Oracle Data Safe is a unified control center for managing database security in the Oracle Cloud, both for your Oracle Cloud Databases as well as for your Oracle On-Premises Databases. Data Safe provides an integrated set of features enabling users to understand the sensitivity of their data, evaluate risks to data, mask sensitive data, implement and monitor security controls, assess user security, monitor user activity, and address data security compliance requirements.

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ABOUT ORACLE DATA SAFE

Why is Data Safe important for you?

Oracle Data Safe helps you to easily manage the database security for all your Oracle Databases. No matter if they are running on-premises, on Cloud@Customer, in the Oracle Cloud Infrastructure or in a 3rd party cloud. Whether working with on-premises or cloud databases, DBAs need to take measures to protect the enterprise data under their care.

Oracle Database Cloud Services provide different sets of security features based on database type and edition. Oracle Autonomous Database takes care of a number of security concerns for customers automatically, including:

- Network security and monitoring
- OS and platform security
- Database patches and upgrades
- Administrative separation of duties
- Data encryption enabled by default

However, even in the cloud, security is a shared responsibility between the provider and the user, and users still have to manage some things such as:

- Additional database and data security controls
- User accounts and the associated risk
- Identifying and understanding sensitive data
- Implementing controls to protect data at the appropriate level
- Auditing user activities, and more

Oracle Data Safe addresses this with integrated data security functionalities accessible to any Oracle Cloud customer through a cloud-based control center. Oracle Data Safe combines information about users, data and data infrastructure to enable users to manage risks to their sensitive data.

What customer problems are addressed with Data Safe?

To protect your enterprise data, you need to be able to answer a number of questions such as:

- Security & User assessment
  - Are my databases securely configured?
  - How do I know if someone changed the configuration?
  - Do I have any highly privileged accounts that could pose a risk to my database?
  - Who can access sensitive data?
  - Do I have gaps in my configuration strategy?
  - How can I best remediate these gaps?
- Sensitive data discovery
  - What types of sensitive data do I have?
- How much sensitive data is stored in this database?
- Where is my sensitive data located?

- Data protection
  - How can I efficiently support test/dev and analytics without exposing sensitive data?

- Audit
  - How can I manage the audit data collected from individual servers?
  - How can I centralize audit data to simplify reporting and event correlation?
  - How can I be alerted to inappropriate user activity?
  - How can I configure how long to keep my audit records?

- SQL Firewall
  - How can I protect my database from attacks such as SQL injection?
  - How can I protect common database attacks by restricting database access to authorized connections?

What features does Oracle Data Safe include?

Data Safe allows customers to perform security and user assessments of their database and their database users

- Security assessment allows customers to create and maintain security baselines. This enables rapid identification of configuration risks and facilitates consistent use of security controls across the enterprise.
- User assessment helps customers understand their user risk profile. Over-privileged users are frequently targeted by cyber attackers to leverage their extensive set of privileges to mount data attacks. You can review the privileges and roles for your users as well as gain insights into password and login-related settings in the user profiles.
- Set up notifications when there is a drift from your configuration baseline or when user or entitlements are changed.

Data Safe manages database server audit policies and securely collects, removes and retains audit data from database servers

- Database audit policies can be centrally managed and configured
- If an attacker compromises a privileged user account, the attacker may also be able to alter or destroy the audit records for the database. Moving the audit data as quickly as possible to a secure centralized repository makes it difficult for attackers to hide their tracks.
- Audit data can be retained for forensic and compliance purposes

Data Safe lets you administer and monitor SQL Firewall across your fleet of Oracle Databases. Oracle SQL Firewall is a new security capability built into the Oracle Database 23c kernel and offers best-in-class protection against these risks.

- Protect against risks such as SQL injection attacks or compromised accounts
- SQL Firewall policies can be centrally managed and monitored
- Review any SQL Firewall violations across the fleet of your target databases

Data Safe discovers sensitive data in Oracle Databases
• Common categories of sensitive data can be discovered by Data Safe so customers don’t accidentally overlook some columns of sensitive data
• Data Safe provides over 150 sensitive data types that can also be extended with customer-specific types
• Sensitive data can then be masked by Data Safe to protect information in test databases

Data Safe masks sensitive data in development and test databases
• Development and test databases need production-like data to modify and test applications. However, development and test databases aren’t protected to the same level as production and the sensitive data needs to be replaced in the database.
• Masking needs to account for foreign/primary key mappings so that sensitive data used for linking data needs to remain consistent

The Data Safe dashboard allows customers to quickly assess and then drill down to review risk
• When alerts are received, the dashboard provides a quick overview of the data security status for the target databases
• Unusual dashboard activity can be drilled down to find specific issues

What is the Oracle Data Safe user experience like?
The Oracle Data Safe security center provides users with an overview of risks associated with their users, sensitive data and platform. Users select from various features available in the security center to assess users and security, search for sensitive data, manage audit policies and mask data for use in test, development and analysis.

We’ve worked hard to remove the complexity from database security, while at the same time giving you the flexibility to meet your security control objectives. The Data Safe user interface is intuitive and uses intelligent defaults. For example, it automatically recommends data masking techniques for the discovered sensitive data if you want to remove that sensitive data from a non-production copy of the database. If the defaults are adequate for your needs, you can complete the entire masking process without typing a single line of code!

Can customers use this to meet compliance regulations like GDPR?
Compliance laws such as the European Union (EU) General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA) levy requirements on companies to safeguard the privacy of their customers. Data Safe helps customers with their various compliance requirements such as identifying where sensitive data is located, masking sensitive data for non-production use, securely capturing audit data and so forth.

What is the benefit of Data Safe for cloud database customers?
Cloud requires a shared responsibility model for security. Oracle has highly automated tools to provide the Oracle portion of the shared security model which include: network security and monitoring, OS and platform security, database patches and upgrades, administrative separation of duties, and data encryption by default. Customers are responsible for managing the security of data such as user permissions, protecting sensitive data and setting up appropriate audit policies. Data Safe provides tools to help customers with their portion of security management. Data Safe is a unique capability in the
industry. By making these essential data security functionalities available to all Oracle Cloud customers, it sets a new standard for cloud database security.

**AVAILABILITY**

**In which regions is Data Safe available?**

You can find the latest list of regions in which Data Safe is available here: [Oracle Cloud Regions](#).

**Which types of Oracle Databases are supported?**

Data Safe works with Oracle Databases no matter where they are deployed: on-premises, in the Oracle Cloud Infrastructure, or in any other cloud environment.

The full list of supported databases and releases can be found here: [Supported Target Databases](#).

**Is Data Safe available for on-premises databases?**

Yes, we added support for on-premises databases in 2020.

**Is Data Safe available for Cloud at Customer database deployments?**

Yes, we added support for Cloud@Customer databases in 2022.

**Is Data Safe available for Free Trial Accounts in the Oracle Cloud Infrastructure (OCI)?**

Yes, you can try out Data Safe as part of the [30-day free trial](#) offering of OCI, all features are supported. Some limitations apply, see [here for full details](#).

**GETTING STARTED**

**How do I get started?**

If you are using a cloud database in the Oracle Cloud Infrastructure, you just need to register your database in Data Safe: [Register your target databases](#).

If your database is running at Cloud@Customer, on-premises or in any other cloud environment, you can choose from two connectivity options before registering your database: [Connectivity Options for Target Databases](#).

**What type of training is needed for my administrators to use Data Safe?**

No prior specialized security expertise is needed. We’ve worked hard in Data Safe to remove the complexity from database security, while at the same time giving you the flexibility to meet your security control objectives. The Data Safe user interface is intuitive and uses intelligent defaults. If the defaults are
adequate for your needs, you can run through all the features of Data Safe without typing. Having said that, there is a comprehensive online help to guide you through the different features.

**Is there an online training available?**

Yes, you can try out Data Safe in our [Data Safe Fundamentals workshop](#) on Oracle LiveLabs. The workshop guides you through all Data Safe features with detailed step-by-step instructions. You can run the workshop either in your own environment or reserve an environment in LiveLabs.
USING ORACLE DATA SAFE

What are some of the security considerations with using Data Safe?

- Data Safe is built upon Next generation security offered by Oracle Cloud Infrastructure (OCI).
- For isolation, each customer’s data is kept in a separate database. All access to customer's databases and Data Safe data is audited.
- A Data Safe account has to be created in target databases with appropriate privileges. For Autonomous Database customers, this is done automatically when registering the database with Data Safe.
- Only your authorized users can access the features in Oracle Data Safe. Depending upon the extent of their access, they can be limited to certain features in Data Safe and to target databases in only one or selected compartments, or they can get access to security data for your target databases in all compartments.
- The security data about your databases remains private to you at all times.

What does it mean that Data Safe is included with subscription to Oracle Cloud Databases? What are the usage limits?

If you are a paid subscriber to any cloud database on Oracle Cloud Infrastructure, you can use Data Safe at no additional cost for these databases. If you are using the audit collection in Data Safe, you can store up to 1 Million audit records per month per target database free of charge. If you exceed this limit, you may incur additional costs. In addition, we built in some limits to prevent abuse. You can find more information here.

What is your audit data retention policy?

Data Safe can keep your audit records for up to 7 years at no additional cost. You can configure the retention period as needed. If you need to keep your audit records for longer than 7 years, you can open a service request.

How do I get support for Data Safe?

Full support is included like with all other services on Oracle Cloud Infrastructure. You may submit your support requests through the Oracle Support portal using your Oracle Customer Support Identifier (CSI).
MORE INFORMATION

I’d like to learn more about Data Safe – how can I keep up-to-date with the latest?

For more information, please see the Oracle Data Safe homepage. A variety of helpful information is available online including data sheet, white paper, customer references and videos.


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