GS Analysis October - January

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Contents

1   Introduction

The following preview of our full analysis (dated from October 2020 to February 2021) aims to present the amount of hardware that has been ordered until today, how many escalations have been made to GV, the total of issues that we have had and the proportional number of issues that an specific issue can present.

The pie charts presented are being primarily occupied by two issues: dock is not recognizing peripherals nor stuck payments. The rest of the issues we encountered are listed on the graphics below with each color corresponding a part of the pie chart.

This report will be an explanation of all the problems that the SD has been experiencing on a day to day basis, and the new difficulties that the surfaces are bringing up to the table.

All data for this document was taken from the Compucom Service Now portal and from our internal store tracker. We imported all the store's information and analyzed one by one to determine each type of issue and possible solution. .

I would like to thank Ricardo Rangel, Saúl Velazquez and Pablo Hernández for all their help and support during the development of this report for GameStop.

With no further ado, let's begin.

GameStop®

2 Stores installed on October

issues

■	BSOD
■	Dock not recognizing peripherals
■	Frozen POS
■	GV
■	Inventory missing
■	Label printer
■	Network
■	No issues
■	No power
■	Pinpad
■	Polling
■	Receipt printer
■	Replaced
■	Scanner
■	Slow register
■	Stuck payment
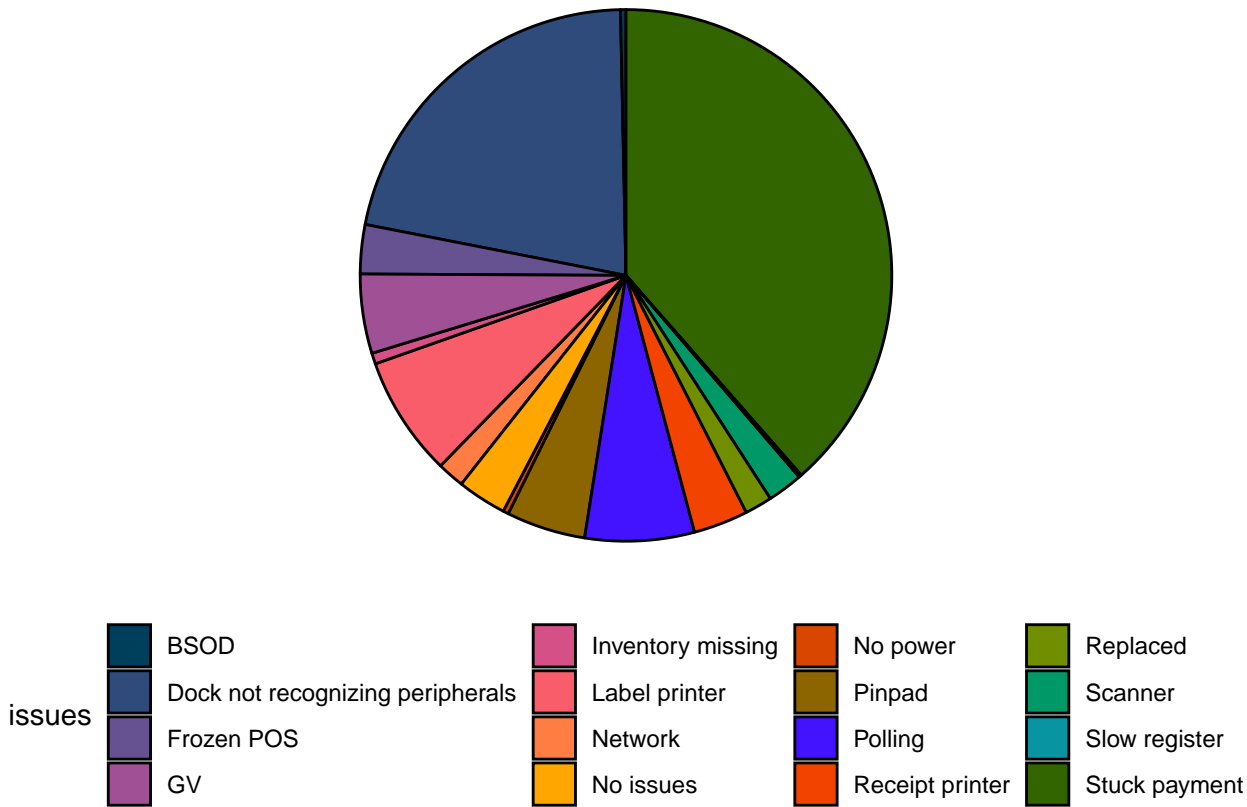
2.1 Issues

Issue	Count
Dock not recognizing peripherals	130
Network	10
BSOD	2
Pinpad	29
Polling	40
Scanner	13
No power	2
Frozen POS	18
Stuck payment	199
Label printer	44
Slow register	1
Inventory missing	4
Receipt printer	20
No issues	18
GV	28
Hardware replacements	11
Total Issues	492
Total installed stores	136

2.2 Replacements

Store	Hardware replaced	Cause	INC
624	Case for R1 & R2	No Ethernet lights on the dock	INC36652075
648	R1 & R2 tablets	PUR not showing on transactions	INC36504781
5107	Dock R1	Dock not responding to any peripherals	INC36680177
6472	R1 tablet	Frozen tablet & no network	INC36515255
995	R1 Tablet	BSOD	INC37017281
2270	R1 Dock	Dock not connecting to the network	INC36829594
5249	R2 Dock	Dock not connecting to the network	INC37024279
4412	R1 Dock	Dock not recognizing the peripherals	INC37379737
3711	R2 Dock	Dock not connecting to the network	INC36705066
2917	R2 Dock	Dock not connecting to the network	INC37455319
826	R1 Dock	Dock not connecting to the network	INC35872221

2.3 Escalations

Store	Issue	GV escalation reason	INC
3345	Dock not responding to peripherals	After all the TS the dock did not respond	INC35943952
1620	Transaction is taking long to end	Escalated for reporting reasons	INC36281531
1620	Scanned SKU's are not appearing	Escalated after all TS was performed	INC36771612
1620	R1 was rebooting by itself	Escalated because it was R1	INC37262165
3711	Dock not responding at network	Escalated after all TS was performed, this dock was replaced	INC36705066
3750	Receipt printer offline	This was the first issue resolved with the TU-S9 driver	INC36117873
5249	Dock not responding at network	Escalated after all TS was performed, this dock was replaced	INC36193898
826	Dock not responding at network	Escalated, LVL 2 had to replace R2 after all TS did not work	INC35872221
826	ER1 was not polling	Escalated after all TS was not working	INC36111688
2270	Inventory was missing completely	We escalated this and LVL 2, LVL 2 had to fix commands 2 & 5	INC35876313
870	Other store inventories no appearing	We did not know how to fix the issue at the time	INC36462005
995	BSOD	Escalated to get a replacement of R1 tablet	INC37017281
6472	Frozen & crashing R1 register	Escalated so LVL 2 could fix the surface codes	INC36515255
6472	Dock not responding to peripherals	After all the TS the dock did not respond	INC36671490
5107	Dock not responding to peripherals	After all the TS the dock did not respond	INC36680177
648	PUR not being recognized on the transactions	The TS did not work and LVL 2 had to replace Tablet 1 & 2	INC36504781
3994	Stuck payment on R1	This is a known issue so we escalated to LVL 2	INC37050139
7527	PUR new customers are not being added	Escalated to LVL 2 and they created a Cherwell #: 1973486	INC36504832
567	Label printer not responding	LP2824 normally has issues with the surface	INC36267516
624	No Ethernet lights on the dock	After all the TS the dock did not respond	INC36652075
2786	No Ethernet lights on the dock	After all the TS the dock did not respond	INC37190717

3 Stores installed on November
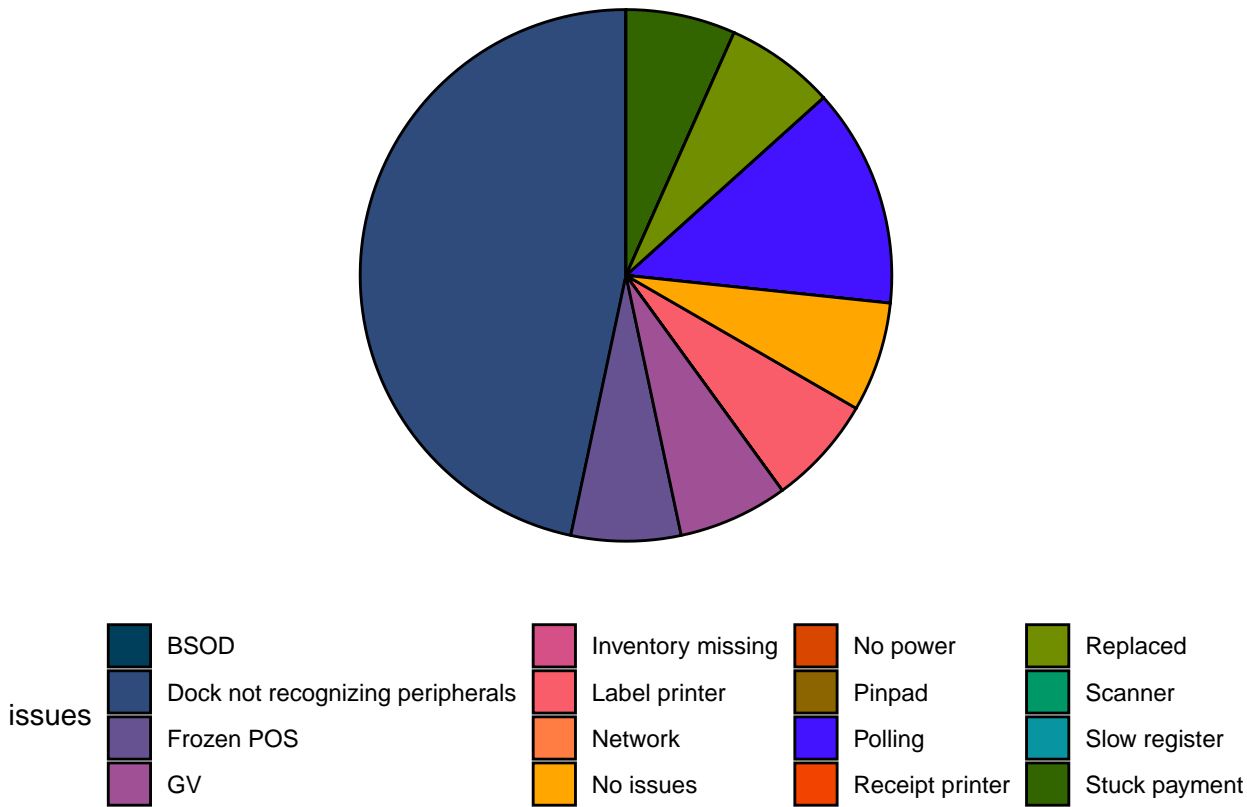
3.1 issues

Issue	Count
Dock not recognizing peripherals	7
Network	0
BSOD	0
Pinpad	0
Polling	2
Scanner	0
No power	1
Frozen POS	1
Stuck payment	1
Label printer	0
Slow register	0
Inventory missing	0
Receipt printer	0
No issues	1
GV	1
Hardware replacements	1
Total Issues	12
Total installed stores	5

3.2   Replacements

Store	Hardware replaced	Cause	INC
3799	R1 Dock	No Ethernet lights on the dock	INC35873919

In November we only installed 5 stores (around 10 docks in total) from which only 1/10 docks were not working (10%).

Docks are presenting a lot of synchronization issues with the surface tablets.

We are aware of the TS when a surface does not have lights on the dock, but even after performing it, the docks are still presenting a lot of problems. They are not connecting properly to the registers.
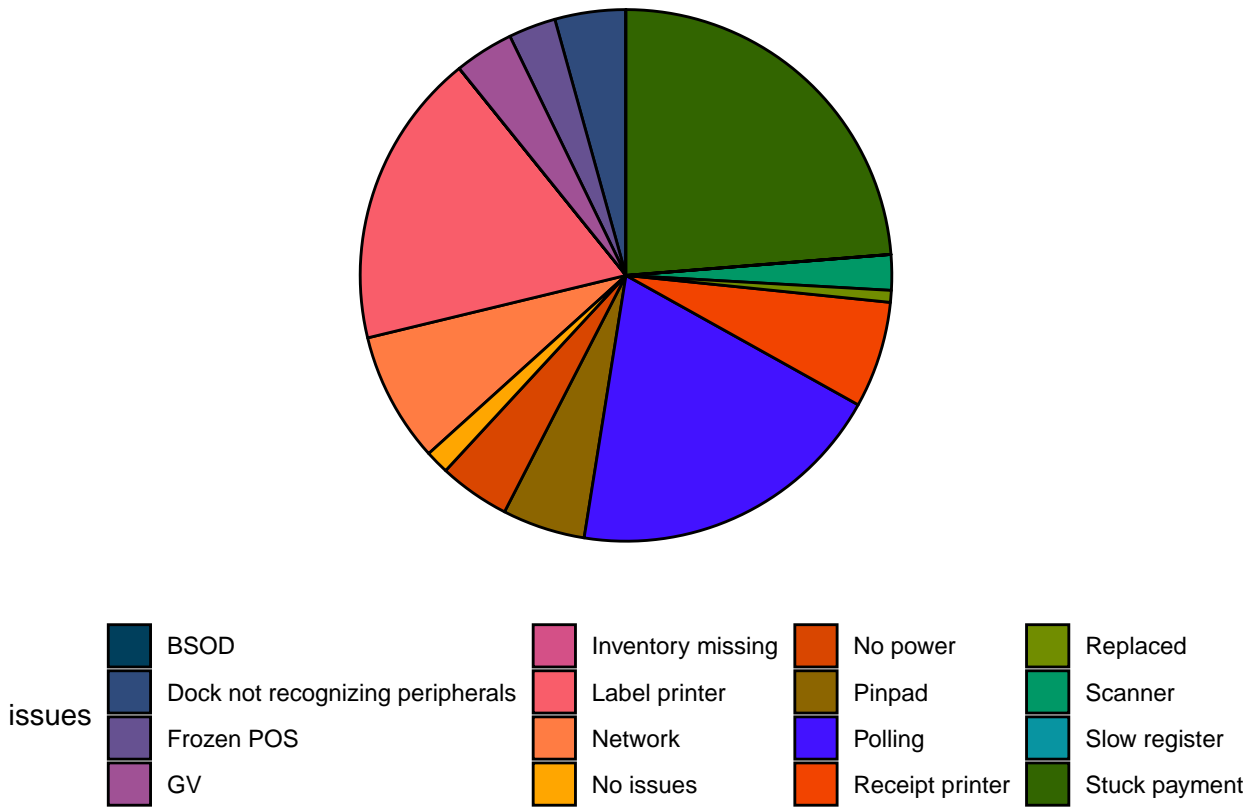
3.3   Escalations

On the following table we have the enlisted issues escalated to GV and the reason behind this escalations.

Store	Issue	GV escalation reason	INC
3799	No Ethernet lights on the dock	After all known TS the dock didn't respond	INC35873919

We are aware of the TS when a surface does not have lights on the dock, but, even with this the docks are having a lot of problems, they are not connecting correctly to the registers.

4 Stores installed on December

issues

■ BSOD	■ Inventory missing
■ Dock not recognizing peripherals	■ Label printer
■ Frozen POS	■ Network
■ GV	■ No issues
■ No power	■ Replaced
■ Pinpad	■ Scanner
■ Polling	■ Slow register
■ Receipt printer	■ Stuck payment

4.1 Issues

Issue	Count
Dock not recognizing peripherals	6
Network	11
BSOD	0
Pinpad	7
Polling	27
Scanner	3
No power	6
Frozen POS	4
Stuck payment	31
Label printer	25
Slow register	0
Inventory missing	0
Receipt printer	9
No issues	2
GV	5
Hardware replacements	1
Total Issues	129
Total installed stores	26

4.2   Replacements

Store	Hardware replaced	Cause	INC
2582	R2 Tablet	The tablet was not rotating	INC37514659

In December we installed 26 stores and got just one dock replaced.

4.3   Escalations

On the following table we have the number of issues escalated to GV and the reason behind this escalations.
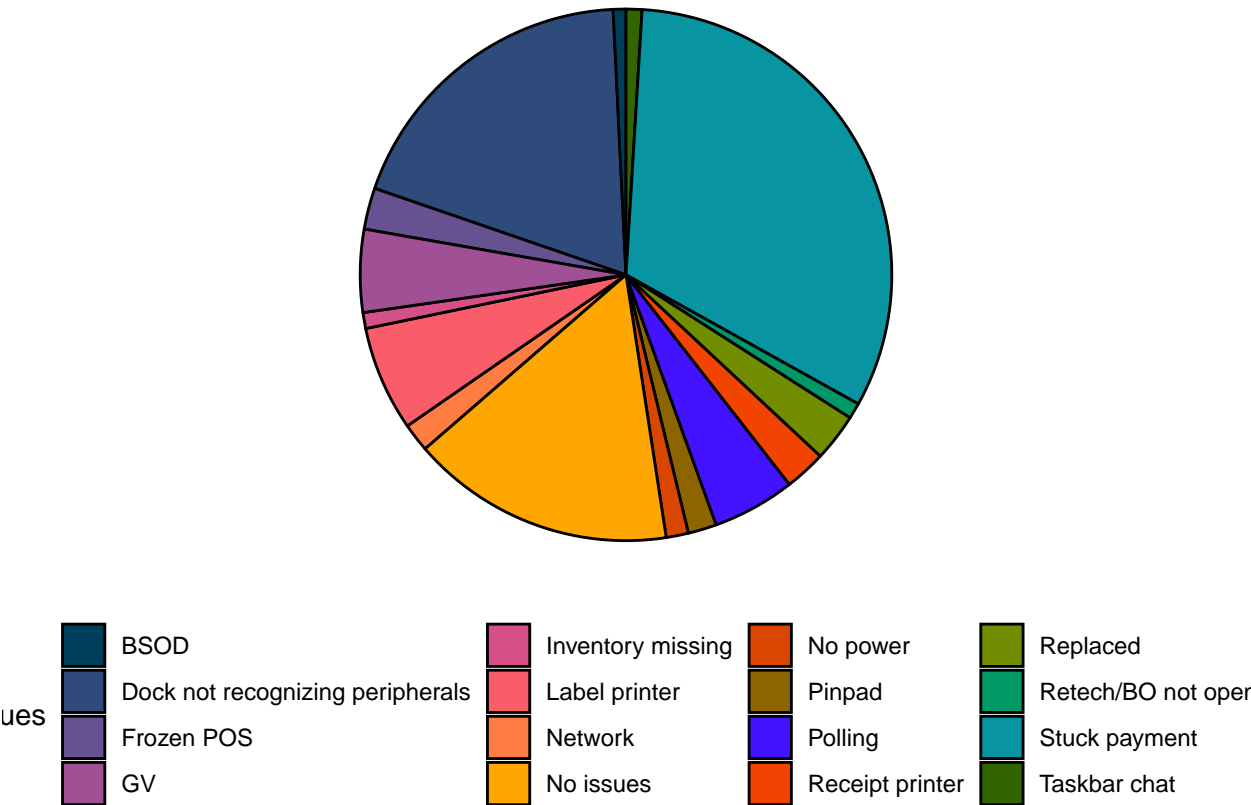
Store	Issue	GV escalation reason	INC
5988	Unable to open chats from the task bar	Known issue escalated for report reasons	INC37147688
3184	Unable to see other store inventory	Known issue escalated for report reasons	INC37137165
7743	Transaction taking longer than expected	Known issue escalated for report reasons	INC37355884

For this issues now we have a workaround or a solution:

1- Unable to open chats from the task bar - LVL 3 fixed it.

2.-Unable to see other store inventory - LVL 2 helped us figure this one out, the issue was that when we were installing the registers we had to put the correct time of the store before polling, if the time was incorrect and we polled the store all the inventory of other stores was unavailable & the BOPS box on the task bar was not updating.

5 Stores installed on January

■ BSOD	■ Inventory missing	■ No power	■ Replaced
■ Dock not recognizing peripherals	■ Label printer	■ Pinpad	■ Retech/BO not oper
■ Frozen POS	■ Network	■ Polling	■ Stuck payment
■ GV	■ No issues	■ Receipt printer	■ Taskbar chat

5.1 Issues

Issue	Count
Dock not recognizing peripherals	98
Network	9
BSOD	4
Pinpad	9
Polling	26
Taskbar Chat	5
No power	7
Frozen POS	13
Stuck payment	147
Label printer	32
Retech/BO not opening	5
Inventory missing	5
Receipt printer	13
No issues	83
GV	26
Hardware replacements	1
Total Issues	373
Total installed stores	257

5.2 Replacements

Store	Hardware replaced	Cause	INC
2873	R2 Dock	The tablet was not connecting to the network	INC37531096
2820	R2 Tablet	The tablet was restarting by itself and flickering	INC37359337
2248	Case R1	The tablet was not connecting to the actual dock	INC37401799
2248	R2 Tablet	R2 had BSOD so it needed to be replaced	INC37745863
2776	USB HUB	Dead USB port on R1 we sent an USB hub	INC37871632
2248	Dock R2	The register was not recognizing peripherals	INC37393345
5343	R1 Dock	The register was not recognizing peripherals	INC37379686
3911	R1 Dock	The register was not recognizing peripherals	INC37871319
2708	R1 Dock	The register was not recognizing peripherals	INC37863594
2373	R1 Dock	The register was not recognizing peripherals	INC37478919
6722	R2 Dock	The register was not recognizing peripherals	INC37634482
5269	R2 Dock	The register was not recognizing peripherals	INC37532331
4323	R2 Dock	The register was not recognizing peripherals	INC37550933
2373	R2 Dock	The register was not recognizing peripherals	INC37474020
2396	R2 Tablet	Blue screen of death	INC37860538
3027	R2 Tablet	Screen flickering, unable to read content	INC37790416
924	R2 Tablet	The tablet had an issue with the imaging at the time of the install	INC37488153
924	R1 tablet	The tablet was not getting charged with the dock or the charger	INC37958552
4649	R2 Tablet	C:\UTIL\RECOVERY.EXE was not available	INC37774660

5.3 Escalations

Store	Issue	GV escalation reason	INC
2681	Peripherals not getting recognized	We did the TS and it did not work, GV fixed it	INC37582970
2407	Receipt printer was not getting recognized	We did the TS, GV fixed it with the 7zip file	INC37576860
5343	Dock not recognizing peripherals	We did the TS and it did not work, GV had to replace it	INC37379686
5766	Unable to open chats from the task bar	Escalated for report reasons, Issue fixed	INC37401022
2820	R2 restarting by itself	This register needed a replacement	INC37359337
2248	R2 dock was not connecting to peripherals	After the TS we had to escalate the issue	INC37393345
2248	R1 was not connecting to the network	We TS the register and it was not connecting to the network	INC37401799
2248	R2 had a BSOD	After BSOD we escalated to have the register replaced	INC37745863
2708	Unable to open chats from the task bar	Escalated for report reasons, Issue fixed	INC37863594
7624	Scanner not getting recognized on R1	After all TS the scanner was not working, GV fixed it	INC37404635
889	Unable to see other stores inventories	The hour change did not work so we escalated it, GV fixed it	INC37434224
2373	Ship.mdb corrupted, inventory missing	After repairing the DB inventory was still missing, GV fixed it	INC37560712

Store	Issue	GV escalation reason	INC
6674	Peripherals not getting recognized	After all TS we escalated to LVL 2, GV is working with it	INC37815269
3193	Surfaces are lagging, R2 remains lagged	After TS R1 got fixed but R2 is still slow and lagging	INC37495479
3027	R2 screen is flickering	This register needed to be replaced we escalated for authorizations	INC37790416
5269	Peripherals not responding	After all TS the dock was not working, GV asked for a replacement	INC37532331
6471	PUR - unable to sell or make transactions	We did not know that the time also affected the PUR trans, GV fixed it	INC37532306
924	Not polling automatically	We activated all services, no success, GV escalated to LVL 3 - fixed	INC37525474
924	R1 not charging even with charger	R1 was not charging at all, LVL2 asked to replace it	INC37958552
4649	R2 tablet was not finding RU	No TS for this issue, LVL 2 asked for replacement	INC37774660
4760	Surface not auto rotating	This has a prb ID - 52632, Escalated for report reasons	INC37664497
4876	Re tech not loading, corrupted file	LVL 1 & LVL 2 TS did not work, LVL 3 fixed it by changing the config	INC37794491
6070	Label printer not getting recognized	After al TS the receipt printer was not printing, GV is working on it	INC37620787
6722	Dock not recognizing network	All TS did not work, LVL 2 replaced the dock	INC37634482

6 Stores installed on February

▪ BSOD	▪ Inventory missing	▪ No power	▪ Replaced
▪ Dock not recognizing peripherals	▪ Label printer	▪ Pinpad	▪ Retech/BO not oper
▪ Frozen POS	▪ Network	▪ Polling	▪ Stuck payment
▪ GV	▪ No issues	▪ Receipt printer	▪ Taskbar chat
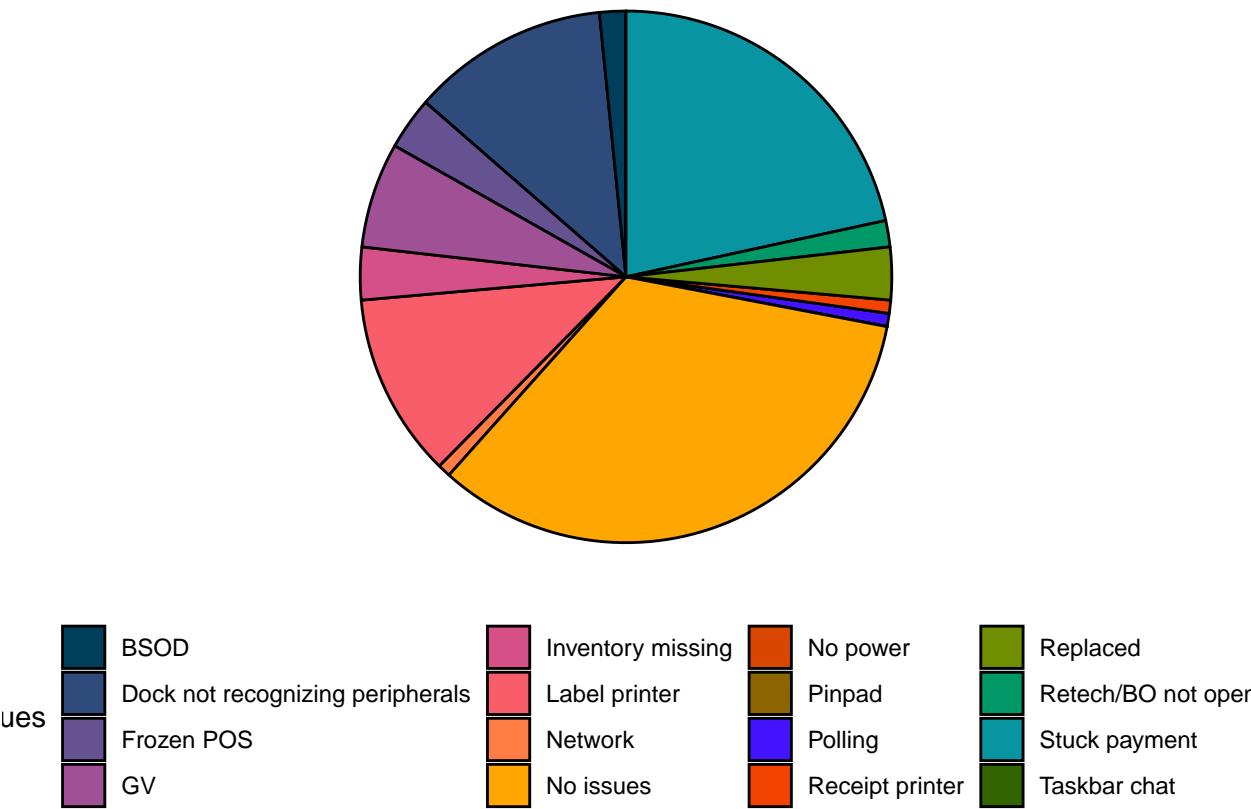
6.1 Issues

Issue	Count
Dock not recognizing peripherals	15
Network	1
BSOD	2
Pinpad	0
Polling	1
Taskbar Chat	0
No power	0
Frozen POS	4
Stuck payment	25
Label printer	14
Retech/BO not opening	2
Inventory missing	4
Receipt printer	1
No issues	42
GV	6
Hardware replacements	4
Total Issues	65
Total installed stores	83

6.2 Replacements

Store	Hardware replaced	Cause	INC
4847	R2 Dock	Dock was not recognizing anything even after the TS	INC37767197
6503	R1 Dock	Dock was not recognizing anything even after the TS	INC37683620
6703	R2 Tablet	Blue screen of death	INC37882318
6728	R1 Tablet	Screen was flickering	INC37953621

6.3 Escalations

Store	Issue	GV escalation reason	INC
5900	Slow register, network issue	After the slow TS was performed issue persisted, after escalation LVL2 stated that it was a network issue	INC37787684
4847	Dock not recognizing peripherals	Dock was not recognizing anything even after the TS, we needed an approval to get it replaced	INC37767197
6503	R1 Dock	Dock was not recognizing anything even after the TS, we needed an approval to get it replaced	INC37683620
4684	Inventory missing on all registers	We escalated the INC so LVL 2 could ask for an inventory refreshment	INC37834856
4684	PRP's not appearing at sales	The store was unable to sell PRP's, Escalated so they could investigate the issue and fix it	INC37883298
6703	R2 Tablet	Blue screen of death, escalated to get a replacement	INC37882318
6728	R1 Tablet	Screen was flickering, escalated to get a replacement	INC37953621

7 General analysis
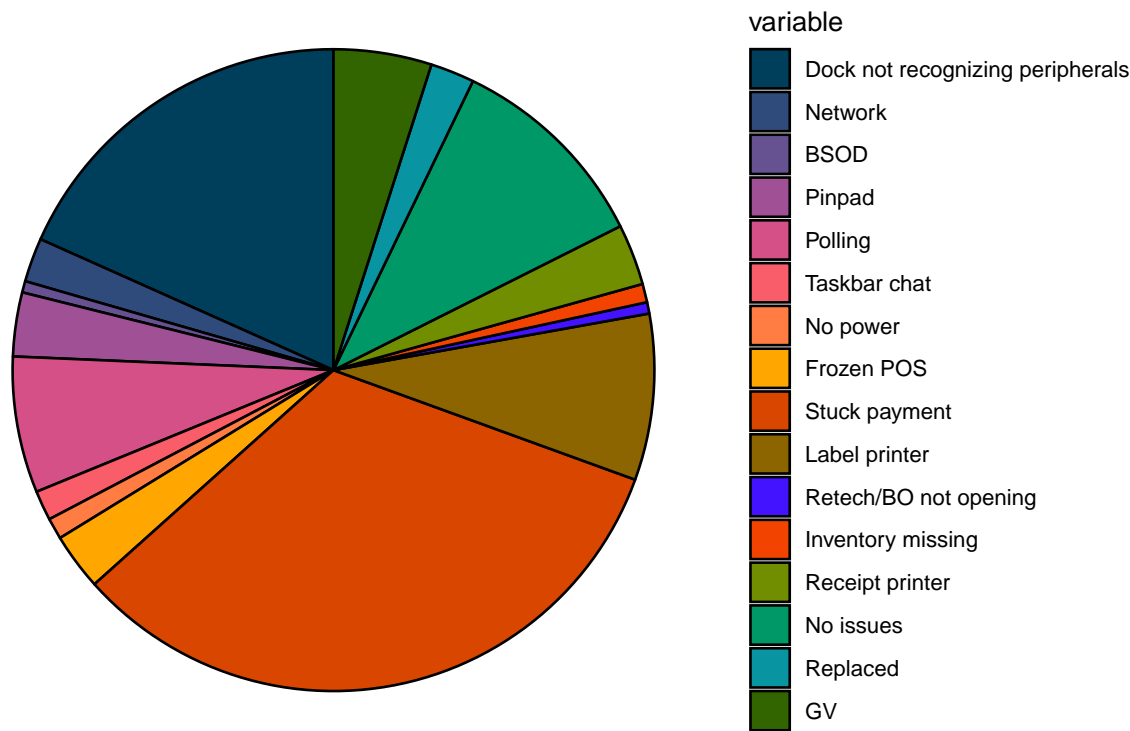
7.1 Issues

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====================================
Dock not recognizing peripherals 256
Network                           31
BSOD                               8
Pinpad                            45
Polling                           96
Taskbar chat                      21
No power                          15
Frozen POS                        40
Stuck payment                    459
Label printer                    117
Retech/BO not opening              8
Inventory missing                 13
Receipt printer                   43
No issues                        146
Replaced                          31
GV                                69
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```

The total amount of issues are:

`[1] 1398`

Installed stores at 02/28/2021: 511

If we get an average between issues and stores we would get a total of 2.6 issues per store in just 4 months

7.2 Replacements

We've a total of 27 INC tickets regarding replacements. The most common reasons for these replacements are the following:

-**Docks not recognizing peripherals or not connecting to the network (18/27):** It is the number one hardware malfunction reason. However, October had 50% of that replacement orders, this might be related to the not well optimized docks that we installed that month.

-**Blue Screen of Death:** We replaced 3 tablets that had BSOD. There was not an established TS that we could performed. The register was just restarting a lot by itself and, after that, it kept getting frozen on a blue screen with a windows error.

-**Tablet screen flickering:** We replaced 2 due to this issue. The tablet's screen suddenly starts flickering and it is unreadable. There is no TS for this, replacement is the only viable solution.

7.3 Escalations

We proceed with a total of 61 Escalations to GV. We escalated the surface's issues after we finish following the pertinent KB looking for solutions. Our escalation process is as follows:

1st. We acknowledge if the issue is a surface or an HP computer. 2nd. We troubleshoot with the corresponding KB 3rd. If the KB does not work we ask on the general team to see if something else can be done 4th. If there are no answers or better methods the agent asks a more experienced agent on the surfaces, for example Saúl Velazquez or Pablo Hernandez 5th. IFinally, if none of the option above work or they are not available, we escalate to GV.

Most common escalations:

Docks not recognizing peripherals or not connecting to the network: We escalated 20/61 incidents due to this. Normally we try the cable trick at least 2 times, we also check the cables on the inside of the case, remove the tablet from the case and put it back in, if that does not work, we escalate the issue.

PUR transactions are not able to be performed: We tried by force polling, if that does not work, we proceed to escalate.

Surface not auto-rotating: We escalated this for report reasons. We already have a PRB ID 52632. We are not escalating this anymore; we just tell the users that LVL 3 is working on it.

ER1 not polling: Every time a store has an emergency R1, they are unable to poll, we normally escalate this to see if LVL 2 is able to activate the services for the register to poll.

7.4 Problems & solutions

While new issues are reported, we start to find new ways to fix them. We noticed what may be triggering them and we are discovering new ones.

7.4.1 New issues

Registers are not able to close at night after the installation: This problem is not on the graphs because it happens to every store that gets a surface installed and that would get us incorrect proportions. We noticed that when we install a new surface, store.ini is changing the tab [Systems], all registers are changed to closed instead of Down.

For example:

Figure 1: Store 3377 installed 02/25/2021

As we can see on figure 1, the [System] tab is changing the Down registers to closed and for some reason R1 is closed but R2 is open.

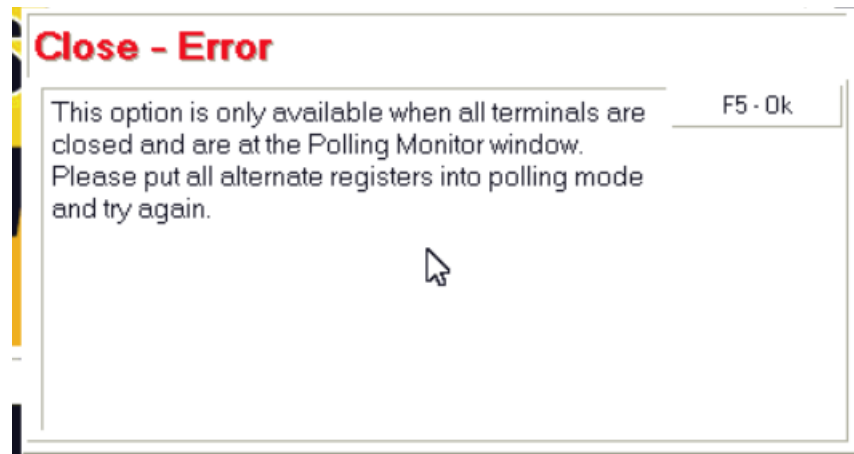The problem with this is that when the store closes we have the following message:

Figure 2: Closed-Error message

To solve this issue we have to open RU - and force close all auxiliary registers from R1, after our fix, the register does not present this issue again.

New RU FO is setting the IP of the computer to .10 instead of .12: We noticed that when we are on the step of turning ER1 to R2, if we use the New RU, it always turns the IP from .11 to .10 instead of .12, for the moment we are using the old RU.
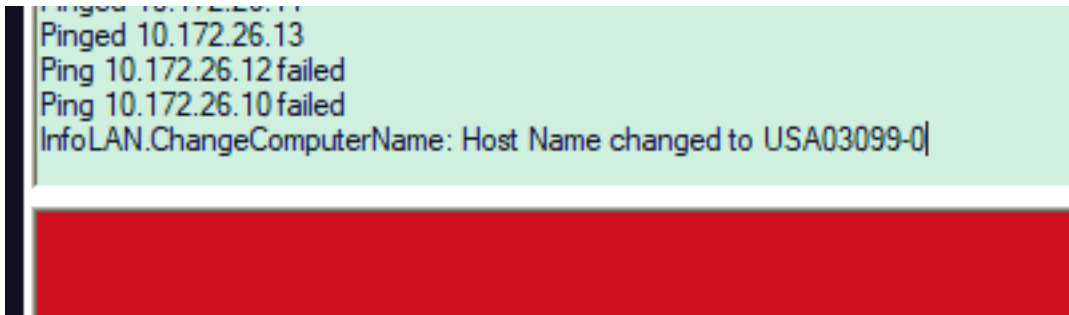

Figure 3: RU IP=.10

The work around for this issue, in case we use the new RU, is to remote to the register with .10, after that we have to change the IP of the computer to .12, then change the name of the computer from usa0xxxx-0 to usa0xxxx-2, and finally restart the computer.

When the register reboots back, we are able to perform the FB, after the FB we were getting an error when the register loaded Retech.

To fix the re tech issue we have to open the register.ini file, where we can visualize the register number ="", in which we must input the number 2 and restart the register. This fixes the issue.

The issue with this is that the store's register 2 has connectivity issues until the register poll. The POSA error appears and we have to perform a series of TS for it to work again.

7.4.2 Issues getting resolved by escalations teams

Tablet software not rotating when the user rotates the tablet for the customer to see the purchase: This issue was escalated as a reporting issue. Currently, when a user calls about regarding this issue, we give them the PRB ID 52632.

Tablet erasing the IP address and not accepting it back: The tablet is connected properly to the network, but the IP is not getting saved; nor manual nor automatic input works. This is a known issue, which LVL 2 is aware of. INC38033675 is one of the examples. .

Emergency R1 are not polling automatically: When a R1 gets replaced we must make a FO. The problem is that when we have an ER1 the store is not able to poll automatically. Consequently, we must activate the remote link client service and set it to automatic, then we poll the register. The escalation group is aware of this.

7.4.3 Issues that we know how to fix

Inventory is unable to be seen on the register: This happened during the October installations. After some escalations to LVL 2, we noticed that the cause for this issue was that the hour was not accurate. This caused a malfunction on the synchronization process of the register; also, it was giving an error message on the BOPS icon on the task bar.

To fix this we changed our surface installation guide, before we force poll we are changing the hour and the time zone of the surface to be as accurate as possible, the issue should not happen on the surface anymore, if it happens, normally we escalate it.

PUR transactions are unable to be performed: This is one of the must frequent issues on the surfaces. We noticed that the incorrect time zone is triggering it. However, this issue should not happen after the installation. To fix it we change the time zone and time on the surface, then we restart the register. In case that this doesn't work we escalate the issue.

Unable to see the kronos scheduler: Master Cherwell Ticket #1966693 (10/27/2020) - We just have to open kronos from back office instead of the OKTA dashboard.

8 Stuck payment Surface & HP comparison

For this report I compared the stuck payment INC's created from the surface installation until today & for the HP computers I started at 10/01/2019 until the surface was installed.

I just performed this analysis for 195 stores, this stores were the ones with at least 1 stuck transaction in our raw data.

Stuck payments Surface & HP comparisson
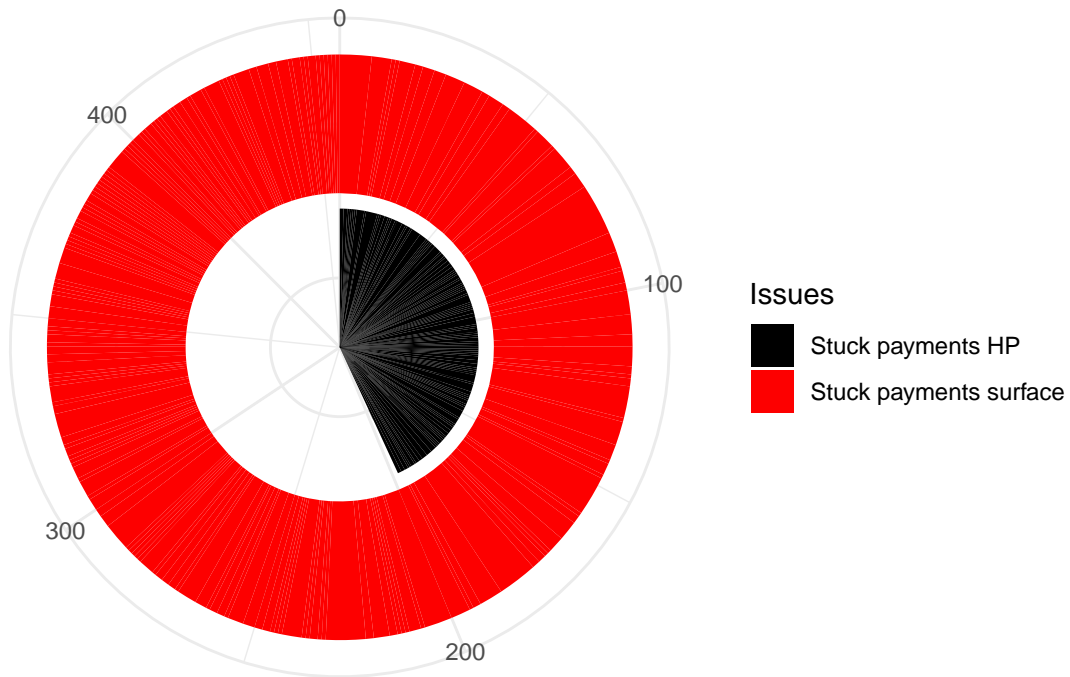
Source: Service Now

We have a total of 197 for the HP computers & a total of 457 for the surfaces, as you can see this is more than double the amount of issues betwwen both