Pervasive Data Protection in a NonStop™ environment

XYGATE Technology Corp.

Leading in mission-critical security solutions for the HPE NonStop™ Servers.

- **Solutions and expertise in NonStop cyber security and compliance**
- Founded in 1983 and based in Simi Valley, CA
- Over 75 employees worldwide
- Globally-based sales, support and services
- Over 150 direct enterprise customers
- Strong partnership with HPE
- 2013 AllianceOne partner of the year in the security category

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XYGATE Security Solutions

Leading in mission-critical security solutions for the HPE NonStop™ Servers.
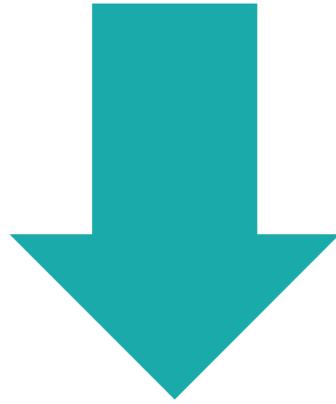
Security Intelligence	Data Protection	Identity & Access Management	Audit & Compliance	Authentication & SSO	Database Management
Security Intelligence & Analytics	Protect business data at rest & in transit	Grant privileges according to job function	Develop & monitor security policy compliance	Simplify & enhance Safeguard environments	Store data efficiently
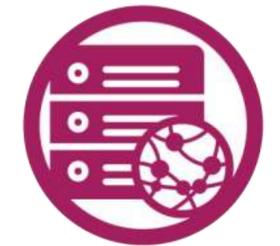
XYGATE Data Protection

Industry standard security with no application or database changes

Data Protection

Protect Your Data

The information age has seen the development of electronic pathways carrying vast amounts of valuable private, commercial, scientific and educational information between businesses and individuals, including financial and government organizations.

Protect business data:
at rest & in transit.

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XYGATE Data Protection

We wanted the best, so we partnered with the best

Voltage Security acquired by HPE in February 2015

Leading experts in data-centric security

- Format-Preserving Encryption (FPE)
- Secure Stateless Tokenization (SST)
- Protect structured and unstructured data enterprise-wide
- Contribute technology to multiple standards organizations

Market leadership—Voltage solutions used by:

- 6 of the 8 top U.S. payment processors
- 7 of the 10 top U.S. banks
- Over 1,100 enterprises around the world
- World's largest merchants and retailers

Leading new standards and trust in proven data protection

- Financial Services, Payments, Retail, Healthcare, Telecoms, and Government

Problems with Traditional Data Protection

Need to change data structures and validation

7412 3456 7890 0000

Encrypted data is unusable until decrypted

8juYE%Uks&dDFa2345^WFLERG

Key management can be a nightmare

Result: multiple, piecemeal solutions
that create multiple security gaps

The Harsh Reality

Impossible to protect against every vulnerability –
IT infrastructures will continue to be breached

Impossible to keep all data behind a firewall –
there is no longer the concept of a "perimeter"

The Logical Conclusion:

Data must be protected *pervasively* and *persistently*

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Format-Preserving Encryption (FPE)
- Protects structured data while maintaining functional and analytic integrity of the data

Secure Stateless Tokenization (SST)
- High-performance tokenization without database management headaches

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First Name: Gunther
Last Name: Robertson
PAN: 4564 1234 1234 1234
DOB: 20-07-1966
SSN: 934-72-2356

Live Data

Ija&3k24kQotugDF2390^32
0OWioNu2(*872weWaasIUahjw2%quiFl
ogjsH&a$%2lQpw*#m
WUYBw3
Oiuqwriuweuwr%oIUOw1@

Traditional Encryption

First Name: Uywjlqo
Last Name: Muwruwwbp
PAN: 4564 12**79 6945** 1234
DOB: **18-06-1972**
SSN: 298-24-2356

HPE SecureData FPE/SST

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Advantages of HPE SecureData Protection

Minimal change to data structures and applications

7412 3456 7890 0000   7412 3456 7890 0000

**Protected data behaves correctly
in applications and analytics**

8juYE%Uks&dDFa2345^WFLERG   7412 34**23 3526** 0000

Simplified operations via Stateless Key Management

Name	SS#	Salary	Address	Enroll Date

**End-to-end security within a consistent
data protection framework**

dynamically generated keys

Key Database

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Unique NonStop requirements	XDP added functionality to HPE SecureData
– Support older legacy applications and newer (often ported) applications	– XDP enables implementation with no application changes on NonStop – XDP adds multiple language support: C, TAL, COBOL and Java
– Support a wide variety of data types including payments and other PII (e.g., SSN, DoB)	–XDP provides a single API for tokenization and encryption of payments and PII (i.e., single XDP API connecting to both HPE SecureData APIs)
– Support NonStop's OS personalities and executable types	–XDP increases support for NonStop's OS personalities and executable types
– Conform to NonStop fault tolerance fundamentals	–XDP adds distributed architecture for fault-tolerance and scalability –XDP adds packaged functionality to support either linking directly to the application or offloading encryption tasks to a dedicated server class process (note: TNS applications can only do the latter)
– Be highly performant	–XDP adds support for nowaited/non-blocking encryption/tokenization
– Be secure and integrate with NonStop's unique security framework	–XDP adds built-in access control and auditing, as with all XYGATE products

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**Can be implemented in two ways**

1. As an intercept library requiring absolutely no changes to the application

2. As an SDK that requires a small amount of programming in the customer's preferred programing language

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Industry standard security with no application or database changes

Intercept Library option:
- No application changes required
- Overlays system's I/O procedures with additional functionality to encrypt/tokenize on the fly
- Application sees clear data and is unaware that XDP is being used
- Allows integration with other platforms via HPE SecureData enterprise support
- All sensitive data is protected in the database
- XDP configuration files control behavior (such as which files or fields to access and protect)
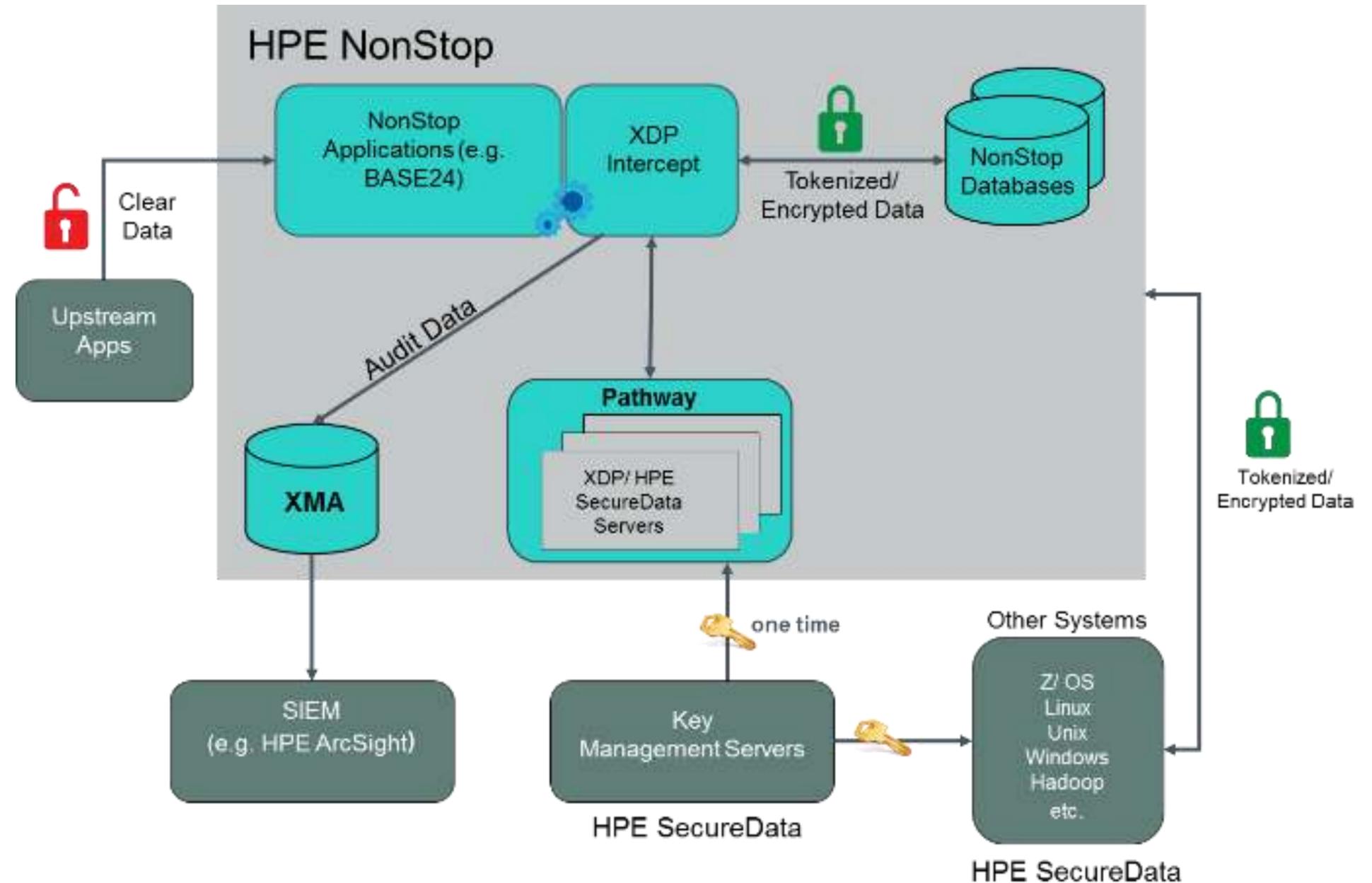
XYGATE Data Protection

Industry standard security with no application or database changes

SDK option:

- Lightweight API that can embed directly into NonStop application

- Enables multi-threaded apps to have non-blocking access to Voltage encryption/tokenization

- Minimal code changes

- All sensitive data is protected in the database

- XDP configuration files control behavior (such as which files or fields to access and protect)

- Comprehensive data-centric security approach
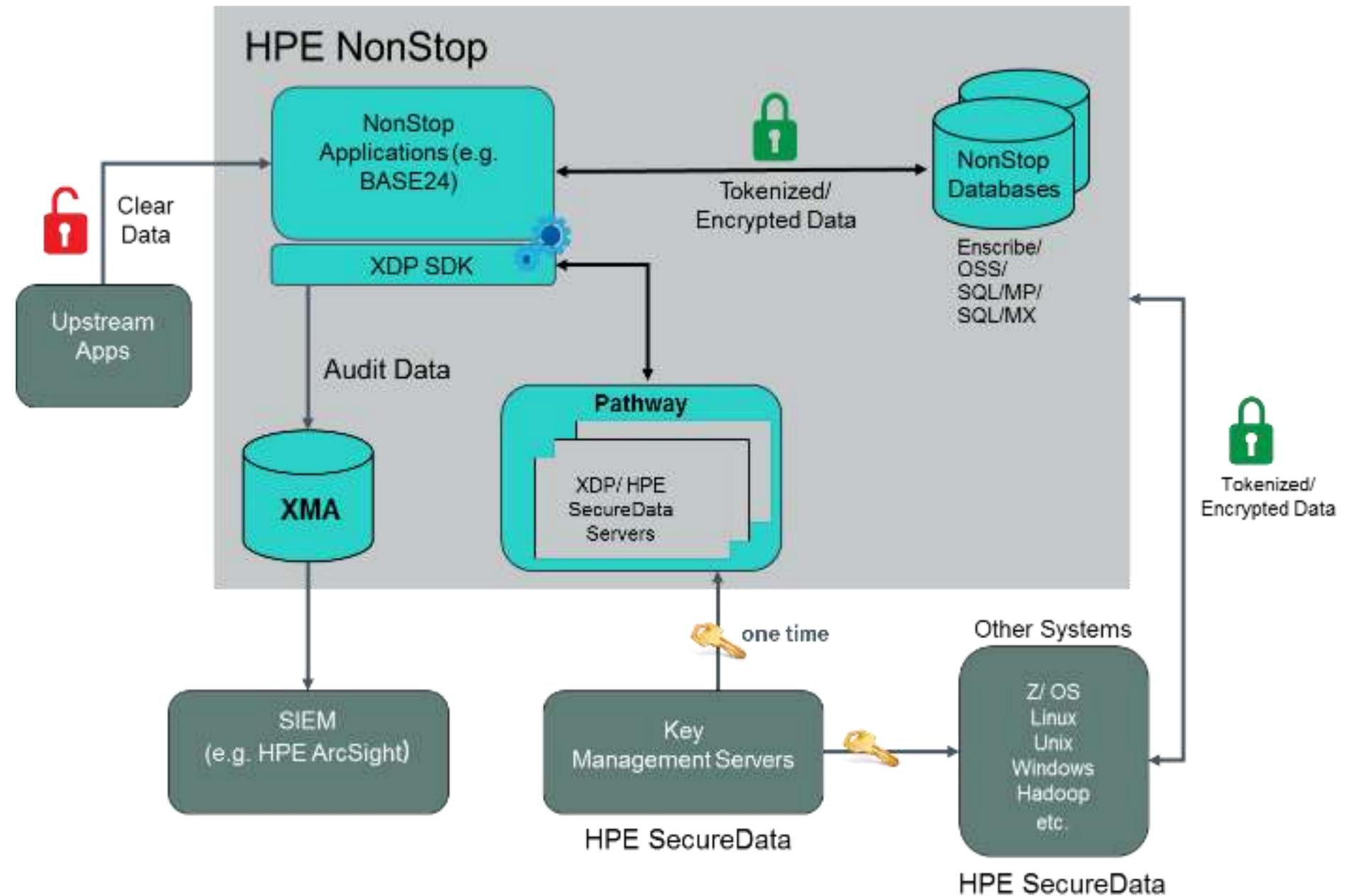
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HPE SecureData

• Industry-leading tokenization and encryption solutions

• Format-preserving

• Standards-based

• Multi-platform support

• Runs natively on NonStop

• Support for wide variety of data types

• Stateless key management

• Flexible

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XYGATE Data Protection (XDP)

- **Available through HPE NonStop sales**
- Optimizes SecureData for NonStop environments
- Enables implementation with no application changes
- Simplifies SecureData implementation
- Enhances SecureData functionality
- Integrates SecureData with NonStop security framework
- Enhances SecureData fault tolerance and scalability
- Provides NonStop database-specific tools for HPE SecureData

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XYGATE Data Protection (XDP)

- Enables implementation with no application changes on NonStop
- Adds support for nowaited/non-blocking encryption/tokenization
- Increases support for NonStop's OS personalities and executable types
- Adds multiple language support: C, TAL, COBOL and Java
- Adds distributed architecture for fault-tolerance, parallelism and scalability
- Adds built-in access control and auditing, as with all XYGATE products
- Adds packaged functionality to support either linking directly to the application or offloading encryption tasks to a dedicated server class process (note: TNS applications can only do the latter)

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STAY IN TOUCH WITH US

There is no such thing as too much communication

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