
UL/SPF Release 6.8 Notes

March 1, 2006



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March 10, 2006

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Proprietary Notices

The following products:

- *Fast/Reload*
- *Fast/Unload*
- *Fast/Unload User Language Interface*
- *Janus OmniSQL Access Module*
- *Janus Open Server*
- *Janus Sockets*
- *Janus Web Server*
- *Sirius Mods*
- *SirMon*
- *SirFile*
- *SirScan*
- *SirPro*
- *SirLib*
- *SirDBA*
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CHAPTER 1 ***Introduction***

This document lists the enhancements and other changes contained in the newest release of *UL/SPF*: version 6.8. The previous version of *UL/SPF*, 6.2, was released in March 2004.

CHAPTER 2 *New Features*

2.1 Packaging

New in Version 6.8, all *UL/SPF* components are distributed in a single file named *SIRIUS*. This change simplifies distribution and maintenance of the *UL/SPF* product line, and it allows all the Sirius products to share common routines. Besides a simpler installation and update process, *UL/SPF* gains a more consistent interface:

- You can see the *UL/SPF* version number in the top line of all Help screens.
- Many more screens take advantage of dynamic screen-resizing, allowing more information to be displayed on the larger 3278/3279 Model types.

Products distributed in the *SIRIUS* file are *SirDBA*, *SirFile*, *SirLib*, *SirMon*, *SirPro*, *SirScan*, *SirFact*, *UL/SPF*, and all the *Janus Web Server*, *Janus SOAP*, and *Janus Sockets* applications and sample code formerly distributed in the *JANUS* file.

Note: Version 6.8 of *UL/SPF* requires Version 6.8 or higher of *Sirius Mods*.

2.2 SirLib

Major changes have taken place in *SirLib* to accommodate the updating of target files even when APSYs are running against them. Along with these new features, a number of improvements have been made to the product's stability, screen layouts, and feedback to users. Specific changes include:

Soft updates

The biggest change to *SirLib* is the addition of two “soft updates” modes. Before *SirLib* applies changes to a file under version 6.8, it checks to see if the procedure it has just created is identical to the one already in the target file. If it is, then no change is made to that procedure in the target file.

Formerly, all procedures were changed whenever a Configuration was run. As a result, all changed procedures assumed the change-date of the latest Configuration instead of the date each procedure truly was last updated. Soft updates allow for much more accurate tracking of change history, as a procedure is only updated when it truly needs to change.

Running while procedures are locked

SirLib Version 6.8 lets you attempt to Reconfigure a procedure file while an APSY subsystem is locking procedures in it. This feature is very useful if you know that the latest updates only affect non-APSY or included routines.

This feature is enabled by the previous “soft updates” feature and by the fact that, in Version 6.8, changes are applied first in a look-aside file — SIRTPROC; new for Version 6.8 — before an attempt is made to copy them to the target file.

2.3 SirMon

SirMon Version 6.8 has many changes from the previous release, including:

SirMon Overview

More statistics are packed on the Overview screen, as well as on the associated threshold screen and the background monitoring function. These stats include:

- New measures for CCALOG usage
- A number of stats to monitor non-terminal thread usage (sdaemons, web threads, external-call facility, and MQ threads), and a number of measures to show the status of DNS lookup performance and possible problems

SirMon Background Monitor

The background monitoring feature is enhanced so that users can be notified of critical resource usage problems by e-mail or by a cell phone message, via a *Janus Sockets* call (requires *Janus Sockets*). Notifications were previously hard-coded in such a way that users could not easily configure warnings. In Version 6.8, users can specify their outgoing e-mail port, destination addresses, and the remote SMTP server for sending e-mail.

A large number of new statistics have been added to *SirMon*, many of them concerning the analysis of *Model 204*'s Table E structure and the monitoring of non-terminal Janus threads, MQ, or the External Call Facility. There are new statistics at the file, user, and system level. Any of the new stats can be added to custom views.

2.3.1 File statistics

Following are the new file statistics:

- | | |
|----------------|--|
| BUFPAGL | Total number of pages in the disk buffer pool currently occupied by Table E pages from the database file. |
| EFULLP | Percentage of Table E that is full. This statistic is equal to the number of Table E pages currently in use (EPGSUSED) divided by the total number of Table E pages (ESIZE). |
| EHIGHPG | The current Table E highwater mark. This is identical to the <i>Model 204</i> EHIGHPG parameter. |

EPGSUSE	The current number of Table E pages in use. This is identical to the <i>Model 204</i> EPGSUSED parameter.
ESIZE	Size of Table E in number of pages.
FCTB	Total number of pages in the disk buffer pool currently occupied by FCT pages from the database file.
FCTM	Total number of pages in the disk buffer pool currently occupied by modified FCT pages from the database file. These pages must be written to disk before they can be flushed from the buffer pool.
MODPAGL	Total number of pages in the disk buffer pool currently occupied by modified Table E pages from the database file. These pages must be written to disk before they can be flushed from the buffer pool.
NPTE	Size of Table E in pages. Same as ESIZE.
NPTF	Size of FCT in pages.
PDCHUNK	Number of "chunks" allocated for the procedure dictionary. The procedure dictionary is allocated in chunks of PDSIZE pages. When an attempt to store a name in the dictionary fails because all chunks are full, a new chunk is allocated.
PDPAGES	Total number of pages allocated for the procedure dictionary. Equal to PDCHUNK * PDSIZE.

2.3.2 User parameters

Following are the new or changed User parameters for Version 6.8.

FSCBSW	Full screen reads issued, or text web responses sent, including Janus Web and Connect* transactions (rate or total).
GTBLRS	Number of GTBL rearrangements required to add a non-string global "object," such as an image or screen.
GTBLRU	Number of GTBL rearrangements required to add or expand a string global value with \$SETG.
OBJSWAP	<i>Janus SOAP ULI</i> objects must be resident in a server area (VTBL and perhaps STBL) before they can be referenced. If a request accesses more objects than were allocated, objects are swapped from the server to CCATEMP. Rate or total.

SCREENS	Full screen reads issued, or text web responses sent, including Janus Web and Connect* transactions (rate or total).
SLGTBLRS	Number of GTBL rearrangements required to add a non-string global “object,” such as an image or screen. Number of GTBL rearrangements required to add or expand a string global value with \$SETG.
SLMQGETN	“Since-Last” total number of MQGETS performed with a wait option that actually returned a message, excluding WAIT_TIME=UNLIMITED MQ gets.
SLMQGETW	“Since-Last” MQ Series MQGET calls. Since-Last stats reflect activity in the current work unit. When the work unit (typically a compilation or evaluation) completes, the Since-Last stats are output to the journal and reset to 0. The WHAT stat contains the work unit type. This is the Since-Last equivalent of the MQCGETS statistic.
SLOBSWP	Since-Last value of OBJSWAP, number of <i>Janus SOAP ULI</i> object swaps from CCATEMP to a server container. Rate or total.
SLUBUFHW	“Since-Last” high water mark of Universal Buffer bytes allocated. Since-Last stats reflect activity in the current work unit. When the work unit (typically a compilation or evaluation) completes, the Since-Last stats are output to the journal and reset to 0. The WHAT statistic contains the work unit type. This is the Since-Last equivalent of the MQHWBUFS statistic.
UBALLOC	Size of currently allocated Universal Buffer, in bytes.
UBUFHWS	Highwater mark of Universal Buffer bytes allocated.
UBUSED	Number of bytes currently used in Universal Buffer.

2.3.3 System parameters

Following are the new Version 6.8 System parameters.

APSYLD	APSY loads (rate or total).
APSYLDD	APSY loads from dataspace (rate or total).
BUFPAGL	Total number of pages in the disk buffer pool currently occupied by Table E pages from all database files.
CHKPNUS	Number of users who have enqueued (preventing) checkpoints.
CNSCURP	Current number of real primary constraint pages.

CNSMAXP	Maximum number of constraint pages.
CNSMERG	Number of constraint table merges (rate or total).
CNSMINP	Minimum number of constraint pages.
CNSNWTS	Number of share enqueue waits for constraints lock (rate or total).
CNSNWTX	Number of exclusive enqueue waits for constraints lock (rate or total).
CNSOVFP	Number of overflow constraints pages.
CNSOVFPH	Highwater mark for number of overflow constraints pages.
CNSREO	Number of constraints table reorgs (rate or total).
CNSREOC	Number of constraints table reorg checks (rate or total).
CNSSPLT	Number of constraint splits (rate or total).
CNSTWTS	Milliseconds spent waiting on share for constraints lock (rate or total).
CNSTWTX	Milliseconds spent waiting on exclusive for constraints lock (rate or total).
DKPRF	Requests for a page in a database file or CCATEMP satisfied by a pending release page, a so-called fast logical page read (rate or total).
DKSTBLE	Physical Table E reads (rate or total).
DNSCACHE	The number of entries in the name server cache (the CACHE value on the JANUS NAMESERVER command).
DNSCURNS	The current “go to” nameserver, in dotted IP address format with the port number in parentheses. For example: 198.242.244.9(53).
DNSRFAIL	Number of name lookup requests that did not succeed, that is, did not get an IP address (rate or total).
DNSMAXTL	The value of the MAXTTL parameter on the JANUS NAMESERVER command.
DNSRCACH	Number of name lookup requests that found the requested name in the cache (rate or total).
DNSRSUCC	Number of name lookup requests that succeeded (rate or total).

DNSRTIMO	Number of requests to nameservers that timed out before they got a response. With multiple nameservers, a single request can try several servers and so get several timeouts. But, of course, this is probably pretty rare in practice.
DNSRTOT	Total number of name lookup requests (rate or total).
DNSWTIME	Total time spent waiting for responses from nameservers. "Interesting" calculated values might be $DNSWTIME/DNSRTOT$ or $DNSWTIME/(DNSRTOT-DNSRCACH)$.
GTBLRS	Number of GTBL rearrangements required to add a non-string global "object," such as an image or screen.
GTBLRU	Number of GTBL rearrangements required to add or expand a string global value with \$SETG.
LCHASH	Number of HASH MP lock conflicts (rate or total).
LCLRUC	Number of LRUQ MP lock conflicts (rate or total).
LCV7IB	Number of V7IB MP lock conflicts (rate or total).
LCV7OB	Number of V7OB MP lock conflicts (rate or total).
LOGALP	Percentage full of log dataset, if it's being used.
LOGIO	Records added to log dataset, if it's being used (rate or total).
LPCMLW	Number of times CMLW lock posted (rate or total).
LPCNST	Number of times CNST lock posted (rate or total).
LPDBCD	Number of times DBCD lock posted (rate or total).
LPECMM	Number of times ECMM lock posted (rate or total).
LPECTM	Number of times ECTM lock posted (rate or total).
LPFILD	Number of times FILD lock posted (rate or total).
LPFORT	Number of times FORT lock posted (rate or total).
LPHASH	Number of times HASH lock posted (rate or total).
LPITS1	Number of times ITS1 lock posted (rate or total).
LPITS2	Number of times ITS2 lock posted (rate or total).

LPJRNL	Number of times JRNL lock posted (rate or total).
LPLIOS	Number of times LIOS lock posted (rate or total).
LPLRUQ	Number of times LRUQ lock posted (rate or total).
LPMQCH	Number of times MQCH lock posted (rate or total).
LPMQST	Number of times MQST lock posted (rate or total).
LPMQTA	Number of times MQTA lock posted (rate or total).
LPPAGE	Number of times PAGE lock posted (rate or total).
LPQMAN	Number of times QMAN lock posted (rate or total).
LPQUEU	Number of times QUEU lock posted (rate or total).
LPRCLK	Number of times RCLK lock posted (rate or total).
LPSIR1	Number of times SIR1 lock posted (rate or total).
LPSIR2	Number of times SIR2 lock posted (rate or total).
LPSMFS	Number of times SMFS lock posted (rate or total).
LPTOTAL	Total something relating to lock posters (rate or total).
LPTWND	Number of times TWND lock posted (rate or total).
LPUSR1	Number of times USR1 lock posted (rate or total).
LPUSR2	Number of times USR2 lock posted (rate or total).
LPV7IB	Number of times V7IB lock posted (rate or total).
LPV7OB	Number of times V7OB lock posted (rate or total).
LSCMLW	Number of times CMLW lock spun (rate or total).
LSCNST	Number of times CNST lock spun (rate or total).
LSDBCD	Number of times DBCD lock spun (rate or total).
LSECMM	Number of times ECMM lock spun (rate or total).
LSECTM	Number of times ECTM lock spun (rate or total).
LSFILD	Number of times FILD lock spun (rate or total).

LSFORT	Number of times FORT lock spun (rate or total).
LSHASH	Number of times HASH lock spun (rate or total).
LSITS1	Number of times ITS1 lock spun (rate or total).
LSITS2	Number of times ITS2 lock spun (rate or total).
LSJRNL	Number of times JRNL lock spun (rate or total).
LSLIOS	Number of times LIOS lock spun (rate or total).
LSLRUQ	Number of times LRUQ lock spun (rate or total).
LSMQCH	Number of times MQCH lock spun (rate or total).
LSMQST	Number of times MQST lock spun (rate or total).
LSMQTA	Number of times MQTA lock spun (rate or total).
LSPAGE	Number of times PAGE lock spun (rate or total).
LSQMAN	Number of times QMAN lock spun (rate or total).
LSQUEU	Number of times QUEU lock spun (rate or total).
LSRCLK	Number of times RCLK lock spun (rate or total).
LSSIR1	Number of times SIR1 lock spun (rate or total).
LSSIR2	Number of times SIR2 lock spun (rate or total).
LSSMFS	Number of times SMFS lock spun (rate or total).
LSTOTAL	Total something relating to lock spins (rate or total).
LSTWND	Number of times TWND lock spun (rate or total).
LSUSR1	Number of times USR1 lock spun (rate or total).
LSUSR2	Number of times USR2 lock spun (rate or total).
LSV7IB	Number of times V7IB lock spun (rate or total).
LSV7OB	Number of times V7OB lock spun (rate or total).
LWCMLW	Number of times CMLW lock waited (rate or total).
LWCNST	Number of times CNST lock waited (rate or total).

LWDBCD	Number of times DBCD lock waited (rate or total).
LWECMM	Number of times ECMM lock waited (rate or total).
LWECTM	Number of times ECTM lock waited (rate or total).
LWFILD	Number of times FILD lock waited (rate or total).
LWFORT	Number of times FORT lock waited (rate or total).
LWHASH	Number of times HASH lock waited (rate or total).
LWITS1	Number of times ITS1 lock waited (rate or total).
LWITS2	Number of times ITS2 lock waited (rate or total).
LWJRNL	Number of times JRNL lock waited (rate or total).
LWLIOS	Number of times LIOS lock waited (rate or total).
LWLRUQ	Number of times LRUQ lock waited (rate or total).
LWMQCH	Number of times MQCH lock waited (rate or total).
LWMQST	Number of times MQST lock waited (rate or total).
LWMQTA	Number of times MQTA lock waited (rate or total).
LWPAGE	Number of times PAGE lock waited (rate or total).
LWQMAN	Number of times QMAN lock waited (rate or total).
LWQUEU	Number of times QUEU lock waited (rate or total).
LWRCLK	Number of times RCLK lock waited (rate or total).
LWSIR1	Number of times SIR1 lock waited (rate or total).
LWSIR2	Number of times SIR2 lock waited (rate or total).
LWSMFS	Number of times SMFS lock waited (rate or total).
LWTOTAL	Total something relating to lock waiters (rate or total).
LWTWND	Number of times TWND lock waited (rate or total).
LWUSR1	Number of times USR1 lock waited (rate or total).
LWUSR2	Number of times USR2 lock waited (rate or total).

LWV7IB	Number of times V7IB lock waited (rate or total).
LWV7OB	Number of times V7OB lock waited (rate or total).
MODPAGL	Total number of pages in the disk buffer pool currently occupied by modified Table E pages from all database files. These pages must be written to disk before being flushed from the buffer pool.
OBJSWAP	<i>Janus SOAP ULI</i> objects must be resident in a server area (VTBL and perhaps STBL) before they can be referenced. If a request accesses more objects than were allocated, objects are swapped from the server to CCATEMP. Rate or total.
OFFIN	Number of something (rate or total).
OFFOU	Number of something (rate or total).
TSMX	Highest CCATEMP page number in use from small model area.
UBCUR	Total number of bytes currently allocated for Universal Buffers.
UBHWM	Highwater mark for storage allocated for Universal Buffers.

2.4 SirPro

Fixes and enhancements in *SirPro* Version 6.8 include:

- General stability improvements.
- Fixes to the Copy, Rename, Move, and Delete functions so they operate correctly in group context.
- Support for dynamic screen sizing for users of Model 6 3279 terminal emulators.

2.5 SirFact

Fixes and enhancements in *SirFact* Version 6.8 include:

- Improvements to 3270 displays, including non-wrapping of long lines and Model 6 terminal support.