Securing Chip and PIN Devices Procedures

Effective Date: June 2019
Supersedes: None
Next Review: May 2020

1. Definitions

Payment Cards Credit and debit cards.
PDQ Process Data Quickly (commonly known as chip & PIN device).
PED PIN Entry Device (commonly known as chip & PIN device).
PSP Payment Service Provider – provides merchants (King’s) with the functionality to accept card payments online.

2. Purpose & Scope

2.1 This procedure relates to all Chip and PIN devices used by King’s staff including contractors or used on King’s premises.

2.2 The intent of this procedure is to secure Chip and PIN devices from malicious tamper and/or malicious replacement with an already tampered device.

2.3 We need to secure all of Chip and PIN devices to maintain PCI DSS compliance at King’s.

2.4 Devices are also known as PDQs (Process Data Quickly) and PEDs (PIN Entry Devices). There are pictures of the various devices in use at King’s in the appendix of this document.

3. Maintain an Inventory of Chip and PIN devices

3.1 Each department is to maintain an inventory list of Chip and PIN devices including the following fields:
   a. Device brand Normally Ingenico or Verifone or iZettle
   b. Device model i.e. Vx680, iWL251, iWL252, iCT220, iCT250
   c. Supplier i.e. Elavon, Uniware, iZettle
   d. Device serial number Can be found on the sticker on the bottom of the device, next to the Model name and number
   e. Serial number of ‘old’ device If applicable
   f. Device location i.e. building name and room where applicable
   g. Date received dmmmmmyy format
   h. Status In stock, Returned to supplier
   i. Comment

3.2 Whenever a replacement or new additional device arrives or a device is returned, the inventory list must be updated, by latest, the next working day.

3.3 Spare devices or devices otherwise not in use, need to be stored under lock and key to prevent unauthorised access or removal. The keys to the locked cabinet or safe need to be restricted to a
3.4 Physically inspect any devices before deploying them for use from secure storage.

3.5 There needs to be an annual inventory audit of all of the King's chip and PIN devices, completed on the same day of the year to ensure that all of the devices are accounted for and that there is a match of the serial numbers documented in the inventory.

3.6 If a device is found to be missing, the following steps need to take place:

- a. Investigate the last known location of the device and if possible the last known use.
- b. If following the investigation, the device cannot be found, contact the device owner to inform them the device is missing, confirming with them the serial number and make/model of the device
  - i. Elavon contact details:
     Phone 0345 850 0195 (Option 1)
  - ii. Uniware contact details:
     0330 202 1601
  - iii. iZettle contact details:
     020 3984 8464
- c. Work with the device owner and the Finance Cashier Operations Manager to verify if cardholder data has been compromised.
- d. If it is suspected that cardholder data has been compromised or a device has signs of being tampered with or missing or suspicious behaviour around a device to the IT service desk:
  
  Email: 8888@kcl.ac.uk
  Phone: 0207 848 888

4. Monthly Security Checks of Chip and PIN devices

4.1 Monthly checks to be completed by each department who have Chip and PIN devices that they are responsible for.

4.2 Each department is to complete a monthly security check of each Chip and PIN device, with the details of the inspection to be formally logged including the following fields (see Appendix A):

- a. Device brand Normally Ingenico or Verifone or iZettle
- b. Device model i.e. Vx680, iWL251, iWL252, iCT220, iCT250, iZettle Reader 1 or 2
- c. Supplier i.e. Elavon, Uniware, iZettle
- d. Device serial number Can be found on the sticker on the bottom of the device, next to the Model name and number
- e. Device Location i.e. building name and room where applicable
- f. Date received ddmmyyyy format
- g. Date(s) inspected ddmmyyyy format
- h. Name of Person ddmmyyyy format (name of person who completed inspection)
- i. Comment
4.3 The device security check will be focussing on signs of them having been tampered with or suspected of being tampered with, including:

a. Holes drilled in the device that shouldn’t be there or the addition of labels/stickers or other covering materials that could be used to mask damage of the device
b. Wires and/or devices that are attached to the Chip and PIN device that shouldn’t be there
c. Missing screws or screws with damaged heads
d. Incorrect keyboard overlays
e. Device misbehaving abnormally such as a high number of declines
f. Difficulty inserting a Chip and PIN card into the card slot
g. A device serial number that is different from what it should be in the inventory (upon receipt of a device, the serial number needs to be logged)
h. Damaged/altered tamper seals or cracks on the body of the device
i. Device is displaying the full card number on either the customer or merchant receipts

4.4 If you notice any one of these issues or anything else out of the ordinary, stop using the device immediately and disconnect it from the Till or network cable, but do not power the device down. Immediately contact the IT service desk and explain your concern:

Email: 8888@kcl.ac.uk
Phone: 0207 848 888

4.5 All monthly device security checks need to be completed on the first Tuesday of each month and be retained for at least 6 months for audit purposes.

4.6 Upon completion of the monthly device security check, the control sheet for that month needs to be sent to PCI-Confirmations@kcl.ac.uk.

4.7 The device’s default admin password must be changed, as these default passwords become widely known.

5. **Procedure for Delivery of a Chip and PIN device**

5.1 All visiting repair technicians or couriers who pick-up an existing device and/or deliver a new device, need to sign in with their name and company information. The sign-in register also needs to include tracking of the serial numbers of any devices that are installed, removed and/or replaced. This register needs to be retained for at least 6 months for audit purposes.

5.2 The identity of technician / courier needs to be validated, with photo ID and only representatives from the following companies are allowed to deliver, replace, troubleshoot or pick-up a Chip and PIN device:

<table>
<thead>
<tr>
<th>Company</th>
<th>Contact phone number for confirming the delivery person if in doubt:</th>
<th>Email address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elavon devices:</td>
<td>0345 850 0195 (Option 1)</td>
<td><a href="mailto:queries@elavon.com">queries@elavon.com</a></td>
</tr>
<tr>
<td>Uniware devices:</td>
<td>0330 202 1601</td>
<td><a href="mailto:helpdesk@uniware.co.uk">helpdesk@uniware.co.uk</a></td>
</tr>
</tbody>
</table>
5.3 Each department is to maintain a sign in register including the following fields:

a. Date
b. Time of arrival
c. Name of courier / technician
d. Company
e. Signature of courier / technician
f. Serial number of new / replacement device
g. Serial number of old / replaced device (if applicable)
h. Comment

5.4 Ensure that the serial number of the device matches the serial number on the box that the device arrived in.

5.5 At no stage will a courier or technician perform an onsite repair of your Chip and PIN device.

5.6 Do not change or attempt to change device configurations or settings, including:

- Attempting to alter security configurations or authentication controls.
- Physically opening the device.
- Attempting to install applications on to the device.
- Attempting to enable any device interfaces or data capture mechanisms that were disabled on the device.

6. Return of Chip and PIN devices

6.1 The Elavon Chip and PIN devices that are either no longer required or are no longer working (including where the device is flashing a tamper warning message), need to be returned to the King’s Finance Cashier Operations Manager, who will then return the devices to Elavon.

6.2 The Uniware Chip and PIN devices that are either no longer required or are no longer working, need to be returned to 84/85 Riverside 3, Sir Thomas Longley Road, Rochester, Kent, ME2 4BH.

6.3 The iZettle devices that are either no longer required or are no longer working, need to be returned to: Power Body Nutrition Ltd, c/o iZettle, Department, Unit 11 Chessingham Park, Common Road, Dunnington, York, YO19 5SE, United Kingdom

6.4 A chain of custody for returned devices is not required to maintain PCI DSS compliance.

7. Other Security concerns and Training

7.1 Any suspicious behaviour around Chip and PIN devices needs to be reported, such as attempts by unknown persons to unplug or open or take away / substitute a device.

7.2 Training to be provided to all King’s staff using Chip and PIN devices on the following:

a. How to verify third parties who delivering a new or replacement device;
b. How to check a device for any signs of tampering;
c. To being aware of suspicious behaviour around devices; and
  
d. How to report signs of tampering and/or suspicious behaviour to the IT service team.

7.3 If unsure of anything in this section you should send an email to PCI-Questions@kcl.ac.uk and someone will be in contact with you to discuss your question further.

7.4 This procedures document to be read in conjunction with the Card Payments Security Policy and the Card Payments Security Procedures document.
Appendix A: Reports

CHIP & PIN Device Inventory Management - Control Sheet
King’s Department:

<table>
<thead>
<tr>
<th>#</th>
<th>Device Brand</th>
<th>Device Model</th>
<th>Supplier</th>
<th>Device Serial Number</th>
<th>Serial # of ‘OLD’ Device</th>
<th>Device Location</th>
<th>Date Received</th>
<th>Status</th>
<th>Comment</th>
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CHIP & PIN Device Inventory Management - Monthly Security Checks
King’s Department:

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<th>#</th>
<th>Device Brand</th>
<th>Device Model</th>
<th>Supplier</th>
<th>Device Serial Number</th>
<th>Device Location</th>
<th>Date Received</th>
<th>Date Inspected</th>
<th>Name of Person (who completed inspection)</th>
<th>Comment</th>
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Upon completion, form to be emailed to: PCI-Questions@kcl.ac.uk

Sign-in Register for delivery of a Chip & PIN device
King’s Department:

<table>
<thead>
<tr>
<th>Date</th>
<th>Time of Arrival</th>
<th>Name of courier / technician</th>
<th>Company</th>
<th>Signature</th>
<th>Device Serial Number</th>
<th>Serial # of ‘OLD’ Device</th>
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Appendix B: Instructions for physically inspecting Chip and PIN devices and preventing skimming of card details

How to inspect a device:

Physical inspections can be performed by visually reviewing all surfaces of the device and comparing them to pictures contained in this document.

What to look for while inspecting a device:

Each device needs to be inspected to ensure that there are no:
- Holes drilled in the device that shouldn’t be there or unusual labels/stickers or other covering materials that could be used to mask damage to the device
- Wires and/or other devices attached to a Chip and PIN device that shouldn’t be there
- Missing screws or screws with damaged heads
- Incorrect keyboard overlays
- Device misbehaving abnormally such as a high number of declines
- Difficulty inserting a Chip and PIN card into the card slot
- A device serial number that is different from what it should be
  - The device serial number will be in the inventory and should match the serial number on the device
  - When the device is first received, the serial number should match the serial number on the box or bag which the device is delivered in
- Damaged/altered tamper seals or cracks on the body of the device
- Device is displaying the full card number on either the customer or merchant receipts
Photos for VeriFone Vx820 Chip and PIN device:

Front

Back

Right side

Left side
Photos for Ingenico iWL2xx series Chip and PIN device:

Front

Back
Photos for Ingenico iCT2xx series Chip and PIN device:

Front

Back

Left side

Right side
Photos for iZettle Chip and PIN device: