

Version GA10 z1090-1-10.55.16 Release Letter

1. Product Description

The IBM System z Personal Development Tool (zPDT) provides System z functionality, with selected emulated I/O devices. The z1090 runs in a Linux environment. As the name implies, a zPDT is intended for development and similar purposes such as education and demonstrations. It lacks the Reliability and Service (RAS) and flexibility of a “real” System z machine and is not suitable for production use. This release letter refers to the zPDT that uses a token or USB hardware key defined as a Sentinel Hardware Key (SHK) for licensing management. Please reference the System zPDT Guide and Reference (SG24-8205-05) Redbook, section 1.3 Terminology changes for more information concerning licensing options.

2. New Function

- Introducing the support for the new Gen2 1090 hardware token.

PLEASE read the Addendum , section “NEW TOKENS” in this document.

3. Fixed in this release

- Fix for listVtoc for ckd disks that have a very large number of files.
- Fix data truncation when using iconv

4. System Configuration and Prerequisites

The supported levels of Linux must be at least the 64-bit version of Red Hat Enterprise Linux (RHEL) 7.0 or greater, the 64-bit version of openSUSE Leap 42.3 or greater, the 64-bit version of SLES 12 SP3 or greater, and Ubuntu 16.04 or greater. **Earlier versions are not supported.**

5. Install z1090-1-10.55.16

If you are installing the 1090 application for the first time, refer to the Redbook titled IBM zPDT Guide and Reference System z Personal Development Tool (SG24-8205-05), chapter five, zPDT Installation. Please be sure that you have installed the appropriate version of Linux and the prerequisites before

proceeding to install the 1090 code. If you have already installed the appropriate version of Linux and the required prerequisites, and you are upgrading from a previous zPDT level, please proceed to the next step.

5.1. Install the 1090 application

You will use root to install the z1090 release. As root, install **z1090-1-10.55.16.x86_64** and accept the End User License agreement. If you've downloaded the release, set the proper write and access permissions (either `chmod 755` or `u+x zPDT package name`).

5.2. Execute z1090instcheck

The next step is to run the command `z1090instcheck` to check if conditions of your system are favorable for the 1090 application. You should run this command from the user login configured to run the 1090 application. If you choose to run from root, the path is **`/usr/z1090/bin/z1090instcheck`**.

5.3. Plug the Sentinel Hardware Key (SHK)

If not already plugged in, be sure to plug the SHK into the appropriate USB slot. If this is a brand new SHK that has not been activated yet, you'll need the 1090 code to be able to activate the SHK. The SHK may be plugged into any available USB 2.0 port. If you are planning to install the SHK in a USB hub make sure that the hub is externally powered, otherwise, you could damage the SHK.

6. 1090 Directory Structure

The following is the directory structure set up by the install process. If the structure is not in place, the **`awsstart`** command will create it for you.

<code>/<homeDir>/z1090/logs</code>	various traces are placed here
<code>/<homeDir>/z1090/configs</code>	IOCDs, IOCP, activation profiles
<code>/<homeDir>/z1090/disks</code>	emulated disk volumes
<code>/<homeDir>/z1090/tapes</code>	emulated tape volumes
<code>/<homeDir>/z1090/cards</code>	input to emulated card reader
<code>/<homeDir>/z1090/list</code>	emulated printer output

(where /<homeDir> is whatever the home directory is for the given user)

7. Known Restrictions, Exceptions, and Other Notes

7.1. Restrictions

- SNA is not supported.
- Multicast IP is not supported via OSE managed devices. Multicast IP is only supported with OSA defined in OSD mode.
- Deflate function is not provided in this driver but will be provided in a future GA10 driver.

7.2 Exceptions

- None

7.3 Other Notes

- With zArchitecture level on by default, if you IPL an older ADCD, you may get a Disable Wait 0019. You will have to update your ADCD image. Using the latest ADCD (zOS 2.2) from May 2017, it did IPL fine. With ZARCH_ONLY turned OFF explicitly via devmap using cpuopt parameter you can IPL in ESA/390 mode in devmap.txt like this:

```
cpuopt ZARCH_ONLY ON
```

```
or
```

```
cpuopt ZARCH_ONLY OFF    (non-standard option)
```

- zOS 2.3 hits SLIP TRAP right in setup right after IPL. This is a zOS problem and will be handled via zOS APAR OA54373.
- Linux on Z under VM may rarely experience a loss of connectivity when using an OSA dedicated configuration. Development is investigating.

- zVM PRG005 abend sometimes observed when running zOS under zVM 7.1 GA 1801 RSU 1902. Development is investigating.
- awsrdr device statement without a full path specified will cause a core dump. Work around is to explicitly provide the full path statement. This is expected to allow the default to work in a future fixpack release.

Addendum

NEW TOKENS:

The IBM 1090 license tokens have been an important part of zPDT since it was released. The technology involved with these tokens has aged and zPDT must switch to new tokens. The general plan is to require the use of the new tokens when renewing a zPDT license, starting in the fourth quarter 2023. Since licenses are generally good for a year, this should result in all users having new tokens by the end of 2024. zPDT will support both the old tokens and the new tokens for at least a year.

The handling of IBM 1091 license tokens used by some ZD&T customers will be addressed in the future. The software-only ZD&T licenses will not be replaced and will continue to be used.

As a general plan, the Information Technology Company (ITC) will handle the actual distribution of the new tokens. ITC will provide suitable documentation and forum notes. Depending on the customer situation, there might be a minor fee to cover the actual cost of the new tokens. The new tokens are USB devices, slightly smaller than the previous tokens, and have IBM model numbers such as 1090-LT1, 1090-LT2, and so forth.

There are only a few technical changes involved in using the new tokens. For example, **request_license** and **update_license** commands replace the previous **Z1090_token_update** command. The **query_license** command has been expanded to include details about the new tokens. Some IBM and ITC documentation uses the terms Gen1 (for the older SHK tokens) and Gen2 (for the new LDK tokens); this terminology was created a few years ago and these are simply convenient names with no special meanings.

For the newer (Gen2) 1090 tokens, do the following:

- You do not need to stop zPDT and you can have multiple Gen2 tokens installed.
- Switch to Linux root mode. There is currently no option to bypass this step.

- Using a Linux window, issue the command **request_license**. This should produce a small binary file, with a system-assigned file name, such as **<linux host name>_<hash>.zip** which is placed in /root.
 - o If multiple Gen2 tokens are present, it will ask you to select the one you want to work with
- Send the binary file to your zPDT support organization (this is probably ITC). (Depending on your interface for obtaining renewed licenses, you might need to include the `11S` and `102` numbers from the tag attached to your license token.)
- They should respond with a binary file having a matching name such as **<linux host name>_<hash>_update.zip** . Place this file in a convenient location in your Linux system.
- Switch to Linux root mode. You can have zPDT still active and multiple tokens connected.
- Issue: **update_license** *<path of>/<linux host name>_<hash>_update.zip*
- You can verify that the new Gen2 hardware token licenses have been installed / updated, by issuing the **query_license** command and observe the license expiration date.
- As in the past, you can also verify by starting zPDT (with the normal `awsstart` command) and then issuing a **token** command from a Linux window.