

High Volumes at High Velocity

Oracle Financial Cloud Services
Scale to Process Millions of
Transactions Every Minute

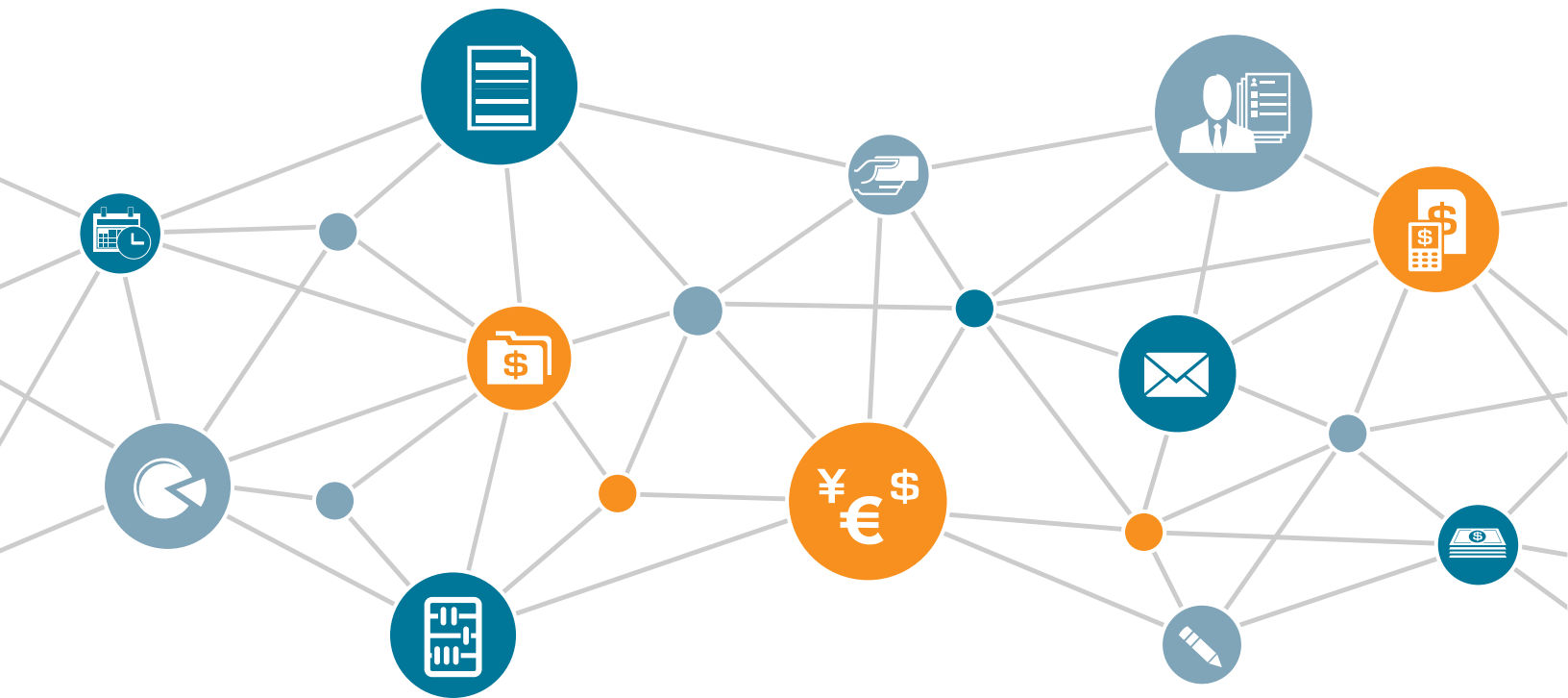
Introduction

Oracle has conducted controlled tests designed to measure the scalability of Oracle ERP Cloud Services against high-volume business activities. The tests demonstrated that the cloud service exceeded expected processing capabilities for very large volumes of transactions and easily surpassed scalability expectations.

Bottom line: The tests demonstrated that Oracle ERP Cloud Services scale to process millions of transactions for key business flows in just a few minutes.

What is Scalability for Cloud Services?

The scalability of a cloud service is defined as how well the underlying infrastructure handles transaction volumes, including periodic surges in business activities. Scalability is important because most organizations require fast processing of their data to promote operational efficiency and timely insight.



Heavy Traffic

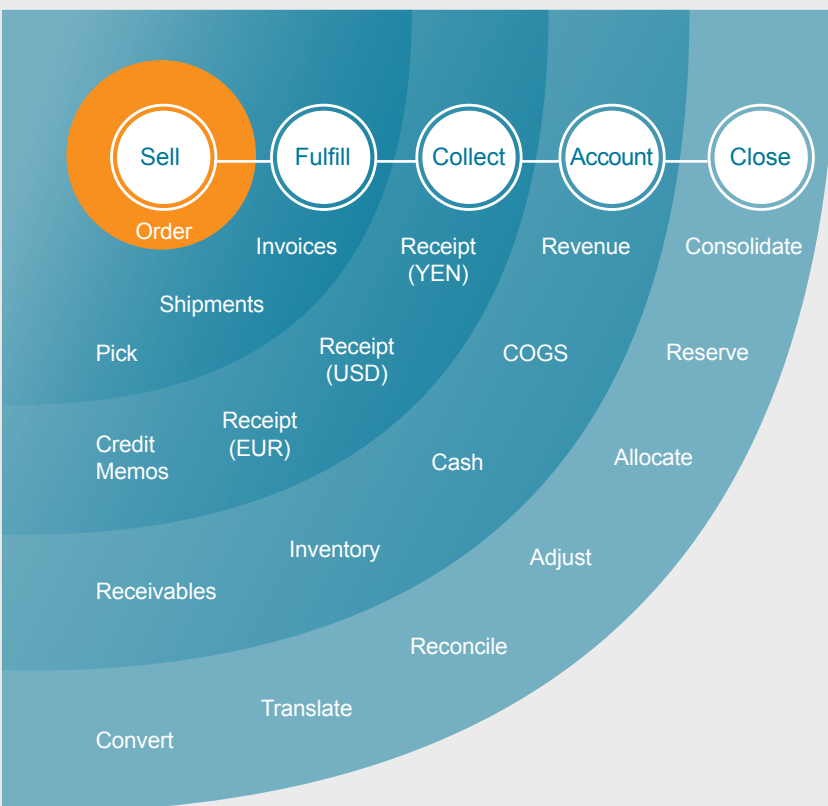
Multipliers Create Millions of Additional Transactions

Financial transactions are usually not singular activities. Rather, a single transaction is only a step in the lifecycle of a particular business flow and usually leads to several additional transactions. **In fact, a single initial transaction can lead to 20-50 additional transactions¹.**

These “transaction multipliers” drive up the volume of financial transactions at increasingly higher velocities, so it is important that scalability tests take multipliers into account.

Depending on an organization’s business model and accounting rules – which may vary from company to company and even industry to industry – a single transactional event such as creating an invoice or sales order can result in as few as two lines or more than a thousand lines. As a result, many large enterprises generate millions of financial transactions every day.

Common Transaction Multipliers for a Sales Order



Understanding Multipliers

Consider the additional transactions that result from common business activities, such as a sales order. Processing the order lines creates new transactions at each stage of the business flow.

- During fulfillment, there are several transactions to pick inventory, ship goods, and submit invoices to one or more customer sites.
- As customers process their orders, the organization receives remittances from the customers’ financial institutions or may issue credit memos for errors or other adjustments.
- The organization iteratively collects subledger transaction lines to post journals. This set of transactions drives the financial accounting related to the business activities.
- Finally, during the close process, the organization creates additional transactions to determine the financial performance for a particular business period.

[1]: Strategies for e-Volume, Competitive Impact of Transaction Processing in e-Business”, prepared by International Technology Group for IBM Corporation.

Millions of Transactions In Minutes

Unparalleled Performance

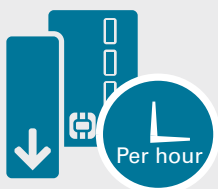
Oracle modeled the Oracle ERP Cloud Services performance tests to simulate the real-world demands of a large enterprise for key business flows. The tests were based on three scenarios that every company encounters: processing receivables transactions, processing payables transactions, and financial accounting in the general ledger.

In each of these scenarios, Oracle ERP Cloud Services processed millions of transaction lines in just a few minutes.

Payables Transactions

Oracle Payables supports scalability by delivering modern optical character recognition (OCR) imaging technology and automated processing for payables transactions, including invoice validation and disbursements.

Processing Payables



7,000,000
Imported invoice lines

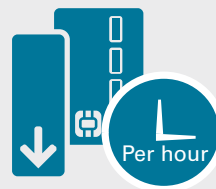
1,000,000
Payments created

For this scalability test, Oracle modeled transaction activity from 1,000 suppliers. Test invoices included a varying number of lines – averaging 25 lines per invoice – that generated between 10 and 1,000 journal lines.

Receivables Transactions

Oracle Receivables supports scalability by automating customer billing, receipt application, revenue recognition, and reconciliation to the general ledger. For example, Oracle Receivables automates cash application using SmartReceipts to match receipts to invoices based upon system-generated recommendations.

Processing Receivables



4,000,000
Imported invoice lines

200,000
Imported lockbox receipts

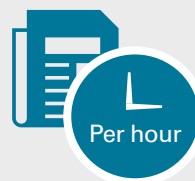
900,000
Applied receipts

For this scalability test, Oracle modeled transaction activity from 1,000 customers. Test invoices included a varying number of lines – averaging 25 lines per invoice – that generated between 10 and 1,000 journal lines.

Financial Accounting

Oracle General Ledger supports scalability by automating subledger data collection and validation, foreign currency conversion, and posting. Further, all financial accounting balances are stored in an advanced, multi-dimensional data model to speed reporting and analysis.

Posting Journals



363,000,000
Posted journals

For this scalability test, several subledger transactions were specified in foreign currencies and journal lines were posted across five separate ledgers using over 100,000 account combinations.

Test Method

Approach and Assumptions

In designing the test, Oracle selected a realistic financial structure derived from a typical large enterprise based on more than 25 years experience with ERP deployments.

The business and accounting model was designed to simulate process variability since throughput is impacted by the complexity of the accounting. Elements such as the chart

of accounts structure, accounting rules, and the number of reporting currencies greatly impact the processing duration and volume of data generated within the represented financial systems.

Business and Accounting Model for Scalability Test

	Customers	1000	Chart of Accounts (8 Segments)		
	Suppliers	1000		Values	Hierarchy Levels
	Ledgers	5	Company	627	10
	Account Combinations	>100,000	Lines of Business	24	2
			Cost Center	57,822	13
			Account	6,941	15
			Sub-Account	18	2
			Sales Channel	14	2
			Location	12	2
			External Reporting	20	2

Additional assumptions and parameters:

- Transactional events were modeled to generate a variable number of subledger journal lines ranging from 10 to 1,000 with an average of 25 lines per event
- Transactions were denominated in multiple currencies
- Testing was limited to throughput of backend batch processes
- Testing did not cover user interface performance or scalability of users
- The scalability test was performed using an Oracle ERP Cloud pod and Oracle 11g database that best simulates an ideal cloud environment for financial transactional activities.

From Test to Reality

Plan Today to Support
Tomorrow's Business Growth



Any large enterprise that is reviewing their ERP strategy must consider scalability. Large enterprises generate high volumes of transactions during day-to-day operations and the need for scalability will only increase as the business expands and diversifies.

Consider also the possibilities offered by a scalable ERP solution: What if operations could process customer orders more quickly? What if cash managers and payables personnel could process supplier invoices faster? What if the finance department could cut one or more days off the month-end close?

The efficiency enabled by a scalable ERP solution delivers improved insight across the business, more time to analyze results and make better decisions. Scalability also reduces the cost of running your business by improving accuracy and increasing flexibility to react to changing business conditions.

With Oracle ERP Cloud Services, large enterprises don't have to worry about scalability: the tests prove that Oracle handle large transaction volumes to meet the needs of your business: today and tomorrow.



Oracle Corporation

WORLDWIDE HEADQUARTERS

500 Oracle Parkway
Redwood Shores
CA 94065
USA

WORLDWIDE INQUIRIES

Phone: +1.650.506.7000
+1.800.ORACLE1

Fax: +1.650.506.7200

oracle.com

Copyright © 2017, Oracle and/or its affiliates. All rights reserved. This document is provided for information purposes only, and the contents hereof are subject to change without notice. This document is not warranted to be error-free, nor subject to any other warranties or conditions, whether expressed orally or implied in law, including implied warranties and conditions of merchantability or fitness for a particular purpose. We specifically disclaim any liability with respect to this document, and no contractual obligations are formed either directly or indirectly by this document. This document may not be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without our prior written permission.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

Integrated Cloud Applications & Platform Services



Oracle is committed to developing practices and products that help protect the environment

CONNECT WITH US



ORACLE®