Cyolo

TOP 5

‘PROBLEMATIC’ APPLICATIONS FOR DIGITAL TRANSFORMATION

It is often hard to let go of tried and tested enterprise applications: legacy applications are often intrinsically integrated into business processes, making them difficult to replace or upgrade. In fact, by 2025, Gartner expects that 90% of current applications will still be in use and have insufficient modernization investment to take them forward.

Digital transformation is changing the face of the enterprise as networks expand to encompass remote employees, supply chains, cloud apps, and edge devices. Application ecosystems are changing along with the digitally transformed business, but legacy apps cannot always fall into line. Security gaps can sneak in when problematic legacy apps lack support for modern security protocols and standards. NCCGroup found that 45% of organizations inherited legacy security issues during a transformation project resulting in a downgraded security posture. This insidious problem increases cyber risk and results in non-compliance with current regulations.

You probably have some of these challenging applications in your environment and odds are they are business critical. Upgrading is not really an option and securing them is nearly impossible.

Here are the some of the most common problematic applications with specific recommendations on how to secure them while on your digital transformation journey:

LEGACY APP 1

ORACLE

Oracle has promised continued support for its legacy applications, including E-Business Suite (EBS), PeopleSoft, and WebLogic. This is great for companies who want to move from these applications during a digital transformation project but need to proceed slowly. However, it is unlikely that Oracle will update and innovate around these products; this means that support for improvements in access control and zero-trust enablement are unlikely to be a priority for Oracle.

SECURITY PROBLEMS

EBS does not have native support for single sign on (SSO); PeopleSoft does not support identity protocols, security assertion markup language (SAML), or open ID connect (OIDC), limiting its use in modern use cases, including federation. An organization must modernize access to Oracle legacy applications using third-party platforms.

LEGACY APP 2

MICROSOFT SHAREPOINT

On-premises SharePoint supports certain types of businesses, for example, heavily regulated industries, where cloud collaboration is seen as less secure. For organizations such as these, security is crucial, and control of data access is an essential part of regulatory compliance and data protection. However, as Microsoft has a strategic focus on cloud applications with Office 365 at its core, legacy on-prem instances of SharePoint may not maintain modern access control options.

SECURITY PROBLEMS

SharePoint for on-premises deployments will certainly lag on cloud-based updates. While the latest version of SharePoint Server Subscription Edition has some modernization features added to help with authentication, including support for OIDC, turning these features on require a specialist and can be complex to achieve. Expansion may be required to fully support a zero-trust approach to controlling access to SharePoint-held resources. Microsoft recommends an identity-centric zero-trust approach to ensure robust SharePoint access control.

LEGACY APP 3

SAP

SAP systems are widely deployed and support many business-critical applications. Some of these deployments have generic user, name, and password (UN&P) that multiple people will use. While this is a security challenge, it is not malicious because the end-users need to get their work done and this insecure set up is the best way to get the job done. Without identity visibility, it is impossible to track which specific user accesses the application making this application a nightmare for compliance.

SECURITY PROBLEMS

Legacy SAP deployments can result in a lack of cohesion when it comes to controlling access to critical business resources. Integration with a third-party identity-centric access control platform can prevent unauthorized access and enforce least privilege access rights as well as prevent lateral movement that leads to control of SAP systems.

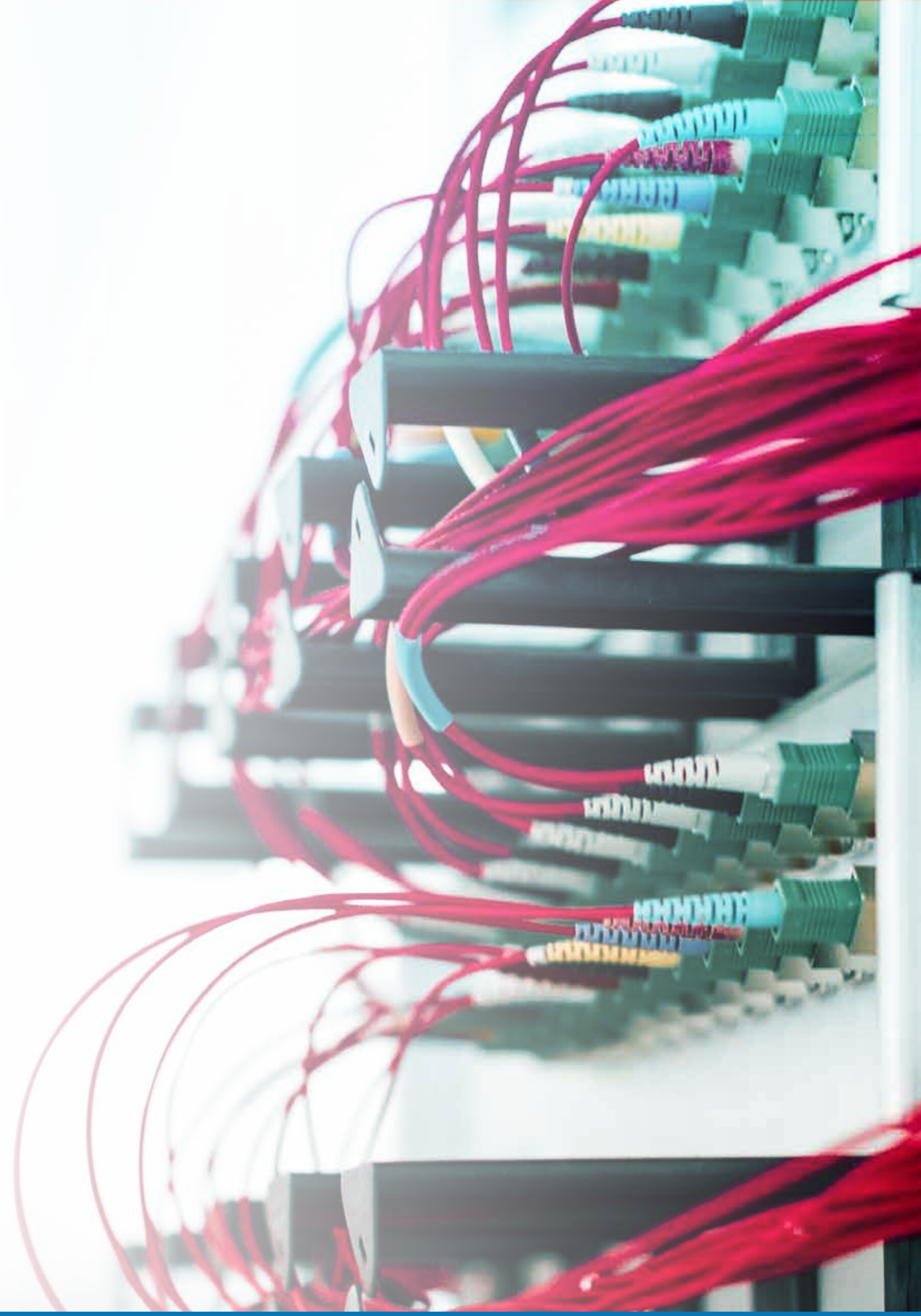
LEGACY APP 4

MAINFRAMES

You would be surprised how many are still out there! Research has found that 44 out of the top 50 banks, healthcare, and government agencies rely on IBM Z Mainframes for business-critical applications. Mainframes may cause security problems during digital transformation as business-critical data must be available to cloud-connected users.

SECURITY PROBLEMS

Mainframes are often based on decades-old technology. These mainframes are not agile enough to easily support modern identity, security protocols, and standards. Mainframes need an identity and access control strategy, as many remain critical to a business.



LEGACY APP 5

HOMEGROWN APPS

Homegrown apps may have been kicking around an enterprise for years, but the original coders are long gone. A lack of expertise in secure application coding can lead to inherent vulnerabilities in homegrown apps. In addition, homegrown legacy apps are unlikely to have included support for modern identity and access management needs, such as secure remote access, zero-trust identity checks, MFA, and SSO. Support for modern identity protocols is also a specialist area of knowledge, making homegrown apps unlikely to support modern access control requirements.

SECURITY PROBLEMS

Homegrown legacy applications will need an agile solution that can bridge the gap between an older code base, human users, and modern zero-trust environment architectures. Identity-centric platforms, such as Cyolo's, overlay MFA capability with legacy applications without compromising the user access experience.

5 RECOMMENDATIONS TO ENSURE EVEN LEGACY APPS ARE

ZERO TRUST SECURED

Cyolo knows how difficult legacy apps can be. We designed our identity-centric zero-trust platform to ensure all applications have modern secure access control options. By striking the difficult balance between user experience and security requirements, these applications can continue to empower your business without increasing the attack surface area. Here are five recommendations to ensure that legacy applications are as secure as modern systems:

1. KNOW YOUR LEGACY

Start with a thorough accounting of all systems and applications to identify which applications will cause your proposed infrastructure security issues. Extend this audit to include suppliers' legacy applications to prevent them from disrupting your digital transformation program. This audit will lead to the next major security exercise.

2. CREATE A SECURITY IMPROVEMENT PLAN (SIP)

According to a Ponemon report, 82% of organizations have experienced at least one data breach during digital transformation. A security improvement plan (SIP) is a series of guidelines that develop procedures to reduce risk and maintain regulatory compliance and should have specific actions for challenging applications. Digitizing operational processes within a hybrid (cloud and on-prem) environment makes the smooth transition a security challenge. By referring to the SIP an organization can minimize the risk associated with digital transformation projects that include legacy applications.

3. MOVE TO A ZERO TRUST MODEL

A Zero-trust model that incorporates your legacy applications is the best practice for modern identity authentication. The digital transformation initiative will likely involve a hybrid environment. To ensure that data and IT resources are secure, you must prioritize access control by implementing multi-factor authentication (MFA) and standardization of password quality across your organization, including external consultants, freelancers, and other non-employees.

4. MAINTAIN COMPLIANCE

The need to comply with regulatory or insurance requirements is a likely driver of the shift to a zero-trust framework. As you transform the security model, ensure that your regulatory obligations continue, and compliance is maintained. While many systems will easily fit the model, some will not. Carry out risk assessments and Privacy Impact Assessments that include legacy application access. Identity-centric zero-trust platforms that overlay modern authentication and authorization protocols will ensure that security and privacy compliance is maintained.

5. IMPLEMENT AN IDENTITY-CENTRIC ZERO TRUST PLATFORM

An identity-centric zero-trust platform will secure and administer access to your 'problematic' applications. For example, there may be a long lead time for a legacy application to move from on-prem to cloud and even longer for the deployment of a modern replacement. During this time, security gaps must be controlled. Using an identity-centric zero-trust platform, you can overlay access control and security measures, including MFA, SSO, least privilege, auditing, and Just-in-time (JIT) access for third-party vendors.

THE CYOLO APPROACH TO 'PROBLEMATIC' APPLICATIONS

Cyolo deploys an agentless solution for your authentication needs, especially for the applications that present challenges to modern authentication methods. The Cyolo Identity Access Controller (IDAC) is placed onsite and integrates with your existing identity infrastructure and connects to your network resources and applications. In this model, a user will continue to use their existing workflows, but will first be authenticated by the Cyolo IDAC which uses the existing identity infrastructure to validate identity. Because the IDAC does not send traffic outside the company network, nor does it store any access information, there is no risk of compromise for users, applications, or services.

CONCLUSION

While digital transformation has greatly improved security for many areas of an organization, there are significant gaps that must be addressed. With a firm understanding of what problematic applications or services exist in your environment, the work of applying modern security methods to them can begin. As an outcome, the desired balance between user experience and security controls is achievable, even for business-critical systems that are historically difficult to apply modern identity authentication to.

At Cyolo, we know work happens anywhere and anytime today. We believe every company should have the ability to extend modern identity validation to all your applications and provide seamless, secure access that does not change the user experience. Cyolo exists to help organizations thrive by securely connecting people to their work and bringing modern, identity-based access to all applications and systems, even the ones existing tools struggle to secure. Because Cyolo was co-founded by a CISO and two ethical hackers, the solution allows you to connect anyone from anywhere with the confidence that the entire digital system is protected.

To learn more, visit cyolo.io.

Cyolo