Root DNSSEC
Safe Deposit Box Maintenance
Wednesday August 7, 2013

ICANN KSK Facility@Equinix LA3
1920 East Maple Avenue, El Segundo, CA 90245

This operation and maintenance is executed under the
DNSSEC Practices Statement for the Root Zone KSK Operator Version A Revision 1358
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEB</td>
<td>Tamper Evident Bag (AMPAC, item #GCS1013 small or #GCS1216 large or MMF Industries, item #2362010N20 small or #2362011N20 large)</td>
</tr>
<tr>
<td>HSM</td>
<td>Hardware Security Module</td>
</tr>
<tr>
<td>IW</td>
<td>Internal Witness</td>
</tr>
<tr>
<td>SSC</td>
<td>Safe Security Controller</td>
</tr>
<tr>
<td>KSR</td>
<td>Key Signing Request</td>
</tr>
<tr>
<td>FD</td>
<td>Flash Drive</td>
</tr>
<tr>
<td>CO</td>
<td>Crypto Officer</td>
</tr>
<tr>
<td>SA</td>
<td>System Administrator</td>
</tr>
<tr>
<td>IW1</td>
<td>Internal Witness</td>
</tr>
<tr>
<td>CA</td>
<td>Ceremony Administrator</td>
</tr>
<tr>
<td>CO2</td>
<td>Crypto Officer</td>
</tr>
<tr>
<td>SA2</td>
<td>System Administrator</td>
</tr>
<tr>
<td>CO5</td>
<td>System Administrator</td>
</tr>
<tr>
<td>CO6</td>
<td>System Administrator</td>
</tr>
<tr>
<td>EW1</td>
<td>Key Signing Request</td>
</tr>
<tr>
<td>EW2</td>
<td>Key Signing Request</td>
</tr>
<tr>
<td>EW3</td>
<td>Key Signing Request</td>
</tr>
<tr>
<td>EW4</td>
<td>Key Signing Request</td>
</tr>
<tr>
<td>EW5</td>
<td>Key Signing Request</td>
</tr>
<tr>
<td>EW6</td>
<td>Key Signing Request</td>
</tr>
<tr>
<td>EW7</td>
<td>Key Signing Request</td>
</tr>
<tr>
<td>CA2</td>
<td>Key Signing Request</td>
</tr>
<tr>
<td>IW2</td>
<td>Key Signing Request</td>
</tr>
<tr>
<td>IW3/KOS</td>
<td>Key Signing Request</td>
</tr>
<tr>
<td>Locksmith</td>
<td>Key Signing Request</td>
</tr>
</tbody>
</table>

## Participants

Instructions: At the end of the ceremony, participants sign on IW1’s copy. IW1 records time upon completion.

<table>
<thead>
<tr>
<th>Title</th>
<th>Printed Name/Citizenship</th>
<th>Signature</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA</td>
<td>Mehmet Akcin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IW1</td>
<td>Gustavo Lozano</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA1</td>
<td>Alexander Kulik</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSC1</td>
<td>Selina Harrington</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSC2</td>
<td>Leo Vegoda</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA2</td>
<td>Matt Childs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO2</td>
<td>Dmitry Burkov / RU</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO5</td>
<td>Edward Lewis / US</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO6</td>
<td>Andy Linton / NZ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EW1</td>
<td>Alejandro Bolivar / Verisign</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EW2</td>
<td>Duane Wessels / Verisign</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EW3</td>
<td>James Kouyoumdjian / PricewaterhouseCoopers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EW4</td>
<td>Martin Levy / Hurricane Electric</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EW5</td>
<td>Edward Beck</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EW6</td>
<td>Connor Barthold</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EW7</td>
<td>Dalini Khemlani</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CA2</td>
<td>Richard Lamb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IW2</td>
<td>Kim Davies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IW3/KOS</td>
<td>Tomofumi Okubo</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locksmith</td>
<td>Mike Jacobs / Industrial Lock and Security</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Date: 7 August 2013
Note: Dual Occupancy enforced. CA leads ceremony. Only CAs, IWs, or SAs can enter ceremony room and/or escort other participants. Only CA+iW can enter safe room and/or escort other participants. CAs, SAs or IWs may let individuals out of the ceremony room but only when CA+iW remain in the ceremony room. No one may leave when CA+iW are in safe room. Participants must sign in and out of ceremony room and leave any credentials assigned to them (keys, cards) in the ceremony room if leaving before completion of the ceremony. The SA starts filming before the participants enter the room.

Some steps during the ceremony require the participants to tell and/or confirm identifiers composed of numbers and letters. When spelling identifiers, the phonetic alphabet shown below will be used:

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

Participants Arrive and Sign into Key Ceremony Room

<table>
<thead>
<tr>
<th>Step</th>
<th>Activity</th>
<th>Initial</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>SA starts video recording and online streaming. SAs or IWs escort participants into the Ceremony Room and all participant sign into the Ceremony Room log.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Emergency Evacuation Procedures

<table>
<thead>
<tr>
<th>Step</th>
<th>Activity</th>
<th>Initial</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>CA or IW reviews emergency evacuation procedures with participants.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Verify Time and Date

<table>
<thead>
<tr>
<th>Step</th>
<th>Activity</th>
<th>Initial</th>
<th>Time</th>
</tr>
</thead>
</table>
| 3.   | IW1 enters UTC date (day/month/year) and time using a reasonably accurate wall clock visible to all in the Ceremony Room:  

Date and time: ____________________________  

All entries into this script or any logs should follow this common source of time. |         |      |
Act 2. Replace the Safe Deposit Box locks

Open Credential Safe #2

<table>
<thead>
<tr>
<th>Step</th>
<th>Activity</th>
<th>Initial</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>CA and IW1 escorts SSC2, COs and the Locksmith into the safe room together. CA brings a flashlight when entering the safe room.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>SSC2, while shielding combination from camera, opens Safe #2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>SSC2 takes out safe log and prints name, date, time, signature, and reason (i.e. “open safe”) in safe log. IW1 initials this entry. Note: If log entry is pre-printed, verify the entry, record time of completion and sign.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Locksmith Replaces the Safe Deposit Box Locks

<table>
<thead>
<tr>
<th>Step</th>
<th>Activity</th>
<th>Initial</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td>CA confirms that the boxes below are empty then the Locksmith installs new dual-nose Mosler locks to the safe deposit box. The box that needs installation is as below. Box 1070 Box 1789</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Close Credential Safe #2

<table>
<thead>
<tr>
<th>Step</th>
<th>Activity</th>
<th>Initial</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>Once all safe deposit boxes are closed, SSC2 makes an entry that includes printed name, date, and signature into the safe log indicating closing of the safe. IW1 initials this entry. Note: If log entry is pre-printed, verify the entry, record time of completion and sign.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>SSC2 puts log back in safe and locks Safe #2 (spin dial at least two full revolutions each way, counter clock wise then clock wise). CA and IW1 verify that the safe is locked and card reader indicator is green.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>IW1, CA, SSC2, and all COs and Locksmith leave safe room, closing the door behind them.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>SA escorts the Locksmith out of the key management facility</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Participant Signing of IW1’s Script

<table>
<thead>
<tr>
<th>Step</th>
<th>Activity</th>
<th>Initial</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.</td>
<td>All participants enter printed name, date, and signature on IW1’s script coversheet. IW records the completion time. Note: If entry is pre-printed, verify the entry and sign.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>CA reviews IW1’s script and signs it.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Continue to Root DNSSEC KSK Ceremony 14