Analyst Version 3.46

Troubleshooting

January 2011

An extract from the full Analyst manual containing:

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Troubleshooting

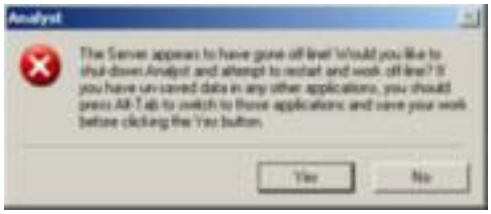
Working Offline

Analyst is designed to use a single database of information for the entire system of terminals in a single shop using the Windows network to provide access to slave units. On this basis all terminals have the benefit of live, up-to-date information with which to sell and dispense to customers. Other systems may require a deliberate transmission of product, price change and stock information around the network from a master terminal, but this is not the case with Analyst. Changes made on one terminal are immediately affected throughout the system.

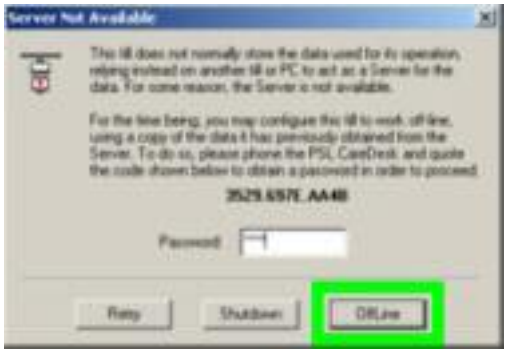
Dependency on a network has inherent dangers: if the master unit storing the database or network connecting the terminals fails for whatever reason Analyst is unable to function as described above. A robust safety net has been devised to provide more-or-less immediate recovery into an 'Offline' mode. When working offline each terminal running Analyst no longer tries to refer to a master database across the network. Instead it now uses a local database which is refreshed each day from the master database using the NTX file system. That database typically reflects the master database at the close of trade yesterday so updates to prices, stock and orders performed that morning may not appear on the offline system.

Going Offline

If Analyst is open when the server becomes unavailable a message will appear:



Press **Yes** to close Analyst and re-launch in offline mode or **No** to dismiss the message and carry on. The message will continue to appear if the server cannot be found so some investigation would be wise before pressing **No**. By pressing **Yes** Analyst will close and launch the Offline confirmation dialogue.



To continue offline a code must be entered which is only available by calling the CareDesk. Quote the 12 digit code displayed on screen and enter the code given by the CareDesk Advisor. The **Offline** button will become available when the correct code has been entered. When you call the CareDesk they will help solve the problem which has caused the terminal

to go offline and the majority off cases are solved following a short investigation and the system can return online as normal. Otherwise they will issue you a code to run offline and open a spares or engineer job to fix the fault. **Retry** will attempt to connect to the server again in case you have noticed the fault and fixed it. **Shutdown** will close this dialogue and return to the Windows Desktop.

Running Offline

When running offline the caption bar changes in the top left to remind you that you are offline.

Analyst will sell and dispense as normal although the Previous Sales/Scripts screens will only display activity on this terminal and network printing might be unavailable.

Note: Before starting to sell offline perform a lift to clear the residue of any unrelated sales. This may be discarded as the figures are unlikely to be meaningful.

Returning Online

When the fault which forced the system offline has been fixed and the master and its connection have become stable again the system can return back online to operate as normal.

Close and re-launch Analyst to re-connect to the server.

Analyst detects that the server is now available for connection and requires another code from the CareDesk to re-connect. The code issued initially to work offline will not work. Call the CareDesk and quote the 12 digit code displayed on screen. This allows the CareDesk Adviser to satisfy themselves that the problem has been properly resolved and is unlikely to happen again. Any jobs opened in connection with the failure can be closed.

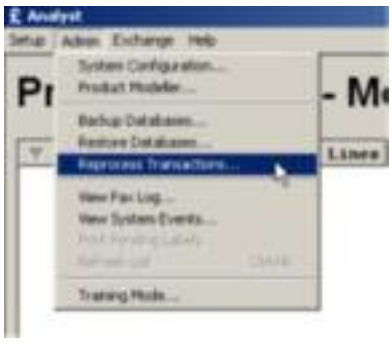
When the correct code is entered click the **reconnect** button to resume normal service. **Shutdown** will close this dialogue and return to the Windows Desktop. **Offline** will launch Analyst in Offline mode incase the fault has not been completely fixed and you need more time.

When back online the server is initially unaware of the activity of the slave terminals when offline. Follow the instructions to reprocess the transactions to update the server.

Reprocessing Transactions

After working offline for any period it will be necessary to reprocess the activity from the slave terminals on the server once the system is reliably back up and running.

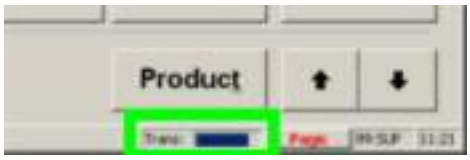
From Analyst PoS, select **Admin** from the menu bar then **Reprocess Transactions...**



The reprocessing parameters then appear.

Enter in here the date and time the transactions should be reprocessed from. This should be the last time the system was online and working normally. The time does not need to be exact so aim for an overlap of between 30mins to an hour. Transactions which have already been processed will not be duplicated. Call the CareDesk and quote the 12 digit code to activate the **OK** button and click it.

The reprocessing now starts and a blue progress bar at the bottom left indicates how complete the task is. All terminals can continue to be used as normal during this procedure.



If any terminals are not available an error will appear and provide the option to cancel out of the procedure to remedy the problem.

When complete a summary is displayed detailing how many transactions have been reprocessed, if any Till Totals have been recovered and whether to reprint them, and any errors. A more detailed report has been added to the reports list of Analyst in the Transaction Reprocessing Summary section.

Offline Till Totals

If your system is forced to run offline for more than a few hours you may need to Lift the Till Totals before reconnecting your till to the server. Performing Till Totals when working off-line is potentially very confusing. When working online the totals accumulate in the database on the master and are retrieved from there when you perform a lift. When working offline though they accumulate locally. Only when the system is fixed, everything is back online and the transactions have been reprocessed will the totals resemble what you normally see.

When a terminal is first launched offline you should perform a lift. The read it provides will almost certainly be nonsense and should be thrown away, but the local totals are now zero. Any trade done since the last lift before the system went down will be stored on the master which, when reconnected, will be fully accessible.

The totals will now accumulate on the local till and any till totals performed whilst still offline will reflect the trade done offline. This might not represent the total trade for the day if any online trading was done.

At your normal cashing up time the lift should be performed as usual and if any pre-declarations are required then enter them as normal. The declarations are unlikely to match the offline totals. Don't worry about it. The printouts are clearly marked as offline.

When the system is brought back online and the transactions are reprocessed, the master assesses when the lifts were performed on the terminals and reproduces the reads from the transactions in period the lift covers. These can be viewed by using the **Recall** button in the Till Totals section option or by clicking on the **View** button on the Transaction Reprocessing Reports.

These reads are now clearly marked 'Reprocessed' and supersede the offline printouts.

RAID Array Monitoring

A RAID (Redundant Arrays of Inexpensive Disks) is an inexpensive data storage solution for larger systems which provides faster access to data and a level of fault tolerance. This is achieved by striping the data across multiple disks, mirroring data between disks or a combination of the two, depending on which RAID solution is used.

The key point about a RAID array is that if one of the disks in the array fails it can be replaced without any loss of data due to the fact that the data is stored across all the disks in the array. When the replacement disk is inserted the array rebuilds the image of the failed drive into it and it is back to full strength.

One of the failings of this system is that if more than one disk fails in the array or a second disk fails before the image of the first is rebuilt onto a replacement, all data can be lost. So swift notification of a failed disk in the array is paramount to the success of using a RAID.

To that end, Analyst can monitor the RAID at regular intervals for any drive failures and will notify users and PSL of any disk failure.

Analyst Modifications

Analyst will work as normal on any RAID machine and it would be well suited to be nominated as the 'Master' terminal. There are some RAID devices though which are designed to be File Servers, simply a storage vessel which will not run any normal applications like Analyst. But these file servers are not suitable to be designated as the Analyst 'Master'; a responsibility bestowed on the keeper of the database. In this instance this role must be taken by one of the other workstations on the system by selecting the 'Assume Master Role' option on the Network Tab of the PoS System Configuration. It is advised to nominate a terminal which is lightly used in the morning for this task.

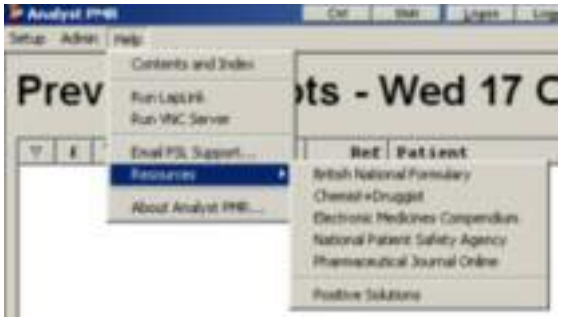
Disk Failure

In the event of a disk failure in the array, a message will appear on all Analyst workstations to warn of the failure. The message can be dismissed, but will reappear each hour until it is silenced by the Supervisor. This will require a password from the CareDesk.

The system will also perform a PSL data exchange when a failure is detected and will inform the CareDesk of the failure. This could result in an engineer being despatched to fix the drive before you are even aware of the fault!

Internet Resources

A selection of internet resources have been conveniently grouped from the **Help** menu from the menu bar to help in day-to-day dispensing.



Selecting one of these options will launch an internet browser and call the appropriate page. If the computer is not able to connect to the internet these links will be inaccessible.

British National Formulary

The online electronic version of the BNF. Fully searchable and up to date this site requires registration for full access, but it is free.

Chemist & Druggist

The online version of the C&D magazine. No registration is required for access.

Electronic Medicines Compendium

The *electronic* Medicines Compendium (*e*MC) provides electronic Summaries of Product Characteristics (SPCs) and Patient Information Leaflets (PILs), all of which can be printed for free without registration.

National Patient Safety Agency

The NPSA site brings together the Patient Safety Division, the National Clinical Assessment Service and national research Ethics Service. There are also links to other parts of the extensive NHS network of websites.

Pharmaceutical Journal Online

PJ Online is the web site of *The Pharmaceutical Journal* (official journal of the Royal Pharmaceutical Society of Great Britain) and its family of publications.

Support

The CareDesk is open from 8:30am to 6:30pm Monday to Friday and 9am to 5pm on Saturday and can be called on 01257 235940 with any problems you may have with your Analyst system or with any queries you may have that cannot be satisfied by this guide.

Telephone

You will get straight through to one of our CareDesk Advisors rather than an automated system or any intermediary. Try to be near the terminal with the problem as they will endeavour to remedy the fault over the telephone. If your problem is not urgent in nature you might prefer to call midweek or in the afternoon, as mornings, particularly Mondays tend to produce a higher than average volume of calls.

Remote Control

The CareDesk have the facility to remotely control your system with your permission and may be able to fix the problem that way. They will need your help over the phone to put the system into a ready state for remote control. They can connect through to any terminal on the system if required.

Diagnostic Backups

If the problem you have is of a data nature and requires further investigation by the CareDesk or Development teams a copy of your data can be securely sent through the internet to the PSL servers where it can be examined more closely. The system must be connected through a broadband internet connection for this to work and can only be initiated with your consent.

To send a diagnostic backup click on **Admin** on the management/PoS section and select **Send diagnostic backup**.

This displays the date and time of the backup which will be sent. Make sure that the problems you are experiencing will be contained in a database made at that time and click **OK** to confirm that you're happy for PSL to receive your data. The transfer can take several hours but is in the less often used 'upload' bandwidth of your connection. But during this time you may find your connection a little sluggish.

Peripheral Swap-outs

If a peripheral like a scanner or printer develops a fault which cannot be fixed we will usually send a replacement on a next-day carrier to your shop for you to swap yourself. We ask that you re-pack the faulty part in the packaging ready for us to collect. We have it shipped back to our workshop so we can assess the fault and fix it or responsibly dispose of it. You may need to lift the till or computer to access the ports where the peripherals plug in. If you are unsure about this give the CareDesk a call when you receive your replacement part and they will talk you through it. Or if you are very nervous about doing so we can arrange our engineer to swap it for you, but we can only call them when your part arrives on-site so this will probably take longer.

Engineers

If the problem is hardware in nature and cannot be remedied remotely your local engineer will be called to attend as soon as possible. Our engineers are all employed exclusively by Positive Solutions and try and arrive on-site within 8 working hours of the fault being reported to them by the CareDesk.

Email

Non-urgent requests or comments can be emailed directly to the CareDesk at support@positive-solutions.co.uk. Please be sure to include your pharmacy name and address in any correspondence. Alternatively your email editor can be launched from within Analyst by clicking **Help** and **Email PSL support...** This method will place your account number

and details in the subject line for you, but it will only work on terminals with an email client (Outlook or similar) already installed on it.

Web

The web site at www.positive-solutions.co.uk contains printable portions of this guide to download and email forms for contacting the CareDesk and Sales.

A forum is also available to post questions or comments of a non-urgent nature and to engage other users in a discussion about particular topics. The address for the forums is: www.psl.tsohost.co.uk/forums/index.php or from the main website click on Support then Forum.

Post

Not normally used for support, but correspondence can be sent to:

Positive Solutions Ltd.
Solutions House
Chorley Business & Technology Centre
East Terrace
Chorley
PR7 6TE

To ensure it reaches the correct person address it to:

Martin Jones	Sales
Priscilla Burley	Accounts
Brian Parry	CareDesk
Bill Ennis	Complaints

Common Error Messages

Beneath the surface of Analyst, the system is running a number of checks and processes that help ensure the integrity of your data and operate a backup system should any part of the network fail. Periodically these processes may fail to start or may crash whilst running. When this happens the system will display an error message.

When these error messages appear, they are usually at a busy time or first thing in a morning. This is usually because the system is under the most strain when busy or one of the many overnight processes have failed.

Always read the error message when it is displayed. This will tell you exactly what has gone wrong and depending on what has failed, why it has failed and how to resolve the problem. The CareDesk should be informed of any errors you encounter. Whilst you may have already fixed the error, the CareDesk log all errors and can spot trends either just in your shop or across everyone's systems. This kind of feedback is crucial is helping us provide a better service and develop the system to prevent failures.

This guide provides a Quick Fix, and a Best Fix. Wherever possible use the Best Fix as this will reduce the chance of the problem re-occurring straightaway.

Quick Fixes

Here is a summary of quick fixes for the most common error messages reported to our CareDesk. By following the quick fix you will be able to serve customers quicker than performing the best fix, but further attention to the system is required so that the warning or error will not keep appearing.

If you continue to receive warnings or errors on your system, you should inform the CareDesk who will log the error and try and resolve any faults they may find.

NTX File not built	**OK** the warning that appears at the beginning of every sale. When quieter, reboot the terminal.
Illegal Operations	**Close** the error message and re-launch Analyst. If the problem persists reboot the terminal.
Blue Screen of Death	Reboot the terminal
Data exchange required	**OK** the warning and perform and PSL Data Exchange when quieter. You may need to call the CareDesk for a password if you have ignored too many of these warnings.
Backup Required	Press **Defer**. Perform a backup when quieter.
Sharing Violation	Close Analyst on all Slave terminals before attempting to backup.

Performing a Controlled Shut Down

Whenever rebooting a Windows terminal, you should always try to shut it down correctly. This is done by closing Analyst by selecting **Switch off** from the top bar of Analyst and **Yes** to the 'Are you sure?' question.

When at the Windows desktop select the **Start** button, the **Shut Down** option and **Shut Down** again, then **OK**.

The system will then shutdown. PSL Micro Terminals will display the message that they are 'Now safe to switch off' when the shut down procedure is complete. Reach behind the screen and press the silver button to turn the unit off.

Other PCs may simply turn themselves off when the shutdown procedure is complete.

Unable to perform a controlled shut down?

If the terminal has crashed so severely that you cannot shut it down as described above, as a last resort, the system can simply be turned off. This is to be avoided if at all possible as damage can be caused to the terminal by simply pulling the power.

On a PSL Micro terminal reach behind the screen and press the silver button. On other PCs you may need to press and hold the power button for a number of seconds.

Restarting a terminal

Wait 10 seconds or so after turning a unit off before turning a terminal back on again. Windows performs checks as the system is starting up and it may perform a Scandisk to check for any errors. Allow the system to do this and startup normally.

NTX File Not Built

The Network Transmission File (NTX file) is a backup feature used by Analyst to provide each terminal on the system with an up-to-date database in the event of a server or network failure. The NTX File Manager is a utility which is permanently running in the background of the system.

Each night the NTX File Manager on the master terminal will close Analyst on itself and all other terminals in the system and create a backup of the live database, called an NTX file. Analyst is then restarted around the system by the NTX File Manager on the master. The NTX file is then copied across the network to each slave terminal in turn. The NTX File Manager which runs on a slave will expand the NTX File into a useable copy of the database on that slave in the event of any failures.

Despite this being a fairly complicated sequence of events, the NTX File system is fairly reliable. Problems occur however if the NTX File Manager stops running. Each time Analyst launches on a terminal, it checks that a recent NTX file has been received. If not the following message will appear:

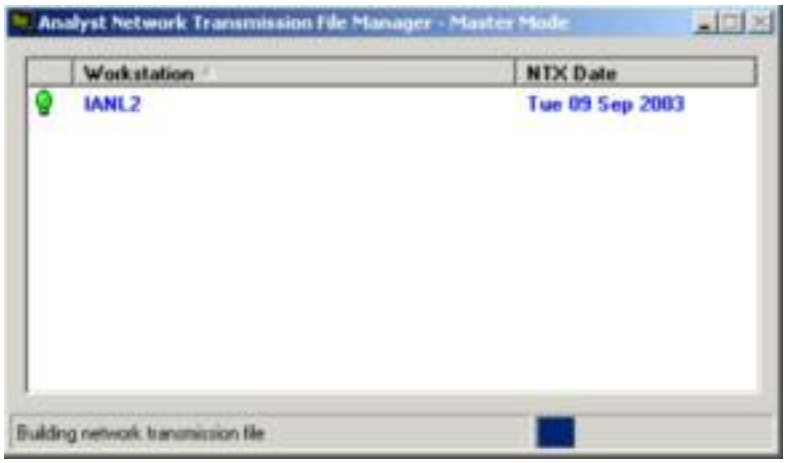
The 'NTX not building' warning appears before every new sale

Quick Fix

Press **OK** on the message to dismiss it. The system can be used normally, but each time you press the **New Sale** button this message will appear. You can continue to press **OK** for as long as is necessary to get you through a busy period.

Better Fix

Re-launch the NTX File manager by closing Analyst then press the **Start** button, **Programs**, **Analyst**, **Analyst NTX File Manager**. The NTX File Manager will then launch and build an NTX file or have one copied over from the server. When complete Analyst can be re-launched. This can take up to 5 minutes depending on your terminal and size of database.



The NTX File Manager building an NTX File on a master

Best Fix

In case the NTX Failure is indicative of a wider failure on the system it is preferred that this terminal is restarted. If this terminal is the master then restart the system. All of the processes and applications that Analyst uses are loaded on start up. Upon restart, the system will build the NTX file that was missing. This may take up to 15 minutes in total.

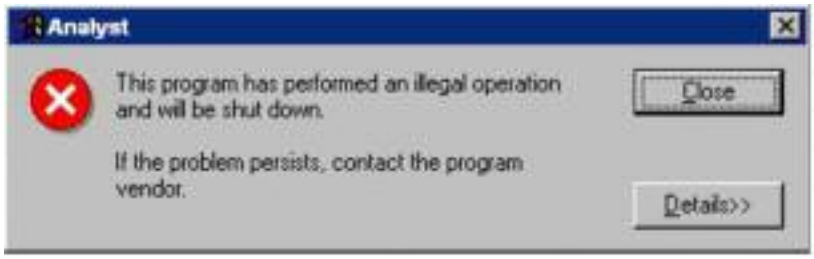
Illegal Operations

Illegal Operations are faults in the execution of the program. Positive Solutions never ship software with known faults. Whilst all software is tested thoroughly before being issued some 'bugs' may slip through to the end user. Any reported faults are acted on immediately and are fixed in an update released as soon as is practicable if the fault lies within Analyst..

Faults in the execution of a program like Analyst can lie with the program that is trying to run (Analyst or a component of Analyst) or Windows (the platform Analyst runs on) or a combination of the two.

If you encounter an illegal operation whilst using Analyst we need you to make a note of a number of things to help us investigate exactly what has failed:

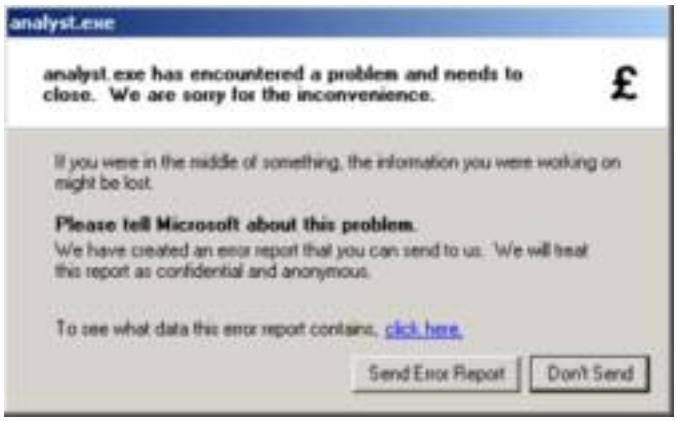
Till/Terminal number?
What precise operation was being performed? Scanning a barcode, typing a dose code, clicking on a certain product etc.?
Who was using the terminal at the time?
What time was it?
What version of Analyst was being used?
What version of Windows was being used?
Has this happened before?
What module was mentioned in the detail section of the error message?



Windows 95/98 illegal operation

Quick Fix

Press the **Close** or **Don't Send** button and re-launch Analyst on the affected terminal. Call the CareDesk to report the fault at the next opportunity.



Windows XP illegal operation

Best Fix

Make a note of the answers to the above questions and any other information you might think is important. Press **Close** or **Don't Send** and reboot the affected terminal in case the illegal operation is indicative of more failures on the system. When the system has restarted check it functions normally. Call the CareDesk to report the error and let them know the details you have logged.

Severe Analyst Crashes

Despite Analyst being produced and tested to the highest possible standards prior to release and on a variety of hardware, we accept that Analyst will occasionally crash. We apologise if this happens to you and ask for your help when it does to prevent it happening again.

When Analyst encounters a serious problem and crashes the following screen appears.

Analyst crash report.

Behind the scenes a report has been created about system conditions when the crash occurred. This can be sent to PSL for analysis by clicking the **Data Exchange** button which will connect to PSL using the configuration on the Exchange tab of the system configuration and deposit the report with us.

Any additional information you can offer to help us pinpoint the precise problem more speedily can be typed into the notes box. This information might include:

- What screen was the system on when it crashed?
- If an item was being dispensed or sold at the time, what was it?
- Has this happened before? If so what common elements are there?
- Your name in case we need to call you.
- Any other information you can provide.

We also appreciate that you may be too busy to provide these details or even tell us it has happened in which case click the **Don't Send** button which will close the crash report and re-launch Analyst for you.

The 'Blue Screen of Death'

The Blue Screen of Death (BSOD), or more correctly Windows Fatal Exception Error, occurs when a serious problem occurs with the Windows operating system. This is not usually a fault with Analyst, but with a system file or piece of system data that allows your terminal to run Windows and execute other programs such as Analyst.

As the nickname suggests, there little chance of being able to recover from this error without restarting the terminal.

The Blue Screen of Death of Windows 95/98

The BSOD looks slightly different on Windows NT and 2000 systems, but they effectively mean the same thing.

The terminal this happened on and the events leading up to the error should be noted and reported to the CareDesk.

Fix

Reboot the terminal. You will probably be unable to perform a controlled shutdown, so just switch the machine off, leave for 10 seconds and restart. The terminal will probably perform a Scandisk which you should let it do. When restarted call the CareDesk and let them know about the problem and which terminal it happened on.

Data Exchange 'Nag'

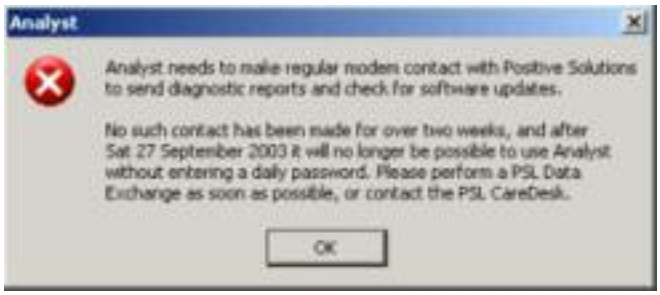
Analyst is configured to perform a PSL Data Exchange every week. This ensures you are up-to-date with your database and software releases which you can download from us whenever available. Every Analyst system has a data exchange time which will lie between 8pm and 8am Sunday to Thursday unless you have a data collection arrangement with us in which case your call will be scheduled over Friday and Saturday nights.

A time slot is allocated to you so we know when to expect your system to call. By allowing all systems to call in a structured and ordered way we can deploy software updates very effectively and quickly. If everyone were to call as soon as they were available, our data collection server would be overloaded; we don't have 800 phone lines!

In addition to your system keeping up-to-date with us, your system produces small statistical files informing us of any errors that may have occurred on the system, free drive space etc. This allows us to spot any anomalies with any systems which fall outside the norm and remedy problems often before they become apparent to the user. We can also monitor trends in system health to check that updates have been applied properly and are not causing any problems on your system.

No personal or sensitive information is collected from your system. The information collected is used solely to monitor the health of systems.

If your system fails to perform a PSL Data Exchange for three consecutive weeks a warning message will appear which will remind you to perform one and check the automatic settings.



Warning after 18 days without contact

If no contact after another week has passed a similar message will appear on startup which will require a password. This call will be logged by the CareDesk. They will of course help resolve any problem you have performing a PSL Data Exchange.

Warning after 25 days without contact

Quick Fix

Press **OK** on the warning and perform a PSL Data Exchange at the soonest opportunity. If you require a password you will need to call the CareDesk. You will still need to perform a PSL Data Exchange at the soonest opportunity.

Best Fix

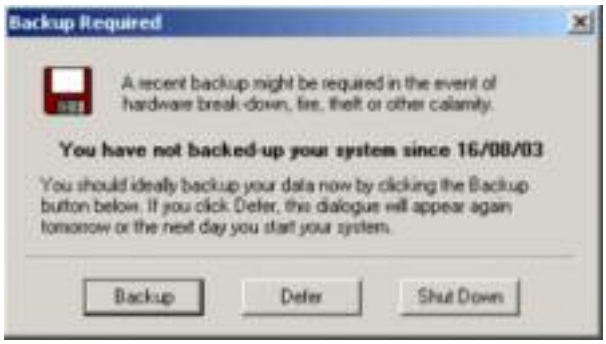
If you receive any warning about performing a data exchange try and perform one manually by selecting **Exchange**, **PSL Data Exchange**. If you encounter any problems check your telephone connection and try again. If problems persist contact the CareDesk for assistance.

Backup 'Nag'

Despite Analyst generating an NTX file which will help in the event of a network or server error the system still requires that you create a backup on removable media (a disk) that you can take off-site*. This is in case your system is destroyed by flood, fire, vandalism or if the data has become corrupt over time. In these instances the backup disks could save you weeks of work and retain all or most of your data.

*** If the backup disks are not removed to another premises, they could be destroyed at the same time as your system.**

Ideally you should perform a backup everyday but the system will not 'nag' you until a backup has not been performed for 3 days. At that point the **Defer** button can be pressed. The backup can be deferred for a further 3 days. Subsequent deferrals will require a password from the CareDesk, the call for which will be logged.



Backup nag

Quick Fix

Press **Defer** and backup at the soonest opportunity.

Best Fix

Press **Backup** to perform the backup now.

Sharing Violation

A sharing violation on an Analyst system will only happen when you are attempting to backup your system to disk. In order for the backup procedure to compress and copy the database onto disk it must have 'exclusive access'. This means that not other terminal may access the database while the backup is in progress.

If you attempt to backup the system without closing Analyst on other terminals in the system, the master will display the error message

Sharing violation whilst backing up

Fix

Close Analyst on all slave terminals in the system and try to backup again. Ensure there are no error messages on the slave terminals or in the background of the master. If problems persist, call the CareDesk.

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