# DB2SPI

# Smart Plug-In for DB2 Databases

# Metric Reference Manual


*Version A.03.20 (OVO/Unix)*

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# Contents

# DB2SPI Metrics

The area tables below show an overview of the DB2SPI Metrics. More information may be found in the following Chapter "Metric Details".

**Note:** Not all metrics are collected out-of-the-box. To collect them, you have to schedule the collection with the help of a schedule template. How this is done is described in the DB2SPI User's Guide. However, be careful not to overload the system with too many metrics. If the load on the system is high, you may want to consider switching off some metrics, which are not important to you.

The default collection interval is with marked with the following colors:

- 5 min
- 10 min
- 30 min
- 60 min
- Not collected

## Area: Agents and Applications

| DB2 SPI Metric | Delta | Type | Alarming | Severity | Interval | Graph | Reports | Monitoring Enabled | Applicable for DPF | Instructions available |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0071g_ApplConnCur_db** | | | | | | | | | | |
| Applications connected currently in the database | no | g | yes | Warning | 30 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0151p_ApplWaitOnLck_db** | | | | | | | | | | |
| Percent applications in the database that are waiting on locks | no | p | yes | Major | 10 min | - | - | yes | Global Snapshot | yes |
| **DB2_0232w_MaxAssocAgt_ap** | | | | | | | | | | |
| Maximum number of associated agents | no | w | yes | Major | - | - | Ascii Report 0232 | no | Global Snapshot | no |
| **DB2_0240c_AgtStolen_in** | | | | | | | | | | |
| Stolen agents in the instance | no | c | yes | Minor | 30 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0242c_AgtStolen_ap** | | | | | | | | | | |
| Stolen agents in an application | no | c | yes | Minor | - | - | Ascii Report 0242 | no | Global Snapshot | yes |
| **DB2_0250w_MaxCoordAgt_in** | no | w | yes | Minor | 30 min | OVPM | - | yes | Global | yes |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum number of coordinating agents in the instance | | | | | | | | | | |
| **DB2_0251w_MaxCoordAgt_db** | | | | | | | | | | |
| Maximum number of coordinating agents in the database | no | w | yes | Minor | - | - | Ascii Report 0251 | no | Global Snapshot | yes |
| **DB2_0440p_AgtAssignPl_in** | | | | | | | | | | |
| Percent agents assigned from agent pool | no | p | no | - | 30 min | - | Ascii Report 0440 | yes | Global Snapshot | no |
| **DB2_0490g_AgtReg_in** | | | | | | | | | | |
| Agents registered in the instance | no | g | yes | Minor | 30 min | OVPM | - | yes | Global Snapshot | no |
| **DB2_0500g_AgtIdle_in** | | | | | | | | | | |
| Agents idle in the instance | no | g | yes | Minor | 30 min | OVPM | - | yes | Global Snapshot | no |
| **DB2_0550g_AgtWaitTok_in** | | | | | | | | | | |
| Agents waiting on a token in the database manager | no | g | no | - | 30 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0560r_AgtEmptyPl_in** | | | | | | | | | | |
| Ratio of agents created due to empty pool to agents assigned from pool | no | r | yes | Minor | 30 min | - | Ascii Report 0560 | yes | Global Snapshot | no |
| **DB2_0631g_ApplExecDbmgr_db** | | | | | | | | | | |
| Applications currently executing in the database manager | no | g | no | - | 30 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0771c_AgtAssocAppl_db** | | | | | | | | | | |
| Agents associated with applications in the database | no | c | no | - | 30 min | OVPM | - | yes | Global Snapshot | no |
| **DB2_0772c_AgtAssocAppl_ap** | | | | | | | | | | |
| Agents associated with the application | no | c | no | - | - | - | Ascii Report 0772 | no | Global Snapshot | No |
| **DB2_2071p_ApplMax_db** | | | | | | | | | | |
| The percentage of application currently connected per database configuration parameter “MAXAPPL” | no | p | yes | Minor | 30 min | - | - | yes | global snapshot | yes |
| **DB2_2490p_AgtMax_in** | | | | | | | | | | |
| Percentage of agents registered in the instance per database manager configuration parameter MAXAGENTS | no | p | yes | Minor | 30 min | - | - | yes | global snapshot | yes |

# Area: Bufferpool

| DB2 SPI Metric | Delta | Type | Alarming | Severity | Interval | Graph | Reports | Monitoring Enabled | Applicable for DPF | Instructions available |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0031p_BufPlHit_db** | | | | | | | | | | |
| The buffer pool hit ratio for the database expressed as a percentage | no | p | yes | Minor | 10 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0032p_BufPlHit_ap** | | | | | | | | | | |
| The buffer pool hit ratio for an application expressed as a percentage | no | p | yes | Minor | - | - | Ascii Report 0032 | no | Global Snapshot | no |
| **DB2_0033p_BufPlHit_ts** | | | | | | | | | | |
| The buffer pool hit ratio for the tablespace expressed as a percentage | no | p | yes | Minor | 30 min | - | - | yes | per Partition | no |
| **DB2_0035p_BufPlHit_bp** | | | | | | | | | | |
| The buffer pool hit ratio for a particular buffer pool | no | p | yes | Minor | 30 min | - | OVPI | yes | per Partition | no |
| **DB2_0081p_InxHit_db** | | | | | | | | | | |
| The buffer pool index hit ratio for the database expressed as a percentage | no | p | yes | Minor | 10 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0082p_InxHit_ap** | | | | | | | | | | |
| The buffer pool index hit ratio for an application expressed as a percentage | no | p | yes | Minor | - | - | Ascii Report 0082 | no | Global Snapshot | no |
| **DB2_0083p_InxHit_ts** | | | | | | | | | | |
| The buffer pool index hit ratio for the tablespace expressed as a percentage | no | p | yes | Minor | - | - | - | no | per Partition | no |
| **DB2_0085p_InxHit_bp** | | | | | | | | | | |
| Indicates the percentage of read requests for index pages that have gone through a particular buffer pool | no | p | yes | Minor | 30 min | - | OVPI | yes | per Partition | no |
| **DB2_0271p_AsyPlDtRdpReq_db** | | | | | | | | | | |
| Percentage asynchronous data reads per request for the database | no | p | yes | Warning | 10 min | - | Ascii Report 0271 | yes | Global Snapshot | yes |
| **DB2_0273p_AsyPlDtRdpReq_ts** | | | | | | | | | | |
| Percentage asynchronous data reads per request for a tablespace | no | p | yes | Warning | - | - | Ascii Report 0273 | no | per Partition | no |
| **DB2_0281a_AsyncRdTime_db** | no | a | yes | Warning | 30 min | OVPM | Ascii Report | yes | Global | yes |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Average asynchronous read time for the database | | | | | | | | | | |
| **DB2_0283a_AsyncRdTime_ts** | | | | | | | | | | |
| Average asynchronous read time for a tablespace | no | a | yes | Warning | - | - | Ascii Report 0283 | no | Per Partition | no |
| **DB2_0291a_AsyncWrtTime_db** | | | | | | | | | | |
| Average asynchronous write time for the database | no | a | yes | Warning | 30 min | OVPM | Ascii Report 0291 | yes | Global Snapshot | yes |
| **DB2_0293a_AsyncWrtTime_ts** | | | | | | | | | | |
| Average asynchronous write time for a tablespace | no | a | yes | Warning | - | - | Ascii Report 0293 | no | per Partition | no |
| **DB2_0301r_AsyPlDataRd_db** | | | | | | | | | | |
| The ratio of asynchronous pool data reads to synchronous pool data reads for the database | no | r | yes | Warning | 30 min | OVPM | Ascii Report 0301 | yes | Global Snapshot | yes |
| **DB2_0303r_AsyPlDataRd_ts** | | | | | | | | | | |
| The ratio of asynchronous pool data reads to synchronous pool data reads in the tablespace | no | r | yes | Warning | - | - | Ascii Report 0303 | no | per Partition | no |
| **DB2_0311r_AsyPlDataWrt_db** | | | | | | | | | | |
| The ratio of asynchronous pool data writes to synchronous pool data writes for the database | no | r | yes | Warning | 30 min | OVPM | Ascii Report 0311 | yes | Global Snapshot | yes |
| **DB2_0313r_AsyPlDataWrt_ts** | | | | | | | | | | |
| The ratio of asynchronous pool data writes to synchronous pool data writes in the tablespace | no | r | yes | Warning | - | - | Ascii Report 0313 | no | per Partition | no |
| **DB2_0321r_AsyPlIdxRd_db** | | | | | | | | | | |
| The ratio of asynchronous pool index reads to synchronous pool index reads for the database | no | r | yes | Warning | 30 min | OVPM | Ascii Report 0321 | yes | Global Snapshot | yes |
| **DB2_0323r_AsyPlIdxRd_ts** | | | | | | | | | | |
| The ratio of asynchronous pool index reads to synchronous pool index reads in the tablespace | no | r | yes | Warning | - | - | Ascii Report 0323 | no | per Partition | no |
| **DB2_0331r_AsyPlIdxWrt_db** | no | r | yes | Warning | 30 min | OVPM | Ascii Report | yes | Global | yes |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| The ratio of asynchronous pool index writes to synchronous pool index writes for the database | | | | | | | | | | |
| **DB2_0333r_AsyPIIdxWrt_ts** | | | | | | | | | | |
| The ratio of asynchronous pool index writes to synchronous pool index writes in the tablespace | no | r | yes | Warning | - | - | Ascii Report 0333 | no | per Partition | no |
| **DB2_0341c_PIDataLogRd_db** | | | | | | | | | | |
| Buffer pool data logical reads for the database | no | c | no | - | 30 min | OVPM | - | yes | Global Snapshot | no |
| **DB2_0351c_PIIdxLogRd_db** | | | | | | | | | | |
| Buffer pool index logical reads for the database | no | c | no | - | 30 min | OVPM | - | yes | Global Snapshot | no |
| **DB2_0661c_PIDataPhyRds_db** | | | | | | | | | | |
| Buffer pool data physical reads in the database | no | c | no | - | 30 min | OVPM | OV Reporter | yes | Global Snapshot | no |
| **DB2_0671c_PIDataWrts_db** | | | | | | | | | | |
| Buffer pool data writes in the database | no | c | no | - | 30 min | OVPM | OV Reporter | yes | Global Snapshot | no |
| **DB2_0681c_PIIdxPhyRds_db** | | | | | | | | | | |
| Buffer pool index physical reads in the database | no | c | no | - | 30 min | OVPM | OV Reporter | yes | Global Snapshot | no |
| **DB2_0691c_PIIdxWrts_db** | | | | | | | | | | |
| Buffer pool index writes in the database | no | c | no | - | 30 min | OVPM | OV Reporter | yes | Global Snapshot | no |
| **DB2_0781a_PIRdTime_db** | | | | | | | | | | |
| Average buffer pool read time for the database | no | a | yes | Major | 30 min | OVPM | - | yes | Global Snapshot | no |
| **DB2_0782a_PIRdTime_ap** | | | | | | | | | | |
| Average buffer pool read time for an application | no | a | yes | Major | - | - | Ascii Report 0782 | no | Global Snapshot | no |
| **DB2_0783a_PIRdTime_ts** | | | | | | | | | | |
| Average buffer pool read time for a tablespace | no | a | yes | Major | - | - | - | no | per Partition | no |
| **DB2_0785a_PIRdTime_bp** | | | | | | | | | | |
| Average buffer pool read time for a particular buffer pool | no | a | yes | Major | 30 min | - | OVPI | yes | per Partition | no |
| **DB2_0791a_PIWrtTime_db** | no | a | yes | Major | 30 min | OVPM | - | yes | Global | no |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Average buffer pool write time for the database | | | | | | | | | | |
| **DB2_0792a_PlWrtTime_ap** | | | | | | | | | | |
| Average buffer pool write time for an application | no | a | yes | Major | - | - | Ascii Report 0792 | no | Global Snapshot | no |
| **DB2_0793a_PlWrtTime_ts** | | | | | | | | | | |
| Average buffer pool write time for a tablespace | no | a | yes | Major | - | - | - | no | per Partition | no |
| **DB2_0795a_PlWrtTime_ts** | | | | | | | | | | |
| Average buffer pool write time for a particular bufferpool | no | a | yes | Major | - | - | - | no | per Partition | no |

# Area: Catalog Cache

| DB2 SPI Metric | Delta | Type | Alarming | Severity | Interval | Graph | Reports | Monitoring Enabled | Applicable for DPF | Instructions available |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0111p_CatCacheHit_db** | | | | | | | | | | |
| The catalog cache hit ratio for the database expressed as a percentage | no | p | yes | Minor | 10 min | - | - | yes | Global Snapshot | yes |
| **DB2_0112p_CatCacheHit_ap** | | | | | | | | | | |
| The catalog cache hit ratio for an application expressed as a percentage | no | p | yes | Minor | - | - | Ascii Report 0112 | no | Global Snapshot | no |

# Area: Connections

| DB2 SPI Metric | Delta | Type | Alarming | Severity | Interval | Graph | Reports | Monitoring Enabled | Applicable for DPF | Instructions available |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0380g_LocConns_in** | | | | | | | | | | |
| Local connections in the database manager | no | g | no | - | 30 min | OVPM | OV Reporter OVPI | yes | Global Snapshot | yes |
| **DB2_0640g_RemConnsExec_in** | | | | | | | | | | |
| Remote connections executing in the database manager | no | g | no | - | 30 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0650g_LocConnsExec_in** | no | g | no | - | 30 min | OVPM | Ascii Report | yes | Global | yes |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Local connections executing in the database manager | | | | | | | 0650 | | Snapshot | |
| **DB2_0750g_RemConns_in** | | | | | | | | | | |
| Remote connections to the database manager | no | g | no | - | 30 min | OVPM | OV Reporter OVPI | yes | Global Snapshot | no |
| **DB2_0800w_MaxConns_in** | | | | | | | | | | |
| Maximum simultaneaous connections to the database | no | w | yes | Major | 10 min | OVPM | - | yes | Global Snapshot | no |
| **DB2_2600p_MaxConns_in** | | | | | | | | | | |
| Percentage of connections per database manager configuration parameter MAX_CONNECTIONS | no | p | yes | Minor | 30 min | - | - | yes | global snapshot | yes |

# Area: Database

| DB2 SPI Metric | Delta | Type | Alarming | Severity | Interval | Graph | Reports | Monitoring Enabled | Applicable for DPF | Instructions available |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0261i_DBStatus_db** | | | | | | | | | | |
| Database status | no | i | yes | Critical | 5 min | OVPM | OV Reporter OVPI | yes | Yes[1] | yes |
| **DB2_0991g_DBGrowth_db** | | | | | | | | | | |
| The growth rate of a database in MB in the monitoring interval | yes | g | no | - | 30 min | - | OVPI | yes | Global Snapshot | no |

# Area: Direct I/O

| DB2 SPI Metric | Delta | Type | Alarming | Severity | Interval | Graph | Reports | Monitoring Enabled | Applicable for DPF | Instructions available |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0091a_DirRdTime_db** | | | | | | | | | | |
| Average direct read time for the database | no | a | yes | Major | 10 min | OVPM | - | yes | Global Snapshot | yes |

[1] [1] This is not a snapshot metric. Availability is checked according to the IBM definition: 1. Instance attach, 2. database connect, 3.execution of one statement. Metric 0261 additionally uses an API call to activate the database on all partitions to guarantee availability of all monitored partitions other than the catalog partition.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0092a_DirRdTime_ap**<br>Average direct read time for an application | no | a | yes | Major | - | - | Ascii Report 0092 | no | Global Snapshot | no |
| **DB2_0093a_DirRdTime_ts**<br>Average direct read time for a tablespace | no | a | yes | Major | - | - | - | no | per Partition | no |
| **DB2_0101a_DirWrtTime_db**<br>Average direct write time for the database | no | a | no | Major | 10 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0102a_DirWrtTime_ap**<br>Average direct write time for an application | no | a | yes | Major | - | - | Ascii Report 0102 | no | Global Snapshot | no |
| **DB2_0103a_DirWrtTime_ts**<br>Average direct write time for a tablespace | no | a | yes | Major | - | - | - | no | per Partition | no |
| **DB2_0361a_DirRdpReq_db**<br>Average sectors read by a direct read in the database | no | a | yes | Minor | 10 min | OVPM | - | yes | Global Snapshot | no |
| **DB2_0362a_DirRdpReq_ap**<br>Average sectors read by a direct read in an application | no | a | yes | Minor | - | - | Ascii Report 0362 | no | Global Snapshot | no |
| **DB2_0363a_DirRdpReq_ts**<br>Average sectors read by a direct read in a tablespace | no | a | yes | Minor | - | - | - | no | per Partition | no |
| **DB2_0371a_DirWrtpReq_db**<br>Average sectors written by a direct write in the database | no | a | yes | Minor | 10 min | OVPM | - | yes | Global Snapshot | no |
| **DB2_0372a_DirWrtpReq_ap**<br>Average sectors written by a direct write in an application | no | a | yes | Minor | - | - | Ascii Report 0372 | no | Global Snapshot | no |
| **DB2_0373a_DirWrtpReq_ts**<br>Average sectors written by a direct write in a tablespace | no | a | yes | Minor | - | - | - | no | per Partition | no |
| **DB2_0701c_DrctRds_db**<br>Direct reads by the database | no | c | no | - | 30 min | OVPM | OV Reporter | yes | Global Snapshot | no |
| **DB2_0703c_DrctRds_ts**<br>The number of direct reads of one or more sectors of data for a particular table space | no | c | no | - | 30 min | - | OVPI | yes | per Partition | no |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0711c_DrctWrts_db**<br>Direct writes by the database | no | c | no | - | 30 min | OVPM | OV Reporter | yes | Global Snapshot | no |
| **DB2_0713c_DrctWrts_ts**<br>The number of requests to perform a direct write of one or more sectors of data for a particular table space | no | c | no | - | 30 min | - | OVPI | yes | per Partition | no |

# Area: FCM

| DB2 SPI Metric | Delta | Type | Alarming | Severity | Interval | Graph | Reports | Monitoring Enabled | Applicable for DPF | Instructions available |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0890p_FCMBuffFree_in**<br>Percent FCM buffers currently free | no | p | yes | Major | - | - | Ascii Report 0890 | no | only for DPF (global) | no |
| **DB2_0900p_MsgAnchrFree_in**<br>Percent message anchors currently free | no | p | yes | Major | - | - | Ascii Report 0900 | no | only for DPF (global) | no |
| **DB2_0910p_ConnEntrFree_in**<br>Percent connection entries currently free | no | p | yes | Major | - | - | Ascii Report 0910 | no | only for DPF (global) | no |
| **DB2_0920p_ReqBlkFree_in**<br>Percent request blocks currently free | no | p | yes | Major | - | - | Ascii Report 0920 | no | only for DPF (global) | no |

# Area: Locks and Deadlocks

| DB2 SPI Metric | Delta | Type | Alarming | Severity | Interval | Graph | Reports | Monitoring Enabled | Applicable for DPF | Instructions available |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0011c_LckTO_db**<br>Lock timeout in the database in the monitoring interval | yes | c | yes | Warning | 60 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0012c_LckTO_ap**<br>Lock timeout in an application in the monitoring interval | yes | c | yes | Warning | - | - | Ascii Report 0012 | no | Global Snapshot | no |
| **DB2_0021c_LckWaiting_db** | yes | c | no | - | 60 min | OVPM | - | yes | Global | yes |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Lock waits in the database in the monitoring interval | | | | | | | | | Snapshot | |
| **DB2_0022c_LckWaiting_ap** | | | | | | | | | | |
| Lock waits in an application in the monitoring interval | yes | c | no | - | - | - | Ascii Report 0022 | no | Global Snapshot | yes |
| **DB2_0141a_LckWaitTime_db** | | | | | | | | | | |
| Average lock wait time for the database | no | a | yes | Major | 10 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0142a_LckWaitTime_ap** | | | | | | | | | | |
| Average lock wait time for an application | no | a | yes | Major | - | - | Ascii Report 0142 | no | Global Snapshot | no |
| **DB2_0191c_LckEscal_db** | | | | | | | | | | |
| Lock escalations in the database | no | c | yes | Minor | 60 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0192c_LckEscal_ap** | | | | | | | | | | |
| Lock escalations in an application | no | c | yes | Minor | - | - | Ascii Report 0192 | no | Global Snapshot | no |
| **DB2_0201c_ExclLckEscal_db** | | | | | | | | | | |
| Exclusive lock escalations in the database | no | c | yes | Major | 60 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0202c_ExclLckEscal_ap** | | | | | | | | | | |
| Exclusive lock escalations in an application | no | c | yes | Major | - | - | Ascii Report 0202 | no | Global Snapshot | no |
| **DB2_0211c_Dlck_db** | | | | | | | | | | |
| Deadlocks in the database | no | c | yes | Major | 60 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0212c_Dlck_ap** | | | | | | | | | | |
| Deadlocks in an application | no | c | yes | Minor | - | - | Ascii Report 0212 | no | Global Snapshot | no |
| **DB2_0221c_LckWaitTime_db** | | | | | | | | | | |
| Lock wait time for the database | no | c | no | - | 30 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0222c_LckWaitTime_ap** | | | | | | | | | | |
| Lock wait time for an application | no | c | no | - | - | - | Ascii Report 0222 | no | Global Snapshot | no |
| **DB2_0461p_LckLstMemUsed_db** | | | | | | | | | | |
| Percent lock list memory used in the database | no | p | yes | Minor | 10 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0471p_LckHeld_db** | | | | | | | | | | |
| Percent locks held in the database | no | p | no | - | 10 min | OVPM | - | yes | Global Snapshot | no |
| **DB2_0472p_LckHeld_ap** | | | | | | | | | | |
| Percent locks held by an application | no | p | yes | Minor | 30 min | - | - | yes | Global Snapshot | no |
| **DB2s_0481g_LckAvail_db** | | | | | | | | | | |
| Number of available locks in the database | no | g | no | - | 10 min | - | - | no | Global Snapshot | yes |
| **DB2_0482g_LckAvail_ap** | no | g | yes | Minor | 30 min | - | Ascii Report | yes | Global | no |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Number of available locks in an application | | | | | | | 0482 | | Snapshot | |

## Area: Package Cache

| DB2 SPI Metric | Delta | Type | Alarming | Severity | Interval | Graph | Reports | Monitoring Enabled | Applicable for DPF | Instructions available |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0051c_PkgCacheOvfl_db** | | | | | | | | | | |
| Package cache overflows in the database in the monitoring interval | yes | c | yes | Minor | 60 min | - | - | yes | Global Snapshot | yes |
| **DB2_0571p_PkgCacheHit_db** | | | | | | | | | | |
| The package cache hit ratio for the database | no | p | yes | Minor | 30 min | OVPM | - | yes | Global Snapshot | no |

## Area: Sorts

| DB2 SPI Metric | Delta | Type | Alarming | Severity | Interval | Graph | Reports | Monitoring Enabled | Applicable for DPF | Instructions available |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0061p_SortOvfl_db** | | | | | | | | | | |
| Percent sort overflows in the database | no | p | yes | Minor | 30 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0062p_SortOvfl_ap** | | | | | | | | | | |
| Percent sort overflows for an application | no | p | yes | Minor | - | - | Ascii Report 0062 | no | Global Snapshot | no |
| **DB2_0120p_PipeSortAccep_in** | | | | | | | | | | |
| Percent piped sorts accepted in the database manager | no | p | yes | Major | 30 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0130c_PostThrSort_in** | | | | | | | | | | |
| Post threshold sorts in the instance | no | c | yes | Minor | 30 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0180g_SortHeapAlloc_in** | | | | | | | | | | |
| Sort heap allocated in the database manager | no | g | yes | Warning | 30 min | - | - | yes | Global Snapshot | yes |
| **DB2_0181g_SortHeapAlloc_db** | | | | | | | | | | |
| Sort heap allocated in the database | no | g | no | - | 30 min | OVPM | Ascii Report 0181 | yes | Global Snapshot | no |
| **DB2_0431a_SortTime_db** | | | | | | | | | | |
| Average sort time in the database | no | a | yes | Minor | 30 min | OVPM | - | yes | Global Snapshot | yes |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0432a_SortTime_ap**<br>Average sort time for an application | no | a | yes | Minor | 30 min | - | Ascii Report 0432 | yes | Global Snapshot | no |
| **DB2_0451a_SortHeapAlloc_db**<br>Average sort heap allocated for an application | no | a | yes | Minor | 30 min | - | - | yes | Global Snapshot | no |

## Area: SQL Cursor

| DB2 SPI Metric | Delta | Type | Alarming | Severity | Interval | Graph | Reports | Monitoring Enabled | Applicable for DPF | Instructions available |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0172p_OpnLocCursBlk_ap**<br>Percent open local cursors with blocking | no | p | yes | Minor | - | - | Ascii Report 0172 | no | Global Snapshot | no |
| **DB2_0582p_OpnRemCursBlk_ap**<br>Percent open remote cursors with blocking | no | p | yes | Minor | - | - | Ascii Report 0582 | no | Global Snapshot | no |

## Area: SQL work area

| DB2 SPI Metric | Delta | Type | Alarming | Severity | Interval | Graph | Reports | Monitoring Enabled | Applicable for DPF | Instructions available |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0621p_ApplSectHit_db**<br>The hit ratio for the SQL work area in the database | no | p | yes | Minor | - | - | - | no | Global Snapshot | no |
| **DB2_0622p_ApplSectHit_ap**<br>The hit ratio for the SQL work area for an application | no | p | yes | Minor | - | - | Ascii Report 0622 | no | Global Snapshot | no |

## Area: Statements

| DB2 SPI Metric | Delta | Type | Alarming | Severity | Interval | Graph | Reports | Monitoring Enabled | Applicable for DPF | Instructions available |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0161c_IntDlckRollb_db** | no | c | yes | Minor | 10 min | OVPM | - | yes | Global | yes |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Internal deadlocked rollbacks in the database | | | | | | | | | Snapshot | |
| **DB2_0162c_IntDlckRollb_ap** | | | | | | | | | | |
| Internal deadlocked rollbacks in an application | no | c | yes | Minor | - | - | Ascii Report 0162 | no | Global Snapshot | no |
| **DB2_0511c_CommAttmpt_db** | | | | | | | | | | |
| Commit statements attempted in the database | no | c | no | - | 30 min | OVPM | OV Reporter | yes | Global Snapshot | no |
| **DB2_0512c_CommAttmpt_ap** | | | | | | | | | | |
| Commit statements attempted by an application | no | c | no | - | - | - | Ascii Report 0512 | no | Global Snapshot | no |
| **DB2_0521c_DdlStmtDone_db** | | | | | | | | | | |
| DDL statements executed in the database | no | c | no | - | 30 min | OVPM | - | yes | Global Snapshot | no |
| **DB2_0522c_DdlStmtDone_ap** | | | | | | | | | | |
| DDL statements executed by an application | no | c | no | - | - | - | Ascii Report 0522 | no | Global Snapshot | no |
| **DB2_0531c_ModStmtDone_db** | | | | | | | | | | |
| UID statements executed in the database | no | c | no | - | 30 min | OVPM | - | yes | Global Snapshot | no |
| **DB2_0532c_ModStmtDone_ap** | | | | | | | | | | |
| UID statements executed by an application | no | c | no | - | - | - | Ascii Report 0532 | no | Global Snapshot | no |
| **DB2_0541c_SelStmtDone_db** | | | | | | | | | | |
| Select statements executed in the database | no | c | no | - | 30 min | OVPM | - | yes | Global Snapshot | no |
| **DB2_0542c_SelStmtDone_ap** | | | | | | | | | | |
| Select statements executed by an application | no | c | no | - | - | - | Ascii Report 0542 | no | Global Snapshot | no |
| **DB2_0721c_RollbAttmpt_db** | | | | | | | | | | |
| Rollbacks attempted by the database | no | c | no | - | 30 min | - | OV Reporter | yes | Global Snapshot | no |
| **DB2_0731c_IntRollbacks_db** | | | | | | | | | | |
| Internal rollbacks attempted by the database | no | c | no | - | 30 min | OVPM | OV Reporter | yes | Global Snapshot | no |
| **DB2_0741c_IntCommits_db** | | | | | | | | | | |
| Internal commits attempted by the database | no | c | no | - | 30 min | OVPM | OV Reporter | yes | Global Snapshot | no |
| **DB2_0871p_FailedSQL_db** | no | p | yes | Major | 30 min | - | - | yes | Global | no |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Percent failed SQL statements in the database | | | | | | | | | Snapshot | |
| **DB2_0872p_FailedSQL_ap** | | | | | | | | | | |
| Percent failed SQL statements in an application | no | p | yes | Major | 30 min | - | Ascii Report 0872 | yes | Global Snapshot | no |
| **DB2_0881c_BndPrcomp_db** | | | | | | | | | | |
| Binds precompiles in the database | no | c | yes | Warning | 30 min | - | - | yes | Global Snapshot | no |
| **DB2_0882c_BndPrcomp_ap** | | | | | | | | | | |
| Binds precompiles in an application | no | c | no | Warning | - | - | Ascii Report 0882 | no | Global Snapshot | no |

# Area: Table Activity

| DB2 SPI Metric | Delta | Type | Alarming | Severity | Interval | Graph | Reports | Monitoring Enabled | Applicable for DPF | Instructions available |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0044c_PgReorg_tb** | | | | | | | | | | |
| Page reorganisations in a table in the monitoring interval | yes | c | yes | Minor | 60 min | - | - | yes | Global Snapshot | yes |

# Area: Tablespace

| DB2 SPI Metric | Delta | Type | Alarming | Severity | Interval | Graph | Reports | Monitoring Enabled | Applicable for DPF | Instructions available |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0933p_FreeTblSpc_ts** | | | | | | | | | | |
| Percent free space in a particular tablespace | no | p | yes | Major | 30 min | - | OV Reporter, OVPI, ASCII Report 0933 | yes | per Partition | no |
| **DB2_0943g_TblSpcSize_ts** | | | | | | | | | | |
| Size of a particular table space | no | g | no | - | 30 min | - | OVPI | yes | per Partition | no |
| **DB2_0953i_iTblSpcStt_ts** | | | | | | | | | | |
| State for a particular table space | no | i | yes | Major | 30 min | - | - | yes | per Partition | no |
| **DB2_0963p_TblSpcgrwth_ts** | | | | | | | | | | |
| Saves the growth rate of a particular table space within the monitoring interval | yes | p | no | - | 30 min | - | OVPI | yes | per Partition | no |

# Area: Transaction Logging

| DB2 SPI Metric | Delta | Type | Alarming | Severity | Interval | Graph | Reports | Monitoring Enabled | Applicable for DPF | Instructions available |
|---|---|---|---|---|---|---|---|---|---|---|
| **DB2_0391w_MaxSecLogSpcU_db**<br>Maximum secondary total space used (in MB) in the database | no | w | yes | Minor | 10 min | OVPM | Ascii Report 0391 | yes | Global Snapshot | yes |
| **DB2_0401w_MaxTotLogSpcU_db**<br>Maximum primary total space used (in MB) in the database | no | w | yes | Minor | 10 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0411g_SecLogAlloc_db**<br>Secondary logs allocated in the database | no | g | yes | Minor | 10 min | OVPM | - | yes | Global Snapshot | yes |
| **DB2_0421p_SecLogRemain_db**<br>Secondary logs remaining to be allocated in the database | no | p | yes | Minor | 10 min | OVPM | Ascii Report 0421 | yes | Global Snapshot | yes |
| **DB2_0811c_LogPgsRd_db**<br>Log pages read in the database | no | c | no | - | - | - | - | no | Global Snapshot | no |
| **DB2_0821c_LogPgsWrt_db**<br>Growth rate of Log pages written in the database in the monitoring interval | no | c | no | - | - | - | - | no | Global Snapshot | no |
| **DB2_0831w_MaxPriLogSpcU_db**<br>Percentage of the primary log space used per database in the monitoring interval | yes | w | yes | Minor | 10 min | OVPM | - | yes | Global Snapshot | no |
| **DB2_0841g_PriLogAlloc_db**<br>Primary logs allocated | no | g | yes | Major | 10 min | OVPM | - | yes | Global Snapshot | no |
| **DB2_0851p_LogSpcUsed_db**<br>Percent log space used by the database | no | p | yes | Major | 10 min | OVPM | - | yes | Global Snapshot | no |
| **DB2_0861p_LogSpcAvail_db**<br>Percent log space available in the database | no | p | yes | Major | 10 min | OVPM | - | yes | Global Snapshot | no |

# Metric Details

Note that not all fields are given for every metric. If they are not applicable, they were left out.

Metrics which are neither used for alarming nor graphing are used for creation of reports (ASCII Report, OV Reporter or OVPI reports).

| | |
|---|---|
| **Metric Number** | The identification number assigned to the metric.<br>All DB2SPI metrics are in the numbered as xxxy where the first 3 digits (xxx) can be used to determine the metric and the last digit (y) can be used to determine the level. The levels and the corresponding numbers used to represent them are given below.<br>0: Database Manager<br>1: Database<br>2: Application<br>3: Tablespace<br>4: Table<br>5: Bufferpool<br>For example the metric Buffer Pool Hit Ratio is calculated at Database, Application, Tablespace and Bufferpool levels. Accordingly the 4 level specific metrics are numbered:<br>0031 (DB2_0031p_BufPlHit_db)<br>0032 (DB2_0032p_BufPlHit_ap)<br>0033 (DB2_0033p_BufPlHit_ts)<br>0035 (DB2_0035p_BufPlHit_bp)<br>Here the first 3 digits from the left (003) identify the metric BufPlHit (Buffer Pool Hit Ratio). The last digit changes according to the level at which data is being collected in this case 1 for database, 2 for Application, 3 for Tablespace and 5 for Bufferpool. |

| | |
|---|---|
| **Name** | The name assigned to the metric.<br>All DB2SPI metrics have the following format:<br>DB2_xxxyQ_name_LV<br>All metrics start with 'DB2_' followed by the metric number as explained above. After the metric number follows the metric identifying name in the format 'Q_name_LV' where:<br>Q is a letter used to represent what type of metric it is or how the metric has been calculated. The values for Q and what each value represents is provided below:<br>a average<br>c counter<br>g gauge<br>i information<br>p percentage<br>r ratio<br>w watermark<br>_name is the name of the metric and is as self explanatory as possible. Please note that there may be 2 or more metrics with the same name if they are being monitored at more than one database level.<br>_LV is the level at which this metric is being monitored. Values<br>_in Database Manager<br>_db Database<br>_ap Application<br>_ts Tablespace<br>_tb Table<br>_bp Bufferpool |
| **Severity** | The severity of the metric (Critical, Major, Minor, Warning, Normal) if it is monitored |
| **Description** | The description of the metric |
| **Alarming, Graphing, Reporting** | If the metric may be used for alarming, graphing and/or Reporting the appropriate character is provided.<br>(A, G, and/or R)<br>If Alarming is provided, it needs to be collected with the help of a schedule template. To see whether it is |

| | |
|---|---|
| | collected out-of-the-box, please refer to the document “DB2SPI_Metrics.pdf”.<br>If Graphing is provided, the Graph may be displayed with OVPM, arrange in categories as in field **Area**.<br>If Reporting is provided, the kind of Report is given in the field **Report Type**. |
| **Collection Interval** | How often this metric is collected and analyzed |
| **Delta** | Whether the metric is calculated based on delta values. This is usually the case where metrics or metric components are provided by the database as continuous counters. |
| **Min/Max Threshold** | Whether the OVO threshold represent a Minimum or Maximum value |
| **Threshold** | The default OVO threshold |
| **Reset (value)** | The reset value for this metric. |
| **Message Text** | Message that is displayed for each condition |
| **Instruction Text** | Problem-solving information |
| **Automatic Action Report** | If the metric is an alarming metric and has an automatic action report associated with it, then the number of this automatic action report is shown here |
| **Report Type** | If the metric is used to generate a report, the application which generates it:<br>o ASCII Report<br>o OV Report<br>o OVPI Report |
| **Area** | The logical area to which this metric belongs. This denotes also the Graph category if an OVPM graph is defined. |

## DB2_0011c_LckTO_db

| | |
|---|---|
| **Metric Number** | 0011 |
| **Name** | DB2_0011c_LckTO_db |
| **Severity** | Warning |
| **Type** | c |
| **Description** | Lock timeouts in the database in the monitoring interval |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 60 min |
| **Delta** | Yes |
| **Min / Max Threshold** | Max |
| **Threshold** | 15 |
| **Reset value** | 9 |
| **Message Text** | <$VALUE> datalock(s) on the database timed out and have been removed |
| **Instruction text** | The number of times that a request to lock an object timed-out instead of being granted.<br>This element can help you adjust the setting for the locktimeout database configuration parameter. If the number of lock time-outs becomes excessive when compared to normal operating levels, you may have an application that is holding locks for long durations. In this case, this element may indicate that you should analyze some of the other elements related to 'Locks and Deadlocks'.<br><br>You could also have too few lock time-outs if your locktimeout database configuration parameter is set too high. In this case, your applications may wait excessively to obtain a lock. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Locks and deadlocks |
| **Graph** | Number of locks / deadlocks |

## DB2_0012c_LckTO_ap

| | |
|---|---|
| **Metric Number** | 0012 |
| **Name** | DB2_0012c_LckTO_ap |
| **Severity** | Warning |
| **Type** | c |
| **Description** | Lock timeouts in an application in the monitoring interval |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | yes |
| **Min / Max Threshold** | Max |
| **Threshold** | 8 |
| **Reset value** | 5 |
| **Message Text** | <$VALUE> datalock(s) in the application <$OPTION(appl)> timed out and have been removed |
| **Instruction text** | The number of times that a request to lock an object timed-out instead of being granted.<br>This element can help you adjust the setting for the locktimeout database configuration parameter. If the number of lock time-outs becomes excessive when compared to normal operating levels, you may have an application that is holding locks for long durations. In this case, this element may indicate that you should analyze some of the other elements related to 'Locks and Deadlocks'.<br><br>You could also have too few lock time-outs if your locktimeout database configuration parameter is set too high. In this case, your applications may wait excessively to obtain a lock. |
| **Automatic Action Report** | 0012 |
| **Report Type** | ASCII |
| **Area** | Locks and deadlocks |
| **Graph** | - |

## DB2_0021c_LckWaiting_db

| | |
|---|---|
| **Metric Number** | 0021 |
| **Name** | DB2_0021c_LckWaiting_db |
| **Severity** | **-** |
| **Type** | c |
| **Description** | Lock waits in the database in the monitoring interval |
| **Alarming, Graphing, Reporting** | G |
| **Collection Interval** | 30 min |
| **Delta** | yes |
| **Min / Max Threshold** | - |
| **Threshold** | **-** |
| **Reset value** | **-** |
| **Message Text** | **-** |
| **Instruction text** | The total number of times that applications or connections waited for locks.<br>At the database level, this is the total number of times that applications have had to wait for locks within this database.<br>At the application-connection level, this is the total number of times that this connection requested a lock but had to wait because another connection was already holding a lock on the data.<br>This element may be used with Time Waited On Locks to calculate, at the database level, the average wait time for a lock. This calculation can be done at either the database or the application-connection level. If the average lock wait time is high, you should look for applications that hold many locks, or have lock escalations, with a focus on tuning your applications to improve concurrency, if appropriate. If escalations are the reason for a high average lock wait time, then the values of one or both of the<br>locklist and maxlocks configuration parameters may be too low. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Locks and deadlocks |
| **Graph** | Agents waiting |

## DB2_0022c_LckWaiting_ap

| | |
|---|---|
| **Metric Number** | 0022 |
| **Name** | DB2_0022c_LckWaiting_ap |
| **Severity** | - |
| **Type** | c |
| **Description** | Lock waits in an application in the monitoring interval |
| **Alarming, Graphing, Reporting** | R |
| **Collection Interval** | 10 |
| **Delta** | yes |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | The total number of times that applications or connections waited for locks.<br>At the database level, this is the total number of times that applications have had to wait for locks within this database. At the application-connection level, this is the total number of times that this connection requested a lock but had to wait because another connection was already holding a lock on the data.<br>This element may be used with Time Waited On Locks to calculate, at the database level, the average wait time for a lock. This calculation can be done at either the database or the application-connection level. If the average lock wait time is high, you should look for applications that hold many locks, or have lock escalations, with a focus on tuning your applications to improve concurrency, if appropriate. If escalations are the reason for a high average lock wait time, then the values of one or both of the<br>locklist and maxlocks configuration parameters may be too low. |
| **Automatic Action Report** | - |
| **Report Type** | ASCII |
| **Area** | Locks and deadlocks |

## DB2_0031p_BufPlHit_db

| | |
|---|---|
| **Metric Number** | 0031 |
| **Name** | DB2_0031p_BufPlHit_db |
| **Severity** | Minor |
| **Type** | p |
| **Description** | The buffer pool hit ratio for the database expressed as a percentage |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 10 |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 40% |
| **Reset value** | 70% |
| **Message Text** | The database Buffer Pool Hit Ratio (<$VALUE>%) below configured threshold (<$THRESHOLD>%) |
| **Instruction text** | The overall buffer pool hit ratio is calculated using the following formula:<br><br>1 - ((buffer pool data physical reads + buffer pool index physical reads)<br>/ (buffer pool data logical reads + buffer pool index logical reads))<br><br>Increasing buffer pool size will generally improve the hit ratio, but you will reach a point of diminishing return. Ideally, if you could allocate a buffer pool large enough to store Your entire database, then once the system is up and running you would Get a hit ratio of 100%. However, this is unrealistic in most cases. The significance of the hit ratio really depends on the size of Your data, and the way it is accessed. A very large database where Data is accessed evenly would have a poor hit ratio. There is little You can do with very large tables. In such case, you would focus your Attention on smaller, frequently accessed tables, and on the indices. Perhaps, assigning them to an individual buffer pools, for which you can aim for higher hit ratios. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Buffer pool |
| **Graph** | Buffer pool hit ratio |

## DB2_0032p_BufPlHit_ap

| | |
|---|---|
| **Metric Number** | 0032 |
| **Name** | DB2_0032p_BufPlHit_ap |
| **Severity** | Minor |
| **Type** | p |
| **Description** | The buffer pool hit ratio for an application expressed as a percentage |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 40% |
| **Reset value** | 70% |
| **Message Text** | The Buffer Pool Hit Ratio (<$VALUE>%) below configured threshold (<$THRESHOLD>%) for application <$OPTION(add)> |
| **Instruction text** | The overall buffer pool hit ratio is calculated using the following formula:<br><br>1 - ((buffer pool data physical reads + buffer pool index physical reads)<br>/ (buffer pool data logical reads + buffer pool index logical reads))<br><br>Increasing buffer pool size will generally improve the hit ratio, but you will reach a point of diminishing return. Ideally, if you could allocate a buffer pool large enough to store Your entire database, then once the system is up and running you would Get a hit ratio of 100%. However, this is unrealistic in most cases. The significance of the hit ratio really depends on the size of Your data, and the way it is accessed. A very large database where Data is accessed evenly would have a poor hit ratio. There is little You can do with very large tables. In such case, you would focus your Attention on smaller, frequently accessed tables, and on the indices. Perhaps, assigning them to an individual buffer pools, for which you can aim for higher hit ratios. |
| **Automatic Action Report** | 0032 |
| **Report Type** | ASCII |
| **Area** | Buffer pool |

## DB2_0033p_BufPlHit_ts

| | |
|---|---|
| **Metric Number** | 0033 |
| **Name** | DB2_0033p_BufPlHit_ts |
| **Severity** | Minor |
| **Type** | p |
| **Description** | The buffer pool hit ratio for the tablespace expressed as a percentage |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 40% |
| **Reset value** | 70% |
| **Message Text** | The Buffer Pool Hit Ratio (<$VALUE>%) below configured threshold (<$THRESHOLD>%) for tablespace <$OPTION(add)> |
| **Instruction text** | The overall buffer pool hit ratio is calculated using the following formula:<br><br>1 - ((buffer pool data physical reads + buffer pool index physical reads)<br>/ (buffer pool data logical reads + buffer pool index logical reads))<br><br>Increasing buffer pool size will generally improve the hit ratio, but you will reach a point of diminishing return. Ideally, if you could allocate a buffer pool large enough to store Your entire database, then once the system is up and running you would Get a hit ratio of 100%. However, this is unrealistic in most cases. The significance of the hit ratio really depends on the size of Your data, and the way it is accessed. A very large database where Data is accessed evenly would have a poor hit ratio. There is little You can do with very large tables. In such case, you would focus your Attention on smaller, frequently accessed tables, and on the indices. Perhaps, assigning them to an individual buffer pools, for which you can aim for higher hit ratios. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Buffer pool |

## DB2_0035p_BufPlHit_bp

| | |
|---|---|
| **Metric Number** | 0035 |
| **Name** | DB2_0035p_BufPlHit_bp |
| **Severity** | Minor |
| **Type** | p |
| **Description** | The buffer pool hit ratio for a particular buffer pool expressed as a percentage |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | 30 min |
| **Delta** | No |
| **Min / Max Threshold** | Min |
| **Threshold** | 60% |
| **Reset value** | 80% |
| **Message Text** | The Buffer Pool Hit Ratio (<$VALUE>%) below configured threshold (<$THRESHOLD>%) for bufferpool <$OPTION(add)> |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OVPI |
| **Area** | Buffer pool |

## DB2_0044c_PgReorg_tb

| | |
|---|---|
| **Metric Number** | 0044 |
| **Name** | DB2_0044c_PgReorg_tb |
| **Severity** | Minor |
| **Type** | c |
| **Description** | Page reorganizations in a table in the monitoring interval |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | 60 min |
| **Delta** | yes |
| **Min / Max Threshold** | Max |
| **Threshold** | 10 |
| **Reset value** | 6 |
| **Message Text** | The number of Page Reorganizations (<$VALUE>%) exceeds configured threshold (<$THRESHOLD>%) |
| **Instruction text** | The number of page reorganizations executed for a table.<br>Too many page reorganizations can result in less than optimal insert performance. You can use the REORG TABLE utility to reorganize a table and eliminate fragmentation. You can also use the APPEND parameter for the ALTER TABLE statement to indicate that all inserts are appended at the end of a table and so avoid page reorgs.<br>In situations where update to rows causes the row length to increase, the page may have enough space to accommodate the new row, but a page reorg may be required to defragment that space.<br>Or if the page does not have enough space for the new larger row, an overflow record is created being created causing Accesses to Overflowed Records during reads.<br>You can avoid both situations by using fixed length columns instead of varying length columns. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Table activity |

## DB2_0051c_PkgCacheOvfl_db

| | |
|---|---|
| **Metric Number** | 0051 |
| **Name** | DB2_0051c_PkgCacheOvfl_db |
| **Severity** | Minor |
| **Type** | C |
| **Description** | Package cache overflows in the database in the monitoring interval |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | 60 min |
| **Delta** | Yes |
| **Min / Max Threshold** | Max |
| **Threshold** | 18 |
| **Reset value** | 12 |
| **Message Text** | A package cache overflow has occurred |
| **Instruction text** | The number of times that the package cache overflowed the bounds of its allocated memory.<br>Use this element with pkg_cache_size_top to determine whether the size of the package cache needs to be increased to avoid overflowing.<br>Overflows of the package cache can cause unnecessary lock escalations, resulting in loss of concurrency, or out of memory errors from the other heaps allocated out of the database shared memory, as well as performance degradation. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Package cache |

## DB2_0061p_SortOvfl_db

| | |
|---|---|
| **Metric Number** | 0061 |
| **Name** | DB2_0061p_SortOvfl_db |
| **Severity** | Minor |
| **Type** | p |
| **Description** | Percent sort overflows in the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 3% |
| **Reset value** | 2% |
| **Message Text** | Sort overflow / total overflow (<$VALUE>%) exceeds configured threshold (<$THRESHOLD>%) for database |
| **Instruction text** | The percentage of sorts that ran out of sort heap and may have required disk space for temporary storage.<br>If this percentage is high, you may want adjust the database configuration by increasing the value of *sortheap*.<br><br>When a sort overflows, additional overhead will be incurred because the sort will require a merge phase and can potentially require more I/O, if data needs to be written to disk.<br>This element provides information for all applications accessing one database**.** |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Sorts |
| **Graph** | Conspicuous sorts |

## DB2_0062p_SortOvfl_ap

| | |
|---|---|
| **Metric Number** | 0062 |
| **Name** | DB2_0062p_SortOvfl_ap |
| **Severity** | Minor |
| **Type** | p |
| **Description** | Percent sort overflows for an application |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 3% |
| **Reset value** | 2% |
| **Message Text** | Sort overflow / total overflow (<$VALUE>%) exceeds configured threshold (<$THRESHOLD>%) for application <$OPTION(add)> |
| **Instruction text** | The percentage of sorts that ran out of sort heap and may have required disk space for temporary storage.<br>If this percentage is high, you may want adjust the database configuration by increasing the value of sortheap.<br><br>When a sort overflows, additional overhead will be incurred because the sort will require a merge phase and can potentially require more I/O, if data needs to be written to disk.<br>This element provides information for one application. |
| **Automatic Action Report** | 0062 |
| **Report Type** | Both |
| **Area** | Sorts |

## DB2_0071g_ApplConnCur_db

| | |
|---|---|
| **Metric Number** | 0071 |
| **Name** | DB2_0071g_ApplConnCur_db |
| **Severity** | Warning |
| **Type** | g |
| **Description** | Applications connected currently in the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 36 |
| **Reset value** | 30 |
| **Message Text** | High application load (<$VALUE>) on the DB2 server |
| **Instruction text** | Indicates the number of applications that are currently connected to the database.<br>You may use this element to help you understand the level of activity within a database and the amount of system resource being used. It can help you adjust the setting of the maxappls and max_coordagents configuration parameters, which are described in the IBM DB2 Administration Guide.<br>For example, its value is always the same as maxappls, you may want to increase the value of maxappls. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Agents and applications |
| **Graph** | Applications |

## DB2_0081p_InxHit_db

| | |
|---|---|
| **Metric Number** | 0081 |
| **Name** | DB2_0081p_InxHit_db |
| **Severity** | Minor |
| **Type** | p |
| **Description** | Indicates the percentage of read requests for index pages that have gone through the buffer pool. |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 10 Minutes |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 40% |
| **Reset value** | 60% |
| **Message Text** | Index read page hit ratio (<$VALUE>%) below configured threshold (<$THRESHOLD>%) for the database |
| **Instruction text** | The index page hit ratio for the buffer pool using one of the following:<br><br>1 - (buffer pool index physical reads / buffer pool index logical reads)<br><br>If the hit ratio is low, increasing the number of buffer pool pages may improve performance.<br>See the Administration Guide provided by IBM for more information about buffer pool size. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Buffer Pool |
| **Graph** | Buffer pool hit ratio |

## DB2_0082p_InxHit_ap

| | |
|---|---|
| **Metric Number** | 0082 |
| **Name** | DB2_0082p_InxHit_ap |
| **Severity** | Minor |
| **Type** | P |
| **Description** | Indicates the percentage of read requests for index pages that have gone through the buffer pool. |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 40% |
| **Reset value** | 60% |
| **Message Text** | Index read page hit ratio (<$VALUE>%) below configured threshold (<$THRESHOLD>%) for the application <$OPTION(add)> |
| **Instruction text** | The index page hit ratio for the buffer pool using one of the following:<br><br>1 - (buffer pool index physical reads / buffer pool index logical reads)<br><br>If the hit ratio is low, increasing the number of buffer pool pages may improve performance.<br>See the Administration Guide provided by IBM for more information about buffer pool size. |
| **Automatic Action Report** | 0082 |
| **Report Type** | ASCII |
| **Area** | Buffer Pool |

## DB2_0083p_InxHit_ts

| | |
|---|---|
| **Metric Number** | 0083 |
| **Name** | DB2_0083p_InxHit_ts |
| **Severity** | Minor |
| **Type** | p |
| **Description** | Indicates the percentage of read requests for index pages that have gone through the buffer pool. |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 40% |
| **Reset value** | 60% |
| **Message Text** | Index read page hit ratio (<$VALUE>%) below configured threshold (<$THRESHOLD>%) for table space <$OPTION(add)> |
| **Instruction text** | The index page hit ratio for the buffer pool using one of the following:<br><br>1 - (buffer pool index physical reads / buffer pool index logical reads)<br><br>If the hit ratio is low, increasing the number of buffer pool pages may improve performance.<br>See the Administration Guide provided by IBM for more information about buffer pool size. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Buffer pool |

## DB2_0085p_InxHit_bp

| | |
|---|---|
| **Metric Number** | 0085 |
| **Name** | DB2_0085p_InxHit_bp |
| **Severity** | Minor |
| **Type** | p |
| **Description** | Indicates the percentage of read requests for index pages that have gone through a particular buffer pool – Index Hit Ratio. |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 60% |
| **Reset value** | 80% |
| **Message Text** | Index read page hit ratio (<$VALUE>%) below configured threshold (<$THRESHOLD>%) for bufferpool <$OPTION(add)> |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OVPI |
| **Area** | Buffer pool |

## DB2_0091a_DirRdTime_db

| | |
|---|---|
| **Metric Number** | 0091 |
| **Name** | DB2_0091a_DirRdTime_db |
| **Severity** | Major |
| **Type** | a |
| **Description** | Average direct read time for the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 500 ms |
| **Reset value** | 300 ms |
| **Message Text** | Direct read time (<$VALUE>) from DB2 database exceeds threshold |
| **Instruction text** | The average elapsed time (in milliseconds) per sector required to perform the direct reads. Formula is:<br>direct read time / direct reads from database<br>A high average time may indicate an I/O conflict. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Direct I/O |
| **Graph** | Average direct read / write time for an application |

## DB2_0092a_DirRdTime_ap

| | |
|---|---|
| **Metric Number** | 0092 |
| **Name** | DB2_0092a_DirRdTime_ap |
| **Severity** | Major |
| **Type** | a |
| **Description** | Average direct read time for all applications connected to the database |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 500 ms |
| **Reset value** | 300 ms |
| **Message Text** | Direct read time (<$VALUE>) from DB2 database exceeds threshold for application <$OPTION(add)> |
| **Instruction text** | The average elapsed time (milliseconds) per sector required to perform the direct reads. Formula is:<br>direct read time / direct reads from all applications<br>A high average time may indicate an I/O conflict. |
| **Automatic Action Report** | 0092 |
| **Report Type** | ASCII |
| **Area** | Direct I/O |

## DB2_0093a_DirRdTime_ts

| | |
|---|---|
| **Metric Number** | 0093 |
| **Name** | DB2_0093a_DirRdTime_ts |
| **Severity** | Major |
| **Type** | a |
| **Description** | Average direct read time for a table space |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 500 ms |
| **Reset value** | 300 ms |
| **Message Text** | Direct read time (<$VALUE>) from DB2 database exceeds threshold for tablespace <$OPTION(add)> |
| **Instruction text** | The average elapsed time (in milliseconds) per sector required to perform the direct reads. Formula is:<br>direct read time / direct reads from database<br>A high average time may indicate an I/O conflict. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Direct I/O |

## DB2_0101a_DirWrtTime_db

| | |
|---|---|
| **Metric Number** | 0101 |
| **Name** | DB2_0101a_DirWrtTime_db |
| **Severity** | Major |
| **Type** | a |
| **Description** | Average direct write time for the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 500 ms |
| **Reset value** | 300 ms |
| **Message Text** | Direct write time (<$VALUE>) to database exceeds threshold |
| **Instruction text** | The average elapsed time (in milliseconds) per sector required to perform the direct writes.<br>direct write time / direct writes from database<br>A high average time may indicate an I/O conflict. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Direct I/O |
| **Graph** | Average direct read / write time for an application |

## DB2_0102a_DirWrtTime_ap

| | |
|---|---|
| **Metric Number** | 0102 |
| **Name** | DB2_0102a_DirWrtTime_ap |
| **Severity** | Major |
| **Type** | a |
| **Description** | Average direct write time for an application |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 500 ms |
| **Reset value** | 300 ms |
| **Message Text** | Direct write time (<$VALUE>) to application <$OPTION(add)> exceeds threshold |
| **Instruction text** | The average elapsed time (in milliseconds) per sector required to perform the direct writes.<br><br>direct write time / direct writes from database<br><br>A high average time may indicate an I/O conflict. |
| **Automatic Action Report** | 0102 |
| **Report Type** | Both |
| **Area** | Direct I/O |

## DB2_0103a_DirWrtTime_ts

| | |
|---|---|
| **Metric Number** | 0103 |
| **Name** | DB2_0103a_DirWrtTime_ts |
| **Severity** | Major |
| **Type** | a |
| **Description** | Average direct write time for a tablespace |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 500ms |
| **Reset value** | 300ms |
| **Message Text** | Direct write time (<$VALUE>) to tablespace <$OPTION(add)> exceeds threshold |
| **Instruction text** | The average elapsed time (in milliseconds) per sector required to perform the direct writes.<br><br>direct write time / direct writes from database<br><br>A high average time may indicate an I/O conflict. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Direct I/O |

## DB2_0111p_CatCacheHit_db

| | |
|---|---|
| **Metric Number** | 0111 |
| **Name** | DB2_0111p_CatCacheHit_db |
| **Severity** | Minor |
| **Type** | p |
| **Description** | The catalog cache hit ratio for the database expressed as a percentage |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 40% |
| **Reset value** | 45% |
| **Message Text** | Catalog cache hit ratio (<$VALUE>%) below configured threshold (<$THRESHOLD>%) for database |
| **Instruction text** | The ratio indicates how well the catalog cache is avoiding catalog accesses. If the ratio is high (more than 0.8), then the cache is performing well. A smaller ratio might suggest that the catalogcache_sz should be increased. You should expect a large ratio immediately following the first connection to the database. The execution of Data Definition Language (DDL) SQL statements involving a table, view, or alias will evict the table descriptor Information for that object from the catalog cache causing it to be re-inserted on the next reference. Therefore, the heavy use of DDLs may also increase the ratio. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Catalog cache |

## DB2_0112p_CatCacheHit_ap

| | |
|---|---|
| **Metric Number** | 0112 |
| **Name** | DB2_0112p_CatCacheHit_ap |
| **Severity** | Minor |
| **Type** | p |
| **Description** | The catalog cache hit ratio for an application expressed as a percentage |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 40% |
| **Reset value** | 60% |
| **Message Text** | Catalog cache hit ratio (<$VALUE>%) below configured threshold (<$THRESHOLD>%) for application <$OPTION(add)>> |
| **Instruction text** | The ratio indicates how well the catalog cache is avoiding catalog accesses. If the ratio is high (more than 0.8), then the cache is performing well. A smaller ratio might suggest that the catalogcache_sz should be increased. You should expect a large ratio immediately following the first connection to the database. The execution of Data Definition Language (DDL) SQL statements involving a table, view, or alias will evict the table descriptor.<br>Information for that object from the catalog cache causing it to be re-inserted on the next reference. Therefore, the heavy use of DDLs may also increase the ratio. |
| **Automatic Action Report** | 0112 |
| **Report Type** | ASCII |
| **Area** | Catalog cache |

## DB2_0120p_PipeSortAccep_in

| | |
|---|---|
| **Metric Number** | 0120 |
| **Name** | DB2_0120p_PipeSortAccep_in |
| **Severity** | Major |
| **Type** | p |
| **Description** | Percent piped sorts accepted in the database manager |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 30 Minutes |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 10% |
| **Reset value** | 15% |
| **Message Text** | Very low percentage of accepted piped sorts (<$VALUE>) on the DB2 server |
| **Instruction text** | Calculation: Pipe sorts requested / Pipe sorts accepted<br>The percentage of piped sorts that have been accepted. Each active sort on the system allocates memory, which may result in sorting taking up too much of the available system memory. When the number of accepted piped sorts is low compared to the number requested, you can improve sort performance by adjusting one or both of the following configuration parameters:<br>(1) sortheap<br>(2) sheapthres<br>If piped sorts are being rejected, you might consider decreasing your sort heap or increasing your sort heap threshold. You should be aware of the possible implications of either of these options. If you increase the sort heap threshold, then there is the possibility that more memory will remain allocated for sorting. This could cause the paging of memory to disk. If you decrease the sort heap, you might require an extra merge phase that could slow down the sort. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Sorts |
| **Graph** | Conspicuous sorts |

## DB2_0130c_PostThrSort_in

| | |
|---|---|
| **Metric Number** | 0130 |
| **Name** | DB2_0130c_PostThrSort_in |
| **Severity** | Minor |
| **Type** | c |
| **Description** | Post threshold sorts in the instance |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 3 |
| **Reset value** | 2 |
| **Message Text** | Number of post threshold sorts (<$VALUE>) exceeds alert limit (<$THRESHOLD>) |
| **Instruction text** | The number of sorts that have requested heaps after the sort heap threshold has been reached.<br>Under normal conditions, the database manager will allocate sort heap using the value specified by the sortheap configuration parameter. If the amount of memory allocated to sort heaps exceeds the sort heap threshold (sheapthres configuration parameter), the database manager will allocate sort heap using a value less than that specified by the sortheap configuration parameter. Each active sort on the system allocates memory, which may result in sorting taking up too much of the system memory available. Sorts that start after the sort heap threshold has been reached may not receive an optimum amount of memory to execute, but, as a result, the entire system may benefit. By modifying the sort heap threshold and sort heap size configuration parameters, the performance of sort operations and/or the overall system can be improved.<br>If this element's value is high, you can:<br>(1) Increase the sort heap threshold (sheapthres) or,<br>(2) Adjust applications to use fewer or smaller sorts via SQL query changes. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Sorts |
| **Graph** | Conspicuous sorts |

## DB2_0141a_LckWaitTime_db

| | |
|---|---|
| **Metric Number** | 0141 |
| **Name** | DB2_0141a_LckWaitTime_db |
| **Severity** | Major |
| **Type** | a |
| **Description** | Average lock wait time for the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 10ms |
| **Reset value** | 8ms |
| **Message Text** | Average lock wait time (<$VALUE>) from DB2 database exceeds threshold |
| **Instruction text** | The average elapsed time waited for a lock.<br>At the database level, this is the average amount of elapsed time that all applications were waiting for a lock within this database.<br>Calculation: Time database waited on lock / Lock Waits<br>When using data elements providing elapsed times, you should consider elapsed times are affected by system load, so the more processes you have running, the higher this elapsed time value.<br>If the average lock wait time is high, you should look for applications that hold many locks, or have lock escalations, with a focus on tuning your applications to improve concurrency, if appropriate.<br>If escalations are the reason for a high average lock wait time, then the values of one or both of the locklist and maxlocks configuration parameters may be too low. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Locks and deadlocks |

## DB2_0142a_LckWaitTime_ap

| | |
|---|---|
| **Metric Number** | 0142 |
| **Name** | DB2_0142a_LckWaitTime_ap |
| **Severity** | Major |
| **Type** | a |
| **Description** | Average lock wait time for an application |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 10ms |
| **Reset value** | 8 |
| **Message Text** | Average lock wait time (<$VALUE>) for application <$OPTION(add)> exceeds threshold |
| **Instruction text** | The average elapsed time waited for a lock.<br>At the database level, this is the average amount of elapsed time that all applications were waiting for a lock within this database.<br>When using data elements providing elapsed times, you should consider elapsed times are affected by system load, so the more processes you have running, the higher this elapsed time value.<br>If the average lock wait time is high, you should look for applications that hold many locks, or have lock escalations, with a focus on tuning your applications to improve concurrency, if appropriate.<br>If escalations are the reason for a high average lock wait time, then the values of one or both of the locklist and maxlocks configuration parameters may be too low. |
| **Automatic Action Report** | 0142 |
| **Report Type** | ASCII |
| **Area** | Locks and deadlocks |

## DB2_0151p_ApplWaitOnLck_db

| | |
|---|---|
| **Metric Number** | 0151 |
| **Name** | DB2_0151p_ApplWaitOnLck_db |
| **Severity** | Major |
| **Type** | p |
| **Description** | Percent applications in the database that are waiting on locks |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 85% |
| **Reset value** | 75 |
| **Message Text** | High percentage of applications waiting for locks (<$VALUE>%) exceeds configured threshold (<$THRESHOLD>%) |
| **Instruction text** | Indicates the percentage of agents waiting on a lock.<br>This element indicates the percentage of applications currently waiting on locks. If this number is high, the applications may have concurrency problems, and you should identify applications that are holding locks or exclusive locks for long periods of time. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Agents and applications |

## DB2_0161c_IntDlckRollb_db

| | |
|---|---|
| **Metric Number** | 0161 |
| **Name** | DB2_0161c_IntDlckRollb_db |
| **Severity** | Minor |
| **Type** | c |
| **Description** | Internal deadlocked rollbacks in the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 2 |
| **Reset value** | 1.4 |
| **Message Text** | Number of internal deadlock rollbacks (<$VALUE>) exceeds alert limit |
| **Instruction text** | The total number of forced rollbacks initiated by the database manager due to a deadlock. A rollback is performed on the current unit of work in an application selected by the database manager to resolve the deadlock.<br>This element shows the number of deadlocks that have been broken and can be used as an indicator of concurrency problems.<br>It is important, since internal rollbacks due to deadlocks lower the throughput of the database.<br>This value is included in the value given by Internal Rollbacks. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Statements |
| **Graph** | Internal Statements |

## DB2_0162c_IntDlckRollb_ap

| | |
|---|---|
| **Metric Number** | 0162 |
| **Name** | DB2_0162c_IntDlckRollb_ap |
| **Severity** | Minor |
| **Type** | c |
| **Description** | Internal deadlocked rollbacks in an application |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 3 |
| **Reset value** | 2.1 |
| **Message Text** | Number of internal deadlock rollbacks (<$VALUE>) exceeds alert limit for application <$OPTION(add)> |
| **Instruction text** | The total number of forced rollbacks initiated by the database manager due to a deadlock. A rollback is performed on the current unit of work in an application selected by the database manager to resolve the deadlock.<br>This element shows the number of deadlocks that have been broken and can be used as an indicator of concurrency problems.<br>It is important, since internal rollbacks due to deadlocks lower the throughput of the database.<br>This value is included in the value given by Internal Rollbacks. |
| **Automatic Action Report** | 0162 |
| **Report Type** | ASCII Report |
| **Area** | Statements |

## DB2_0172p_OpnLocCursBlk_ap

| | |
|---|---|
| **Metric Number** | 0172 |
| **Name** | DB2_0172p_OpnLocCursBlk_ap |
| **Severity** | Minor |
| **Type** | p |
| **Description** | Percent open local cursors with blocking |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 20% |
| **Reset value** | 30% |
| **Message Text** | Percentage of local open cursors (<$VALUE>) is below limit (<$THRESHOLD>) |
| **Instruction text** | The percentage of local blocking cursors currently open for this application calculated as<br><br>Open local cursors with blocking / Open local cursors * 100<br><br>If the percentage is low, you may be able to improve performance by improving the row blocking in the application:<br>1. Check the pre-compile options for record blocking for treatment of ambiguous cursors<br>2. Redefine cursors to allow for blocking (for example, if possible, specify FOR FETCH ONLY on your cursors).<br>Rejected Block Cursor Requests and Accepted Block Cursor Requests in the snapshot provide additional information that may help you tune your configuration parameters to improve row blocking in your application. |
| **Automatic Action Report** | 0172 |
| **Report Type** | ASCII Report |
| **Area** | SQL Cursor |

## DB2_0180g_SortHeapAlloc_in

| | |
|---|---|
| **Metric Number** | 0180 |
| **Name** | DB2_0180g_SortHeapAlloc_in |
| **Severity** | Warning |
| **Type** | g |
| **Description** | Sort heap allocated in the database manager |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | 30min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 18000 |
| **Reset value** | 15000 |
| **Message Text** | Number of memory pages allocated for the sort heap (<$VALUE>) on the DB2 server exceeds limit |
| **Instruction text** | The total number of allocated pages of sort heap space for all sorts at the level chosen and at the time the snapshot was taken.<br>The amount of memory allocated for each sort may be some or all of the available sort heap size. Sort heap size is the amount of memory available for each sort as defined in the database configuration parameter sortheap. It is possible for a single application to have concurrent sorts active. For example, in some cases a SELECT statement with a subquery can cause concurrent sorts.<br>Information may be collected at two levels:<br>(1) At the database manager level, it represents the sum of sort heap space allocated for all sorts in all active databases in the database manager<br>(2) At the database level, it represents the sum of the sort heap space allocated for all sorts in a database. Normal memory estimates do not include sort heap space.<br>If excessive sorting is occurring, the extra memory used for the sort heap should be added to the base memory requirements for running the database manager. Generally, the larger the sort heap, the more efficient the sort. Appropriate use of indexes can reduce the amount of sorting required. You may use the information returned at the database manager level to help you tune the sheapthres configuration parameter. If the element value is greater than or equal to sheapthres, it means that the sorts are not getting the full sort heap as defined by the sortheap parameter. |
| **Automatic Action Report** | - |

| | |
|---|---|
| **Report Type** | - |
| **Area** | Sorts |

## DB2_0181g_SortHeapAlloc_db

| | |
|---|---|
| **Metric Number** | 0181 |
| **Name** | DB2_0181g_SortHeapAlloc_db |
| **Severity** | - |
| **Type** | g |
| **Description** | Sort heap allocated in the database |
| **Alarming, Graphing, Reporting** | G, R |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | |
| **Instruction text** | The total number of allocated pages of sort heap space for all sorts at the level chosen and at the time the snapshot was taken.<br>The amount of memory allocated for each sort may be some or all of the available sort heap size. Sort heap size is the amount of memory available for each sort as defined in the database configuration parameter sortheap. It is possible for a single application to have concurrent sorts active. For example, in some cases a SELECT statement with a subquery can cause concurrent sorts.<br>Information may be collected at two levels:<br>(1) At the database manager level, it represents the sum of sort heap space allocated for all sorts in all active databases in the database manager<br>(2) At the database level, it represents the sum of the sort heap space allocated for all sorts in a database. Normal memory estimates do not include sort heap space.<br>If excessive sorting is occurring, the extra memory used for the sort heap should be added to the base memory requirements for running the database manager. Generally, the larger the sort heap, the more efficient the sort. Appropriate use of indexes can reduce the amount of sorting required. You may use the information returned at the database manager level to help you tune the sheapthres configuration parameter. If the element value is greater than or equal to sheapthres, it means that the sorts are not getting the full sort heap as defined by the sortheap parameter. |
| **Automatic Action Report** | - |
| **Report Type** | ASCII Report |

| | |
|---|---|
| **Area** | Sorts |
| **Graph** | Sort heap |

## DB2_0191c_LckEscal_db

| | |
|---|---|
| **Metric Number** | 0191 |
| **Name** | DB2_0191c_LckEscal_db |
| **Severity** | Minor |
| **Type** | C |
| **Description** | Lock escalations in the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 60 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 2 |
| **Reset value** | 1.5 |
| **Message Text** | Number of lock escalations (<$VALUE>) on the DB2 server exceeds limit |
| **Instruction text** | The number of times that locks have been escalated from several row locks to a table lock.<br>A lock is escalated when the total number of locks held by an application reaches the maximum amount of lock list space available to the application, or the lock list space consumed by all applications is approaching the total lock list space.<br>The amount of lock list space available is determined by the maxlocks and locklist configuration parameters. When an application reaches the maximum number of locks allowed and there are no more locks to escalate, it will then use space in the lock list allocated for other applications. When the entire lock list is full, an error occurs. This data item includes a count of all lock escalations, including exclusive lock escalations.<br>There are several possible causes for excessive lock escalations:<br>(1) The lock list size (locklist) may be too small for the number of concurrent applications<br>(2) The percent of the lock list usable by each application (maxlocks) may be too small<br>(3) One or more applications may be using an excessive number of locks.<br>To resolve these problems, you may be able to:<br>(1) Increase the locklist configuration parameter value.<br>(2) Increase the maxlocks configuration parameter value.<br>(3) Identify the applications with large numbers of locks or those that are holding too much of the lock list, using the following formula:<br>(((locks held * 36) / (locklist * 4096)) * 100)<br>and comparing the value to maxlocks. |

| | |
|---|---|
| | These applications can also cause lock escalations in other applications by using too large a portion of the lock list. These applications may need to resort to using table locks instead of row locks, although table locks may cause an increase in 'Lock Waits' and 'Time Waited On Locks'. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Locks and deadlocks |
| **Graph** | Escalation |

## DB2_0192c_LckEscal_ap

| | |
|---|---|
| **Metric Number** | 0192 |
| **Name** | DB2_0192c_LckEscal_ap |
| **Severity** | Minor |
| **Type** | c |
| **Description** | Lock escalations in an application |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 3 |
| **Reset value** | 2.1 |
| **Message Text** | Number of lock escalations (<$VALUE>) for application <$OPTION(add)> exceeds limit |
| **Instruction text** | The number of times that locks have been escalated from several row locks to a table lock.<br>A lock is escalated when the total number of locks held by an application reaches the maximum amount of lock list space available to the application, or the lock list space consumed by all applications is approaching the total lock list space.<br>The amount of lock list space available is determined by the maxlocks and locklist configuration parameters. When an application reaches the maximum number of locks allowed and there are no more locks to escalate, it will then use space in the lock list allocated for other applications. When the entire lock list is full, an error occurs. This data item includes a count of all lock escalations, including exclusive lock escalations.<br>There are several possible causes for excessive lock escalations:<br>(1) The lock list size (locklist) may be too small for the number of concurrent applications<br>(2) The percent of the lock list usable by each application (maxlocks) may be too small<br>(3) One or more applications may be using an excessive number of locks.<br>To resolve these problems, you may be able to:<br>(1) Increase the locklist configuration parameter value.<br>(2) Increase the maxlocks configuration parameter value.<br>(3) Identify the applications with large numbers of locks or those that are holding too much of the lock list, using the following formula:<br>(((locks held * 36) / (locklist * 4096)) * 100)<br>and comparing the value to maxlocks. |

| | |
|---|---|
| | These applications can also cause lock escalations in other applications by using too large a portion of the lock list. These applications may need to resort to using table locks instead of row locks, although table locks may cause an increase in 'Lock Waits' and 'Time Waited On Locks'. |
| **Automatic Action Report** | 0192 |
| **Report Type** | ASCII Report |
| **Area** | Locks and deadlocks |

## DB2_0201c_ExclLckEscal_db

| | |
|---|---|
| **Metric Number** | 0201 |
| **Name** | DB2_0201c_ExclLckEscal_db |
| **Severity** | Major |
| **Type** | c |
| **Description** | Exclusive lock escalations in the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 60 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 2 |
| **Reset value** | 1.5 |
| **Message Text** | Number of exclusive lock escalations (<$VALUE>) on the DB2 server exceeds limit |
| **Instruction text** | The number of times that locks have been escalated from several row locks to one exclusive table lock, or the number of times an exclusive lock on a row caused the table lock to become an exclusive lock.<br>Other applications cannot access data held by an exclusive lock; therefore it is important to track exclusive locks since they can impact the concurrency of your data. A lock is escalated when the total number of locks held by an application reaches the maximum amount of lock list space available to the application.<br>The amount of lock list space available is determined by the locklist and maxlocks configuration parameters.<br>When an application reaches the maximum number of locks allowed and there are no more locks to escalate, it will then use space in the lock list allocated for other applications. When the entire lock list is full, an error occurs. See 'Number of Lock Escalations' for possible causes and resolutions to excessive exclusive lock escalations. An application may be using exclusive locks when share locks are sufficient. Although share locks may not reduce the total number of lock escalations share lock escalations may be preferable to exclusive lock escalations. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Locks and deadlocks |
| **Graph** | Escalation |

## DB2_0202c_ExclLckEscal_ap

| | |
|---|---|
| **Metric Number** | 0202 |
| **Name** | DB2_0202c_ExclLckEscal_ap |
| **Severity** | Major |
| **Type** | c |
| **Description** | Exclusive lock escalations in an application |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 3 |
| **Reset value** | 2.1 |
| **Message Text** | Number of exclusive lock escalations (<$VALUE>) for application <$OPTION(add)> exceeds limit |
| **Instruction text** | The number of times that locks have been escalated from several row locks to one exclusive table lock, or the number of times an exclusive lock on a row caused the table lock to become an exclusive lock.<br>Other applications cannot access data held by an exclusive lock; therefore it is important to track exclusive locks since they can impact the concurrency of your data. A lock is escalated when the total number of locks held by an application reaches the maximum amount of lock list space available to the application.<br>The amount of lock list space available is determined by the locklist and maxlocks configuration parameters.<br>When an application reaches the maximum number of locks allowed and there are no more locks to escalate, it will then use space in the lock list allocated for other applications. When the entire lock list is full, an error occurs. See 'Number of Lock Escalations' for possible causes and resolutions to excessive exclusive lock escalations. An application may be using exclusive locks when share locks are sufficient. Although share locks may not reduce the total number of lock escalations share lock escalations may be preferable to exclusive lock escalations. |
| **Automatic Action Report** | 0202 |
| **Report Type** | ASCII Report |
| **Area** | Locks and deadlocks |

## DB2_0211c_Dlck_db

| | |
|---|---|
| **Metric Number** | 0211 |
| **Name** | DB2_0211c_Dlck_db |
| **Severity** | Major |
| **Type** | c |
| **Description** | Deadlocks in the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 60 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 2 |
| **Reset value** | 1.5 |
| **Message Text** | Number of deadlocks (<$VALUE>) exceeds alert limit (<$THRESHOLD>) |
| **Instruction text** | The total number of deadlocks that have occurred.<br>This element can indicate that applications are experiencing contention problems. These problems could be caused by the following situations:<br>(1) Lock escalations are occurring for the database<br>(2) An application may be locking tables explicitly when system-generated row locks may be sufficient<br>(3) An application may be using an inappropriate isolation level when binding<br>(4) Catalog tables are locked for repeatable read<br>(5) Applications are getting the same locks in different orders, resulting in deadlock.<br>You may be able to resolve the problem by determining in which applications (or application processes) the deadlocks are occurring.<br>You may then be able to modify the application to better enable it to execute concurrently. Some applications, however, may not be capable of running concurrently. 10 deadlocks in 5 minutes is much more severe than 10 deadlocks in 5 hours. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Locks and deadlocks |

| | |
|---|---|
| **Graph** | Number of locks / deadlocks |

## DB2_0212c_Dlck_ap

| | |
|---|---|
| **Metric Number** | 0212 |
| **Name** | DB2_0212c_Dlck_ap |
| **Severity** | Minor |
| **Type** | c |
| **Description** | Deadlocks in an application |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 3 |
| **Reset value** | 2.1 |
| **Message Text** | Number of deadlocks (<$VALUE>) exceeds alert limit (<$THRESHOLD>) for application <$OPTION(add)> |
| **Instruction text** | The total number of deadlocks that have occurred.<br>This element can indicate that applications are experiencing contention problems. These problems could be caused by the following situations:<br>(1) Lock escalations are occurring for the database<br>(2) An application may be locking tables explicitly when system-generated row locks may be sufficient<br>(3) An application may be using an inappropriate isolation level when binding<br>(4) Catalog tables are locked for repeatable read<br>(5) Applications are getting the same locks in different orders, resulting in deadlock.<br>You may be able to resolve the problem by determining in which applications (or application processes) the deadlocks are occurring.<br>You may then be able to modify the application to better enable it to execute concurrently. Some applications, however, may not be capable of running concurrently. 10 deadlocks in 5 minutes are much more severe than 10 deadlocks in 5 hours. |
| **Automatic Action Report** | 0212 |
| **Report Type** | ASCII Report |
| **Area** | Locks and deadlocks |

## DB2_0221c_LckWaitTime_db

| | |
|---|---|
| **Metric Number** | 0221 |
| **Name** | DB2_0221c_LckWaitTime_db |
| **Severity** | - |
| **Type** | c |
| **Description** | Lock wait time for the database |
| **Alarming, Graphing, Reporting** | G |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | The total elapsed time waited for a lock.<br>At the database level, this is the total amount of elapsed time that all applications were waiting for a lock within this database.<br>This element may be used in conjunction with the Lock Waits monitor element to calculate the average wait time for a lock.<br>This calculation can be performed at either the database or the application-connection level. When using data elements providing elapsed times, you should consider:<br>(1) Elapsed times are affected by system load, so the more processes you have running, the higher this elapsed time value.<br>(2) To calculate this data element at the database level, the database system monitor sums the application-level times. This can result in double counting elapsed times at a database level, since more than one application process can be running at the same time. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Locks and deadlocks |
| **Graph** | Wait time |

## DB2_0222c_LckWaitTime_ap

| | |
|---|---|
| **Metric Number** | 0222 |
| **Name** | DB2_0222c_LckWaitTime_ap |
| **Severity** | - |
| **Type** | c |
| **Description** | Lock wait time for an application |
| **Alarming, Graphing, Reporting** | R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | The total elapsed time waited for a lock.<br>At the database level, this is the total amount of elapsed time that all applications were waiting for a lock within this database.<br>This element may be used in conjunction with the Lock Waits monitor element to calculate the average wait time for a lock.<br>This calculation can be performed at either the database or the application-connection level. When using data elements providing elapsed times, you should consider:<br>(1) Elapsed times are affected by system load, so the more processes you have running, the higher this elapsed time value.<br>(2) To calculate this data element at the database level, the database system monitor sums the application-level times. This can result in double counting elapsed times at a database level, since more than one application process can be running at the same time. |
| **Automatic Action Report** | - |
| **Report Type** | ASCII Report |
| **Area** | Locks and deadlocks |

## DB2_0232w_MaxAssocAgt_ap

| | |
|---|---|
| **Metric Number** | 0232 |
| **Name** | DB2_0232w_MaxAssocAgt_ap |
| **Severity** | Major |
| **Type** | w |
| **Description** | Maximum number of associated agents |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 180 |
| **Reset value** | 150 |
| **Message Text** | Number of associated agents (<$VALUE>) from application <$OPTION(add)> exceeds threshold |
| **Instruction text** | The maximum number of subagents associated with this application.<br>If the peak number of subagents is close to the num_poolagents configuration parameter, this might indicate too high a workload for this node. |
| **Automatic Action Report** | 0232 |
| **Report Type** | ASCII Report |
| **Area** | Agents and applications |

## DB2_0240c_AgtStolen_in

| | |
|---|---|
| **Metric Number** | 0240 |
| **Name** | DB2_0240c_AgtStolen_in |
| **Severity** | Minor |
| **Type** | c |
| **Description** | Stolen agents in the instance |
| **Alarming, Graphing, Reporting** | G |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 80 |
| **Reset value** | 60 |
| **Message Text** | - |
| **Instruction text** | The number of times that agents are stolen from an application.<br>Agents are stolen when an idle agent associated with an application is reassigned to work on a different application.<br>This element can be used in conjunction with 'Maximum Number of Associated Agents' to evaluate the load that this application places on the system. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Agents and applications |
| **Graph** | Conspicuous agents |

## DB2_0242c_AgtStolen_ap

| | |
|---|---|
| **Metric Number** | 0242 |
| **Name** | DB2_0242c_AgtStolen_ap |
| **Severity** | Minor |
| **Type** | C |
| **Description** | Stolen agents in an application |
| **Alarming, Graphing, Reporting** | R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 5 |
| **Reset value** | 3 |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | 0242 |
| **Report Type** | ASCII Report |
| **Area** | Agents and applications |

## DB2_0250w_MaxCoordAgt_in

| | |
|---|---|
| **Metric Number** | 0250 |
| **Name** | DB2_0250w_MaxCoordAgt_in |
| **Severity** | Minor |
| **Type** | w |
| **Description** | Maximum number of coordinating agents in the instance |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 30 min |
| **Delta** | No |
| **Min / Max Threshold** | Max |
| **Threshold** | 180 |
| **Reset value** | 150 |
| **Message Text** | Watermark of coordinating agents (<$VALUE>) exceeds alert limit (<$THRESHOLD>) |
| **Instruction text** | The maximum number of coordinating agents working at one time.<br>If the peak number of coordinating agents represents too high a workload for this node, you can reduce the number that can be concurrently executing a transaction by changing the maxcagents configuration parameter. See the Administration Guide for more information on the Maximum Number of Concurrent Coordinating Agents (maxcagents) configuration parameter. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Agents and applications |
| **Graph** | Agents |

## DB2_0251w_MaxCoordAgt_db

| | |
|---|---|
| **Metric Number** | 0251 |
| **Name** | DB2_0251w_MaxCoordAgt_db |
| **Severity** | Minor |
| **Type** | w |
| **Description** | Maximum number of coordinating agents in the database |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 180 |
| **Reset value** | 150 |
| **Message Text** | Watermark of coordinating agents (<$VALUE>) exceeds alert limit (<$THRESHOLD>) for database |
| **Instruction text** | The maximum number of coordinating agents working at one time.<br>If the peak number of coordinating agents represents too high a workload for this node, you can reduce the number that can be concurrently executing a transaction by changing the maxcagents configuration parameter. See the Administration Guide for more information on the Maximum Number of Concurrent Coordinating Agents (maxcagents) configuration parameter. |
| **Automatic Action Report** | 0251 |
| **Report Type** | ASCII Report |
| **Area** | Agents and applications |

## DB2_0261i_DBStatus_db

| | |
|---|---|
| **Metric Number** | 0261 |
| **Name** | DB2_0261i_DBStatus_db |
| **Severity** | Critical |
| **Type** | i |
| **Description** | Database status |
| **Alarming, Graphing, Reporting** | A, G, R |
| **Collection Interval** | 5 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | Active |
| **Reset value** | - |
| **Message Text** | |
| **Instruction text** | The current status of the database.<br>You can use this element to determine the state of your database.<br>Values for this field are:<br>SQLM_DB_ACTIVE The database is active.<br>SQLM_DB_QUIESCE_PEND The database is in quiesce-pending state. New connections to the database are not permitted and new units of work cannot be started. Depending on the quiesce request, active units of work will be allowed to complete or will be rolled back immediately.<br>SQLM_DB_QUIESCED The database has been quiesced. New connections to the database are not permitted and new units of work cannot be started.<br>SQLM_DB_ROLLFWD A rollforward is in progress on the database. |
| **Automatic Action Report** | - |
| **Report Type** | OV Report, OVPI Report |
| **Area** | Database |
| **Graph** | Database Status |

## DB2_0271p_AsyPlDtRdpReq_db

| | |
|---|---|
| **Metric Number** | 0271 |
| **Name** | DB2_0271p_AsyPlDtRdpReq_db |
| **Severity** | Warning |
| **Type** | p |
| **Description** | Percentage asynchronous data reads per request for the database |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 50% |
| **Reset value** | 60% |
| **Message Text** | Average percentage of data pages read by asynchronous read requests (<$VALUE>) from DB2 database exceeds threshold |
| **Instruction text** | The average number of buffer pool reads per asynchronous read request.<br>Formula:<br><br>buffer pool asynchronous data reads / buffer pool asynchronous read requests<br><br>This average can help you determine the amount of asynchronous I/O one in each interaction with the prefetcher |
| **Automatic Action Report** | 0271 |
| **Report Type** | ASCII Report |
| **Area** | Buffer pool |

## DB2_0273p_AsyPlDtRdpReq_ts

| | |
|---|---|
| **Metric Number** | 0273 |
| **Name** | DB2_0273p_AsyPlDtRdpReq_ts |
| **Severity** | Warning |
| **Type** | p |
| **Description** | Percentage asynchronous data reads per request for a tablespace |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 50% |
| **Reset value** | 60% |
| **Message Text** | Average percentage of data pages read by asynchronous read requests (<$VALUE>) for tablespace <$OPTION(add)> exceeds threshold |
| **Instruction text** | The average number of buffer pool reads per asynchronous read request.<br>Formula:<br><br>buffer pool asynchronous data reads / buffer pool asynchronous read requests<br><br>This average can help you determine the amount of asynchronous I/O one in each interaction with the prefetcher |
| **Automatic Action Report** | - |
| **Report Type** | ASCII Report |
| **Area** | Buffer pool |

## DB2_0281a_AsyncRdTime_db

| | |
|---|---|
| **Metric Number** | 0281 |
| **Name** | DB2_0281a_AsyncRdTime_db |
| **Severity** | Warning |
| **Type** | a |
| **Description** | Average asynchronous read time for the database |
| **Alarming, Graphing, Reporting** | A, G, R |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 200 ms |
| **Reset value** | 150 ms |
| **Message Text** | Average time of asynchronous data pages read (<$VALUE>) from DB2 database exceeds threshold |
| **Instruction text** | This element calculates the average asynchronous read time using the following formula:<br><br>buffer pool asynchronous read time / buffer pool asynchronous data reads<br><br>These calculations can be used to understand the I/O work being performed. |
| **Automatic Action Report** | 0281 |
| **Report Type** | ASCII Report |
| **Area** | Buffer pool |
| **Graph** | Asynchronous times |

## DB2_0283a_AsyncRdTime_ts

| | |
|---|---|
| **Metric Number** | 0283 |
| **Name** | DB2_0283a_AsyncRdTime_ts |
| **Severity** | Warning |
| **Type** | a |
| **Description** | Average asynchronous read time for a tablespace |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 200 ms |
| **Reset value** | 150 ms |
| **Message Text** | Average time of asynchronous data pages read (<$VALUE>) for tablespace <$OPTION(add)> exceeds threshold |
| **Instruction text** | This element calculates the average asynchronous read time using the following formula:<br><br>buffer pool asynchronous read time / buffer pool asynchronous data reads<br><br>These calculations can be used to understand the I/O work being performed. |
| **Automatic Action Report** | - |
| **Report Type** | ASCII Report |
| **Area** | Buffer pool |

## DB2_0291a_AsyncWrtTime_db

| | |
|---|---|
| **Metric Number** | 0291 |
| **Name** | DB2_0291a_AsyncWrtTime_db |
| **Severity** | Warning |
| **Type** | a |
| **Description** | Average asynchronous write time for the database |
| **Alarming, Graphing, Reporting** | A, G, R |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 200ms |
| **Reset value** | 150 ms |
| **Message Text** | Average time of asynchronous data/index pages write (<$VALUE>) to DB2 database exceeds threshold |
| **Instruction text** | This element calculates the average asynchronous read time using he following formula:<br><br>buffer pool asynchronous write time /<br>(buffer pool asynchronous data writes + buffer pool asynchronous index writes)<br><br>These calculations can be used to understand the I/O work being performed. |
| **Automatic Action Report** | 0291 |
| **Report Type** | ASCII Report |
| **Area** | Buffer pool |
| **Graph** | Asynchronous times |

## DB2_0293a_AsyncWrtTime_ts

| | |
|---|---|
| **Metric Number** | 0293 |
| **Name** | DB2_0293a_AsyncWrtTime_ts |
| **Severity** | Warning |
| **Type** | a |
| **Description** | Average asynchronous write time for a tablespace |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 200ms |
| **Reset value** | 150 ms |
| **Message Text** | Average time of asynchronous data/index pages write (<$VALUE>) to tablespace <$OPTION(add)> exceeds threshold |
| **Instruction text** | This element calculates the average asynchronous read time using he following formula:<br><br>buffer pool asynchronous write time /<br>(buffer pool asynchronous data writes + buffer pool asynchronous index writes)<br><br>These calculations can be used to understand the I/O work being performed. |
| **Automatic Action Report** | - |
| **Report Type** | ASCII Report |
| **Area** | Buffer pool |
| **Graph** | - |

## DB2_0301r_AsyPlDataRd_db

| | |
|---|---|
| **Metric Number** | 0301 |
| **Name** | DB2_0301r_AsyPlDataRd_db |
| **Severity** | Warning |
| **Type** | r |
| **Description** | The ratio of asynchronous pool data reads to synchronous pool data reads for the database |
| **Alarming, Graphing, Reporting** | A, G, R |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 4 |
| **Reset value** | 6 |
| **Message Text** | Ratio of asynchronous to synchronous data reads (<$VALUE>) to DB2 database below threshold |
| **Instruction text** | The ratio of asynchronous data reads to synchronous data reads.<br>Comparing the ratio of asynchronous to synchronous reads, you gain an insight into how well the prefetchers are working. This element can be helpful when you are tuning the num_ioservers configuration parameter (see the Administration Guide provided by IBM). |
| **Automatic Action Report** | 0301 |
| **Report Type** | ASCII Report |
| **Area** | Buffer pool |
| **Graph** | Ratio of data read / write |

## DB2_0303r_AsyPlDataRd_ts

| | |
|---|---|
| **Metric Number** | 0303 |
| **Name** | DB2_0303r_AsyPlDataRd_ts |
| **Severity** | Warning |
| **Type** | r |
| **Description** | The ratio of asynchronous pool data reads to synchronous pool data reads in the tablespace |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 4 |
| **Reset value** | 6 |
| **Message Text** | Ratio of asynchronous to synchronous data reads (<$VALUE>) to tablespace <$OPTION(add)> below threshold |
| **Instruction text** | The ratio of asynchronous data reads to synchronous data reads.<br>Comparing the ratio of asynchronous to synchronous reads, you gain an insight into how well the prefetchers are working. This element can be helpful when you are tuning the num_ioservers configuration parameter (see the Administration Guide provided by IBM). |
| **Automatic Action Report** | - |
| **Report Type** | ASCII Report |
| **Area** | Buffer pool |
| **Graph** | - |

## DB2_0311r_AsyPlDataWrt_db

| | |
|---|---|
| **Metric Number** | 0311 |
| **Name** | DB2_0311r_AsyPlDataWrt_db |
| **Severity** | Warning |
| **Type** | r |
| **Description** | The ratio of asynchronous pool data writes to synchronous pool data writes for the database |
| **Alarming, Graphing, Reporting** | A, G, R |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 4 |
| **Reset value** | 6 |
| **Message Text** | Ratio of asynchronous to synchronous data writes (<$VALUE>) to DB2 database below threshold |
| **Instruction text** | The ratio of asynchronous data reads to synchronous data writes. By comparing the ratio of asynchronous to synchronous writes, you can gain insight into how well the buffer pool page cleaners are performing. This ratio can be helpful when you are tuning the num_iocleaners configuration parameter. |
| **Automatic Action Report** | 0311 |
| **Report Type** | ASCII Report |
| **Area** | Buffer pool |
| **Graph** | Ratio of data read / write |

## DB2_0313r_AsyPlDataWrt_ts

| | |
|---|---|
| **Metric Number** | 0313 |
| **Name** | DB2_0313r_AsyPlDataWrt_ts |
| **Severity** | Warning |
| **Type** | r |
| **Description** | The ratio of asynchronous pool data writes to synchronous pool data writes in the tablespace |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 4 |
| **Reset value** | 6 |
| **Message Text** | Ratio of asynchronous to synchronous data writes (<$VALUE>) to tablespace <$OPTION(add)> below threshold |
| **Instruction text** | The ratio of asynchronous data reads to synchronous data writes. By comparing the ratio of asynchronous to synchronous writes, you can gain insight into how well the buffer pool page cleaners are performing. This ratio can be helpful when you are tuning the num_iocleaners configuration parameter. |
| **Automatic Action Report** | - |
| **Report Type** | ASCII Report |
| **Area** | Buffer pool |
| **Graph** | - |

## DB2_0321r_AsyPIIdxRd_db

| | |
|---|---|
| **Metric Number** | 0321 |
| **Name** | DB2_0321r_AsyPIIdxRd_db |
| **Severity** | Warning |
| **Type** | r |
| **Description** | The ratio of asynchronous pool index reads to synchronous pool index reads for the database |
| **Alarming, Graphing, Reporting** | A, G, R |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 4 |
| **Reset value** | 6 |
| **Message Text** | Ratio of asynchronous to synchronous index reads (<$VALUE>) from DB2 database below threshold |
| **Instruction text** | The ratio of asynchronous index reads to synchronous index reads. By comparing the ratio of asynchronous to synchronous reads, you can gain insight into how well the prefetchers are working. This element can be helpful when you are tuning the num_ ioservers configuration parameter (see the IBM DB2 Administration Guide) |
| **Automatic Action Report** | 0321 |
| **Report Type** | ASCII Report |
| **Area** | Buffer pool |
| **Graph** | Ratio of Index Read / Write |

## DB2_0323r_AsyPIIdxRd_ts

| | |
|---|---|
| **Metric Number** | 0323 |
| **Name** | DB2_0323r_AsyPIIdxRd_ts |
| **Severity** | Warning |
| **Type** | r |
| **Description** | The ratio of asynchronous pool index reads to synchronous pool index reads in the tablespace |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 4 |
| **Reset value** | 6 |
| **Message Text** | Ratio of asynchronous to synchronous index reads (<$VALUE>) from tablespace <$OPTION(add)> below threshold |
| **Instruction text** | The ratio of asynchronous index reads to synchronous index reads. By comparing the ratio of asynchronous to synchronous reads, you can gain insight into how well the prefetchers are working. This element can be helpful when you are tuning the num_ ioservers configuration parameter (see the IBM DB2 Administration Guide) |
| **Automatic Action Report** | - |
| **Report Type** | ASCII Report |
| **Area** | Buffer pool |
| **Graph** | - |

## DB2_0331r_AsyPIIdxWrt_db

| | |
|---|---|
| **Metric Number** | 0331 |
| **Name** | DB2_0331r_AsyPIIdxWrt_db |
| **Severity** | Warning |
| **Type** | r |
| **Description** | The ratio of asynchronous pool index writes to synchronous pool index writes for the database |
| **Alarming, Graphing, Reporting** | A, G, R |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 4 |
| **Reset value** | 6 |
| **Message Text** | Ratio of asynchronous to synchronous index writes (<$VALUE>) to DB2 database exceeds threshold |
| **Instruction text** | The ratio of asynchronous index reads to synchronous index writes. By comparing the ratio of asynchronous to synchronous writes, you can gain insight into how well the prefetchers are working. This element can be helpful when you are tuning the num_ioservers configuration parameter (see the IBM DB2 Administration Guide). |
| **Automatic Action Report** | 0331 |
| **Report Type** | ASCII Report |
| **Area** | Buffer pool |
| **Graph** | Ratio of Index Read / Write |

## DB2_0333r_AsyPIIdxWrt_ts

| | |
|---|---|
| **Metric Number** | 0333 |
| **Name** | DB2_0333r_AsyPIIdxWrt_ts |
| **Severity** | Warning |
| **Type** | r |
| **Description** | The ratio of asynchronous pool index writes to synchronous pool index writes in the tablespace |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 4 |
| **Reset value** | 6 |
| **Message Text** | Ratio of asynchronous to synchronous index writes (<$VALUE>) to tablespace <$OPTION(add)> exceeds threshold |
| **Instruction text** | The ratio of asynchronous index reads to synchronous index writes. By comparing the ratio of asynchronous to synchronous writes, you can gain insight into how well the prefetchers are working. This element can be helpful when you are tuning the num_ioservers configuration parameter (see the IBM DB2 Administration Guide). |
| **Automatic Action Report** | - |
| **Report Type** | ASCII Report |
| **Area** | Buffer pool |
| **Graph** | - |

## DB2_0341c_PlDataLogRd_db

| | |
|---|---|
| **Metric Number** | 0341 |
| **Name** | DB2_0341c_PlDataLogRd_db |
| **Severity** | - |
| **Type** | c |
| **Description** | Buffer pool data logical reads for the database |
| **Alarming, Graphing, Reporting** | G |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Buffer pool |
| **Graph** | Data Logical / Physical Reads |

## DB2_0351c_PlIdxLogRd_db

| | |
|---|---|
| **Metric Number** | 0351 |
| **Name** | DB2_0351c_PlIdxLogRd_db |
| **Severity** | - |
| **Type** | c |
| **Description** | Buffer pool index logical reads for the database |
| **Alarming, Graphing, Reporting** | G |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Buffer pool |
| **Graph** | Index Logical / Physical Reads |

## DB2_0361a_DirRdpReq_db

| | |
|---|---|
| **Metric Number** | 0361 |
| **Name** | DB2_0361a_DirRdpReq_db |
| **Severity** | Minor |
| **Type** | a |
| **Description** | Average sectors read by a direct read in the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 50 |
| **Reset value** | 30 |
| **Message Text** | Average sectors read by direct read (<$VALUE>) from database exceeds threshold |
| **Instruction text** | The average number of sectors that are read by a direct read:<br><br>direct reads from database / direct read requests<br><br>Direct reads are those of read operations that do not use the buffer pool. When using system monitors to track I/O, this data element helps you distinguish database I/O from non-database I/O on the device.<br>Direct reads are performed in units, the smallest being a 512-byte sector. They<br>are used when:<br>1 Reading LONG VARCHAR columns<br>2 Reading LOB (large object) columns<br>3 Performing a backup |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Direct I/O |
| **Graph** | Average sector read / writes in the database |

## DB2_0362a_DirRdpReq_ap

| | |
|---|---|
| **Metric Number** | 0362 |
| **Name** | DB2_0362a_DirRdpReq_ap |
| **Severity** | Minor |
| **Type** | a |
| **Description** | Average sectors read by a direct read in an application |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 50 |
| **Reset value** | 30 |
| **Message Text** | Average sectors read by direct read (<$VALUE>) by application <$OPTION(add)> exceeds threshold |
| **Instruction text** | The average number of sectors that are read by a direct read:<br><br>direct reads from database / direct read requests<br><br>Direct reads are those of read operations that do not use the buffer pool. When using system monitors to track I/O, this data element helps you distinguish database I/O from non-database I/O on the device.<br>Direct reads are performed in units, the smallest being a 512-byte sector. They<br>are used when:<br>1 Reading LONG VARCHAR columns<br>2 Reading LOB (large object) columns<br>3 Performing a backup |
| **Automatic Action Report** | 0362 |
| **Report Type** | ASCII Report |
| **Area** | Direct I/O |
| **Graph** | - |

## DB2_0363a_DirRdpReq_ts

| | |
|---|---|
| **Metric Number** | 0363 |
| **Name** | DB2_0363a_DirRdpReq_ts |
| **Severity** | Minor |
| **Type** | a |
| **Description** | Average sectors read by a direct read in a tablespace |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 50 |
| **Reset value** | 30 |
| **Message Text** | Average sectors read by direct read (<$VALUE>) by tablespace <$OPTION(add)> exceeds threshold |
| **Instruction text** | The average number of sectors that are read by a direct read:<br><br>direct reads from database / direct read requests<br><br>Direct reads are those of read operations that do not use the buffer pool. When using system monitors to track I/O, this data element helps you distinguish database I/O from non-database I/O on the device.<br>Direct reads are performed in units, the smallest being a 512-byte sector. They<br>are used when:<br>1 Reading LONG VARCHAR columns<br>2 Reading LOB (large object) columns<br>3 Performing a backup |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Direct I/O |
| **Graph** | - |

## DB2_0371a_DirWrtpReq_db

| | |
|---|---|
| **Metric Number** | 0371 |
| **Name** | DB2_0371a_DirWrtpReq_db |
| **Severity** | Minor |
| **Type** | a |
| **Description** | Average sectors written by a direct write in the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 50 |
| **Reset value** | 30 |
| **Message Text** | Average sectors written by direct write (<$VALUE>) from database exceeds threshold |
| **Instruction text** | The average number of sectors that are written by a direct write.<br><br>direct writes to database / direct write requests<br>The number of write operations that do not use the buffer pool. When using system monitors to track I/O, this data element helps you distinguish database I/O from non-database I/O on the device. Direct writes are performed in units, the smallest being a 512-byte sector. They are used when:<br>1 Writing LONG VARCHAR columns<br>2 Writing LOB (large object) columns<br>3 Performing a restore<br>4 Performing a load. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Direct I/O |
| **Graph** | Average sector read / writes in the database |

## DB2_0372a_DirWrtpReq_ap

| | |
|---|---|
| **Metric Number** | 0372 |
| **Name** | DB2_0372a_DirWrtpReq_ap |
| **Severity** | Minor |
| **Type** | a |
| **Description** | Average sectors written by a direct write in an application |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 50 |
| **Reset value** | 30 |
| **Message Text** | Average sectors written by direct write (<$VALUE>) by application <$OPTION(add)> exceeds threshold |
| **Instruction text** | The average number of sectors that are written by a direct write.<br><br>direct writes to database / direct write requests<br>The number of write operations that do not use the buffer pool. When using system monitors to track I/O, this data element helps you distinguish database I/O from non-database I/O on the device. Direct writes are performed in units, the smallest being a 512-byte sector. They are used when:<br>1 Writing LONG VARCHAR columns<br>2 Writing LOB (large object) columns<br>3 Performing a restore<br>4 Performing a load. |
| **Automatic Action Report** | 0372 |
| **Report Type** | ASCII Report |
| **Area** | Direct I/O |
| **Graph** | - |

## DB2_0373a_DirWrtpReq_ts

| | |
|---|---|
| **Metric Number** | 0373 |
| **Name** | DB2_0373a_DirWrtpReq_ts |
| **Severity** | Minor |
| **Type** | a |
| **Description** | Average sectors written by a direct write in a tablespace |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 50 |
| **Reset value** | 30 |
| **Message Text** | Average sectors written by direct write (<$VALUE>) by tablespace <$OPTION(add)> exceeds threshold |
| **Instruction text** | The average number of sectors that are written by a direct write.<br><br>direct writes to database / direct write requests<br>The number of write operations that do not use the buffer pool. When using system monitors to track I/O, this data element helps you distinguish database I/O from non-database I/O on the device. Direct writes are performed in units, the smallest being a 512-byte sector. They are used when:<br>1 Writing LONG VARCHAR columns<br>2 Writing LOB (large object) columns<br>3 Performing a restore<br>4 Performing a load. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Direct I/O |
| **Graph** | - |

## DB2_0380g_LocConns_in

| | |
|---|---|
| **Metric Number** | 0380 |
| **Name** | DB2_0380g_LocConns_in |
| **Severity** | - |
| **Type** | g |
| **Description** | Local connections in the database manager |
| **Alarming, Graphing, Reporting** | G, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | |
| **Instruction text** | The number of local applications that are currently connected to a database within the database manager instance being monitored. This number can help you determine the level of concurrent processing occurring in the database manager. This value will change frequently, so you may need to sample it at specific intervals over an extended period of time to get a realistic view of system usage.<br>This number only includes applications that were initiated from the same instance as the database manager. The applications are connected, but may or may not be executing a unit of work in the database. When used in conjunction with the Remote Connections To Database Manager monitor element, this element can help you adjust the setting of the maxagents configuration parameter. |
| **Automatic Action Report** | - |
| **Report Type** | OV Reporter, OVPI |
| **Area** | Connections |
| **Graph** | Connections to the database manager |

## DB2_0391w_MaxSecLogSpcU_db

| | |
|---|---|
| **Metric Number** | 0391 |
| **Name** | DB2_0391w_MaxSecLogSpcU_db |
| **Severity** | Minor |
| **Type** | w |
| **Description** | Maximum secondary total space used (in MB) in the database |
| **Alarming, Graphing, Reporting** | A, G, R |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 7MB |
| **Reset value** | 5 MB |
| **Message Text** | Maximum secondary log space used (<$VALUE> MB) exceeds alert limit (<$THRESHOLD> MB) |
| **Instruction text** | The maximum amount of secondary log space used (in bytes).<br>You may use this element in conjunction with Secondary Logs Allocated Currently and Maximum Total Log Space Used to show your current dependency on secondary logs. If this value is high, you may need<br>larger log files, or more primary log files, or more frequent COMMIT statements within your application. As a result, you may need to adjust the following configuration parameters:<br>(1) logfilsz<br>(2) logprimary<br>(3) logsecond<br>(4) logretain<br>The value will be zero if the database does not have any secondary log files. This would be the case if there were none defined.<br><br>Note: While the database system metric information is given in megabytes, the configuration parameters are set in pages, which are each 4K bytes. |
| **Automatic Action Report** | 0391 |
| **Report Type** | ASCII Report |
| **Area** | Transaction logs |

| | |
|---|---|
| **Graph** | Maximum total space used |

## DB2_0401w_MaxTotLogSpcU_db

| | |
|---|---|
| **Metric Number** | 0401 |
| **Name** | DB2_0401w_MaxTotLogSpcU_db |
| **Severity** | Minor |
| **Type** | w |
| **Description** | Maximum primary total space used (in MB) in the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 18MB |
| **Reset value** | 15 MB |
| **Message Text** | Maximum total log space used (<$VALUE> MB) exceeds alert limit (<$THRESHOLD> MB) |
| **Instruction text** | The maximum amount of total log space used (in bytes).<br>You can use this element to help you evaluate the amount of primary log space that you have allocated. Comparing the value of this element with the amount of primary log space you have allocated can help you to evaluate your configuration parameter settings. Your primary log space allocation can be calculated using the following formula:<br><br>logprimary x logfilsiz x 4096<br><br>You can use this element in conjunction with Maximum Secondary Log Space Used and Secondary Logs Allocated Currently to show your current dependency on secondary logs. This value includes space used in both primary and secondary log files, and is only returned if circular logging is used. (That is, it is not returned if either the logretain or userexit configuration parameter is enabled.) As a result, you may need to adjust the following configuration parameters:<br>(1) logfilsz<br>(2) logprimary<br>(3) logsecond<br>(4) logretain<br><br>Note: While the database system metric information is given in megabytes, the configuration parameters are set in pages, which are each 4K bytes. |
| **Automatic Action** | - |

| | |
|---|---|
| **Report** | |
| **Report Type** | - |
| **Area** | Transaction logs |
| **Graph** | Maximum total space used |

## DB2_0411g_SecLogAlloc_db

| | |
|---|---|
| **Metric Number** | 0411 |
| **Name** | DB2_0411g_SecLogAlloc_db |
| **Severity** | Minor |
| **Type** | g |
| **Description** | Secondary logs allocated in the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 10 min |
| **Delta** | No |
| **Min / Max Threshold** | Max |
| **Threshold** | 10 |
| **Reset value** | 7 |
| **Message Text** | Number of actual secondary logs (<$VALUE>) of DB2 database exceeds threshold |
| **Instruction text** | The number of secondary log files that are currently being used for the database. You may use this element in conjunction with Maximum Secondary Log Space Used and Maximum Total Log Space Used to show your current dependency on secondary logs. If this value is consistently high, you may need larger log files, or more primary log files, or more frequent COMMIT statements within your application. As a result, you may need to adjust the following configuration parameters:<br>(1) logfilsz<br>(2) logprimary<br>(3) logsecond<br>(4) logretain |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Transaction logs |
| **Graph** | Logs Allocated |

## DB2_0421p_SecLogRemain_db

| | |
|---|---|
| **Metric Number** | 0421 |
| **Name** | DB2_0421p_SecLogRemain_db |
| **Severity** | Minor |
| **Type** | p |
| **Description** | Secondary logs remaining to be allocated in the database |
| **Alarming, Graphing, Reporting** | A, G, R |
| **Collection Interval** | 10 min |
| **Delta** | No |
| **Min / Max Threshold** | Min |
| **Threshold** | 15% |
| **Reset value** | 25 % |
| **Message Text** | Percentage of remaining secondary logs (<$VALUE>) of DB2 database is below threshold |
| **Instruction text** | The number of secondary log files that are currently remaining.<br>You may use this element in conjunction with Maximum Secondary Log Space Used and Maximum Total Log Space Used to show your current dependency on secondary logs. If this value is consistently low, you may need larger log files, or more primary log files, or more frequent COMMIT statements within your application. As a result, you may need to adjust the following configuration parameters:<br>(1) logfilsz<br>(2) logprimary<br>(3) logsecond<br>(4) logretain |
| **Automatic Action Report** | 0421 |
| **Report Type** | ASCII Report |
| **Area** | Transaction logs |
| **Graph** | Secondary logs remaining |

## DB2_0431a_SortTime_db

| | |
|---|---|
| **Metric Number** | 0431 |
| **Name** | DB2_0431a_SortTime_db |
| **Severity** | Minor |
| **Type** | a |
| **Description** | Average sort time in the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 100ms |
| **Reset value** | 80 ms |
| **Message Text** | Average sort time (<$VALUE>) in DB2 database exceeds threshold |
| **Instruction text** | The average elapsed time (in milliseconds) for all sorts that have been executed.<br>At a database or application level, this can indicate whether or not sorting is an issue as far as performance is concerned. This count also includes sort time of temporary tables created during related operations. It provides information for all applications accessing one database. When using data elements providing elapsed times, you should consider:<br>(1) Elapsed times are affected by system load, so the more processes you have running, the higher this elapsed time value.<br>(2) To calculate this data element at a database level, the database system monitor sums the application-level times. This can result in double counting elapsed times at a database level, since more than one application process can be running at the same time. To provide meaningful data from the database level, has been normalized to a lower level by providing the average elapsed time for each sort. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Sorts |
| **Graph** | Sort time |

## DB2_0432a_SortTime_ap

| | |
|---|---|
| **Metric Number** | 0432 |
| **Name** | DB2_0432a_SortTime_ap |
| **Severity** | Minor |
| **Type** | a |
| **Description** | Average sort time for an application |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 100ms |
| **Reset value** | 80 ms |
| **Message Text** | Average sort time (<$VALUE>) of application <$OPTION(add)> exceeds threshold |
| **Instruction text** | The average elapsed time (in milliseconds) for all sorts that have been executed.<br>At a database or application level, this can indicate whether or not sorting is an issue as far as performance is concerned. This count also includes sort time of temporary tables created during related operations. It provides information for one statement, one application, or all applications accessing one database. |
| **Automatic Action Report** | 0432 |
| **Report Type** | ASCII Report |
| **Area** | Sorts |
| **Graph** | - |

## DB2_0440p_AgtAssignPl_in

| | |
|---|---|
| **Metric Number** | 0440 |
| **Name** | DB2_0440p_AgtAssignPl_in |
| **Severity** | - |
| **Type** | p |
| **Description** | Percent agents assigned from agent pool |
| **Alarming, Graphing, Reporting** | R |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | 0440 |
| **Report Type** | ASCII Report |
| **Area** | Agents and applications |
| **Graph** | - |

## DB2_0451a_SortHeapAlloc_db

| | |
|---|---|
| **Metric Number** | 0451 |
| **Name** | DB2_0451a_SortHeapAlloc_db |
| **Severity** | Minor |
| **Type** | a |
| **Description** | Average sort heap allocated for an application |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | 30 min |
| **Delta** | No |
| **Min / Max Threshold** | Max |
| **Threshold** | 230 MB |
| **Reset value** | 180 MB |
| **Message Text** | Average sort heap allocated for an application (<$VALUE>%) exceeds threshold |
| **Instruction text** | The average sort heap space used by each sort.<br><br>Total Sort Heap Allocated / Active Sorts<br><br>If the sortheap configuration parameter is substantially larger than the average sort heap used, you may be able to lower the value of this parameter. This value includes heaps for sorts of temporary tables that were created during relational operations. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Sorts |
| **Graph** | - |

## DB2_0461p_LckLstMemUsed_db

| | |
|---|---|
| **Metric Number** | 0461 |
| **Name** | DB2_0461p_LckLstMemUsed_db |
| **Severity** | Minor |
| **Type** | p |
| **Description** | Percent lock list memory used in the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 10 min |
| **Delta** | No |
| **Min / Max Threshold** | Max |
| **Threshold** | 50% |
| **Reset value** | 45 % |
| **Message Text** | Percentage of locklist memory in use (<$VALUE>%) of DB2 database exceeds threshold |
| **Instruction text** | The percentage amount of lock list memory (in bytes) that is in use. This element may be used to calculate the lock list utilization. If the lock list utilization is high, you may want to consider increasing the size of that parameter. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Locks and deadlocks |
| **Graph** | Lock list |

## DB2_0471p_LckHeld_db

| | |
|---|---|
| **Metric Number** | 0471 |
| **Name** | DB2_0471p_LckHeld_db |
| **Severity** | - |
| **Type** | p |
| **Description** | Percent locks held in the database |
| **Alarming, Graphing, Reporting** | G |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | |
| **Report Type** | - |
| **Area** | Locks and deadlocks |
| **Graph** | Lock list |

## DB2_0472p_LckHeld_ap

| | |
|---|---|
| **Metric Number** | 0472 |
| **Name** | DB2_0472p_LckHeld_ap |
| **Severity** | Minor |
| **Type** | p |
| **Description** | Percent locks held by an application |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | 30 min |
| **Delta** | No |
| **Min / Max Threshold** | Max |
| **Threshold** | 90% |
| **Reset value** | 75 % |
| **Message Text** | Percentage of locks currently held (<$VALUE>%) of application <$OPTION(add)> exceeds threshold |
| **Instruction text** | The percentage of allowed locks currently held.<br>Locks held / ((locklist * 4096 / 36 ) * (maxlocks / 100))* 100<br>At the application level, this is the total number of locks currently held by all agents for the application. How you use this element depends on the level of information being returned from the database system monitor.<br>You can use this counter to determine if the application is approaching the maximum number of locks available to it, as defined by the *maxlocks* configuration parameter. This parameter indicates the percentage of the lock list that each application can use before lock escalations occur. Lock escalations can result in a decrease in concurrency between applications connected to a database. Since the *maxlocks* parameter is specified as a percentage and this element is a counter, you can compare the count provided by this element against the total number of locks that can be held by an application, as calculated using the following formula: (locklist * 4096 / 36 ) * (maxlocks / 100)<br>If you have a large number of locks, you may need to perform more commits within your application so that some of the locks can be released. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Locks and deadlocks |
| **Graph** | - |

## DB2_0481g_LckAvail_db

| | |
|---|---|
| **Metric Number** | 0481 |
| **Name** | DB2_0481g_LckAvail_db |
| **Severity** | - |
| **Type** | g |
| **Description** | Number of available locks in the database |
| **Alarming, Graphing, Reporting** | - |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | |
| **Instruction text** | |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | - |
| **Graph** | - |

## DB2_0482g_LckAvail_ap

| | |
|---|---|
| **Metric Number** | 0482 |
| **Name** | DB2_0482g_LckAvail_ap |
| **Severity** | Minor |
| **Type** | g |
| **Description** | Number of available locks in an application |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | 10 min |
| **Delta** | No |
| **Min / Max Threshold** | Min |
| **Threshold** | 120 |
| **Reset value** | 180 |
| **Message Text** | Number of available locks (<$VALUE>) of application <$OPTION(add)> is below threshold |
| **Instruction text** | The percentage of allowed locks currently held.<br>((locklist * 4096 / 36 ) * (maxlocks / 100)) – locks held<br>At the application level, this is the total number of locks currently available by all agents for the application.<br>You can use this counter to determine if the application is approaching the maximum number of locks available to it, as defined by the *maxlocks* configuration parameter. This parameter indicates the percentage of the lock list that each application can use before lock escalations occur. Lock escalations can result in a decrease in concurrency between applications connected to a database. Since the *maxlocks* parameter is specified as a percentage and this element is a counter, you can compare the count provided by this element against the total number of locks that can be held by an application, as calculated using the following formula: (locklist * 4096 / 36 ) * (maxlocks / 100)<br>If you have a few available locks, you may need to perform more commits within your application so that some of the locks can be released. |
| **Automatic Action Report** | 0482 |
| **Report Type** | ASCII Report |
| **Area** | Locks and deadlocks |
| **Graph** | - |

## DB2_0490g_AgtReg_in

| | |
|---|---|
| **Metric Number** | 0490 |
| **Name** | DB2_0490g_AgtReg_in |
| **Severity** | Minor |
| **Type** | g |
| **Description** | Agents registered in the instance |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 360 |
| **Reset value** | 270 |
| **Message Text** | |
| **Instruction text** | The number of agents registered in the database manager instance that is being monitored (coordinator agents and subagents).<br>You can use this element to help evaluate your setting for the maxagents configuration parameter. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Agents and applications |
| **Graph** | Agents |

## DB2_0500g_AgtIdle_in

| | |
|---|---|
| **Metric Number** | 0500 |
| **Name** | DB2_0500g_AgtIdle_in |
| **Severity** | Minor |
| **Type** | g |
| **Description** | Agents idle in the instance |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 40 |
| **Reset value** | 60 |
| **Message Text** | Number of agents registered in the instance (<$VALUE>) is above threshold |
| **Instruction text** | The number of agents in the agent pool that are currently unassigned to an application and are, therefore, “idle”. You can use this element to help set the num_poolagents configuration parameter. Having idle agents available to service requests for agents can improve performance. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Agents and applications |
| **Graph** | Agents |

## DB2_0511c_CommAttmpt_db

| | |
|---|---|
| **Metric Number** | 0511 |
| **Name** | DB2_0511c_CommAttmpt_db |
| **Severity** | - |
| **Type** | c |
| **Description** | Commit statements attempted in the database |
| **Alarming, Graphing, Reporting** | G, R |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OV Reporter |
| **Area** | Statement s |
| **Graph** | Commit attempts |

## DB2_0512c_CommAttmpt_ap

| | |
|---|---|
| **Metric Number** | 0512 |
| **Name** | DB2_0512c_CommAttmpt_ap |
| **Severity** | - |
| **Type** | c |
| **Description** | Commit statements attempted by an application |
| **Alarming, Graphing, Reporting** | R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | ASCII Report |
| **Area** | Statements |
| **Graph** | - |

## DB2_0521c_DdlStmtDone_db

| | |
|---|---|
| **Metric Number** | 0521 |
| **Name** | DB2_0521c_DdlStmtDone_db |
| **Severity** | - |
| **Type** | c |
| **Description** | DDL statements executed in the database |
| **Alarming, Graphing, Reporting** | G |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Statements |
| **Graph** | Other statements |

## DB2_0522c_DdlStmtDone_ap

| | |
|---|---|
| **Metric Number** | 0522 |
| **Name** | DB2_0522c_DdlStmtDone_ap |
| **Severity** | - |
| **Type** | c |
| **Description** | DDL statements executed by an application |
| **Alarming, Graphing, Reporting** | R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | ASCII Report |
| **Area** | Statements |
| **Graph** | - |

## DB2_0531c_ModStmtDone_db

| | |
|---|---|
| **Metric Number** | 0531 |
| **Name** | DB2_0531c_ModStmtDone_db |
| **Severity** | - |
| **Type** | c |
| **Description** | UID statements executed in the database |
| **Alarming, Graphing, Reporting** | G |
| **Collection Interval** | 30min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Statements |
| **Graph** | Other statements |

## DB2_0532c_ModStmtDone_ap

| | |
|---|---|
| **Metric Number** | 0532 |
| **Name** | DB2_0532c_ModStmtDone_ap |
| **Severity** | - |
| **Type** | c |
| **Description** | UID statements executed by an application |
| **Alarming, Graphing, Reporting** | R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | ASCII Report |
| **Area** | Statements |
| **Graph** | - |

## DB2_0541c_SelStmtDone_db

| | |
|---|---|
| **Metric Number** | 0541 |
| **Name** | DB2_0541c_SelStmtDone_db |
| **Severity** | - |
| **Type** | c |
| **Description** | Select statements executed in the database |
| **Alarming, Graphing, Reporting** | G |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Statements |
| **Graph** | Other statements |

## DB2_0542c_SelStmtDone_ap

| | |
|---|---|
| **Metric Number** | 0542 |
| **Name** | DB2_0542c_SelStmtDone_ap |
| **Severity** | - |
| **Type** | c |
| **Description** | Select statements executed by an application |
| **Alarming, Graphing, Reporting** | R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | ASCII Report |
| **Area** | Statements |
| **Graph** | - |

## DB2_0550g_AgtWaitTok_in

| | |
|---|---|
| **Metric Number** | 0550 |
| **Name** | DB2_0550g_AgtWaitTok_in |
| **Severity** | - |
| **Type** | g |
| **Description** | Agents waiting on a token in the database manager |
| **Alarming, Graphing, Reporting** | G |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | The number of agents waiting for a token so they can execute a transaction in the database manager. You can use this element to help evaluate your setting for the maxcagents configuration parameter. Each application has a dedicated coordinator agent to process database requests within the database manager. Each agent has to get a token before it can execute a transaction. The maximum number of agents that can execute database manager transactions is limited by the configuration parameter maxcagents. For more information about this parameter, see the IBM DB2 Administration Guide. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Agents and applications |
| **Graph** | Agents and applications |

## DB2_0560r_AgtEmptyPl_in

| | |
|---|---|
| **Metric Number** | 0560 |
| **Name** | DB2_0560r_AgtEmptyPl_in |
| **Severity** | Minor |
| **Type** | r |
| **Description** | Ratio of agents created due to empty pool to agents assigned from pool |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 2 |
| **Reset value** | 1.4 |
| **Message Text** | Ratio of agents due to empty pool (<$VALUE>) is above threshold |
| **Instruction text** | The ratio of agents created because the agent pool was empty to the agents assigned from pool. The agents created due to empty pool include the number of agents started at DB2 start up (num_initagents).<br><br>Agents Created Due to Empty Agent Pool / Agents Assigned From Pool<br><br>This ratio can be used to determine how often an agent must be created because the pool is empty. If the ratio of<br><br>Agents Created Due to Empty Agent Pool / Agents Assigned From Pool<br><br>is high, it may indicate that the num_poolagents configuration parameter should be increased. A low ratio suggests that num_poolagents is set too high, and that some of the agents in the pool are rarely used and are wasting system resources.<br>A high ratio can indicate that the overall workload for this node is too high. You can adjust the workload by lowering the maximum number of coordinating agents specified by the maxcagents configuration parameter, or by redistributing data among the nodes. |
| **Automatic Action Report** | 0560 |
| **Report Type** | ASCII Report |

| | |
|---|---|
| **Area** | Agents and applications |
| **Graph** | - |

## DB2_0571p_PkgCacheHit_db

| | |
|---|---|
| **Metric Number** | 0571 |
| **Name** | DB2_0571p_PkgCacheHit_db |
| **Severity** | Minor |
| **Type** | p |
| **Description** | The package cache hit ratio for the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 80% |
| **Reset value** | 90 % |
| **Message Text** | Package cache hit ratio for the database (<$VALUE>) is below threshold |
| **Instruction text** | The package cache hit ratio calculated as follows:<br><br>1 - (Package Cache Inserts / Package Cache Lookups)<br><br>The package cache hit ratio tells you whether or not the package cache is being used effectively. If the hit ratio is high (more than 0.8), the cache is performing well. A smaller ratio may indicate that the package cache should be increased. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Package cache |
| **Graph** | |

## DB2_0582p_OpnRemCursBlk_ap

| | |
|---|---|
| **Metric Number** | 0582 |
| **Name** | DB2_0582p_OpnRemCursBlk_ap |
| **Severity** | Minor |
| **Type** | p |
| **Description** | Percent open remote cursors with blocking |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 20% |
| **Reset value** | 30 % |
| **Message Text** | Percentage open remote cursors with blocking (<$VALUE>) is below threshold for application <$OPTION(add)> |
| **Instruction text** | The percentage of remote blocking cursors currently open for this application.<br><br>Open remote cursors with blocking / Open remote cursors * 100<br><br>If the percentage is low, you may be able to improve performance by improving the row blocking in the application:<br>1. Check the pre-compile options for record blocking for treatment of ambiguous cursors<br>2. Redefine cursors to allow for blocking (for example, if possible, specify FOR FETCH ONLY on your cursors).<br>Rejected Block Cursor Requests and Accepted Block Cursor Requests in the snapshot provide additional information that may help you tune your configuration parameters to improve row blocking in your application. |
| **Automatic Action Report** | 0582 |
| **Report Type** | ASCII Report |
| **Area** | SQL Cursor |
| **Graph** | - |

## DB2_0621p_ApplSectHit_db

| | |
|---|---|
| **Metric Number** | 0621 |
| **Name** | DB2_0621p_ApplSectHit_db |
| **Severity** | Minor |
| **Type** | p |
| **Description** | The hit ratio for the SQL work area in the  database |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 50% |
| **Reset value** | 70 % |
| **Message Text** | Hit ratio of SQL work areas in the database (<$VALUE>) is below threshold |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | SQL work area |
| **Graph** | - |

## DB2_0622p_ApplSectHit_ap

| | |
|---|---|
| **Metric Number** | 0622 |
| **Name** | DB2_0622p_ApplSectHit_ap |
| **Severity** | Minor |
| **Type** | p |
| **Description** | The hit ratio for the SQL work area for an application |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 50% |
| **Reset value** | 70% |
| **Message Text** | Hit ratio of SQL work areas in the database (<$VALUE>) is below threshold |
| **Instruction text** | - |
| **Automatic Action Report** | 0622 |
| **Report Type** | ASCII Report |
| **Area** | SQL work area |
| **Graph** | - |

## DB2_0631g_ApplExecDbmgr_db

| | |
|---|---|
| **Metric Number** | 0631 |
| **Name** | DB2_0631g_ApplExecDbmgr_db |
| **Severity** | - |
| **Type** | g |
| **Description** | Applications currently executing in the database manager |
| **Alarming, Graphing, Reporting** | G |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | Indicates the number of applications that are currently connected to the database, and for which the database manager is currently processing a request.<br>You can use this element to understand how many of the database manager agent tokens are being used by applications connected to this database. If the sum of Remote Connections Executing in the Database Manager and Local Connections Executing in the Database Manager is equal to the value of the maxcagents configuration parameter, you may want to increase the value of that parameter, as described in the IBM DB2 Administration Guide. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Agents and applications |
| **Graph** | Current Applications |

## DB2_0640g_RemConnsExec_in

| | |
|---|---|
| **Metric Number** | 0640 |
| **Name** | DB2_0640g_RemConnsExec_in |
| **Severity** | - |
| **Type** | g |
| **Description** | Remote connections executing in the database manager |
| **Alarming, Graphing, Reporting** | G |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | The current number of connections initiated from remote clients to the instance of the database manager that is being monitored. Shows the number of connections from remote clients to databases in this instance. This value will change frequently, so you may need to sample it at specific intervals over an extended period of time to get a realistic view of system usage. This number does not include applications that were initiated from the same instance as the database manager.<br>When used in conjunction with the Local Connections monitor element, these elements can help you adjust the setting of the max_coordagents configuration parameter. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Connections |
| **Graph** | Connections executing in the database manager |

# DB2_0650g_LocConnsExec_in

| | |
|---|---|
| **Metric Number** | 0650 |
| **Name** | DB2_0650g_LocConnsExec_in |
| **Severity** | - |
| **Type** | g |
| **Description** | Local connections executing in the database manager |
| **Alarming, Graphing, Reporting** | G, R |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | The number of local applications that are currently connected to a database within the database manager instance being monitored and are currently processing a unit of work. This number can help you determine the level of concurrent processing occurring in the database manager. This value will change frequently, so you may need to sample it at specific intervals over an extended period of time to get a realistic view of system usage. This number only includes applications that were initiated from the same instance as the database manager.<br>When used in conjunction with the Remote Connections Executing in the Database Manager monitor element, this element can help you adjust the setting of the maxcagents configuration parameter. |
| **Automatic Action Report** | - |
| **Report Type** | ASCII Report |
| **Area** | Connections |
| **Graph** | Connections executing in the database manager |

## DB2_0661c_PlDataPhyRds_db

| | |
|---|---|
| **Metric Number** | 0661 |
| **Name** | DB2_0661c_PlDataPhyRds_db |
| **Severity** | - |
| **Type** | c |
| **Description** | Buffer pool data physical reads in the database |
| **Alarming, Graphing, Reporting** | G, R |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | |
| **Automatic Action Report** | - |
| **Report Type** | OV Reporter |
| **Area** | Buffer pool |
| **Graph** | Data Logical / Physical Reads |

## DB2_0671c_PlDataWrts_db

| | |
|---|---|
| **Metric Number** | 0671 |
| **Name** | DB2_0671c_PlDataWrts_db |
| **Severity** | - |
| **Type** | c |
| **Description** | Buffer pool data writes in the database |
| **Alarming, Graphing, Reporting** | G, R |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OV Reporter |
| **Area** | Buffer pool |
| **Graph** | Data / Index Physical Writes |

## DB2_0681c_PlIdxPhyRds_db

| | |
|---|---|
| **Metric Number** | 0681 |
| **Name** | DB2_0681c_PlIdxPhyRds_db |
| **Severity** | - |
| **Type** | c |
| **Description** | Buffer pool index physical reads in the database |
| **Alarming, Graphing, Reporting** | G, R |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OV Reporter |
| **Area** | Buffer pool |
| **Graph** | Index Logical / Physical Reads |

## DB2_0691c_PlIdxWrts_db

| | |
|---|---|
| **Metric Number** | 0691 |
| **Name** | DB2_0691c_PlIdxWrts_db |
| **Severity** | - |
| **Type** | c |
| **Description** | Buffer pool index writes in the database |
| **Alarming, Graphing, Reporting** | G, R |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OV Reporter |
| **Area** | Buffer pool |
| **Graph** | Data / Index Physical Writes |

## DB2_0701c_DrctRds_db

| | |
|---|---|
| **Metric Number** | 0701 |
| **Name** | DB2_0701c_DrctRds_db |
| **Severity** | - |
| **Type** | c |
| **Description** | Direct reads by the database |
| **Alarming, Graphing, Reporting** | G, R |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OV Reporter |
| **Area** | Direct I/O |
| **Graph** | Direct read / writes in the database |

## DB2_0703c_DrctRds_ts

| | |
|---|---|
| **Metric Number** | 0703 |
| **Name** | DB2_0703c_DrctRds_ts |
| **Severity** | - |
| **Type** | C |
| **Description** | The number of direct reads of one or more sectors of data for a particular table space |
| **Alarming, Graphing, Reporting** | R |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OVPI |
| **Area** | Direct I/O |
| **Graph** | - |

## DB2_0711c_DrctWrts_db

| | |
|---|---|
| **Metric Number** | 0711 |
| **Name** | DB2_0711c_DrctWrts_db |
| **Severity** | - |
| **Type** | c |
| **Description** | Direct writes by the database |
| **Alarming, Graphing, Reporting** | G, R |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OV Reporter |
| **Area** | Direct I/O |
| **Graph** | Direct read / writes in the database |

## DB2_0713c_DrctWrts_ts

| | |
|---|---|
| **Metric Number** | 0713 |
| **Name** | DB2_0713c_DrctWrts_ts |
| **Severity** | - |
| **Type** | C |
| **Description** | Direct writes of one or more sectors of data for a particular table space |
| **Alarming, Graphing, Reporting** | R |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OVPI |
| **Area** | Direct I/O |
| **Graph** | - |

## DB2_0721c_RollbAttmpt_db

| | |
|---|---|
| **Metric Number** | 0721 |
| **Name** | DB2_0721c_RollbAttmpt_db |
| **Severity** | - |
| **Type** | c |
| **Description** | Rollbacks attempted by the database |
| **Alarming, Graphing, Reporting** | R |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OV Reporter |
| **Area** | Statements |
| **Graph** | - |

## DB2_0731c_IntRollbacks_db

| | |
|---|---|
| **Metric Number** | 0731 |
| **Name** | DB2_0731c_IntRollbacks_db |
| **Severity** | - |
| **Type** | c |
| **Description** | Internal rollbacks attempted by the database |
| **Alarming, Graphing, Reporting** | G, R |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OV Reporter |
| **Area** | Statements |
| **Graph** | Internal Statements |

## DB2_0741c_IntCommits_db

| | |
|---|---|
| **Metric Number** | 0741 |
| **Name** | DB2_0741c_IntCommits_db |
| **Severity** | - |
| **Type** | c |
| **Description** | Internal commits attempted by the database |
| **Alarming, Graphing, Reporting** | G, R |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OV Reporter |
| **Area** | Statements |
| **Graph** | Internal Statements |

## DB2_0750g_RemConns_in

| | |
|---|---|
| **Metric Number** | 0750 |
| **Name** | DB2_0750g_RemConns_in |
| **Severity** | - |
| **Type** | g |
| **Description** | Remote connections to the database manager |
| **Alarming, Graphing, Reporting** | G, R |
| **Collection Interval** | 10 min |
| **Delta** | No |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OV Reporter, OVPI |
| **Area** | Connections |
| **Graph** | Connections to the database manager |

## DB2_0771c_AgtAssocAppl_db

| | |
|---|---|
| **Metric Number** | 0771 |
| **Name** | DB2_0771c_AgtAssocAppl_db |
| **Severity** | - |
| **Type** | c |
| **Description** | Agents associated with applications in the database |
| **Alarming, Graphing, Reporting** | G |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Agents and applications |
| **Graph** | Applications |

## DB2_0772c_AgtAssocAppl_ap

| | |
|---|---|
| **Metric Number** | 0772 |
| **Name** | DB2_0772c_AgtAssocAppl_ap |
| **Severity** | - |
| **Type** | c |
| **Description** | Agents associated with the application |
| **Alarming, Graphing, Reporting** | R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | ASCII Report |
| **Area** | Agents and applications |
| **Graph** | - |

## DB2_0781a_PlRdTime_db

| | |
|---|---|
| **Metric Number** | 0781 |
| **Name** | DB2_0781a_PlRdTime_db |
| **Severity** | Major |
| **Type** | a |
| **Description** | Average buffer pool read time for the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 200 ms |
| **Reset value** | 100 ms |
| **Message Text** | High average buffer pool read time (<$VALUE>) on the database |
| **Instruction text** | Provides the average amount page read time for processing read requests that caused data or index pages to be physically read from disk to buffer pool.<br>This average is important since it may indicate the presence of an I/O wait, which in turn may indicate that you should be moving data to a different device. At the database and table space levels, this element includes the value of Buffer Pool Asynchronous Read Time. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Buffer pool |
| **Graph** | Average Read / Write Times |

## DB2_0782a_PlRdTime_ap

| | |
|---|---|
| **Metric Number** | 0782 |
| **Name** | DB2_0782a_PlRdTime_ap |
| **Severity** | Major |
| **Type** | a |
| **Description** | Average buffer pool read time for an application |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 200ms |
| **Reset value** | 100 ms |
| **Message Text** | High average buffer pool read time (<$VALUE>) for an application <$OPTION(add)> |
| **Instruction text** | Provides the average amount page read time for processing read requests that caused data or index pages to be physically read from disk to buffer pool.<br>This average is important since it may indicate the presence of an I/O wait, which in turn may indicate that you should be moving data to a different device. At the database and table space levels, this element includes the value of Buffer Pool Asynchronous Read Time. |
| **Automatic Action Report** | 0782 |
| **Report Type** | ASCII Report |
| **Area** | Buffer pool |
| **Graph** | - |

## DB2_0783a_PlRdTime_ts

| | |
|---|---|
| **Metric Number** | 0783 |
| **Name** | DB2_0783a_PlRdTime_ts |
| **Severity** | Major |
| **Type** | a |
| **Description** | Average buffer pool read time for a tablespace |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 200 ms |
| **Reset value** | 100 ms |
| **Message Text** | High average buffer pool read time (<$VALUE>) for a tablespace <$OPTION(add)> |
| **Instruction text** | Provides the average amount page read time for processing read requests that caused data or index pages to be physically read from disk to buffer pool.<br>This average is important since it may indicate the presence of an I/O wait, which in turn may indicate that you should be moving data to a different device. At the database and table space levels, this element includes the value of Buffer Pool Asynchronous Read Time. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Buffer pool |
| **Graph** | - |

## DB2_0785a_PlRdTime_bp

| | |
|---|---|
| **Metric Number** | 0785 |
| **Name** | DB2_0785a_PlRdTime_bp |
| **Severity** | Major |
| **Type** | A |
| **Description** | Average buffer pool read time for a particular buffer pool |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 200 ms |
| **Reset value** | 100 ms |
| **Message Text** | High average buffer pool read time (<$VALUE>) for bufferpool <$OPTION(add)> (Threshold <$THRESHOLD>) |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OVPI |
| **Area** | Buffer pool |
| **Graph** | - |

## DB2_0791a_PlWrtTime_db

| | |
|---|---|
| **Metric Number** | 0791 |
| **Name** | DB2_0791a_PlWrtTime_db |
| **Severity** | Major |
| **Type** | a |
| **Description** | Average buffer pool write time for the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 200ms |
| **Reset value** | 100 ms |
| **Message Text** | High average buffer pool write time (<$VALUE>) on the database |
| **Instruction text** | The average page write time spent physically writing data or index pages from the buffer pool to disk.<br>This average is important since it may indicate the presence of an I/O wait, which in turn may indicate that you should be moving data to a different device. At the database and table space levels, this element includes the value of Buffer Pool Asynchronous Write Time. |
| **Automatic Action Report** | . |
| **Report Type** | - |
| **Area** | Buffer pool |
| **Graph** | Average Read / Write Times |

## DB2_0792a_PlWrtTime_ap

| | |
|---|---|
| **Metric Number** | 0792 |
| **Name** | DB2_0792a_PlWrtTime_ap |
| **Severity** | Major |
| **Type** | a |
| **Description** | Average buffer pool write time for an application |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 200ms |
| **Reset value** | 100 ms |
| **Message Text** | High average buffer pool write time (<$VALUE>) for an application <$OPTION(add)> |
| **Instruction text** | The average page write time spent physically writing data or index pages from the buffer pool to disk.<br>This average is important since it may indicate the presence of an I/O wait, which in turn may indicate that you should be moving data to a different device. At the database and table space levels, this element includes the value of Buffer Pool Asynchronous Write Time. |
| **Automatic Action Report** | 0792 |
| **Report Type** | ASCII Report |
| **Area** | Buffer pool |
| **Graph** | - |

## DB2_0793a_PlWrtTime_ts

| | |
|---|---|
| **Metric Number** | 0793 |
| **Name** | DB2_0793a_PlWrtTime_ts |
| **Severity** | Major |
| **Type** | a |
| **Description** | Average buffer pool write time for a tablespace |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 200ms |
| **Reset value** | 100 ms |
| **Message Text** | High average buffer pool write time (<$VALUE>) for a tablespace <$OPTION(add)> |
| **Instruction text** | The average page write time spent physically writing data or index pages from the buffer pool to disk.<br>This average is important since it may indicate the presence of an I/O wait, which in turn may indicate that you should be moving data to a different device. At the database and table space levels, this element includes the value of Buffer Pool Asynchronous Write Time. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Buffer pool |
| **Graph** | - |

## DB2_0795a_PlWrtTime_bp

| | |
|---|---|
| **Metric Number** | 0795 |
| **Name** | DB2_0795a_PlWrtTime_bp |
| **Severity** | Major |
| **Type** | a |
| **Description** | Average buffer pool write time for a tablespace |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 200ms |
| **Reset value** | 100 ms |
| **Message Text** | High average buffer pool write time (<$VALUE>) for bufferpool <$OPTION(add)> (Threshold <$THRESHOLD>) |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Buffer pool |
| **Graph** | - |

## DB2_0800w_MaxConns_in

| | |
|---|---|
| **Metric Number** | 0800 |
| **Name** | DB2_0800w_MaxConns_in |
| **Severity** | Major |
| **Type** | w |
| **Description** | Maximum simultaneous connections to the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 10 min |
| **Delta** | No |
| **Min / Max Threshold** | Max |
| **Threshold** | 36 |
| **Reset value** | 27 |
| **Message Text** | High connection load (<$VALUE>) on the DB2 server |
| **Instruction text** | The highest number of simultaneous connections to the database since the database was activated.<br>You may use this element to evaluate the setting of the maxappls configuration parameter. If the value of this element is the same as the maxappls parameter, it is likely that some database connection requests were rejected, since maxappls limits the number of database connections allowed. The current number of connections at the time the snapshot was taken can be<br>calculated using the following formula:<br><br>remote connections to database manager + local connections |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Connections |
| **Graph** | Connections to the database manager |

## DB2_0811c_LogPgsRd_db

| | |
|---|---|
| **Metric Number** | 0811 |
| **Name** | DB2_0811c_LogPgsRd_db |
| **Severity** | - |
| **Type** | c |
| **Description** | Log pages read in the database |
| **Alarming, Graphing, Reporting** | - |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | High number of log pages read in the database (<$VALUE>%) |
| **Instruction text** | The number of log pages read from disk by the logger.<br>You can use this element with an operating system monitor to quantify the amount of I/O on a device that is attributable to database activity. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Transaction logs |
| **Graph** | - |

## DB2_0821c_LogPgsWrt_db

| | |
|---|---|
| **Metric Number** | 0821 |
| **Name** | DB2_0821c_LogPgsWrt_db |
| **Severity** | - |
| **Type** | c |
| **Description** | Growth of Log pages written in the database in the monitoring interval |
| **Alarming, Graphing, Reporting** | - |
| **Collection Interval** | - |
| **Delta** | yes |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | High number of log pages written in the database (<$VALUE>%) |
| **Instruction text** | The number of log pages written to disk by the logger.<br>You may use this element with an operating system monitor to quantify the amount of I/O on a device that is attributable to database activity.<br>Note: When log pages are written to disk, the last page might not be full. In such cases, the partial log page remains in the log buffer, and additional log records are written to the page. Therefore log pages might be written to disk by the logger more than once. You should not use this data element to measure the number of pages produced by DB2. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Transaction logs |
| **Graph** | - |

## DB2_0831w_MaxPriLogSpcU_db

| | |
|---|---|
| **Metric Number** | 0831 |
| **Name** | DB2_0831w_MaxPriLogSpcU_db |
| **Severity** | Minor |
| **Type** | w |
| **Description** | Percentage of the primary log space used in the database in the monitoring interval |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 10 min |
| **Delta** | yes |
| **Min / Max Threshold** | Max |
| **Threshold** | 10% |
| **Reset value** | 7% |
| **Message Text** | High maximum primary logspace used in the database (<$VALUE>%) |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Transaction logs |
| **Graph** | Maximum Primary log space used |

## DB2_0841g_PriLogAlloc_db

| | |
|---|---|
| **Metric Number** | 0841 |
| **Name** | DB2_0841g_PriLogAlloc_db |
| **Severity** | Major |
| **Type** | g |
| **Description** | Primary logs allocated |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 10 min |
| **Delta** | No |
| **Min / Max Threshold** | Max |
| **Threshold** | 2 |
| **Reset value** | 1.4 |
| **Message Text** | High number of primary logs allocated (<$VALUE>%) in the database |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Transaction logs |
| **Graph** | Logs Allocated |

## DB2_0851p_LogSpcUsed_db

| | |
|---|---|
| **Metric Number** | 0851 |
| **Name** | DB2_0851p_LogSpcUsed_db |
| **Severity** | Major |
| **Type** | p |
| **Description** | Percent log space used by the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 10 min |
| **Delta** | No |
| **Min / Max Threshold** | Max |
| **Threshold** | 85% |
| **Reset value** | 50% |
| **Message Text** | High usage of active logspace (<$VALUE>%) in the database |
| **Instruction text** | The total amount of active log space currently used (in megabytes) in the database.<br>Use this element to determine whether you may need to adjust the following configuration parameters to avoid running out of log space:<br>1. logfilsz<br>2. logprimary<br>3. logsecond<br><br>Note: While the database system monitor information is given in bytes, the configuration parameters are set in pages, which are each 4K bytes. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Transaction logs |
| **Graph** | Log space in the database |

## DB2_0861p_LogSpcAvail_db

| | |
|---|---|
| **Metric Number** | 0861 |
| **Name** | DB2_0861p_LogSpcAvail_db |
| **Severity** | Major |
| **Type** | p |
| **Description** | Percent log space available in the database |
| **Alarming, Graphing, Reporting** | A, G |
| **Collection Interval** | 10 min |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 20% |
| **Reset value** | 30% |
| **Message Text** | Low available active logspace (<$VALUE>%) in the database |
| **Instruction text** | The total amount of active log space currently available (in megabytes) in the database.<br>Use this element to determine whether you may need to adjust the following configuration parameters to avoid running out of log space:<br>1. logfilsz<br>2. logprimary<br>3. logsecond<br><br>Note: While the database system monitor information is given in bytes, the configuration parameters are set in pages, which are each 4K bytes. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Transaction logs |
| **Graph** | Log space in the database |

## DB2_0871p_FailedSQL_db

| | |
|---|---|
| **Metric Number** | 0871 |
| **Name** | DB2_0871p_FailedSQL_db |
| **Severity** | Major |
| **Type** | p |
| **Description** | Percent failed SQL statements in the database |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 90% |
| **Reset value** | 75% |
| **Message Text** | High percentage of failed SQL statements (<$VALUE>) in the database |
| **Instruction text** | The number of SQL statements that were attempted, but failed.<br>This count includes all SQL statements that received a negative SQLCODE. This element may also help you in determining reasons for poor performance, since failed statements mean time wasted by the database manager and as a result, lower throughput for the database. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Statements |
| **Graph** | - |

## DB2_0872p_FailedSQL_ap

| | |
|---|---|
| **Metric Number** | 0872 |
| **Name** | DB2_0872p_FailedSQL_ap |
| **Severity** | Major |
| **Type** | p |
| **Description** | Percent failed SQL statements in an application |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 90% |
| **Reset value** | 75 |
| **Message Text** | High percentage of failed SQL statements (<$VALUE>) in the application <$OPTION(add)> |
| **Instruction text** | The number of SQL statements that were attempted, but failed.<br>This count includes all SQL statements that received a negative SQLCODE. This element may also help you in determining reasons for poor performance, since failed statements mean time wasted by the database manager and as a result, lower throughput for the database. |
| **Automatic Action Report** | 0872 |
| **Report Type** | ASCII Report |
| **Area** | Statements |
| **Graph** | - |

## DB2_0881c_BndPrcomp_db

| | |
|---|---|
| **Metric Number** | 0881 |
| **Name** | DB2_0881c_BndPrcomp_db |
| **Severity** | Warning |
| **Type** | c |
| **Description** | Binds precompiled in the database |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | 30 min |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 5 |
| **Reset value** | 3 |
| **Message Text** | High number of binds precompiled (<$VALUE>) in the database |
| **Instruction text** | The number of binds and pre-compiles attempted.<br>You can use this element to gain insight into the current level of activity within the database manager. This value does not include the count of Internal Automatic Rebinds, but it does include binds that occur as a result of the REBIND PACKAGE command. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Statements |
| **Graph** | - |

## DB2_0882c_BndPrcomp_ap

| | |
|---|---|
| **Metric Number** | 0882 |
| **Name** | DB2_0882c_BndPrcomp_ap |
| **Severity** | Warning |
| **Type** | c |
| **Description** | Binds precompiled in an application |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | - |
| **Delta** | no |
| **Min / Max Threshold** | Max |
| **Threshold** | 3 |
| **Reset value** | 2 |
| **Message Text** | High number of binds precompiled (<$VALUE>) in the application <$OPTION(add)> |
| **Instruction text** | The number of binds and pre-compiles attempted.<br>You can use this element to gain insight into the current level of activity within the database manager. This value does not include the count of Internal Automatic Rebinds, but it does include binds that occur as a result of the REBIND PACKAGE command. |
| **Automatic Action Report** | 0882 |
| **Report Type** | ASCII Report |
| **Area** | Statements |
| **Graph** | - |

## DB2_0890p_FCMBuffFree_in

| | |
|---|---|
| **Metric Number** | 0890 |
| **Name** | DB2_0890p_FCMBuffFree_in |
| **Severity** | Major |
| **Type** | p |
| **Description** | Percent FCM buffers currently free |
| **Alarming, Graphing, Reporting** | A, G, R |
| **Collection Interval** | - (Applicable only in Partitioned Database Environment) |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 10% |
| **Reset value** | 15 % |
| **Message Text** | Low percentage of FCM buffers currently free (<$VALUE>) for the instance |
| **Instruction text** | This element indicates the percentage of FCM buffers currently free.<br>Use this to determine the current FCM buffer pool utilization. You can use this information to tune fcm_num_buffers. |
| **Automatic Action Report** | 0890 |
| **Report Type** | ASCII Report |
| **Area** | Fast Communications Manager |
| **Graph** | Fast Communications Manager |

## DB2_0900p_MsgAnchrFree_in

| | |
|---|---|
| **Metric Number** | 0900 |
| **Name** | DB2_0900p_MsgAnchrFree_in |
| **Severity** | Major |
| **Type** | p |
| **Description** | Percent message anchors currently free |
| **Alarming, Graphing, Reporting** | A, G, R |
| **Collection Interval** | - (Applicable only in Partitioned Database Environment) |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 10% |
| **Reset value** | 15 % |
| **Message Text** | Low percentage of message anchors currently free (<$VALUE>) for the instance |
| **Instruction text** | This metric indicates the percentage of message anchors currently free.<br>Use this to determine the current message anchor utilization. You can use this information to tune fcm_num_anchors. |
| **Automatic Action Report** | 0900 |
| **Report Type** | ASCII Report |
| **Area** | Fast Communications Manager |
| **Graph** | Fast Communications Manager |

## DB2_0910p_ConnEntrFree_in

| | |
|---|---|
| **Metric Number** | 0910 |
| **Name** | DB2_0910p_ConnEntrFree_in |
| **Severity** | Major |
| **Type** | p |
| **Description** | Percent connection entries currently free |
| **Alarming, Graphing, Reporting** | A, G, R |
| **Collection Interval** | - (Applicable only in Partitioned Database Environment) |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 10% |
| **Reset value** | 15 % |
| **Message Text** | Low percentage of connection entries currently free (<$VALUE>) for the instance |
| **Instruction text** | This element indicates the percentage of message anchors currently free.<br>Use this to determine the current message anchor utilization. You can use this information to tune fcm_num_anchors. |
| **Automatic Action Report** | 0910 |
| **Report Type** | ASCII Report |
| **Area** | Fast Communications Manager |
| **Graph** | Fast Communications Manager |

## DB2_0920p_ReqBlkFree_in

| | |
|---|---|
| **Metric Number** | 0920 |
| **Name** | DB2_0920p_ReqBlkFree_in |
| **Severity** | Major |
| **Type** | p |
| **Description** | Percent request blocks currently free |
| **Alarming, Graphing, Reporting** | A, G, R |
| **Collection Interval** | - (Applicable only in Partitioned Database Environment) |
| **Delta** | no |
| **Min / Max Threshold** | Min |
| **Threshold** | 10% |
| **Reset value** | 15 % |
| **Message Text** | Low percentage of requested block currently free (<$VALUE>) for the instance |
| **Instruction text** | This element indicates the percentage of request blocks currently free.<br>Use this to determine the current request block utilization. You can use this information to tune fcm_num_rqb. |
| **Automatic Action Report** | 0920 |
| **Report Type** | ASCII Report |
| **Area** | Fast Communications Manager |
| **Graph** | Fast Communications Manager |

## DB2_0933p_FreeTblSpc_ts

| | |
|---|---|
| **Metric Number** | 0933 |
| **Name** | DB2_0933g_**FreeTblSpc**_ts |
| **Severity** | Major |
| **Type** | p |
| **Description** | Percent free space in the table space in the monitoring interval |
| **Alarming, Graphing, Reporting** | A, R |
| **Collection Interval** | 10 min |
| **Delta** | No |
| **Min / Max Threshold** | Min |
| **Threshold** | 50% |
| **Reset value** | 60 % |
| **Message Text** | High percentage request blocks currently free (<$VALUE>%) in the table space <$OPTION(add)> |
| **Instruction text** | |
| **Automatic Action Report** | - |
| **Report Type** | OV Reporter, OVPI, ASCII Report |
| **Area** | Tablespace |
| **Graph** | - |

## DB2_0943g_TblSpcSize_ts

| | |
|---|---|
| **Metric Number** | 0943 |
| **Name** | DB2_0943g_**TblSpcSize**_ts |
| **Severity** | - |
| **Type** | G |
| **Description** | Size of a particular table space |
| **Alarming, Graphing, Reporting** | R |
| **Collection Interval** | 30 min |
| **Delta** | No |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OVPI Report |
| **Area** | Tablespace |
| **Graph** | - |

## DB2_0953i_TblSpcStt_ts

| | |
|---|---|
| **Metric Number** | 0953 |
| **Name** | DB2_0953i_**TblSpcStt**_ts |
| **Severity** | Major |
| **Type** | i |
| **Description** | State for a particular table space |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | 10 min |
| **Delta** | No |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | Tablespace <$OPTION(add)> on partition <$OPTION(ptn)> is available (Status: normal).<br>Tablespace <$OPTION(add)> on partition <$OPTION(ptn)> is currently unavailable. |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Tablespace |
| **Graph** | - |

## DB2_0963p_TblSpcGrwth_ts

| | |
|---|---|
| **Metric Number** | 0963 |
| **Name** | DB2_0963g_**TblSpcGrwth**_ts |
| **Severity** | - |
| **Type** | p |
| **Description** | Saves the growth rate of a particular table space within the monitoring interval |
| **Alarming, Graphing, Reporting** | R |
| **Collection Interval** | 60 min |
| **Delta** | Yes |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OVPI, Report |
| **Area** | Tablespace |
| **Graph** | - |

## DB2_0991g_DBGrowth_db

| | |
|---|---|
| **Metric Number** | 0991 |
| **Name** | DB2_0991g_DBGrowth_db |
| **Severity** | - |
| **Type** | g |
| **Description** | The growth rate and size of a database in MB in the monitoring interval |
| **Alarming, Graphing, Reporting** | R |
| **Collection Interval** | 30 min |
| **Delta** | Yes |
| **Min / Max Threshold** | - |
| **Threshold** | - |
| **Reset value** | - |
| **Message Text** | - |
| **Instruction text** | - |
| **Automatic Action Report** | - |
| **Report Type** | OVPI Report |
| **Area** | Database |
| **Graph** | - |

## DB2_2071p_ApplMax_db

| | |
|---|---|
| **Metric Number** | 2071 |
| **Name** | DB2_2071p_ApplMax_db |
| **Severity** | Minor |
| **Type** | P |
| **Description** | The percentage of application currently connected calculated from the maximum number of applications defined in the database configuration parameter “MAXAPPL” |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | 30 min |
| **Delta** | No |
| **Min / Max Threshold** | Max |
| **Threshold** | 80% |
| **Reset value** | 70 % |
| **Message Text** | High application load (<$VALUE>%) on the DB2 server exceeding threshold (<$THRESHOLD>%) |
| **Instruction text** | You may use this element to help you understand the level of activity within a database and the amount of system resource being used. It can help you adjust the setting of the maxappls and max_coordagents configuration parameters, which are described in the IBM DB2 Administration Guide. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Agents and Applications |
| **Graph** | - |

## DB2_2490p_AgtMax_in

| | |
|---|---|
| **Metric Number** | 2490 |
| **Name** | DB2_2490p_AgtMax_in |
| **Severity** | Minor |
| **Type** | P |
| **Description** | Percentage of agents registered in the instance per Database manager configuration parameter MAXAGENTS |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | 30 min |
| **Delta** | No |
| **Min / Max Threshold** | Max |
| **Threshold** | 80 % |
| **Reset value** | 70 % |
| **Message Text** | Percentage of agents registered in the instance (<$VALUE>%) is above threshold (<$THRESHOLD>%) |
| **Instruction text** | You may use this element to help you understand the level of activity within an instance and the amount of system resource being used. It can help you adjust the setting of the database manager configuration parameters maxagents, max_cagents and max_coordagents. This is described in the IBM DB2 Administration Guide. |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Agents and Applications |
| **Graph** | - |

## DB2_2600p_ConnMax_in

| | |
|---|---|
| **Metric Number** | 2600 |
| **Name** | DB2_2600p_ConnMax_in |
| **Severity** | Minor |
| **Type** | P |
| **Description** | Percentage of connections per database manager configuration parameter MAX_CONNECTIONS |
| **Alarming, Graphing, Reporting** | A |
| **Collection Interval** | 30 min |
| **Delta** | No |
| **Min / Max Threshold** | Max |
| **Threshold** | 80 % |
| **Reset value** | 70 % |
| **Message Text** | Connections open for the instance (<$VALUE>%) is above threshold (<$THRESHOLD>%) |
| **Instruction text** | You may use this element to help you understand the level of activity within an instance and the amount of system resource being used. It can help you adjust the setting of the database manager configuration parameters max_connections and max_coordagents. This is described in the IBM DB2 Administration Guide (Performance). |
| **Automatic Action Report** | - |
| **Report Type** | - |
| **Area** | Connections |
| **Graph** | - |