Quick Reference:

onstat Utility Commands Sorted by Functional Category

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The information in this quick reference lists **onstat** commands sorted by functional category. The **onstat** commands that provide general information are listed in more than one category.

For an online version of this information with links to full argument descriptions, see the **onstat** portal in the *IBM Informix Administrator's Reference*: https://ibm.biz/Bdx8yB

Send comments about this card or suggestions for additional quick reference topics to docinf@us.ibm.com.

Archiving

Use the following **onstat** options to display information about archives and restores.

- onstat -D •Prints chunk I/O activity. Prints read/write activity for monitoring restore progress.
- onstat -g arc •Prints the last committed backup and any ongoing backups for each dbspace.

Cache

Use the following **onstat** options to display information about caches and cached data, including buffer pools.

- onstat -b •Prints buffer pages in use.
- onstat -B •Prints buffer pages that are touched.
- onstat -F •Prints state of buffer queue cleaners and I/O.
- onstat -g cac •Prints summary and detailed information about all memory caches or about the specified cache.
- onstat -g dic •Prints data-dictionary cache that contains system catalog data for tables. Prints one line of information for each table that is cached in the shared-memory dictionary.
- onstat -g dsc •Prints table distribution statistics for the optimizer.
- onstat -g prc •Prints the stored procedure (SPL) routine cache and information about SPL routine cache.
- onstat -g ssc •Prints the number of times that the database server reads the SQL statement in the cache. Displays the same output as the **cac** option.
- onstat -g vpcache •Prints statistics about CPU virtual processor memory caches.
- onstat -h •Prints buffer hash chain information.
- onstat -p •Prints global (server) information regarding the effectiveness of buffer-pool caching.
- onstat -X •Prints threads waiting on buffers.

Compression

Use the following **onstat** options to print compression information.

- onstat -g dsk •Prints progress of currently running compression operations.
- onstat -g ppd •Prints partition compression dictionary information.

Debugging

Use the following **onstat** options to display information that is useful for debugging problems with the server.

- onstat -g dmp •Prints raw memory at a specified address for a number of bytes.
- onstat -g src •Searches for patterns in shared memory. Memory is byte-swapped on Intel platforms.
- onstat -o •Prints shared memory contents to a file.

Enterprise Replication

Use the following **onstat** options to track Enterprise Replication statistics and to provide troubleshooting information.

- onstat -g cat •Prints information from the Enterprise Replication global catalog, including information about the defined servers, replicates, and replicate sets on each of the servers.
- onstat -g cdr •Prints the settings of Enterprise Replication configuration parameters and environment variables.
- onstat -g cdr config •Prints Enterprise Replication configuration parameters and environment variables.
- onstat -g ddr •Prints status of Enterprise Replication components that read and process log records.
- onstat -g dss •Prints activity of individual data sync (transaction processing) threads.
- onstat -g dtc •Prints delete table cleaner activity. Deleted or updated rows that are placed in the delete table are purged at intervals.
- onstat -g grp •Prints Enterprise Replication grouper statistics. The grouper evaluates the log records, rebuilds the individual log records into the original transaction, packages the transaction, and queues the transaction for transmission.
- onstat -g nif •Prints network interface statistics. Shows the state of the network interface, servers, and data transfer among servers.
- onstat -g que •Prints statistics for the high-level queue interface (which is common to all of the queues of the Enterprise Replication Queue Manager).
- onstat -g rcv •Prints receive manager statistics.
- onstat -g rep •Prints events that are in the queue for the schedule manager.
- onstat -g rqm •Prints statistics and contents of the low-level queues (send queue, receive queue, ack send queue, sync send queue, and control send queue) managed by the Reliable Queue Manager (RQM).
- onstat -g sync •Prints synchronization status.

High-Availability Clusters

Use the following **onstat** options to monitor high-availability cluster (HDR, RSS, and SDS) environments and the Connection Manager.

- onstat -g cluster •Prints high-availability clusters information.
- onstat -g cmsm •Prints Connection Manager information for high-availability clusters (HDR, RSS, and SDS).
- onstat -g dri •Prints data-replication information.
- onstat -g ipl •Prints index page logging information in high-availability environments.
- onstat -g laq •Prints information about queues on the secondary server.
- onstat -g proxy •Prints proxy distributors for high-availability.
- onstat -g rss •Prints remote stand-alone server (RSS) information.
- onstat -g sds •Prints shared disk secondary (SDS) server information.
- onstat -g smx •Prints Server Multiplexer Group (SMX) connections in high-availability environments. Prints data transfer statistics and encryption status.

Informix Warehouse Accelerator

Use the following **onstat** option to display information that is exchanged between the database server and the Informix Warehouse Accelerator.

- onstat -g aqt •Prints information about data marts and associated accelerated query tables (AQTs).

Input/Output (I/O)

Use the following **onstat** options to track input and output (read and write) activity.

- onstat -D •Prints chunk I/O activity.
- onstat -g cpu •Prints runtime statistics for each thread.
- onstat -g ioa •Prints combined information from **onstat -g ioq** (queues), **onstat -g iov** (virtual processors), and **onstat -g iob** (big buffer).
- onstat -g iob •Prints the big buffer usage summary.
- onstat -g iof •Prints I/O statistics by file or chunk. This option is similar to the **onstat-D** option, but also displays information about non-chunk, temporary, and sort-work files.
- onstat -g iog •Prints asynchronous I/O (AIO) global information.
- onstat -g ioq •Prints queue I/O statistics and queue length.
- onstat -g iov •Prints asynchronous I/O statistics by virtual processor.
- onstat -p •Prints global disk activity including sequential scans.

Locks and Latches

Use the following **onstat** options to display information about locks.

- onstat -k •Prints information about active locks.
- onstat -L •Prints the number of free locks.
- onstat -p •Prints global statistics on lock requests, lock waits, and latch waits.
- onstat -s •Prints latch (mutex) information.

Logical and Physical Logs

Use the following **onstat** options to monitor logical and physical logs.

- onstat -g ipl •Prints index page logging information in high-availability environments.
- onstat -l • Prints status of physical and logical logs, and log buffering.

Memory

Use the following **onstat** options to monitor the various aspects of server memory allocation and use.

- onstat -g afr •Prints allocated memory fragments for a specified session or shared-memory pool. To obtain the pool name, use the **onstat -g mem** command.
- onstat -g ffr (*pool_name session_ID*) •Prints free fragments for a session or shared memory pool.
- onstat -g lmm •Prints information about automatic low memory management settings and recent activity.
- onstat -g mem •Prints session or pool virtual shared memory statistics.
- onstat -g mgm •Prints Memory Grant Manager (parallel and sort operations) resource information.
- onstat -g nbm •Prints block map for non-resident segments.
- onstat -g rbm •Prints block map for resident segment.
- onstat -g seg •Prints memory segment statistics.
- onstat -g ses •Prints session information, including memory breakdown.
- onstat -g stm •Prints SQL statement memory use.
- onstat -g stq •Prints stream queue buffers.
- onstat -g ufr •Prints memory pool fragments for a session or shared memory pool in use.
- onstat -R •Prints buffer pool queues and their status.

Networking

Use the following **onstat** options to monitor shared memory and network connection services.

- onstat -g imc •Prints information about Informix MaxConnect instances that are connected to the database server. If Informix MaxConnect is not connected to the database server, this command displays No MaxConnect servers are connected.

onstat -g nsc	•Prints shared-memory status by client ID. If client ID is omitted, all client status areas are displayed. Prints the same status data as the **nss** option.
onstat -g nsd	•Prints network shared-memory data for poll threads.
onstat -g nss	•Prints network shared-memory status by session ID. If session ID is omitted, all session status areas are displayed. Prints the same status data as the **nsc** option.
onstat -g nta	•Prints combined network statistics from **onstat -g ntd**, **onstat -g ntm**, **onstat -g ntt**, and **onstat -g ntu**. If Informix MaxConnect is installed, this command prints statistics that you can use to tune Informix MaxConnect performance.
onstat -g ntd	•Prints network statistics by service.
onstat -g ntm	•Prints network mail statistics.
onstat -g ntt	•Prints network user times.
onstat -g ntu	•Prints network user statistics.

Performance (First Tier)

Use the following **onstat** options to monitor performance and to check for performance impediments. Use the second-tier **onstat** options (and other **onstat** commands) to further narrow the problem.

onstat -c	•Prints server configuration.
onstat -D	•Prints chunk I/O.
onstat -g ath	•Prints status and statistics for all threads. The **sqlexec** thread is a client session thread. The **rstcb** value corresponds to the user field of the **onstat -u** command.
onstat -g ckp	•Prints checkpoint history and display configuration recommendations.
onstat -g cpu	•Prints runtime statistics for each thread.
onstat -g ioq	•Prints pending I/O operations for the queue name.
onstat -p	•Prints global server performance profile.
onstat -u	•Prints status and statistics for user threads. If a thread is waiting for a resource, this command identifies the type (flags field) and address (wait field) of the resource.

Performance (Second Tier)

Use the following **onstat** options to identify performance impediments.

onstat -b	•Prints active buffers.
onstat -g act	•Prints active threads.
onstat -g glo	•Prints virtual processors and their operating system processes (**oninit** processes). Prints virtual processor CPU use. On Windows, the virtual processors are operating system threads, and the values in the **pid** field are thread IDs.
onstat -g mgm	•Prints Memory Grant Manager resource information.
onstat -g rah	•Prints read-ahead request statistics.
onstat -g rea	•Prints threads in the ready queue waiting for CPU resources.
onstat -g seg	•Prints shared-memory-segment statistics. This option shows the number and size of shared-memory segments that are allocated to the database server.
onstat -g wai	•Prints waiting threads; all threads waiting on mutex, condition, or yielding.
onstat -k	•Prints active locks.

Tables

Use the following **onstat** options to display information about table status and table statistics.

onstat -g buf	•Prints buffer pool profile information.
onstat -g lap	•Prints information on the status of currently active light appends (writes bypassing the buffer pool).
onstat -g opn	•Prints open partitions (tables).
onstat -g ppf	•Prints partition profile (activity data) for the specified partition number or prints profiles for all partitions.
onstat -g scn	•Prints scan progress.
onstat -P	•Prints table and B-tree pages in the buffer pool, listed by partition (table).
onstat -t	•Prints basic tblspace (partition) information for active tblspaces.
onstat -T	•Prints basic tblspace (partition) information for all tblspaces.

Threads

Use the following **onstat** options to display the status and activity of threads.

onstat -g act	•Prints active threads.
onstat -g ath	•Prints all threads, including active threads, ready threads, and waiting threads.
onstat -g bth	•Displays the dependencies between blocking and waiting threads.
onstat -g BTH	•Displays session and stack information for the blocking threads.
onstat -g cpu	•Prints runtime statistics for each thread.
onstat -g rea	•Prints ready threads (threads waiting for CPU resource).
onstat -g sle	•Prints information about threads sleeping for a specified time. Does not include threads that are sleeping forever.
onstat -g stk	•Prints the stack of a specified thread or prints stacks for all threads.
onstat -g sts	•Prints maximum and current stack use per thread.
onstat -g tpf	•Prints thread activity statistics.
onstat -g wai	•Prints waiting (idle, sleeping, and waiting) threads.
onstat -g wst	•Prints wait statistics for threads.

Users and Sessions

Use the following **onstat** options to display information about the user environment and active sessions.

onstat -g env	•Prints the values of environment variables the database server is using.
onstat -g his	•Prints SQL tracing information.
onstat -g pqs	•Prints operators that are used in currently running SQL queries.
onstat -g ses	•Prints summary information for all active sessions or detailed information for individual sessions.
onstat -g sql	•Prints SQL information for all active sessions or detailed SQL information for individual sessions.
onstat -G	•Prints global transactions.
onstat -u	•Prints status of user threads and their global read/write statistics.
onstat -x	•Prints information about transactions.

Virtual Processors

Use the following **onstat** options to display information and statistics for virtual processors.

onstat -g glo	•Prints global multithreading information and global statistics for virtual processor classes and individual virtual processors. On Windows, the virtual processors are operating system threads, and the values in the **pid** field are thread IDs.
onstat -g sch	•Prints the number of semaphore operations, spins, and busy waits for each virtual processor. On Windows, the virtual processors are operating system threads, and the values in the **pid** field are thread IDs.

Wait Conditions

Use the following **onstat** options to display information about wait conditions for threads.

onstat -g con	•Prints IDs of threads waiting for conditions.
onstat -g lmx	•Prints all locked mutexes.
onstat -g qst	•Prints queue wait statistics for mutex and condition queues.
onstat -g rwm	•Prints read/write mutexes.
onstat -g spi	•Prints spin locks with long spins and spin locks statistics.
onstat -g wai	•Prints waiting threads; all threads waiting on mutex, condition, or yielding.
onstat -g wmx	•Prints all mutexes with waiting threads.

Other Commands

onstat -	•Prints **onstat** header; includes engine version, status, elapsed time since initialization, and memory footprint.
onstat –	•Prints **onstat** usage options.
onstat *options infile*	•Print **onstat** output by using a shared memory dump file (*infile*) as input.
onstat -a	•Prints collective **onstat** outputs.
onstat -c	•Prints the server configuration file.
onstat -C	•Prints B-tree index scanner information (shows statistics about index cleaning).
onstat -d	•Prints chunk information.
onstat -f	•Prints dbspaces configured for dataskip.
onstat -g all	•Prints diagnostic information.
onstat –g cfg	•Prints a list of configuration parameters with their current values.
onstat -g dbc	•Prints statistics about dbScheduler and dbWorker threads.
onstat -g dis	•Prints a list of database servers, their status, directory location, configuration information, and host name.
onstat -g dll	•Prints a list of dynamic libraries that have been loaded.
onstat -g osi	•Prints information on operating system resources and parameters.
onstat -g pos	•Prints values from **$INFORMIXDIR/etc/.infos.servernum** file, which are used by clients such as **onmode** for shared memory connections to the server. **onmode -R** rebuilds the **$INFORMIXDIR/etc/.infos.servernum** file.
onstat -g smb	•Prints detailed information about sbspaces.
onstat -g sym	•Prints symbol table information for the **oninit** utility.
onstat -i	•Changes **onstat** mode to interactive.
onstat -j	•Prints information about the status of an **onpload** job.
onstat -m	•Prints message log contents.
onstat -r	•Prints repetitive **onstat** execution.
onstat -z	•Resets the accumulated statistics to zero.