

Network Requirements

V 4.11

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Version control

Date	Version	Details
19 Mar 2019	4.0	Base
03 Aug 2020	4.1	Added Integration Server
08 Feb 2021	4.2	Changed IPs to server names, removed port 80
31 Oct 2021	4.3	Add requirement for Outbound traffic
15 Dec 2021	4.4	Add Google NTP servers
15 Dec 2021	4.5	Google NTP port corrected
17 Mar 2022	4.6	LAN preferred over SIM router
18 Aug 2022	4.7	LAN Only, Fixed / DHCP IPs Server/Bay/LiDARs, sys architecture
19 Mar 2023	4.8	Lidars removed, hubz added, some requirements refined
13 Sep 2023	4.9	Same subnet, secure connection, payment devices with SIM
07 Nov 2023	4.10	Two LANs when using Vianet payment system, new document format
27 Nov 2023	4.11	Vianet payment system update (SIM and LAN)

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1 Applicability

Purpose:	Network requirements
Target audience:	IT departments and technicians
User knowledge:	IT networks
Tools:	NA
SW version:	All
View with:	NA
HW models supported:	All Shekel Product Aware Weighing, Vianet or Nayax payment systems
HW versions:	All
Related documents:	NA

2 Terminology

Term	Explanation
Smart store	Consists of a store server managing a few store bays
(Store) Server	A server in a smart store managing its bays. The server HW varies according to the store size.
(Store) Bay	A single bay in a Smart store managed by the Store Server General name: EP (= End Point)
Locked fridge	A bay, the computer of which includes also as its own server, has a door lock and a SIM-based payment device
EP	Same as Bay, cooler or Store server
HUBZ	A type of locked cooler with special additional LAN requirements
Vianet	Card payment system with special additional LAN requirements
Nayax	Card payment system

3 Safety

- **Software:** handling of IT networks should be done by the organization IT specialists.
- **Hardware:** none special

4 Purpose

The purpose of this document is to define the wired network (LAN) and Internet requirements for:

- Any Shekel Bay connecting via the Internet to the Shekel Cloud.
- Where used, HUBZ and other Locked fridges have additional requirements.
- Other network-requiring systems, e.g. payment terminals are normally **EXCLUDED** from this document, as they rely on Telecommunication based on SIM cards and not LAN.

5 Requirements

Note:

1. Test and confirm with your IT department that all the requirements are met before you attempt activating any new bay by your IT. Shekel noted a few failed attempts, which after investigation, proved to be due to failure to meet the above requirements.
2. Other potentially network-requiring systems, e.g. payment terminals, are normally **EXCLUDED** from this document.

3. All the requirements are relevant to **each and every bay** and **store server**.

5.1 Payment devices with SIM

Payment terminals used in locked fridges use their own SIM connectivity or LAN cables and are not part of this network requirements document, please consult their vendors.

Warning:

Check with the vendor if using the internal SIM concurrently may clash with the LAN.

5.2 Internet service capacity

#	Recommended	Store (bays + server)	Innovendi / hubz	Pass / Fail
1.	Volume	Unlimited	1 Gb / month	
2.	Speed burst (stable)	100 Mbps	8 Mbps	
3.	SIM router	-	Check account limits	
4.	SIM router		1 Router per EP	

The Internet and network service is to be provided by the Customer (not provided by Shekel).

5.3 RJ45 cables

Only LAN cables and/or SIM routers can be used, Wi-Fi is not supported.

The Customer of Shekel is to provide the network connectivity including the cables.

#	Lan Cables RJ45	Pass / Fail
1.	1x RJ45 for each EP	
2.	Vianet payment system optional: 1x RJ45 Note: Vianet supports both SIM and LAN including together. Check with the vendor what will be used and if RJ45 is needed (too).	

5.4 Cloud and local connectivity

#	Secure connection to Shekel Cloud	Pass / Fail
1.	With Firewalls, network monitors, VLAN, man-in-the-middle-arrangements etc., consult with Shekel support first.	
2.	During initial system setup: all-time Internet LAN Cloud access is required till setup completion.	

5.5 EP types

5.5.1 Stores with Server and Bays

All smart Shekel Stores require:

IP allocation:

#	IP allocation	Pass / Fail
1.	<p>All store Bays (except Store servers): must be always in the same IP subnet.</p> <p>The subnet and particular bay IPs may later be changed per Customer's network policies, which will have no negative effect on the Shekel service</p>	
2.	<p>(The) Store Server: must have a fixed and non-changeable IP at all times defined in the Customer's DHCP, and in the same subnet as the rest of the Store bays.</p>	
3.	<p>Shekel does not allocate fixed IPs to any of the EPs, which must be done by the Customer's network (admin).</p>	

Secure connection to Shekel Cloud:

#	Secure connection to Shekel Cloud	Pass / Fail
4.	<p>During Production period after initial setup completion:</p> <ul style="list-style-type: none"> • Shekel recommends continuing to have the same all-time Internet LAN Cloud access as explained above. • The system can work offline for periods on an as-is basis, but during this time cloud-based actions will not be available, like updating planograms, products or getting remote Shekel support. 	
5.	<p>Stores servers can work cloud-offline for some time, however, must always have local Bay – Store server network. During this time actions requiring the Cloud will not be available.</p>	
6.	<p>Cloud connection will have to be resumed as and when the support and updates are required.</p>	

5.5.2 Locked door coolers with Nayax Payment device

Found in the following coolers: Innovendi, hubz 1.0 (with Par Level), hubz 2.0

#	Coolers with Nayax	Pass / Fail
1.	<p>During Production period after initial setup completion:</p> <ul style="list-style-type: none"> Shekel recommends continuing to have the same all-time Internet LAN Cloud access as explained above. The system can work offline for periods on an as-is basis, but during this time cloud-based actions will not be available, like updating planograms, products or getting remote Shekel support. 	
2.	<p>Nayax transactions can work (LAN) Cloud-offline, as Nayax uses its own independent SIM for continuous communications.</p> <p>During offline time, actions requiring the Cloud like remote support and updates, will not be available.</p>	

5.5.3 Locked door coolers with Vianet Payment device

Found in the following coolers: hubz 2.0

#	Coolers with Vianet	Pass / Fail
1.	<p>Vianet payment devices can operate with SIM, LAN or both, check with Vianet the specifics of the deal.</p> <p>Vianet need all-time Internet connection, SIM or LAN, to perform transactions.</p>	

5.6 Outbound traffic and ports

All the following must be accessible and white-listed by the Customer's own network.
Non-SIM routers will comply by default.

5.6.1 Ports for Shekel

#	Shekel requirements (always)	Port	Pass / Fail
1.	shekelbrainweighmc.com	22	
2.	*. shekelbrainweighmc.com	22	
3.	shekelbrainweighmc.com	443	
4.	*. shekelbrainweighmc.com	443	
5.	www.googleapis.com	443	
6.	oauth2.googleapis.com	443	
7.	accounts.google.com	443	
8.	safebrowsing.googleapis.com	443	
9.	time.google.com	123	

5.6.2 Additional ports for Par Level with hubz 1.0

#	Additional (to Shekel) Par Level hubz 1.0 requirements	Port	Pass / Fail
1.	[company].parlevelvms.com	433	
2.	inbound.parlevelvms.com	433	
3.	*.api.splashtop.com	433	
4.	*.api.splashtop.eu	80, 443	
5.	*.relay.splashtop.com	80, 443	
6.	sn.splashtop.com	80, 443	

5.6.3 Additional ports for Vianet with hubz 2.0

#	Additional (to Shekel) Vianet hubz 2.0 requirements	Port	Pass / Fail
1.	Confirm with Vianet	Confirm with Vianet	

5.7 Tests

#	Final check	Pass / Fail
1.	Test and confirm that ALL the requirements are met to avoid futile attempts.	