

The Case For Operational Cost Reduction Through Terminal Emulation Migration

Open Text Connectivity Solutions Group
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Abstract

Flat IT budgets for 2010 and the foreseeable future will require CIOs to consider new ways of saving money and driving efficiencies into existing business processes. For large companies that rely on terminal emulators to access host business systems, CIOs should carefully consider the potential benefits of migrating to more flexible and lower cost emulators.

One such solution is Open Text HostExplorer®, which has saved customers substantial sums in maintenance fees without incurring additional risk, lengthy implementation times, or the need to retrain users.

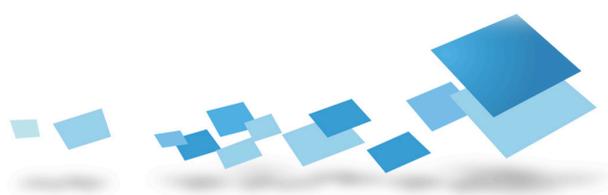
Highlights:

- Evaluating vendors, architectures, and features before migrating
- Managing risks in emulator migrations
- Yielding cost savings with standardized emulators



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Terminal Emulators – Gateways to Host Applications

Terminal emulators are the PC-and Web browser-based gateways for accessing critical applications running on IBM® mainframes, AS/400s, UNIX®, Linux, VAX, Hewlett-Packard's® HP3000, and other legacy systems used by hundreds of thousands of businesses around the world. Companies choose to manage their businesses on these platforms—year after year and decade after decade—because they have proven to be secure, reliable, and scalable.

CIOs are understandably reluctant to change any part of an enterprise computer system that puts the system's stability into question. But while emulators are often the most visible, outward-facing element of these critical applications, customers should keep in mind that they are representations of the applications, and not the applications themselves.

Companies often replace their PC desktops every three to five years. Usually, these companies continue to use the same old terminal emulator, year after year, even as the PC hardware is upgraded, and the operating systems moved from Windows® XP to Windows Vista® and, now, Windows 7.

CIOs will take note that nothing groundbreaking has occurred in the terminal emulation market for years. While there are significant differences in the architecture of Web-to-host emulators that can impact customers, most of the major offerings on the market today offer very similar sets of core features.

Standard features found in all mainstream emulators include:

1. Support for multiple emulation types (TN3270, TN5250, VT) and multiple sessions
2. Connections to standard ethernet networks (no more SNA)
3. User-customizable keyboards, screen settings, and toolbars
4. Support for custom macros, scripts, and printing functionality
5. HLLAPI- and OLE-based application integration
6. Support for single sign-on, SSH and SSL security protocols, and FIPS 140-2 certification

Some emulators also include handy features such as auto complete functions, report formatting and printing capabilities, and integration with Microsoft® Office applications that, for example, allow users to automatically email data or reports from their 5250, 3270, or VT applications. These are useful features that can boost productivity and reduce costs, and they do vary a bit from vendor to vendor. Overall, the state of the art in terminal emulation more closely resembles a state of stasis.



Maturity of Market Leads to Business Opportunities

This market and product maturity is bad news for established providers of terminal emulation software. Owing to the maturing of the products, vendors struggle to differentiate their products from the competition.

As a result, many established players resort to tactics such as increasing annual maintenance fees and conducting licensing audits to backfill the lack of new top-line license revenue.

But the market maturity is good news for the savvy emulator shopper, who can now freely move among the various mature offerings without taking the chance that their users will lose access to critical host applications, or that the new environment will require extensive implementation work or user retraining.

The market maturity has also spurred an era of competitive replacements, whereby smart and agile terminal emulation vendors, such as Open Text, are able to offer more compelling value than the incumbents.

Open Text can do this by making its software cheaper, easier to use, and by adopting more customer-friendly business models.



Reduce License Fees by Migrating Terminal Emulators

Customers can save substantial amounts of money in licensing fees by moving to newer, lower cost, and easier-to-use terminal emulators for accessing applications running on legacy hosts.

For example, consider one of Open Text's recent customer wins in the financial services industry. When the company standardized its 30,000 emulation seats on HostExplorer, it was able to cut its recurring annual maintenance fees by about 75 percent, leading to a savings of more than \$300,000 US per year.

Another Open Text customer in the financial services industry moved almost 40,000 users to HostExplorer, which translated into a savings of almost \$2.5million US over three years compared to the previous mix of emulators.

As these examples show, changing emulation vendors can be a source of considerable savings. The modern CIO typically has better things to spend money on than high maintenance fees for terminal emulators—a product category that is mature and not likely to change much before the next PC upgrade cycle, if then.

Due diligence requires that a CIO conduct a fair amount of research into emulator products and companies before making the switch. It is very common for companies to lock in a low, multi-year maintenance agreement and slash their emulator-related fees by 50 percent or more by considering emulators outside of the established vendors.



Managing Risks in Emulator Migrations

Large companies are often reluctant to move from one terminal emulation product to another for fear of consuming large amounts of resources reconfiguring the software and retraining their employees to use it. While there is some degree of risk inherent in any large-scale migration, these fears are, for the most part, remnants of the way things used to work, and also the result of vendors' efforts to prevent customers from leaving.

Many of today's modern emulators, such as Open Text's HostExplorer, come with an array of tools that allow them to basically "emulate" other emulators. They offer automated ways of migrating the configuration settings—things like user profiles and LU pool information—into the new environment. Many also offer compatibility with scripts, macros, and HLLAPI and OLE-integrated applications developed on other emulation environments.

HostExplorer, for example, uses the same Basic language for programming macros as Attachmate®, providing customers with a high degree of certainty that macros developed for EXTRA! will run unchanged in HostExplorer. HostExplorer also offers macro converters for RUMBA and PCOMM environments, and "skins" that make the new emulation environment look like their old environment.

The biggest headache in migrating emulation environments is locating all this information. If a company has allowed its users to store the configuration settings, scripts, and macros on their own desktops (as opposed to storing them on a central server, as is usually the case with Web-to-host) it can be a lot of work to hunt down all of these components. Powerful search tools, like those included with HostExplorer, can help in these situations.

Absent a wild goose chase for customized settings, customers should take comfort in the fact that HostExplorer has automated tools that largely eliminate the need for administrators and programmers to spend time and resources reconfiguring settings and rebuilding integrated applications. And because the new HostExplorer environment looks and functions almost exactly like the old environment, customers don't have to waste time retraining users on the new environment.



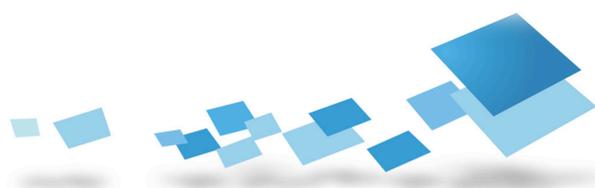
The Vendor Question: Do Size and Amiability Matter?

The relationship a company has with its current terminal emulation provider can have a positive or negative impact on whether that company will consider changing vendors. Some of the biggest factors affecting this relationship are the quality of the vendor's technical support, the vendor's relative size and stability, and how the vendor handles disagreements over licensing.

IBM, which sells PCOMM, is by far the biggest vendor in the emulation business, and it also has the lion's share of 5250 and 3270 emulation clients. From before the 1960s through the 1990s, the phrase "You can't get fired for buying IBM" has been the mantra of "True Blue" shops around the world. In the hyper-competitive market of the 21st century, however, IBM must compete on equal footing with other vendors, and customers that have called into question IBM's commitment to technical support with PCOMM have options.

As mentioned above, the static nature of the emulation market has led some established vendors to seek other forms of revenue generation. It is not uncommon to hear of large terminal emulation vendors sending customers form letters that challenge their adherence to license agreements. Except hinting at the financial stability of the letter-writers, this shortsighted tactic can have long-term consequences when it comes to maintaining good relationships with its customers. Companies that receive these letters should ask themselves if this is how they treat their customers, and if so, how long they expect them to remain customers.

Finally, Open Text and its Connectivity Solutions Group (formerly Hummingbird) is a giant in the X-Windows emulation space. This gives the company, which has revenues approaching \$1 billion and whose stock is traded on both the TSX and NASDAQ stock exchanges, a unique perspective. On the one hand, it means Open Text understands what comes with being the established market-maker. While on the other hand, it affords the freedom to disrupt the established terminal emulation market with newer products and more favorable licensing.



Evaluating Web-To-Host Architecture for Cost Reductions

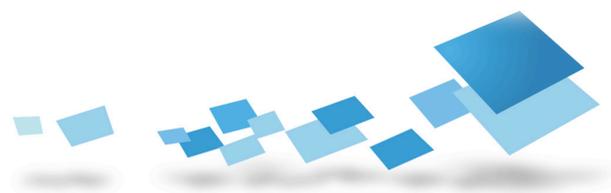
There is little feature or function differentiation among the biggest terminal emulator vendors. However, while the products offer very similar capabilities, they often feature different architectures, and these differences can impact the resources required by the CIO to maintain and enhance these environments.

One of the biggest differentiators is the fact that many vendors offer, in effect, different emulators for traditional thick client emulation and Web-to-host thin client emulation. For many customers, this can cause problems when they upgrade from thick clients to thin clients; to take advantage of the centralized management capabilities of the Web-to-host model and the capability to quickly roll out host sessions to customers and suppliers.

Often, administrators will need to reconfigure session information, user profiles, macros, scripts, and rebuild HLLAPI applications to work under the Web-to-host model. In effect, administrators are tasked with a full-scale migration, even if the customer has not changed vendors. Making matters worse, many vendors will also charge additional licensing fees when customers move to Web-to-host.

Open Text, on the other hand, has taken a unique approach with HostExplorer's "Anything-to-Host" model, which combines thick and thin client emulators into a single product with a single code base. This gives HostExplorer customers the option of choosing a traditional Windows emulator, a Web-based emulator, or both—depending on their needs—without incurring any additional license fees.

This ease of movement between thick and thin clients is the result of HostExplorer's unique "profile spaces" technology, which stores configuration settings like user profiles, LU group names, and user customizations next to an LDAP or Active Directory server, or on a common file server. Most macros, scripts, and HLLAPI-integrated applications are also fully compatible and shareable between thick and thin client emulation rollouts in HostExplorer.

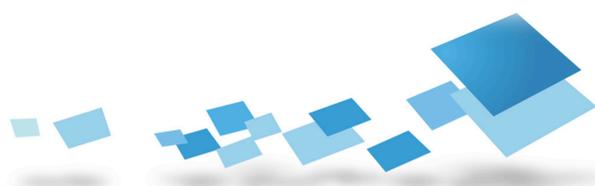


Boosting User Efficiency Through Emulator Features

There's nothing glitzy about a character-based terminal emulator. These so-called "green screen" products were designed to do one job: access applications running on AS/400, mainframes, and UNIX hosts without adding a lot of processing and network overhead like fancy graphics and other bells and whistles.

However, forward-looking vendors like Open Text have been adding timesaving functions to their emulators for years, and any customer considering a change would do well to look at their features and see how they can help. Some of the practical functions that can boost user-productivity features in HostExplorer include:

- **Screen History Functions** – Some emulators keep a trail of recently accessed emulation screens that users can access at any time without leaving their current session. This comes in handy when a user needs to copy a piece of information, like a phone number, into a current screen.
- **Text Shortcuts** – This form of auto completion can save time when users have long strings of text to enter on a regular basis. The function works by allowing a user to enter just part of a word, or an abbreviation of the word, and Text Shortcuts will automatically convert it into the full word.
- **Glossaries** – Many emulators allow customers to establish their own custom glossaries for things such as product codes. Instead of requiring users to remember product codes or keep a written list on a scrap of paper, they can press a button and pull up a window that displays a glossary of terms.
- **Multi-Screen Print** – All emulators support printing as a basic function. But only some of them come with the multi-screen print feature, which allows users to capture multiple screens as they navigate through an application. When they are done, the multi-screen print feature will batch the captured screens and send them to the printer as a single job.
- **Report Wizard** – This is a variation of the multi-screen print function that provides similar content-capturing capabilities. But instead of working across screens, Report Wizard works on long lists that would otherwise require the user to page up and down to capture content.
- **Event Automation** – This feature gives administrators the capability to have certain processes triggered by events. If a certain word appears on the terminal emulation screen, or the emulator enters a certain state, the emulator can be automatically configured to run a preconfigured macro.

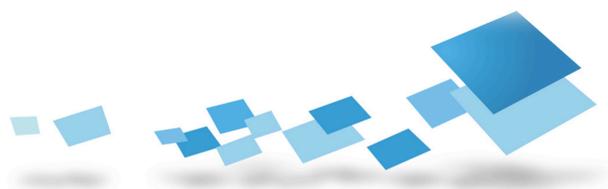


Conclusion: Standardized Emulators Yield Cost Savings

The rapid evolution of information technology has put tremendous pressures on CIOs. They must continually evaluate new technologies, weigh the costs and benefits of each, consider what the competition is doing, and ensure that changes do not imperil the stability, security, or regulatory stance of critical enterprise systems. With IT budgets down or flat as the result of the global recession, CIOs are leaving no stone unturned when looking to slash costs.

While technologies such as Web 2.0 and mobile computing have evolved tremendously over just the past year, the terminal emulator, by contrast, has remained virtually the same for the last decade. By consolidating the largely standardized terminal emulators onto a low cost, low risk option, the smart CIO can free up funding for more rewarding development efforts.

With many companies expected to begin Windows 7 desktop refreshes in the next six to nine months, now is a great time for smart CIOs to re-evaluate their existing terminal emulation solutions, consider other alternatives in the market, and lock in substantial bottom-line savings for years to come, without introducing any substantial risk to their critical application infrastructure.



About Open Text

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