

PSI

MAINFRAME SOFTWARE PROVISIONING & MAINTENANCE



Software provisioning and maintenance in a mainframe environment was historically a highly manual and time consuming process. Every mainframe IT architecture is equipped with its own settings and rules. Forced by the globalization of IT hosting the centralized operating teams have to define and implement standardized processes of software distribution and maintenance.

The Product Software Inventory (PSI) software, developed and maintained by T-Systems, is the core software for an automated standardized software provisioning and maintenance process of zOS and other mainframe software packages. It enables the pre-configuration of a standard software stack in a central mainframe environment and the provision and implementation of customized parts out of the standard software stack into the local mainframe systems. Using PSI will minimize significantly the efforts on time and resources as well as unintended misconfigurations in the setup of your software roll-out or maintenance.

Benefits of PSI

- minimizing human efforts for the maintenance of local systems
- reducing significantly time for software roll-out and change
- enhanced resilience due to reduction of service user mistakes and fall back options
- quality improvement by standardized system software layout
- reduction of storage consumption
- consistency due to central creation of software stacks
- flexibility in local deployment due to
 - full software stack roll-out
 - incremental software stack roll-out
 - local customizing via renaming of software

- provision of a loadable software stack to the local environment

PSI administration - generic functions

- TSO/ISPF based client for central or local administration
- easy to use, with
 - editor like administration menus
 - field sensitive help information
- increased resilience due to extensive plausibility checks

PSI, the central part of the SDM process

T-Systems as a leader in global IT hosting established over the last decade the Software Delivery for Mainframe (SDM) process to automate and standardize the initial software setup, periodic maintenance and updates.

The PSI software is the core element of the SDM process, assuring all activities to provide the right software combinations out of hundreds of different software packages. It could include multiple version of zOS and the related compatible zOS software products from IBM and ISV 's into one consistent and stable running SDM software version as a central software stack.

Central PSI repository

The central repository server of PSI contains the entire interoperable software stack, which can be customized for each location.

Central PSI functions

- support the definition of
 - products (software including meta information)
 - packages (lists of products)
 - locations
 - systems (i.e. LPARs) with their software
- allow workflow based product definition
 - construction
 - installed
 - approved by product owner
 - approved by maintenance team
- provide extensive search algorithms to maintain workflows
- are robust and secure
 - object security based on SAF interface
 - logging of server and user actions
 - automatic inflight backup
- assure automatic software stack creation for all systems of a specific location
 - full software stack (all software of repository included) – or
 - incremental software stack (selection of software products)
- ensure consistency by software stack creation in steps
 - information collection
 - information verification
 - built software stack dataset
 - ready to sent software stack dataset

Local PSI repository

The local PSI server creates a SYSRES environment out of the provided software stack for its systems. It restores the software libraries plus additional information (e.g. SMP/E environment, PARMLIB members, append jobs) including re-naming to support local naming rules.

Local PSI functions

- allow a batch controlled load of a central created software stack into database
- apply local naming conventions to overwrite central settings
- define and control the restore process
 - selection of target system(s)
 - software products selection to create restore profiles
 - JCL for the restore job is created automatically based on restore profile
 - restore job updates the product dataset and provides renaming
- adapt the SMP/E environment to reflect new dataset names
- create PARMLIB members and append jobs
- generate history records for
 - restore information
 - selected systems
 - selected products
 - job steps
- log return codes for “fall-back” scenarios