

Common Licensing Technology Overview

Siemens PLM Software has developed a common license technology in response to customer requests for consistent licensing and a common license file as well as the Siemens PLM Software need for improved license security and the ability to operate within the emerging virtual environments. The common licensing technology is a toolkit developed by Siemens PLM Software and based on FLEXlm from Macrovision. This toolkit brings together functionality from the various Siemens PLM Software products and is the foundation for delivering a consistent licensing implementation to all our products. This toolkit will show up in products starting in 2006 and will cause some changes in the license files and operation of licensing for those products.

The following changes are incorporated in the licensing toolkit:

- New daemon. The toolkit has adopted a new Siemens PLM Software-wide licensing vendor daemon called “ugslmd”. All products that adopt the common licensing technology will gain access to common functionality and utilize the same daemon. This will enable customers to have a single license file that encompasses all products using the toolkit.
- Combined license files. By utilizing a common daemon, Siemens PLM Software will generate combined license files for all products that adopt the toolkit.
- High security license files. The licensing toolkit will use the Tamper Resistant License (TRL) option of FLEXlm from Macrovision.
- Use of port 28000. The new ugslmd daemon communicates on the Siemens PLM Software reserved port of 28000. By using this dedicated port rather than FLEXlm’s default port of 27000, we have eliminated a source of port conflict with other software that uses FLEXlm.
- Composite hostID for license server. The composite hostID (CID) replaces the current license server hostID. The CID is a combination of hardware and network parameters used to create a unique machine identifier required by the common licensing technology. Adopting a composite hostID enables Siemens PLM Software to support license servers running on virtualization technology such as VMware. Obtaining a composite hostID requires running a Siemens PLM Software provided utility on the license server.
- Change in Dongle support. Dongles are not compatible with a composite hostID and are no longer supported as an NX license server hostID. Dongles are still supported for a node locked license. In addition, a new standalone license option permits the use of dongles for mobile licenses.

Product Schedules

All products that adopt the common licensing toolkit will be affected by the changes identified in this document. The current schedule for implementation is listed in the

following table. Additional products are evaluating their development plans for adoption of the toolkit.

| Product | Release | Estimated Date |
|--------------------------|----------------|-----------------------|
| Teamcenter Visualization | TC Vis 2007 | Q4, 2006 |
| NX Nastran | V5 | Q4, 2006 |
| NX | NX5 | Q1, 2007 |
| I-deas | V13 | Q1, 2007 |
| Teamcenter Engineering | 2007.1 MP3 | Q2, 2008 |

Compatibility with Older Versions

By moving to a new daemon, previous versions of those products will not be able to access licenses from the new license file. Previous versions of the software must continue to use the old daemon and license file. The solution is to have the license server simultaneously run multiple daemons each with their own license file.

For example, a customer with a running NX4 installation receives NX5 with the new daemon and license file. The NX4 installation is not touched and the new NX5 daemon and license file are installed. Clients at NX5 will use the NX5 daemon and license file while those at NX4 will use the NX4 components.

Product Impact

The features and changes incorporated in the common licensing technology impacts products and product delivery as follows:

TRL

TRL creates a larger license file due to longer signatures on each PACKAGE, FEATURE or INCREMENT line. The signature is the "SIGN=" field and is a key to detect tampering of the license file. The larger key and underlying technology improves the security of the license file. See Appendix A for a sample of the new license file.

ugslmd

The name of the new Siemens PLM Software licensing daemon is "ugslmd". The daemon name change is required to implement TRL and the composite hostID. Products that incorporate the common licensing toolkit must adopt this daemon.

The impact of a new daemon is that customers running multiple versions of the same product (e.g. NX4 and NX5) will require both the old licensing daemon and the new one to be installed and running.

Composite HostID

The composite hostID (CID) replaces the hostID on the SERVER line of the license file. It also is preceded by the keyword COMPOSITE= to differentiate the composite hostID from a standard hostID.

Obtaining the CID requires running a Siemens PLM Software utility call “ugs_composite.exe” rather than the FLEXlm utility called lmhostid. Once obtained, the CID must be registered with Siemens PLM Software via customer services or WebKey.

Combined License File

Siemens PLM Software will generate a combined license file for all products that adopt the toolkit. Each new license file will accumulate the new features that use the ugsldm daemon and merge into a single file. The latest license file from Siemens PLM Software should contain all the licenses you need to run the software you own using the common licensing. Each product line will still maintain their unique feature names and version numbers.

Environment variables

The common licensing technology implements a new environment variable called “UGS_LICENSE_SERVER” to identify the port@host of the license server. Legacy environment variables may still be supported but that depends on the implementation and will be product specific. Please refer to product documentation to identify if legacy variables can also be used.

Hostname

The registration of the CID also permits entry of the license server’s hostname into the customer record. The benefit of this is that Siemens PLM Software will generate a license file with the correct hostname on the SERVER line. No editing of the license file is required. Entry of the hostname is optional.

NX Dongle Support Changes

Due to their incompatibility with the CID, dongles are no longer supported as the hostID for a license server by NX on Windows. As an alternative, a new standalone license option is available with NX6 that will permit dongle based licenses for movement of licenses. The standalone option operates without a license server and is installed directly on the client using the license. Please refer to the document called NX6 Product Licensing for more information.

Common Capabilities

One of the benefits of the common licensing technology will be a standard set of licensing functionality available to all products adopting the toolkit. For example, license borrowing and bundle support are part of the toolkit but require application enhancements to support. Since much of product licensing is embedded in the application the timing and ability to offer new capabilities will be based on product development resources.

CID and WebKey Operation

The composite hostID must be obtained once for each license server. As with the hostID of the past, it normally does not change and is used from release to release. If you have redundant servers, a CID is required for each server. The CID utility is included on all product media using the toolkit and is also available for download from the GTAC web site.

If a product shipment occurs and there is no CID information on record, the license file will be a 30 day temporary license using the previous hostID. The temporary license allows additional time to obtain and register the CID. For new customers that do not have a previous hostID and have not registered a CID, the license file will be an emergency 7 day license that will work on any license server.

To make the CID entry easy and available at all times, WebKey has been enhanced to permit the entry of the CID and the hostname information. After entry, a permanent license file is immediately available. Since the CID is only needed once, the WebKey interface for CID registration was designed for initial entry only and does not allow editing or updating. Any changes after initial entry must go through customer services.

Virtual Machines and License Serving

The use of a composite hostID creates a unique identifier for each virtual machine and allows the generation of Siemens PLM Software license files for a license server running in a virtual machine. Customers who use virtual servers will now be able to get Siemens PLM Software license files for those products that employ the common licensing technology. However, Siemens PLM Software does not test or certify the operation of license serving in a virtual machine environment. It is recommended that customers who wish to deploy VM technology configure, test, and confirm to their satisfaction, the operation of license serving in their environment. Problems reported that appear to be related to the use of virtual servers cannot be resolved by Siemens PLM Software and should be reported to the VM supplier.

Appendix A: Sample License File

```
SERVER cyli6013 COMPOSITE=89D32AAA27DB 28000
VENDOR ugslmd
PACKAGE STUDIO4DS ugslmd 23.000 EB73DE80DE4D COMPONENTS=" \
  STUDIO4DS_assemblies STUDIO4DS_design_studio \
  STUDIO4DS_drafting STUDIO4DS_dxf_to_ug \
  STUDIO4DS_features_modeling STUDIO4DS_free_form_modeling \
  STUDIO4DS_gateway STUDIO4DS_iges STUDIO4DS_sla_3d_systems \
  STUDIO4DS_solid_modeling STUDIO4DS_step_ap203 \
  STUDIO4DS_step_ap214 STUDIO4DS_studio_analyze \
  STUDIO4DS_studio_free_form STUDIO4DS_studio_visualize \
  STUDIO4DS_ug_photo STUDIO4DS_ug_to_dxf \
  STUDIO4DS_usr_defined_features " OPTIONS=SUITE ck=143 \
  SIGN="1CAD 7694 FC52 96EA D4CB D0C0 C94C AC55 27AE 3E76 15DC \
  CCF7 3392 4F49 41FC 0995 2F1B 6771 BC98 F481 B37E E788 33A7 \
  047C 0AF8 4573 46EF 76C1 1226 3FEF"
INCREMENT STUDIO4DS ugslmd 23.000 28-apr-2007 1 124932F8C505 \
  VENDOR_STRING="For Internal UGS PLM Use Only" SUPERSEDE \
  DUP_GROUP=UHD user_info="STUDIO4DS bundle" ISSUER="UGS PLM \
  Solution, Inc," ISSUED=27-Apr-2006 ck=94 SIGN="142C CD70 EB57 \
  FE5D 3F21 8B35 B89C E6B8 32C0 589F 14CF 36C5 BE72 EA1E 90C2 \
  0046 314F 9A7E 16D4 F525 BB96 9684 95DE A8FC 35C8 7CE4 B0E6 \
  8A7C CE76 6A9E"
INCREMENT gateway ugslmd 23.000 28-apr-2007 1 3AAF858AFD2B \
  VENDOR_STRING="For Internal UGS PLM Use Only" SUPERSEDE \
  DUP_GROUP=UHD user_info="gateway module" ISSUER="UGS PLM \
  Solution, Inc," ISSUED=27-Apr-2006 ck=163 SIGN="010B 3119 62F6 \
  A8BE 1A19 DE52 77DD B760 E83E 1737 D661 9DE7 CC60 8E30 B0DE \
  1B76 440E 6BC7 500B 8E80 49CD 894E BA45 4A74 3DC7 627E 05EC \
  E437 8148 F217"
INCREMENT server_id ugslmd 23.000 permanent 1 B686043EC2C2 \
  VENDOR_STRING="For Internal UGS PLM Use Only" SUPERSEDE \
  DUP_GROUP=UHD user_info="server module" ISSUER="UGS PLM \
  Solution, Inc," ISSUED=27-Apr-2006 ck=140 SIGN="0372 B7B7 40BA \
  88D2 8309 FD6E CA10 5060 0F0F 60D9 2453 1B64 9525 D81C EBCE \
  176D D17E F524 0E57 1CBF FC67 D5D1 5F4A 3A98 D094 5B45 783A \
  78DF 1A24 6EBD"
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