

August 19, 2020

Dear Valued Dejavoo Customer:

In the last few weeks, we have been working diligently to address a sporadic, but non-field recoverable, issue of terminals that would randomly freeze on “System Initializing”.

On July 8<sup>th</sup> we provided a correction to a specific memory issue caused by one specific credit card, which we thought may be the cause of the memory corruption, which was believed to ultimately be causing the System initializing freeze. Since most reported occurrences came from TSYS enabled terminals, we hoped that the fix would address the freeze issue and another related issue in where terminals were unable to commit transactions to the database causing the transaction number to either duplicate or revert back to transaction #1.

Unfortunately (and fortunately) we realized that there was another more critical issue hiding as the initialization freeze increased the frequency of the failures, post downloads, led us to discover and cure the core issue causing the freeze and with it, several other memory related fixes were discovered and resolved.

We added to the release a long awaited and significant improvement to the way the terminal application handles GPRS communication, more specifically, the roaming between towers in rural areas and while on the go.

Our first release of this fix is done as a patch of the 20191205 release, which is our most commonly used application. We are in the process of implementing and releasing these changes also to the new Aura application. All changes and improvements will of course be part of our next major release that will be ready for production in the upcoming weeks, however, the patch is **important and should be applied at your earliest convenience**.

After thorough review of these reported issues it was determined that the terminal device would operate in a normal state and didn’t experience the “System Initializing” error until a reboot was initiated. Please note, any terminal that is already in this state may still experience the “System Initializing” error when performing the new download. Once the new software version is downloaded and the application is running, we believe the issue is resolved.

Going forward we strongly urge and request that all new Terminal Profiles (TPNs) be created using the templates in this new software model, the version can be identified by the model name, for example: **V3CoreF w CrDb\_PATCH20191205**, the new software version will be assigned to your STEAM profile. In addition to all new terminal installs, please rebuild the Terminal Profile for any replacement terminals to this new software as well.

For your convenience, the information below summarizes the cause of these reported issues and the resolution we implemented in this new software version.

<b>DESCRIPTION OF ISSUE</b>	UPON BOOT UP THE TERMINAL FREEZES AT “SYSTEM INITIALIZING”, A WHITE SCREEN APPEARING AND DISABLING TERMINALS AND TRANSACTION SEQUENCE OUT OF ORDER OR NOT COMMITTING TO DATA BASE.
<b>REASON FOR ISSUE</b>	THE LINUX FILESYSTEM EXPERIENCED CORRUPTION. THIS CORRUPTION IS ONLY REVEALED DURING TERMINAL STARTUP/REBOOT.

<p><b>EFFECT OF ISSUES</b></p>	<p>TERMINAL DISABLED TEMPORARILY AND/OR MEMORY MAY NOT BE FULLY RECOVERABLE OR OPERABLE.</p>
<p><b>TEMPORARY SOLUTION WITH EXISTING SOFTWARE</b></p>	<p>SEND TERMINALS TO DEJAVOO, PERFORMED SULD (MEMORY RESET) AND RETURN TERMINAL TO THE FIELD.</p>
<p><b>PERMANENT RESOLUTION WITH NEW SOFTWARE</b></p>	<p>WE REMOVED THE USE OF ALL SYNC AND FSYNC FUNCTIONS FROM OUR CODE. WITH THIS CHANGE THE SOFTWARE CREATES A BACKUP OF THE FILE, UPDATES THAT BACKUP AND THEN RESTORES THE ORIGINAL FILE WITH THE UPDATED BACKUP.</p> <p>IN ADDITION TO THE CHANGES IN THE BOOT UP PROCESS OF THE SYSTEM INITIALIZING OF THE APPLICATION, WE HAVE MADE IMPROVEMENTS TO OTHER FEATURES, SUCH AS: MEMORY ALLOCATION, SPIN REQUEST VALIDATION, PREVENTION OF MEMORY CORRUPTION, AND GPRS COMMUNICATION IMPROVEMENTS.</p>
<p><b>POSSIBLE IMPACT IN LOADING NEW SOFTWARE</b></p>	<p>SOME TERMINALS THAT ARE CURRENTLY DEPLOYED AND OPERATIONAL IN THE FIELD MAY ALREADY HAVE CORRUPTED MEMORY OR FILE SYSTEM AND WILL EXPERIENCE THE SYSTEM INITIALIZING FREEZE ON THE NEXT BOOT UP (AS TERMINALS AUTOMATICALLY REBOOT AFTER THE DOWNLOAD); THEREFORE, THESE EFFECTED TERMINALS WILL SEE THE ISSUE. EFFECTED TERMINALS ARE NOT RECOVERABLE IN THE FIELD AND WOULD REQUIRE TO BE SENT TO DEJAVOO FOR ONE LAST SULD (RESET MEMORY IN OUR LAB) BEFORE RESUMING NORMAL OPERATIONS.</p>

We appreciate your continued support and we will always work hard to bring you the most reliable and flexible software in today's market. Should you have any questions or concerns regarding this software update please contact your Dejavoo Account Executive and he/she will be happy to assist you.

Respectfully,

**Dejavoo Systems Executive Team**