



Enterprise-Class Data Management,
Security, Performance and Availability

NetSuite Data Center



Oracle NetSuite currently operates geographically distinct data centers across North America, Europe, and Asia-Pacific. Each data center has a counterpart that provides data mirroring, disaster recovery and failover capabilities in its region in case any data center becomes non-operational. The NetSuite service is natively multi-tenant and leverages cloud infrastructure designed around multiple layers of redundancy.

Data Center Locations

North America

- Seattle
- Santa Clara
- Phoenix
- Chicago
- Boston
- Ashburn

Europe

- London
- Dublin
- Frankfurt
- Amsterdam

Asia-Pacific

- Sydney
- Melbourne



NetSuite Data Center Infrastructure

Data Management

- **Redundancy:** Many layers in the NetSuite system contain multiple levels of redundancy. This design allows uninterrupted service because redundant systems automatically assume processing in the event that one or more elements fail.
- **Disaster Recovery (DR):** Within each region, data is replicated and synchronized between data centers. Semi-annual DR exercises ensure that systems and processes are in place, as well as to assess and enhance the competency of all personnel key to the successful implementation of DR activities. Data centers use archival media backups, which supports customer-initiated data restores for up to a year.

- **Scalability:** NetSuite supports over 26,000 customers with over 1.5 billion application requests per day and more than six petabytes of data under management. The system has been designed to accommodate routine surges and spikes in usage, and to scale upward smoothly to address increased transaction volume.

Application Security

- **Encryption:** Transmission of user credentials, as well as all data in the resultant connection, are encrypted with industry standard protocol and cipher suite. NetSuite supports Custom Attribute encryption and provides encryption APIs. NetSuite uses token-based application authentication and multi-factor end-user authentication.

- **Role-Level Access and Idle Disconnect:**

Each end user can be assigned a specific role with permissions that are specific only to his or her own job. There is a complete audit trail that tracks changes to each transaction by the user login details and a timestamp.

- **IP Address Restrictions:** Customers can restrict access to a NetSuite account from specific computers and/or locations, which is valuable for those who are concerned not only about who is able to access their NetSuite account but from where they access it as well. This feature significantly reduces the risk of unauthorized third parties accessing a user's account.

- **Robust Password Policies:** Customers have granular password configuration options, ranging from the length of the passwords to the password expiration policy. They can set up strict policies to ensure that new passwords vary from prior passwords and that passwords are complex enough to include a combination of numbers, letters and special characters.

Accounts are also locked out after several unsuccessful attempts. For customers who desire a higher level of access control, there is a multi-factor authentication option using text SMS, one-time passwords (OTP) and backup codes. In addition to entering their own passwords, users must possess TOTP-compatible devices to receive the random one-time passwords. These cryptographically robust passwords prevent key loggers, shoulder surfers, phishers and password crackers from accessing a user's account.

Operational Security

- **Continuous Monitoring:** NetSuite employs both network and server-based Intrusion Detection Systems (IDS) to identify malicious traffic attempting to access its servers and networks. Security alerts and logs are sent to a Security Information and Event Management (SIEM) system for monitoring and response actions by a dedicated security team.
- **Separation of Duties:** In addition to mandatory employee background checks at all levels of the operations organization, job responsibilities are separated. The Principle of Least Authority (POLA) is followed and employees are given only those privileges that are necessary to do their duties.
- **Physical Access:** All data centers maintain stringent physical security policies and controls including photo IDs, proximity access cards, biometrics, single person entry portals and alarmed perimeters.
- **Dedicated Security Team:** Oracle NetSuite employs a global security team dedicated to enforcing security policies, monitoring alerts and investigating any anomalous system behavior including unauthorized connection attempts and malicious software. Near real-time monitoring is in place with a 24x7 worldwide incident response capability. All access to production is approved and regularly reviewed by the security team.

- **Data Center Performance Audits:** There are auditing controls appropriate for SOC 1 Type II, SOC 2 Type II, ISO 27001 and PCI compliance. NetSuite has implemented a comprehensive risk management process modeled after the National Institute of Standards and Technology's (NIST) special publication 800-30 and the ISO 27000 series of standards. Periodic audits are carried out to help ensure that personnel performance, procedural compliance, equipment serviceability, updated authorization records and key inventory rounds meet or exceed industry standards.
- **Security Certifications:** Oracle NetSuite issues reports upon the completion of periodic SOC 1 Type II and SOC 2 Type II audits and is certified for PCI DSS and ISO 27001:2013.
 - Oracle NetSuite has defined its Information Security Management System in accordance with NIST 800-53 and ISO 27000 series standards.
 - Independent third-party auditors prepare and conduct SOC 1 Type II and SOC 2 Type II audits. A SOC 1 Type II audit report is essential to meeting the reporting requirements on the effectiveness of internal controls over financial reporting of Section 404 of the Sarbanes-Oxley Act. SOC 2 Type II reports on controls that directly relate to the security, availability and confidentiality trust services criteria at a service organization.
 - PCI DSS is a security standard designed to ensure that companies are processing, storing and transmitting payment card information in

a secure environment. A PCI Qualified Security Assessor (QSA) issues an Attestation of Compliance (AOC) to NetSuite.

- **Privacy Certifications:** Oracle Corporate (Oracle EMEA Ltd) has [obtained EU/EEA-wide authorization from the European data protection authorities](#) for its Binding Corporate Rules for Processors (BCR-p). This helps our customers address their privacy and security requirements under the EU General Data Protection Regulation (GDPR) and other European data protection laws and regulations in the EU/ EEA, the UK and Switzerland ("European Data Protection Law"). See the [Privacy Code for Processing Personal Information of Customer Individuals \(Oracle Processor Code\)](#).

Oracle NetSuite provides Product Feature Guidance documents that describe how the service functionality is designed to assist customers with their EU GDPR requirements. Oracle NetSuite has extended the ISO 27001 Information Security Management System to include the ISO 27018 control set, demonstrating protection and adequacy for processing Personal Information as a Public Cloud Hosting Provider. Oracle NetSuite performs reviews and annual audits, conducts privacy risk management and oversees remediations, has a third-party vendor management program to ensure that the suppliers adhere to the privacy regulations, oversees privacy by design in technology and processes, and is committed to maintaining and improving its privacy information management and data protection programs.

Performance

- **Scalable Application Architecture:** The NetSuite application runs on a three-tiered architecture supported by additional specialized services. All tiers are highly scalable and support multi-data center deployment.
- **Performance Team:** NetSuite invests heavily in performance at every layer. This includes a dedicated performance team of developers and database engineers whose sole purpose is to proactively verify application performance benchmarks and tune the application for maximum performance.
- **High-Performance Databases:** The NetSuite application runs on high-performance database server hardware with multiple cores and maximum RAM configuration. NetSuite production database servers run exclusively on solid state storage ensuring the fastest possible database I/O performance available in the industry.
- **Performance Monitoring Tool:** The NetSuite Application Performance Management (APM) tool provides a comprehensive performance dashboard that allows users to easily and quickly drill down and investigate the root cause of a site's performance issues. By capturing critical performance data and quickly identifying, analyzing and fixing the problem areas, customers can optimize performance, improve user experience and maintain critical transactions.

Availability

- **Service Level Commitment (SLC):** An SLC guarantees a 99.7% uptime (outside scheduled service windows) for the NetSuite production application for all customers. A credit is available if NetSuite does not deliver its application services with 99.7% uptime. A publicly available [status page](#) is provided to display system status at all times that includes quantitative current and historic uptime metrics as well as up-to-the-minute announcements during disruptions.
- **World-Class Hosting Operations Team:** A global team of dedicated operations personnel proactively monitors the health of the entire system with industry leading alert and trend-based tools designed to identify and resolve events before they impact the live site. This team provides 24x7 coverage to respond to any incident with automated recovery procedures.
- **Dedicated Event Response Team:** A global cloud event response team is dedicated to expediting responses and resolutions while establishing communications and regular updates during service-impacting events. This team is active 24x7 from multiple worldwide locations.
- **Network Design:** The network was built to meet or exceed commercial telecommunications standards worldwide for availability, integrity and confidentiality. The network design ensures reliable connectivity and maximum uptime with no single-point data transmission bottlenecks to or from the data center. Finally, NetSuite uses a content delivery network (CDN) to enhance network reliability and help protect against denial-of-service attacks.