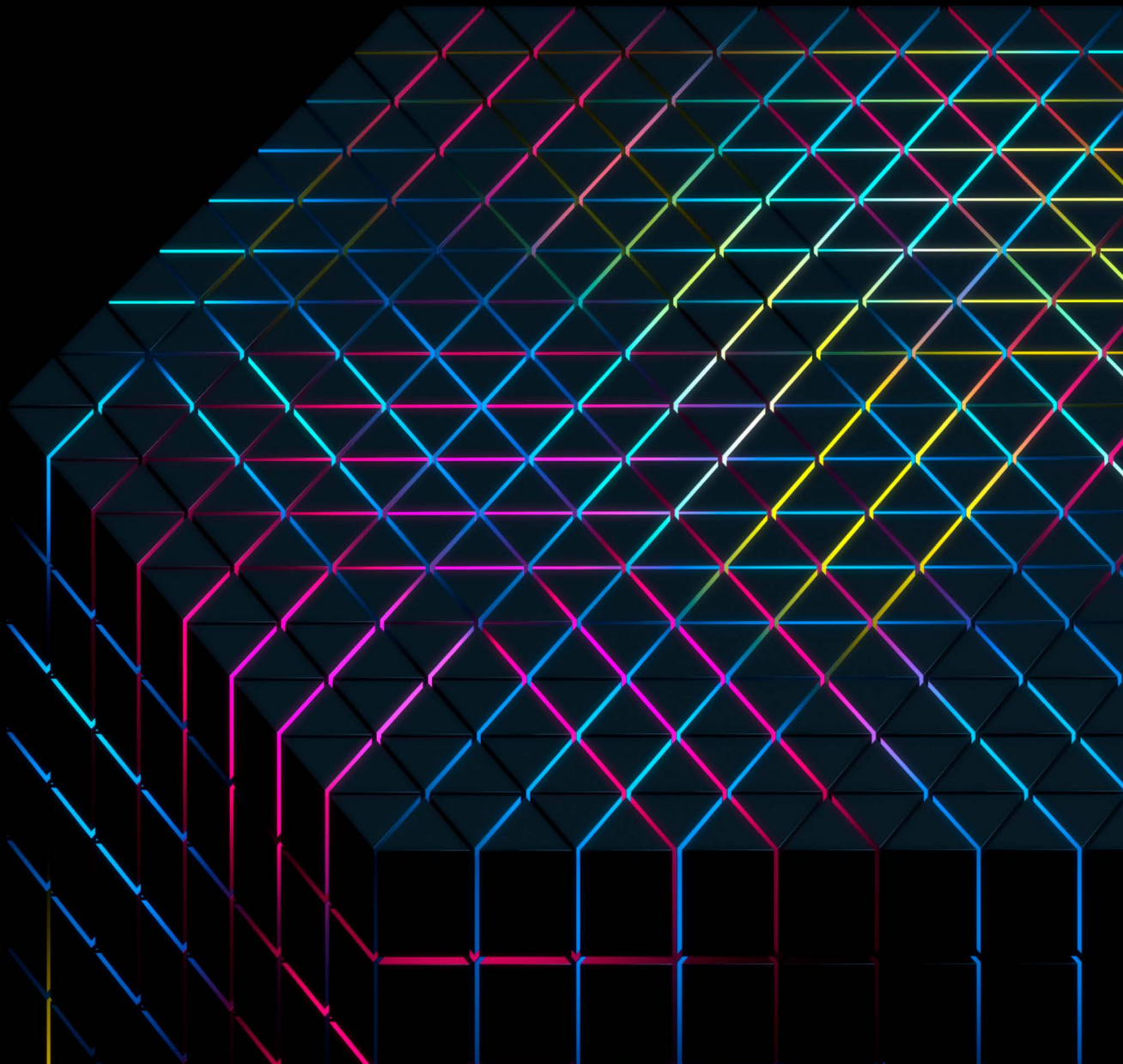# Protected and Connected

Modern Mainframe Access and Security

The mainframe lives in a connected, digital, hybrid IT world

It must meet a new generation of demands such as mobile and cloud connectivity, while continuing to underpin big business by extending enterprise-level security to an ever-changing world of business applications.

In short, protected and connected.

Protect

Ensure the mainframe complies with the very latest secure access standards, making application security the mandatory requirement, while simultaneously accommodating more points of entry than ever.

Connect

Revisit mainframe applications so they integrate, collaborate and cooperate, accommodate new users, capabilities, devices and platforms.

These requirements–greater workloads, demands, and use cases–represent a big change of pace for the mainframe.

Secure, modern mainframe access is becoming the standard. Organizations with the solutions that enable modern host access, extend enterprise security to the mainframe, deliver terminal-based mainframe applications, increase business efficiencies and improve services with Robotic Process Automation (RPA) have a competitive advantage.

This is recognized by analysts, **including IDC** who agree "businesses around the world are engaged in platform modernization initiatives to position their organizations for an era of business transformation, much of which is driven by digital transformation, and for new regulatory environments with such mandates as GDPR and PCI DSS". Put simply, the mainframe must modernize and adapt to meet these modernization imperatives.

Protected and Connected

The demands on your organization's technology continue to grow. This is especially true for the mainframe where, according to **IBM**, "the mainframe continues to be the heart that beats at the center of business today. From insurance and government to healthcare, most of the world's critical businesses rely on the mainframe.". Additionally, IBM states that "more than 55% of all enterprise application transactions run on the mainframe". With all this information, and so many mainframe-reliant applications, organizations must ensure secure access.

The challenge

If the mainframe is an essential part of your success, your challenges include:

1 **Terminal-centric client applications**

2 **Enterprise level security**

3 **Secure host access**

4 **Testing of terminal-based applications**

5 **Robotic Process Automation (RPA)**

1. Terminal-centric client applications

Organizations need technology to meet the ongoing increase in business and regulatory compliance standards, an ever-competitive marketplace, and increasingly sophisticated user demands. This is especially true for terminal-centric client applications, as users expect a modern look and feel when accessing the mainframe. Creating a user-friendly experience for mainframe access requires understanding the deployed software and user configurations. This insight informs modernization initiatives. The next requirement is secure, modern, enterprise-wide host access through desktop, or zero-footprint terminal

emulation. Finally, modernized, terminal-based applications that integrate mainframe business logic and applications through service enablement, or user interface modernization, complete the picture.

"Businesses want to modernize to enable competitive differentiation, and they need to modernize, both as a competitive response and for regulatory compliance"

IDC

2. Enterprise-level security

IBM estimates[i] "nearly 80 percent of the world's corporate data resides on or originates from mainframe computing platforms"; however, even though "85 percent of companies say mainframe security is a top priority, just 33 percent always or often make mainframe decisions based on security", according to **Key Resources, Inc.** This is not a nice-to-have, as much as a business necessity. Data breaches cost on average $3.92 million **globally**[5], not to mention reputational damage and lost business.

3. Secure host access

IDC believes that mainframe access is **moving to the cloud**[ii]; "Technology shifts to hybrid cloud or public cloud, which are essential for digital transformation, may require a rethinking of workload deployment strategies. The key to digital transformation is integrating the platforms that these applications are running on with contemporary platforms to ensure maximum yield with application delivery".

To help with this shift, organizations must implement flexible, zero-footprint access to business-critical host applications, in the cloud or on-premises. This lowers endpoint total cost of ownership, enables host access from anywhere, and helps ensure a modern user experience.

4. Testing of terminal-based applications

Test automation is key for organizations looking to increase the delivery velocity of terminal-based mainframe applications, while ensuring they meet user requirements without compromising quality. By automating the testing behind continuous integration/continuous delivery (CI/CD) practices, mainframe development teams can meet user and line-

of-business demands, quickly and efficiently. Organizations using functional, regression, and performance testing deliver mainframe applications that meet regulatory requirements on time, with fewer bugs, and increased scale and flexibility.

5. Robotic Process Automation (RPA)

RPA drives improvements in business efficiencies and customer service by automating interactions with desktop, web, and legacy applications. Software robots interact with applications and systems just as people do, but are faster, more accurate, and highly secure. They also save time, reduce costs, and free employees to work on other projects.

Analysts, **including Gartner**[iii], write about the growing popularity of RPA, as the market is "being boosted by a growing ecosystem of hyper automation offerings and by top software vendors launching products". They continue, "The RPA software market grew 62.9% in 2019 to $1.4 billion and held its position as the fastest-growing segment in the enterprise software market for a second year." And a **recent study**[iv] found "98% of IT business leaders say automating processes is essential to ongoing business success."

"98% of IT business leaders say automating processes is essential to ongoing business success"

Organizations using RPA on the mainframe can automate repetitive tasks currently performed by human users, potentially reducing errors and improving productivity. With a large percentage of key business data housed on the mainframe, enterprises are looking for ways to leverage this data in their RPA initiatives.

The challenge is in implementation. It is important the mainframe team leads work to implement RPA rather than, for example, the security or customer operations functions, who are less likely to understand the specific needs of the platform. While interacting with a desktop- or web-based application is typically straightforward, host system data typically requires special skills, such as a connector. Not every enterprise can do this.

Micro Focus Mainframe Access and Security answers the challenge

1. Modernizing terminal-centric client applications

Micro Focus Host Access Analyzer offers a first step toward challenge resolution by providing insight on software deployment and usage across organization-wide host access systems and users. The information provided, helps organizations make decisions to ensure a secure, modern user experience, license compliance and control. Micro Focus Reflection Desktop, Extra! X-treme, and Rumba+ Desktop all provide secure desktop host access with a modern interface. Micro Focus Host Access for the Cloud ensures secure, true zero-footprint mainframe access from anywhere. Finally, Micro Focus Verastream uses RESTful services, Java and .NET interfaces to enable the integration behind modernized mainframe application access.

2. Extending enterprise-level security

Micro Focus Host Access Management and Security Server (MSS) uses centrally managed desktop terminal emulation and built-in security that ring-fences business-critical systems and data through masking and encryption. For example, Automated Sign-On for Mainframe add-on gives mainframe users automatic access. Multi-Factor Authentication (MFA) with MSS further extends mainframe protection, and the Micro Focus Advanced Authentication Connector for z/OS ensures authorized access only to business-critical host systems. By integrating directly with the Micro Focus Advanced Authentication Server, this solution adds MFA, or Two-Factor authentication, to meet regulatory, industry, and client standards.

3. Delivering secure host access

Micro Focus Host Access for the Cloud answers the host access challenge by enabling secure, zero-footprint access at any time, from the cloud or on-premises. It reduces IT costs and desktop maintenance at the endpoint and improves mainframe protection through strong access control.

4. Providing automated testing of terminal-based applications

Micro Focus Verastream Host Integrator delivers automated testing that works with current testing solutions and infrastructure, using discrete services to automate terminal-based mainframe application testing. These services use encapsulated application business logic that is exposed by many standard interfaces.

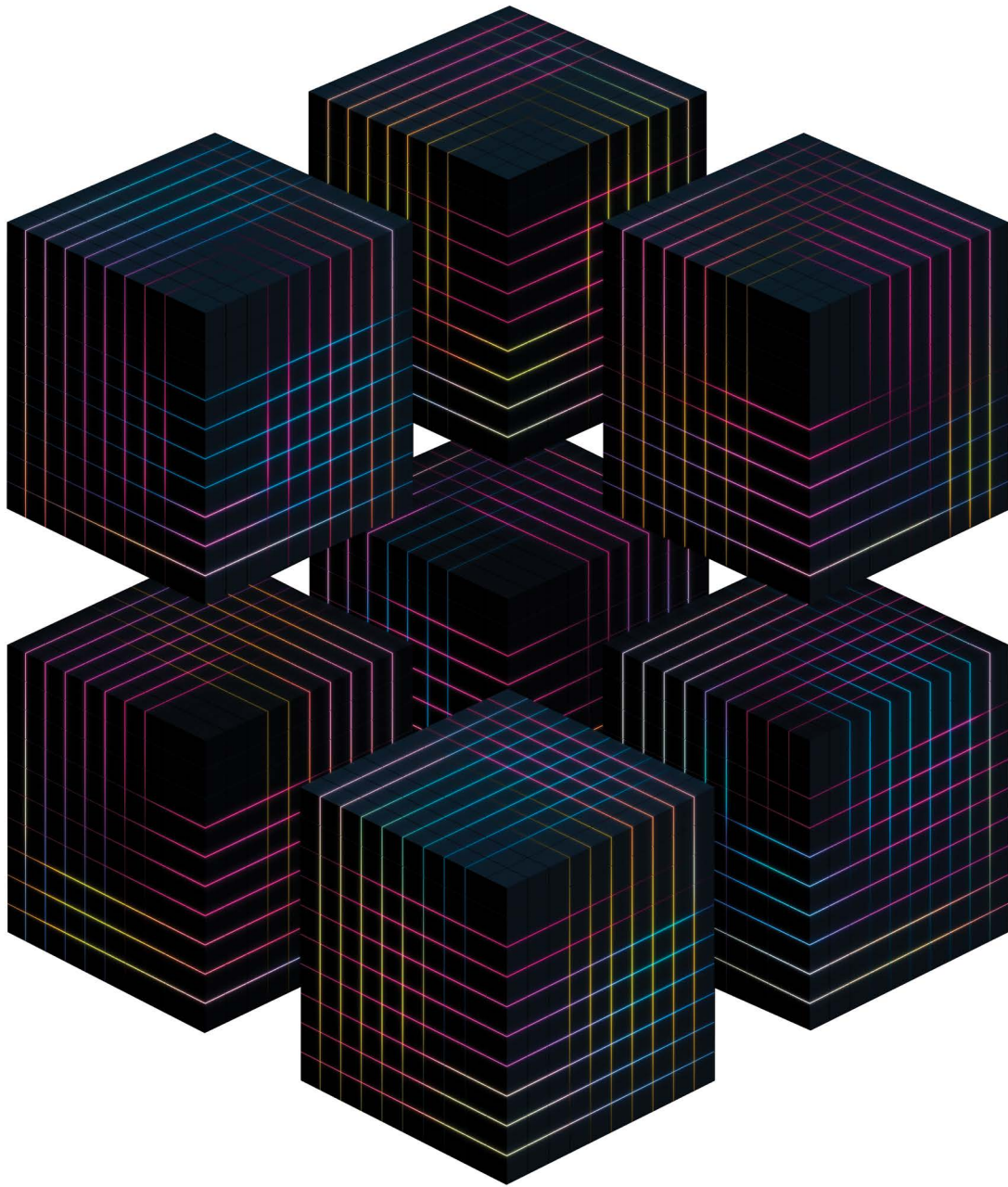## 5. Incorporating Robotic Process Automation

Micro Focus Verastream Host Integrator can harness the power of RPA by incorporating host data into RPA projects via a service-enablement approach. This brings performance and scalability to RPA via web services or through more traditional application programming interfaces, such as HLLAPI, Java, and .NET. These traditional interfaces work with our desktop terminal emulation solutions, including Micro Focus Extra! X-treme, Reflection Desktop, and Rumba+ Desktop.

i.   https://www.ibm.com/blogs/systems/the-futurescape-of-it/
ii.   https://www.microfocus.com/media/white-paper/modernization_a_flexible_approach_to_digital_transformation_wp.pdf
iii.   https://www.gartner.com/document/3985614
iv.   https://towardsdatascience.com/all-the-robotic-process-automation-rpa-stats-you-need-to-know-bcec22eaaad9

▶ Next Steps

Contact your **local Micro Focus office** to ask about our **Value Profile Service**. It is how we understand what you want to achieve, and explain how our modernization solutions and collaborative approach can help deliver it.

Micro Focus Application Modernization

Our application modernization portfolio delivers four things, to realize one ambition – enabling smart digital transformation.

- Bridging old and new by IT investments, by reusing not replacing
- Protecting, and using core system IP in new ways to serve the business
- Increasing app and data value by delivering changes faster with low risk
- Leveraging cloud or containers to drive new business

What makes us different?

Real world application modernization with Micro Focus re-uses what works to create successful, risk-averse digital transformation that enables applications deployment across every platform.

An unmatched track record of reducing customer risk by adding innovative new technologies to proven systems more than 1000 times.

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