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Knowledge Base Article

Product Group: Software
Product: CMSW7700 - @ptitude Monitoring Suite
Version: 8.1

Abstract

This document goes into detail about SKF @ptitude Analyst Monitor application and its data archiving function.

Overview

Monitor Application Overview

SKF @ptitude Analyst's Monitor program is a support application that runs in the background. While running, a Monitor icon displays in the Windows icon tray. The Monitor application performs continuous operations that require little or no user interface, such as retrieving data from on-line systems and DMx modules, creating Work Notifications in a CMMS, and archiving data as set in each POINT's POINT Properties > Schedule tab. In conjunction with @ptitude Analyst's Scheduler feature, the Scheduler also utilizes the Monitor application as specified in the Scheduler wizard, to facilitate scheduled archiving.

If you are collecting online systems data, you should run Monitor in continuous mode. If you are using @ptitude Analyst with multiple hierarchies, it is also recommended to run the @ptitude Analyst Monitor application continuously as you may wish to archive more than the currently open hierarchy, as is the case with Analyst's Scheduler archives.

You may also wish to archive specific hierarchy(ies). To avoid redundant processing and slowing of hierarchy operations, it is recommended to run Monitor on only one machine in a network situation. If this is the case, run Monitor continuously and do not use Scheduler for archiving purposes.

Monitor – Scheduled Mode

The Monitor application may also be scheduled to run automatically, as part of a scheduled event. This method is recommended for single users or for use with a single hierarchy. The Scheduler function allows you to run the Monitor on an as needed basis. For example, you may want to perform Monitor operations based on a certain event (after a DAD upload), or under certain circumstances (on a specified day of the week, etc.). In scheduled mode, the Monitor runs (on the currently open hierarchy only), then shuts down when the scheduled task completes. Refer to the appropriate product specific manuals for more information on the Scheduler dialog. The Monitor application is able to collect online data for one hierarchy at a time. If necessary, you may change the hierarchy used by Monitor.

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Monitor Preferences – Archive tab

Monitor archive options can be found within the Preferences dialog. [Figure 1]

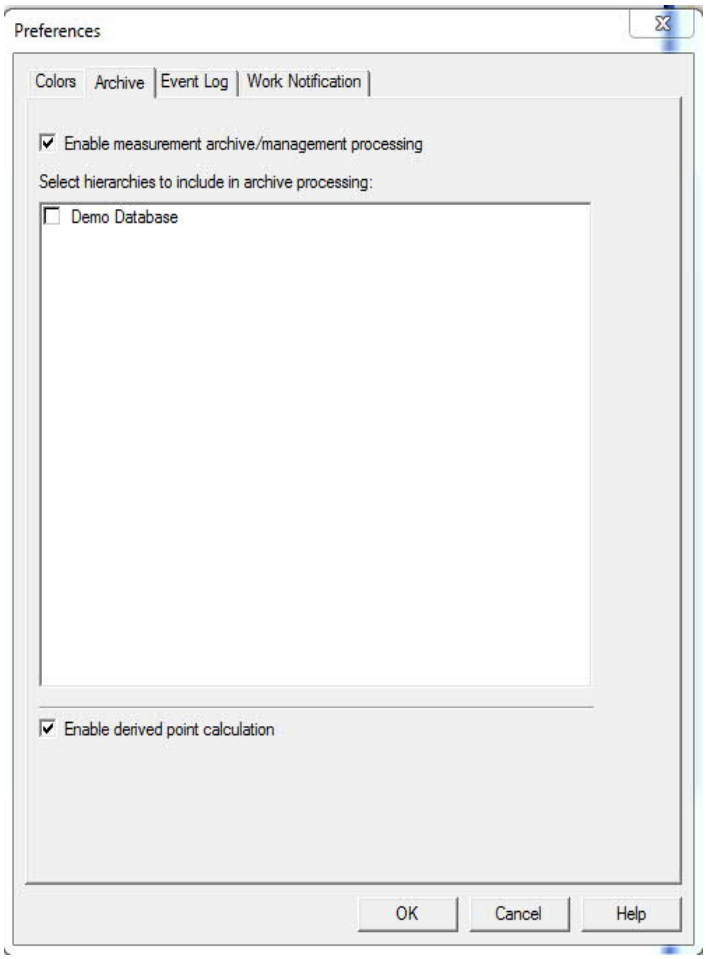

Figure 1. Monitor Preferences > Archive tab

To set up continuous archiving:

1. Select the Tools > Preferences menu to display Monitor Preferences.

2. The Archive preference is used in continuous mode only. To begin archive processing on the specified hierarchies, enable 'Enable measurement archive/management processing.' Select the hierarchies to include in archive processing from the list.

3. By default, all new hierarchies are enabled for Monitor archiving.

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Point Properties – Schedule tab

The following is an explanation of the fields used to control the archiving of data.

Data Collection

- Keep current data for – Enter a value to indicate how long to keep (store) the measurement record in the database's "current data" bin and select the appropriate units (Wk(s), Mo(s), Yr(s)). When the specified time from data collection elapses, and a Scheduled or Monitor archive process is performed, the measurement is typically moved from the "current data" bin into the "short term archive" bin (or discarded) as specified in the Short term archive / Archive data everyfield. The Keep current data for field determines the length of time a measurement is kept before it is archived.

Short term archive (optional, but typically enabled)

- Archive data every – Determines whether data leaving the "current data" bin is archived in the "short term archive" bin. Enter numerical value to indicate how often data leaving the "current data" bin is stored in the "short term archive" bin and select appropriate units (Wk(s), Mo(s), Yr(s)). As scheduled archives occur, measurements leaving the "current data" bin are accepted into the "short term archive" bin only if this Archive data everysetting has expired since the last measurement was stored in the "short term archive" bin. Otherwise, they are discarded.

- Keep archive for – Enter a value to indicate how long to keep (store) the measurement record in the "short term archive" bin and select appropriate units (Wk(s), Mo(s), Yr(s)). When the specified time of storage elapses, and a scheduled archive process performed, the measurement is typically moved from the "short term archive" bin into the "long term archive" bin (or discarded) as specified in the Long term archive fields.

Long term archive

- Archive data every – Determines whether data leaving the "short term archive" bin is archived in the "long term archive" bin. Enter numerical value to indicate how often data leaving the "short term archive" bin is stored in the "long term archive" bin and select appropriate units (Wk(s), Mo(s), Yr(s)). As scheduled archives occur, measurements leaving the "short term archive" bin are accepted into the "long term archive" bin if this Archive data every setting has expired, since the last measurement was stored in the "long term archive" bin.

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- Keep archive for – Enter value to indicate how long to keep (store) the measurement record in the "long term archive" bin and select appropriate units (Wk(s), Mo(s), Yr(s)). When the specified time of storage elapses, and a scheduled archive process is performed, the measurement is discarded.

Unscheduled data

In on-line DAD systems, alarm data is automatically placed in the "Unscheduled data" bin. This setting determines how long alarm data is stored in the alarm data bin before it is discarded.

- Keep for – Specify value to indicate the desired length of time to store alarm data and select appropriate units (Wk(s), Mo(s), Yr(s)). After the specified storage time elapses, the alarm data is discarded.

The above sections described how to turn archiving on and define the various settings. Now, how do you decide what, when, and how much to archive? There is no right answer. As an example, you have one SKF IMx system that collects 80 points every 4 hours - that would be 4*7*80=2,240 readings per week that are stored in the database. Over a three year period, that's 349,440 readings - not including any unscheduled (alarm) data!

Turning on archiving with the settings shown in Figure 2 will have the following affect on the stored data.

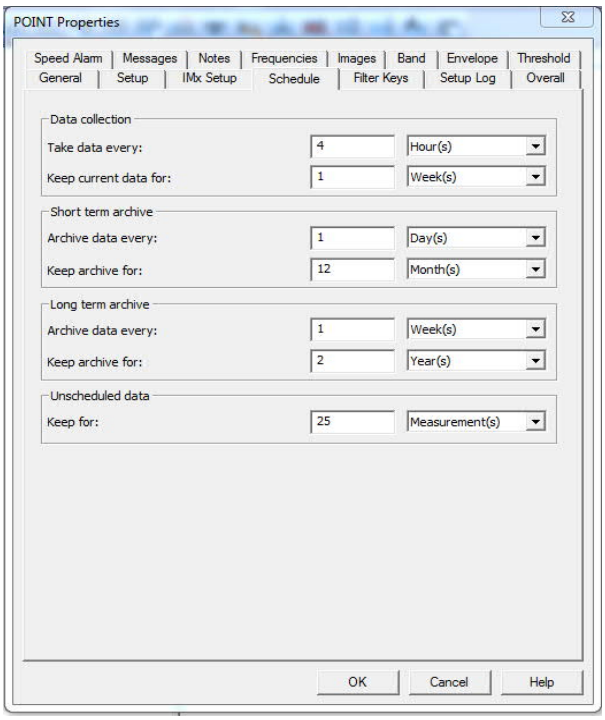

Figure 2. Archive setting example

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Achiving can be set up so that once a week the current data is archived so that one reading per day is placed in the Short Term bin, and keep for one year. This will reduce the total numer of reading to 30,880 redings - or a reduction of 85,600 readings or 73% less readings over the course of a year.

With the Short Term Keep archive for set to one year, when the oldest piece of data is one year old, it is either added to the Long Term Archive or deleted. The data will stay in the Long term Archive for two years before being deleted. Without archiving, the total readings for three years would be 349,440. Conversly, with archiving enabled, that number would be reduced to 30,982 plus another possible 2000 (80 points * 25 alarm measurements). This is a reduction of 90% in the number of reading.

Now that we have gone through an example and know what archiving can do, the big question is what data needs to be kept and for how long. The first question that needs to be asked is, what data is relevant, and how long is it relevant for? Four readings a day for a week lets us trend process versus vibration data, but after a week, does it really have any value? If you answer no, then start short term archiving after one week.

Next, how long does your equipment run before an outage and maintenance is performed? In the example above, you have three years of data - is that enough, or too much?

The last setting is the unscheduled data or alarm data. This data is collected when a machine is running below alarm levels and then between the four scheduled readings a POINT's vibration level increases above a preset alarm. So, if the machine vibration levels stay high, subsequent schedule data samples will reflect this high vibration. So 25 unscheduled readings were used in the example allow for fluctuations due to speed or load changes. The key to making the decision is to remember that once the data has been deleted, it is gone. To use an old woodworking adage – "measure twice and cut once!" You can always adjust the schedule to remove more data, but you can not adjust it to get data back.

For further assistance, please contact the Technical Support Group by phone at 1-858-496-3627, or by e-mail at TSG-CMC@skf.com.