

## Guide to Troubleshooting

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## 1 Suggested procedure for troubleshooting?

1. Examine if the host has connection to the IAPS  
(Use *ping* command from host)
2. Verify that Services and Drivers has been created and used in a proper manner.  
(Refer to the *Services, Drivers and Templates Guide* for more detail)
3. Investigate the online help and section 2 *Error- and Status Messages* in this guide

If at this point the problem hasn't been solved, you probably need to contact your point of purchase!

In order to get a fast and sufficient answer, please do as much possible of the following:

1. Describe the problem, and what have been tried to resolve it.
2. Describe the Host Writer Setup (does it use PSF, etc).
3. Enclose a Status sheet from the printer, stating brand, model and setup.
4. Enclose the Printed output (if such is created) with clear indication of what is wrong.
5. Enclose - if possible - a correct printout.
6. Capture a Trace of the host print data (Refer to Section 3 *How to Capture a Trace*)
7. Export a Configuration file from the IAPS (Refer to Section 1.1 below)

Please send the above mentioned to your point of purchase.

### 1.1 How to extract a Configuration file from the IAPS?

Open the *Configuration > Import or Export* menu in the IAPS. Press the *Export Configuration* Button and Save the file *IAPS200.cfg* to the PC.

Please note that your IP- and GateManager settings are not included in the Configuration file.

... What is GateManager?

GateManager is a fleet management tool. The IAPS can be enabled for GateManager by buying an add-on option.

For more information about GateManager, please refer to:

<http://www.gatemanager.dk>

## 2 Error- and Status Messages

### 2.1 Status Messages from the *Status > Overall Status* Menu

#### 2.1.1 The *Service Row(s)*

A service can be **Activated** or **Deactivated**

By deactivating the service, it will be stopped and the attached licenses will be freed.

When activating a service, it allocates the appropriate licenses. If these are not available, the service cannot be started. If the appropriate licenses are available the service will be started.

A service must be activated and started before it can process print data.

#### 2.1.2 The *Target Printer* Column

Before a connection to a printer is established, the name will be **Not Available** and the status will be **Unknown**.

When a connection to a printer is established, the Name of the printer will be shown in the Name column or in case of the SNMP lookup failed it will show **Not Available**. The status column will change to **(0) Ready** and the Hostname/IP address of the printer will show in the Hostname/IP column.

#### 2.1.3 The *Connected Host* Column

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The service is not running.

##### **Awaiting Connection**

The service is running and ready to handle session requests from a host.

##### **Connected**

The service is running and has established an active session with the host at the IP address shown.

##### **Printing**

The service is running, has an active session and the printer is receiving data from the host (at the IP address shown).

### 2.2 Error Messages

#### 2.2.1 Fatal Messages

##### **"No driver selected for this service"**

If a service hasn't got a reference to a driver, it wouldn't know what to do with the received printer data – Attach an appropriate driver to the service (Configuration > Services).

##### **"Not properly configured. Target not valid!"**

Not able to get an appropriate answer from an attached printer, or no printer attached at all. Check that IP address, IP port and other vital information is correct

##### **"Failed to connect to Intermate IPDS Capture Tool"**

The IAPS cannot get in contact with the Intermate Capture Tool on the specifies IP address – please check that the IP address is valid and reachable and make sure that the Intermate Capture Tool is started.

##### **"IPDS trace server IP missing"**

The IAPS hasn't been provided with an IP Address – go to Configuration > services > Emulator Setup and provide an IPDS Capture Tool IP Address.

**"Unsupported colorspace specified"**

A Colorspace command has been received that the IAPS doesn't support. Please use a different colorspace on the host application and generate the print job again.

**"Error code : <<n>>", Where <<n>> is the number of an internal error.**

Please contact your point of purchase and report the error.

**"Target not valid configured, powered off or unreachable"**

Not able to get an appropriate answer from an attached printer, or no printer attached at all. Check that IP address, IP port and other vital information is correct. Also check if the printer is turned on and connected to the network.

**2.2.2 Severe Messages**

**"Not properly configured. No input trays defined"**

Define Input Trays at: Configuration > drivers or driver Templates > Input Trays.

**"Not properly configured. Input tray mapping table may be empty or no trays defined"**

Map or define Input Trays at: Configuration > drivers > Input Trays.

**"Not properly configured. No SNMP response received from target"**

Try to use the 'ping' or 'tracert' command from a dos box to reach the printer. If the printer could be reached without problems, go to Configuration > services > Emulator Setup and set Page Counter Update to Early.

**"Not properly configured. Output bin mapping table may be empty or no bins defined"**

Map or define Output Bins at: Configuration > drivers > Output Bins.

**"Not properly configured. No selected target configuration"**

Go to Configuration > services and provide required information about the Target Printer.

**"Not properly configured. Resolution is Invalid"**

Go to Configuration > services > Emulator Setup and choose the correct Resolution or change the IPDS Resolution to Auto.

**"Not properly configured. Some input trays does not have a selected paper"**

Go to Configuration > drivers > Input Trays and make sure that all Input Trays have a valid reference to a Paper Definition.

**"Not properly configured. No valid input tray mappings available"**

Go to Configuration > drivers > Input Trays and make sure that all used Input Trays have a mapping to a valid IPDS Paper Source ID.

**"Not properly configured. No valid output bin mappings available"**

Go to Configuration > drivers > Output Bins and make sure that all used Output Bins have a mapping to a valid IPDS Paper Destination ID.

**"Writing to printer failed. Printer may have disconnected"**

After several tries to connect to the printer the IAPS has given up. Check that the Printer is available and reachable. Try to use the 'ping' or 'tracert' command from a dos box to reach the printer.

**"Invalid PPR/PPD data received"**

The PPR/PPD protocol is used to control the dataflow between the host and the IAPS. You need to capture a trace of the data for analysis purposes. Please refer to <http://www.intermate.com/iaps> for instruction on how to Capture a Trace with the Intermate Capture Tool. As the PPR/PPD protocol is host driven, please contact your host support for further information.

**2.3 Warning Messages**

**"Received driver template file with invalid format!"**

You have tried to import a file that did not contain driver Templates – file is ignored.

**"Firmware upgrading failed."**

You have tried to import a firmware, but it failed – please try again. If the IAPS is unreachable by HTTP as well as FTP after the flawed update, the IAPS must be returned to your point of purchase for revival.

**"Invalid IAPS configuration file received"**

You have tried to import a file that did not contain a valid configuration – file is ignored.

**"ppm license check failed!"**

You haven't got the proper licenses for one or more services. Either reduce the speed (ppm) or buy additional licenses.

**"Finishing license check failed"**

You haven't got the proper licenses for enabling finishing on one or more services. Either disable the finishing option or buy additional licenses.

**"Importing Configuration Backup failed."**

You have tried to import a Configuration Backup from GateManager© – please try again. If the IAPS is unreachable by HTTP as well as FTP after the flawed import, the IAPS must be returned to your point of purchase for revival.

**"Importing Configuration Profile failed."**

You have tried to import a Configuration Profile from GateManager© – please try again. If the IAPS is unreachable by HTTP as well as FTP after the flawed import, the IAPS must be returned to your point of purchase for revival.

**2.4 Notification Messages**

These messages are used by Intermate A/S for debugging purposes – It is most likely that they have no effect on your operation!

**"Errors found in database PlatformConfig - fixed!"**

A database error was corrected automatically.

**"Errors found in database IpdsConfig - fixed!"**

A database error was corrected automatically.

**"Errors found in database TargetOption - fixed!"**

A database error was corrected automatically.

**"Missing DB instance : <<instance>> in TargetOption, - Deleting template <<template\_name>>"**

A driver Template was corrupt and the driver Template has been deleted.

**"Unlinked DB Instance : Name <<instance>> in TargetOption, - Deleting DB Instance"**

A database integrity rule has been violated and the database has been repaired.

**"No Session DB instance set for service : <<service\_name>> - Creating new instance."**

A database integrity rule has been violated and the database has been repaired.

**"Missing DB Instance : <<instance>> in IpdsConfig - recreated. IPDS Emulator setting will default for service : <<service\_name>>."**

A database integrity rule has been violated and the database has been repaired.

**"Unlinked DB Instance : <<instance>> in IpdsConfig, - Deleting DB Instance",**

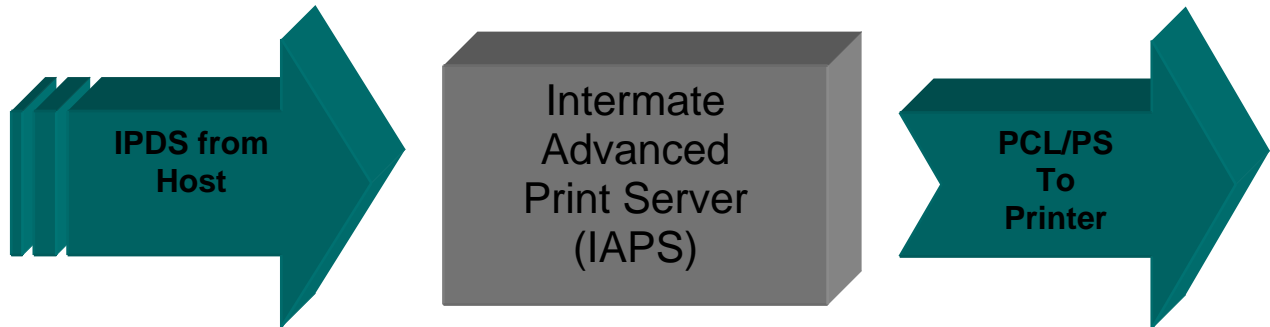
A database integrity rule has been violated and the database has been repaired.

**"Zombie driver detected. - Deleting driver <<driver\_name>>"**

A driver was corrupt and the driver has been deleted.

### 3 How to Capture a Trace

#### 3.1 Which DataStream do you want to trace?



If you wish to capture the data coming from the host to the IAPS, Please refer to section 2.2: **How to Capture a Trace with the Intermate Capture Tool.**

If you wish to capture the data coming from the IAPS to the printer, Please refer to section 2.3: **How to Capture a Trace with the Ethereal Public Trace Tool.**

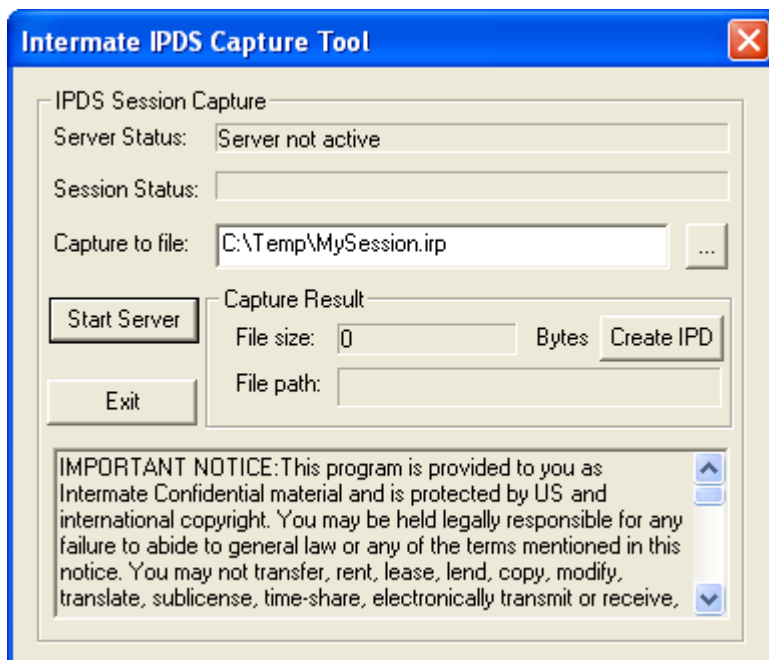
#### 3.2 How to Capture a Trace with the Intermate Capture Tool

The Capture tool can be downloaded from the Utility Section at <http://www.intermate.com/iaps>

To install the Intermate Capture Tool, copy the exe file to an appropriate directory on a windows PC and start it.

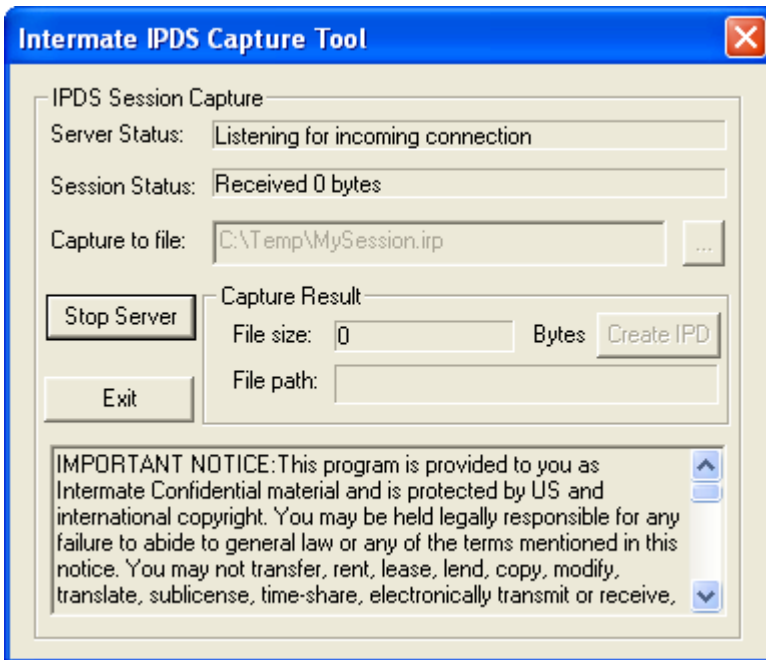
##### 3.2.1 Setup the Local Capture File:

Type the filename (and path – if needed) into the list box with the caption: **Capture to file** and give the filename the extension .irp. E.g. *c:\temp\MySession.irp*



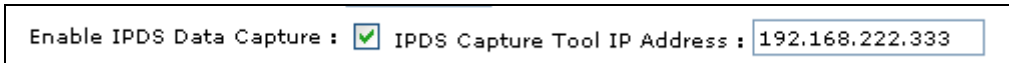
### 3.2.2 Start the Intermate capture Tool:

Click the “Start Server” Button and You will see the text “Listening for incoming connection” in the box with the caption: “Server Status”.



### 3.2.3 Enable The Remote IPDS Data Capture:

This is done from the IAPS Printer Server Box in the menu: Configuration->Services->Emulator Setup:



The **IPDS Capture Tool IP Address** is the IP address of the PC where the Capture tool is running. It could be any valid IP Address.

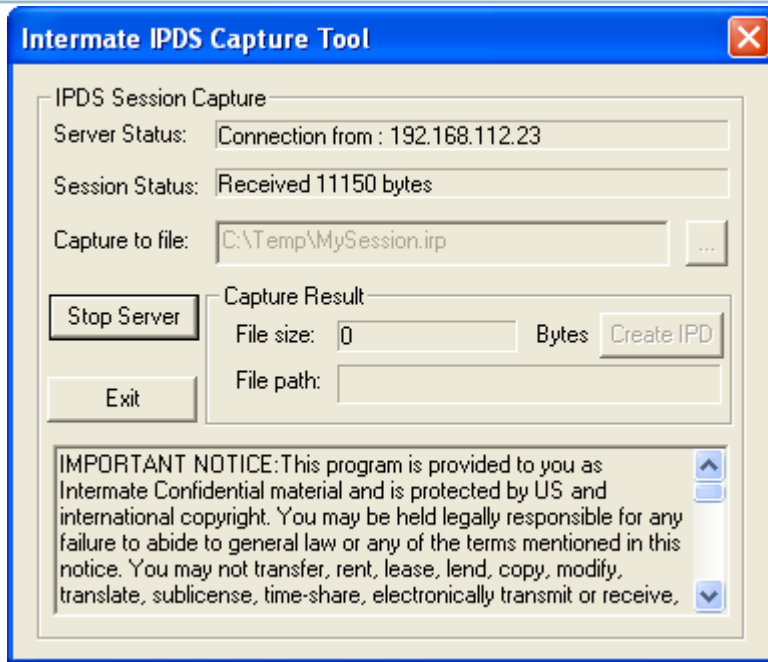
*Remember to click on the “Save Changes” Button.*

**NOTE:** *The Capture must be activated before the Host connects to the IAPS, in order to get the IPDS resources included in the Trace. You should therefore Reboot the IAPS after you have activated the Capture Tool, and before you submit the print job to be captured.*

### 3.2.4 Execute a print job to the IAPS box

Now you can submit the print job to the IAPS Print Server and you will observe two things on the Intermate IPDS Capture Tool:

- **Server Status** shows: ‘Connection from: 192.168.192.23’ which is the IP Address of the IAPS Print Server.
- **Session Status** counts the number of captured Bytes.

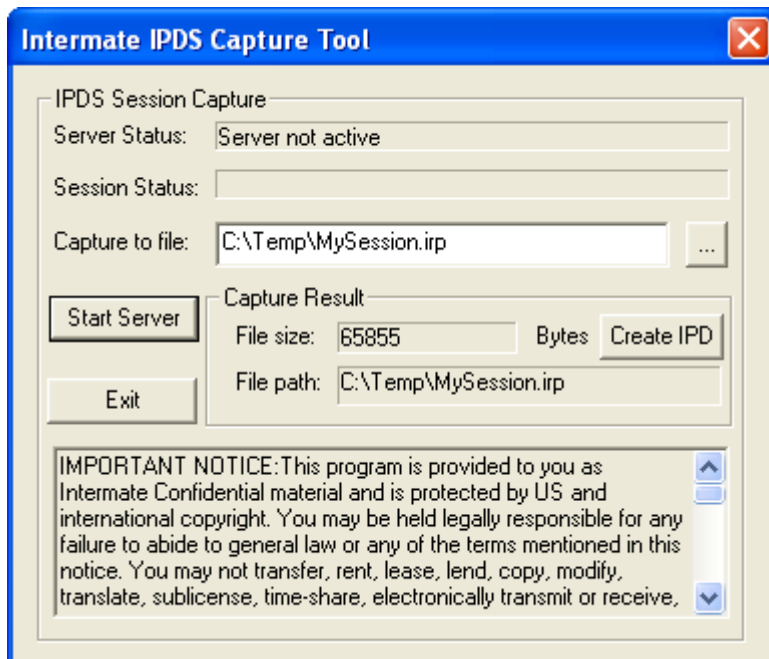


### 3.2.5 End the Capture

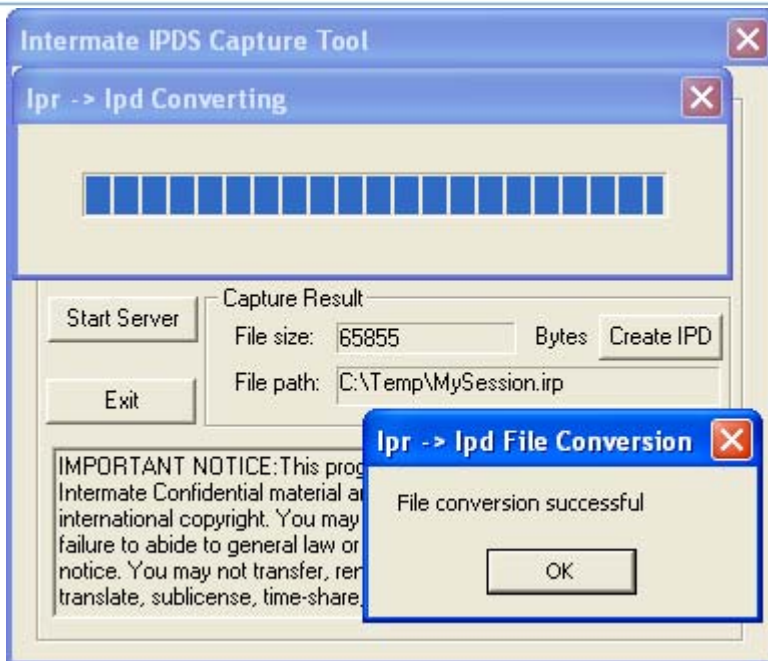
The Intermate IPDS Capture Tool will end when the hosts print session ends. When the Host Print Job has been processed to the point where the problem occurs, you can also stop the Intermate Capture Tool by pressing the button with the caption: "Stop Server".

### 3.2.6 Save the Captured Trace

In the box with the caption 'Capture Result' you will see the file path, -name and -size. You could stop here, as this file contains all info about print- and network data.



If you are in possession of the IPDSTest Tool© from Intermate A/S, which can replay Intermate's proprietary format - IPD, please press the 'Create IPD' button to strip the IRP file of any non IPDS data and convert it to an IPD file. Refer to Section 4 – How to use the IPDS Test Tool.



**NOTE:** Remember to disable capture in the IAPS or else the log will show this message:  
**Thu Dec 2 18:54:26 2004: Failed to connect to Intermate IPDS Capture Tool.**  
 You don't have to clear the Capture destination field.

### 3.3 How to Capture a Trace with the Ethereal Public Trace Tool.

This session shows how to trace a PCL Data stream from the IAPS to a printer. It can be used on other data streams as well, e.g. a PostScript Data Stream.

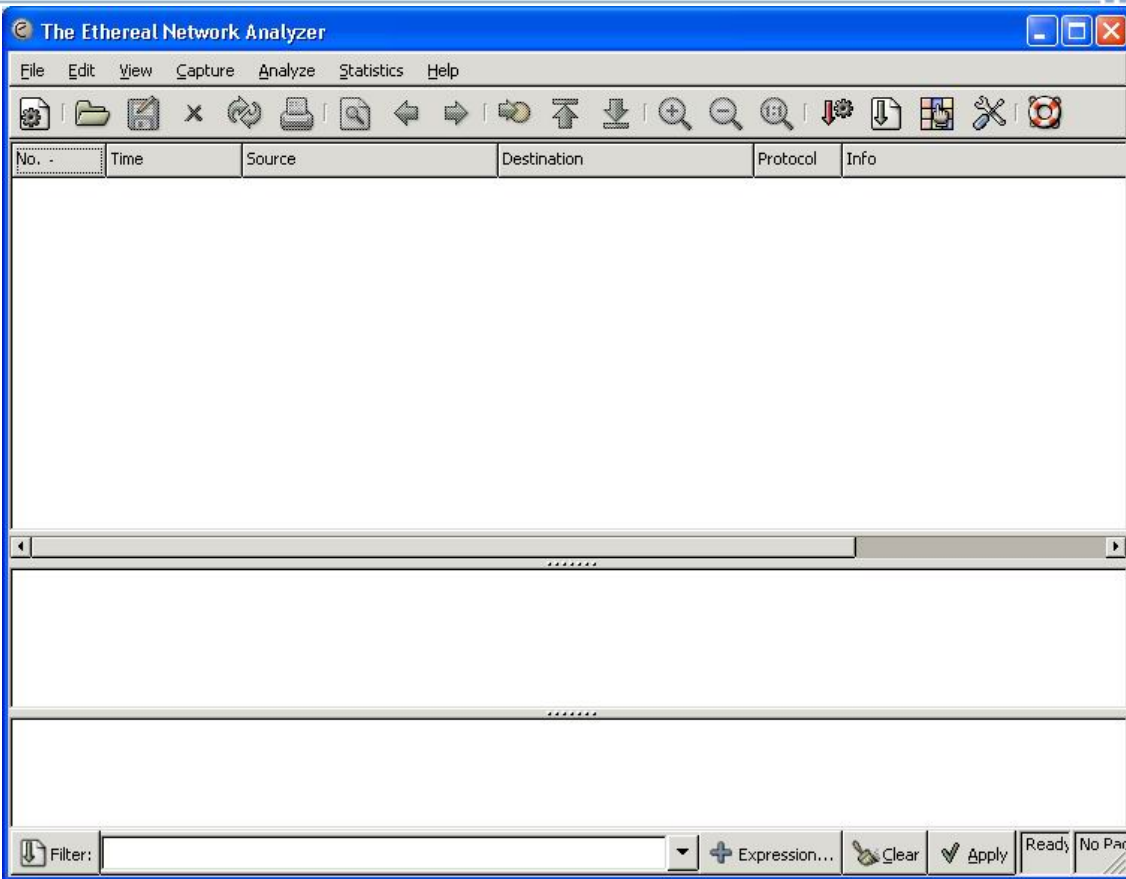
#### 3.3.1 SetUp EtherReal 0.10.2

We recommend the freely available sniffer tool Ethereal.  
 This guide is for version 0.10.2, but other versions will do as well!

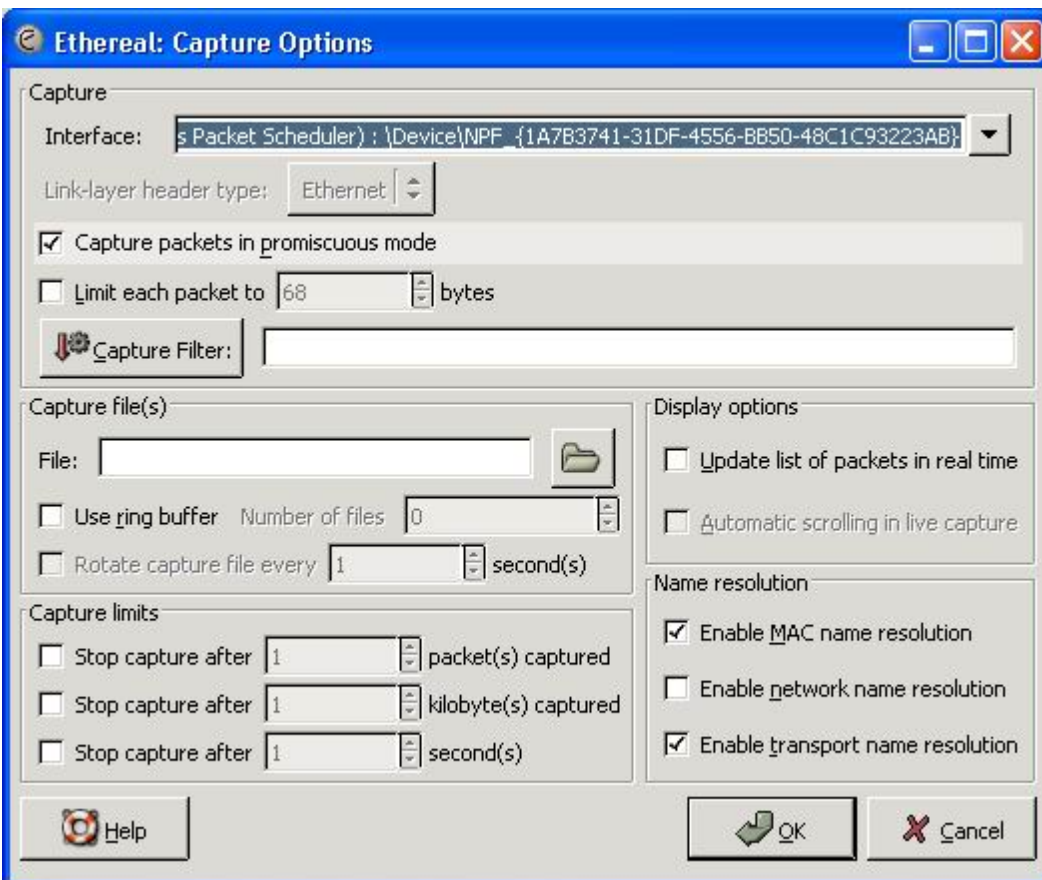
It can be downloaded from this web site: <http://www.ethereal.com/> and is available for several operating systems including Windows.  
 For Windows you need to install a driver component called WinPcap after you have installed Ethereal. It can be downloaded from here: <http://winpcap.polito.it/install/default.htm>

#### 3.3.2 Create a Capture

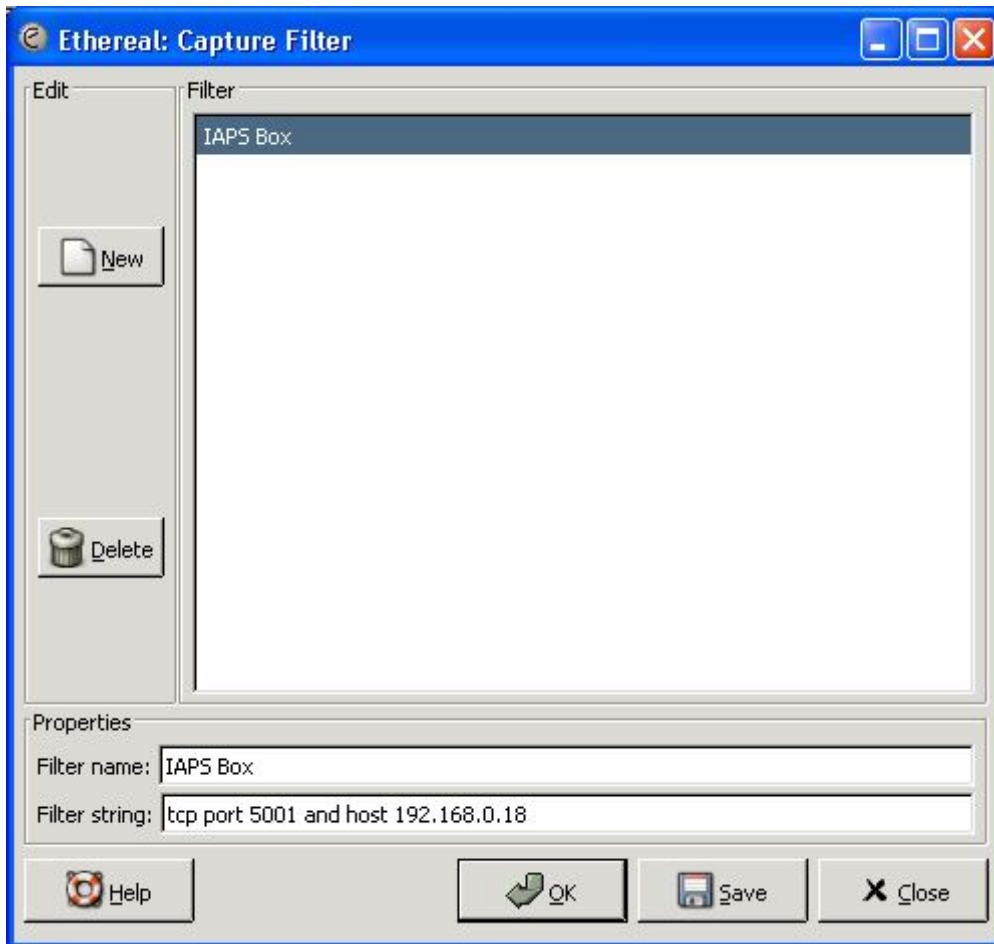
Make sure you are sitting on the same subnet as the printer you want to trace. It is recommended to install a HUB between the printer and the network and connect the trace PC to the same HUB (A switch may not work).



Start Ethereal and Select Capture → Start

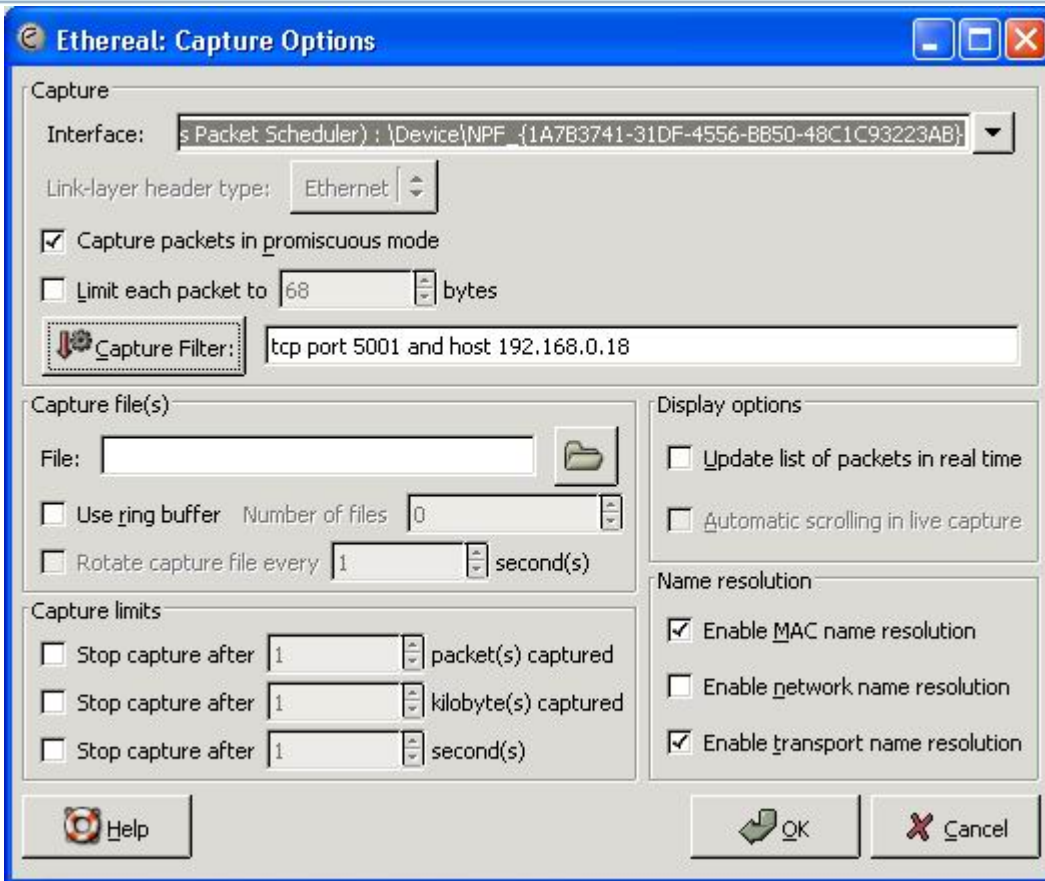


Make sure that the correct NIC is selected in the Interface field and Click **Capture Filter** Button



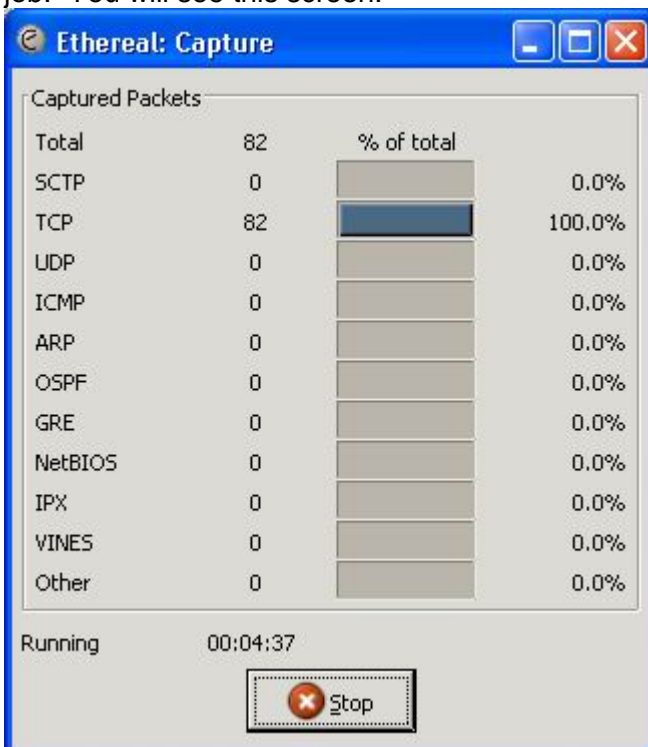
Type a filter name, e.g. IAPSBBox, and a filter string.  
 Click New to add the filter to the list.  
 Click Save and then OK.

Type in the following in the filter string: “host 192.168.0.18” where 192.168.0.18 is the IP address of the Device you want to sniff. If you know the actual TCP port data is transmitted on, you can narrow the trace to e.g. RAW data only. For example by typing the filter “tcp port 9100 and host 192.168.0.18”, where port is the appropriate printer port.  
 Please note that unwanted data can be filtered using the Display filters, though it is convenient still to keep the trace file at a minimum.  
 For printers port 9100 is often used for Raw Socket communication (PCL, PS, etc.).



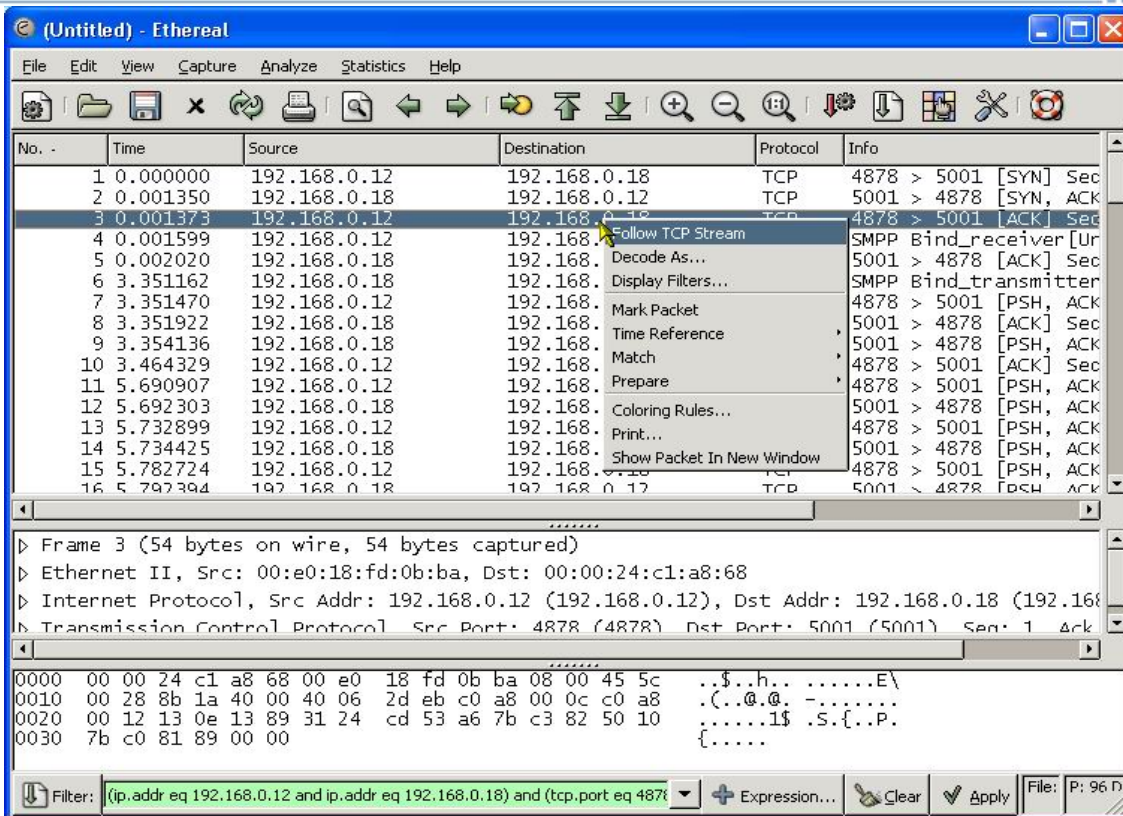
You are now back in the Capture options view.

Press OK to start capture. Power on the Device (that you want to trace) and submit the host print job. You will see this screen:

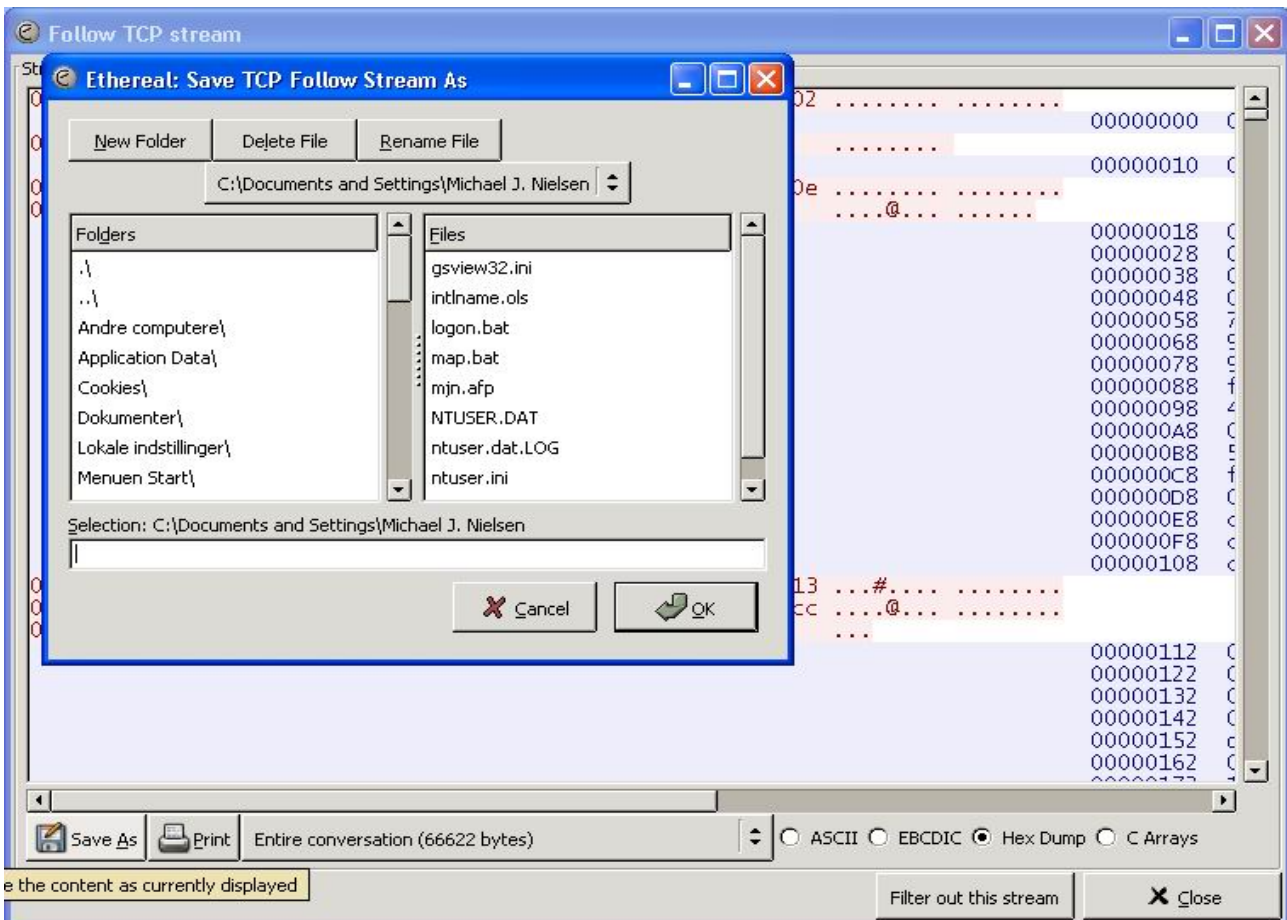


When the print is done, press the Stop Button (in Ethereal).

This screen dump shows that the trace has been running for 4 minutes and 37 seconds and it has captured 82 TCP packets.



To save the capture: Right Click on a stream with proper IP address and Port and select **Follow TCP Stream**



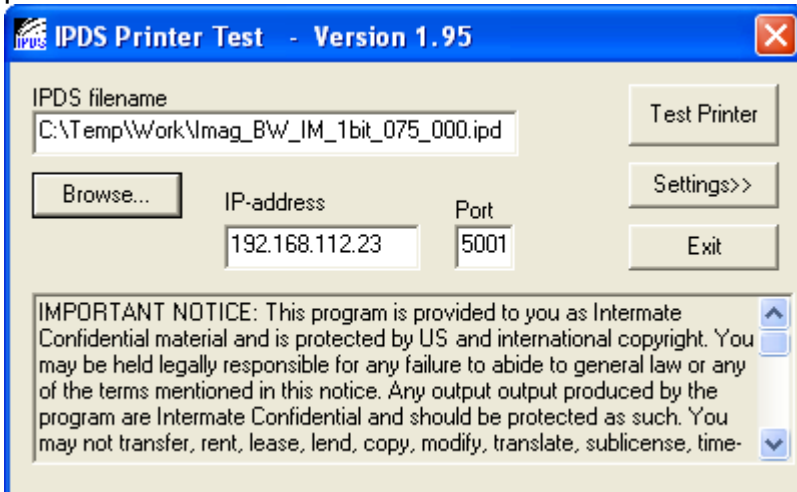
Save the File as a Hex file by clicking on the **Save As** Button, give it a name and press **OK**.

#### 4 How to use the IPDS Test Tool

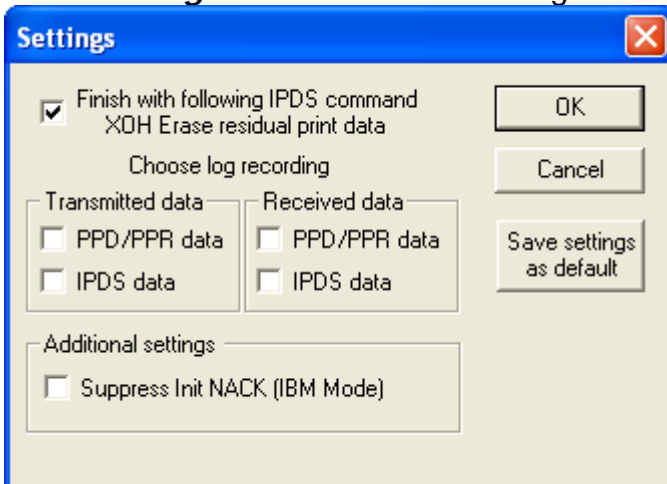
The IPDSTest is Host Print Simulator. This tool can be used for submitting a captured trace from a host print session from a Win32 environment to the Intermate Advanced Printer Server. The file format used is an ipd file.

An ipd file is an Intermate A/S proprietary file format for Captured Traces. These traces can either be obtained from Intermate A/S or be captured by the free Intermate Capture Tool, which can be obtained from the utility section at <http://www.intermate.com/iaps>.

Start the program, set the IP-address and desired port of the IAPS, select an IPD file and push 'Test Printer'.



Push **Settings>>** for additional settings:



**Finish with ... XOH ... :**

Clears all page segments, overlays and buffered page data from printer storage at the end of the test run.

**Suppress Init NACK (IBM Mode):**

Suppress Initial NACK reply when submitting to an IBM printer.

A log file for IPDSTest is available for inspection in the same folder as the exe file. This log can contain various data depending on selection:

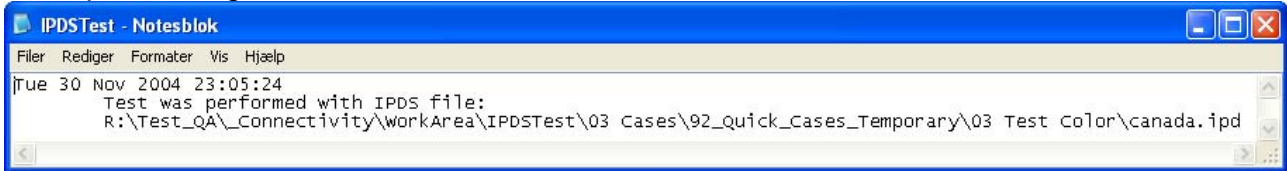
**Transmitted data:**

- PPD/PPR data:**
- IPDS data:**

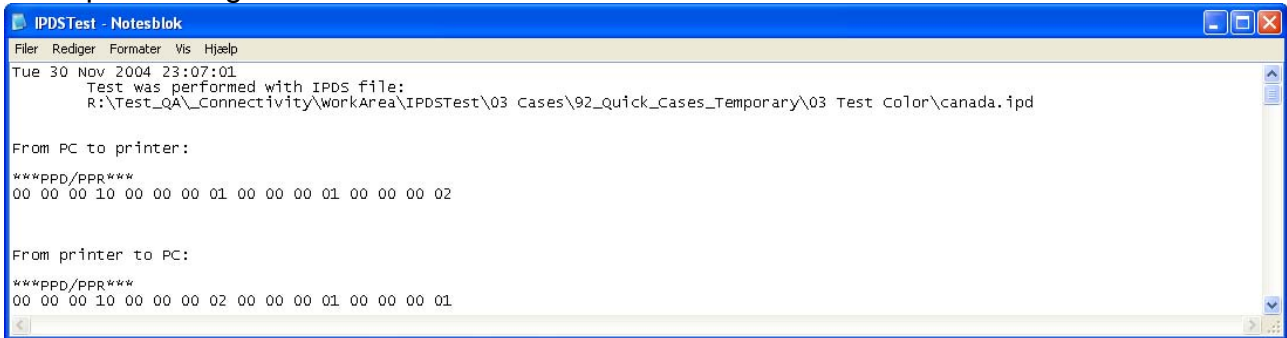
**Received data:**

- PPD/PPR data:**
- IPDS data**

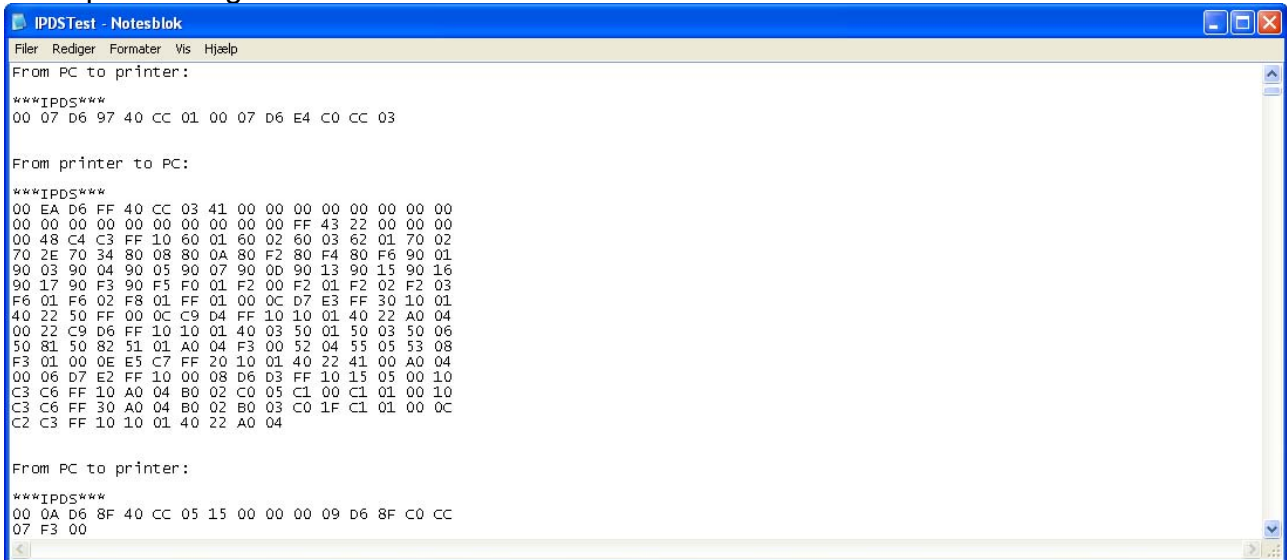
Example of a logfile with no PPD/PPR data and no IPDS Data



Example of a logfile with PPD/PPR data and no IPDS Data

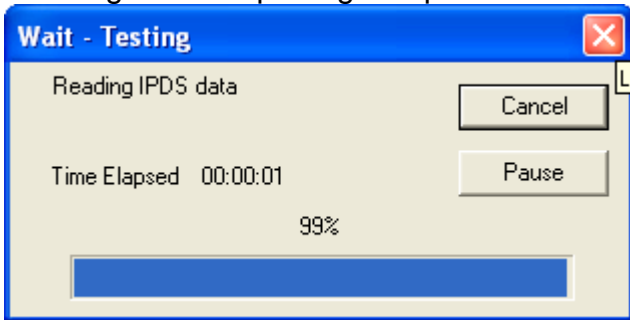


Example of a logfile with no PPD/PPR data and IPDS Data

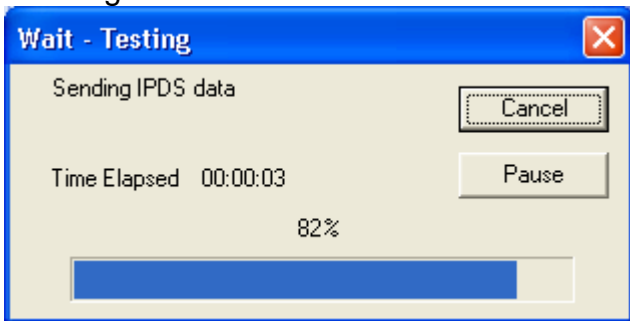


When an IPD File is submitted the following dialogue occurs:

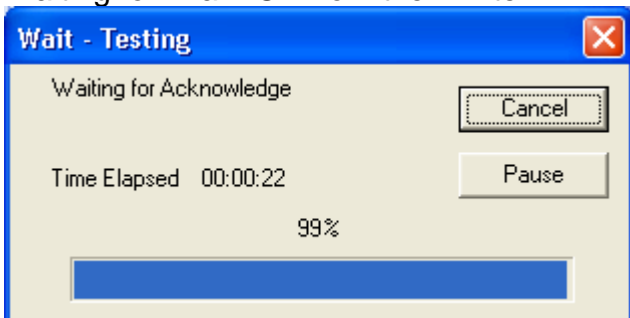
Reading and interpreting the ipd file:



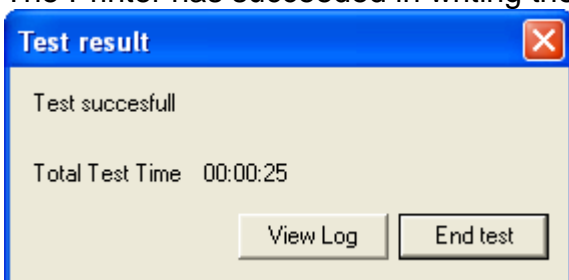
Sending Print Data to the Printer:



Waiting for final ACK from the Printer:



The Printer has succeeded in writing the IPD File:



A log file is available for inspection (press 'View Log').

## 5 Notices

### 5.1 Publication Information

Troubleshooting Guide. Ed 2. 21 February 2005. Conforms with release 2.0

The information contained in this document is subject to change without notice.

Composed in Denmark.

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Product support portal <http://www.intermate.com/iaps>

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