Basic Monitoring Commands

Basic Informix Server Monitoring

- Onstat – Discovery Options
- Onstat – Performance Ratios
- Onstat – User Sessions and Threads
- Onstat – Measuring Disk IO
- Onstat – Monitoring Locks
- Other Onstat Options
- Oncheck – Basic Dbspace Checks
- Omode – How to Terminate a Session

Informix Command Utilities

- **ONSTAT** - Shows shared memory and server statistics
- **ONCHECK** - Checks and repairs disk space
- **ONMODE** - Changes Server's operating mode and terminates User Session

Onstat – Monitor Informix Server Operations

- Onstat utility reads shared-memory structures and provides statistics about the database server at the time that the command executes.
- The contents of shared memory might change as the onstat output displays.
- The onstat utility does not place any locks on shared memory, so running the utility does not affect performance.
- Onstat is a key utility to monitor the performance of your Informix server.

To Discover Your Informix Server:

Onstat Option	Purpose
onstat -	Show version, status, and uptime of the server
onstat –g osi	Show operation system and machine info
onstat –g dis	Show known Informix servers on machine
onstat -c	Show server configuration ONCONFIG File
onstat -d	Show Informix dbspaces and chunks
onstat -l	Show logical logs status
onstat –m	Show Informix server message log
onstat -g sch	Show Informix oninit processes and classes
onstat –g seg	seg Show Informix memory segments

Onstat – Monitor Informix Server Operations

Instance Online:

```
informix@kitten:cssbstbshm $ onstat -

IBM Informix Dynamic Server Version 9.40.FC8     -- On-Line -- Up 92 days 13:42:01 -- 213708 Kbytes

informix@kitten:cssbstbshm $
```

Instance Down:

```
informix@vampire:#jtratbstbshm $ onstat -
shared memory not initialized for INFORMIXSERVER '#jtratbstbshm'
informix@vampire:#jtratbstbshm $
```

Onstat Header Information:

```
informix@kitten:cssbstbshm $ onstat -

IBM Informix Dynamic Server Version 9.40.FC8     -- On-Line -- Up 92 days 13:42:01 -- 213708 Kbytes

informix@kitten:cssbstbshm $
```

- Product and Version
- Mode (and Type)
- (Optional: Reason when Server is Blocked)
- Time Server has been up
- Size of Shared Memory in Kbytes

Mode of Server:

OFF-LINE MODE (DOES NOT SHOW IN HEADER) | QUIESCENT MODE (ADMIN MODE) | ON-LINE MODE | READ-ONLY MODE (DR ONLY) | RECOVERY MODE | SHUTDOWN MODE

Onstat –g osi : Show Operation System Info:

```
-bash-4.2$ onstat -g osi

IBM Informix Dynamic Server Version 12.10.FC4AEE -- On-Line (Prim) -- Up 60 days 19:54:14 -- 307368 Kbytes


Machine Configuration....
OS Name                                 Linux
OS Release                              3.10.0-1160.42.2.el7.x86_64
OS Node Name                            bld13619002
OS Version                              #1 SMP Tue Sep 7 11:20:39 PDT 2021
OS Machine                              x86_64
Number of processors                    8
Number of online processors             8
System memory page size                 4096 bytes
System memory                           15884 MB
System free memory                      13876 MB
Number of open files per process        1024
shmmax                                  9223372036854775807
shmmin                                  1
shmids                                  4096
shmNumSegs                              9223372036854775807
semmap                                  <<  UnSupported  >>
semids                                  128
semnum                                  32000
semundo                                 <<  UnSupported  >>
semNumPerID                             250
semops                                  32
semUndoPerProc                          <<  UnSupported  >>
semUndoSize                             20
semMaxValue                             32767
```

Onstat –g dis: Show Informix Instance:

```
-bash-4.2$ onstat -g dis

IBM Informix Dynamic Server Version 12.10.FC4AEE -- On-Line (Prim) -- Up 60 days 19:59:43 -- 307368 Kbytes
There are 2 servers found
Server        : ol_informix1210
Server Number : 0
Server Type   : IDS
Server Status : Down
Server Version: IBM Informix Dynamic Server Version 12.10.FC4AEE
Shared Memory : 0x44000000
INFORMIXDIR   : /informix1210FC1
ONCONFIG      : /informix1210FC1/etc/onconfig.ol_informix1210
SQLHOSTS      : /informix1210FC1/etc/sqlhosts
Host          : bld13619002

Server        : billbstb
Server Number : 2
Server Type   : IDS
Server Status : Up
Server Version: IBM Informix Dynamic Server Version 12.10.FC4AEE
Shared Memory : 0x44000000
INFORMIXDIR   : /informix1210FC1
ONCONFIG      : /informix1210FC1/etc/onconfig.billbstb
SQLHOSTS      : /informix1210FC1/etc/sqlhosts
Host          : bld13619002


-bash-4.2$
```

Onstat –c: Show ONCONFIG File:

```
-bash-4.2$ onstat -c

IBM Informix Dynamic Server Version 12.10.FC4AEE -- On-Line (Prim) -- Up 60 days 20:12:09 -- 307368 Kbytes

Configuration File: /informix1210FC1/etc/onconfig.billbstb
##############################################################
# Licensed Material - Property Of IBM
#
# "Restricted Materials of IBM"
#
# IBM Informix
# Copyright IBM Corporation 1996, 2014. All rights reserved.
#
# Title: onconfig.std
# Description: Informix Configuration Parameters
#
# Important: $INFORMIXDIR now resolves to the environment
# variable INFORMIXDIR. Replace the value of the INFORMIXDIR
# environment variable only if the path you want is not under
# $INFORMIXDIR.
#
# For additional information on the parameters:
# http://www.ibm.com/support/knowledgecenter/SSGU8G/welcomeIfxServers.html
##############################################################

##############################################################
# Root Dbspace Configuration Parameters
##############################################################
# ROOTNAME     - The root dbspace name to contain reserved pages and
#                internal tracking tables.
# ROOTPATH     - The path for the device containing the root dbspace
# ROOTOFFSET   - The offset, in KB, of the root dbspace into the
#                device. The offset is required for some raw devices.
# ROOTSIZE     - The size of the root dbspace, in KB.  The value of
#                200000 allows for a default user space of about
```

Onstat –d: Show DBSpaces and Chunks:

```
informix@kitten:cssbstbshm $ onstat -d

IBM Informix Dynamic Server Version 9.40.FC8     -- On-Line -- Up 92 days 15:11:34 -- 213708 Kbytes

Dbspaces
address          number   flags      fchunk   nchunks  flags    owner    name
c000000028aba490 1        0x1        1        6        N        informix rootdbs
c00000002988e4f0 2        0x2001     6        1        N T      informix tempdbs
 2 active, 2047 maximum

Chunks
address          chunk/dbs  offset     size       free       bpages     flags pathname
c000000028aba8f8 1     1    0          250000     45289                 PO--  /informix/cssbstb/rootdbs
c00000002988da50 2     1    0          128000     136                   PO--  /informix/cssbstb/rootdbs2
c00000002988dbe8 3     1    0          50000      11                    PO--  /informix/cssbstb/rootdbs3
c00000002988dd80 4     1    0          250000     89                    PO--  /informix/cssbstb/rootdbs4
c00000002988e028 5     1    0          250000     68                    PO--  /informix/cssbstb/rootdbs6
c00000002988e1c0 6     2    0          200000     199947                PO--  /informix/cssbstb/tempdbs1
c00000002988e358 7     1    0          512000     182937                PO--  /informix/cssbstb/rootdbs7
 7 active, 2047 maximum

Expanded chunk capacity mode: disabled
```

Onstat -d Flags:

The "flags" for Dbspaces are:

Position 1

- M - Mirrored Dbspace
- N - Not Mirrored Dbspace

Position 2

- X - Newly mirrored
- P - Physical recovery underway
- L - Logical recovery underway
- R - Recovery underway
- D - Down

Position 3

- B – Blobspace
- P – Plogdbs
- S – Sbspace
- T – Temporary Dbspace
- U – Temporary SBSpace
- W – Temporary Dbspace on SD Server

Position 4

- B – Chunk greater than 2GB Enabled

Position 5

- A = Auto expandable

Position 6

E - Encrypted

The "flags" for Chunks are:

Position 1

P - Primary

M - Mirror

Position 2

O - On-line

D - Down

X - Newly mirrored

I - Inconsistent

N – Renamed and Down or Inconsistent

Position 3

B - Blobspace Dbspace

T - Temporary Dbspace

Position 4

B – Chunk greater than 2GB Enabled

Position 5

E – Chunk is Extendable

Position 6

- Direct IO not enabled

C – AIX Concurrent IO enabled

D – Direct IO Enabled

Onstat –l: Show Logs:

```
-bash-4.2$ onstat -l

IBM Informix Dynamic Server Version 12.10.FC4AEE -- On-Line (Prim) -- Up 60 days 20:49:17 -- 307368 Kbytes

Physical Logging
Buffer bufused  bufsize  numpages   numwrits   pages/io
  P-1  57       256      135982     2433       55.89
      phybegin         physize    phypos     phyused    %used
      2:53             1023947    560360     320        0.03

Logical Logging
Buffer bufused  bufsize  numrecs    numpages   numwrits   recs/pages pages/io
  L-1  0        128      5325581    632292     499464     8.4        1.3
       Subsystem    numrecs    Log Space used
       OLDRSAM      5308175    529465424
       HA           17406      960048

address          number   flags    uniqid   begin              size     used    %used
451b7a60         1        U-B----  13       3:53               512000     22     0.00
451b7ac8         2        U------  14       3:512053           512000   512000   100.00
451b7b30         3        U---C-L  15       4:3                512000   134308    26.23
451b7b98         4        A------  0        4:512003           512000        0     0.00
451b7c00         5        A------  0        5:3                512000        0     0.00
451b7c68         6        A------  0        5:512003           512000        0     0.00
451b7cd0         7        A------  0        6:3                512000        0     0.00
451b7d38         8        A------  0        6:512003           512000        0     0.00
451b7da0         9        A------  0        7:3                512000        0     0.00
451b7e08         10       A------  0        7:512003           512000        0     0.00
451b7e70         11       A------  0        8:3                512000        0     0.00
451b7ed8         12       A------  0        8:512003           512000        0     0.00
451b7f40         13       A------  0        9:3                512000        0     0.00
451b7fa8         14       A------  0        9:512003           512000        0     0.00
44faaf30         15       A------  0        10:3               512000        0     0.00
44faaf98         16       A------  0        10:512003          512000        0     0.00
45074e28         17       A------  0        11:3               512000        0     0.00
45074e90         18       A------  0        11:512003          512000        0     0.00
45074ef8         19       A------  0        12:3               512000        0     0.00
45074f60         20       A------  0        12:512003          512000        0     0.00
4519c050         21       A------  0        13:3               512000        0     0.00
4519c0b8         22       A------  0        13:512003          512000        0     0.00
4519c120         23       A------  0        14:3               512000        0     0.00
```

Onstat -l Flags:

ØA - New and ready to use

Ø B - Backed up

Ø C - Current logical-log file

Ø D - Marked for deletion

Ø F - Free and available for reuse

Ø L - Contains the last checkpoint record

Ø U - Used

Onstat –m: Show Message Logs

```
informix@kitten:cssbstbshm $ onstat -m

IBM Informix Dynamic Server Version 9.40.FC8     -- On-Line -- Up 92 days 15:53:35 -- 213708 Kbytes

Message Log File: /informix940/log/cssbstb.log

11:34:26  Maximum server connections 797
11:37:17  Logical Log 668176 Complete, timestamp: 0x1889ec95.
11:39:30  Fuzzy Checkpoint Completed:  duration was 1 seconds, 33 buffers not flushed.
11:39:30  Checkpoint loguniq 668177, logpos 0x911cc, timestamp: 0x188a2d6f

11:39:30  Maximum server connections 797
11:40:05  Logical Log 668177 Complete, timestamp: 0x188a4037.
11:43:16  Logical Log 668178 Complete, timestamp: 0x188a991a.
11:44:34  Fuzzy Checkpoint Completed:  duration was 0 seconds, 28 buffers not flushed.
11:44:34  Checkpoint loguniq 668179, logpos 0x48190, timestamp: 0x188aba02

11:44:34  Maximum server connections 797
11:46:34  Logical Log 668179 Complete, timestamp: 0x188af301.
11:49:37  Fuzzy Checkpoint Completed:  duration was 0 seconds, 27 buffers not flushed.
11:49:37  Checkpoint loguniq 668180, logpos 0xa9184, timestamp: 0x188b412d

11:49:37  Maximum server connections 797
11:49:53  Logical Log 668180 Complete, timestamp: 0x188b4945.
11:53:14  Logical Log 668181 Complete, timestamp: 0x188ba36b.

informix@kitten:cssbstbshm $
```

Onstat –g sch: Show Oninit Process and Classes

```
-bash-4.2$ onstat -g sch

IBM Informix Dynamic Server Version 12.10.FC4AEE -- On-Line (Prim) -- Up 60 days 20:59:47 -- 307368 Kbytes

VP Scheduler Statistics:
 vp    pid       class       semops    busy waits  spins/wait  bsy lspins
 1     13630     cpu         49        53          9953        0
 2     13632     adm         0         0           0           0
 3     13633     lio         2         0           0           0
 4     13635     pio         2         0           0           0
 5     13637     aio         1473      0           0           0
 6     13639     msc         59        0           0           0
 7     13642     fifo        2         0           0           0
 8     13643     soc         10        67          3669        0
 9     13647     aio         576       0           0           0
 10    13648     aio         564       0           0           0
 11    13649     aio         246       0           0           0
 12    13650     aio         62        0           0           0
 13    13652     aio         8         0           0           0
 14    13653     aio         3         0           0           0
 15    13654     aio         3         0           0           0
 16    13655     aio         3         0           0           0
 17    13656     aio         2         0           0           0
 18    13818     cpu         13310391  13367386    9968        1

Thread Migration Statistics:
 vp    pid       class       steal-at steal-sc idlvp-at idlvp-sc inl-polls Q-ln
 1     13630     cpu         10011923 2478113  18237    9945     6238655   0
 2     13632     adm         0        0        49931490 3194575  0         0
 3     13633     lio         0        0        0        0        0         0
 4     13635     pio         0        0        0        0        0         0
 5     13637     aio         0        0        2        0        0         0
 6     13639     msc         0        0        0        0        0         0
 7     13642     fifo        0        0        0        0        0         0
 8     13643     soc         0        0        1526     822      0         0
 9     13647     aio         0        0        0        0        0         0
 10    13648     aio         0        0        0        0        0         0
 11    13649     aio         0        0        0        0        0         0
 12    13650     aio         0        0        0        0        0         0
 13    13652     aio         0        0        0        0        0         0
 14    13653     aio         0        0        0        0        0         0
 15    13654     aio         0        0        0        0        0         0
 16    13655     aio         0        0        0        0        0         0
 17    13656     aio         0        0        0        0        0         0
 18    13818     cpu         15911308 2715008  31528    19389    0         0
```

Oninit Process Classes:

Ø CPU - Executes all user and session threads and some system threads

Ø PIO - Handles physical log file when cooked disk space is used

Ø LIO - Handles logical log file when cooked disk space is used

Ø AIO - Handles disk I/O

Ø SHM - Performs shared memory communications

Ø TLI - Performs TLI network communications

Ø SOC - Performs socket network communications

Ø FIFO - Performs FIFO operations

Ø OPT - Handles optical disk I/O

Ø ADM - Executes administrative threads

Ø ADT - Executes auditing threads

Ø MSC - Handles request for system calls

Onstat –g seg: Show Memory Segments:

```
informix@kitten:cssbstbshm $ onstat -g seg

IBM Informix Dynamic Server Version 9.40.FC8     -- On-Line -- Up 92 days 15:57:25 -- 213708 Kbytes

Segment Summary:
id       key        addr              size             ovhd     class blkused  blkfree
17       1381451777 c0000000094ac000 62353408         429856   R     15190    33
41       1381451778 c000000028922000 51200000         2232     V     12475    25
62       1381451779 c000000031794000 1441792          712      M     320      32
63       1381451780 c0000000318f4000 1441792          712      M     318      34
8261     1381451782 c000000037a5e000 25600000         1456     V     4638     1612
2128     1381451783 c00000003f2d2000 25600000         1456     V     2103     4147
3148     1381451781 c00000004ccee000 25600000         1456     V     1640     4610
2133     1381451784 c00000004ef1c000 25600000         1456     V     717      5533
Total:   -          -                 218836992        -        -     37401    16026

   (* segment locked in memory)
```

Informix Memory Classes:

R – Resident Memory Segment

B – Buffer Pool Segment for data

V – Virtual Memory Segment for Working Storage

M – Message Segment for communications between clients

Onstat –p: Server Profile Performance Ratios:

```
informix@kitten:cssbstbshm $ onstat -p

IBM Informix Dynamic Server Version 9.40.FC8     -- On-Line -- Up 93 days 15:16:24 -- 213708 Kbytes

Profile
dskreads pagreads bufreads %cached dskwrits pagwrits bufwrits %cached
69947327 133716776 209401246673 99.97   1998884  7005113  197641799 98.99

isamtot  open     start    read     write    rewrite  delete   commit   rollbk
226868655557 180230670 54777067579 92573614667 11322779 1356244  241932   29231697 14337

gp_read  gp_write gp_rewrt gp_del   gp_alloc gp_free  gp_curs
0        0        0        0        0        0        0

ovlock   ovuserthread ovbuff   usercpu  syscpu   numckpts flushes
0        0            0        1171564.01 226611.64 20154    51224

bufwaits lokwaits lockreqs deadlks  dltouts  ckpwaits compress seqscans
843315   968      2845801070 4        0        19006    11736529 10973380

ixda-RA  idx-RA   da-RA    RA-pgsused lchwaits
1080398  163954   12815408 13587930   315834186
```

Key Elements of onstat -p:

- **Reads %cached** - The goal is > 95%
- **Writes %cached** - The goal is > 85%
- The BUFFERS parameter in your ONCONFIG file will affect this value.
- Be careful - if you make the BUFFERS too large this will take memory away from other processes and may slow down your whole system.
- **bufwaits** - This indicates the number of times a user thread has waited for a BUFFER.
- **lokwaits** - This indicates the number of times a user thread has waited for a LOCK.
- **deadlks** - This should be zero. This indicates the number of times a deadlock was detected and prevented.
- **dltouts** - This should be zero. This indicates the number of times a distributed deadlock was detected.

User Sessions and Threads:

Onstat Options	Purpose
Onstat –u	Show User Sessions Status
Onstat –x	Show User Sessions Transactions
Onstat –g sql	Show Sessions and SQL
Onstat –g ses	Show Session Details

Onstat –u: User Status

```
informix@kitten:cssbstbshm $ onstat -u

IBM Informix Dynamic Server Version 9.40.FC8     -- On-Line -- Up 93 days 15:29:37 -- 213708 Kbytes

Userthreads
address          flags   sessid   user     tty      wait             tout locks nreads   nwrites
c000000028c0f028 ---P--D 1        informix -        0                0    0     60189    312821
c000000028c0f860 ---P--F 0        informix -        0                0    0     0        250365
c000000028c10098 ---P--F 0        informix -        0                0    0     0        207866
c000000028c108d0 ---P--F 0        informix -        0                0    0     0        288153
c000000028c11108 ---P--F 0        informix -        0                0    0     0        76532
c000000028c11940 ---P--F 0        informix -        0                0    0     0        26041
c000000028c12178 ---P--F 0        informix -        0                0    0     0        10742
c000000028c129b0 ---P--F 0        informix -        0                0    0     0        0
c000000028c131e8 ---P--F 0        informix -        0                0    0     0        0
c000000028c13a20 ---P--- 17       informix -        0                0    0     0        140533
c000000028c14258 ---P--B 18       informix -        0                0    0     910392   240
c000000028c14a90 Y--P--- 586880   webdb    -        c00000004cd56ee8 0    2     0        0
c000000028c15b00 ---P--D 33       informix -        0                0    0     0        1
c000000028c173a8 Y--P--- 399831   informix 7        c0000000380f3b00 0    1     0        0
c000000028c17be0 Y--P--- 391890   webdb    -        c000000029e09560 0    2     337      0
c000000028c18418 Y--P--- 391871   webdb    -        c000000038e087d0 0    2     0        0
c000000028c1a4f8 Y--P--- 391879   webdb    -        c00000004f22f0b0 0    2     18       0
c000000028c1ad30 Y--P--- 391881   webdb    -        c00000004efbe570 0    2     0        0
c000000028c1b568 Y--P--- 391864   webdb    -        c000000038ff8158 0    1     0        0
c000000028c1bda0 Y--P--- 477207   webdb    -        c00000003fd7e388 0    2     293      0
c000000028c1c5d8 Y--P--- 413116   webdb    -        c0000000298caa18 0    2     0        0
c000000028c1de80 Y--P--- 413078   webdb    -        c00000002b5770b0 0    2     250      0
c000000028c1e6b8 Y--P--- 391888   webdb    -        c00000003fc84c18 0    2     232      0
c000000028c1eef0 Y--P--- 391848   webdb    -        c00000004f369b60 0    1     405      0
c000000028c20798 Y--P--- 391883   webdb    -        c000000037c22d00 0    2     0        0
c000000028c20fd0 Y--P--- 391853   webdb    -        c000000038ad8ed0 0    1     87       0
c000000028c230b0 Y--P--- 273333   webdb    -        c00000004d3c9608 0    2     433      0
c000000028c238e8 Y--P--- 391839   webdb    -        c00000003810e4b8 0    1     0        0
c000000028c24120 Y--P--- 391868   webdb    -        c00000002a777a28 0    2     0        0
c000000028c24958 Y--P--- 391887   webdb    -        c00000002a0cdaa0 0    2     0        0
c000000028c25190 Y--P--- 391833   webdb    -        c000000040232998 0    1     6        0
c000000028c26a38 Y--P--- 586879   webdb    -        c000000038d914b8 0    2     0        0
c000000028c27270 Y--P--- 391886   webdb    -        c00000003fab30b0 0    2     518      0
c000000028c282e0 Y--P--- 413070   webdb    -        c00000004def8300 0    2     348      0
c000000028c29350 Y--P--- 586736   webdb    -        c00000004e17d450 0    2     0        0
c000000028c29b88 Y--P--- 586874   webdb    -        c000000038c6c288 0    2     0        0
c000000028c2a3c0 Y--P--- 586270   rit_r    tb       c00000004043bf68 0    1     4        0
```

User status: onstat -u Flags

Flags in position 1

B - Waiting on a buffer

C - Waiting on a checkpoint

G - Waiting on a logical log buffer write

L - Waiting on a lock

S - Waiting on a mutex

T - Waiting on a transaction

Y - Waiting on a condition

X - Waiting on a transaction rollback

Flags in position 2

* - Transaction active during I/O error

Flags in position 3

A - Dbspace backup thread

B - Begin work

P - Prepared for commit work

X - TP/XA prepared for commit work

C - Committing work

R - Rolling back work

H - Heuristically rolling back work

Flags in position 4

P - Primary thread for a session

Flags in position 5

R - Reading call

X - Transaction is committing

Flags in position 6

None

Flags in position 7

B - Btree cleaner thread

C - Cleanup of terminated user

D - Daemon thread

F - Page flusher thread

M - ON-Monitor user thread

Onstat –x: Show Transactions

```
informix@kitten:chpbstbshm $ onstat -x

IBM Informix Dynamic Server Version 9.40.FC8     -- On-Line -- Up 93 days 15:38:58 -- 75580 Kbytes

Transactions
address           flags userthread       locks  beginlg curlog  logposit   isol    retrys coord
c00000004b7b3028 A---- c00000004b771028 0      0       6484    0x11118    COMMIT  0
c00000004b7b3298 A---- c00000004b771860 0      0       0       0x0        COMMIT  0
c00000004b7b3508 A---- c00000004b772098 0      0       0       0x0        COMMIT  0
c00000004b7b3778 A---- c00000004b7728d0 0      0       0       0x0        COMMIT  0
c00000004b7b3c58 A---- c00000004b774178 0      0       0       0x0        COMMIT  0
c00000004b7b3ec8 A---- c00000004b773940 0      0       0       0x0        COMMIT  0
 6 active, 128 total, 10 maximum concurrent
```

Onstat –g sql: List SQL statements

```
informix@kitten:cssbstbshm $ onstat -g sql

IBM Informix Dynamic Server Version 9.40.FC8     -- On-Line -- Up 93 days 15:45:43 -- 213708 Kbytes

Sess  SQL            Current            Iso Lock       SQL  ISAM F.E.
Id    Stmt type      Database           Lvl Mode       ERR  ERR  Vers Explain
586957 -             sysmaster           DR  Wait       0    0    9.03 Off
586882 -             css2                CR  Not Wait   0    0    9.03 Off
586881 -             css2                CR  Not Wait   0    0    9.03 Off
586880 -             css2                CR  Not Wait   0    0    9.03 Off
586879 -             css2                CR  Not Wait   0    0    9.03 Off
586877 -             css2                CR  Not Wait   0    0    9.03 Off
586875 -             css2                CR  Not Wait   0    0    9.03 Off
586874 -             css2                CR  Not Wait   0    0    9.03 Off
586873 -             css2                CR  Not Wait   0    0    9.03 Off
586872 -             css2                CR  Not Wait   0    0    9.03 Off
586871 -             css2                CR  Not Wait   0    0    9.03 Off
586270 -             css2                DR  Not Wait   0    0    9.03 Off
586228 -             css2                DR  Wait 5     0    0    9.03 Off
585657 -             css2                DR  Wait 5     0    0    9.03 Off
585656 -             css2                DR  Wait       0    0    9.03 Off
585655 SELECT        css2                DR  Wait 1     0    0    9.03 Off
585653 -             utilities           DR  Wait 10    0    0    9.03 Off
580248 -             sysutils            DR  Not Wait   0    0    9.03 Off
580247 -             sysmaster           CR  Not Wait   0    0    9.03 Off
```

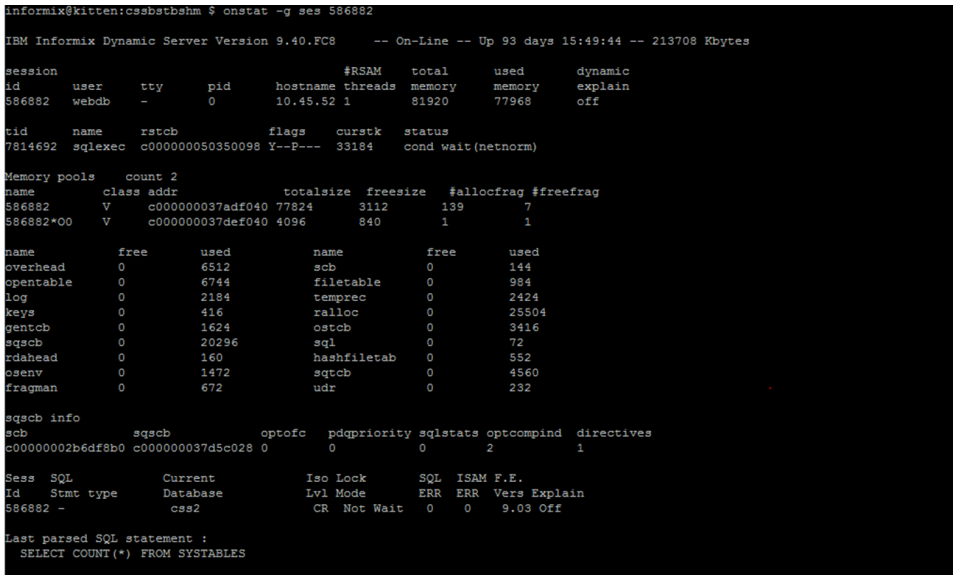
Onstat –g ses: List current SQL Session

```
informix@kitten:cssbstbshm $ onstat -g ses

IBM Informix Dynamic Server Version 9.40.FC8     -- On-Line -- Up 93 days 15:47:50 -- 213708 Kbytes

session                                    #RSAM    total      used       dynamic
id       user     tty      pid      hostname threads  memory     memory     explain
586973   informix -        0        -        0        12288      11344      off
586966   informix -        0        -        0        12288      11344      off
586964   informix -        0        -        0        12288      11344      off
586957   informix 31       13500    gollum.o 1        57344      47128      off
586882   webdb    -        0        10.45.52 1        81920      77968      off
586881   webdb    -        0        10.45.52 1        81920      77968      off
586880   webdb    -        0        10.45.52 1        81920      77968      off
586879   webdb    -        0        10.45.52 1        90112      79856      off
586877   webdb    -        0        10.45.52 1        311296     261352     off
586875   webdb    -        0        10.45.52 1        311296     277104     off
586874   webdb    -        0        10.45.52 1        90112      79736      off
586873   webdb    -        0        10.45.52 1        327680     261144     off
586872   webdb    -        0        10.45.52 1        327680     268792     off
586871   webdb    -        0        10.45.52 1        81920      78040      off
586270   rit_r    tb       5011     kitten   1        65536      48032      off
586228   rit_r    ta       544      kitten   1        2338816    2299016    off
585657   css      -        8080     kitten   1        286720     277416     off
585656   css      -        8077     kitten   1        94208      76048      off
585655   css      -        8074     kitten   1        1138688    1102208    off
585653   css      2        8052     kitten   1        77824      62008      off
580248   informix 28       314      gollum.o 1        77824      58560      off
```

Onstat –g ses: current SQL Session



```
informix@kitten:cssbstbshm $ onstat -g ses 586882

IBM Informix Dynamic Server Version 9.40.FC8     -- On-Line -- Up 93 days 15:49:44 -- 213708 Kbytes

session                                    #RSAM    total      used       dynamic
id       user     tty      pid      hostname threads  memory     memory     explain
586882   webdb    -        0        10.45.52 1        81920      77968      off

tid      name     rstcb            flags    curstk   status
7814692  sqlexec  c000000050350098 Y--P---  33184    cond wait(netnorm)

Memory pools    count 2
name         class addr              totalsize  freesize   #allocfrag #freefrag
586882       V     c000000037adf040 77824      3112       139        7
586882*00    V     c000000037def040 4096       840        1          1

name           free       used           name           free       used
overhead       0          6512           scb            0          144
opentable      0          6744           filetable      0          984
log            0          2184           temprec        0          2424
keys           0          416            ralloc         0          25504
gentcb         0          1624           ostcb          0          3416
sqscb          0          20296          sql            0          72
rdahead        0          160            hashfiletab    0          552
osenv          0          1472           sqtcb          0          4560
fragman        0          672            udr            0          232

sqscb info
scb              sqscb            optofc   pdqpriority sqlstats optcompind  directives
c00000002b6df8b0 c000000037d5c028 0        0           0        2           1

Sess  SQL            Current            Iso Lock       SQL  ISAM F.E.
Id    Stmt type      Database           Lvl Mode       ERR  ERR  Vers Explain
586882 -              css2               CR  Not Wait   0    0    9.03 Off

Last parsed SQL statement :
  SELECT COUNT(*) FROM SYSTABLES
```

Onstat - Show Threads

Onstat Option	Purpose
onstat -g ath	Show all threads
onstat -g rea	Show threads ready to run
onstat -g wai	Show threads waiting to run
onstat -g act	Show active threads running
onstat -g bth	Show blocking threads

Onstat –g ath: Show threads

```
informix@kitten:cssbstbshm $ onstat -g ath

IBM Informix Dynamic Server Version 9.40.FC8     -- On-Line -- Up 93 days 15:57:02 -- 213708 Kbytes

Threads:
 tid     tcb             rstcb            prty status               vp-class      name
 2       c0000000295d3028 0                 2    sleeping forever        3lio        lio vp 0
 3       c0000000295eb630 0                 2    sleeping forever        4pio        pio vp 0
 4       c00000002960c630 0                 2    sleeping forever        5aio        aio vp 0
 5       c00000002962d630 0                 2    sleeping forever        6msc        msc vp 0
 6       c00000002965e630 0                 2    sleeping forever        7aio        aio vp 1
 7       c00000002967f890 c000000028c0f028 4    sleeping secs: 1        1cpu        main_loop()
 8       c00000002962d910 0                 2    running                 8soc        soctcppoll
 9       c00000002962dd98 0                 2    running                 9soc        soctcppoll
 10      c00000002965ec08 0                 2    running                10shm        sm_poll
 11      c000000029714028 0                 2    running                11shm        sm_poll
 12      c00000002973a028 0                 3    sleeping forever        1cpu        soctcplst
 13      c0000000297620c0 0                 3    sleeping forever        1cpu        sm_listen
 14      c000000029786028 0                 2    sleeping secs: 1        1cpu        sm_discon
 15      c00000002979b028 0                 3    sleeping forever        1cpu        sm_listen
 16      c0000000297bf028 0                 2    sleeping secs: 1        1cpu        sm_discon
 17      c0000000297bf290 c000000028c0f860 2    sleeping forever        1cpu        flush_sub(0)
 18      c0000000297bf5b0 c000000028c10098 2    sleeping forever        1cpu        flush_sub(1)
 19      c0000000297bf8d0 c000000028c108d0 2    sleeping forever        1cpu        flush_sub(2)
 20      c0000000297bfbf0 c000000028c11108 2    sleeping forever        1cpu        flush_sub(3)
 21      c00000002981f028 c000000028c11940 2    sleeping forever        1cpu        flush_sub(4)
 22      c00000002981f348 c000000028c12178 2    sleeping forever        1cpu        flush_sub(5)
 23      c00000002981f668 c000000028c129b0 2    sleeping forever        1cpu        flush_sub(6)
 24      c00000002981f988 c000000028c131e8 2    sleeping forever        1cpu        flush_sub(7)
 25      c000000029898028 0                 2    sleeping forever       12aio        aio vp 2
 26      c000000029898348 0                 2    sleeping forever       13aio        aio vp 3
 27      c0000000298d1630 0                 2    sleeping forever       14aio        aio vp 4
 28      c0000000298f2630 0                 2    sleeping forever       15aio        aio vp 5
 29      c000000029913630 0                 2    sleeping forever       16aio        aio vp 6
 30      c000000029913950 0                 2    sleeping forever       17aio        aio vp 7
 31      c000000029913c70 0                 2    sleeping forever       18aio        aio vp 8
 32      c0000000298d1d38 0                 2    sleeping forever       19aio        aio vp 9
 33      c000000029982630 0                 2    sleeping forever       20aio        aio vp 10
 34      c0000000299a3630 0                 2    sleeping forever       21aio        aio vp 11
 35      c0000000299c6630 0                 2    sleeping forever       22aio        aio vp 12
 36      c0000000299e7630 0                 2    sleeping forever       23aio        aio vp 13
 37      c0000000299a3950 c000000028c13a20 3    sleeping forever        1cpu        aslogflush
 38      c0000000299c6c48 c000000028c14258 1    sleeping secs: 49       1cpu        btscanner_0
 54      c000000029c95da0 c000000028c15b00 4    sleeping secs: 1        1cpu        onmode_mon
 100     c00000002a139618 c000000028c2bc68 2    cond wait  bp_cond      1cpu        bf_priosweep()
```

Onstat – Show Disk IO:

Option	Purpose
onstat -D	Show Dbspaces and Chunk IO Statics
onstat -g iof	Show Disk IO Statistics by Chunk/file
onstat –g iov	Show Disk IO Statistics by Oninit VP
onstat –g ioh	Show Disk IO History
onstat –g ckp	Show Checkpoint Statistics
onstat -F	Show Buffer Flush Statistics
onstat -R	Show LRU Queue Statistics

Onstat –D: Disk IO

```
informix@kitten:cssbstbshm $ onstat -D

IBM Informix Dynamic Server Version 9.40.FC8     -- On-Line -- Up 93 days 15:58:09 -- 213708 Kbytes

Dbspaces
address          number   flags      fchunk   nchunks  flags    owner    name
c000000028aba490 1        0x1        1        6        N        informix rootdbs
c00000002988e4f0 2        0x2001     6        1        N T      informix tempdbs
 2 active, 2047 maximum

Chunks
address          chunk/dbs  offset     page Rd  page Wr  pathname
c000000028aba8f8 1      1    0          28261940 1735854  /informix/cssbstb/rootdbs
c00000002988da50 2      1    0          11214422 860811   /informix/cssbstb/rootdbs2
c00000002988dbe8 3      1    0          3246593  274525   /informix/cssbstb/rootdbs3
c00000002988dd80 4      1    0          19057948 1476802  /informix/cssbstb/rootdbs4
c00000002988e028 5      1    0          36967877 330225   /informix/cssbstb/rootdbs6
c00000002988e1c0 6      2    0          1        4        /informix/cssbstb/tempdbs1
c00000002988e358 7      1    0          34970566 2330270  /informix/cssbstb/rootdbs7
 7 active, 2047 maximum

Expanded chunk capacity mode: disabled
```

Onstat –R: LRU Statistics

```
informix@kitten:cssbstbshm $ onstat -R

IBM Informix Dynamic Server Version 9.40.FC8     -- On-Line -- Up 95 days 15:23:36 -- 213708 Kbytes

8 buffer LRU queue sets              priority levels
# type   set total     % of    length       LOW      HIGH
 0 f       1250      99.1%     1239         817       422
 1 m                  0.9%       11           1        10
 2 f       1250      99.4%     1243         821       422
 3 m                  0.6%        7           0         7
 4 f       1250      99.3%     1241         819       422
 5 m                  0.7%        9           1         8
 6 f       1250      99.4%     1243         821       422
 7 m                  0.6%        7           3         4
 8 f       1250      99.6%     1245         823       422
 9 m                  0.4%        5           1         4
10 F       1250      99.8%     1247         825       422
11 m                  0.2%        3           1         2
12 f       1250      99.4%     1243         821       422
13 m                  0.6%        7           2         5
14 f       1250      99.4%     1242         820       422
15 m                  0.6%        8           3         5
57 dirty, 10000 queued, 10000 total, 16384 hash buckets, 2048 buffer size
start clean at  60.000% (of set total) dirty, or 750 buffs dirty, stop at
  50.000%
```

Onstat –F: Flush to Disk

```
informix@kitten:cssbstbshm $ onstat -F

IBM Informix Dynamic Server Version 9.40.FC8     -- On-Line -- Up 95 days 15:24:29 -- 213708 Kbytes


Fg Writes     LRU Writes    Chunk Writes
0             0             36915

address           flusher  state    data
c000000028c0f860 0        I        0        = 0X0
c000000028c10098 1        I        0        = 0X0
c000000028c108d0 2        I        0        = 0X0
c000000028c11108 3        I        0        = 0X0
c000000028c11940 4        I        0        = 0X0
c000000028c12178 5        I        0        = 0X0
c000000028c129b0 6        I        0        = 0X0
c000000028c131e8 7        I        0        = 0X0
      states: Exit Idle Chunk Lru

informix@kitten:cssbstbshm $
```

Onstat –g ckp: Show Checkpoint History

```
informix@chester:chuckshm $ onstat -g ckp

IBM Informix Dynamic Server Version 11.70.FC7X1 -- On-Line -- Up 310 days 12:35:09 -- 15172124 Kbytes

AUTO_CKPTS=On   RTO_SERVER_RESTART=Off

                                                    Critical Sections                                  Physical Log    Logical Log
          Clock                                Total Flush Block #      Ckpt  Wait  Long  # Dirty  Dskflu Total    Avg     Total    Avg
Interval  Time      Trigger   LSN              Time  Time  Time  Waits  Time  Time  Time  Buffers  /Sec   Pages    /Sec    Pages    /Sec
1817740   10:33:50  CKPTINTVL 171188:0x5efc5018 14.2  14.1  0.0   10     0.0   0.0   0.0   279605   19790  248616   1366    76901    422
1817741   10:37:12  CKPTINTVL 171188:0x77cc2018 20.4  20.4  0.0   15     0.0   0.0   0.0   383987   18828  342840   1749    109539   558
1817742   10:40:24  CKPTINTVL 171188:0x7d0bb018 10.5  10.0  0.0   63     0.0   0.4   0.5   84187    8452   81978    405     21497    106
1817743   10:43:43  CKPTINTVL 171189:0x17684018 18.2  18.1  0.0   22     0.0   0.0   0.0   363943   20089  319842   1665    107977   562
1817744   10:46:49  CKPTINTVL 171189:0x1e241278 5.0   5.0   0.0   22     0.0   0.0   0.0   86755    17445  75323    378     28178    141
1817745   10:49:50  CKPTINTVL 171189:0x1eecf018 0.8   0.7   0.0   10     0.0   0.0   0.0   13807    13807  12792    69      3214     17
1817746   10:52:58  CKPTINTVL 171189:0x26751018 6.2   6.1   0.0   8      0.0   0.0   0.0   116106   18956  103671   569     30850    169
1817747   10:56:00  CKPTINTVL 171189:0x270096f0 0.8   0.7   0.0   12     0.0   0.0   0.0   12393    12393  11290    60      2232     11
1817748   10:59:04  CKPTINTVL 171189:0x2a38a018 2.3   2.2   0.0   9      0.0   0.0   0.0   44348    19919  38742    212     13185    72
1817749   11:02:16  CKPTINTVL 171189:0x369fe694 10.3  10.2  0.0   12     0.0   0.0   0.0   189972   18579  169101   919     52835    287
1817750   11:05:20  CKPTINTVL 171189:0x3947c018 2.6   2.6   0.0   7      0.0   0.0   0.0   47840    18568  45270    235     10878    56
1817751   11:08:36  CKPTINTVL 171189:0x4c1ec018 15.0  15.0  0.0   3      0.0   0.0   0.0   281827   18842  250548   1369    77168    421
1817752   11:11:53  CKPTINTVL 171189:0x5df917a4 15.5  15.5  0.0   11     0.0   0.0   0.0   296556   19190  266634   1360    75389    384
1817753   11:14:58  CKPTINTVL 171189:0x62b34018 4.8   4.8   0.0   4      0.0   0.0   0.0   88716    18609  81916    415     19362    98
1817754   11:18:03  CKPTINTVL 171189:0x6a36e018 3.6   3.6   0.0   7      0.0   0.0   0.0   100596   28236  87916    472     30778    165
1817755   11:21:07  CKPTINTVL 171189:0x6c03a6d4 2.3   2.2   0.0   11     0.0   0.0   0.0   44146    20016  41049    221     7788     42
1817756   11:24:16  CKPTINTVL 171189:0x757d9018 7.5   7.5   0.0   1      0.0   0.0   0.0   158668   21232  143098   777     38815    210
1817757   11:27:21  CKPTINTVL 171189:0x79406018 3.1   3.1   0.0   2      0.0   0.0   0.0   64440    20921  58070    307     15405    81
1817758   11:30:23  CKPTINTVL 171189:0x79408018 0.0   0.0   0.0   1      0.0   0.0   0.0   128      128    0        0       2        0
1817759   11:33:33  CKPTINTVL 171190:0xca1018  9.2   9.1   0.0   1      0.0   0.0   0.0   135816   14875  123243   680     30873    170

Max Plog      Max Llog      Max Dskflush   Avg Dskflush   Avg Dirty     Blocked
pages/sec     pages/sec     Time           pages/sec      pages/sec     Time
29625         11778         64             1              0             0
```

LOCKS:

- Onstat –k to Show Locks
- How many Lock Table overflows?
- What User Owns the Lock?
- What Table is Locked?
- What Type of Lock is it?

Onstat –k: Show Locks

- WARNING: If you have a large number of LOCKS defined in your ONCONFIG
- file and many users, you could see thousands of rows from this command.

```
-bash-4.2$ onstat -k

IBM Informix Dynamic Server Version 12.10.FC4AEE -- On-Line (Prim) -- Up 63 days 20:43:36 -- 307368 Kbytes

Locks
address          wtlist           owner            lklist           type     tblsnum  rowid    key#/bsiz
441a3028         0                4515daa8           0                HDR+S    100002   204         0
441a32d0         0                4515c928           0                    S    100002   204         0
441a3358         0                4515c928           441a32d0         HDR+S    100002   201         0
441a33e0         0                4515d1e8           0                    S    100002   204         0
441a3468         0                4515e368           0                    S    100002   204         0
 5 active, 40000 total, 16384 hash buckets, 0 lock table overflows
```

Who owns a lock:

- The "owner" column lists the address in shared memory of the user who owns a lock. Use this with "onstat -u" to see all users and compare this with the "address" column to identify username of the owner.

```
-bash-4.2$ onstat -k

IBM Informix Dynamic Server Version 12.10.FC4AEE -- On-Line (Prim) -- Up 63 days 20:43:36 -- 307368 Kbytes

Locks
address          wtlist           owner            lklist           type     tblsnum  rowid    key#/bsiz
441a3028         0                4515daa8           0                HDR+S    100002   204         0
441a32d0         0                4515c928           0                    S    100002   204         0
441a3358         0                4515c928           441a32d0         HDR+S    100002   201         0
441a33e0         0                4515d1e8           0                    S    100002   204         0
441a3468         0                4515e368           0                    S    100002   204         0
 5 active, 40000 total, 16384 hash buckets, 0 lock table overflows

-bash-4.2$ onstat -u

IBM Informix Dynamic Server Version 12.10.FC4AEE -- On-Line (Prim) -- Up 63 days 20:46:54 -- 307368 Kbytes

Userthreads
address          flags   sessid   user     tty      wait             tout locks nreads   nwrites
45156028         ---P--D 1        informix -        0                0    0     1867     23849
451568e8         ---P--F 0        informix -        0                0    0     0        162203
451571a8         ---P--F 0        informix -        0                0    0     0        10672
45157a68         ---P--- 11       informix -        0                0    0     0        2316
45158328         ---P--B 12       informix -        0                0    0     113843   512
45158be8         Y--P--D 13       informix -        472f2808         0    0     52945    0
451594a8         ---P--D 14       informix -        0                0    0     0        0
45159d68         ---P--D 66       informix -        0                0    0     0        0
4515a628         ---P--D 18       informix -        0                0    0     0        3
4515aee8         Y--P--D 43       informix -        44115c30         0    0     0        0
4515b7a8         ---P--D 19       informix -        0                0    0     3        0
4515c068         ---P--D 20       informix -        0                0    0     0        0
4515c928         ---P--- 30       informix -        0                0    2     262      15820
4515d1e8         ---P--- 31       informix -        0                0    1     11362    87291
4515daa8         ---P--- 29       informix -        0                0    1     11       0
4515e368         ---P--- 32       informix -        0                0    1     17085    86509
4515ec28         ---P--D 53       informix -        0                0    0     14235    1285
4515f4e8         ---P--D 67       informix -        0                0    0     0        5927
4515fda8         Y--P--- 63       informix 2        47552d18         0    0     0        0
45160668         Y--P--- 69       informix -        4711c340         0    0     0        0
45160f28         ---P--- 70       informix -        0                0    0     0        0
 21 active, 128 total, 34 maximum concurrent
```

What table is locked?

- The "tblsnum" column identifies the table that is being locked. Compare this with the output of the following SQL statement to convert a table's partnum to hex. This will identify which table is locked.

Types of locks:

- Database - Lock on tablespace 100002
- Table - Lock on actual tablespace with rowid of 0
- Page - Lock on tablespace with rowid ending in 00
- Row - Lock on tablespace with actual rowid (not 00)
- Byte - Lock on tablespace/page with size of bytes
- Key - Lock on tablespace hex rowid (starting with f)

Types of locks Flags:

- HDR - Header
- B - Bytes lock
- S - Shared lock
- X - Exclusive
- I - Intent
- U - Update
- IX - Intent-exclusive
- IS - Intent-shared
- SIX - Shared, Intent-exclusive

More Onstat Options:

Option	Purpose
Onstat –r	Repeat every <seconds> seconds (default: 5)
Onstat -z	Zero profile counts (To flush the profile counts)

Onstat -o	Put shared memory into specified dump file
onstat <infile>	Read shared memory information from specified dump file
onstat -i	Interactive mode

Onstat –r: Repeat

- **Repeat ONSTAT commands: -r**
- To continually repeat an ONSTAT command use the "-r # of seconds" option. This is very useful when you need to monitor a situation. The following example displays the status of the logical logs every 10 seconds.
- **onstat -l -r 10**

Onstat –z: Reset Statistics

- Clear ONSTAT shared memory statistics: onstat -z
- The Server statistics are reset every time OnLine is restarted. To reset all the statistics while OnLine is running without shutting it down, use the following command:
- **onstat -z**

onbar -v syntax: Verifying backups

Use the onbar -v command to verify that backups that were created by the ON-Bar utility are complete and can be restored.

To run ON-Bar commands, you must be user **root**, user **informix**, a member of the **bargroup** group on UNIX, or a member of the Informix®-Admin group on Windows.

Sufficient temporary space must be available. For more information, see Temporary space for backup verification.

Option	Description
-v	Verifies a backup. The server can be in any mode. If verification is successful, you can restore the storage spaces safely. You can verify a whole-system or physical-only backup. You cannot verify the logical logs.
space	Names of storage spaces to verify. If you enter more than one storage-space name, use a space to separate the names.
-f filename	Verifies the storage spaces that are listed in the text file whose path name filename provides. Use this option to avoid entering a long list of storage spaces every time that you verify them. You can use any valid UNIX or Windows path name and file name. For the format of this file, see List of storage spaces in a file. The file can list multiple storage spaces per line.
-p	Verifies a physical-only backup.
-t "time"	Specifies the date and time to which dbspaces are verified. Must be surrounded by quotation marks. How you enter the time depends on your current GLS locale convention. If the GL_DATETIME environment variable is set, you must specify the date and time according to that variable. If the GLS locale is not set, use ANSI-style date format: `YYYY-MM-DD HH:MM:SS`.
-w	Verifies a whole-system backup.

Usage

The onbar -v command runs the archecker utility. The archecker utility verifies that all pages required to restore a backup exist on the media in the correct form. After you successfully verify a backup, you can restore it safely.

When you verify a backup, ON-Bar writes summary messages to the bar_act.log that report which storage spaces were verified and whether the verification succeeded or failed. The archecker utility writes detailed messages to the ac_msg.log. IBM® Software Support uses the ac_msg.log to diagnose problems with backups and restores.

The onbar -v command verifies only the smart-large-object extents in an sbspace. For a complete check, use the oncheck -cS command.

The onbar -v command cannot verify the links between data rows and simple large objects in a blobspace. Use the oncheck -cD command instead to verify the links in a blobspace.

Example: Perform a point-in-time verification of a backup

The following command verifies a backup at a point-in-time:

```
onbar -v -t "2011-12-10 10:20:50"
```

Example: Verify backups of storage spaces listed in a file

The following command verifies the backed-up storage spaces that are listed in the file bkup1:

```
onbar -v -f /usr/backups/bkup1
```

Example: ON-Bar activity log verification messages

The following examples show messages about verification in the ON-Bar activity log:

The level-0 backup of dbspace **dbs2.2** passed verification, as follows:

```
Begin backup verification of level0 for dbs2.2 (Storage Manager Copy ID:##)
Completed level-0 backup verification successfully.
```

The level-0 backup of **rootdbs** failed verification, as follows:

```
Begin backup verification of level0 for rootdbs (Storage Manager Copy ID:##).
ERROR: Unable to close the physical check: error_message.
```

Example: archecker message log verification messages

More detailed information is available in the archecker message log, as follows:

```
STATUS: Scan PASSED
STATUS: Control page checks PASSED
STATUS: Starting checks of dbspace dbs2.2.
STATUS: Checking dbs2.2:TBLSpace
.
.
STATUS: Tables/Fragments Validated: 1
Archive Validation Passed
```

- **Temporary space for backup verification**
  When you verify backups, 15-25 MB of temporary space must be available.
- **Verification failures**
  The verification of a backup can fail for various reasons. If a backup fails verification, do not attempt to restore it.