Recommended ASPECT® Database Settings

Issue Date: March 29th, 2019
Product: ASPECT®
Product Version: < 3.02.01

Summary

This bulletin lists the tested logging limits per **ASPECT®** device. Customers are advised to limit the amount of log data stored in installed instances of **ASPECT®** databases to conform with these limits.

Background

ASPECT® `3.02.01` introduced standard limits for **Alarm** and **Trend logging**, to ensure proper housekeeping in the **ASPECT®** database. As this is now considered best practice, customers are advised to add these limits to existing projects.

Features and Installation

For applications that require extensive logging such as an extended data retention or high rate of sampling, configure **ASPECT®-Enterprise** to log points from the **MATRIX Series** and **NEXUS Series** controllers as required. To retain a backup duplicate you can log the same points directly in the **MATRIX Series** or **NEXUS Series** to their respective "Max Rows" limits at the same or a different logging frequency.

For applications such as ten-year data retention with 1-minute logging intervals, consideration must be made of the amount of data stored in **ASPECT®-Enterprise**, including the effect on IT infrastructure. Databases can run to terabyte sizes under some configurations. Cylon recommends architecting your system design and database architecture with experienced IT personnel to ensure a robust solution capable of storing and maintaining trend and log data from the automation system.

Recommended Settings

To ensure optimal performance in the **ASPECT®** database, customers should ensure that the following values are used as maximums for the relevant parameters:

MATRIX Series

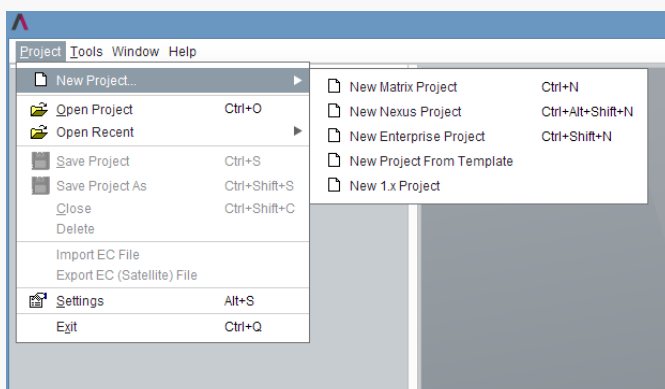| Parameter	Recommended setting
Cleanup Trends	True
Cleanup Trends Max Rows *(Samples/Point)*	9,000 *
Cleanup Alarms	True
Cleanup Alarm Max Rows	5,000
Cleanup Retain Open Alarms	True
Cleanup Audit Trails	True
Cleanup Audit Trails Max Rows	50,000
Cleanup Map Status Tables	True
Cleanup Map Status Rows	50,000

* 9,000 rows equate to approximately:
3 months of data @ 15 min interval,
4.5 weeks of data @ 5 min intervals,
6 days of data at 1 min intervals

NEXUS Series

Parameter	Recommended setting
Cleanup Trends	True
Cleanup Trends Max Rows *(Samples/Point)*	36,000 *
Cleanup Alarms	True
Cleanup Alarm Max Rows	10,000
Cleanup Retain Open Alarms	True
Cleanup Audit Trails	True
Cleanup Audit Trails Max Rows	100,000
Cleanup Map Status Tables	True
Cleanup Map Status Rows	100,000

* 36,000 rows equate to approximately:
 12.5 months of data @ 15 min interval,
 4 months of data @ 5 min intervals,
 25 days of data at 1 min intervals

ASPECT®-Enterprise

Parameter	Recommended setting
Cleanup Trends	True
Cleanup Trends Max Rows *(Samples/Point)*	432,000 *
Cleanup Alarms	True
Cleanup Alarm Max Rows	20,000
Cleanup Retain Open Alarms	True
Cleanup Audit Trails	True
Cleanup Audit Trails Max Rows	500,000
Cleanup Map Status Tables	True
Cleanup Map Status Rows	100,000

* 432,000 rows equate to approximately:
 12.5 years of data @ 15 min interval,
 50 months of data @ 5 min intervals,
 2.5 months of data at 1 min intervals

Note: All new **MATRIX Series**, **NEXUS Series** and **ASPECT®-Enterprise** `v3.02.01+` projects will automatically include the new limits when created as follows:

However, existing projects should be manually modified to take advantage of the new settings.

Where to find these parameters:

The following parameters:

- Cleanup Trends
- Cleanup Trends Max Rows
- Cleanup Alarms
- Cleanup Alarm Max Rows
- Cleanup Retain Open Alarms

may be set in Map > Basic tab.

Basic Expert Edit/Display	
Map	Map
Name	Map
Alarm Update Time	15
AlarmManager	/GlobalConfig/MapAlarmManager ▼
Always Trend, Alarm, Distribute? (careful!)	False ▼
Cleanup Alarm Max Rows	5000
Cleanup Alarms?	True ▼
Cleanup Interval	1440
Cleanup Retain Open Alarms?	True ▼
Cleanup Trend Max Rows	9000
Cleanup Trends?	True ▼
Connection Name	/GlobalConfig/MapDb ▼
Poll Interval (fast)	5
Poll Multiplier (slow)	12
Poll Multiplier (standard)	3
Project Target Type	Matrix ▼
Timebase	1.0
Trend/Alarm/Distribute from Instance	1
Trend/Alarm/Distribute from Target	Not Set

▼ Templates
▼ 📁 Targets
  📄 localhost
  📄 Aspect
▼ 📁 Map

The following parameters:

- Cleanup Audit Trails
- Cleanup Audit Trails Max Rows
- Cleanup Map Status Tables
- Cleanup Map Status Rows

May be accessed in Map > Services > Event Subsystem > Basic tab:

Customer Impact

These values are the optimal settings for general use. All customers are advised to use them whenever practical.

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