GSM (Windows) Fat Client Possible Problems

1. Introduction

This document describes some problems that **may** occur when a GSM (Windows) fat client configuration is upgraded by the application of a GSM Service Pack; and the additional problem that may occur by the application of GSM Service Pack 6, in particular. All the problems that may be encountered by the application of GSM Service Packs are easily avoided.

The various problems only occur with GSM (Windows) "fat-client" configurations. For the purposes of this document a "fat client" configuration is defined as a network configuration with two, or more, computers running a Global Client GLOBAL.EXE (or GLCONS.EXE) loading from different IPL devices. **The problems outlined in this document do not occur with thin-client configurations** (i.e. a single GLOBAL.EXE connected to multiple GSMWIN32.EXE or GX.EXE thin-clients); or Symmetric Multiple Client configurations (i.e. multiple GLOBAL.EXE's on the same computer, loading from the same SYSIPL unit, connected to multiple GSMWIN32.EXE or GX.EXE thin-clients).

This short document merely provides overviews on the various issues. Other Technical Notes describe the problems, and the solutions, in complete detail.

Because of these various complications, wherever possible, **a fat-client configuration should be converted to a thin-client configuration.**

2. Problems with External $MONITOR Customisations

This problem only applies to GSM SP-1, SP-2, SP-3, SP-4 and SP-5.

As described in IN237 a pre-requisite for all GSM Service Packs is that the customisations held in the $MONTOR file on SYSIPL (or SYSRES) must be exported to the registry (under the Monitor key) before a GSM Service Pack can be applied. This is necessary because an un-customised $MONITOR file is copied to SYSIPL (or SYSRES) during the application of the GSM Service Pack. See IN188 for more details.

After the application of the GSM Service Pack the Global Client that was running when the service pack was applied will load correctly because, although the SYSIPL (or SYSRES) contains an un-customised $MONITOR**, the registry on that PC will include a correctly configured Monitor key**. However, if the SYSIPL (i.e. gl-ipl.dlv) that contains the un-customised $MONITOR, is moved to another PC to propagate a Global Client that Global

Client, on the new PC, will fail to load because it will be attempting to load using the un-customised $MONTOR file.

This problem, and the work-around of propagating the "Monitor" key of the registry in addition to the gl-ipl.dlv file, is fully described in IN237. This problem has been fixed in GSM SP-6, which always re-applies the $MONITOR customisations after installing the Service Pack components.

3. GSM Service Packs can lead to inconsistent SYSRES and SYSIPL

This problem applies to all GSM Service Packs.

If a GSM Service Pack is applied on a Global Client that was loaded from a local SYSIPL (gl-ipl.dlv) both the central SYSRES volume and the local SYSIPL unit will be updated with new components from the Service Pack. Typically, the SYSIPL will be updated with new $MONITOR and P.$MON files from the Service Pack; the SYSRES will be updated with new P.$CMLB*x* and P.$SDLM0 libraries (in addition to numerous other files). Amongst the files copied to the SYSRES by the application of a GSM Service Pack is the start-up overlay $STARC within the P.$CMLB0 library.

Reloading the Global Client on the PC that was used to apply the Service Pack, using the updated SYSIPL (gl-ipl.dlv), will correctly load the new GSM Service Pack. However, if an attempt is made to load GSM on another PC that loads from a **different** local SYSIPL (gl-ipl.dlv) the load will result in either the following Initiation Warning which **MUST not be ignored**:

```
$57 INITIATION WARNING 302 - $MONITOR VERSION V8.1.5 ; $STARC VERSION V8.1.6
```

or the following Initiation Error which **CANNOT be ignored**:

```
$57 INITIATION ERROR 60 - MONITOR AND COMMAND LIBRARY INCOMPATIBLE
```

The GSM start-up processing checks that the version of the $MONITOR file (loaded from SYSIPL) is the same as the $STARC overlay (loaded from SYSRES).

Thus, to complete the application of a GSM Service Pack on a fat client configuration that includes multiple "local" SYSIPL (gl-ipl.dlv) units with a central SYSRES, the updated SYSIPL (gl-ipl.dlv) must be copied to all the other PC's that load GSM from a SYSIPL.

This problem only affects those fat client configurations that include multiple "local" SYSIPL (gl-ipl.dlv) units. It does not affect those fat client configurations with a single, shared SYSIPL (gl-ipl.dlv) unit.

Furthermore, this problem does not affect those fat client configurations that include a separate SYSRES for each distributed fat-client. See section 4 for a less severe problem with these "multiple" SYSRES configurations.

This issue is covered in more detail in IN245.

4. GSM Service Packs can lead to inconsistent SYSRES volumes

This problem applies to all GSM Service Packs.

Whereas the severe problem described in section 3 affects "multiple" SYSIPL fat-client configurations, a less severe problem can affect "multiple" SYSRES fat-client configurations. If a GSM Service Pack is applied to the central SYSRES of a multiple-SYSRES configuration, it should also be applied to all the other "local" SYSRES volumes on the network. This is to avoid fat-client, multiple SYSRES network configurations that include mixtures of GSM Service Pack versions. A mixture of GSM Service Packs on a network can sometimes lead to unpredictable effects.

This issue is covered in more detail in IN245.

5. GLOBAL.EXE Requires Access to global.lic FIle

This problem, which is fully described in IN245, only applies to GSM SP-6, and later.

All GSM Service Pack upgrades which involve upgrading from GSM SP5, or earlier (including "vanilla" GSM V8.1l), to GSM SP-6, or later, involve the conversion of the $STARH file on the central SYSRES (normally A01) to the Windows file global.lic. **Whereas the $STARH file on A01 (for GSM SP-5, and earlier) is accessed via the normal GLOBAL.EXE to GLSERVER.EXE network interface, the global.lic file (for GSM SP-6, and later) is accessed directly by GLOBAL.EXE.**

Consider the case of a classic "fat client" configuration on a two computer network. Computer-1 acts as the notional server and runs a single Global Server GLSERVER.EXE (file server "A") and a single Global Client GLOBAL.EXE (node-id #1B). The Global Server "A" is used to access domain A00 which contains a central SYSRES on unit A01. The Global Client

#1B loads from a "local" SYSIPL (gl-ipl.dlv). Assume GSM is installed in directory C:\gsmpc1\ on this computer.

Computer-2 runs a second fat client: A single Global Client GLOBAL.EXE (node-id #1C) which loads from a "local" SYSIPL (gl-ipl.dlv). Although Global Client #1C accesses the SYSIPL unit directly (i.e. as unit 110) the central SYSRES (A01) is accessed via the GLSERVER running on Computer-1. Assume GSM is installed in directory C:\gsmpc2\ on this computer.

GSM SP-6 is applied on Computer-1 which updates the central SYSRES and the "local" SYSIPL. The upgrades also **moves** (i.e. exports and deletes) the $STARH file on the central SYSRES to the file global.lic:

>   C:\gsmpc1\LicenceFiles\global.lic

When the GLOBAL.EXE on Computer-1 is used to load GSM, the global.lic file is in the "correct location" and is used to access the Global Licencing information. The reload of GSM on Computer-1 after the application of the Service Pack is successful.

Now consider Computer-2. Firstly, the upgraded SYSIPL from Computer-1 (C:\gsmpc1\gl-ipl.dlv) must be copied to Computer-2 (C:\gsmpc2\gl-ipl.dlv) to prevent the inconsistent SYSRES/SYSIPL problem described in section 3. However, whereas the SYSIPL copy is all that is necessary to complete a GSM SP-5 (or earlier) upgrade, a further step is required for SP-6.

If the application of a GSM Service Pack involves the export of $STARH from a central SYSRES to a global.lic file in a local "Global directory" either that global.lic file must be copied to all other fat-clients on the network or the global.lic file must be made shareable.

Because the global.lic file is routinely updated by a number of $CUS Customisation options (e.g. the Edit contract description, Upgrade price level and Apply Expiry Date Password options) **you are strongly advised to maintain a central global.lic file**. This is achieved by using GLOBAL.EXE V3.4, or later, and setting the following registry setting, on **every** fat client PC:

>   ..\Global\Client\LicenceFiles\CentralLicenceFileDirectory

to a shared directory on a central server. This shared directory must contain the global.lic file.

This problem is analogous to the issues described in section 3: Using a central SYSIPL (gl-ipl.dlv) for all Global Clients avoids the need to re-propagate gl-ipl.dlv after a GSM Service Pack upgrade (see section 3). Using a central Licence File (global.lic) for all Global Clients avoids the need to re-propagate global.lic after a $CUS "Licence Information" upgrade.