

SENSOR TOD

Date and time of the most recent sensor data collection before the evaluation.

SUM MSG

Content of the summary message.

LEVEL

Exception level of the message from Policy Services.

- WARNING
- CRITICAL
- SEVERE

NAME

Name of the action.

REORG

A reorganization is recommended.

EXTENDSDEP

An SDEP extension of a DEDB area is recommended.

EXTENDIOVF

An IOVF extension of a DEDB area is recommended.

MESSAGE

A rule exception message is issued.

CLASS

Exception class name.

For more information about an exception class name, see the *IBM Tools Base Policy Services for z/OS User's Guide*.

CODE PAGE

Translation code page for the message.

RULE

Policy rule or user set exception level.

For more information about a rule, see the *IBM Tools Base Policy Services for z/OS User's Guide*.

EXC MSG

The long version of the message.

For more information about an exception message, see the *IBM Tools Base Policy Services for z/OS User's Guide*.

Monitor List Registration utility (IAVBUTLO)

The Monitor List Registration utility is a batch utility that adds multiple databases to the monitor list.

IAVSYSIN DD is the input SYSIN DD for this utility. On the IAVSYSIN DD statement, you supply the names of the databases that you want to add to the monitor list together with monitoring attributes. When the utility is run, it adds all the databases found on the IAVSYSIN DD statement with specified monitoring attributes to the monitor list.

If one or more of the specified databases already exist in the monitor list, the utility updates the database entries and ends with return code 4 to alert that the entries were updated.

Tip: Use the Monitor List Registration utility to add or update multiple entries in the monitor list at once. If you want to add or update a single entry, you can use the Autonomics Director client dialog. For more information, see [“Adding or updating monitor list entries” on page 55](#).

Running the Monitor List Registration utility

The Monitor List Registration utility runs as a standard z/OS batch job. To add or update entries in the monitor list, code the Monitor List Registration utility JCL and run the job.

Before you begin

1. Ensure that both the Autonomics Director server and the IMS Tools Knowledge Base server are available. The utility uses these servers to update the monitor list that is stored in the Autonomics Director repository managed by IMS Tools Knowledge Base.
2. You must create skeleton JCL for use with DB Sensor. For more information about creating JCL for DB Sensor, see the *Tools Base for z/OS: Configuration Guide for IMS*.

Procedure

To add or update monitor list entries:

1. Copy IAVBMLA0 from SHKTSAMP as sample JCL.
2. Write the EXEC and the DD statements.

See [“EXEC and DD statements for the Monitor List Registration utility” on page 118](#) for information about the format of the EXEC statement and the input and the output DD statements.

3. Specify GLOBAL, ATTRIBUTE, and DATABASE command keywords on the IAVSYSIN DD statement.

See [“Control statements for the Monitor List Registration utility” on page 119](#) for information about the keywords that can be specified for these commands.

Tip: The Monitor List Registration utility supports adding or updating up to 9,999 databases entries in one job. However, the actual number of entries that can be added or updated in one job may be less depending on the system resource availability. If you want to add or update a large number of database entries, consider running multiple Monitor List Registration utility jobs.

4. Submit the job.

Ensure that the job completes with a return code of 0 or 4. Return code 4 indicates that either the job completed with a warning condition or one or more existing entries were updated. You can review detailed registration result in the Monitor List Registration report.

If the utility ends with one of other return codes, review the Journal Messages report and identify the cause of the error.

Example JCL for the Monitor List Registration utility

To run the Monitor List Registration utility, run the job step that is similar to that shown in the following figure.

```
//S01 EXEC PGM=IAVBUTL0,PARM='FUNC=ADD_MONITORLIST'
//STEPLIB DD DISP=SHR,DSN=ITB.SHKTLOAD
//IAVBJRNL DD SYSOUT=*
//IAVBRPRT DD SYSOUT=*
//IAVSYSIN DD *
GLOBAL(
ITKBSRVR(FPQSRV01)
ADXCGRP(IAVADM00)
RECONID(IMSARECN)
)
ATTRIBUTE(
OWNER(ITBUSR)
PRIORITY(5)
AUTOEVAL(Y)
EVALCNT(010)
EVALINT(001:000:00)
SENSOR_AGE(001:000:00)
SENSOR_JCLDSN(IMST00LS.ITB16.JCLLIB)
DBSENSOR_FFDB(SNSRFF)
DBSENSOR_HALDB(SNSRHL)
DBSENSOR_DEDB(SNSRFP)
REORG_POLICY(DBTYPE(FFDB) POLICYBY(DBTYPE))
REORG_POLICY(DBTYPE(HALDB) POLICYBY(DBDNAME))
REORG_POLICY(DBTYPE(DEDB) POLICYBY(NAME) POLICYNAME(SYS.DBDTYPE.DEDB))
RECOVERY_POLICY(DBTYPE(ALL) POLICYBY(DEFAULT))
DATABASE(DBD(CAGDA01))
...
DATABASE(DBD(Z9Y9A02))
/*
```

Figure 16. JCL for the Monitor List Registration utility

EXEC and DD statements for the Monitor List Registration utility

You must specify an EXEC statement and DD statements that define the input and output data sets in your JCL.

EXEC statement

The EXEC statement must be in the following format:

```
EXEC PGM=IAVBUTL0,PARM='FUNC=ADD_MONITORLIST'
```

DD statements

Specify DD statements as follows:

STEPLIB DD

Required DD statement. It specifies the IMS Tools Base product library (SHKTLOAD data set). The library must be APF-authorized.

IAVSYSIN DD

Required DD statement. It specifies the input control statements that control the Monitor List Registration utility.

IAVBJRNL DD

Optional DD statement. It specifies the processing log output data set, which stores processing messages that are issued by the Monitor List Registration utility.

If you do not specify this DD statement, the Monitor List Registration utility dynamically allocates the data set by using SYSOUT=*.

IAVBRPRT DD

Optional DD statement. It specifies the report output data set, which stores the Monitor List Registration report.

If you do not specify this DD statement, the Monitor List Registration utility dynamically allocates the data set by using SYSOUT=*.

Control statements for the Monitor List Registration utility

A control statement for the Monitor List Registration utility contains information needed to access IMS Tools Base servers, a list of databases to add or update, and database monitoring attributes to apply to new and updated monitor list entries.

The control statement must be specified in the IAVSYSIN data set. This control statement data set generally resides in the input stream. However, it can also be defined as a sequential data set or as a member of a partitioned data set. It must contain 80-byte, fixed-length records. The block size, if coded, must be a multiple of 80.

The control statement must be coded in columns 1 - 72. Columns 73 - 80 are regarded as comments and ignored.

GLOBAL command

The **GLOBAL** command specifies the information needed to access IMS Tools Base servers.

The following syntax diagram shows the syntax for the **GLOBAL** command:

```
►► GLOBAL( — ADXCFGRP( AD_XCF_group_name ) — ITKBSRVR( IMS_Tools_KB_server_name ) —►  
  
    ► RECONID( RECON_id ) ►◄
```

The following table summarizes the keywords for the **GLOBAL** command.

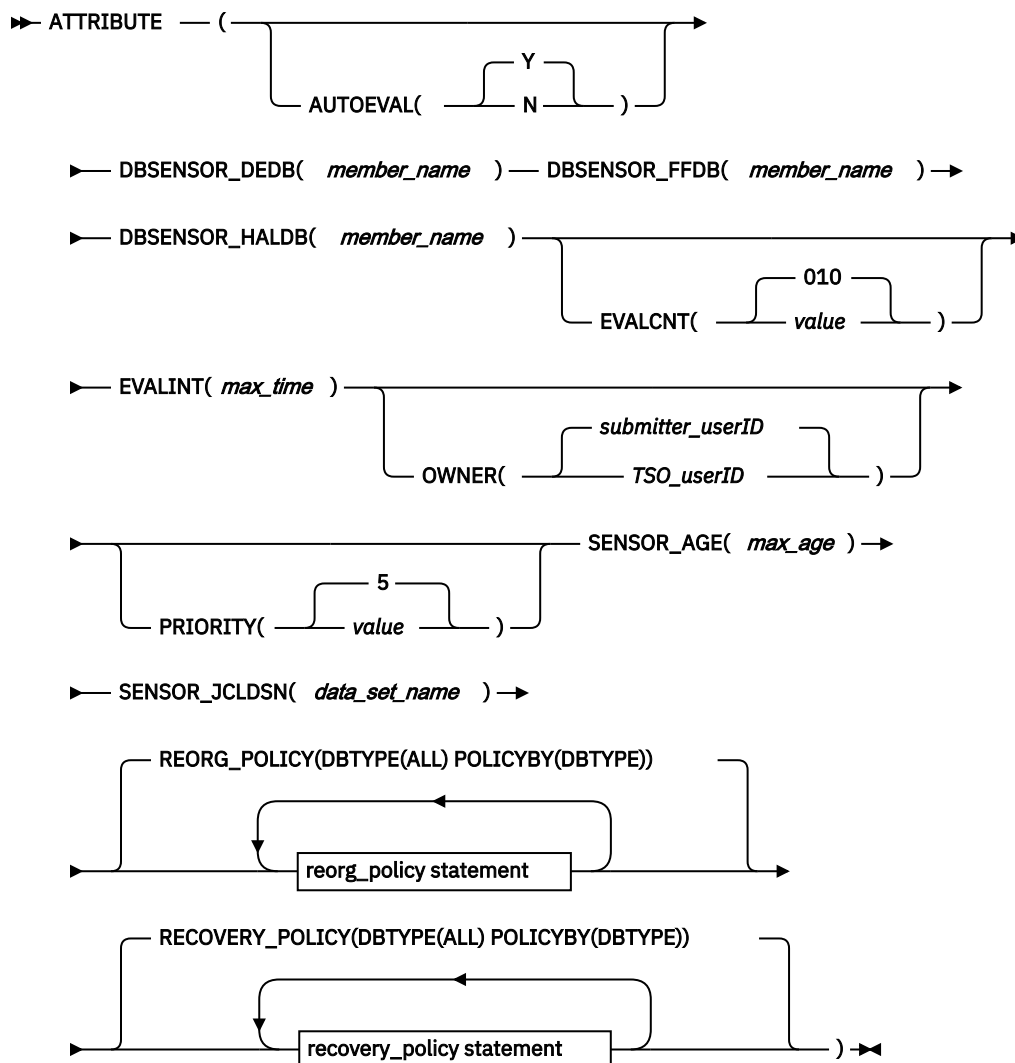
Table 6. **GLOBAL** command keywords

Keyword	Required or optional?	Default	Description
ADXCFGRP	Required	n/a	Specify the name of the Autonomics Director server XCF group.
ITKBSRVR	Required	n/a	Specify the name of the IMS Tools KB server XCF group.
RECONID	Required	n/a	Specify the RECON ID that identifies the IMS Tools KB RECON environment.

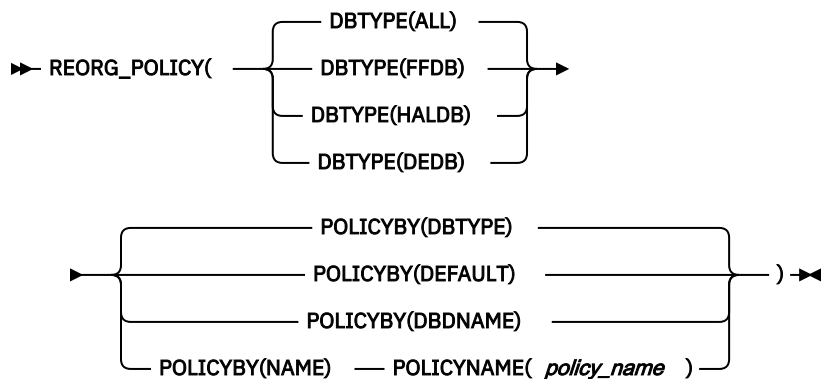
ATTRIBUTE command

The **ATTRIBUTE** command specifies monitoring attributes. There can be only one **ATTRIBUTE** command. The monitoring attributes supplied with the **ATTRIBUTE** command are applied to all the database entries that are added or updated in the job.

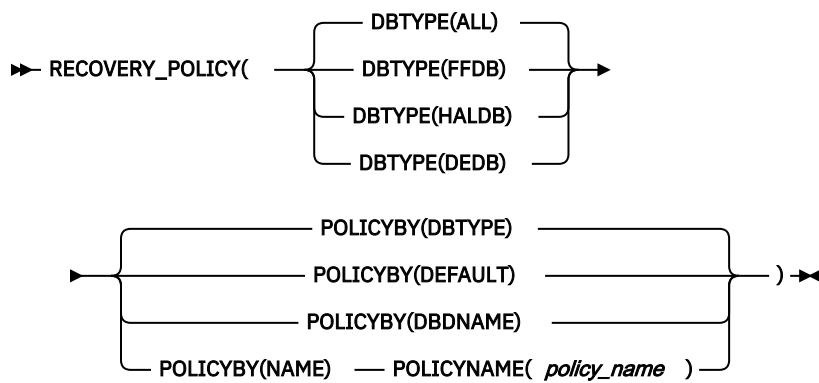
The following syntax diagram shows the syntax for the **ATTRIBUTE** command:



reorg_policy statement



recovery_policy statement



The following table summarizes the keywords for the **ATTRIBUTE** command.

Table 7. **ATTRIBUTE** command keywords

Keyword	Required or optional?	Default	Description
AUTOEVAL	Optional	Y	Specify whether to evaluate the database, partition, or area after each sensor data collection run for the selected database, partition, or area. Valid values are Y (evaluate) and N (do not evaluate).
DBSENSOR_DEDB	Optional	n/a	<p>At least one DBSENSOR_xxxx keyword must be specified. If you are adding or updating one or more DEDB area entries, you must specify the DBSENSOR_DEDB keyword.</p> <p>Specify the partitioned data set member that contains the JCL for Fast Path DEDB that is used to run the sensor data collector.</p> <p>During evaluation run scheduling, a domain-specific suffix may be added to the member name. Therefore, the member name must not exceed seven characters. For REORG sensor collection, the member name is used as specified. For RECOVERY sensor collection, a 'Y' is appended to the specified member name.</p>
DBSENSOR_FFDB	Optional	n/a	<p>At least one DBSENSOR_xxxx keyword must be specified. If you are adding or updating one or more full-function database entries, you must specify the DBSENSOR_FFDB keyword.</p> <p>Specify the partition data set member that contains the JCL for full-function database that is used to run the sensor data collector.</p> <p>During evaluation run scheduling, a domain-specific suffix may be added to the member name. Therefore, the member name must not exceed seven characters. For REORG sensor collection, the member name is used as specified. For RECOVERY sensor collection, a 'Y' is appended to the specified member name.</p>

Table 7. **ATTRIBUTE** command keywords (continued)

Keyword	Required or optional?	Default	Description
DBSENSOR_HALDB	Optional	n/a	<p>At least one DBSENSOR_xxxx keyword must be specified. If you are adding or updating one or more HALDB partition entries, you must specify the DBSENSOR_HALDB keyword.</p> <p>Specify the partitioned data set member that contains the JCL for HALDB database that is used to run the sensor data collector.</p> <p>During evaluation run scheduling, a domain-specific suffix may be added to the member name. Therefore, the member name must not exceed seven characters. For REORG sensor collection, the member name is used as specified. For RECOVERY sensor collection, a 'Y' is appended to the specified member name.</p>
EVALCNT	Optional	10	Specify the number of evaluations that are saved for the database, partition, or area. This value is in the range of 1 - 255.
EVALINT	Required	n/a	Specify the maximum amount of time that can elapse before a policy evaluation is scheduled for the selected database, partition, or area. This value is expressed in days, hours, and minutes in <i>days:hrs:mins</i> format. For example, 031:001:30 indicates 31 days, 1 hour, and 30 minutes can elapse before the next evaluation.
OWNER	Optional	User ID of the utility job submitter	Specify the TSO user ID of the owner. Automated jobs of Autonomics Director are submitted by using this user ID. This user ID must have proper RACF authority.
PRIORITY	Optional	5	Specify the priority level that is used when the database, partition, or area is selected for evaluation. This value is in the range of 1 - 9. A value of 1 indicates the highest priority, which means that this database, partition, or area is evaluated first.
SENSOR_AGE	Required	n/a	Specify the maximum age of sensor data for the database, partition, or area. This value is expressed in days, hours, and minutes in <i>days:hrs:mins</i> format. For example, 031:001:30 indicates 31 days, 1 hour, and 30 minutes is the maximum age of sensor data. If the sensor data is older than the specified age, a sensor run is scheduled prior to an evaluation run.
SENSOR_JCLDSN	Required	n/a	Specify the cataloged partitioned data set name that contains the JCL that is used to run the sensor data collector.

The following tables summarize the keywords for the REORG_POLICY statement and the RECOVERY_POLICY statement of the **ATTRIBUTE** command. Up to three REORG_POLICY statements and RECOVERY_POLICY statements can be specified, respectively.

Use REORG_POLICY statement for the REORG domain, and RECOVERY_POLICY statement for the RECOVERY domain.

Table 8. REORG_POLICY statement keywords (**ATTRIBUTE** command keywords)

Keyword	Required or optional?	Default	Description
DBTYPE	Optional	ALL	<p>Specify the type of database to which this REORG_POLICY statement applies.</p> <p>ALL The POLICYBY and POLICYNAME keywords specified in this REORG_POLICY statement apply to all databases regardless of their database type. If you specify DBTYPE(ALL), there must be no other REORG_POLICY statement.</p> <p>FFDB The POLICYBY and POLICYNAME keywords specified in this REORG_POLICY statement apply only to full-function databases.</p> <p>HALDB The POLICYBY and POLICYNAME keywords specified in this REORG_POLICY statement apply only to HALDB partitions.</p> <p>DEDB The POLICYBY and POLICYNAME keywords specified in this REORG_POLICY statement apply only to Fast Path DEDB areas.</p>
POLICYBY	Optional	DBTYPE	<p>Specify how Policy Services determines the name of the policy for database evaluation.</p> <p>DEFAULT The policy name is determined in the same manner as DBTYPE (using the database organization form).</p> <p>DBTYPE The policy name is determined by using the database organization form.</p> <p>DBDNAME The policy name is determined by using the policy name that is associated with the database.</p> <p>NAME The policy name is determined by using the policy name that is specified on the subsequent POLICYNAME keyword.</p>
POLICYNAME	Optional	n/a	<p>Specify the policy name for database evaluation. This keyword is required when POLICYBY(NAME) is specified. The POLICYNAME keyword is effective only when POLICYBY(NAME) is specified.</p>

Table 9. RECOVERY_POLICY statement keywords (**ATTRIBUTE** command keywords)

Keyword	Required or optional?	Default	Description
DBTYPE	Optional	ALL	<p>Specify the type of database to which this RECOVERY_POLICY statement applies.</p> <p>ALL The POLICYBY and POLICYNAME keywords specified in this RECOVERY_POLICY statement apply to all databases regardless of their database type. If you specify DBTYPE(ALL), there must be no other RECOVERY_POLICY statement.</p> <p>FFDB The POLICYBY and POLICYNAME keywords specified in this RECOVERY_POLICY statement apply only to full-function databases.</p> <p>HALDB The POLICYBY and POLICYNAME keywords specified in this RECOVERY_POLICY statement apply only to HALDB partitions.</p> <p>DEDB The POLICYBY and POLICYNAME keywords specified in this RECOVERY_POLICY statement apply only to Fast Path DEDB areas.</p>
POLICYBY	Optional	DEFAULT	<p>Specify how Policy Services determines the name of the policy for database evaluation.</p> <p>DEFAULT The default policy is used.</p> <p>DBTYPE The policy name is determined by using the database organization form.</p> <p>DBDNAME The policy name is determined by using the policy name that is associated with the database.</p> <p>NAME The policy name is determined by using the policy name that is specified on the subsequent POLICYNAME keyword.</p>
POLICYNAME	Optional	n/a	<p>Specify the policy name for database evaluation. This keyword is required when POLICYBY(NAME) is specified. The POLICYNAME keyword is effective only when POLICYBY(NAME) is specified.</p>

DATABASE command

The **DATABASE** command specifies the name of the database that you want to add to the monitor list or update in the monitor list. There can be up to 9,999 **DATABASE** commands.

The following syntax diagram shows the syntax for the **DATABASE** command:

➤ DATABASE(— DBD(*database_name*) —) ➤

The Monitor List Registration utility supports adding or updating up to 9,999 databases entries in one job. However, the actual number of entries that can be added or updated in one job may be less depending on the system resource availability. If you want to add or update a large number of database entries, consider running multiple Monitor List Registration utility jobs.

Table 10. **DATABASE** command keywords

Keyword	Required or optional?	Default	Description
DBD	Required	n/a	Specify the name of the database that you want to add to or update in the monitor list. Wildcard characters are not supported.

Output from the Monitor List Registration utility

The Monitor List Registration utility generates a Journal Messages report, a Process Summary report, and a Monitor List Registration report.

Journal Messages report

The Journal Messages report contains processing messages about the Monitor List Registration utility. This report is generated in the IAVBJRNL data set.

```
Tools Base Autonomics Director - V1R6          Journal Messages          MONITOR LIST REGISTRATION UTIL.
5655-V93                                         Date: 2020-09-24 Time: 20:00:00

2020-09-24 20:00:023 IAV8001I THE MONITOR LIST REGISTRATION UTILITY PROCESS HAS STARTED.
2020-09-24 20:00:024 IAV8039I CONNECTED TO THE AD SERVER. NAME=IAVSRV01.
2020-09-24 20:00:066 IAV8042W PARTITION HAL1H1C OF DBD HAL1H1 , WHICH EXISTS IN THE MONITOR LIST, IS NOT FOUND IN THE DBD.
2020-09-24 20:00:418 IAV8043E DBD DEDBJN20 DOES NOT EXIST.
2020-09-24 20:00:429 IAV8044E DATABASE ORGANIZATION TYPE GSAM IS NOT SUPPORTED. DBD GSAMDB .
2020-09-24 20:01:045 IAV8041W DBD AUTODB HAS BEEN UPDATED IN THE MONITOR LIST.
2020-09-24 20:01:273 IAV8040I DBD DEDBJN23 HAS BEEN ADDED TO THE MONITOR LIST.
2020-09-24 20:01:298 IAV8041W DBD HAL1H1 HAS BEEN UPDATED IN THE MONITOR LIST.
2020-09-24 20:01:470 IAV8041W DBD DEDBJN24 HAS BEEN UPDATED IN THE MONITOR LIST.
2020-09-24 20:02:230 IAV8004E THE MONITOR LIST REGISTRATION UTILITY PROCESS HAS ENDED WITH ERROR.
```

Figure 17. Journal Messages report

Process Summary report

The Process Summary report contains the summary of registration processing by the Monitor List Registration utility. This report is generated in the IAVBRPRT data set.

```
Tools Base Autonomics Director - V1R6          Process Summary Report          Page: 1
5655-V93                                         Date: 2020-09-24 Time: 20:00:00

GLOBAL statement:

ITKBSRVR ..... FPQSRV01
ADXCFCGRP ..... IAVADM00
RECONID ..... IMSARECN

Summary of monitor list registration:

Number of entries added
Full-function databases ..... nn,nnn,nnn
HALDB partitions ..... nn,nnn,nnn
Fast Path DEDB areas ..... nn,nnn,nnn

Total ..... nn,nnn,nnn

Number of entries updated
Full-function databases ..... nn,nnn,nnn
HALDB partitions ..... nn,nnn,nnn
Fast Path DEDB areas ..... nn,nnn,nnn

Total ..... nn,nnn,nnn

Number of resources failed ..... nn,nnn,nnn

Completion code ..... nn
```

Figure 18. Process Summary report

Monitor List Registration report

The Monitor List Registration report contains the attributes that were applied to the new and updated database entries, and the names of the databases that were added, updated, and failed. This report is generated in the IAVBRPRT data set..

Tools Base Autonomics Director - V1R6				Monitor List Registration Report				Page: 2			
5655-V93								Date: 2020-09-24 Time: 20:00:00			
Attributes for full-function database:											
OWNER		: ITBUSR									
PRIORITY		: 5									
AUTOEVAL		: Y									
EVALCNT		: 010									
EVALINT		: 001:000:00									
SENSOR_AGE		: 001:000:00									
SENSOR_JCLDSN		: IMSTOOLS.ITB16.JCLLIB									
DBSENSOR_FFDB		: SNSRFF									
REORG_POLICYBY		: DBTYPE									
REORG_POLICYNAME		:									
RECOVERY_POLICYBY		: DEFAULT									
RECOVERY_POLICYNAME		:									
Note: An asterisk (*) indicates that the entry was updated. Resources without an asterisk indicate that the entries were added.											
Added or updated databases											
*AUTODB		EMPDB2		*CAGDA01		*CAGDA02		CAGDA03		CAGDB01	
CAGDC03		CAGDC04		CAGDC05		CAGDF01		CAGDF02		CAGDB02	
										CAGDB03	
										CAGDB04	
										CAGDB05	
										CAGDC01	
										CAGDC02	
Tools Base Autonomics Director - V1R6				Monitor List Registration Report				Page: 3			
5655-V93								Date: 2020-09-24 Time: 20:00:00			
Attributes for HALDB partitions:											
OWNER		: ITBUSR									
PRIORITY		: 5									
AUTOEVAL		: Y									
EVALCNT		: 010									
EVALINT		: 001:000:00									
SENSOR_AGE		: 001:000:00									
SENSOR_JCLDSN		: IMSTOOLS.ITB16.JCLLIB									
DBSENSOR_HALDB		: SNSRHL									
REORG_POLICYBY		: DBDNAME									
REORG_POLICYNAME		:									
RECOVERY_POLICYBY		: DBDNAME									
RECOVERY_POLICYNAME		:									
Note: An asterisk (*) indicates that the entry was updated. Resources without an asterisk indicate that the entries were added.											
DBD name		Added or updated partitions									
HAL1H1		*HAL1H1A		*HAL1H1B							
HAL2H1		H210001		H210002		H210003		H210004		H210005	
		H210011		H210012		H210013		H210014		H210015	
								H210016		H210017	
								H210018		H210019	
								H210020			
Tools Base Autonomics Director - V1R6				Monitor List Registration Report				Page: 4			
5655-V93								Date: 2020-09-24 Time: 20:00:00			
Attributes for Fast Path DEDB areas:											
OWNER		: ITBUSR									
PRIORITY		: 5									
AUTOEVAL		: Y									
EVALCNT		: 010									
EVALINT		: 001:000:00									
SENSOR_AGE		: 001:000:00									
SENSOR_JCLDSN		: IMSTOOLS.ITB16.JCLLIB									
DBSENSOR_DEDB		: SNSRFP									
REORG_POLICYBY		: NAME									
REORG_POLICYNAME		: SYS.DBTYPE.DEDB									
RECOVERY_POLICYBY		: NAME									
RECOVERY_POLICYNAME		: SYS.RECOV._DEFAULT									
Note: An asterisk (*) indicates that the entry was updated. Resources without an asterisk indicate that the entries were added.											
DBD name		Added or updated areas									
DEDBJN22		D22AR11		D22AR31		D22AR51					
DEDBJN23		*D2300000		*D2300001		*D2300002		*D2300003		*D2300004	
		*D2300010		*D2300011		*D2300012		*D2300013		*D2300014	
		*D2300020		*D2300021		*D2300022		*D2300023		*D2300024	
		*D2300030		*D2300031		*D2300032		*D2300033		*D2300034	
		*D2300040		*D2300041		*D2300042		*D2300043		*D2300044	
		*D2300050		*D2300051		*D2300052		*D2300053		*D2300054	
		*D2300060		*D2300061		*D2300062		*D2300063		*D2300064	
		*D2300070		*D2300071		*D2300072		*D2300073		*D2300074	
		*D2300080		*D2300081		*D2300082		*D2300083		*D2300084	
		*D2300090		*D2300091		*D2300092		*D2300093		*D2300094	
								*D2300095		*D2300096	
								*D2300097		*D2300098	
								*D2300099			

Figure 19. Monitor List Registration report

```

Tools Base Autonomics Director - V1R6      Monitor List Registration Report      Page: 5
5655-V93                                     Date: 2020-09-24      Time: 20:00:00

Resources ended with warning status

DBD name   Area/Part   Message (See journal messages for details)
-----
HAL1H1     HAL1H1C     IAV8042W Area/Partition in the monitor list not found in the DBD

Tools Base Autonomics Director - V1R6      Monitor List Registration Report      Page: 6
5655-V93                                     Date: 2020-09-24      Time: 20:00:00

Resources ended with error status

DBD name   Message (See journal messages for details)
-----
DEDBJN20   IAV8043E DBD does not exist
GSAMDB     IAV8044E Database organization type is not supported

```

Figure 20. Monitor List Registration report (cont.)

Return codes: Monitor List Registration utility

This reference section provides detailed information about the return and reason codes reported by the Monitor List Registration utility.

Table 11. Return codes from the Monitor List Registration utility

Code	Description	User response
0	Job successfully ended.	None.
4	Job ended with a warning message.	Check the messages whose message numbers are suffixed by 'W'. The utility also ends with this return code when it updates existing database entries.
8	Job ended with an error message.	Check the messages whose message numbers are suffixed by 'E'. Correct the error, and rerun the job.
12	Job abnormally ended and recovered by ESTAE routine.	This might be an internal system error. Contact IBM Software Support.
16	Job failed to initialize the BPE environment.	Correct any errors, and rerun the job. If this situation persists, contact IBM Software Support.