSB0 LCYUSBO ttyUSB0 ttyUSBO **ttyUSBO** tty05B0 t.t.yusao ttyUSB0 t tyus B0 LEVUSBO tty USBO ttyUSBO **ttyUSBO** L LYUSBO LEYUSBO t tyused 2024-04-25118.33.35-0000 2024-04-25118.33.35-0000 2024-04-25118.33.35-0000 2024-04-25118.33.35-0000 2024-04-25118.35.15-0000 2024-04-25118.36.16-0000 2024-04-25118.36.16-0000 2024-04-25118.36.16+0000 2024-04-25118.36.16+0000 2024-04-25118.36.16+0000 2024-04-25118.36.16+0000 2024-04-25118.36.16+0000 2024-04-25118.36.16+0000 2024-04-25118.36.16+0000 2024-04-25118.36.16+0000 2024-04-25118.36.16+0000 2024-04-25118.36.16+0000 2024-04-25118.36.16+0000 2024-04-25118.36.16+0000 2024-04-25118.36.16+0000 2024-04-25T18:39:32-40000 2024-04-25T18:39:32-40000 2024-04-25T18:59:32-40000 2024-04-25T18:52:22-40000 2024-04-25T18:52:22-40000 2024-04-25T18:52:148-0000 2024-04-25T18:52:148-0000 2024-04-25T18:53:16-0000 2024-04-25T18:53:16-0000 2024-04-25T18:53:16-0000 2024-04-25T18:53:16-0000 2024-04-25T18:53:16-0000 2024-04-25T18:53:16-0000 2024-04-25T18:53:16+0000 2024-04-25119:18:49+00000 2024-04-25119:18:49+00000 2024-04-25119:18:49+00000 2024-04-25119:18:49+00000 2024-04-25119:18:49+00000 2024-04-25T18:33:35+0000 2024-04-25T18:33:35+0000 2024-04-25T18: 33: 35+0000

tty USBO



ttyUSB0 ttyusad tty USBO **L**LYUSBO ttyUSB0 **L**tyUSBO tty USBO ttyUSBO ttyUSB0 ttyUSB0 ttyused LEYUSBO tty USBO **tLVUSBO L**LYUSBO **L**LYUSBO ttyUSBO ttyusad ttyUSBO ttyUSBO **ttyUSBO** tty USB0 **CEYUSBO** ttyUSBO t ty USBO ttyUSBO ttyUSBO tty USBO tty0SB0 tty used tty USBO ttyUSB0 **LEYUSBO** ttyUSB0 ttyUSBO LEVUSBO ttyUSBO THORSEN + ttyUSB0 t y USBO **ttyUSB0 L**LYUSBO ttyUSB0 LtyUSB0 2024-04-25119:18:49+0000 2024-04-25T19:18:49-0000 2024-04-25T19:18:49-0000 2024-04-25T19:18:49-0000 2024-04-25T19:18:49-0000 2024-04-25T19:18:49-0000 2024-04-25T19:18:49-0000 2024-04-25T19:18:49-0000 2024-04-25T19:18:49+0000 2024-04-25T19:18:49+0000 2024-04-25T19:18:49+0000 2024-04-25T19:18:49-0000 2024-04-25T19:18:49-0000 2024-04-25T19:18:49+0000 2024-04-25T19:18:49+0000 2023-04-25719:18:49-0000 2023-04-25719:18:49-0000 2023-04-25719:18:49-0000 2023-04-25719:18:49-0000 2023-04-25719:18:51-0000 2023-04-25719:18:51-0000 2023-04-25719:18:51-0000 2023-04-25719:18:51-0000 2024-04-25T19:18:49+0000 2024-04-25T19:18:49+0000 2024-04-25719:18:49+0000 2024-04-25119-18:52+0000 2024-04-25119-18:52+0000 2024-04-25119:18:52+0000 2024-04-25119:18:52+0000 2024-04-25119:18:52+0000 2024-04-25119:18:52+0000 2024-04-25119:18:52+0000 2024-04-25TI9:19:49+0000 2024-04-25TI9:19:49+0000 2024-04-25T19:18:51+0000 2024-04-25T19:18:51+0000 2024-04-25T19:18:51+0000 2024-04-25T19:18:51+0000 2024-04-25T19:18:51+0000 2024-04-25T19:18:51+0000 2024-04-25T19:18:52+0000 2024-04-25T19:18:52+0000 2024-04-25T19:18:52+0000 2024-04-25719:18:51+0000 2024-04-25T19:18:52+0000 2024-04-25T19:18:52+0000 2024-04-25T19:18:52+0000 2024-04-25T19:18:52+0000

.... 1.... EXT_POWER_DOWN ttyUSBO System page at phys:00000000 user:00000000 kern:00000000 0×0000 0P 40 0000×0 ttyUSBO Copyright Ultra Electronics AEP. All Rights Reserved. ttyUSB0 Cpu_clk-1000000000, sys_clk=100000000, CCB=50000000 ttyUSBO Bitmapped Change Record (most recent first); tryUSBO Running cryptoApplication at 0xEBF00000 do 0800×0 ttyUSBO Starting next program at v0015183c Jumping to startup @ 0x00103784 0 0 D 5 0 0 -0 6 ttyUSB0 Current tamper bitmaps: tryUSB0 Sat Jan 11 03:26:43 1975 maxstrtempTamperCount: ttyUSBO minstrtempTamperCount: ttyUSBO Starting K-Series Kernel ttyUSBO extampIMKTamperCount: currentTamper bitmap: extampSMKTamperCount: ttyUSB0 vextoosTamperCount: ttyUSB0 tempdiffTamperCount: ttyUSBC board_smp_init: 2 cpu ttyUSBO vintoosTamperCount: ttyUSB0 vbboosTamperCount: restartTamperCount: lastTamper bitmap: ttyUSB0 meshTamperCount: ttyUSBO Board is P2020RDB ttyUSB0 pfTamperCount:

1.4



route: writing to routing socket: Network is unreachable route: writing to routing socket: Network is unreachable add net default: gateway 0.0.0.0: Network is unreachable ttyUSBO add net default: gateway ::: Network is unreachable 9960 v3.4 Keyper Application - May 19 2017 15:48:58 ... started. Interface 0 configured for IPv4. Interface 0 configured for IPv6. Interface I configured for IPv6. Interface 1 configured for IPv4. ttyUSB3 Running Triple DES POST Test tryUSB0 Triple DES POST Test Passed Running RandomGen POST Test Running RIPEMD160 POST Test ttyUSBO RandomGen POST Test Passed Starting USB driver ... ttyUSBO Starting auditd v2.0 ttyUSBO Running SHA2 POST Test Running SHAI POST Test ttyUSB0 Running DES POST Test ttyUSBO Running AES POST Test SHAZ POST Test Passed SHAI POST Test Passed Running SEED POST Test DES POST Test Passed SEED POST Test. Passed ttyUSB0 AES POST Test Passed ttyUSBO Running RSA POST Test ctyUSBO Running DSA POST Test ttyUSBG RSA POST Test Passed ttyUSBC DSA POST Test Passed ttyused ttyused ttyUSB0 ttyUSB0 ttyUSB0 ttyUSB0 ttyUSB0 ttyUSB0 **ttyUSBO** ttyUSBO ttyUSBO ttyUSBO tty USBO ttyUSBO ttyUSB0 ttyusbo LtyUSB0 tty USBO ttyUSED ttyusad **t**ty**USBO** LEVUSB0 ttyUSB0 **ttyUSBO ttyUSBO** LEYUSBO ttyUSB0 ttyUSBO ttyUSB0 ttyUSB0 t.tyUSB0 **LLVUSBO** ttyUSB0 ttyUSB0 *ttyUSBO* tty USBO tty USB0 tty USB0 LtyUSB0 ttyUSBO **ttyUSBO ttyUSBO** ttyUSBO tty USBO LtyUSB0 ttyusbo ctyUSB0 tty USBO ttyUSB0 tty USBO tty USBO 2024-04-25719.18:32+0000 2024-04-25719.18:32+0000 2024-04-25719.18:53+0000 2024-04-25719.18:53+0000 2024-04-25719.18:53+0000 2024-04-25719.18:53+0000 2024-04-25719.18:53+0000 2024-04-25719.18:54+0000 2024-04-25719.18:54+0000 2024-04-25719.18:54+0000 2024-04-25719.18:54+0000 2024-04-25719.18:54+0000 2024-04-25719.18:54+0000 2024-04-25T19:18:34-0000 2024-04-25T19:18:54-0000 2024-04-25T19:18:54-0000 2024-04-25T19:18:54-0000 2024-04-25T19:18:54-0000 2024-04-25T19:18:54-0000 2024-04-25T19:18:54-0000 2024-04-25T19:18:54-0000 2024-04-25T19:18:54-0000 2024-04-25T19:18:54-0000 2024-04-25T19:18:56+0000 2024-04-25T19:18:56+0000 2024-04-25T19:18:56+0000 2024-04-25T19:18:56+0000 2024-04-25T19:18:56+0000 2024-04-25719:18:56+0000 2024-04-25719:18:56+0000 2024-04-25719:18:56+0000 2024-04-25719:18:56+0000 2024-04-25719:18:56+0000 2024-04-25719:18:56+0000 2024-04-25719:18:56+0000 2024-04-25T19:18:5640000 2024-04-25T19:18:5640000 2024-04-25T19:18:5640000 2024-04-25T19:18:5640000 2024-04-25T19:18:5640000 2024-04-25T19:18:5640000 2024-04-25T19:18:52+0000 2024-04-25T19:18:56+0000 2024-04-25T19:18:56+0000 2024-04-25T19:18:56+0000 2024-04-25719:18:54+0000 2024-04-25719:18:56+0000 2024-04-25119:18:56+0000 2024-04-25T19:18:56+0000 2024-04-25719:18:56+0000 2024-04-25T19:18:56+0000 2024-04-25T19:18:56+0000 18:56+0000 2024-04-25T19:18:56+0000 2024-04-25T19:18:56+0000 18:56+0000 2024-04-25T19:18:56+0000 2024-04-25T19:18:56+0000 2024-04-25T19:18:56+0000 2024-04-25719: 2024-04-25T19:

F~-



201767070-77404707-0700 (ii) immi (ii)	RIPEMD160 POST Test Passed		tryuse	ttyUSBO Running ECC POST Test	tryusad try back that house	ttyUSHO Running HMAC POST Tests		ttyusid iMAC POST Tests Passed	turians Audit on 11/1/1975 As-26-47 Annuaries	ttyusad	ttyUSBO		tury Cost Carter 1960-2 Serial Number H1903018	ttyused	tervised warmen income	tryUSBO tranul based	ttyUSBO RAM (free/total) 192Mb/256Mb	tryUSBO	ttyUSBO black store 596b		tructors scatterics 112b tructors	tryUSB0 other 116b	tryUSB0 RedStore (free/total) 107Kb/128Kb	tryUSBD tryUSBD	ttyUSBO	ttyUSBO Network Configuration:	tryused	trybox include us	ttyUSB0 IPv4: enabled	tryUSBD	tructed it was capited	LTV0390 MAC/IF address(es): D0:E0:6C:0D:C4:9D / 192 168 n 2/24 2001	tytusmo interface 1:	tryusuo tryusuo tryuseo Tevd·	ttyUSB0 IPv6: enabled		tryUSBU MAC/IP address(ss): 00:20:6C:00:C4:9E / 192.168.1.2/24 , 2001:11:200:6cff:fa00:c49e/64	HSM	ttyUSBO HSM Port 1: 03000	regroup der quickey (s/ : 0.0.5.1 : t.	ttyusac	ttyUSBO
		LEYUSBU Mediterr	LEYUSBO							tyusao	tyusao	tyusau + viisan	Keyper 9860-2	tyusaq	tydsad	LyUSBO								VUSBD	LYUSBO	.yUSBO Network Configuratio												HSM	HSM Port 1:		(USBO	-0SBD
	2024-04-25719:18:56+0000			2024-04-25T19:18:56+0000			2024-04-25T19:18:56+0000 +				2024-04-22119:18:56+0000			2024-04-25T19:18:57+0000 t				2024-04-25T19:18:57+0000 t		2024-04-25T19:18:57+0000 ti 2024-04-25T19:18:57+0000			2024-04-25T19:18:57+0000 tt			2024-04-25719:18:57+0000 to				2024-04-25119:18:57+0000 Et			2024-04-25T19:18:57+0000 Et		-	2024-04-25T19:18:57+0000 tt			2024-04-25T19:18:57+0000 tt			2024-04-25719:18:57+0000 +++



ttyUSB0 tty USB0 ttyUSBO ttyUSB0 ttyUSB0 ttyUSB0 ttyUSB0 tty USBO tty USBO tty USBD tty USB0 ttyUSBO t ty USBO tty USB0 **ttyUSBO** ttyused ttyUSBO ttyUSBC tty USBO tty USB0 **LLYUSBO L**tyUSBO ttyUSBO tty USBO ttyused tty USBO ttyUSBO ttyUSB0 ttyUSB0 LEYUSBO **ttyUSBO** ttyUSBO ttyUSBO LLYUSBO LLYUSBO ttyusao ttyUSBO **t**ty**U**SBO LtyUSB0 tty USBO **ttyUSBO** tty USBO **ttyUSBO C**tyUSBO CEVUSED CLYUSHO tty USB0 2024-04-25119:18:57+0000 2024-04-25119-18:57-0000 2024-04-25119-18:57-0000 2024-04-25119-18:57-0000 2024-04-25119-18:57-0000 2024-04-25119-18:57-0000 2024-04-25119-18:57-0000 2024-04-25119-18:57-0000 2024-04-25119:18:57-0000 2024-04-25119:18:57-0000 2024-04-25T19:45:24-0000 2024-04-25T19:45:24-0000 2024-04-25T19:45:24-0000 2024-04-25T19:45:43-0000 2024-04-25T19:45:43-0000 2024-04-25T19:45:43-0000 2024-04-25T19:45:43-0000 2024-04-25T19:45:43-0000 2024-04-25T19:45:43-0000 2024-04-25T19:45:43-0000 2024-04-25T19:45:43-0000 2024-04-25T19,45,43+49000 2024-04-25T19,45,43+40000 2024-04-25T19,45,43+40000 2024-04-25T19,45,43+40000 2024-04-25T19,45,43+0000 2024-04-25T19,45,43+0000 2024-04-25T19,45,43+0000 2024-04-25T19,45,48+0000 2024-04-25719:18:57+0000 2024-04-25T19:44:34+0000 2024-04-25T19:44:34+0000 2024-04-25T19:44:34+0000 2024-04-25T19:44:58+0000

ttyUSB0 ttyUSB0 ttyUSB0 Audit on 11/1/1975 03:52:24 00200066 478000094Ab2972 ttyUSB0 Audit on 11/1/1975 03:52:49 0020006b 4780000080ED2972 ttyUSB0 Audit on 11/1/1975 03:53:15 0020006b 4780000095202972 tty0380 HmcListener: Created IPv4 socket 12 on port 3000. HmcListener: Created IPv6 socket 13 on port 3000. ttyUSB0 Audit on 11/1/1975 03:26:47 00100003 ttyUSBO Klajeyz, RSA, FIPS, 2048, wt, svedmvu ttyUSBO Kmrfl3b,RSA,FIPS,2048,wt,sd ttyUSB0 BBL 030 ABL 021 App 034 ttyUSBO SCR Firmware Version: ttyUSBO Software Versions: RSA, 2048, Private, 2 ttyUSB0 OROS-R2.99-R1.20 ttyUSB0 ttyUSB0 CPLD Version: ttyUSBO Key Details Key Summary ttyUSB0 ttyUSB0 1.9



tryUSBD Audit on 11/1/1975 04:01:46 00200025 0090002710F156D ttyUSB0 Audit on 11/1/1975 03:55:38 0020004f Kmrf13b ttyUSBO RSA, 2048, Private, 1 ttyUSBO ttyUSBO RSA, 2048, Private, 1 ttyUSBO Key Details ttyUSBO Key Summary ttyUSBO Key Details ttyUSB0 Key Summary tty USB0 ttyUSB0 **ttyUSBO** ttyusbo ttyUSB0 ttyUSB0 tty USBO LtyUSB0 ttyUSB0 P ttyUSBO tty USBO tty USBO ttyUSB0 ttyUSB0 ttyUSBO ttyUSBO ttyUSB0 ttyUSB0 tty USBO ttyUSBO ttyusad ttyUSBO **L**LYUSBO ttyUSB0 ttyUSB0 ttyUSB0 ttyUSBO ttyUSBO ttyUSB0 ttyUSB0 ttyUSBO ttyusad LLYUSEO *ELYUSBO* t ty USBO t tyus BO ttyUSB0 tty USBO tty USB0 tty USB0 LEYUSB0 CLYUSBO. ttyUSB0 ttyUSB0 **ttyUSB0** ttyUSB0 tvUSB0 LEVUSBO t ty USBO 2024-04-25119:48:23-0000 2024-04-25119:48:23-0000 2024-04-25119:48:23-0000 2024-04-25119:48:23-0000 2024-04-25119:48:23-0000 2024-04-25119:48:23-0000 2024-04-25119:48:23-0000 2024-04-25119:48:23-0000 2024-04-25119:48:23-0000 2024-04-25119:48:23-0000 2024-04-25119:48:23-0000 2024-04-25119:48:23-0000 2024-04-25119:48:23-0000 2024-04-25119:48:23-0000 2024-04-25119:48:28-0000 2024-04-25T19:48.28+0000 2024-04-25T19:48.28+0000 2024-04-25T19:48.28+0000 2024-04-25T19:48.28+0000 2024-04-25T19:48.28+0000 2024-04-25T19:48.28+0000 2024-04-25T19:49:11+0000 2024-04-25119:51:44-0000 2024-04-25719:51:44-0000 2024-04-25719:51:44-0000 2024-04-25719:51:44-0000 2024-04-25719:51:44-0000 2024-04-25719:51:44-0000 2024-04-25719:51:47+0000 2024-04-25719:51:47+0000 2024-04-25T19:47:48+0000 2024-04-25T19:48:23+0000 2024-04-25719:47:48+0000 2024-04-25T19:51:48+0000 2024-04-25T19:51:48+0000 2024-04-25T19:51:48+0000 2024-04-25T19:51:48+0000 2024-04-25T19:53:56+0000 2024-04-25T19:53:56+0000 2024-04-25T19:51:44+0000 2024-04-25T19:51:44+0000 2024-04-25T19:51:44+0000 2024-04-25T19:49:11+0000 2024-04-25T19:51:07+0000 2024-04-25719:51:07+0000 2024-04-25T19:51:44+0000 2024-04-25T19:51:44+0000 2024-04-25T19:51:44+0000 2024-04-25T19:51:44+0000 2024-04-25T19:51:44+0000 2024-04-25719:51:44+0000 2024-04-25T19:51:48+0000 2024-04-25T19:51:48+0000 2024-04-25T19:51:48+0000 2024-04-25T19:51:48+0000 2024-04-25T19:51:48+0000 2024-04-25T19:51:48+0000 2024-04-25T19:51:48+0000 2024-04-25T19:51:48+0000 2024-04-25T19:51:48+0000 2024-04-25T19:51:48+0000

ttyOSB0 Audit on 11/1/1975 03:58:57 00200014 3F400031F88AZA777 1200 ttyUSBO Audit on 11/1/1975 03:57:01 0020001c ttyUSBO ttyUSBC Klajeyz, RSA, FIPS, 2048, wt, svedmvu Klajeyz, RSA, FIPS, 2048, wt, svedmvu



ttyUSBO Key Summary ttyUSB0 tty USBO ttyUSB0 ttyUSBO ttyusad ttyUSB0 ttyUSBO t ty USBO tty USBO ttyUSBO ttyUSB0 ttyUSBO ttyUSBO tty USB0 ttyUSBO tty USBO ttyUSBO ttyusbo ttyUSBO ttyUSB0 ttyUSBO tty USBO tty USBO tty USB0 tty USBO ttyUSBO ttyUSB0 **LEYUSBO EEVUSBO** tty USBO ttyUSBO L VUSBO ttv0SB0 **ttyUSBO** tty USBO tty USBO LEYUSBO LtvUSB0 **ttyUSBO** tty USBO **tyusBO ttyUSBO** 2024-04-25T19:54:28+000 2024-04-25T19:54:28+000 2024-04-25T19:54:23+000 2024-04-25T19:55:17+0000 2024-04-25T19:55:17+0000 2024-04-25T19:55:41+0000 2024-04-25T19:55:41+0000 2024-04-25T19:55:44-0000 2024-04-25T19:55:44-0000 2024-04-25T19:55:44-0000 2021-04-25119-57-32-0000 2024-04-25119-57-32-0000 2024-04-25119-57-32-0000 2024-04-25119-57-32-0000 2024-04-25119-57-32-0000 2024-04-25119-57-32-0000 2024-04-25119-57-32-0000 2024-04-25119-57-32-0000 2024-04-25119-57-32-0000 2024-04-25119-57-32-0000 2024-04-25119:57:32-0000 2024-04-25119:57:32-0000 2024-04-22119:57:32-0000 2024-04-22119:57:33+0000 2024-04-25119:57:33+0000 2024-04-25119:57:39+0000 2024-04-25119:57:39+0000 2024-04-25T19:57:3240000 2024-04-25T19:57:3240000 2024-04-25T19:57:3240000 2024-04-25T19:57:3240000 2024-04-25T19:57:3240000 2024-04-25720:03:54-0000 2024-04-25720:04:36-0000 2024-04-25720:04:36-0000 2024-04-25720:05:19-0000 2024-04-25720:05:19-0000 2024-04-25720:05:19-0000 2024-04-25720:05:05-00000 2024-04-25T19:57:05+0000 2024-04-25T19:57:05+0000 2024-04-25T19:57:05+0000 2024-04-25T19:57:39+0000 2024-04-25T19:57:39+0000 2024-04-25T19:57:39+0000 2024-04-25T19:57:39+0000 2024-04-25T19:57:39+0000 2024-04-25T19:57:05+0000 2024-04-25T19:57:05+0000 2024-04-25T19:57:05+0000 2024-04-25T19:57:32+0000 2024-04-25T19:54:28+0000 2024-04-25119:57:39+0000 2024-04-25119:57:39+0000 2024-04-25T19:57:39+0000 2024-04-25T19:57:39+0000 2024-04-25T19:57:39+0000 2024-04-25720:06:05+0000 2024-04-25720:06:48+0000 2024-04-25720:06:48+0000 2024-04-25T19:57:39+0000 2024-04-25T19:57:39+0000 2024-04-25T20:07:40+0000 2024-04-25T20:09:26+0000 2024-04-25T20:10:51+0000 2024-04-25T20:10:51+0000 2024-04-25T20:10:51+00000 2024-04-25T20:11:40+0000 2024-04-25T20:11:40+0000 2024-04-25119:57:39+0000 2024-04-25720:07:40+0000 2024-04-25720:08:26+0000

ttyUSBD Audit on 11/1/1975 04:03:07 00200025 0090000277CF1560 ttyUSB0 Audit on 11/1/1975 04:02:19 00200025 00800002928F1560 ttyUSB0 Audit on 11/1/1975 04:02:44 00200025 0880004A79F3296D Audit on 11/1/1975 04:03:32 00200025 008000029E8F1560 Audit on 11/1/1975 04:04:55 00200015 3F400031F88A2A77 ttyUSB0 Audit on 11/1/1975 04:11:45 0020002d 3F400033C8CA2A77 ttyUSB0 Audit on 11/1/1975 04:13:09 0020002d 3F400031D68A2A77 ttyUSB0 Audit on 11/1/1975 04:12:27 0020002d 3F400031D60A2A77 ttyUSBO Audit on 11/1/1975 54:14:39 0020002d 3F400033690A2A77 LLYUSBO Audit on 11/1/1975 04:15:30 0020002d 3F4000335CCA2A77 LtyUSBO Audit on 11/1/1975 04:13:55 0020002d 3F4000335F8A2A77 ttyUSB0 ttyUSB0 Audit on 11/1/1975 04:19:29 0020002d 3F400033C94AZA77 try05B0 Audit on 11/1/1975 04:16:16 0020002d 3F400033624A2A77 ttyuSB0 Audit on 11/1/1975 04:04:55 00200016 Kmrf13b ttyUSB0 Audit on 11/1/1975 04:03:35 00200005 ttyUSB0 Audit on 11/1/1975 04:04:55 00200018 tryUSB0 Audit on 11/1/1975 04:18:42 00200007 ttyUSBO Klajeyz, RSA, FIPS, 2048, wt, svedmvu Kmrfl3b,RSA,FIFS,2048,wt,sd ttyUSBO RSA,2048, Private,2 ttyUSBO Key Details



2024-04-25720:12:21+0000 2024-04-25720:12:29+0000 2024-04-25720:12:59+0000 2024-04-25720:12:59+0000 2024-04-25720:11:41+0000 2024-04-25720:11:41+0000 2024-04-25720:11:41+0000 2024-04-25720:11:42:+0000 2024-04-25720:11:12:04+0000 2024-04-25720:15:04+0000 2024-04-25720:15:04+0000 2024-04-25720:15:04+0000 2024-04-25720:15:04+0000 2024-04-25720:15:28+0000 2024-04-25720:15:28+0000 2024-04-25720:17:52+0000 2024-04-25720:17:52+0000 2024-04-25720:17:52+0000 2024-04-25720:17:52+0000 2024-04-25720:17:52+0000 2024-04-25720:17:52+0000 2024-04-25720:17:52+0000 2024-04-25720:17:52+0000 2024-04-25720:17:52+0000 2024-04-25720:20:19+0000 2024-04-25720:20:19+0000 2024-04-25720:20:19+0000 2024-04-25720:20:19+0000 2024-04-25720:20:19+0000 2024-04-25720:20:10+0000 2024-04-25720:20:10+0000 2024-04-25720:20:10+0000 2024-04-25720:20:10+0000 2024-04-25720:20:10+0000 2024-04-25720:20:10+0000 2024-04-25720:20:10+0000 2024-04-25720:20:20+0000 2024-04-25720:20+0000 2024-04-25720:20+0000 2024-04-25720:20:20+0000 2024-04-25720:20+0000 2024-04-25720:20+0000 2024-04-25720:20+0000 2024-04-25720:20+0000 2024-04-25720:20+0000 2024-04-25720:20+0000 2024-04-25700 2024-04-25720:20+0000 2024-04-25720:20+0000 2024-04-25700 2024-04-25700 2024-04-25700 2024-04-25700 2024-04-25700 2024-04-25700 2024-04-25700 2024-04-25700 2024-04-25700 2024-04-25700 2024-04-25700 2024-04-25700 2024-04-25700 2024-04-25700 2024-04-25700 2024-04-25700 2024-04-25700 2024-04-25700 2024-04-257000 2024-04-25700 20

ttyUSB0 Audit on 11/1/1975 04:20:12 0020002d 3F400031D64A2A77 ttyUSB0 Audit on 11/1/1975 04:20:50 0020002d 3F4000335FCA2A77 tryUSBO Audit on 11/1/1975 04:22:11 0020002d 3f4000335C8A2A77 ttyUSBO Audit on 11/1/1975 04:21:31 0020002d 3F400033B68A2A77 ttyUSB0 Audit on 11/1/1975 04:22:55 002002d 3F4000335D0A2A77 ttyUSBC ttyUSBD Audit on 11/1/1975 04:23:32 002002d 3F4000335D4A2A77 ttyUSBC Audit on 11/1/1975 04:28:09 0020002d 0880004A79F3296D ttyUSB0 tty0580 Audit on 11/1/1975 04:28:43 0020024 008000029E8F1560 ttyUSB0 Audit on 11/1/1975 04:29:19 00200024 00800002904F156D Audit on 11/1/1975 04:29:56 0020002d 00800002710F156D ttyUSB0 Audit on 11/1/1975 04:30:34 0020002d 00800002928F156D tty USB0 Audit on 11/1/1975 04:31:12 0020002d 00800002770EF156D ttyUSBD Audit on 11/1/1975 04:32:52 0020002d 0880004A7C73296D ttyUSB0 Audit on 11/1/1975 04:35:24 0020002d 004000017B9A026C ttydSB0 Audit on 11/1/1975 04:36:02 0020002d 008000028F8F156D Audit on 11/1/1975 04:36:38 0020002d 008000028F4F156D ttyUSBG Audit on 11/1/1975 04:37:12 0020002d 00800002900F1560 ttyUSB0 :tyUSB0 Audit on 11/1/1975 04:37:49 0020002d 008000028FCF156D ttyUSB0 Audit on 11/1/1975 04:25:42 00200007 ttyUSB0 ttyUSB0 ttyUSB0 ttyUSBO



HSMFD SHA-256 HASH

find -P /media/HSMFD/ -type f -print0 | LC_COLLATE=POSIX sort -z | xargs -0 cat | sha2wo
rdlist

SHA-256: 01cf6b152bf1f5c8dfc9dfef0b3c06b2e7eba689abc3709c059542892e6f6fe0 PGP Words: absurd Saturday glitter bifocals briefcase vacancy vapor retrieval talon retros pect talon unravel alone crossover afflict pioneer transit underfoot rematch matchmaker rhy thm replica guidance October adult Montana crowfoot matchmaker buzzard hemisphere gremlin t obacco

Act 6: Secure Hardware

The CA will secure the ceremony hardware to prepare it for storage by performing the steps below:

- Copy the HSMFD contents
- Print log information
- Place the equipment and Crypto Officer credentials inside of TEBs Along with IW, escort SSC1 and equipment cart into Tier 5 (Safe Room) to return equipment to Safe #1
- Along with IW, escort SSC2 and COs into Tier 5 (Safe Room) to return Crypto Officers' credentials to Safe #2

Stop Logging the Serial Output and the Terminal Session

Step	Activity	Initials	Time
6.1	 CA performs the following steps to stop logging: a) Perform the following steps using the HSM Output terminal window to stop logging the serial output (ttyaudit): i) Press Ctrl + C ii) Execute exit b) Execute the command below using the Commands terminal window to stop logging the terminal session: exit Note: The Commands terminal session window will remain open. c) Disconnect the null modem and ethernet cables from the laptop. 		21:20

Print Logging Information

Step	Activity	Initials	Time
	CA executes the following commands to print a copy of the logging information:		
6.2	a) print-script script-202404*.log b) print-ttyaudit ttyaudit-tty*-202404*.log	N	21:26
	Attach the printed copies to IW script. Note: Ignore the error regarding non-printable characters if prompted.		

Prepare Blank FDs and Copy the HSMFD Contents

Step	Activity	Initials	Time
6.3	CA executes the following command to print two copies of the hash for the HSMFD content: hsmfd-hash -p Note: One copy for the audit bundle and one copy for the OS media TEB.	MI	21:2,
6.4	CA executes the command below to display the contents of the HSMFD: ls -ltrR	M	21:27
6.5	CA executes the command below and follows the interactive prompts in the terminal window to create five HSMFDs copies: copy-hsmfd Note 1: Wait for the activity light on the copied HSMFD to stop flashing before removal. Note 2: "copy-hsmfd -v" can be used to activate verbose mode.	M	

Place HSMFDs and OS Media into a TEB

Step	ACTIVITY	Initials	Time
6.6	Using the Commands terminal window, CA executes the commands below to unmount the HSMFD: a) cd /tmp b) umount /media/HSMFD CA removes the HSMFD, then places it on the holder. Note: Wait for the activity light on the copy HSMFD to stop flashing before removal.		21:3
6.7	 CA performs the following steps to shut down the laptop: a) Power OFF the laptop by pressing the power button. b) Disconnect all connections from the laptop. c) Remove the OS media from the laptop, and place it in its case. d) Close all laptop latches. 	M	21:35
6.8	 CA performs the following steps to prepare the OS media bundle for storage: a) Ask the IW for the OS media bundle's designated new TEB, then read the TEB number aloud while IW verifies it matches the information below. b) Place 2 HSMFDs and 2 OS media SD cards into a plastic card case. c) Place the plastic card case containing 2 HSMFDs and 2 OS media SD cards along with 1 sheet of paper with the printed HSMFD hash into its designated new TEB, then seal it. d) Give IW the sealing strips for post-ceremony inventory. e) Place the OS media bundle onto the HSM designated space of the ceremony table visible to the audit camera. f) Initial the TEB along with IW using a ballpoint pen. g) Place the OS media bundle TEB on the cart. OS Media (release coen-1.1.0) + HSMFD: TEB # BB02639666 	M	21137
6.9	CA distributes the following HSMFDs: 2 for IW (for audit bundles). 2 for RKOS (for SKR exchange with RZM and process review).	m	21:38

Place Laptop3 into a TEB

Step	Activity	Initials	Time
	 CA performs the following steps to prepare the Laptop for storage: a) Ask the IW for the Laptop's designated new TEB, then read the TEB number aloud while IW verifies it matches the information below. b) Read aloud the service tag number from the bottom of the laptop while the IW verifies it matches the information below. 		Time
6.10	 c) Place the Laptop into its designated new TEB, then seal it. d) Give IW the sealing strips for post-ceremony inventory. e) Place the Laptop onto the HSM designated space of the ceremony table visible to the audit camera. f) Initial the TEB along with IW using a ballpoint pen. g) Place the Laptop TEB on the cart. 	pu	21:40
	Laptop3: TEB # BB81420051 / Service Tag # J8SVSG2		

Place Crypto Officers' Credentials into TEBs

Step	Activity	Initials	Time
5.11	 The CA calls each of the COs listed below sequentially to the ceremony table to perform the following steps: a) CA asks the IW for the CO's designated new TEB, then reads the TEB number and description aloud while IW verifies it matches the information below. b) CO removes their credentials from the card holder, then hands them to the CA. c) CA verifies the credentials, then places them into an available plastic case. d) CA places the plastic case into its designated new TEB, then seals it. e) CA gives the IW sealing strips for post-ceremony inventory. f) CA places the TEB onto the HSM designated space of the ceremony table visible to the audit camera. g) CA initials the TEB with a ballpoint pen. h) IW inspects the TEB, confirms the TEB number with the list below, then initials it with a ballpoint pen. i) CA gives the TEB containing the cards to the CO. j) CO inspects the TEB, verifies its contents, then initials it with a ballpoint pen. k) CO writes the date and time, signs the credential table of the IW's script, then the IW initials the entry. l) CO returns to their seat with their TEBs. m) Repeat steps for all the remaining COs' credentials on the list. CO2: Pia Gruvö Set # 2 TEB # BB02639669 CO4: Robert Seastrom Set # 2 TEB # BB02639668 CO7: Dileepa Lathsara Set # 2 TEB # BB02639667 	M	21:4

Act 6: Secure Hardware

0,	TCR TEB # CO2 Set # 2 TEB # BB02639669	Printed Name <mark>Pia Gruvö</mark>	Signature Jes Grund	Date Time 2024 Apr 2 2/2 イジ	Time え/シゲえ	IW Initials
Š	CO4 Set # 2 TEB # BB02639668	Robert Seastrom	A A	2024 Apr 25 21:44	21:44	(m)
S	CO7 Set # 2 TEB # BB02639667	Dileepa Lathsara	A.	2024 Apr 25 21.44	21.46	11 N

5

Root DNSSEC KSK Ceremony 53-1

Page 36 of 45

Return the Equipment to Safe #1 (Tier 6, Equipment Safe)

Step	HOLIVILY	Initials	Time
6.12	CA and IW transport a cart and escort SSC1 into Tier 5 (Safe Room.)		Time
6.13	SSUI opens Safe #1 while shielding the combination from the server	an	21:48
6.14	SSC1 removes the safe log, writes the date and time, then signs the safe log where "Open Safe" is indicated. IW verifies this entry, then initials it. Note: If log entry is pre-printed, verify the entry, record time of completion and sign	M	21:49
6.15	 CA performs the following steps to return each piece of equipment to the safe: a) CAREFULLY remove the equipment TEB from the cart. b) Read aloud the TEB number, then verify its integrity. c) Present the equipment TEB to the audit camera above, then place it inside Safe #1 (Equipment Safe). d) Write the date, time, and signature on the safe log where "Return" is indicated. e) IW verifies the safe log entry, then initials it. 	M	21.52
	HSM5E: TEB # BB51184554 HSM7E: TEB # BB51184553 Laptop3: TEB # BB81420051 OS media (release coen-1.1.0) + HSMFD: TEB # BB02639666 KSK-2023: TEB # BB02639665 Note: The shelves in the equipment safe can slide in and out for ease of use.		

Close Safe #1 (Tier 6, Equipment Safe)

Step	ACTIVITY	Initials	Time
6.16	Safe" is indicated. IW verifies the entry, then initials it.	111	71KZ
6.17	SSC1 returns the safe log to Safe #1, closes the safe door, pulls up on the handle, then ensures it's locked by spinning the dial at least two full revolutions each way, counter-clockwise then clockwise. CA and IW verify that the safe is locked and the "WAIT" light indicator adjacent to the Tier 5 (Safe Room) exit door is off.	A	21:53
6.18	01 0001	111	71/01

Open Safe #2 (Tier 6, Credentials Safe)

Step	ACTIVITY	Initials	Time
6.19	CA transports the guard key and a flashlight, and with IW escort SSC2 and the COs into Tier 5 (Safe Room.)	pr	ったとろ
	SSC2 opens Safe #2 while shielding the combination from the camera. Note: SSC begins by rapidly spinning the dial counter-clockwise 15-20 revolutions in order to charge it before stopping at the first number in the combination.	To	21:56
	SSC2 removes the safe log, writes the date and time, then signs the safe log where "Open Safe" is indicated. IW verifies this entry, then initials it. Note: If log entry is pre-printed, verify the entry, record time of completion and sign.	M	21:5

Step	Activity	Initials	Time
6.22	 COs perform the following steps sequentially to return the listed TEBs: a) CO reads aloud the TEB number, verifies integrity of TEB, then presents it to the audit camera above. b) CO announces their box number, then CA operates the guard key in that box's lower lock with the key blade facing downward. c) CO operates their tenant key in that box's upper lock with the key blade facing upward, then opens the safe deposit box. d) CO places their TEB(s) in their safe deposit box, locks it, then removes their key. e) CO writes the date and time, then signs the safe log where "Return" is indicated. f) IW verifies the completed safe log entry, then initials it. g) CA locks the safe deposit box, then removes the guard key. CO2: Pia Gruvö Box # 1264 Set # 2 TEB # BB02639668 CO7: Dileepa Lathsara Box # 1263 Set # 2 TEB # BB02639667		22:0

Close Safe #2 (Tier 6, Credentials Safe)

Step	Activity	Initials	Time
6.23	Once all safe deposit boxes are closed and locked, SSC2 writes the date and time, then signs the safe log where "Close Safe" is indicated. IW verifies the safe log entry, then initials it.	Im	72:02
6.24	SSC2 returns the safe log to Safe #2, closes the safe door, pulls up on the handle, then ensures it's locked by spinning the dial at least two full revolutions each way, counter-clockwise then clockwise. CA and IW verify that the safe is locked and the "WAIT" light indicator adjacent to the Tier 5 (Safe Room) exit door is off.	m	22:02
6.25	CA, IW, SSC2, and COs leave Tier 5 (Safe Room) returning to Tier 4 (Key Ceremony Room).	M	22:03

Act 7: Close the Key Signing Ceremony

The CA will finish the ceremony by performing the following steps:

- Read any exceptions that occurred during the ceremony
 Call the ceremony participants to sign the IW's script
 Stop the online streaming and video recording

Participants Sign IW's Script

Step		Initials	Time
7.1	CA reads all exceptions that occurred during the ceremony.	initials	
	CA calls each in-person attendee not seated at the ceremony table to sign the IW's participant list. All signatories declare to the best of their knowledge that this script is a true and accurate record of the ceremony.	M	22:07
7.3	CA reviews IW's script, then signs the participants list.		-
7.4	IW signs the list and records the completion time.	m	62113

Stop Online Streaming and Recording

Step	AGLIVILY	Initials	Time
7.5	CA acknowledges the participation of the online participants, then instructs the SA to stop the online streaming.	MA	224
7.6	CA instructs the SA to stop the audit camera video recording.	100	
7.7	CA informs onsite participants of post ceremony activities.	m	22:14
7.8	Ceremony participants take a group photo.	m	2215

Appendix A: Glossary

[1] COEN: The Ceremony Operating ENvironment (COEN) is a Reproducible ISO image consisting of a live operating system. More information and the OS image source code can be found at:

https://github.com/iana-org/coen

- [2] configure-printer:* A bash script used to install the HP LaserJet print driver from the command line instead of system-config-printer.
- [3] copy-hsmfd:* A bash script used to copy HSMFD contents to new flash drives; includes
- [4] hsmfd-hash:* A bash script used to calculate, print, and compare SHA-256 checksums for Note: The sort command has different behavior depending on the locale settings specified by environment variables.
- [5] kskm-keymaster:** An application that creates and deletes keys and performs a key
- [6] kskm-ksrsigner:** An application that uses the KSK private key stored in the HSM to generate digital signatures for the ZSK.
- [7] ksrsigner: A legacy application that uses the KSK private key stored in the HSM to generate

The source code is available at https://github.com/iana-org/dnssec-keytools-legacy

- [8] ping hsm: The HSM static IP address 192.168.0.2 has been included in the /etc/hosts
- [9] printlog:* A bash script used to print the Key Signing Log output from ksrsigner
- [10] print-script:* A bash script used to print the terminal commands.
- [11] print-ttyaudit: * A bash script used to print the HSM logs.
- [12] sha2wordlist: An application that reads data from STDIN and outputs a SHA-256 checksum as hex and PGP words in STDOUT.

The source code is available at https://github.com/kirei/sha2wordlist

[13] ttyaudit:* A perl script used to capture and log the HSM output.

* The source code is available at https://github.com/iana-org/coen/blob/master/tools/packages/ksk-

A debian package is an ar archive. To extract data from a deb package, use the command ar -x ksk-tools-1.1.0coen_amd64.deb Then extract the files with tar -xvf data.tar.xz

The file will be located in the directory: ./opt/icann/bin/

** The source code is available at https://github.com/iana-org/dnssec-keytools

Root DNSSEC KSK Ceremony 53-1

- [14] Keyper HSM Role Cards:
 - a) OP (Operator): Configures the HSM to an online or offline state toggling communication through its ethernet adapter. Required for communication with the laptop for key signing operations.
 - b) so (security Officer) : Used for HSM administrative operations. Required to create other role cards (OP and CO), and the introduction or zeroization of an HSM.
 - c) CO (Crypto Officer) : Used for the key management functions in an HSM. Required for adding or deleting keys stored in an HSM.
 - d) SMK (Storage Master Key): Allows an HSM to read an encrypted APP key (KSK) backup. Required for initial migration of keys and disaster recovery.
 - e) AAK (Adapter Authorization Key): Configures an HSM to use previously generated OP, CO, and SO cards. Required for the introduction of an HSM.
 - f) APP (Application Key): An encrypted backup copy of one or more keys stored in an HSM, which can only be decoded by its corresponding SMK. Required for migrating keys and disaster recovery.
- [15] Thales Luna HSM Role iKeys:
 - a) CO (Crypto Officer) : Used for the key management functions in the HSM. Required for adding or deleting keys stored in an HSM.
 - b) so (security Officer) : Required for administration of the HSMs.
 - c) Audit: Required to access transaction logs from the HSMs.
 - d) Domain: Associates HSMs to facilitate cloning key materials to dedicated Luna backup HSMs.

Appendix B: Audit Bundle Checklist

1. Output of Signer System (by CA)

Each audit bundle will contain one HSMFD. All bundles will be placed inside TEBs that are prelabeled Audit Original and Audit Copy

2. Key Ceremony Script (by IW)

Hard copies of the IW's key ceremony script, notes generated during the ceremony, and attestation. See Appendix C on page 43.

3. Audio-Visual Recordings from the KSK Ceremony (by SA)

Two sets of the audit camera footage - One for the original audit bundle and the other for the duplicate audit bundle.

4. Logs from the Physical Access Control System and Intrusion Detection System (by SA)

Two electronic copies of the following:

- 1. Firewall configuration
- 2. Configuration reports
- 3. Personnel/cardholder reports
- 4. Activity and audit log reports

These files will be placed inside two separate Flash Drives that are labeled "Audit".

The contents of the Flash Drive will be confirmed by the IW before placing each of them inside the original and the duplicate audit bundles.

5. Configuration review of the Physical Access Control System and Intrusion Detection System (by SA)

SA's attestation and hard copies of the screen shots and configuration audit log from the review process. See Appendix D on page 44.

6. Configuration review of the Firewall System (by SA)

SA's attestation and hard copies of the firewall configuration from the review process. See Appendix E on page 45. Ensure the scrambled passwords are eliminated from the configuration before publishing it.

7. Audit Bundle Information

All TEBs are labeled **Root DNSSEC KSK Ceremony 53-1**, dated and initialed by IW and CA. An off-site audit bundle is delivered to an off-site storage.

Appendix C: Key Ceremony Script (by IW)

I hereby attest that the Key Ceremony was conducted in accordance with this script. Any exceptions that occurred were accurately and properly documented.

IW: Andy Newton

25 Signature: Date: 2024 Apr

Appendix D: Access Control System Configuration Review (by SA)

In my review of the KMF's Access Control System, I attest that the following are true and correct to the best of my knowledge:

- a) There were NO discrepancies found in the system configurations, assigned authorizations, and audit logs.
- b) Aside from the date filter that is applicable to some reports, there were NO other filters applied.

Below are the reports that were generated from the access control system:

- 1. List of Personnel with assigned Access Group.
- 2. Configuration of Areas and Access Groups.

3. Logs for Access Event activities and Configuration activities.

Range: 20231130 00:00:00 to 20240426 00:00:00 UTC.

Darren Kara SA: Signature:

Date: 2024 Apr 25

Appendix E: Firewall Configuration Review (by SA)

I have reviewed and confirmed that the firewall configuration satisfies the requirements of the DNSSEC Practice Statement with version 7th Edition (2024-03-15). No part of the signer system making use of the Hardware Security Module (HSM) is connected to any communication network.

Darren Kara SA: Signature:

Date: 2024 Apr 25