

Gateway Framework Distribution Note

Date: 6 April 2009

1 Associated Documents

The following documentation accompanies this release:

1.1 Referenced Documents

| Document Name | Document Description |
|------------------------------|--------------------------------------------------------------------------|
| [Gateways Installation Note] | This document describes the steps required to install and run a Gateway. |

1.2 Other Related Documents

| Document Name | Document Description |
|--------------------------------|----------------------------------------------------------------------------------------------------|
| [Gateway Framework User Guide] | Gateway Framework User Guide describing the management and configuration of the Gateway Framework. |

2 Introduction

This Distribution Note provides an overview of the release history of the Gateway Configuration.

For information on the Gateway Framework, its configuration and use refer to the [Gateway Framework User Guide].

3 Platform Support and Perl Version

Gateway Framework release 3.4 is built on Perl version 5.6.1. The Gateway Framework is currently supported on the following platforms:

| Operatin System Version(s) | Chipset | Perl Build Architecture |
|---------------------------------------|--------------------|-------------------------|
| HP-UX 10.2 & 11.0 | PA-RISC2.0 | PA-RISC2.0 |
| Solaris 9 & 10 | SPARC | sun4-solaris |
| Tru64 UNIX 5.0 | DEC-ALPHA | alpha-dec_osf |
| Red Hat Enterprise Linux Server 4 & 5 | x86-32, and x86-64 | i686-linux |
| | PPC64 | ppc64-linux |
| AIX 5.3 | PPC64 | aix |

Note: x86-64 includes EM64T (Xeon) and AMD64 (Opteron, Athlon 64); x86-32 is Intel 32-bit and AMD Athlon

Use of other versions of Perl has led to unexpected run time errors.

4 Release History

4.1 Release 3.4.2.2

Fix Pack release date 16 April 2009.

Listed below are the APARs fixed for this release.

| APAR NO | Description |
|---------------|-----------------------------------------------------|
| IZ 45415 | Relative Path support for SCP |
| IZ 41816 | Removed empty PID file. |
| valnt00082132 | Fixed AIX platform bulk transfer issue on FTP & SCP |
| IZ 46661 | Document update for Gateway Installation Note. |

Listed below are the enhancements for this release.

| Bug# | Description |
|---------------|---------------------------------------------------------------------------------------------------------|
| MR 0309093040 | Support for x86-64 platform. |
| valnt00083214 | CSV_Writer outputs CSV with commented text at the top and end of file. This is to support TNSQM loader. |

4.2 Release 3.4.2

Fix Pack release date 7 January 2009.

Listed below are the APARs fixed in this release.

| APAR NO | Description |
|---------|---------------------------------------------------------------------------------------|
| IZ26504 | Unable FTP to AIX due to different Date Format |
| IZ28674 | Missing "TAR TVF" in Gateway Framework Install Notes on Section 5.1 |
| IZ28675 | Perl Compilation Notes Typo |
| IZ29648 | Perl Compilation On AIX Showing Missing Libraries |
| IZ33714 | Documentation Typo in Gateway Framework User Guide |
| IZ33715 | DATA_COUNTERS_ORDER not functioning due to hash reference instead of array reference. |
| IZ32959 | Unpegging files of the same timestamp can cause gateway to exit |
| IZ35362 | Data Spikes (very large incorrect values) are observed in the database. |
| IZ36196 | Transfer Engine exits prematurely when encountering a restricted subfolder. |
| IZ34662 | Parser processing increased when data that are coming in as appended data. |
| IZ34667 | Timestamp file grows over time due to parser traversing over time |

Listed below are the enhancements for this release.

| Bug# | Description |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------|
| CR62122 | Enhance the LIF output to automatically batch for each Post Parser rule. Added new OUTPUT_FORMAT for all Post Parser rules, LIF_Bucket. |
| 59309 | Allow output filename to be specified for output to CSV. Added new Post Parser rule PIF_2_CSV. |

Note:

The **properties** file for each Gateway Configuration needs to include the following variables in order to enable the LIF_Bucket across all the Post Parser rules with OUTPUT_FORMAT => 'LIF_Writer':

```
ENABLE_LIF_BUCKET=true
LIF_BUCKET_LIMIT=10000
```

4.3 Release 3.4.1

Fix Pack release date 30 June 2008.

Listed below are the bugs fixed in this release.

| Bug# | Description |
|-------|-----------------------------------------------------------------|
| 59217 | FTP transfer engine transfer duplicate file. |
| 58224 | Transfer Out does not transfer files that have a # in its name. |
| 58223 | Transfer Out does not find the .timestamp file if it exists. |
| 58193 | ScpRcp.pm causes certain file not to be transferred. |
| 56766 | FTP exits early without checking all sub directories. |

4.4 Release 3.4.0

Release date 30 January 2008.

Listed below are the enhancements for this release.

| # | Description |
|---|-------------------------------------------------------------|
| 1 | Support for new machine architecture, Sun Solaris on Intel. |
| 2 | Specific platform Gateway extensions installation. |

4.5 Release 3.3.1

Release date 1 November 2007.

Listed below are the enhancements for this release.

| # | Description |
|---|-----------------------------------------------|
| 1 | Include modules directory for Vendor Gateways |

Listed below are the bugs fixed in this release.

| Bug# | Description |
|-------|------------------------------------------------------------------------------------------------|
| 58193 | ScpRcp.pm causes certain file not to be transferred |
| 57841 | The Expat.sl shared library links in to a file not included with the GWF with a hardcoded path |
| 57613 | ERROR: Some required CPAN modules were not found! |
| 57503 | UNPEGGER rule does not work for STARTDATE, STARTTIME, DURATION combination |
| 56907 | Bugs in PostParser.pm |
| 56450 | TIME KEY sorted in wrong order by UNPEGGER post parser rule when year changed to 2007 |

Note:

The `VENDOR_GATEWAY` environment variable must be set to include the modules directory in the path before running Gateway, e.g.:

```
VENDOR_GATEWAY=${GATEWAY_ROOT}/modules/<vendor-gateway>
```

4.6 Release 3.3.0

Release date 17 July 2007.

Listed below are the enhancements to this release.

| # | Description |
|---|-------------------------------------------------------|
| 1 | Blue wash exercise. |
| 2 | Average function added to ACCUMULATE post parser rule |

Listed below are the bugs fixed in this release.

| Bug# | Description |
|-------|---------------------------------------------------------------------------------------|
| 56450 | TIME KEY sorted in wrong order by UNPEPPER post parser rule when year changed to 2007 |
| 57503 | UNPEPPER rule did not make use of FORMAT in DATETIME_COUNTERS |

4.7 Release 3.2.0

Release date April 2007.

Listed below are the updates to the user documentation for this release.

| DocDefect # | Description |
|-------------|----------------------------------------------------------------------------------|
| 54786 | Gateway framework 3.1 user guide (doc release 2.1) has error in PERLIZE example |
| 55372 | Gateway Framework - update FW User Guide to explain better MIN_FILES_PER_PROCESS |

Listed below are the enhancements to this release.

| # | Description |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Date::Calc has been included into the Gateway Framework. Migrate the use of Date::Manip to Date::Calc module for performance enhancements in UNPEPPER and any processing within the EngineConfig.pm which requires date and time manipulation. |
| 2 | New standard Post Parser rule, FILE_SPLIT_BY_COUNTERS . Allows a single PIF files to split across multiple PIF based on different counter sets. |

Listed below are the bugs fixed in this release.

| Bug# | Description |
|-------|----------------------------------------------------------------------------|
| 55245 | TransferConfig.pm does not transfer all the files |
| 55464 | UNPEPPER handling DEFAULT_NULL_VALUE incorrectly |
| 55805 | Transfer OUT can't read or delete files |
| 55887 | Transfer Config - If "Remote_dir" is invalid, no PID/Timestamp in log file |
| 56070 | Siemens BSS Gateway Out of Memory errors with 3.1.1 framework |
| 56072 | Gateway Framework deletes intermediate hierarchy files during parsing. |
| 56112 | Siemens BR8 - TieCache Warning Message |
| 56114 | Siemens BR8 BULK TRANSFER does not remove original file |
| 56116 | Siemens BR8: .bad files processes 2nd time round |
| 56117 | Siemens BR8: Parser Performance |
| 56123 | Siemens BR8: BULK TRANSFER cpio output in log file |
| 56124 | Siemens BR8: PRE-TRANSFER Message in LOG File |
| 56125 | Siemens BR8: Bulk Transfer doesn't list files copied in Audit File |
| 56126 | Siemens BR8 BULK TRANSFER does not remove original file |

| | |
|-------|-------------------------------------------------------------------|
| 56127 | Siemens BR8: BULK TRANSFER output in LOG file |
| 56235 | FTP File transfer process can miss files with directory depth set |

Listed below are reverted bug fixes in this release.

| Bug# | Description |
|-------|-------------------------|
| 40272 | Parser auditing updated |

Important Notes:

Below are changes to the configuration entries for the **Transfer Engine**.

Ftp module specific configuration:

LIST_SLEEP

Sets the number seconds to sleep after getting the list of files to be transferred. This is to allow the partially generated files during the directory listing to be completely produced. Default is 0. Accepts float numbers.

Timestamp file format

The timestamp file format for Ftp module now records the modification time of every file transferred. To maintain the continuity of the timestamp for the Transfer Engine, the old timestamp format must be migrated over.

The new timestamp file format:

```
$mod_time = {
  '/<remote_dir_1>' => {
    'LAST_TIME' => <last_file_mod_time>,
  },
  '/<remote_dir_2>' => {
    'LAST_TIME' => <last_file_mod_time>,
  },
};
```

Where <remote_dir_#> is the full path of the directories on the remote server, and <last_file_mod_time> is the modification time of the last file transferred in POSIX time. The time should be consistent with the time from the previous timestamp file format.

For every directory level in the remote server directory, a similar hash structure must be defined respectively.

ScpRcp module specific changes and configuration:

ENABLE_REMOTE_COMPRESSION

When set to 'True', compresses the remote files copied in or out after they have been transferred. Set to '0' to disable.

NOTE: ENABLE_LOCAL_COMPRESSION and ENABLE_REMOTE_COMPRESSION will work exclusively, where ENABLE_REMOTE_COMPRESSION will take precedence when DIRECTION 'IN', and ENABLE_LOCAL_COMPRESSION will take precedence when DIRECTION 'OUT'.

4.8 Release 3.1.1

Release date May 2006.

Listed below are the enhancements to this release.

| # | Description |
|-------|-------------------------------------------------------------------------------------|
| 54551 | Transfer should continue other rules in Transferconfig even if the first rule fails |
| 54537 | Gateway Transfers - all remote transactions should have retries if failures occur |

Listed below are the bugs fixed in this release.

| Bug# | Description |
|-------|-------------------------------------------------------------------------------|
| 44647 | Gateway Framework - rcp/scp tsfr - need to escape '#' in name for remote copy |
| 53811 | Bug in file list retrieval code when depth>0 |
| 54282 | TransferEngine/FTP error : keep getting files that had been copied before |
| 54452 | Problems with timestamps and FTP Transfer causes re-transfer of old data |
| 54878 | Transfer problems: byte size differs to the original file |
| 54525 | Drip Feed for TransferEngine IN Direction infinite loop |
| 54595 | Bulk Transfer failed for a large number of files |
| 54713 | Unpegger rename saved pegged file incorrectly |
| 54736 | GWF is failing to find a file in the parser input dir |

Important Notes:

Below are changes to the configuration entries for the Transfer Engine.

BULK_TRANSFER

Bulk transfer only applies to Scp Protocol. When BULK_TRANSFER is set to 'True', DELETE_ORIGINAL and NUMBER_OF_FILES_TO_PROCESS are ignored. Therefore drip feeding no longer applies for bulk transfer. And all files in destination directory will be overwritten.

OVERWRITE_FILES

This is a new entry for Ftp and Scp protocol (except bulk transfer). Target files will be overwritten when OVERWRITE_FILES is set to 'True'. It is set to '0' by default, no overwrite.

TRANSFER_MODE

This is an optional entry that only applies to Ftp protocol. TRANSFER_MODE is configured with either 'ASCII' or 'BINARY' only. The transfer mode is set to binary by default.

4.9 Release 3.1.0

Release date October 2005.

Listed below are the enhancements to this release.

| # | Description |
|-------|------------------------------------------------------------------------------------|
| 1 | Integration with MPM and NPR Event and Alarm API's |
| 2 | Redhat Linux ES is now an officially supported platform for the Gateway Framework. |
| 3 | Support has been included to support the Prospect loading process |
| 43790 | Support bulk file transfer for ftp, rcp and scp. |

| | |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 43893 | Counter sort order in LIFs should work for all rules producing LIF files. See requirement 4 for details on enhancements, which address this. |
| 45050 | Process required to cleanly stop a Gateway during the parsing run. Should execute between each key stage. (transfer, engine, post parser). |
| 40272 | Parser auditing updated |
| 45996 | PIF Handler should abandon write if duplication occurs. |
| 47511 | UNPEPPER: Support for arrays values for INPUT_FILE_DESCRIPTION. Note: this needs careful evaluation for impact it will have generally. |
| 47143 | All Post Parser rules should support an OUTPUT_DIR standard entry. The actual processing for this should be in the framework post parser rule processing code. |
| 48620 | rcp/scp should use an optional username and password if configured. |
| 48716 | Include timeout for ftp transfer. Investigate timeouts for other protocols. |
| 48986 | Ability to load files by filename date time order. Resolved in 45051. |

Listed below are the bugs fixed in this release.

| Bug# | Description |
|-------------|-------------------------------------------------------------------------------------------------|
| 42717 | FTP Transfer – modification time check now works correctly |
| 43809 | Colon in filename now works correctly with rcp. |
| 44099 | rcp or scp transfer now works on local nodes. |
| 44101 | Transfer on local nodes – space now removed from “find” return. |
| 44647 | rcp/scp – ‘#’ now escaped in name for remote copy |
| 48621 | Timestamp now found using rcp and scp |
| 48773 | Drip feed now works using ftp Transfer |
| 45181 | Generic test commands now used. |
| 36035 | JOIN: Now working correctly |
| 43479 | PERLIZE: now keeps track of new PIF files. |
| 43802 | INFOINSERT: ONLY_INSERT field name was appended with multiple APPEND_STR. Now works correctly. |
| 44279 | JOIN: Correct log level now used. |
| 44723 | Batcher process in Gateway framework now creates unique filenames. |
| 44877 | UNPEPPER: First data slot missing as no PEG files available. Now fixed. |
| 45038 | UNPEPPER – UNPEG PIF files being retained by Post Parser. Now fixed. |
| 45115 | PIF_REMOVE: - Doesn’t remove PIF files cleanly. Fixed |
| 45680 | UNPEPPER: Writes random value for first period. Fixed. |
| 46767 | PIF_2_OUTPUT: Now implements the OUTPUT_DIR option. |
| 48785 | JOIN: Rule description in docs updated. |
| 48871 | BATCHFILES: Batched files overwritten – same as bug 44723. Fixed. |
| 44196 | INFOINSERT: Rule isn’t working with APPEND_STRING. See 43802. Fixed. |
| 44282 | Block statistics error. Fixed. |
| 45049 | Drip feed inefficiencies fixed. |
| 45051 | Engine’s DIRECTORY_ORDER doesn’t match ls |
| 45081 | PIF_Cache problem could not be reproduced. |
| 43898 | Process already running message should go to the audit file not the log file. |
| 47695 | HOURS_TO_WAIT_FOR_PARTNER_FILES and PIF_CACHING now work. |
| 50262 | Individual failing rules will now not affect other successful rule execution in TransferConfig. |
| 51502 | FTP Transfer Engine crashes if too many files are transferred. Memory problem fixed. |
| 51748 | Setting HOURS_TO_WAIT_FOR_PARTNER_FILES does not always work. Fixed. |
| 51749 | Transfer process is executed too often when parser is configured to drip feed. Fixed. |
| 53328 | Unpegger time problem now fixed. |

Upgrade notes:

Upgrading from Gateway Framework r3.0.x requires updates and changes to the Vendor Gateway Engine and configuration files in the start directory.

Notification Engine

A new configuration file, **NotificationConfig.pm** must be copied into the vendor gateway start directory. A sample copy is available from the Gateway Framework r3.1.0 kit in the "example" sub-directory. By default the Notification Engine is disabled, without any configuration rules defined. However, the file contains sample configurations for both MPM and NPR.

Vendor Gateway Engine

Due to the new Notification Engine enhancement, all Vendor Gateway Engine modules are required to return an array containing the fail code and fail reason. The return array is from the function process_file(). The fail reason is a short text message of the failure, e.g:

```
my $fail_reason = "Could not open file $filenm";
return (-2, $fail_reason);
```

Post Parser

The entry name REDUNDANT_COUNTERS is replaced by REDUNDANT_DATA_COUNTERS for all Post Parser rules. All instances of the entry name must be updated for redundant data counters to work.

4.10 Release 3.0.1

Release date is August 2004.

Listed below are the bugs fixed in this release:

| Bug# | Description |
|-------|----------------------------------------------------------------------------------------------------|
| 40695 | INFOINSERT: configured APPEND_STR now changes secondary counter names properly. |
| 40714 | Updated the MY_VENDOR_INTERFACE.pm engine template. |
| 40811 | Engine: Storage of processed data now works if "/" is placed at end of IN_DIR |
| 41172 | Properties file now supports environment variables in the property value. |
| 41554 | INFOINSERT - Storage of information files logic now works. |
| 41814 | Gateway Framework: Misc Transfer failures now log at correct levels. |
| 41841 | Gateway Framework User Guide: Transfer process - missing config entries included. |
| 42199 | Transfer using rcp or scp. Return for system command now processed correctly. |
| 42200 | Gateway Framework: Transfer find operation now uses generic arguments which work on all platforms. |
| 42201 | Gateway Framework Transfer - Remote copying now works correctly. |
| 42672 | Gateway Framework - Unpegger - now sorts files in a backlog properly. |
| 42717 | Gateway Framework FTP Transfer - modification time check now |

| | |
|-------|----------------------------------------------------------------------------------------|
| | checks for identical modification times as well as older files. |
| 42718 | Gateway Framework - FTP transfer – can now handle > 1 subdirectory level. |
| 42853 | Gateway Framework – Subdirectory storage of input files now works for two or more dirs |
| 42999 | JOIN : Now produces output filenames with same number of file tokens. |

4.11 Release 3.0.0

Release date is May 2004.

Listed below are the bugs fixed in this release:

| Bug# | Description |
|-------|---------------------------------------------------------------------------------------------------------|
| 37409 | Gateway Framework: PIF_Handler only attempts to close the output filehandle if it has been initialised. |
| 36628 | INFOINSERT: rule handles main and information header key of 0 correctly. |
| 36512 | INFOINSERT: rule attempts to close PIF file even when it has not necessarily created one. |
| 35896 | UNPEPPER: rule does not save previous pegged files |

Listed below are the enhancements in this release. A number of fundamental architectural and functional enhancements have been made to improve the Gateway Framework, in particular its speed and usability. These are listed in the table as enhancements 1 to 8 below. The [Gateway User Guide] contains further details on configuration and usage of the Gateway Framework.

| # | Description |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 39398 | BATCHFILES: Supports the output of PIF files as well as LIF. |
| 37352 | Gateway Framework: Add counter calculation rule to Gateway Framework |
| 35896 | Gateway Framework: Add the input PIF names as comments in the output LIF file |
| 35818 | Gateway Framework: produces empty files if filesystem is full |
| 35795 | FILE_SPLIT: Support for ordering of PIF/LIF filename components |
| 35517 | INFOINSERT: post-parsing rule should support PIF files as info files |
| 33911 | INFOINSERT: Make the storage of info files optional. |
| 1 | UNPEPPER: Support the multiple time periods per PIF file. |
| 2 | Gateway Framework now supports caching of PIF objects either on disk or in memory. A Gateway caching PIF data in memory is approximately 40% faster than disk based caching. |
| 3 | Gateway Framework now supports parallel processing within engine and post parser rules, for multi processor servers. |
| 4 | A new stage has been added to the Gateway Framework. It can now be configured to transfer data both onto the local server before the engine stage, and off the local server after the post parser stage. The protocols supported are ftp/scp/rcp/cp. |
| 5 | Gateway Framework can now check for sufficient disk free space at startup. |

| | |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6 | Gateway Framework supports ordering of PIF/LIF counter names in output for ease of debugging. |
| 7 | Gateway Framework now supports the output of data in XML and CSV format, aswell as the standard LIF. |
| 8 | A number of new Post Parser rules have been added: <ul style="list-style-type: none"> - PIF_REMOVE: remove PIFs between Post Parser rules. - AGGREGATE_LINE: aggregates a number of counters per row matching an RE. - PERLIZE: allows complete flexibility in header and data counter manipulation and creation, by passing PIF data to user defined functions for processing. |

4.12 Release 2.4.0

Release date is August 2003.

Listed below are the bugs to be fixed in this release.

| Bug# | Description |
|-------------|-----------------------------------------------------------------------------------------------------------------------------|
| 32462 | Engine now properly removes files in a sub-directory, where storage directory variable not set. |
| 33409 | Typos in documentation fixed |
| 33549 | INFOINSERT rule now has option to remove/store INFO files. |
| 33840 | UNPEGGER rule now supports the `:` date time separator. |
| 33947 | UNPEGGER rule now supports start date/time and end date/time; start date/time and duration; and end date/time and duration; |
| 33978 | UNPEGGER now facilitates the sorting by date/time and optionally an element ID extracted from the peg filenames. |
| 34247 | PIF handler now writes completed records to disk immediately, rather than buffering unnecessarily. |
| 35045 | UNPEGGER Rule - Time difference calculation now includes date as well as time. |

4.13 Release 2.3.0

Release date is April 2003.

Listed below are the bugs to be fixed in this release.

| Bug# | Description |
|-------------|---------------------------------------------------------------------------|
| 16255 | The INFO_INSERT rule needs modification |
| 28187 | It would be useful to enhance the output format options in the framework. |
| 28326 | Productised parser framework should compress files after processing |
| 28484 | Data in multiple PIF blocks overruns when using BATCHFILES |
| 31686 | ACCUMULATE rule outputs 0 for NULL counters |
| 31759 | Accumulate rule does not handle MAX/MIN values |
| 32209 | DATALINE_WHERE post parsing rule needs optimisation |
| 32287 | Cannot produce LIF files from FILE_SPLIT rule |
| 32974 | Add recovery checking for parser crash during post parser rule. |

Listed below are the enhancements in this release

| # | Description |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Add support for Counter based statistics. These statistics will log in LIF format the names of RAW and LIF counter processed. A single LIF file will be produced for each Gateway run. See online documents for more information. |
| 2 | Add new post parser rule UNPEGGER, which will unpeg data values between related PIF files. Unpegged values are calculated as the difference between two pegged counter values. See online documents for more information. |