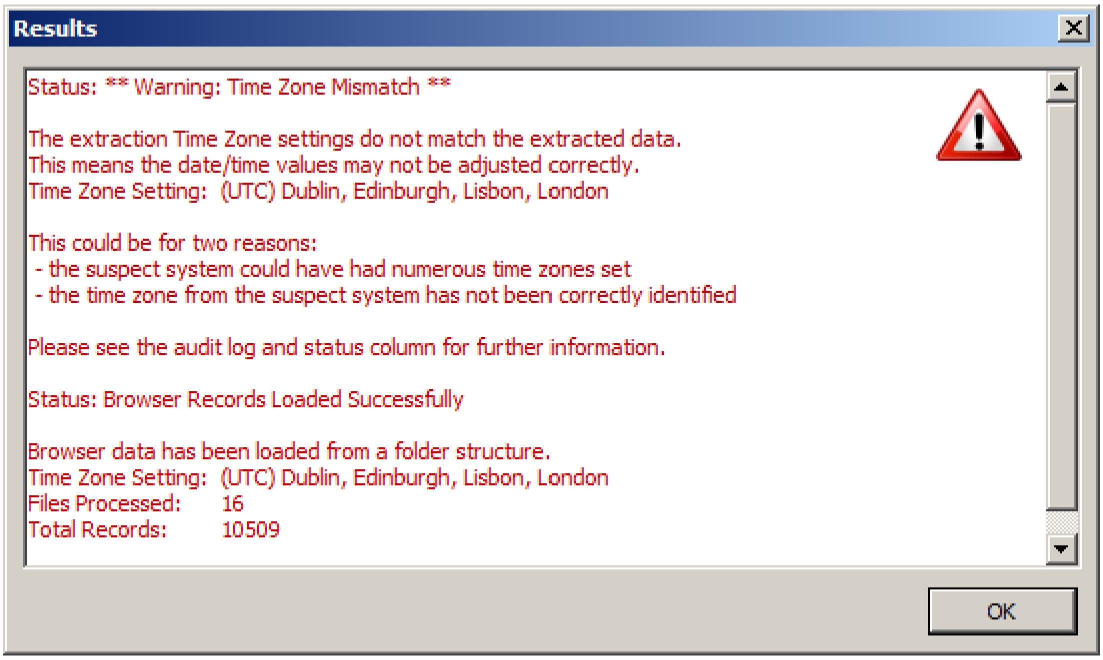
Time Zone Warnings

As NetAnalysis imports data from Microsoft Internet Explorer Daily INDEX.DAT records, it checks the bias difference between the last visited UTC and local times and adds the calculated bias to the ActiveBias column. This information is checked against the bias information for the time zone set (in NetAnalysis Options) by the examiner. If the time zone has not been set correctly, or there are multiple time zone bias values encountered, NetAnalysis will flag this when it completes importing the INDEX data.



Status: ** Warning: Time Zone Mismatch **

The extraction Time Zone settings do not match the extracted data.
This means the date/time values may not be adjusted correctly.
Time Zone Setting: (UTC) Dublin, Edinburgh, Lisbon, London

This could be for two reasons:
 - the suspect system could have had numerous time zones set
 - the time zone from the suspect system has not been correctly identified

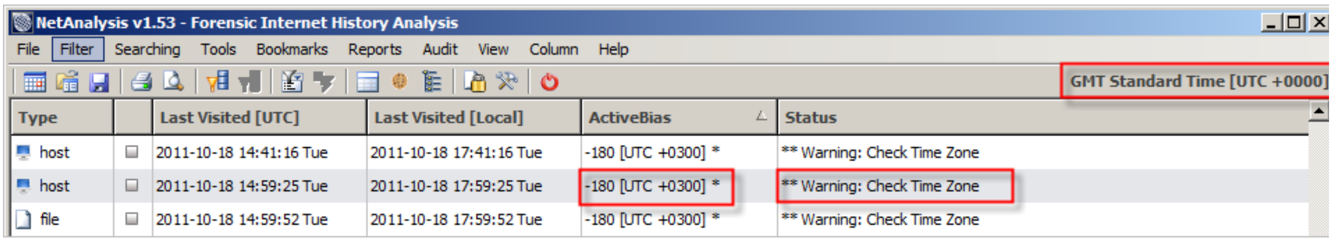
Please see the audit log and status column for further information.

Status: Browser Records Loaded Successfully

Browser data has been loaded from a folder structure.
Time Zone Setting: (UTC) Dublin, Edinburgh, Lisbon, London
Files Processed: 16
Total Records: 10509

Figure 1

To establish where the problem lies, examine the ActiveBias column as shown in Figure 2. The ActiveBias column shows the bias for the highlighted record is -180 minutes [UTC +0300]. We can also see that for this import, the time zone was set to GMT Standard Time [UTC +0000]. The asterisk [*] symbol after the ActiveBias value indicates there is a problem and to review the Status column. The Status column shows there is an issue with the time zone settings.

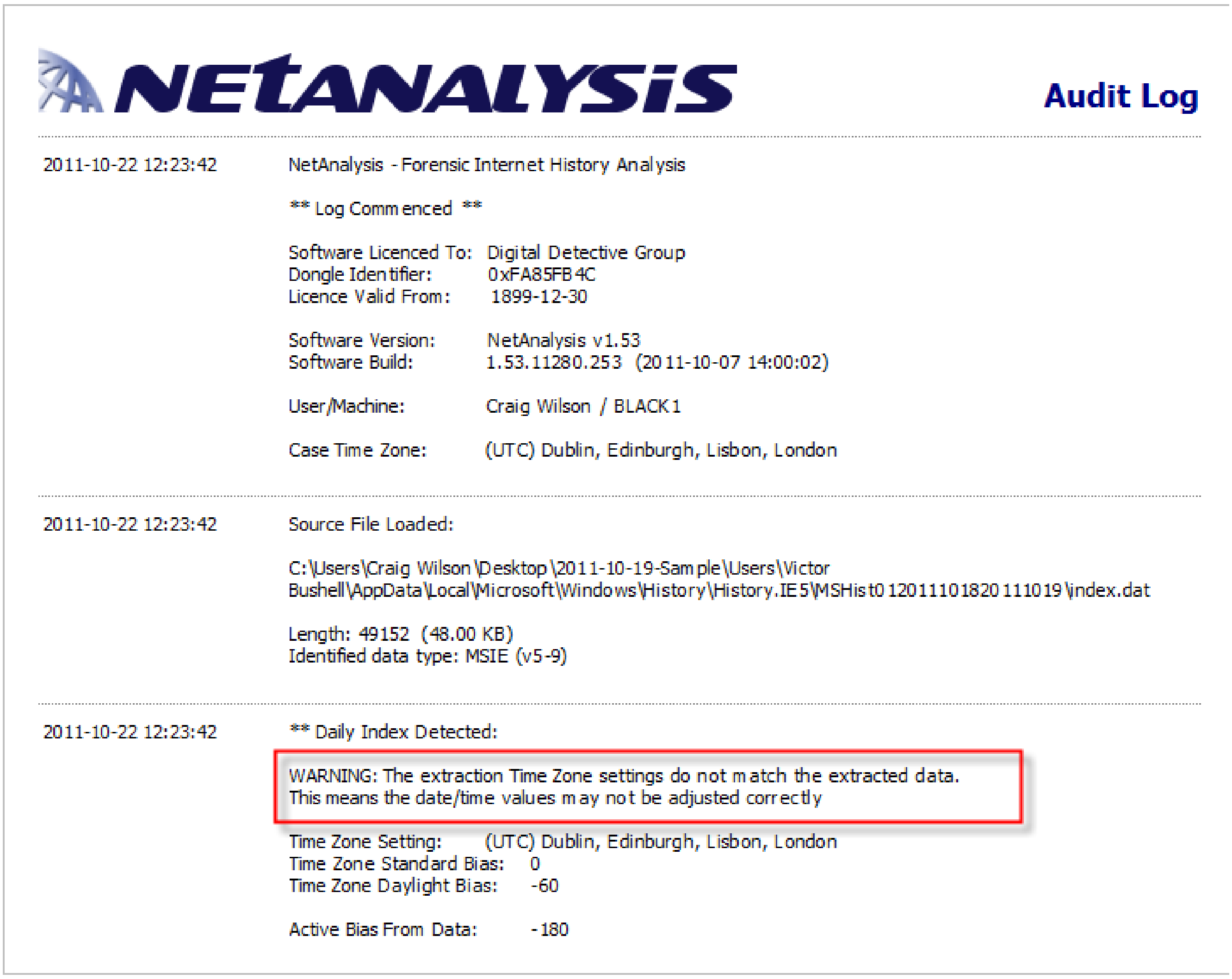


GMT Standard Time [UTC +0000]

Type		Last Visited [UTC]	Last Visited [Local]	ActiveBias	Status
host	□	2011-10-18 14:41:16 Tue	2011-10-18 17:41:16 Tue	-180 [UTC +0300] *	** Warning: Check Time Zone
host	□	2011-10-18 14:59:25 Tue	2011-10-18 17:59:25 Tue	-180 [UTC +0300] *	** Warning: Check Time Zone
file	□	2011-10-18 14:59:52 Tue	2011-10-18 17:59:52 Tue	-180 [UTC +0300] *	** Warning: Check Time Zone

Figure 2

At this point, it is advisable to review the content of the audit Log. This can be accessed from the Audit Log button on the main toolbar, or from the menu: Audit » View Audit Log. Figure 78 shows a portion of the audit log with a time zone warning highlighted.



Audit Log

```
2011-10-22 12:23:42    NetAnalysis - Forensic Internet History Analysis

                       ** Log Commenced **

                       Software Licenced To:  Digital Detective Group
                       Dongle Identifier:     0xFA85FB4C
                       Licence Valid From:     1899-12-30

                       Software Version:      NetAnalysis v1.53
                       Software Build:        1.53.11280.253  (2011-10-07 14:00:02)

                       User/Machine:          Craig Wilson / BLACK1

                       Case Time Zone:        (UTC) Dublin, Edinburgh, Lisbon, London

2011-10-22 12:23:42    Source File Loaded:

                       C:\Users\Craig Wilson\Desktop\2011-10-19-Sample\Users\Victor
                       Bushell\AppData\Local\Microsoft\Windows\History\History.IE5\MSHist012011101820111019\index.dat

                       Length: 49152  (48.00 KB)
                       Identified data type: MSIE (v5-9)

2011-10-22 12:23:42    ** Daily Index Detected:

                       WARNING: The extraction Time Zone settings do not match the extracted data.
                       This means the date/time values may not be adjusted correctly

                       Time Zone Setting:        (UTC) Dublin, Edinburgh, Lisbon, London
                       Time Zone Standard Bias:    0
                       Time Zone Daylight Bias:    -60

                       Active Bias From Data:      -180
```

Figure 3

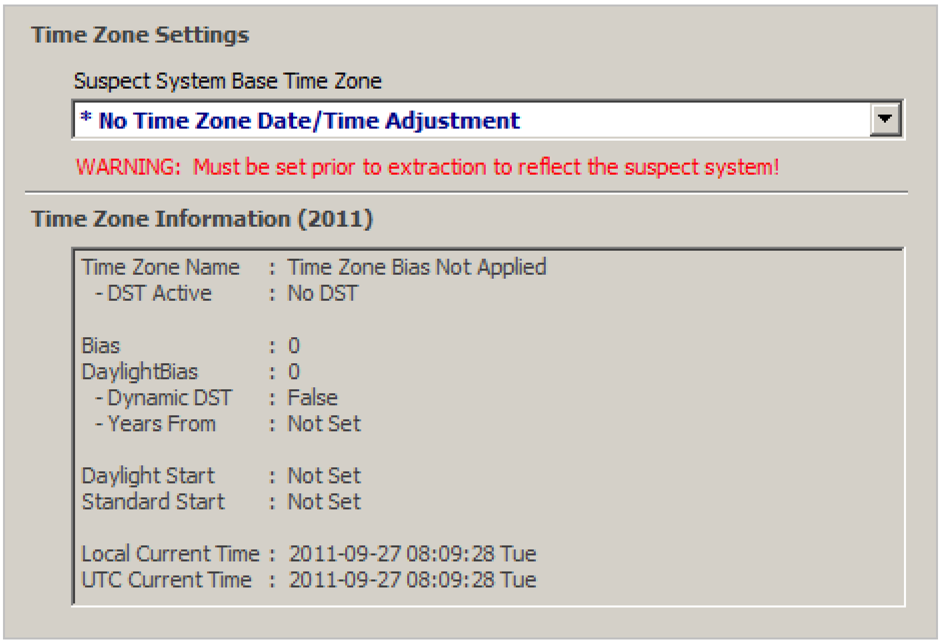
It is clear from the information presented by NetAnalysis that the importation time zone setting is incorrect. Examination of the ActiveBias column also shows that there appears to be only one bias value identified. This indicates a single time zone setting but an incorrect import setting for NetAnalysis. In this case, you would simply check the time zone settings, select the correct value and then re-import the data.

Dealing with Mixed Time Zone Data

If you have evidence of multiple time zones being set, you will end up with miscalculated timestamps if you select any of the standard time zone settings.

The recommended course of action in this case is to set the NetAnalysis time zone option to ‘No Time Zone Date / Time Adjustment’. With this setting, NetAnalysis will calculate the date/times exactly as they are stored in the file. You can then re-import the data into NetAnalysis. NetAnalysis will only represent what it knows to be accurate (assuming the clock was accurate on the system and the computer was being used in the time zone it was set to use).

To access the time zone settings, select Tools » Options from the Tools menu. Select ‘* No Time Zone Date/Time Adjustment’ from the Suspect System Base Time Zone dropdown list (as shown in Figure 4).



Time Zone Settings

Suspect System Base Time Zone

* No Time Zone Date/Time Adjustment

WARNING: Must be set prior to extraction to reflect the suspect system!

Time Zone Information (2011)

```
Time Zone Name    :  Time Zone Bias Not Applied
  - DST Active    :  No DST

Bias              :  0
DaylightBias      :  0
  - Dynamic DST   :  False
  - Years From    :  Not Set

Daylight Start    :  Not Set
Standard Start    :  Not Set

Local Current Time :  2011-09-27 08:09:28 Tue
UTC Current Time   :  2011-09-27 08:09:28 Tue
```

Figure 4