Oracle® Communications Services Gatekeeper

Licensing Guide

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The usage cost model for Oracle Communications Services Gatekeeper is based on the idea of the *transaction unit*. This book describes how transaction *categories* are monitored and how transaction *units* are calculated.

Transaction Based Usage Costs

Usage costs for Oracle Communications Services Gatekeeper are based on the rate (measured in *transaction units per second* or TUPS) during a specific time period per 24-hour interval. As Oracle Communications Services Gatekeeper runs, it continuously counts the number of transactions it processes. Every 5 minutes that count is stored. After 24 hours of use, the busiest 60 minute window (the *busy hour*) is identified and the total number of transaction units processed in that period is divided by 3600. This computed busy hour forms the basis of the cost of using Oracle Communications Services Gatekeeper.

> **Note:** Transaction units are based on statistics collected by the statistics service. By default, the system simply keeps track of usage for auditing purposes, but if an operator wishes to monitor usage more closely, it is possible to use OAM to set thresholds to raise alarms if certain usage levels are reached. For more information on setting alarms, see "Managing and Configuring Transaction Licenses" in *System Administrator's Guide*, another document in this set.

What specifically constitutes a transaction unit is based on the type of functionality being measured. Sending an SMS is not the same as setting up a call between two parties. In general, the Oracle Communications Services Gatekeeper model is arranged in a tiered manner, using two large transaction categories, Base Platform and Oracle Module. Usage monitoring is based on the TUPS rates associated with these two transaction categories. For more information, see "Transactions - Categories and Units".

> **Note:** In application-initiated scenarios, transaction units are logged only if Oracle Communications Services Gatekeeper returns an OK to the application. If there is an exception, no transaction unit is recorded. In network-triggered scenarios, transaction units are logged only if Oracle Communications Services Gatekeeper returns an OK to the network. If there is an exception, no transaction unit is recorded.

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Transactions - Categories and Units

Oracle Communications Services Gatekeeper keeps track of transaction units at two basic levels:

- Base Platform TUPS, the larger and more general level, which tracks:

    - Platform Services, which covers services such as subscriber profile or callable policy that can be used by multiple capabilities

    - Custom Modules, which covers custom communication services

    - And also includes, Oracle Module TUPS, which covers individual communication services.

- Oracle Module TUPS, which tracks transaction units in Oracle Communications Services Gatekeeper supplied communication services, which fall into the following groups:

    - Call Control

    - Messaging

    - Mobility

    - Presence

    - Payment

Base Platform TUPS

The larger and more general rate category is Base Platform TUPS. The Base Platform TUPS rate is the sum of the TUPS limits for Platform Services and Custom Modules plus that for Oracle Modules.

Platform Services

Platform Services covers general services that can be used by multiple capabilities.

These services include:

- Subscriber Profile (based on Extended Web Services Subscriber Profile Interface)

- Callable Policy

Application-initiated - Subscriber Profile

A Subscriber Profile transaction unit is recorded in the following situations:

- Getting one or more attributes from a subscriber profile.

- Getting either a whole or a subset of a profile identified by a profile ID.

Application-initiated - Callable Policy

A Callable Policy transaction unit is recorded in the following situation:

- Evaluating a request using the Interceptor stack.

These services support application-initiated requests only.

Network-triggered

Network-triggered scenarios are not applicable for subscriber profile or callable policy.

Custom Modules

Custom Modules covers communication services or custom modules created using Oracle Communications Services Gatekeeper's Platform Development Toolkit.

In general there are two main types of custom module transactions:

- Application-initiated
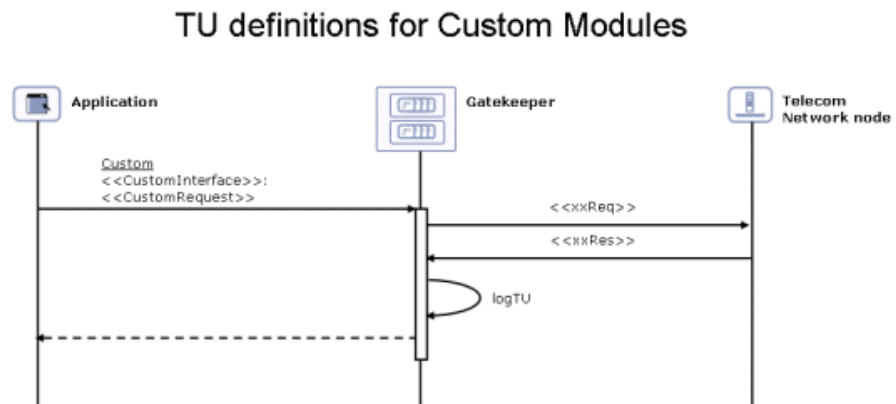- Network-triggered

Application-initiated

A transaction unit for a custom module application-initiated scenario:

Oracle Communications Services Gatekeeper processes a request that is submitted by the application and passes it to the underlying network node and then Oracle Communications Services Gatekeeper processes the response that is submitted by the underlying network node and passes it to the application.

> **Note:** The exact sequence of request and response is defined during the custom module development process.

Figure 1 illustrates when a generic custom module application-initiated transaction unit is logged. The illustrated operations are generic and abstract and would depend on which application-facing interface and/or network protocol the communication service is using.

*Figure 1   TU definition Custom Module application-initiated Scenario*

Network-triggered

A transaction unit for a custom module network-triggered scenario:

Oracle Communications Services Gatekeeper processes a request that is submitted by the telecom network node and passes it on to the application, which processes it and returns a response to Oracle Communications Services Gatekeeper, which passes it on to the telecom network node.

Figure 2 illustrates when a generic custom module network-triggered transaction unit is logged. The illustrated operations are generic and abstract and would depend on which application-facing interface and/or network protocol the communication service is using.

Figure 2   TU definition Custom Module network-triggered scenario

TU definitions for Custom Modules
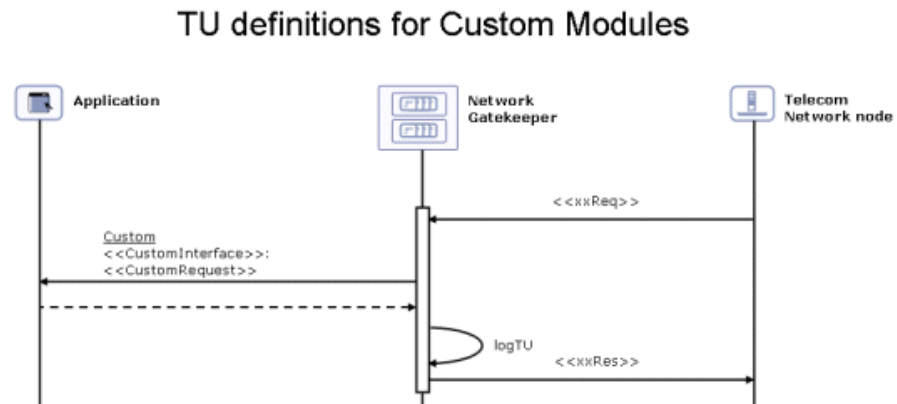
Oracle Module TUPS

The second rate category is Oracle Module TUPS. The Oracle Module TUPS rate measures the total transaction rate for communication services delivered as a part of Oracle Communications Services Gatekeeper.

For definitional purposes, Oracle Module-based communication services are divided into the following transaction groups:

- Messaging
- Mobility
- Call Control
- Presence
- Payment

Messaging

The Messaging transaction group covers transactions for the following Parlay X 2.1 and RESTful communication services:

- Short Messaging
- Multimedia Messaging

It also covers transactions for all Extended Web Services and RESTful WAP Push communication services, the Binary SMS communication service, the native MM7 communication service and the native UCP service.

There are two main types of transaction units in the Messaging group:

- Application-initiated
- Network-triggered

Application-initiated

In an application-initiated scenario, a transaction unit consists of the following sequence:

Oracle Communications Services Gatekeeper receives a request from an application and passes it on to the underlying network node. If notifications have been set up, Oracle Communications Services Gatekeeper also receives the delivery notification from the network and passes it back to the application. Even if the message is distributed to a group of destination addresses, only one transaction unit is logged per message.

> **Note:** If the application is not registered for delivery notifications, the transaction unit is not affected.

Network-triggered

In a network-triggered scenario, a transaction unit consists of one of the following two sequences:

- Oracle Communications Services Gatekeeper receives a message from the network node and passes it on to the application.
- Oracle Communications Services Gatekeeper receives a message from the network node and consumes the message itself. In this case, Oracle Communications Services Gatekeeper itself acts as the application.

Mobility

The Mobility transaction group covers transactions for the following Parlay X 2.1 and RESTful communication services:

- Terminal Location

There are two main types of transaction units in the Mobility group:

- Application-initiated
- Network-triggered

Application-initiated

In an application-initiated scenario, a transaction unit consists of one of the two following sequences:

- Oracle Communications Services Gatekeeper receives a polling request for location from an application and passes it to the underlying network node. Oracle Communications Services Gatekeeper then receives the immediate response that the underlying network node returns and passes it back to the application. Group requests are treated the same as single requests.
- Network receives a notification setup request from an application that *also* requests an immediate location check.

> **Note:** An immediate check followed by a status notification is considered two transaction units.

A transaction unit is *not* recorded in the following situation:

- Oracle Communications Services Gatekeeper receives a notification setup request that does *not* include an immediate status or location check

Network-triggered

In a network-triggered scenario, a transaction unit consists of the following sequence:

Oracle Communications Services Gatekeeper receives a notification request that is submitted by the network node and then passes it on to the application.

> **Note:** For the purposes of logging transaction units, all notification triggers are equivalent: periodic, geographical, or state-change based are logged in the same manner.

Call Control

The Call Control transaction group includes transactions for the following Parlay X 2.1/3.0 and RESTful communication services:

- Third Party Call
- Call Notification
- Audio Call

There are two main types of transaction units in the Call Control group:

- Application-initiated
- Network-triggered

Application-initiated

In an application-initiated scenario, a transaction unit consists of one of the following:

- An application requests that Oracle Communications Services Gatekeeper setup a third party call. For the purposes of logging transaction units, no distinction is made based on who eventually terminates the call: the application, the caller or the callee.

- An application requests that Oracle Communications Services Gatekeeper add or transfer a participant in a call (PX 3.0 only).

- An application requests that Oracle Communications Services Gatekeeper either play an Audio Call message of any type or play a message and collect digits (PX 3.0 only).

Network-triggered

In a network-triggered scenario, a transaction unit consists of one of the two following sequences:

- Oracle Communications Services Gatekeeper receives a notification request from the network node and passes it on to the application. The request contains status

information about the call, such as the callee is busy or not answering. No distinction is made between a notification that arrives in notify mode (for information only) and one that arrives in interrupt mode (where the call can be manipulated in the return message from the application).

- Oracle Communications Services Gatekeeper receives a notification request from the network node and processes the call itself, based on rules that have been provisioned by the application at an earlier time.

Presence

The Presence transaction group covers transactions for the following Parlay X 2.1 and RESTful communication services:

- Presence

There are three main types of transaction units in the Presence group:

- Application-initiated - Watcher
- Network-triggered - Watcher
- Application-initiated - Presentity

Application-initiated - Watcher

In an application-initiated scenario, a transaction unit consists of the following:

Oracle Communications Services Gatekeeper receives a polling request for user presence information from an application and passes it to the underlying network node. Oracle Communications Services Gatekeeper then receives the immediate response that the underlying network node returns and passes it back to the application.

Network-triggered - Watcher

In a network-triggered scenario, a transaction unit consists of the following:

Oracle Communications Services Gatekeeper receives a status change notification request from the network node and passes it on to the application.

Application-initiated - Presentity

In an application-initiated scenario, a transaction unit consists of the following:

A presentity publishes its presence information to Oracle Communications Services Gatekeeper, which passes it on to the Presence Server.

Payment

The Payment transaction group covers transactions for the following Parlay X 3. 0 and RESTful communication services:

- Payment

The Payment transaction group includes only application-initiated requests.

Application-initiated

A Payment transaction unit is recorded in the following situations

- Charging or refunding an amount

- Charging a split amount

- Reserving an initial amount and releasing it

- Reserving an initial amount and charging it

- Reserving an additional amount

A payment transaction unit is *not* recorded in the following situation:

- Releasing a previously held amount

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