Value Proposition

- Customers automatically recognized by RFID or NFC tags
- Register sale in VendHQ automatically
- No queuing to order – customer convenience and operational/staff efficiency

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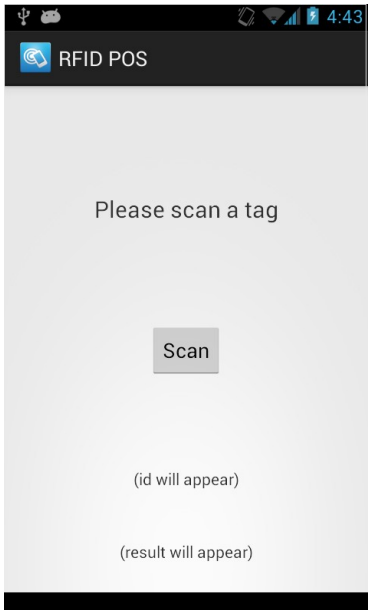
Proof of Concept

①

RFIDPOS app on Android device is started manually (or automatically on first scan)

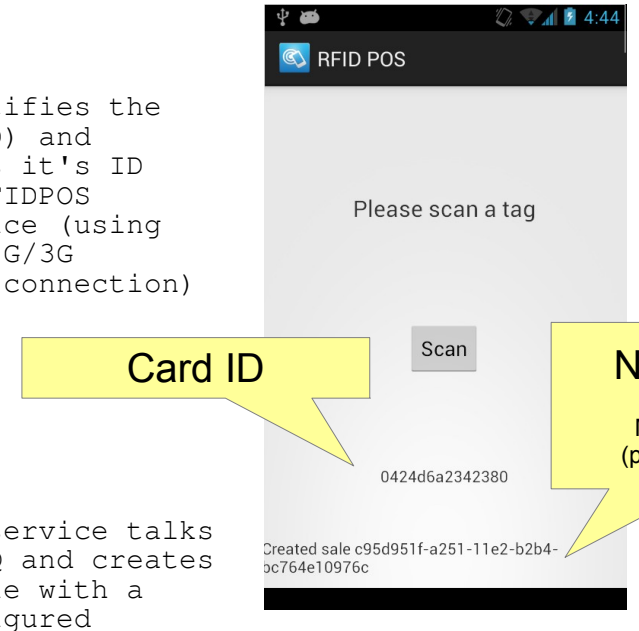


②

App identifies the card (UID) and transmits it's ID to the RFIDPOS web service (using WiFi or 2G/3G internet connection)

③

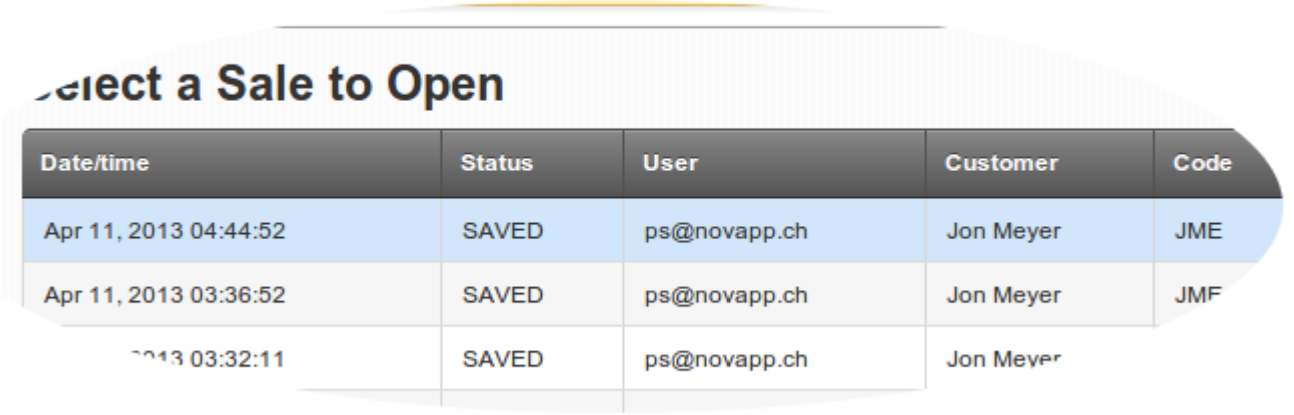
The web service talks to VENDHQ and creates a new sale with a pre-configured product



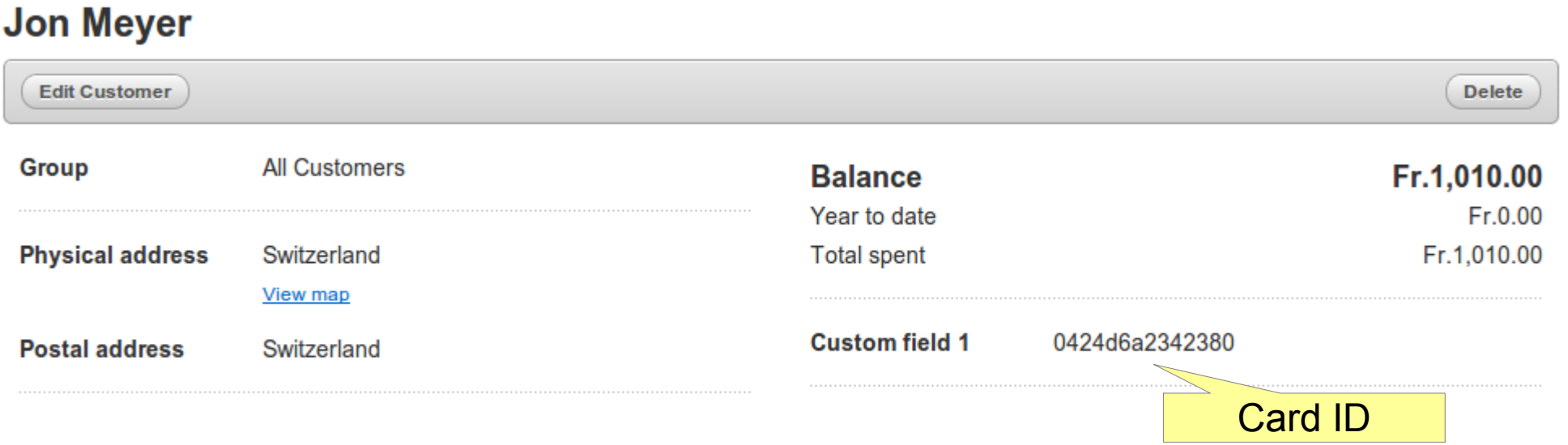
④

Sale can be shown and changed in VendHQ

The whole process takes 1–2 sec max.



Card ID / Customer Link



This must currently be done manually. In the future, RFIDPOS will provide a „linkCustomer“ web service to allow this from the Android device and/or using a web UI.

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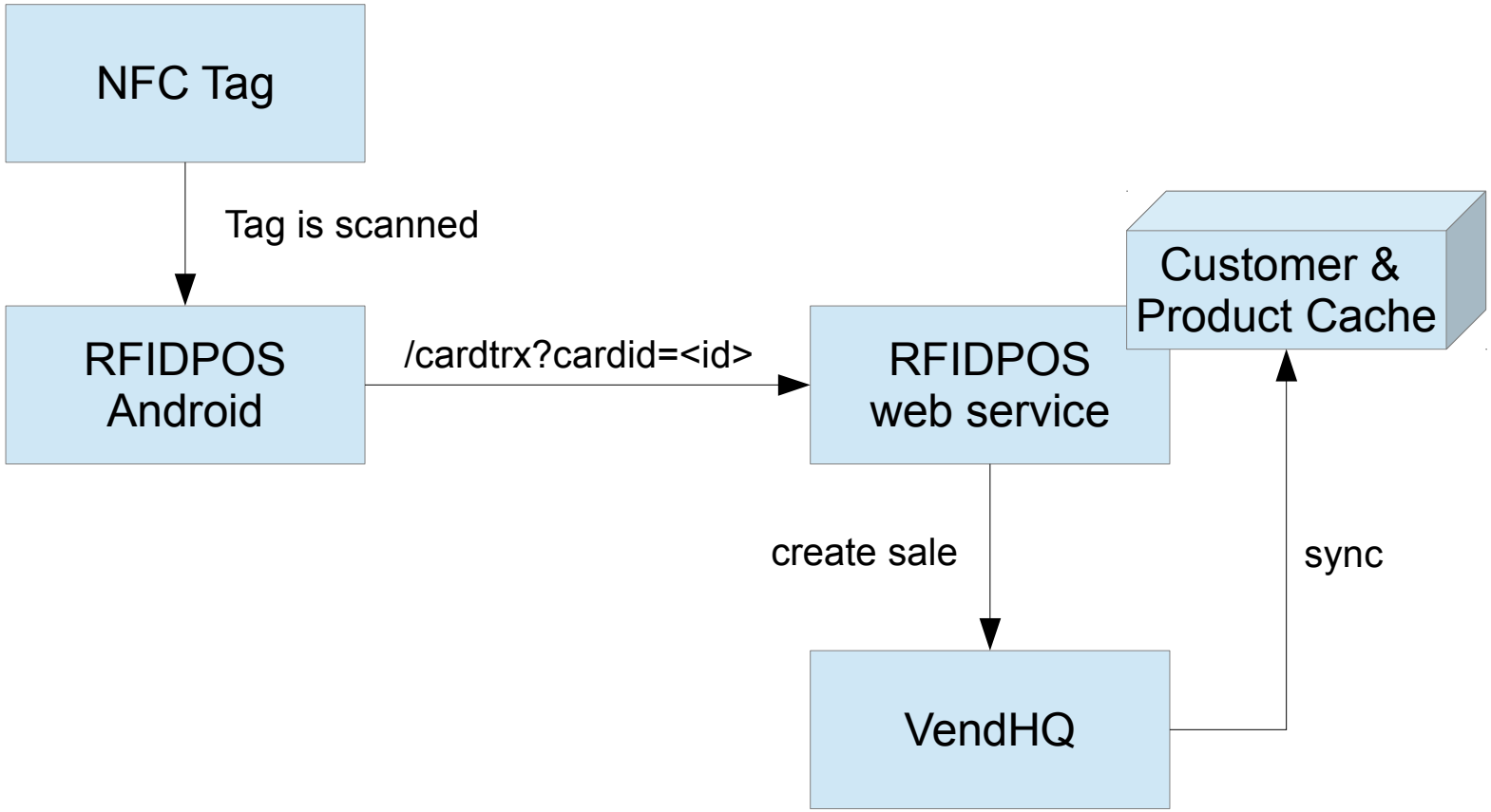
Architecture / Data Flow



Security/Privacy Concerns

- Card Security

  MiFare Classic (NFC) or ISO-18000 6C (RFID) provide security features (against card cloning and spoofing)

  Loss of card not a problem since card does not store any information other than it's UID and security profile.
  Any cards not known to RFIDPOS will not be accepted. Spoofed cards will not contain a valid security profile so no tempering is possible (to be verified).

- RFIDPOS Security and Customer Privacy

  RFIDPOS web service keeps only mapping between Customer ID, Card and Products in memory/cache (no names, addresses etc. stored in RFIDPOS *)

  Card/Tag only stores UID and security profile. No customer data can be extracted using the data on the card.

- VendHQ security (spoof sale with invalid or third party card?)

  VendHQ stores Customer-2-Card mapping. Could be tampared by staff – if this is a concern, RFIDPOS would be used to store this mapping taking information out of reach of staff.

- *) Disclaimer

  Proof of concept used MiFare Ultralight NFC cards, and RFIDPOS caches all customer and product data for reasons of simplicity (security not a concern in PoC)