"DP2 to NHF Module"
for NetOrder API v 1.0.3
Reference Manual
Rev. 08.22.04

Install Files:

There are only four files involved with installing the "DP2 to NHF Module".
1. "NHF_OrderComplete_103.txt"
2. "ISLDR.dll"
3. "NHF_OrderComplete.dll"
4. "NHF_OrderComplete_103.ini"

All files must be installed on every DP2 Client workstation that you wish to render products for the Noritsu Hot Folder to send to the Noritsu printer.

Do Not install these files on the DP2 Server machine if you are operating DP2 in the Server / Client mode.

DP2 "Scripts" Directory files:

The script, "NHF_OrderComplete_103.txt" must be placed in the DP2 "Scripts" directory.

DP2 Application Directory files:

The two dll's, "NHF_OrderComplete.dll" and "ISLDR.dll" must be placed in the root directory of the DP2 application folder (in the same directory as the DP2.exe).

The ".ini" file "NHF_OrderComplete_103.ini" goes in the DP2 application directory as well.

You should always restart DP2 after installing or replacing these files with newer versions.

Network Configuration:

IMPORTANT: It is very important to follow these guidelines if you want optimum performance from DP2 rendering as well as NHF performance.

DP2 should render images to the hard drive of same machine that the DP2 is running on, not across the network.

NHF should be running on a separate stand alone workstation. It should not be installed on one of your DP2 workstations. There must be a shared drive on the NHF workstation that can be accessed from DP2.

Create Directories that will be used:

There are two directories that need to be created on your hard drive before you can begin setting up DP2 to work with the "DP2 to NHF Module".

The first directory will be the "Output Path" and is used by DP2 as the directory to render the order item images into as it renders them to disk. This directory should be on the hard drive of the same machine that is running DP2 which is also the same machine you installed our script and ".dll" files on. In order to follow our examples that we use in this reference you should create the following directory on the root level of your "C:\" drive and name it "DP2_Rendered_Images".

"C:\DP2_Rendered_Images"

The second directory will be the "Control Folder" and is used by the "Noritsu Hot Folder" application ("NHF") as the directory that it monitors for work that is ready to print. The "DP2 to NHF" software copies the images from the "Output Path" directory into the "Control Folder" when all the order items have successfully been rendered to disk.

In order to follow our examples that we use in this reference you should create the following directory on the root level of your "C:\" drive of the computer that you have the Noritsu Hot Folder application running on, and name it "Noritsu_Hot_Folders". Remember, this should be a different computer than the one running DP2.

"C:\ Noritsu_Hot_Folders"

Then create another directory inside the "Noritsu_Hot_Folders" directory and name it "DP2_103_Output" so you end up with the following path:

"C:\ Noritsu_Hot_Folders\DP2_103_Output"

VERY IMPORTANT: Whatever drive you create the "Noritsu Hot Folder" directory on must be shared with the appropriate access privileges necessary for DP2 to write files to the drive

Now you are ready to begin DP2 configuration.

DP2 Configuration: "Printer Data" table:

You will need to create a Printer in DP2 and an associated Printer Queue for each paper width size that you will be running on the Noritsu printer.

Example:

Printer Name	Queue Name
"NHF_103_Printer_10_Inch"	"NHF_10_In_Queue"
"NHF_103_Printer_5_Inch"	"NHF_5_In_Queue"
"NHF_103_Printer_4_Inch"	"NHF_4_In_Queue"

The reason for this is, that the 1.0.3 version of Net Order API only supports one paper width size per Order. The setup method we describe will allow you to have mixed paper widths within a DP2 order, but allow us to send them to the Noritsu Hot Folder application in such a manner as not to get errors, and have you work come out of the printer in an orderly fashion.

Your Products in DP2 must point to the Printer Queue you created for the paper width that is used for that product. So if the product is 8x10 in overall size and you want that printed on 10 inch paper, it must be designated to go to the 10 inch queue.

In the "Printer Data" table in DP2, a typical setup should be as follows:

Printer Name	Model	Printer Status	Queue Name	Run Attended	Computer Nar
NHF_103_Printer_10_Inch	Disk	Run	NHF_10_In_Queue	☐	DELLLAPTOP
NHF_103_Printer_4_Inch	Disk	Run	NHF_4_In_Queue	☐	DELLLAPTOP
NHF_103_Printer_5_Inch	Disk	Run	NHF_5_In_Queue	☐	DELLLAPTOP

This example shows 3 different paper width Printer Data records, 10, 5, and 4 inch.

"Printer Name" field should be something simple like "NHF_103_Printer_10_Inch" so that the user knows it is going to the Noritsu Hot Folder printer that is running version 1.0.3 of Net Order API, and the paper width is 10 inches.

The reason for designating the version number is because some of the Noritsu printers only support version 1.0.3 of the NetOrder API, while other printers support version 1.0.5. We provide different "DP2 to NHF" modules for each so that you can run them both at the same time.

For example: The QSS 3101 and the R2R-1100Pro printers both require the 103 version of the "DP2 to NHF" module, but the QSS 31Pro works with either the 103 or 105 version depending on the software installed on the printer. So if you decided to purchase another printer at a later date that required version 105 of "DP2 to NHF" you would be able to run the 103 version you are installing now and the 105 version of the "DP2 to NHF Module" at the same time without any conflicts. By naming the Printers with the version number, it will make it easier to keep things running smoothly in a mixed environment.

"Model" field should be set to "Disk".

"Queue Name" field should be set to "NHF_10_In_Queue" according to our example since this is the 10 inch paper width Printer.

"Run Attended" field entry should be Unchecked if you don't want the printer to stop when an error occurs.

Printer Data

|	Order Punch	Auto Startup	Save File Type	Output Path	Start Up Script	Hot Folder Ap
	☐	☑	JPEG	C:\DP2_Rendered_Images\[-].jpg		
	☐	☑	JPEG	C:\DP2_Rendered_Images\[-].jpg		
	☐	☑	JPEG	C:\DP2_Rendered_Images\[-].jpg		

"Auto Startup" field should be checked if you want the Printer to startup automatically when DP2 launches.

"Save File Type" field should be set to "JPEG".

"Output Path" field should be set to "C:\DP2_Rendered_Images\[-].jpg". You do this by clicking on the down arrow symbol in the Output Path field as shown below.
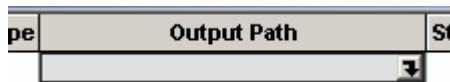
This will open the explorer window for you to point to the directory you created earlier that is labeled "DP2_Rendered_Images".
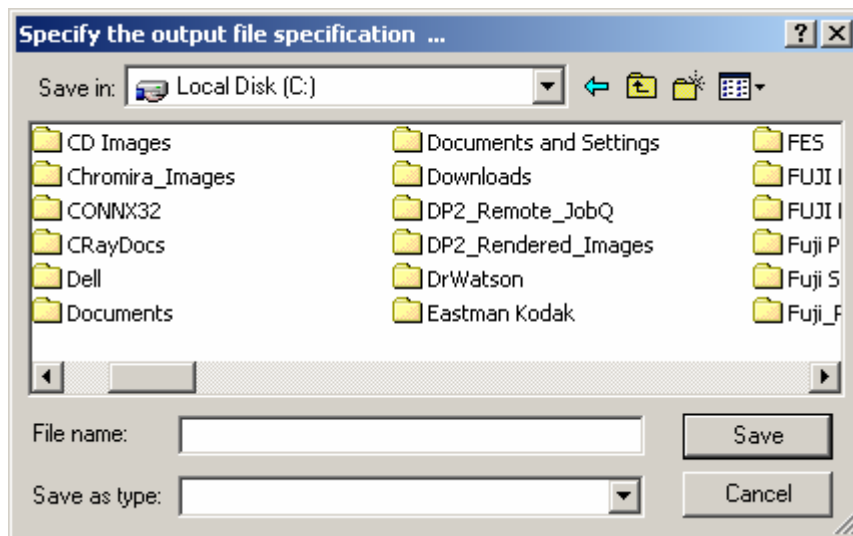
When you find the directory, double click on it and the following window will be displayed.
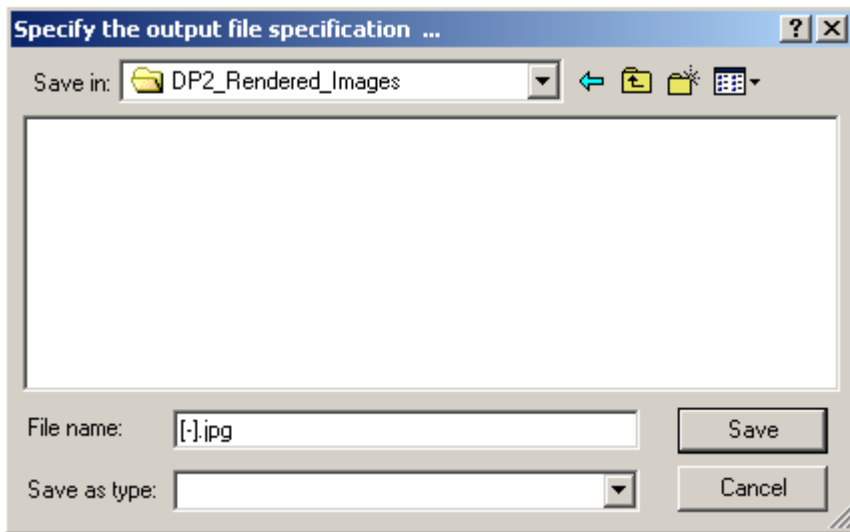
Then you must type the following in the File name field, "[-].jpg".

Then click the "Save" button and you will be returned to the "Output Path" field in the DP2 Printer Data table and the full path will be displayed plus the filename shortcut.

The "Output Path" tells the "DP2 to NHF Module" software where the images are getting rendered by DP2. We will move the files from that directory to the hot folder directory that the Noritsu Hot Folder software monitors when all order items are completely rendered.

Caution: This path should not point to the NHF Hot Folder directory. The NHF Hot Folder directory path will go in the "Control Folder" field.

In our example above we added the string "[-].jpg" which tells DP2 to create the filename for the rendered image using an internal macro plus the ".jpg" extension. The "-" special character within the brackets creates a filename which consists of Batch, OrderID, OrderItem#, and Page#. The name would look something like this: "000000076 549390_103 0012 0001.jpg".

You can override this "Output Path" by the settings in the "Save Image:" output spec in your layout or in the Disk Output Spec wizard Output Path field. However, until you get the installation successfully tested, we recommend not adding any other variables that might cause problems. DP2 is very complex and difficult to troubleshoot if you start modifying data in different locations.

The "Order Complete Script" field and the "Control Folder" field will have the same entries for all your paper widths as they will all get sent to the same NHF Hot Folder directory and the same script is called for each.

| Printer Data			
	Order Complete Script	**Control Folder**	**Response Script**
	NHF_OrderComplete_103.txt	\\Delllaptop\C_Dell_Laptop\Noritsu_Hot_Folders\DP2_103_Output	
	NHF_OrderComplete_103.txt	\\Delllaptop\C_Dell_Laptop\Noritsu_Hot_Folders\DP2_103_Output	
	NHF_OrderComplete_103.txt	\\Delllaptop\C_Dell_Laptop\Noritsu_Hot_Folders\DP2_103_Output	

"Order Complete Script" field entry is a critical entry. This field should point to the script you placed in the DP2 "Scripts" directory which is named "NHF_OrderComplete_103.txt".

"Control Folder" field should point to the Hot Folder directory that you created earlier for the Noritsu Hot Folder application to monitor for orders that are ready to print. In our example it is:

\\Delllaptop\C_Dell_Laptop\Noritsu_Hot_Folders\DP2_103_Output

Your path will obviously be different unless the computer you are running NHF on is named "Delllaptop" and the share name is "C_Dell_Laptop". However, if you installed the folders as we outlined, the balance of the path will look the same.

You do this by clicking on the down arrow symbol in the "Control Folder" field and the following window opens.
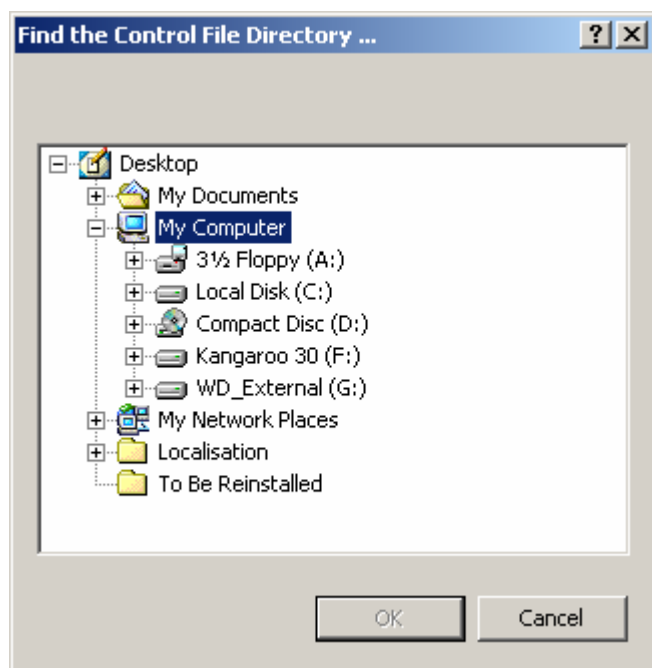

Browse to "My Network Places" and find the workstation that is running the Noritsu Hot Folder application. Then click on the "+" symbol beside the workstation name which will expose the share names for any shared drives on that machine.
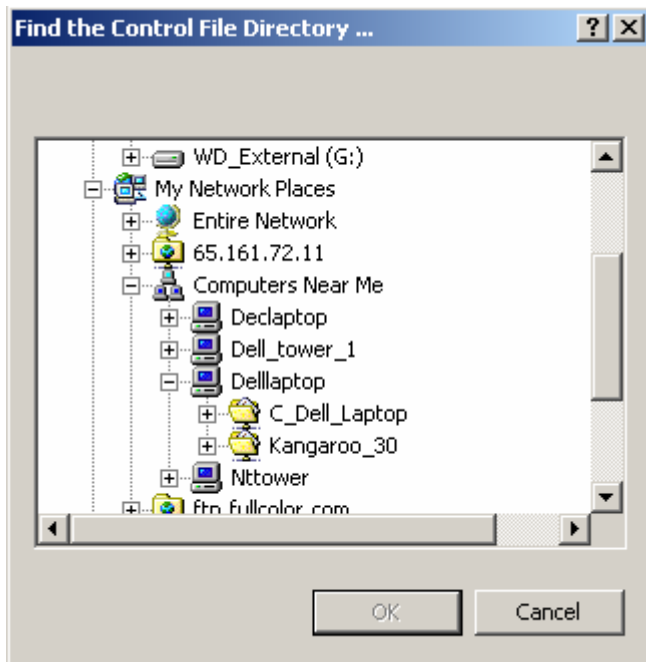
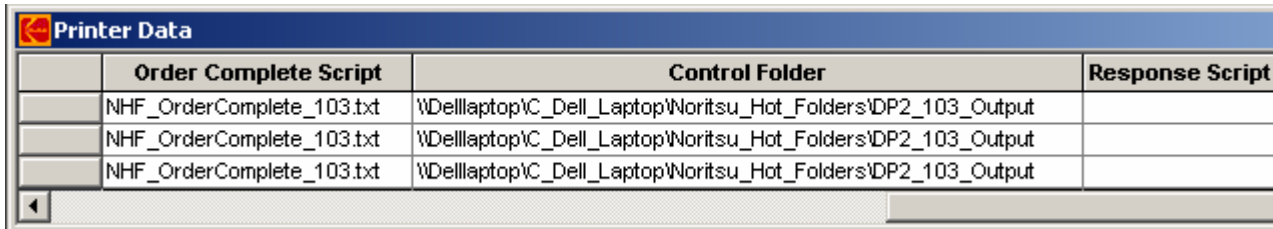Next select the share name of the drive you created the "Noritsu_Hot_Folders" directory on and open it.

In our example you can see that we found our workstation named "Delllaptop", opened it and we have two shares, and one of them is the "C:/" drive that we created our NHF directories on and it is shared as "C_Dell_Laptop".

Next browse to the "Noritsu_Hot_Folders" directory and open it as shown below.
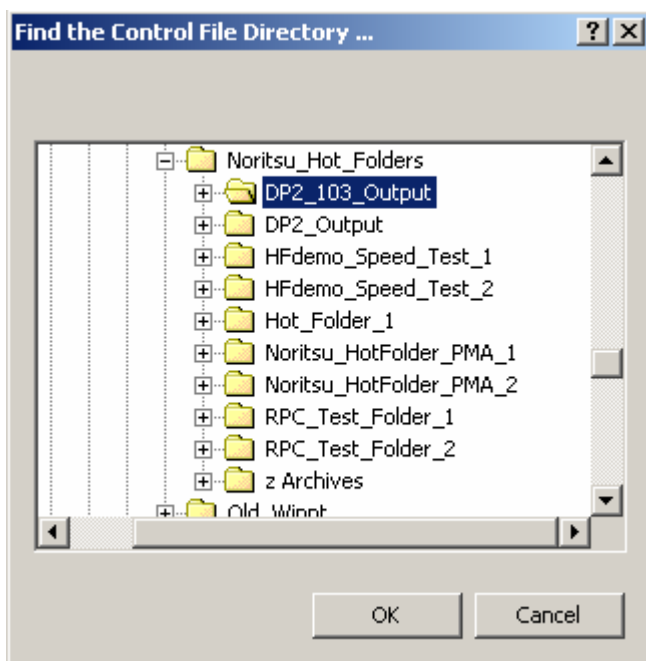
Browse to the "DP2_103_Output" directory, highlight it, and click the OK button.

This will return you to the DP2 Control Folder field and the full path will be copied into the field contents as shown below.
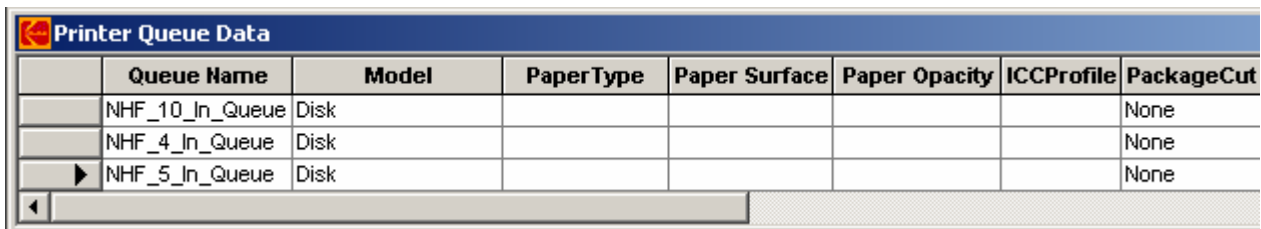
	Order Complete Script	Control Folder	Response Script
	NHF_OrderComplete_103.txt	\\Delllaptop\C_Dell_Laptop\Noritsu_Hot_Folders\DP2_103_Output	
	NHF_OrderComplete_103.txt	\\Delllaptop\C_Dell_Laptop\Noritsu_Hot_Folders\DP2_103_Output	
	NHF_OrderComplete_103.txt	\\Delllaptop\C_Dell_Laptop\Noritsu_Hot_Folders\DP2_103_Output	

Printer Data (window title)

The "Printer Status" field entry is automatically set to "Shutdown" when you create a new printer and you must set it to "Run" before it will become active.

Save the modified "Printer Data" record and DP2 will automatically create a new "Printer Queue" table record having the Queue Name that you entered in the Printer Data "Queue Name" field.

DP2 Configuration: "Printer Queue Data" table:

In the "Printer Queue Data" table the related queues for each of the example three paper size Printers would then look like the screen shot below.

Printer Queue Data (window title)

	Queue Name	Model	PaperType	Paper Surface	Paper Opacity	ICCProfile	PackageCut
	NHF_10_In_Queue	Disk					None
	NHF_4_In_Queue	Disk					None
▶	NHF_5_In_Queue	Disk					None

"Model" field should be set to "Disk".

At this time, none of the other field settings in the "Printer Queue Data" table are critical to the "DP2 to NHF Module", so simply save the record.

Important Note: Make sure that you do not put any entries in the Printer Queue Data fields that are labeled "Output Path", "Order Complete Script", and "Control Folder". These are only to be set in the Printer Data table or you will cause errors.

Next, you must setup at least one Product in DP2 for testing purposes.

DP2 Product Setup:

In order for DP2 to be able to direct products of different paper widths that are mixed in the same order to the correct DP2 Printer Queue, for Back Printing feature to be enabled, etc., the DP2 Products that are rendering to the NHF Printer must be configured following very specific instructions.

It is best to start with one product for each paper width size that you plan to use in the Noritsu printer. Once you have one product successfully printing, then it is easy to follow the same pattern to create others. If you start creating or converting lots of products before you have one working all the way through the process you will introduce too many variables and troubleshooting becomes a nightmare.

For our example we will start with an 8x10 product that we will print on 10 inch paper (254 mm).

Note: You must remember that Noritsu uses millimeters as the measurement for paper size and DP2 uses inches. So the settings in DP2 are all in inches.

In order to keep things in an orderly fashion, we created a new Products category and labeled it "NHF103" so that we know the products are for the Noritsu Hot Folder and they are for version 103 API. This also keeps all the products for the Noritsu Hot Folder printer separated from our other print device products.
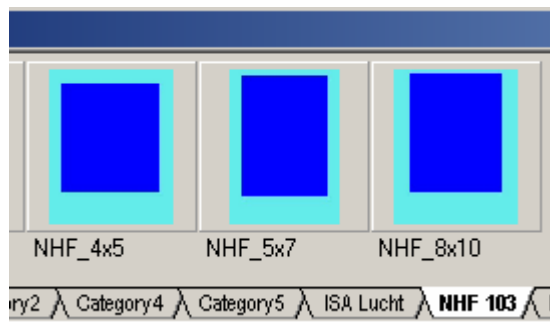

Products in new "NHF 103" category.

As you can see above, we gave the 8x10 the Product ID of "NHF_8x10".

For any products that you want to print to the NHF Printer, you must enable the "Save to Disk" output specifications.

To modify the output specifications, simply double-click on the product icon in the products window. This will open it in the Layout window which will look something like the window below.
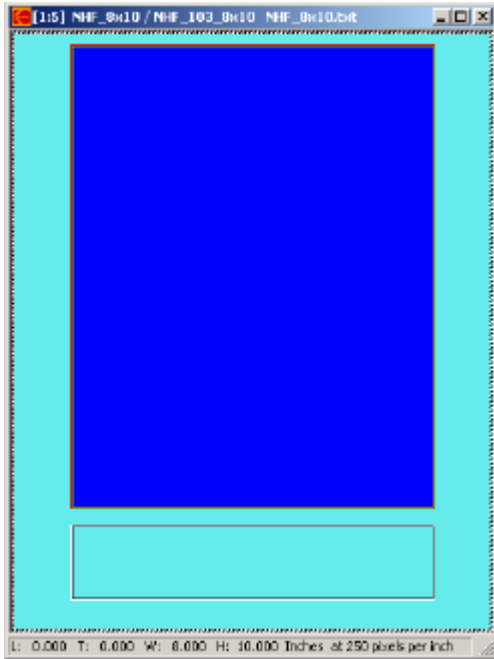
Next click the Open Save Image dialog button at the top of the DP2 window that is shown below. It has the disk symbol on the button.

This will open the "Output to a Disk File" Dialog window shown below.
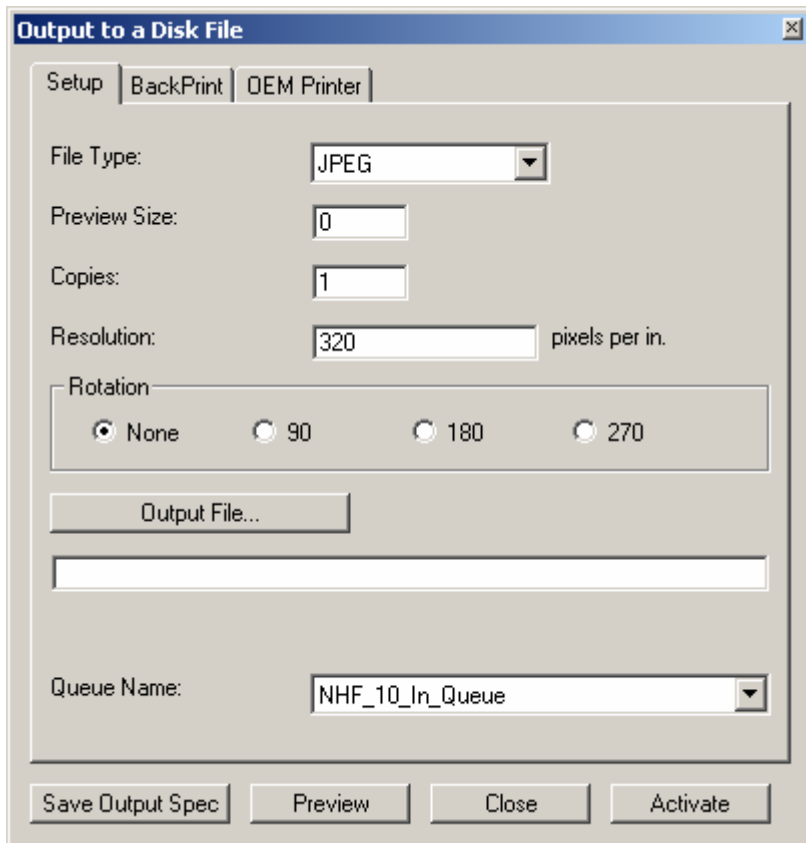
"File Type" should be set to JPEG.

"Copies" should be set to 1.

"Resolution" should be set to appropriate resolution of your printer.

"Output File" should be blank for now since we set the Output Path in the Printer Data setup.

"Queue Name" must be set to the "NHF_10_In_Queue" that we created earlier in the Printer Queue Data table that is for 10 paper width products.

Next click on the "BackPrint" tab which will look like the following:
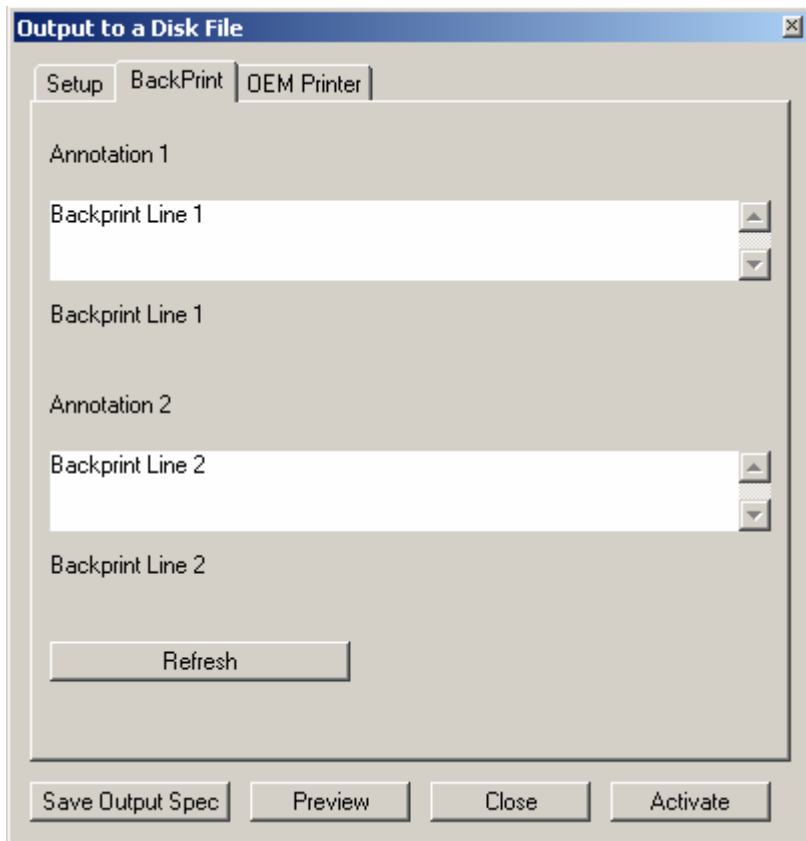
To enable back printing for this product you must enter macros in each of the Annotation 1 and Annotation 2 fields if you want 2 lines of back printing. In our example we simply typed in text. (Please refer to the DP2 online documentation for instructions on how to use Macros.)

Next click the "OEM Printer" tab.
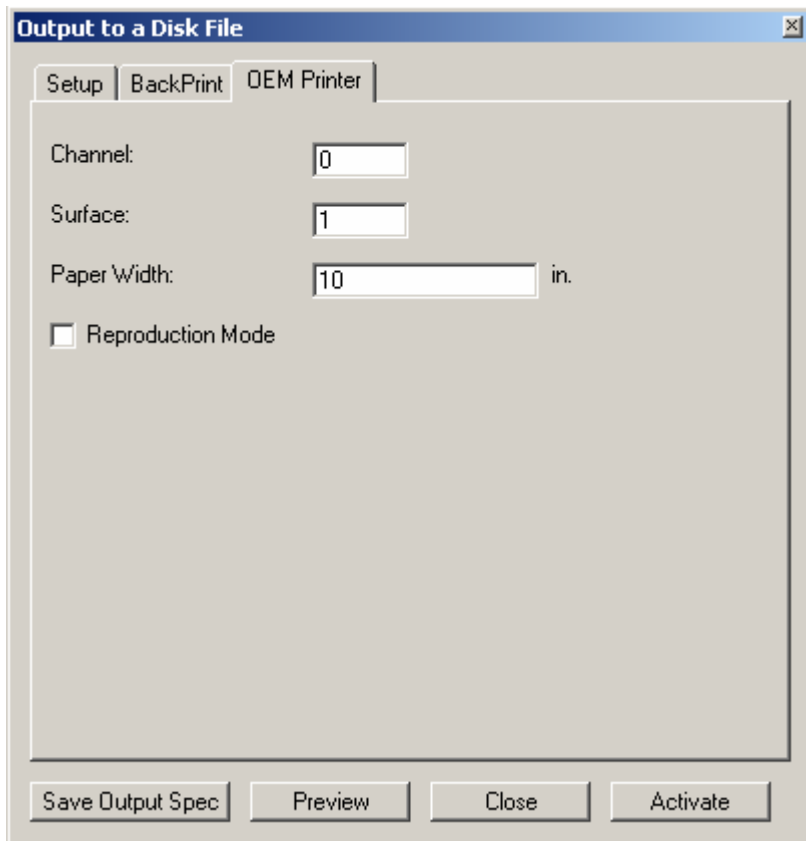
"Surface" should be set to a value in the range from 1 to 4.

Important Note: Any value outside the range of 1 to 4 will cause an error in the Noritsu Hot Folder application that is an Invalid Paper Size error. You should refer to the Noritsu Printer documentation for what the different values represent.

"Paper Width" is set to "10" since our product needs to print on 10 inch paper (254 mm).

Then click the "Activate" button to enable the Save to Disk output spec, and close the window.

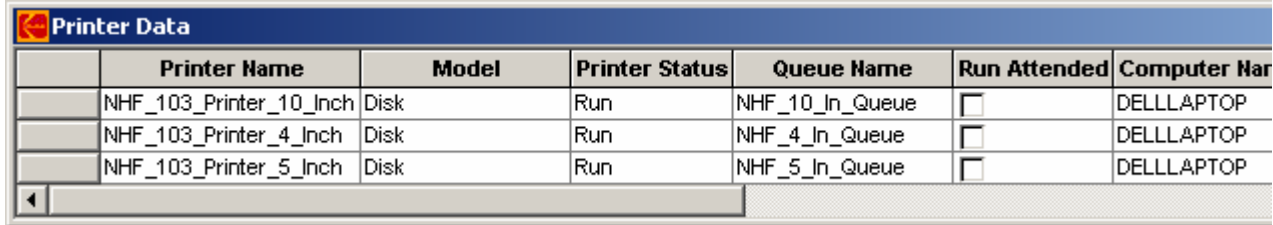Then close the product Layout window and the window below will open.
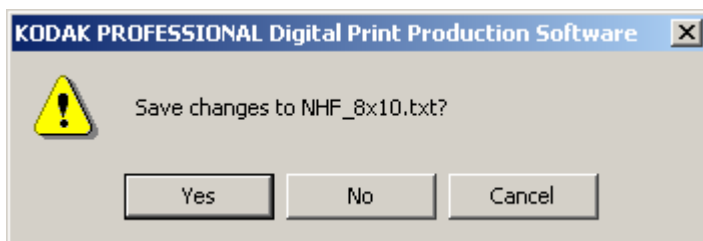
Click the Yes button indicating you want the changes you made in the output spec to be saved.

You will need to follow the same procedure for each product that you want to print to the NHF printer. However, we recommend you setup one or two products to test the process all the way through from DP2 to

the printer before modifying all your existing layouts. This way if you make a mistake in the setup process you don't repeat it numerous times and then have to go back and fix lots of mistakes later.

Once DP2 is configured and you have a layout or two to work with, you are ready to begin testing your setup and printing.

Make sure that each of the Printers that you created in DP2 for the different paper widths are all running. You can have more than one printer running at the same time, so you don't have to shut down other printers to do this testing.

	Printer Name	Model	Printer Status	Queue Name	Run Attended	Computer Nar
	NHF_103_Printer_10_Inch	Disk	Run	NHF_10_In_Queue	☐	DELLLAPTOP
	NHF_103_Printer_4_Inch	Disk	Run	NHF_4_In_Queue	☐	DELLLAPTOP
	NHF_103_Printer_5_Inch	Disk	Run	NHF_5_In_Queue	☐	DELLLAPTOP

As you can see in the above example, we have all 3 paper width printers in the "Run" Printer Status mode.

With this setup, when the user runs selected "Order Items" or all "Order Items" from an Order to the NHF Printers, after all Order Items are rendered to disk the Order Complete Script will execute. The script calls the "DP2 to NHF Module" code that will create a directory in the NHF hot folder directory specified in "Printer Data" table "Control Folder" field.

The directory name will be the Order ID from DP2 plus the extension ".n" which tells NHF that this order is not ready to print yet.

Then it will create a Command File inside that Order ID directory and move all the rendered images for that order that are of the same paper width as the DP2 Printer Queue that did the rendering.

When the "DP2 to NHF Module" finishes creating the Command file and moving all the rendered images into the Order directory, it changes the name of the directory so that it ends in ".r" which instructs the Noritsu Hot Folder that this job is ready to be printed.

"Noritsu Hot Folder" will send the orders to the printer in ASCII sort order if there are more than one directory that end in ".r" at the same time.
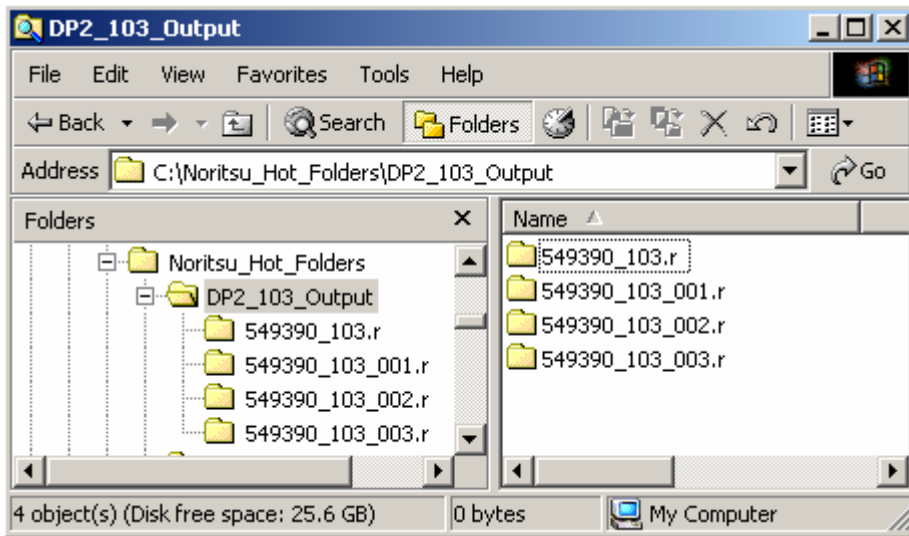
As you can see in the example above, we have four Order directories that start with "549390_103". That is the Order ID from the Orders table in DP2 for these Order Items.

When the "DP2 to NHF Module" application sees an existing directory in the hot folder with the same Order ID filename, it automatically appends a sequence number to the end of the directory name so that it does not overwrite an existing directory.
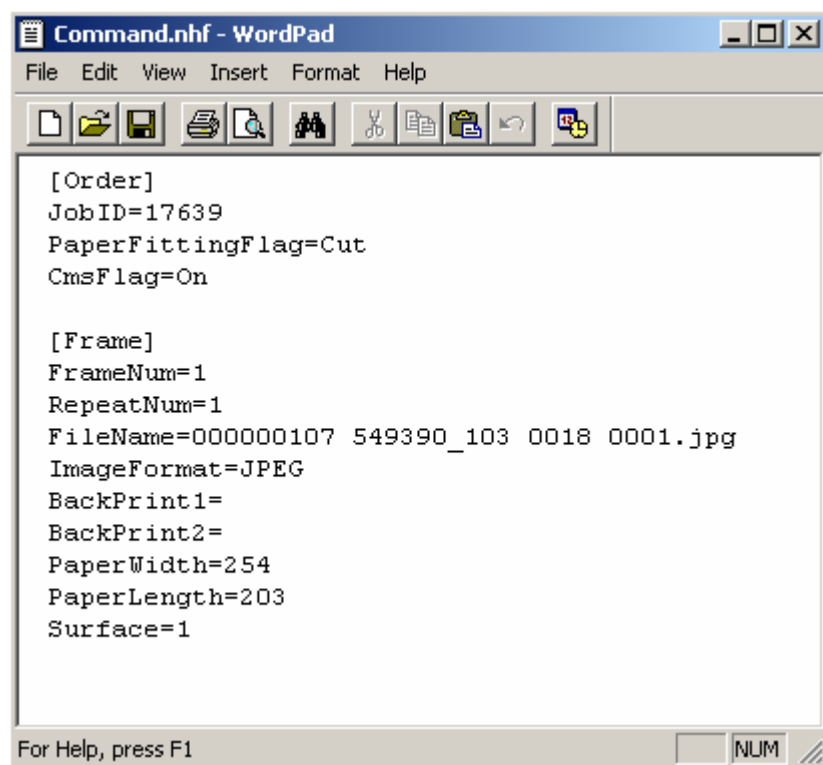
In this example, each of the last 3 directories contains products of different paper widths from the different printers we created in DP2.

If you open up one of the Order directories you should see the following.
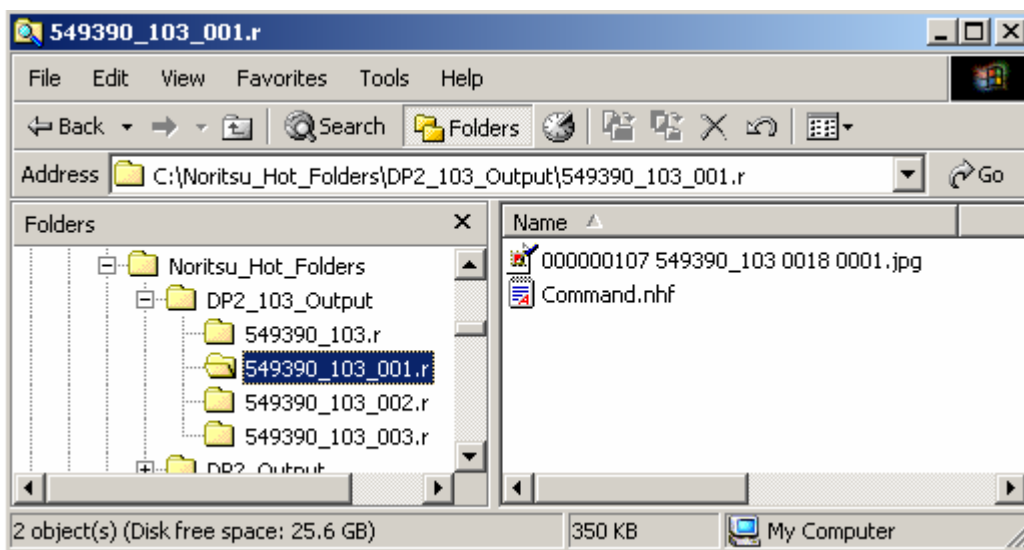
There will be a file labeled "Command.nhf" and then all the order item rendered images that DP2 rendered to disk for that Order that are from the same paper width Printer in DP2.

If you open the "Command.nhf" file using WordPad or NotePad it will look something like the following.

```
[Order]
JobID=17639
PaperFittingFlag=Cut
CmsFlag=On

[Frame]
FrameNum=1
RepeatNum=1
FileName=000000107 549390_103 0018 0001.jpg
ImageFormat=JPEG
BackPrint1=
BackPrint2=
PaperWidth=254
PaperLength=203
Surface=1
```

This order contains only one item, and you can see the Filename matches that of the one image in the Order directory.

The JobID is a randomly generated number that is created in order to prevent sending multiple orders to the Noritsu Net Order printer with the same RefID. It does not correspond to the Order ID in DP2 at all.

PaperWidth and PaperLength have been converted from the DP2 unit of measure which is inches, to millimeters before sending the order to the printer. 254 x 203mm (10 x 8 in.)

If you get to this point, then you know that your DP2 Setup for the "DP2 to NHF Module" is working correctly. If you have not already done the setup for the Noritsu Hot Folder application, you should do that now and then proceed to testing these orders that are in the hot folder directory.

DP2 to NHF Preferences INI file:

One of the four files that you installed as a part of this application was a file named "NHF_OrderComplete_103.ini".

This is used as a preferences file that you can alter in order to have "DP2 to NHF" perform in a way that is more suited to your production workflow.

If you open this file in a text editor such as WordPad or NotePad, you will see it only contains a few lines of text.
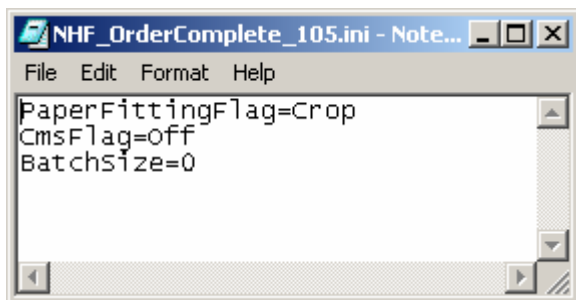
"NHF_OrderComplete_103.ini" file

"PaperFittingFlag" is the first key word and it is set to "Crop". The accepted values for this key word are: "Crop", "Real", or "Shrink". (Please refer to the Noritsu Hot Folder reference manual for information on the different effects of each of these settings.)

"CmsFlag" is the next key word and it is set to "Off". Accepted values for this key word are: "Off" or "On". (Please refer to the Noritsu Hot Folder reference manual for information on the different effects of this setting.)

"BatchSize" is the next key word and it is set to "0" (zero). Accepted values for this key word are: 0 to 999. If you set this to zero, then "DP2 to NHF" will send the entire selection of OrderItems you submit to be printed in DP2 as one order to Noritsu Hot Folder.

If you wish to change the BatchSize to break up your orders into smaller batches, simply change the 0 to a number that you want to use and save the file. Some labs like to do this in order to speed up when the first images get printed, since Noritsu Hot Folder can't start transmitting to the printer until we are done sending all the images in a batch.

Example:
If you want all of your orders to be in maximum of 100 images per batch, change the 0 to 100.
Then if your order has 1000 images, you will end up with 10 batches of 100.

We manage the Directory names in the NHF hot folder by appending a sequence number to the end of the DP2 Order ID.

So if the OrderID is 12345 you will have directories labeled 12345_001.r, 12345_002.r, 12345_003.r, etc. if you have chosen to break the same order into smaller batches.

NOTE: If you do modify this file, do not include double quotes around the field values you change. Also make sure you only use accepted values that are included above.

Noritsu Hot Folder Installation and Setup:

Instructions for the "Noritsu Hot Folder" are installed during its installation process. So please refer to the NHF Reference manual for those instructions.

Once the "Noritsu Hot Folder" is setup and running, then you are ready to start sending orders.

Support Contact Information:

If you have any questions about the "DP2 to NHF Module" or need assistance during installation or configuration, please call or email Chuck Morris at Impossible Solutions, Inc.

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