Fujitsu Enterprise Postgres

Datasheet

Secure, user-friendly data infrastructure for AI applications

FUJITSU

Fujitsu Enterprise Postgres

Fujitsu's PostgreSQL-based enterprise-enhanced database

Fujitsu Enterprise Postgres is a PostgreSQL-based database system that is the result of Fujitsu's experience of developing enterprise databases for almost 40 years.

Fujitsu's added enhanced features make it the database of choice for systems that require enterprise features, portability and interoperability.

Fujitsu has been a keen player in open source development since the early 80's, and has been supporting PostgreSQL for 20 years. We are proud of our commitment to the promotion of PostgreSQL as a world-class enterprise database.

Fujitsu Enterprise Postgres leverages PostgreSQL, enabling integration with a wide range of software, information systems, development tools, and runtime environments.

Fully compatible with PostgreSQL, we extend the benefits of the OSS version with enterprise quality. It is a cost-effective and reliable alternative, with no vendor lock-in and supported by Fujitsu's strong track record in mission-critical enterprise systems.

The improved reliability and Fujitsu's high-level support create major benefits to complement intelligent data systems for enterprises.

Fujitsu Enterprise Postgres

Our database provides effective solutions to common business challenges

Reduced installation and running costs

We employ minimized setup technology to eliminate the need for specific database expertise, reducing staff workload

High :level support

Our service model is the result of decades with large platform providers, plus commercial and government organizations.

Features and benefits

Main features	Benefits
PostgreSQL:based RDBMS	
• 100% compatible with PostgreSQL	• No vendor lock-in
• Compatible with other PostgreSQL databases	• Supports Zabbix, Apache, Tomcat
• Extends open source PostgreSQL	• Enterprise quality
• Simple migration from proprietary databases	• Low migration cost
AI	
• Generative AI for enterprise	• Secured data management for AI applications
• AI application development support	• Integration with RAG application development framework LangChain
Security	
• Transparent Data Encryption	• Increased security with PCI DSS-compliant 256-bit encryption
• Data Masking	• Protects production data
• Dedicated Audit Log	• Efficient and accurate monitoring of audit log
• Key management for Transparent Data Encryption	• Reduced risk of data leakage; lower operational costs
• Cloud-based key management	• Improved security by storing keys in secure external services
• Confidentiality management	• Easier and more efficient security operations
• Policy-based login security	• Login security policies simplify management and improve DB security
Performance	
• Vertical Clustered Index†	• Improved performance for large data sets
• Global Meta Cache	• Reduced overall memory usage with little performance degradation
• High-speed data load	• Loads large volumes of data using parallelism according to available CPU
• High-speed backup/recovery	• High-speed copy technology of choice can be used for backup/recovery
Reliability and High Availability	
• Mirroring Controller	• Automated instant failover
• Connection Manager	• Business continuity and fast failover without SQL relay
• Database Mirroring	• Two copies of a single database reside on different server instances
• Database Transaction Log Mirroring	• Transaction records are continuously streamed to the standby database
• WAL duplication	• Solves PostgreSQL's single point of failure
DevOps	
• Support for COBOL applications	• COBOL programs can execute SQL commands with little to no change
• System usage statistics	• Users can access database's utilization metrics and statistics
• WebAdmin	• Easily manage database and its contents saving time and money
• Enhanced GUI for cluster management	• Management tool makes setup and cluster management simpler
Ease of use	
• Easy installation, setup and management	• Reduced technical staff overheads
• Web-based and command line interfaces	• Simplified operation management
• One-click backup and recovery	• Easily performed high-level tasks
Fujitsu support options	
• Version compatibility	• Low migration cost due to compatibility verification
• Provides patches following PostgreSQL updates	• Guaranteed standard support
• Guaranteed support from end of sales period	• Optional extended support period; extendable
Collaboration	
• Operational monitoring with Amazon CloudWatch	• Operational monitoring with metrics and logs related to databases
• Privileged user management	• CyberArk Privileged Access Manager protects privileged users
• Database monitoring with Datasentinel	• Effectively monitor and analyze database performance

† Fujitsu's implementation of In-Memory Columnar Index by Fujitsu Laboratories Limited

Topics

PostgreSQL:based database system

Fujitsu Enterprise Postgres is based on PostgreSQL, the world's most advanced feature-rich open source database system. PostgreSQL, used by millions worldwide, enables integration with a wide range of software, information utilization systems, development tools, and application runtime environments.

Easy and cost :effective migration

Fujitsu Enterprise Postgres has been designed to be fully compatible with open source PostgreSQL databases and also offers enhanced compatibility when migrating from existing Oracle® systems.

The solution significantly reduces migration time so that budget restraints and business disruption are no longer a concern; migration has now become much more streamlined.

Enhanced system integration

The utilization of PostgreSQL technology enables integration with a wide range of software, information utilization systems, development tools, and application runtime environments. Investing in additional software systems and high migration costs are no longer considerations. User disruption is also avoided due to the ability to retain software products that users are already familiar with.

Fujitsu support

High :level support

Standard support and extended support options available to customers for ongoing assurance, so that future support and system confidence is a guaranteed business outcome.

Ease of use

Reduced expenditure for DB design and implementation

Fujitsu Enterprise Postgres employs a minimal setup process based on optimized resource deployment that performs dynamic hardware resource detection during installation. The software is automatically tuned with the customer's server configuration - parameter and backup settings are all completed during the system deployment.

Reduced reliance on technical staff

Many operational tasks can be carried out by non-technical staff. For example, to back up or restore instances, simply click to backup and click to restore.

Reliability and High Availability

Mirroring Controller

Constantly checks the status of database processes, and if a problem is detected, automatically redirects operations to the standby server, without the need for human intervention.

Connection Manager keeps your business running

Heartbeat monitoring is performed between client and server, so business can be resumed immediately from the application side in case a failure occurs. Applications can connect to an instance without being aware of which server the instance is running on. Fast failover without SQL relay.

WAL duplication for simple. reliable recovery

If a problem occurs or data is accidentally deleted, recovery of WAL (Write-Ahead Log) can be performed with a single click.

AI

Generative AI for enterprise

Knowledge data can be managed in vector and graph formats without requiring a dedicated database. Fujitsu Enterprise Postgres leverages its robust security features to provide a secure data infrastructure for AI applications.

AI application development support

Integration with RAG development framework LangChain, simplifying the creation of applications powered by large language models (LLMs).

Security

Transparent Data Encryption

Secure 256-bit Transparent Data Encryption (PCI-DSS compliant) and redundancy for high reliability and asset protection that is aligned with your data management strategy.

Data Masking

Redacts data using masking policies to obscure data returned from queries, making it available for reference without exposing the actual data. Data masking makes it safe to use production data in a test or development environment.

Key management for Transparent Data Encryption

By storing the encryption key outside the database, you can securely store the master encryption key and reduce the risk of data leakage. The database administrator is released from the operation and management of the master encryption key.

Cloud :based key management

Transparent Data Encryption keys can be stored in cloud key management services. Supports plug-ins to call communication adapters in the cloud and to share data encryption keys. Key management services in the cloud provide more choices for key management, lower operational costs, and increased security.

Confidentiality management

Simpler operations for role-based access control (RBAC) setting and audit. Easier and efficient security operations, and reduced human errors, minimizing security risks.

Policy :based login security

Prevent unauthorized logins and improve database security by setting password expiration dates and locking users who repeatedly fail to log in or are dormant to restrict access to their accounts.

FIPS compliance

Fujitsu Enterprise Postgres with Cryptographic Module can use algorithms approved by the Cryptographic Module Security Requirements (Federal Information Processing Standard) 140, designed to ensure strengthened data encryption and communication security.

Performance

Vertical Clustered Index

The VCI engine integrated with Fujitsu Enterprise Postgres provides significantly faster analytical query processing with a columnar representation of row-oriented data in memory. Tests show this results in almost 5 times the throughput of analytical queries while maintaining equivalent transaction volumes.

Global Meta Cache

System catalog and table information is cached in shared memory instead of in per-process memory. The memory usage of the overall system is reduced to enhance system performance.

Technical details

Item			Fujitsu Enterprise Postgres			
Basic architecture	Max. database capacity		Unlimited			
	Max. number of columns in table		1,600			
	Max. row length in table		1.6 TB			
	Max. number of rows in table		Unlimited			
	Max. number of indexes per table		Unlimited			
	Index storage format in table		B-tree		GiST/SP-GiST	
			hash		GIN	
			BRIN		VCI (Fujitsu's In-Memory Columnar Index)	
	Data types	Character types	CHARACTER		NCHAR	
			CHARACTER VARYING		NCHAR VARYING	
			text			
		Numeric types	bigint	integer	smallint	
			bigserial	numeric	smallserial	
			decimal	real	serial	double precision
		Datetime types	date	time	time with time zone	
			interval	timestamp	timestamp with time zone	
		Binary data types	bytea	Large object		
		XML	Yes			
		JSON	Yes			
	Character set	UNICODE	Yes			
	Multilingual support		Yes (149 locales)			
AI	Generative AI for enterprise		Knowledge data can be managed in vector and graph formats			
	AI app development support		Integration with RAG development framework LangChain			
Security	Transparent Data Encryption		256-bit (compliant with PCI-DSS)			
	Data Masking		Full masking / Partial masking / Regular expression masking			
	Dedicated Audit Log		Yes (compliant with PCI-DSS)			
	Key management for Transparent Data Encryption					
	Cloud-based key management					
	Confidentiality management					
	Policy-based login security					
Reliability# High Availability	Standby		Yes			
	Split brain control		Yes			
	Instant failover		Yes			
	Transparent connection		Yes (ability to connect to a database server without knowing its stage)			
Performance	In-Memory Columnar Index		Yes (implemented via Fujitsu's Vertical Clustered Index)			
	High-speed backup/recovery		Yes			
	High-speed data load		Yes			
Application development	SQL standard		Compliant with ANSI/ISO SQL:2016			
	Oracle-compatible SQL		Outer join operator			
			DUAL table			
			Functions (SUBSTR | NVL | DECODE)			
			Built-in packages (UTL_FILE | DBMS_OUTPUT | DBMS_SQL | DBMS_ALERT | DBMS_ASSERT | DBMS_PIPE | DBMS_RANDOM | DBMS_UTILITY | PLUNIT | PLVCHR | PLVDATE | PLVLEX | PLVSTR | PLVSUBST)			
	Language		C	COBOL	Python	
	Interface		ODBC	JDBC	.NET Framework	
	Development environment (Eclipse, etc.)		Yes			
	Stored procedures / functions		Yes			
	Access control		Deadlock automatic detection			
			Query by other transactions during updates (multiversion control)			
Support	High quality long-term support		Guaranteed			

Supported environments

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	Server operating system	Client operating system
Windows	• Windows Server 2025 (64 bit) • Windows Server 2022 (64 bit) • Windows Server 2019 (64 bit) • Windows Server 2016 (64 bit)	• Windows Server 2025 (64 bit) • Windows Server 2022 (64 bit) • Windows Server 2019 (64 bit) • Windows Server 2016 (64 bit) • Windows 11 / 10 (64 bit, 32 bit) *
Linux	• Red Hat Enterprise Linux 9.2 or later minor version • Red Hat Enterprise Linux 8.6 or later minor version • SUSE Linux Enterprise 15 SP4 or later minor version	• Red Hat Enterprise Linux 9.2 or later minor version • Red Hat Enterprise Linux 8.6 or later minor version • SUSE Linux Enterprise 15 SP4 or later minor version
on IBM Z and LinuxONE (s390x)	• Red Hat Enterprise Linux 9.2 or later minor version • Red Hat Enterprise Linux 8.6 or later minor version • SUSE Linux Enterprise 15 SP4 or later minor version	• Red Hat Enterprise Linux 9.2 or later minor version • Red Hat Enterprise Linux 8.6 or later minor version • SUSE Linux Enterprise 15 SP4 or later minor version
on IBM Power® (ppc64le)	• Red Hat Enterprise Linux 9.2 or later minor version • Red Hat Enterprise Linux 8.6 or later minor version • SUSE Linux Enterprise 15 SP4 or later minor version	• Red Hat Enterprise Linux 9.2 or later minor version • Red Hat Enterprise Linux 8.6 or later minor version • SUSE Linux Enterprise 15 SP4 or later minor version

*: If Windows is 32 bit, only the Windows client (32 bit) can be installed

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	Server operating system	Client operating system
Windows		• Windows Server 2022 (64 bit) • Windows Server 2019 (64 bit) • Windows Server 2016 (64 bit) • Windows 11 / 10 (64 bit)
Linux	• Red Hat Enterprise Linux 9.2 or later minor version • Red Hat Enterprise Linux 8.6 or later minor version • SUSE Linux Enterprise 15 SP4 or later minor version	• Red Hat Enterprise Linux 9.2 or later minor version • Red Hat Enterprise Linux 8.6 or later minor version • SUSE Linux Enterprise 15 SP4 or later minor version
on IBM Z and LinuxONE (s390x)	• Red Hat Enterprise Linux 9.2 or later minor version • Red Hat Enterprise Linux 8.6 or later minor version • SUSE Linux Enterprise 15 SP4 or later minor version	• Red Hat Enterprise Linux 9.2 or later minor version • Red Hat Enterprise Linux 8.6 or later minor version • SUSE Linux Enterprise 15 SP4 or later minor version
on IBM Power® (ppc64le)	• Red Hat Enterprise Linux 9.2 or later minor version • Red Hat Enterprise Linux 8.6 or later minor version • SUSE Linux Enterprise 15 SP4 or later minor version	• Red Hat Enterprise Linux 9.2 or later minor version • Red Hat Enterprise Linux 8.6 or later minor version • SUSE Linux Enterprise 15 SP4 or later minor version

Our PostgreSQL experts are at hand

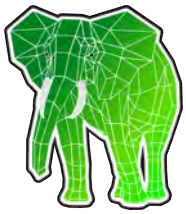
Our PostgreSQL experts contribute to the community in a variety of activities, from feature development to code reviews, and test coverage.

If you have any concerns about the security of your data or would like to find out more about Fujitsu Enterprise Postgres, please contact us at **enterprisepostgresql@fujitsu.com**

Fujitsu Enterprise Postgres can help your journey

Fujitsu Enterprise Postgres is the enhanced version of PostgreSQL, for enterprises seeking a more robust, secure, and fully supported edition for business-critical applications.

It is fully compatible with PostgreSQL and shares the same operation method, interface for application development, and inherent functionality. Designed to deliver the Quality of Service (QoS) that enterprises demand of their databases in the digital world, while supporting the openness and extensibility expected of open source platforms, all at a lower cost than traditional enterprise databases.



Fujitsu Enterprise Postgres

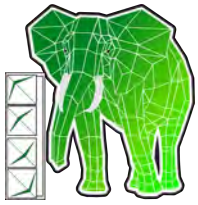
Combine the strengths of open-source PostgreSQL with the enterprise features developed by Fujitsu.

Enhanced speed, security, and support — without the costs associated with most proprietary systems.

Fujitsu Enterprise Postgres for Kubernetes

Utilize operator capabilities for provisioning and managing operations on the OpenShift Container Platform.

Business-ready database that integrates container operation technology for rapid development-to-production deployments.



Fujitsu Enterprise Postgres on IBM LinuxONE©

World-class platform that embraces open source and improves data security, performance, and business continuity.

The best of open source flexibility with the peace of mind that comes from knowing it is backed by Fujitsu and IBM.

Fujitsu Enterprise Postgres on IBM Power¶

Experience frictionless hybrid cloud that can help you modernize to respond faster to business demands.

Fujitsu database designed for security, performance, and reliability, combined with IBM server built for agility in the hybrid cloud.

Discover how Fujitsu Enterprise Postgres' unique and enhanced features take PostgreSQL to the next level to provide enterprise-grade security, scalability, security, and performance.

Visit postgres.global.fujitsu.com/key-features-in-fujitsu-enterprise-postgres

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