



WHITE PAPER

Using Microsoft Windows 7 as a Platform for Legacy Integration

C O N T E N T S

- INTRODUCTION
- MICROSOFT WINDOWS 7:
AN INEXPENSIVE INTEGRATION PLATFORM
- EXTENSIVE KNOWLEDGE OF .NET, ACTIVEX,
VISUAL BASIC, VB SCRIPT, ASP AND MORE
- NON-INTRUSIVE USE OF HOST SCREEN
AS AN API SPEEDS DELIVERY OF
APPLICATION TO MARKET
- EXTRA SECURITY DELIVERED
THROUGH SSL/TLS AND SSH
- 3270 IS OUR BUSINESS
- OUR CLIENT LIST IS IMPRESSIVE

Given the proliferation of Microsoft Windows desktops within large IBM mainframe accounts, a Windows 7 platform can be the perfect place for quick and easy, screen-based 3270 application integration.

Large insurance companies, banks, retailers and others have succeeded with Microsoft-based legacy integration projects where much more complex, expensive Java-based legacy integration solutions have failed.

Introduction

In this document, we will consider the strategic benefits of using Microsoft Windows 7 as a platform for legacy integration projects and offer examples of how Zephyr's PASSPORT family of host integration and terminal emulation products can be used as proven alternatives to older, incumbent integration solutions.

Sample uses:

- Several of the world's largest insurance firms have used PASSPORT to integrate agent applications with 3270 mainframe applications. Using a Windows desktop as the platform to publish the integration solution, each of these clients have over 30,000 users running highly integrated versions of PASSPORT as a host integration solution. The end result: elimination of duplicate data entry, greater productivity, expedited host resources and more.
- A long list of clients have used PASSPORT to integrate Windows SQL Server and Visual Basic applications with 3270 applications running on the IBM mainframe. Visit www.zephyrcorp.com/products for case studies.

Zephyr: TN3270E Legacy Integration and Terminal Emulation Specialists

If you seek to use the TN3270E protocol for communication with your IBM mainframe, why not use the same supplier for both legacy application integration and advanced terminal emulation?

Depending on your requirements, access to the desired legacy business processes can occur from a Windows 7 desktop (or a Windows 2008 Server if you choose).

Zephyr supplies TN3270 communications modules with APIs that can be published from any platform running Microsoft Windows.

Microsoft Windows: An Inexpensive Integration Platform

The larger the IBM mainframe account, the more likely they are to extensively use Microsoft Windows servers and desktops. As such, why not make use of the Microsoft platform for integration?

Extensive knowledge of .NET, ActiveX, Visual Basic, VB Script, ASP and more

One of the principal benefits of using a Microsoft platform for integration is the extensive knowledge of Microsoft programming languages and the broad amount of resources at your disposal for an integration project involving legacy applications and assets.

Non-intrusive use of host screen as an API speeds delivery of application to market

Though certainly not new, scraping 3270 host screens as a method of passing data to and from legacy applications offers one of the fastest, if not the fastest, method for legacy application integration. This is particularly true if developers have knowledge of the IBM mainframe application (or if they have access to mainframe application managers or power end users that also know the 3270 application).

3270 screen scraping has two other huge benefits: the integration method is both low cost and has little risk of failure.

Extra security delivered through SSL/TLS and SSH

As an extra layer of security, with PASSPORT, Microsoft-based integration applications have access to SSL/TLS and SSH security found in IBM mainframe, iSeries (AS/400) and UNIX applications.

PASSPORT Terminal Control Object

The PASSPORT Terminal Control Object provides the terminal emulation screen and keyboard support and runs in conjunction with a session object.

The session object maintains the host screen buffer and performs all communication with the host system, while the PASSPORT Terminal Control

Object provides a user interface for that session object. The PASSPORT Terminal Control Object is used for developing client based host integration applications where a terminal emulator needs to be embedded into another desktop application.

PASSPORT Terminal Emulator vs PASSPORT Terminal Control

The PASSPORT Terminal Control Object is a subset of the PASSPORT PC TO HOST terminal emulator.

The PASSPORT Terminal Control Object is an ActiveX component found in the PASSPORT Host Integration Objects software. The features not found in PASSPORT Terminal Control, but found in the PASSPORT terminal emulator are:

- VT, SCO ANSI and Wyse 60 emulation
- File Transfer (FTP and IND\$FILE)
- Macros
- Toolbar
- Keypad
- Menu
- Ability to display APA mainframe graphics
- Windows Title Bar configuration
- Keyboard - APL characters, Jump keys, Word Wrap, some other keys
- OIA Line - LU Name indicator
- Help File

Using PASSPORT Terminal Control Object

The PASSPORT Terminal Control Object is a single object that contains a DocumentName and Session property as well as two methods: AboutBox and EnableCommand. In order to use the terminal object it must be connected to a session object using the session property.

```
Set objManager = CreateObject("PASSHIO.Sessions")  
Set objSess = objManager.AddSession(strZCCFile, 1)  
Set Terminal1.Session = objSess
```

PASSPORT Terminal Control User Interface

The user interface to the PASSPORT Terminal Control allows keyboard and mouse input, as well as a floating pop-up menu (available by right-clicking the mouse button). This menu can be used to perform clipboard operations, configure various screen attribute and keyboard information, and print the screen. Each pop-up menu command and property sheet page can be enabled or disabled by using the EnableCommand method of the PASSPORT Terminal Control Object.

For example, to disables the popup menu "Print Setup" command:

```
Terminal1.EnableCommand PASSTERM_CMD_FILE_PRINT_SETUP, 0
```

PASSPORT Terminal Control Configuration Data

All configuration data is stored in a .ZWS file. The default file is PASSTERM.ZWS. Keyboard mapping information is stored in a file with the .ZKB file extension. Color information is stored in a file with the .ZCS file extension. Hotspot information is stored in a file with the .ZHS file extension.

You will need a Zephyr Communication Configuration (.ZCC) file to specify the connection information to your 3270 or 5250 host. You can copy the LOCIS.zcc file from the TermControlSample folder. At the very least, you will need to fill in the IPHostName and TCPPort for your host connection. You can read more information about the .ZCC file format here. An example of a .ZCC file:

```
[Connection]  
IPHostName=127.0.0.1  
TCPPort=23  
EmulType=TN3270  
TimeOut=30  
TN3270ESupport=Yes  
ConnectMethod=Generic  
ResourceName=  
ScreenSize=2  
ExtendedAttributes=Yes  
AutoReconnect=Yes  
HostCodePage=037
```

Events

If you prefer to design your application in an event-driven model, PASSPORT HIO provides the following events that your application can listen for:

OnSessionChanged

This event is generated when the session state changes. The session state can be either connected or disconnected. It can be used to tell when the connection process is completed after issuing the Session. Connect and also after the mainframe disconnects you (when you log off from the host or when you are inactive for a certain period of time). For example, to display a message box when a session is connected or disconnected:

```
Private Sub Terminal1_OnSessionChanged(ByVal inState As Long)

    If inState = OHIO_STATE_CONNECTED Then

        MsgBox "Session connected!"

    ElseIf inState = OHIO_STATE_DISCONNECTED Then

        MsgBox "Session disconnected!"

    End If

End Sub
```

OnScreenChanged

This event is generated when the virtual screen is modified whether it is from the host or from the user inputting text on the host screen. For example, when the Screen.SendKeys (simulating a keystroke) is called, it will trigger this event.

The OnScreenChanged event can change the form's caption to the users keyboard input using the following code:

```
Private Sub Terminal1_OnScreenChanged(ByVal inUpdate As Long, ByVal inStart As Long, ByVal inEnd As Long)

    If (inUpdate = OHIO_UPDATE.OHIO_UPDATE_CLIENT) Then

        Form1.Caption = Mid(Terminal1.Session.Screen.String, inStart + 1, inEnd - inStart + 1)

    End If

End Sub
```

OnOIAClanged

This event is generated when anything on the Operator Information Area (OIA) changes. For example, to displays the OIA text on a label, you can use the following:

```
Private Sub Terminal1_OnOIChanged()

    labelOIA.Caption = Terminal1.Session.Screen.OIA.String

End Sub
```

3270 is our Business

Zephyr specializes in 3270 communication, whether from a Windows 7 desktop, XP, Windows 2008 Server, a standard web server or virtual server. If you seek IETF standard TN3270E solutions for Microsoft Windows, Zephyr is the number one supplier to consider.

Founded in 1985, Zephyr is an employee owned company that is debt-free and consistently profitable. The large majority of our revenue recurs annually and the company maintains an almost 100% renewal rate of its products and services. Zephyr maintains offices and distributors in the U.S., UK, Germany, South Africa and throughout Latin America.

Our Client List is Impressive

Our client portfolio includes large banks such as Bank of America Merrill Lynch, Comerica, U.S. Bank and Wachovia, as well as large insurance companies such as Liberty Mutual, Nationwide Insurance and Progressive.



ZEPHYR



CORPORATE

3355 West Alabama
Suite 1220
Houston Texas 77098
USA

800.966.3270
tel 713.623.0089
fax 713.623.0091

EUROPE

71 High Street
Harrold, Bedfordshire
MK43 7BJ UK

tel 44 (0) 1234 721755
fax 44 (0) 1234 420317

Zephyr, PASSPORT and PASSPORT Host Integration Objects are trade marks of Zephyr Development Corporation. All other trademarks and trade names are the property of their respective owners.

Zephyr excels at connecting Microsoft Windows desktops and servers to IBM mainframe, AS/400 and UNIX host applications. Whether using our PASSPORT terminal emulation for Windows 7 or the PASSPORT host integration client or server for legacy integration, Zephyr helps organizations lower host access costs through secure, standard TN3270E, TN5250E, VT, SCO ANSI, Wyse 60 and FTP solutions.

Our impressive client list features many notable U.S. and international organizations, including Banco BPI (Portugal), Bank of America Merrill Lynch, Comerica Bank, First National Bank (South Africa), Huntington Bank, Landesbank Baden-Württemberg (Germany), Liberty Mutual, Nationwide Insurance, Progressive Insurance, Otis Elevator, Saks Fifth Avenue, State of California, Wachovia and more.

WEB zephyrcorp.com

E-MAIL info@zephyrcorp.com