Maximize the security of your Adabas data

Learn how encryption, access control and auditing can deliver pervasive security and a complete view of Adabas system activity

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Changing threats call for
a new approach to security

The security risks facing Adabas data are higher than ever because your mainframe is more exposed. More tools and applications are accessing and manipulating data for analysis, intelligence and real-time processing. Enterprise systems are also more interconnected, with distributed networks and the internet used for daily operations.

How will you prevent malicious access before it damages your operations or causes customers to lose confidence? Do you have full visibility into your database activity to detect unauthorized use, especially when more than half of database breaches come from insiders? Are you able respond to security audits and compliance mandates?

In this environment, you need enhanced features of Adabas and the IBM Z® platform to protect your sensitive data wherever it is and however it is used.

57% of database breaches involve internal actors[1]

287 days: avg time to identify and contain a data breach[2]

$5.6M: avg cost of breach in companies with high compliance failures[2]

[1] **Verizon Insider Threats Report**
[2] **IBM 2021 Cost of a Data Breach Report**

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Protect and monitor
your most valuable data

In an environment with increasing malicious attacks from external and internal sources, and greater connectivity of your Adabas systems, you need comprehensive database security. Protecting sensitive data goes beyond compliance—it means maintaining customer trust and a competitive edge.

It's time to take a fresh look at cybersecurity to protect your data at rest, in use, and in flight. Embrace industry-leading encryption to reduce the risks and costs of a data breach, and help meet complex compliance mandates. Authenticate users to prevent unauthorized access. And audit to gain full visibility into database activity to inhibit in-house fraud and protect your company and employees. Together, these solutions can keep your Adabas systems secure and reliable for years to come.

Protect data at rest with industry-leading encryption

Protect data in use with control over user profiles and access

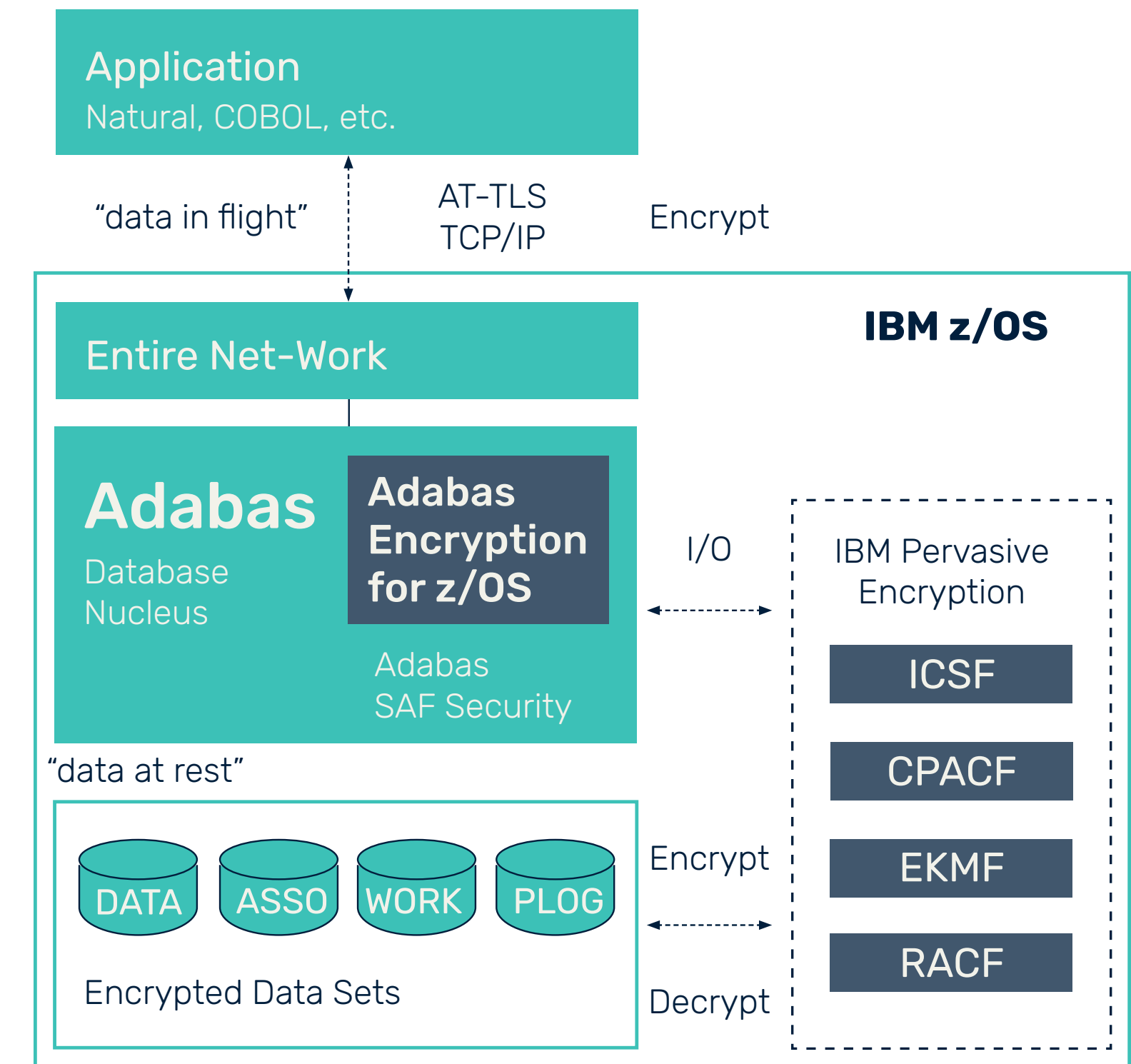**Protect data in flight** with secure, encrypted communication

Audit all database activity to detect unauthorized access

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Encrypt to
protect data at rest

Encrypt your Adabas data with industry-leading security. Streamline administration with easy to use enterprise key management that helps you protect your information against unauthorized access.

Adabas Encryption for z/OS extends the security and reliability benefits of IBM hardware-based pervasive encryption to Adabas data sets. IBM Z offers high-speed encryption and key management for broad protection with fast database performance. You can choose to apply selective encryption or encrypt your full Adabas data sets.

Adabas Encryption provides greater security than disk-level encryption that only protects against theft of physical media. Encryption requires no changes to your applications—continue to deliver data to all your authorized programs, users and services.

Application
Natural, COBOL, etc.

"data in flight"   AT-TLS TCP/IP   Encrypt

IBM z/OS

Entire Net-Work

Adabas
Database Nucleus

Adabas Encryption for z/OS

Adabas SAF Security

I/O

IBM Pervasive Encryption

ICSF

CPACF

EKMF

RACF

"data at rest"

DATA   ASSO   WORK   PLOG

Encrypt

Decrypt

Encrypted Data Sets

> **Extensive use of encryption is one of the most impactful ways to help reduce the risks and financial losses of a data breach and help meet complex compliance mandates.**
>
> - Michael Jordan, IBM Distinguished Engineer for Z Security

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Control access to
protect data in use

Adabas authentication and authorization enable you to deliver uninterrupted data to authorized programs, users and services. All Adabas utilities can work with encrypted data without requiring changes. Management is simplified through existing utilities for loading, unloading, restore, backup and other functions.

Adabas SAF Security ensures your data is secured with proven, industry-standard security methods. By using profiles and connecting directly with the IBM Resource Access Control Facility (RACF), CA-ACF2® or CA-Top Secret® for data privacy, you can feel confident these resource managers grant access only to authorized users.

Stolen or compromised credentials are the most expensive cause of malicious data breaches.

19% of breaches stole or used credentials for access[1]
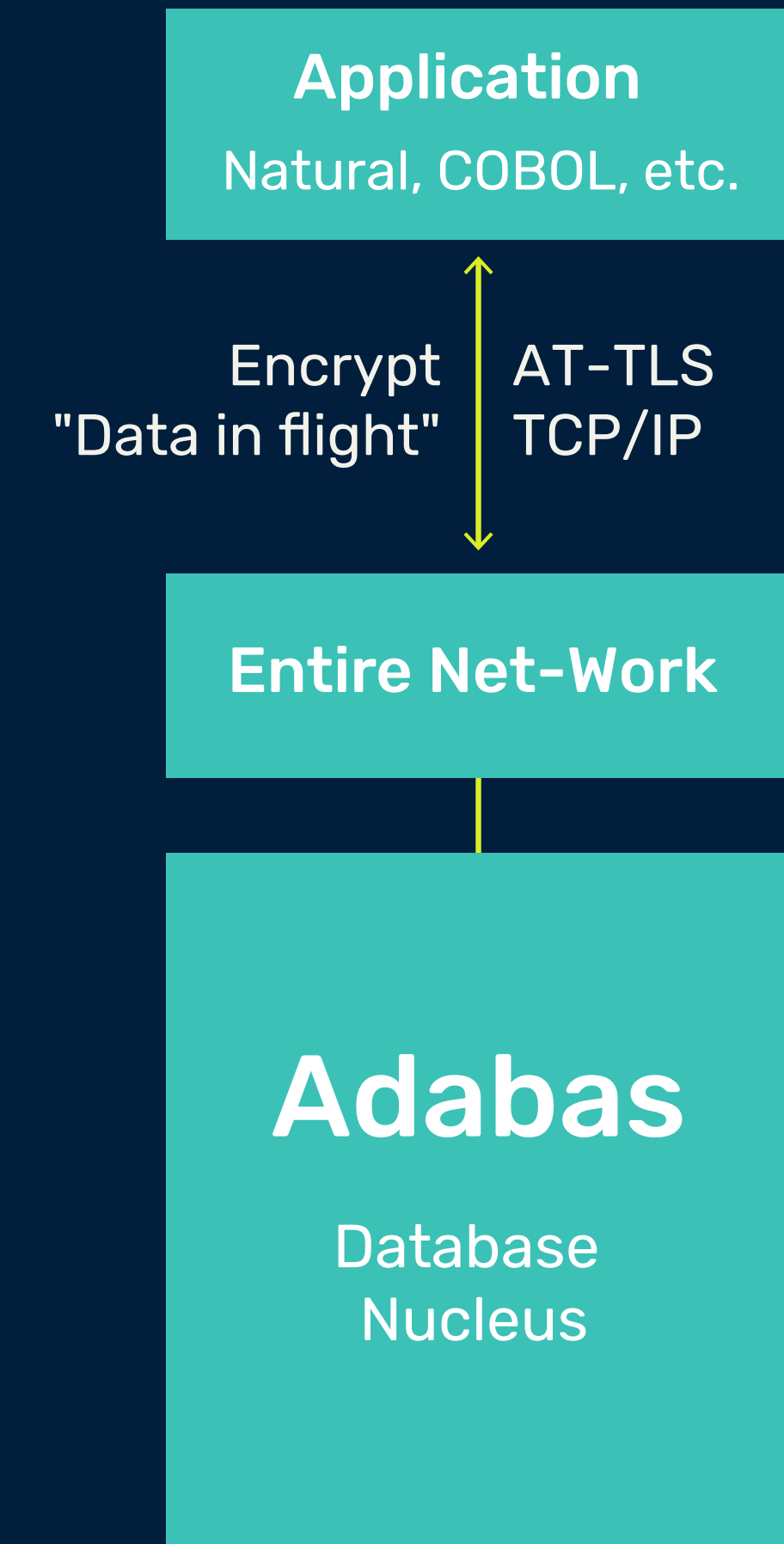
Breaches with stolen or compromised credentials cost

$4.75 million on average[1]

[1] **IBM 2020 Cost of a Data Breach Report**

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Secure communications to **protect data in flight**

Protect your data at its most vulnerable point—on public networks between the application and your Adabas database. Adabas solutions encrypt data before it is sent over the network and decrypt it upon return, making the process transparent to the application. You can implement encryption to protect data in flight without changing your existing applications.

Entire Net-Work encryption leverages security negotiations and encryption of industry-standard security transport protocols, such as TCP/IP and AT-TLS, to protect your data as it travels on private and public networks, including the internet, between Adabas and any application.
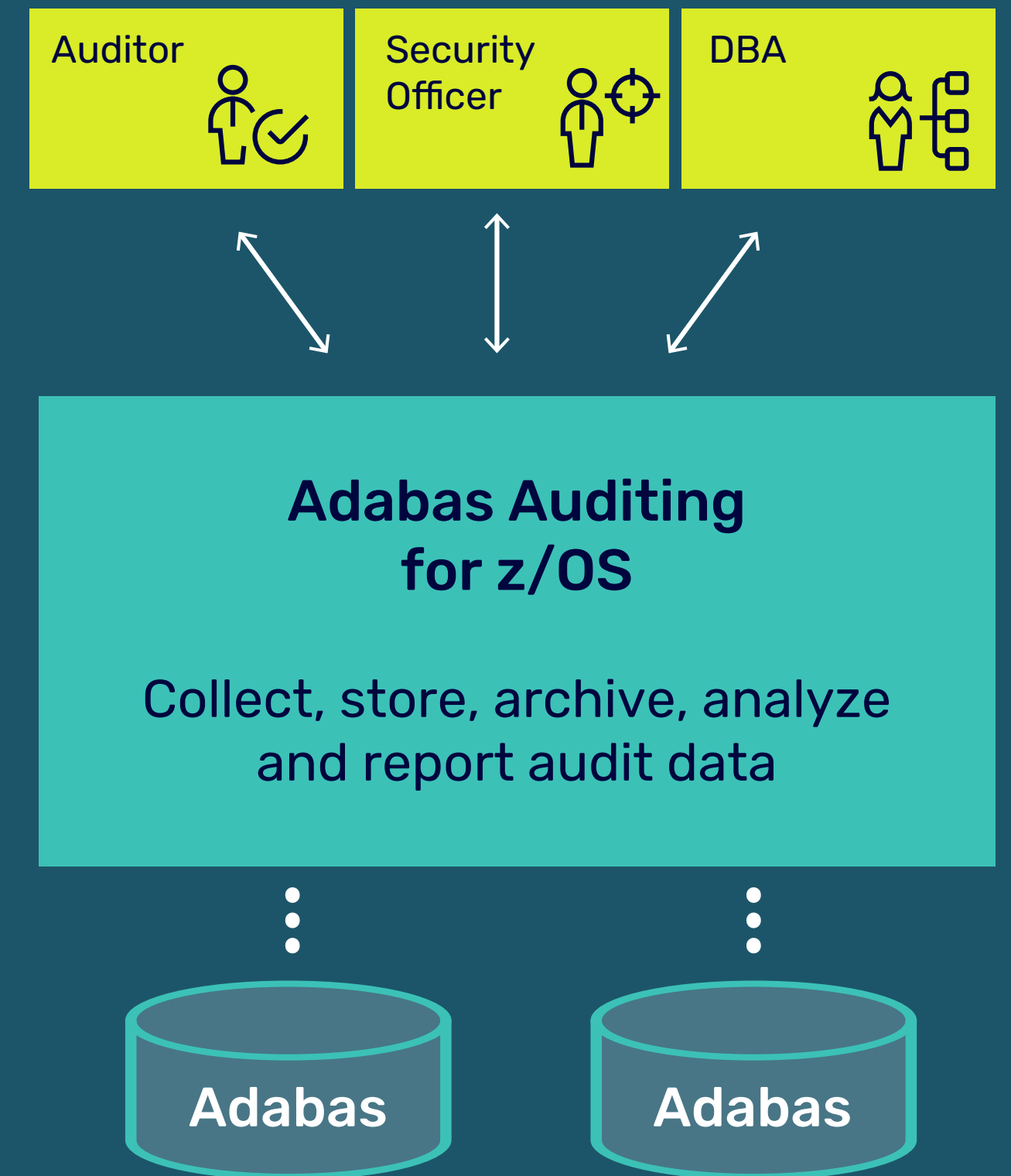
Application
Natural, COBOL, etc.

Encrypt | AT-TLS
"Data in flight" | TCP/IP

Entire Net-Work

Adabas

Database
Nucleus

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Detect unauthorized access **with complete auditability**

To detect unauthorized access, you need a cybersecurity solution that delivers full visibility into your database activity: who is reading or changing your data, the changes made, when and where the activity occurred and which applications were used to access your data.

Enhance your cybersecurity with a powerful, easy to use web-based tool that helps your organization protect data and comply with ever-growing regulations. Then, track and store audit data safely in secure, indexed, long-term archives so your data stays protected, and is available whenever you need to review it. With Adabas Auditing for z/OS you can:

- Empower auditors/security officers to certify that IT systems follow quality standards and regulations
- Enable database administrators to track all access and activity on the database
- Support data protection officers with tools to respond quickly to security audits

Auditor

Security Officer

DBA

Adabas Auditing for z/OS

Collect, store, archive, analyze and report audit data

Adabas

Adabas

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Upgrade your security
with IBM z15

IBM Z pervasive encryption provides an umbrella of functionality to the IBM Z platform to meet complex compliance mandates while reducing the risks and financial losses of a data breach. IBM Pervasive Encryption and Adabas security solutions operate on the lastest three versions of IBM Z. With the IBM z15™ platform for data encryption everywhere, you can protect your data on-prem or in flight—running up to 19 billion fully encrypted transactions per day—and manage privacy by policy. The IBM Z platform enables increased speed, scalability, security and the high availability demanded by today's enterprises.

↗ **Learn more about the IBM Z**
↗ **Explore IBM Pervasive Encryption**

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Take the next step to
stronger Adabas data security

Start your journey to greater security while maintaining the high performance you expect from Adabas. Protect your data at rest, in use and in flight – and gain total visibility into all database activity.

↗ **Learn more about Adabas & Natural on IBM Z**

↗ **Explore Adabas & Natural 2050+**

↗ **Contact us**

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