

Setting up a Sentinel Log Repository

The Sentinel logs up to 25 hours of readings data internally. This includes all measurements performed by the Sentinel and all metadata. To save space, the data is saved at a lower time resolution, approximately 1.4 second intervals. This represents a reduction of up to 16-to-1.

You can download the logged data through the Sentinel's web interface for longer term storage. You can also perform this downloading as a separate command, independent of the web interface. The downloading process saves the data to a user specified repository; it can operate at scheduled intervals or on demand. Once in the repository, you can review and display log data in the same way as live readings through the Readings Timeline panel..

Repository organization

The repository is organized as a sequence of daily log files, stored in a single directory. The directory can be located on any file system to which you have access from your browser – local, or on a shared server.

Each daily log file starts at 00:00:00 UTC (midnight, UTC time), and is associated with a particular Sentinel. This information is coded in the name of the file:

XXXXXX-yyyyymmdd0000.qa1

Where XXXXXX is the Sentinel serial number, yyyy is year, mm is month (01-12), and dd is day of month (01-31). For example, the log file for Sentinel 20C148 for June 21, 2010, would be:

20C148-201006210000.qa1

Each daily log file in the repository holds about 13 MB of data; a month of data is about 400 MB.

Log repository operation

Due to file system access issues and the additional setup parameters which would be required, the Sentinel was not designed to push log data to the repository. Log data must be downloaded to the repository via a browser or a by a program which runs on a timed basis. In either case the process is performed by a Java applet loaded from the Sentinel. The applet is designed to tolerate multiple accesses to the file, so if the applet is run from both a browser and a network server there should be no conflict. If you can't insure that the browser will be pointed to the Sentinel for an hour each day it is prudent to setup a computer which will run the applet on a timed basis.

In a production environment, you will want to schedule downloading of data to the log repository, and you will need to plan for archiving and eventual purging of the log data. The strategy for purging or archiving these files is your choice – the Sentinel software doesn't delete log files, and it provides access to whatever files are in the repository.

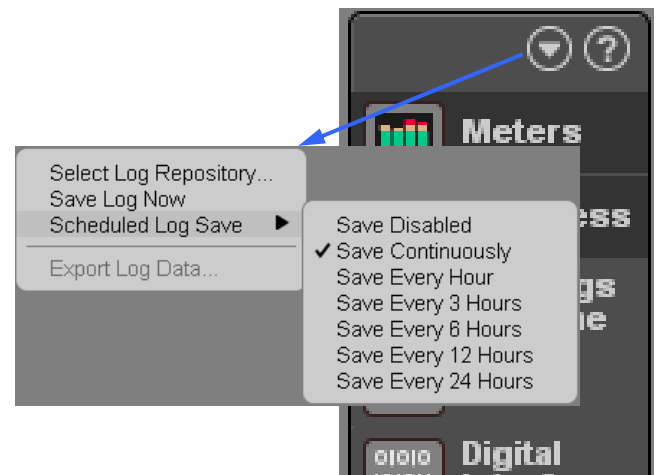
Browser based operation

All log repository access is managed by a Java applet downloaded from the Sentinel since browsers do not otherwise have access to a computer's file system. This is true even if the logs are being downloaded by another computer. For the browser access to work correctly, you must have Java applets enabled in your browser, and the computer should be using Java 1.5.0 or later.

Configuration

Configuration options for defining the log repository and scheduling downloads are located in the pulldown menu illustrated at right. This is located on the readings navigation panel at the left of the readings page.

The "Select Log Repository" option presents a file browser that lets you select the location of the log repository. The "Scheduled Log Save" option enables periodic downloading of log data from the Sentinel to the repository, and lets you set the interval. The "Save Log Now" performs an immediate download of all new log data to the repository. If the Log Repository settings are not available check that Java is enabled.




Since the scheduled downloading is performed by the web interface, it works only if the web interface remains active.

Saving settings

The web interface saves these settings in your browser's local storage, so they are remembered from one browser session to the next. You'll need to reenter the settings if they're lost for some reason – if you clear cookies on your browser, change browsers, or change the IP address of the Sentinel.

Repository status

A folder shaped icon  in the lower left corner of the Meters panel provides an indication of log repository status. It is green when there are no problems, yellow to indicate a warning, and red to indicate problems. An updating repository is indicated by a moving dot in the center of the folder. Placing the cursor over the icon will show a detailed status description.

Program based operation

As an alternative to using the browser interface for downloading data to the log repository, you can invoke the download service independently, without the browser being active. This allows you to perform the download in scripts, or include it in scheduled batch operations.

The download application is stored on the Sentinel, and is invoked using Java Web Start (JavaWS). JavaWS is a standard part of the Java Runtime Environment. It handles the transfer of the application to your computer for execution and caches it for future use.

For the applet to work correctly, you must have Java applets enabled, and the computer should be using Java 1.5.0 or later.

Invoking the download operation

The command for invoking the repository download operation is:

```
javaws -wait -Xnosplash http://sentinel-  
address/logrepository.jnlp \
```

```
-open "directory-path\sentinel-serial-number"
```

Where sentinel-address is the IP address or DNS name of the Sentinel, directory-path is the full path to the log repository directory, and sentinel-serial-number is the serial number of the Sentinel. The serial number is displayed on the Sentinel front panel, and, in the Sentinel web interface, on the status line of the main meter panel.)

The backslash (\) between the directory-path and Sentinel-serial-number is the system-specific directory path separator. On Unix-based systems (including Mac OS X), you use a forward slash (/) instead.

For example:

```
javaws -wait -Xnosplash  
http://209.180.174.206/logrepository.jnlp \
```

```
-open "C:\Sentinel Logs\207745"
```

Download schedules

The Sentinel stores up to 25 hours of log data internally, so a daily download will preserve all logged data. However, a shorter interval provides additional protection against data loss and interruptions. It also makes log data available more quickly when a browser is opened as the browser will not have to fetch it from the Sentinel but may access it from the repository. Hourly downloads are a typical schedule.

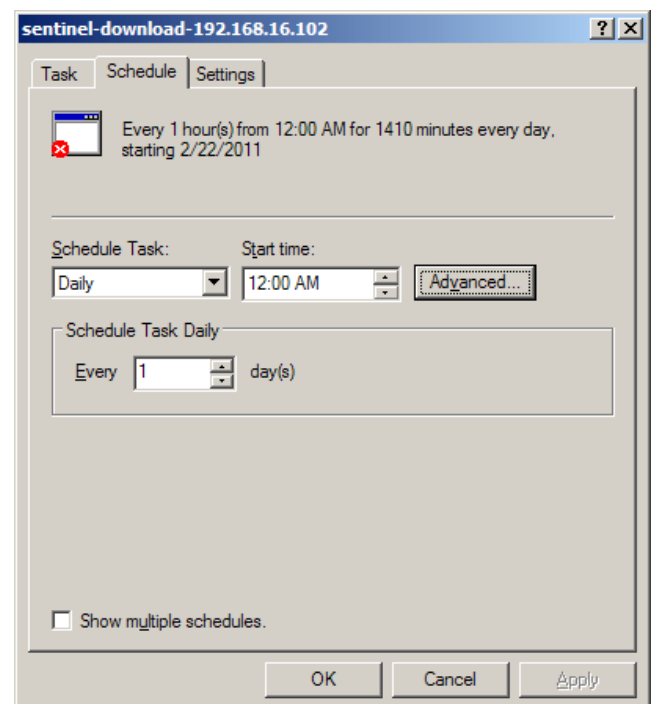
Scheduled download on Windows XP systems

To perform scheduled downloads on a Windows XP system, you create a .bat file containing the download command as described above, then create scheduled task that runs the .bat file.

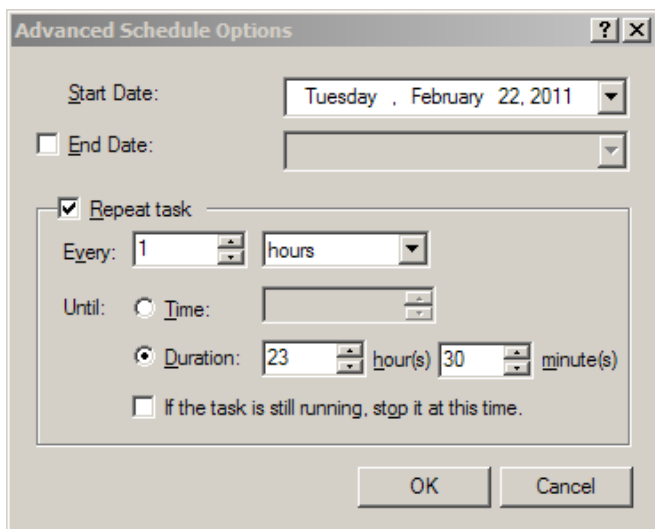
You can place the .bat file wherever is convenient. The log repository directory is a reasonable choice.

The Scheduled Tasks control panel provides a wizard to create a scheduled task. However, a daily schedule is the shortest interval allowed by the wizard. To set a shorter interval, you need to edit the task once you've created it.

To edit the task, display the created task (it should be listed in the Schedule Tasks control panel). Select the Schedule tab and set the task Schedule to Daily, and the Start time to 12:00 AM:



Then click the Advanced... button, select Repeat task, and set the repeat interval and duration:

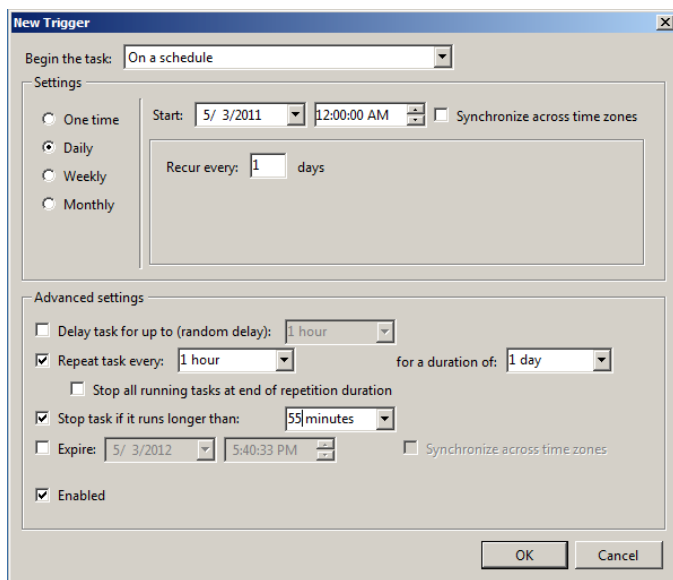


Scheduled download on Windows 7 systems

To perform scheduled downloads on a Windows 7 system, you create a .bat file containing the download command as described above, then create scheduled task that runs the .bat file.

You can place the .bat file wherever is convenient. The log repository directory is a reasonable choice.

To create the scheduled task, select the Create Task... option from the Actions subpanel of the Task Scheduler control panel. (The Task Scheduler is one of the Administration control panels.) You set the download times by creating a Trigger from the Triggers tab. Set the Trigger to begin the task on a daily schedule. In the advanced settings section, set the task to repeat every hour for the full duration of the day. If you set the option to stop the task if it runs longer than 55 minutes, it will keep a slow or stalled download from overlapping with the next scheduled download.



Scheduled download on UNIX systems

On UNIX systems, you can perform scheduled downloads using cron. In general terms, you create a shell file containing the download command and a crontab file that specifies the task and schedule, and then install the task using the crontab utility. The following notes provide additional detail.

There is considerable variability among UNIX systems, so you'll need to consult local documentation in addition to these notes.

In the crontab file, tasks are specified by lines that have a sequence of tab-separated fields:

- minute (0-59)
- hour (0-23)
- day of month (1-31)
- month (1-12, or names)
- day of week (0-7, or names)
- command name

An asterisk (*), indicating "any," may be specified for any of the time fields.

For example:

```
30 0-23 * * * ~/Sentinel\ Logs/download.sh
```

You install the crontab task using:

```
crontab crontab-file
```

Problems

If you encounter problems with the procedures described here all Qualis Audio, Inc. at (503) 635-9376 or email support@qualisaudio.com.

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