

# Using AppSight Black Box

BMC Application Problem Resolution system - commonly called BMC AppSight - is a lightweight software module that operates like a black box flight recorder. It is a process monitor that lets you troubleshoot and analyze problems with custom code in your MetraNet installation.

The MetraNet-optimized AppSight monitors IIS and MetraNet executable processes, such as pipesvc.exe, and captures Windows API, registry calls and database I/O, among other activity. Exactly what AppSight looks for is determined by a runtime profile. The current MetraTech package includes profiles that are optimized for pipeline servers.

Using the standard profile, AppSight can be left running in the background as a proactive measure if errors arise. The troubleshooting profile can be used when a problem has been identified and the source of the problem needs to be found.

The end product of running AppSight is a log file, called an ASL file. ASL files need to be interpreted by MetraTech engineers.

## Obtain the software

MetraNet's AppSight package is available from MetraNet Professional Services.

## Target systems

You can install AppSight on any server running MetraNet 5.1 or 6.0.1. MetraTech redistributes AppSight with profiles that are designed for MetraNet servers running IIS, the pipeline and billingserver services. Profiles have not been optimized for ActivityServices and MetraPay.

## Security considerations

The data collected by AppSight is saved in an unencrypted text format. Since ASL files contain low-level information, including individual customer account data, they should never be sent by email or any insecure means. The recommended method for transmitting the data to MetraTech is secure FTP.

## How sessions are managed

The MetraTech AppSight profiles are configured to generate a maximum of around 20 sessions of about 20 MB each. When tracing starts, a new session folder is created.

After 20 MB of trace data has been logged, a new session folder is created. When the maximum number of session folders is reached, AppSight automatically deletes (rolls over) the oldest session folder. Thus, in general, with these profiles, AppSight preserves about 400 MB of trace data in session folders.

When the BBXService\_Stop command is issued, the session data is saved to the ASL log file. However, the session folders are not deleted until new ones are created.

Certain events, like process crashes, create specially named session folders that are not counted against the maximum of 20. These sessions are not rolled over. Therefore, it is possible that more than 400 MB will be required for session data. If a generated ASL file is significantly larger than 400 MB, you should purge the session files. This should only be done once the stop command has ended normally, and thus you have a valid ASL log file with the session data.



Purging deletes all session data. It is the only way to delete crash data.

## More About AppSight

[Product Overview](http://www.identify.com/products/index.php) <http://www.identify.com/products/index.php>

[BMC Black Box Technology](http://www.identify.com/products/bbx.php) <http://www.identify.com/products/bbx.php>

## 1.1 Installing AppSight

You can install AppSight on any drive with adequate space. Preferably, it should not be the system drive, which is typically the C: drive. For purposes of this guide, the D: drive is assumed throughout.



**Make sure you have adequate space and monitor available space while running AppSight**

AppSight typically uses nearly 1 GB of space if using the same drive for session files and the ASL folder (400 MB for each). If a monitored system is frequently crashing (according to the profile's definition of a crash), session files can exceed the standard limit of 20, requiring greater space. See [Operational Considerations](#) (on page 4).

## Install Procedure

1. Execute BBXService\_MT\_Install.exe and verify that the destination drive is correct before proceeding.

All files will be installed under <drive>:BBXService.

After extracting the files, a command windows opens and says "About to install AppSight Black Box Service...".

2. Proceed with the installation by pressing any key (or abort by pressing Ctrl+C).

Wait for the installation to complete and the command window to close. This can take several minutes.

A successful installation of the AppSight Black Box Service is confirmed when the install log file ends with "ResultCode=0".

## 1.2 Tracing with AppSight

- To start AppSight (and run the standard profile), run:  
`D: \BBXService\CMD\BBXService_Start.cmd`
- To stop AppSight and generate the log (ASL) file, run:  
`D: \BBXService\CMD\BBXService_Stop.cmd`

This waits until the BBXService process has ended. When this script returns, it is safe to copy the generated ASL file.

This script first issues a stop on the service, and then waits. If the service is busy writing a large ASL file, the service control stop will time out. However, this script will then wait for the process end event.



It can take anywhere from 1 to 20 minutes or more to generate the ASL file.

- Copy the most recent ASL file from:  
`D: \BBXService\ASL\`  
Using secure FTP, transfer the ASL file to MetraTech Support for analysis.

## 1.3 Reproducing a Problem and Tracing with AppSight

To generate a trace while reproducing a problem, you should follow a slightly modified procedure.

First, you should stop AppSight, as follows:

- To stop AppSight, and save the current session files to an ASL file, run:  
`D: \BBXService\CMD\BBXService_Stop.cmd`

Then clear out the session files, so only results of the problem re-creation are included in the soon-to-be-generated ASL file. The BBXService\_Stop command saves off the data. You can now purge the unwanted sessions.



Purging deletes all session data, including crash data.

- To purge the data, run:  
`D: \BBXService\CMD\BBXService_Purge_Sessions.cmd`

You can now execute AppSight, this time with the troubleshooting profile to capture in greater details the events before and after the event.

- To start AppSight with the troubleshooting profile, run:  
`D: \BBXService\CMD\BBXService_Start_WST.cmd`

While running in troubleshooting mode, attempt to replicate the events - for example, a particular operator activity in MetraControl - that produced the problem.

- To stop AppSight, and save the current session files to an ASL, run:

`D: \BBXService\CMD\BBXService_Stop. cmd`

You could repeat this process several times, so that the only session data in the ASL is error-related.

- Copy the most recent ASL file from:

`D: \BBXService\ASL\`

Using secure FTP, transfer the ASL file to MetraTech Support for analysis.

## 1.4 Operational Considerations

While the AppSight Black Box Service is actively tracing, sessions files are being written to a folder under the system TEMP environment variable path.



On most systems, the system TEMP folder is on the C: drive. You can use the `BBXService_List_Sessions.cmd` to display the location of the session folders.

- To see the active session folders, run:

`D: \BBXService\CMD\BBXService_List_Sessions. cmd`

If AppSight is using excessive space, issue the `BBXService_Stop` command and wait for it to finish, then purge the session data.

- To purge the session files, run:

`D: \BBXService\CMD\BBXService_Purge_Sessions. cmd`