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# SAMSUNG SDS Cloud

## DevOps Tools

GitLab
Jenkins
SonarQube
Nexus
DevOps Console
MAXIGENT
KHAN
Jennifer

**SAMSUNG SDS**

DevOps Tools

# GitLab

# Distributed source code configuration management tool for development collaboration

GitLab is an open-source configuration management tool that provides a remote repository for Git, a distributed version control system. GitLab's features such as version control and issue-tracking improve efficiency in building and deployment and increase development productivity.

## Efficient source management

GitLab provides a variety of source code management capabilities for the DevOps lifecycle including phases from project planning to monitoring. You can improve your productivity through GitLab features such as Group Milestones for efficient collaboration and Issue Tracker that helps reduce manual work.
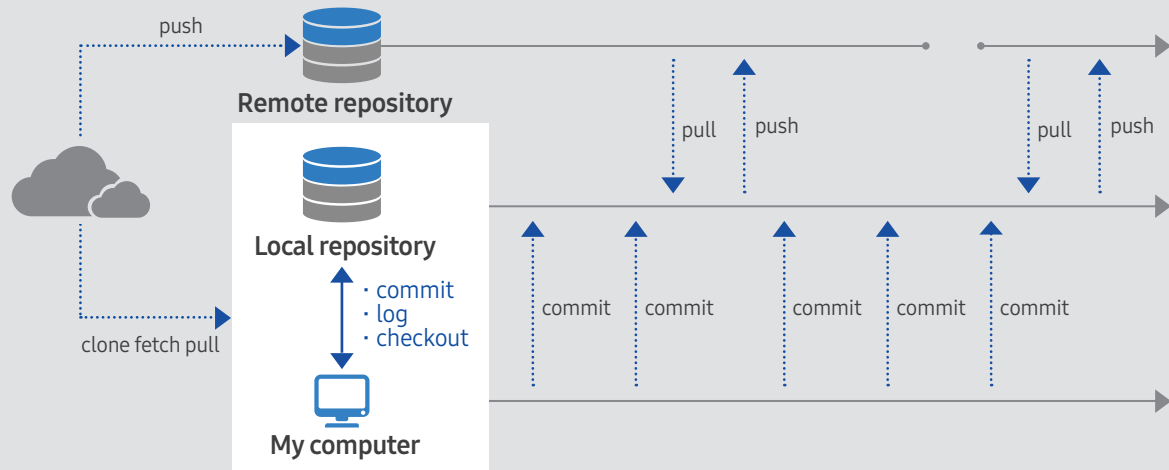
## Distributed repository for continuous version control

Unlike centralized repositories, GitLab enables quick data recovery from a local storage in case of connectivity loss with a remote repository or any server failure. Also, configuration management without affecting mainstream development and operation is possible and it is easy to delete or merge requests.

## User convenience

It is easy to use GitLab features by using SDS Cloud portal. As a free open source development tool, GitLab has a plenty of use cases that first-time users can refer to.

# GitLab Service Architecture



push

Remote repository

clone fetch pull

Local repository

· commit
· log
· checkout

My computer

pull   push        pull   push

commit   commit      commit   commit   commit

## Offerings and Pricing

· GitLab is a free, open-source development software that only charges the user
  for infrasturcture required for installing and using GitLab

· Please inquire us separately for the price of technical support home-visiting service

## Related Other Products

| DevOps Tools | Jenkins | Integrated management development tool for software development/deployment processes |
| --- | --- | --- |
| | SonarQube | Source code quality management tool |
| | Nexus | Libraries and related file repository for application building |
| | DevOps Console | An orchestration tool to configure a DevOps environment |

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DevOps Tools

# Jenkins

## Integrated management development tool for software development/deployment processes

Jenkins is an open source-based development tool for continuous integration of develop, build, release and deploy process.
The Jenkins service enables collaborative development tasks in more efficient building and deployment environment.

**Automated develop/deploy**

Jenkins detects configuration changes from its connected configuration management tool and automatically executes build within a certain time frame. It delivers a problem identified in tests to the user and minimizes repetitive work by integrated build, which ultimately enhances productivity.
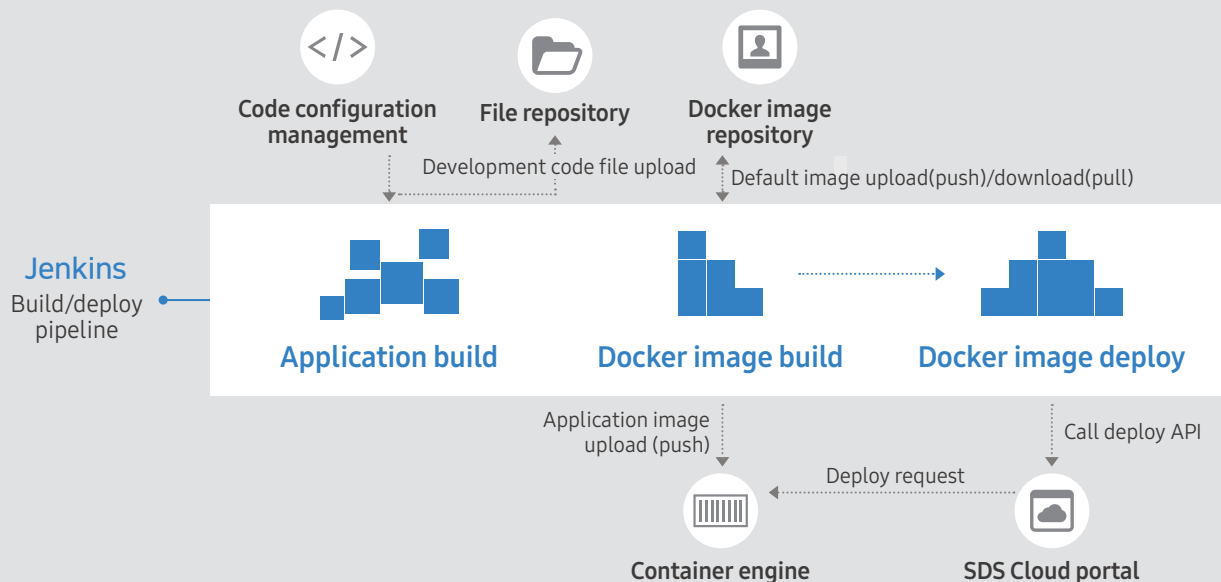
**High compatibility with other dev tools**

Jenkins is a plugin-based architecture, so it has high compatibility with other CI/CD development tools.

**User convenience**

It is easy to use Jenkins features by using SDS Cloud portal.
As a free open source development tool, Jenkins has a plenty of use cases that first-time users can refer to.

# Jenkins Service Architecture



**Code configuration management**

**File repository**

**Docker image repository**

**Jenkins**
Build/deploy pipeline

Development code file upload

Default image upload(push)/download(pull)

**Application build**

**Docker image build**

**Docker image deploy**

Application image upload (push)

Deploy request

Call deploy API

**Container engine**

**SDS Cloud portal**

## Offerings and Pricing

· Jenkins is a free, open-source development software that only charges the user for infrasturcture required for installing and using Jenkins

· Please inquire us separately for the price of technical support home-visiting service

## Related Other Products

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## DevOps Tools

# SonarQube

# Source code quality management tool

SonarQube is an open source development tool for continuous inspection of code quality. It provides quality metrics, identifies the code with errors and analyzes source code. Through SonarQube, customers can easily fix issues and problems in the code.

**Improving quality through source code monitoring**

SonarQube minimizes occurrence of any problem in the stage of deployment by monitoring quality gate status on a daily basis and prevents quality leaks by pre-setting leak period and quality thresholds.
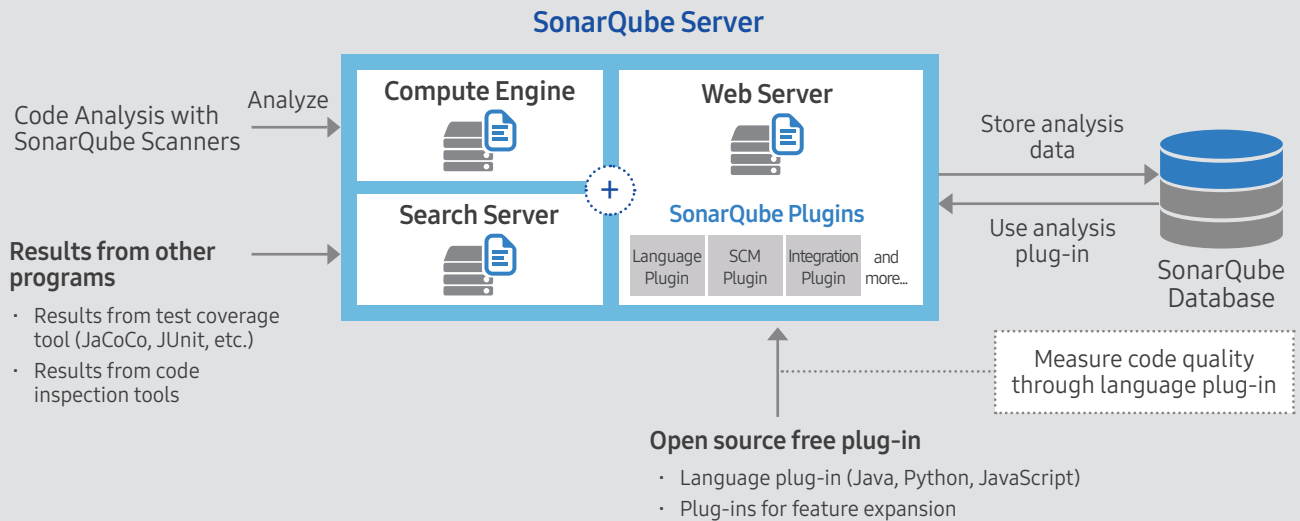
**High compatibility with other dev tools**

SonarQube is a plugin-based architecture, so it has high compatibility with other CI/CD development tools such as Jenkins.

**User convenience**

It is easy to use SonarQube features by using SDS Cloud portal. As a free open-source development tool, SonarQube has a plenty of use cases that first-time users can refer to.

# SonarQube Service Architecture

## SonarQube Server

**Compute Engine**

Analyze →

**Web Server**

Code Analysis with SonarQube Scanners

**Search Server**

**SonarQube Plugins**

| Language Plugin | SCM Plugin | Integration Plugin | and more... |

**Results from other programs**

- Results from test coverage tool (JaCoCo, JUnit, etc.)
- Results from code inspection tools

Store analysis data →

← Use analysis plug-in

**SonarQube Database**

Measure code quality through language plug-in

**Open source free plug-in**

- Language plug-in (Java, Python, JavaScript)
- Plug-ins for feature expansion

## How to Buy

- Any questions about using or applying for SonarQube, please contact us via email at cloud.sds@samsung.com

## Related Other Products

| DevOps Tools | | |
|---|---|---|
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DevOps Tools

# Nexus

# Libraries and related file repository for application building

Nexus is an open-source based repository that manages libraries and application packaging files (.war, .jar, etc.) needed for application building. Through SDS Cloud, you can use Nexus to store and manage files more efficiently.

**Suitable for enterprise-class uses**

Compared to other centralized repositories, Nexus repository offers faster building speed by serving as a cache for the main repository. With SDS Cloud Nexus, customers can create a private repository and get modules, so this service is appropriate for enterprise-class customers.
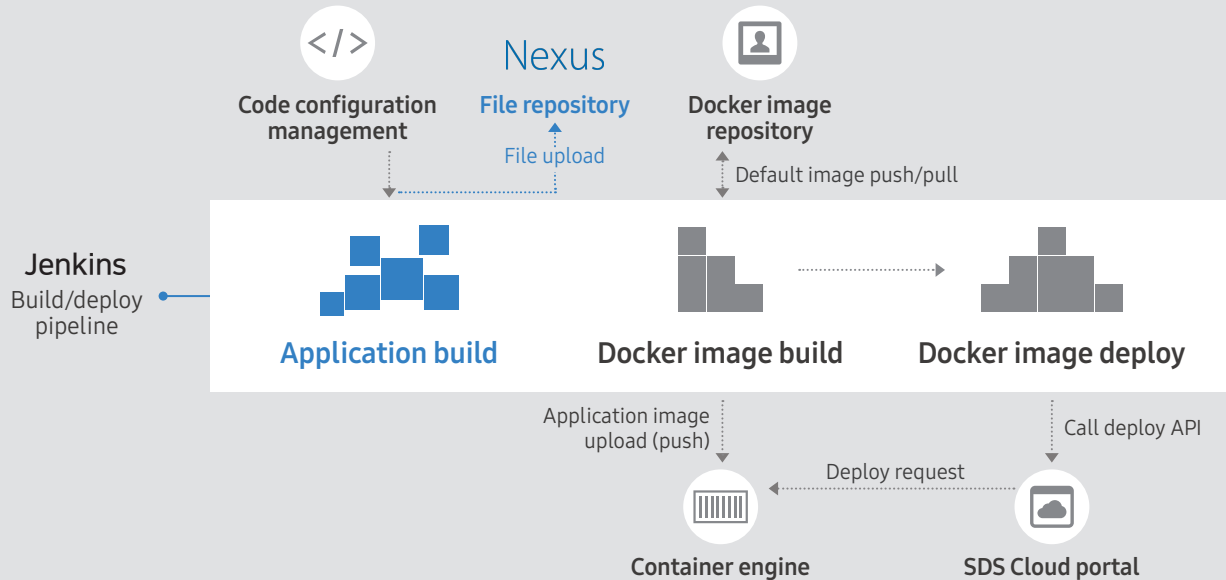
**Supporting various open-source repositories**

Key repositories Nexus supports include:
Maven Repositories with Apache Maven and Other Tools,
.NET Package Repositories with NuGet,
Node Packaged Modules and npm Registries,
Bower Repositories, PyPI Repositories, Yum Repositories,
Ruby, RubyGems and Gem Repositories, Raw Repositories,
Maven Sites and More Git LFS Repositories, Yum Repositories

**User convenience**

It is easy to use Nexus features by using SDS Cloud portal. As a free open-source development tool, Nexus has a plenty of use cases that first-time users can refer to.

# Nexus Service Architecture



**Nexus**

- Code configuration management
- File repository — File upload
- Docker image repository — Default image push/pull

**Jenkins** — Build/deploy pipeline

- Application build
- Docker image build
- Docker image deploy

Application image upload (push)
Deploy request
Call deploy API

- Container engine
- SDS Cloud portal

## Offerings and Pricing

· Nexus is a free, open-source development software that only charges the user for infrasturcture required for installing and using Nexus

· Please inquire us separately for the price of technical support home-visiting service

## Related Other Products

| DevOps Tools | | |
|---|---|---|
| | GitLab | Distributed source code configuration management tool for development collaboration |
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## DevOps Tools

# DevOps Console

# An orchestration tool to configure a DevOps environment

DevOps Console is an orchestration tool that helps create a DevOps environment for the entire application lifecycle from development and build to operations. The DevOps Console makes it easy to configure the configuration management environment, CI/CD (Continuous Integration/Continuous Deployment) environment, and development environment. It also can constantly monitor code quality and configure Artifact repositories for use in projects.

**Easy to configure CI/CD**

DevOps Console automates repetitive build, test, and deployment processes to increase development productivity. One can easily configure CI/CD environment required for software development and operation such as, remote storage of source code, quality control, and configuration management.
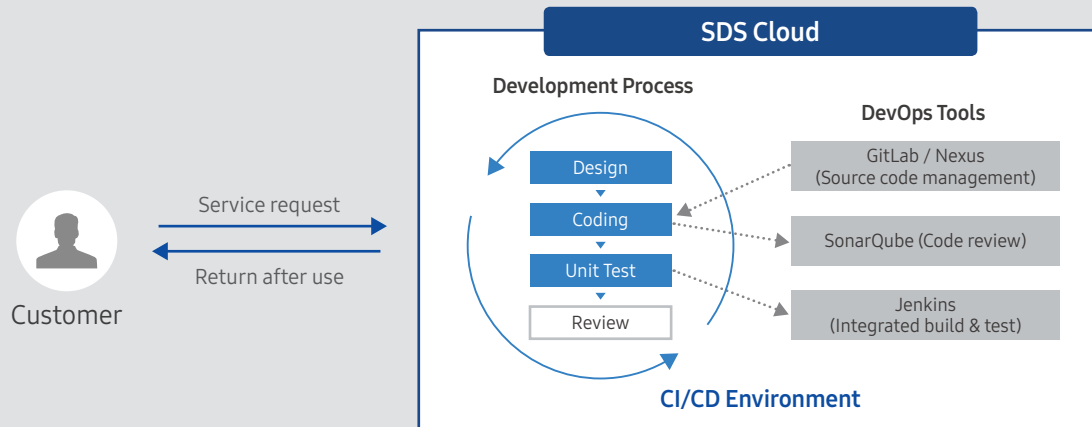
**Development template**

DevOps Console provides templates for developing applications including web applications and websites. These templates contain codes so that you can use programming languages such as Java, Node.js, and Python.

**Easy deployment**

DevOps Console offers summary information of container deployment. You can check deployment status and history and can easily re-run and re-deploy containers.

# DevOps Console Service Architecture



**SDS Cloud**

Development Process

- Design
- Coding
- Unit Test
- Review

**DevOps Tools**

- GitLab / Nexus (Source code management)
- SonarQube (Code review)
- Jenkins (Integrated build & test)

CI/CD Environment

Customer

Service request →
← Return after use

# How to Buy

· Any questions about using or applying for DevOps Console,
  please contact us via email at cloud.sds@samsung.com

# Related Other Products

| Compute | Container | Virtual server based on container technology |
|---|---|---|
| Middleware | JBoss EAP/WS | Open source-based, enterprise-class Java™ web application server |
| | WildFly | WildFly project-based Java™ web application server |
| | Tomcat | Web application server based on open source Servlet Container |
| DevOps Tools | GitLab | Distributed source code configuration management tool for development collaboration |
| | Jenkins | Integrated management development tool for software development/deployment processes |
| | SonarQube | Source code quality management tool |
| | Nexus | Libraries and related file repository for application building |

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## DevOps Tools

# MAXIGENT™

# Monitoring service for cloud resources and applications

MAXIGENT is a service that monitors the performance and anomalies of cloud resources applications. One can easily manage to predefined operational levels using strandard monitoring templates, or define and monitor additional items as needed. Particularly, by providing integrated monitoring of SDS Cloud products such as compute, storage, and networking, one can easily manage the overall status of cloud resources to improve business efficiency.

**Convenient monitoring**

MAXIGENT automatically generates topology views of Virtual Server and Container to provide an intuitive easy-to-view UI. MAXIGENT's integrated dashboard allows you to see the status of all resources and its monitoring feature is convenient to use.

**Real-time monitoring**

MAXIGENT provides real-time monitoring of standard items and user-defined items on various resources to detect abnormalities and control failures. In the event of a failure, timeline-based event vs. performance views are provided for rapid cause analysis.
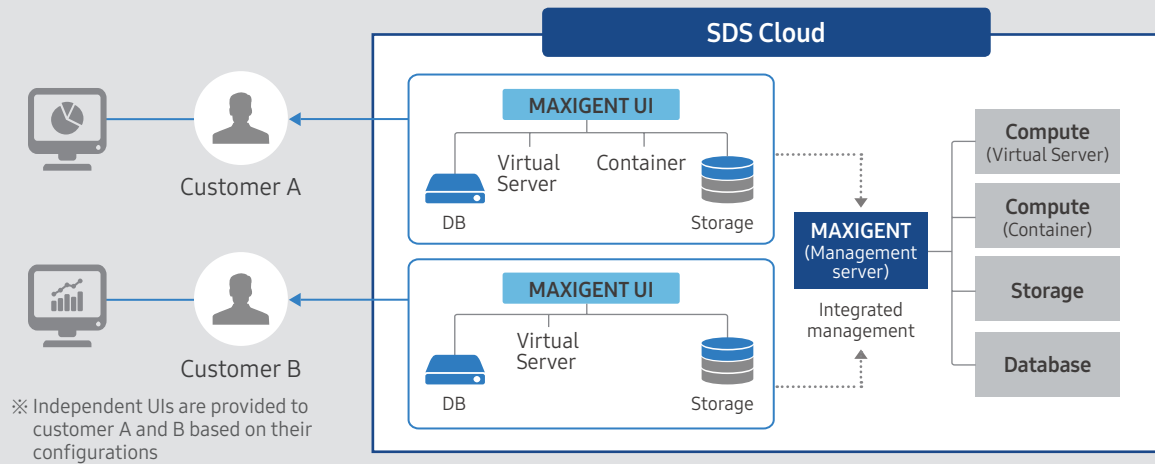
**Optimized operation and management**

Automated detection of expanded system, integrated agent management (deployment and upgrading of agents), and an integrated dashboard ensure service stability in cloud.

**High efficiency**

Network security services on top of a professional security system of SDS Cloud computing services. Expert diagnostics and recommendations are automatically reflected in the system settings, making it easier to use the service without any separate optimization settings.

# MAXIGENT Service Architecture



## How to Buy

· Any questions about using or applying for MAXIGENT,
  please contact us via email at cloud.sds@samsung.com

## Related Other Products

| | | |
|---|---|---|
| **Compute** | **Virtual Server** | Virtual server optimized for various use purposes |
| | **Container** | Virtual server based on container technology |
| | **Bare Metal Server** | Single-tenant and high-performing physical server |
| | **GPU Server** | High performance computing server optimized for parallel processing |
| **Storage** | **Block Storage** | Storage assigned to the server |
| | **File Storage** | Storage for data sharing between servers |
| | **Object Storage** | Storage accessible anytime anywhere via web |
| | **Backup** | Backup service to minimize data loss |
| **Database** | **EPAS** | Enterprise-class relational database based on open source PostgreSQL |
| | **MySQL** | Small but strong open source relational database |
| **Middleware** | **Apache** | Apache project-based web server |
| | **Tomcat** | Web application server based on open source Servlet Container |
| | **JEUS** | Enterprise-class web application server |
| | **Weblogic** | Enterprise-class web application server |

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DevOps Tools

# KHAN

# Monitoring service for web application performance

KHAN is a real-time web application monitoring service that maintains the best performance of web applications. KHAN periodically monitors WAS and web applications and provides alarms to enable quick response in the event of a failure. KHAN is provided along with WAS (JBoss EAP, WildFly, Tomcat, WebLogic, JEUS) based on SDS Cloud compute products.

**Real-time integrated monitoring**

KHAN performs real-time performance monitoring in a containerized environment, particularly during auto-scaling. Its active service monitoring allows real-time analysis of transactions and monitoring of OS resources and network system.

**Performance analysis and failure management**

KHAN performs analysis on response time of web applications, call/error statistics, JVM usage rate in various platform environments. It provides various analysis tools (Thread dump / Netstat dump / lsof dump) for efficient assessment management.
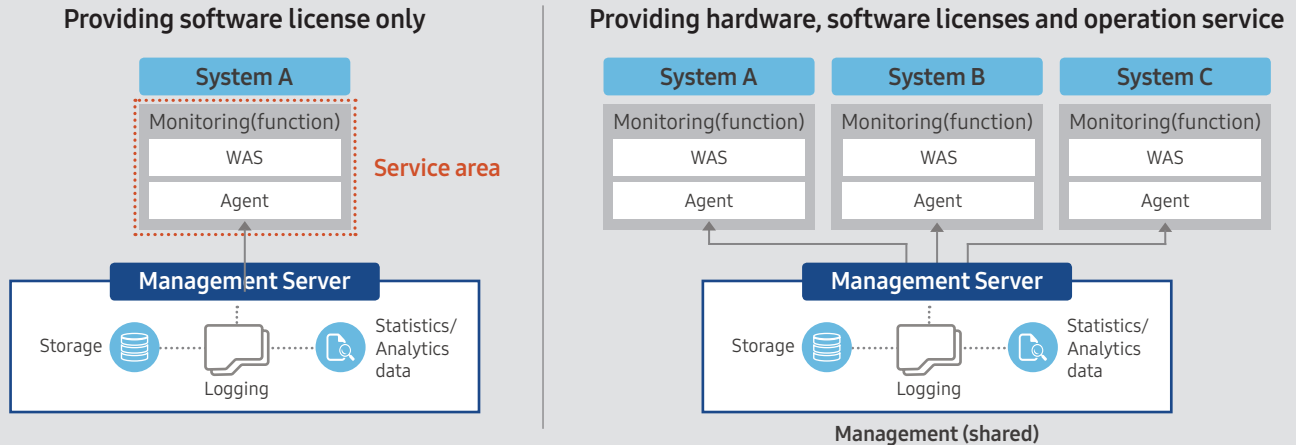
**Optimized operation and management**

KHAN monitors web servers and web application servers in a container and each container's CPU, memory usage, and image statistics.

**High efficiency**

Network security services on top of a professional security system of SDS Cloud computing services. Expert diagnostics and recommendations are automatically reflected in the system settings, making it easier to use the service without any separate optimization settings.

# KHAN Service Architecture



**Providing software license only**

System A
- Monitoring(function)
  - WAS
  - Agent

*Service area*

Management Server
- Storage
- Logging
- Statistics/Analytics data

**Providing hardware, software licenses and operation service**

System A
- Monitoring(function)
  - WAS
  - Agent

System B
- Monitoring(function)
  - WAS
  - Agent

System C
- Monitoring(function)
  - WAS
  - Agent

Management Server
- Storage
- Logging
- Statistics/Analytics data

**Management (shared)**

## Offerings and Pricing

· KHAN is available through option selection when requesting WAS, and monitoring agent is included

· There is a product that comes only with the agent software and an integrated product that comes bundled with a management server

· Price varies depending on the number of cores in the monitored WAS server

· Usage is restricted depending on a customer environment, so in order to use the service, please contact us

## Related Other Products

| | | |
|---|---|---|
| **Database** | EPAS | Enterprise-class relational database based on open source PostgreSQL |
| | PostgreSQL | PostgreSQL relational database |
| | Microsoft SQL Server | Enterprise relational database |
| | MariaDB | Open source relational database with high compatibility with MySQL |
| **Middleware** | JBoss EAP/WS | Open source-based, enterprise-class Java™ web application server |
| | WildFly | WildFly project-based Java™ web application server |
| | Apache | Apache project-based web server |
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# DevOps Tools
# Jennifer

# Monitoring service for web application performance

Jennifer is a service that monitors all phases of performance and failure, from development to operation. Jennifer monitors systems on a variety of platforms (JAVA, .Net, PHP) in real time with minimal load. Jennifer is provided along with WAS (JBoss EAP, WildFly, Tomcat, WebLogic, JEUS) based on SDS Cloud compute products.

**Real-time integrated monitoring**

Jennifer offers rule-based dashboard and web service topology view to provide more precise and easier monitoring. Plus, intuitive active service monitoring enables real-time transaction analysis and supports variety of monitoring environments.

**Performance analysis and failure identification**

Jennifer provides per second data analysis such as transaction profiling, measure service response time, and application and SQL tuning data offering. It also provides rule-based event control in order to manage loads at a peak time and track unnecessary memory use.
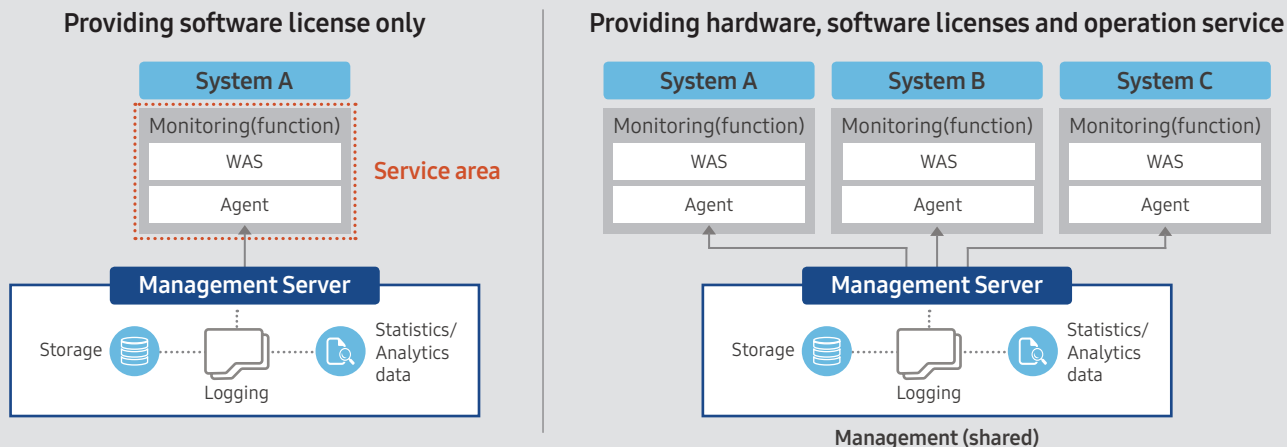
**Optimized operation and management**

Jennifer supports reliable services in the cloud environment through auto detection for extended systems, unified agent management (bulk deployment and upgrades), and integrated dashboards for large services.

**High efficiency**

Network security services on top of a professional security system of SDS Cloud computing services. Expert diagnostics and recommendations are automatically reflected in the system settings, making it easier to use the service without any separate optimization settings.

# Jennifer Service Architecture

**Providing software license only**

| System A |
|:---:|
| Monitoring(function) |
| WAS |
| Agent |

*Service area*

**Management Server**

Storage · · · Logging · · · Statistics/Analytics data

**Providing hardware, software licenses and operation service**

| System A | System B | System C |
|:---:|:---:|:---:|
| Monitoring(function) | Monitoring(function) | Monitoring(function) |
| WAS | WAS | WAS |
| Agent | Agent | Agent |

**Management Server**

Storage · · · Logging · · · Statistics/Analytics data

**Management (shared)**

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