NEW MOON TECH NOTE

Canaveral iQ™ UniDriver

Solving a longstanding problem in server-based computing

Problem Description

Printing has been a sore point since the very beginning of the server based computing concept. To be able to print, in the server based computing world, the remote application server needed to have a copy of the actual vendor specific printer driver that existed on the client. To do this, administrators had to keep a copy of all existing printer drivers on each of the application servers. This list could run into thousands of printers and had to be updated periodically. When new printers – or newer versions of printer drivers for existing printers - were added to the environment, the challenge for the IT administrator to keep this list up-to-date grew even more. This task became such a pain that some people made a business just out of keeping a current list of all the various printer drivers for their users and customers.

But the problem was even bigger. Besides having to maintain this list, the even more difficult task was to ensure that when the client would connect to an application server, it would actually find the relevant printer driver. This required that the client's printer driver be named exactly the same as the name of a printer driver that existed in the list. This was not easy, because different operation systems assigned the same printer driver with different names. So another mapping list had to be created, where each printer driver name was mapped against the actual driver that existed on the server. Thus when a client connected to the application server, the system first looked up the printer driver name that corresponded to the client's printer driver and then went into the actual printer driver database (or file system) to find the relevant printer driver. In the event of a failure at any step of this process the client would fail to have access to print capabilities. Finally - even if this process went through -, in the event that the printer driver used to create a printer on the server had bugs or was corrupted, it would cause the print spooler on the server to crash, thus preventing any person connected to this application sever to print. Blue screens on the application server were therefore quite common.

What is the Canaveral iQ Unidriver ?

The Universal Printer Driver concept embedded in Canaveral iQ – the so-called Canaveral iQ UniDriver - eliminates the need of server side printer drivers in a server-based computing environment without compromising the quality of the print job. It utilizes the superior Enhanced Meta File (EMF) redirection technology to achieve this objective. Canaveral iQ UniDriver supports all types of printers from basic, black and white, to high resolution color, laser, PCL3, PCL4, PCL6 as well as PostScript printers. It allows clients to print to any of their attached printers and also supports the default printer functionality without the need of server side printer drivers. Canaveral iQ UniDriver printing does not require any additional client or server component to enable this functionality.

How does the Canaveral iQ Unidriver work ?

I. When the client connects to the application server, Canaveral iQ maps all the client printers on the application server (network and local). These printers are created on the server using Windows unidriver files. Since this driver will not be used to process the print job it is not necessary to have the “real” printer driver on the server.

II. When the client prints via any of the active applications, a print job is created on the server side.

III. The print job is rerouted to the client machine in the form of an EMF (Enhanced Meta File), using Canaveral iQ’ proprietary IFS technology. The use of EMF format ensures that in the vast majority of cases there is no noticeable loss in quality during the transmission.

IV. The print job is then further processed on the client side using the actual vendor-supplied printer driver and is converted to a format that the printer understands. Since the job is processed using the device specific printer

driver on the client, printing features such as full color and high resolution are fully supported.

V. The print job is then finally sent to the printer.

How does the Canaveral iQ UniDriver compare with Universal Printer Driver solutions that are based on the PCL4 standard?

Other Universal Printer Driver solutions in the market use a PCL4 Universal Printer Driver on the server to generate a print job in PCL4 format (PCL4 is actually an outdated format, the latest version of PCL is PCL6). The server sends the PCL4 print job to the Client, where the PCL4 interpreter renders the print job. The client uses the local printer driver and print services to output the rasterized print job on the client printer. The PCL4 interpreter in the Client rasterizes print pages in monochrome at 300 dots per inch (dpi) resolution, which is usually an unwelcome limitation as far as resolution of the print job. The PCL4 interpreter does not support special printer options or features such as duplex printing. It does not support color output on color printers either.

New Moon Systems Inc.
2 North Second Street,Tenth Floor
San Jose, CA 95113
Main 408-296-8500
Fax 408-296-8600
www.newmoon.com
info@newmoon.com

