



# **FUJITSU Software Enterprise Service Catalog Manager V16.0**

## **Reseller's Guide**

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## About this Manual

This manual describes how resellers can prepare, offer, and sell services defined by suppliers on a marketplace with FUJITSU Software Enterprise Service Catalog Manager - hereafter referred to as Catalog Manager or CT-MG.

This manual is structured as follows:

Chapter	Description
<i>Introduction</i> on page 7	Outlines the role of a reseller in CT-MG and gives an overview of the reseller's tasks.
<i>Service Management</i> on page 10	Describes the basic concepts of services and explains how to update service definitions and publish services to a marketplace.
<i>Customer Management</i> on page 13	Describes the different tasks involved in customer management.
<i>Billing and Payment</i> on page 15	Describes how CT-MG supports resellers in collecting payments from customers and calculating their revenue shares.
<i>Reporting</i> on page 19	Describes the reports available for resellers in CT-MG.
<i>Menu Options and User Roles</i> on page 20	Gives an overview of the menu options relevant for resellers.
<i>LDAP Keys</i> on page 22	Lists the keys to be defined for enabling access to a customer's LDAP system.

## Readers of this Manual

This manual is directed to people who want to offer services defined by suppliers to customers applying their own terms and conditions. It assumes that you are familiar with the CT-MG concepts as explained in the *Overview* manual.

## Notational Conventions

This manual uses the following notational conventions:

<b>Add</b>	The names of graphical user interface elements like menu options are shown in boldface.
<code>init</code>	System names, for example command names and text that is entered from the keyboard, are shown in Courier font.
<code>&lt;variable&gt;</code>	Variables for which values must be entered are enclosed in angle brackets.
<code>[option]</code>	Optional items, for example optional command parameters, are enclosed in square brackets.
<code>one   two</code>	Alternative entries are separated by a vertical bar.
<code>{one   two}</code>	Mandatory entries with alternatives are enclosed in curly brackets.

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## Abbreviations

This manual uses the following abbreviations:

<b>CT-MG</b>	Catalog Manager
<b>IaaS</b>	Infrastructure as a Service
<b>LDAP</b>	Lightweight Directory Access Protocol
<b>PaaS</b>	Platform as a Service
<b>PSP</b>	Payment service provider
<b>SaaS</b>	Software as a Service

## Available Documentation

The following documentation on CT-MG is available:

- *Overview*: A PDF manual introducing CT-MG. It is written for everybody interested in CT-MG and does not require any special knowledge.
- *Online Help*: Online help pages describing how to work with the administration portal of CT-MG. The online help is intended for and available to everybody working with the administration portal.
- *Installation Guide (GlassFish)*: A PDF manual describing how to install and uninstall CT-MG. It is intended for operators who set up and maintain CT-MG in their environment.
- *Operator's Guide*: A PDF manual for operators describing how to administrate and maintain CT-MG.
- *Technology Provider's Guide*: A PDF manual for technology providers describing how to prepare applications for usage in a SaaS model and how to integrate them with CT-MG.
- *Supplier's Guide*: A PDF manual for suppliers describing how to define and manage service offerings for applications that have been integrated with CT-MG.
- *Reseller's Guide*: A PDF manual for resellers describing how to prepare, offer, and sell services defined by suppliers.
- *Broker's Guide*: A PDF manual for brokers describing how to support suppliers in establishing relationships to customers by offering their services on a marketplace.
- *Marketplace Owner's Guide*: A PDF manual for marketplace owners describing how to administrate and customize marketplaces in CT-MG.
- *Developer's Guide*: A PDF manual for application developers describing the public Web service interface of CT-MG and how to integrate applications and external systems with CT-MG.
- *ServerView Resource Orchestrator Integration (GlassFish)*: A PDF manual for operators describing how to offer and use virtual platforms and servers controlled by FUJITSU ServerView Resource Orchestrator through services in CT-MG.
- *Amazon Web Services Integration (GlassFish)*: A PDF manual for operators describing how to offer and use virtual servers controlled by the Amazon Elastic Compute Cloud Web service through services in CT-MG.
- *OpenStack Integration (GlassFish)*: A PDF manual for operators describing how to offer and use virtual systems controlled by OpenStack through services in CT-MG.

- *Trusted Public S5 Integration (GlassFish)*: A PDF manual for operators describing how to offer and use virtual systems controlled by FUJITSU Cloud IaaS Trusted Public S5 through services in CT-MG.
- *Systemwalker Runbook Automation Integration Guide*: A PDF manual for operators describing how to offer and use automated operation processes of Systemwalker Runbook Automation through services in CT-MG.
- *IaaS Integration Guide*: A PDF manual for operators describing how to offer and use virtual systems on different platforms through services in CT-MG.
- Javadoc documentation for the public Web service interface of CT-MG and additional resources and utilities for application developers.

# 1 Introduction

Catalog Manager (CT-MG) is a set of services which provide all business-related functions and features required for turning on-premise software applications into Software as a Service (SaaS) offerings and using them in the Cloud. This includes ready-to-use account and subscription management, online service provisioning, billing and payment services, and reporting facilities. With its components, CT-MG covers all the business-related aspects of a Platform as a Service (PaaS) or Cloud platform. It supports software vendors as well as their customers in leveraging the advantages of Cloud Computing.

The basic scenario of deploying and using applications as services in the CT-MG framework involves the following organizations:

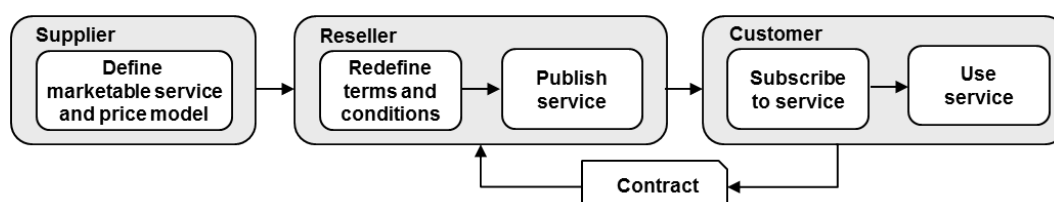
- **Technology providers** (e.g. independent software vendors) technically prepare their applications for usage in the Cloud and integrate them with CT-MG. They register the applications as technical services in CT-MG.
- **Suppliers** (e.g. independent software vendors or sales organizations) define service offerings, so-called marketable services, for the technical services in CT-MG. They publish the services to a marketplace.
- **Customers** register themselves or are registered by an authorized organization in CT-MG and subscribe to one or more services. Users appointed by the customers work with the underlying applications under the conditions of the corresponding subscriptions.
- **Marketplace owners** are responsible for administrating and customizing the marketplaces to which services are published.
- **Operators** are responsible for installing and maintaining CT-MG.

In extended usage scenarios, the suppliers who define marketable services may involve additional users and organizations in offering and selling these services:

- **Brokers** support suppliers in establishing relationships to customers by offering the suppliers' services on a marketplace. A service subscription is a contract between the customer and the supplier.
- **Resellers** offer services defined by suppliers to customers applying their own terms and conditions. A service subscription establishes a contract between the customer and the reseller.

## 1.1 The Reseller's Tasks in CT-MG

As a reseller, you offer the services defined by one or more suppliers on marketplaces to which you have been granted access. In order to offer a service, you need an explicit permission by the supplier. While you cannot change the definition and price model of a service, you can apply your own terms and conditions, for example, as to licenses.



A subscription to a service establishes a contract between the customer and your reseller organization. This contract is based on the price model defined by the supplier and on the terms and conditions defined by you.

For subscribing to services you offer, customers need to register with CT-MG, or you can register them. The customers can register or import any number of users who work with the services.

Apart from offering services to customers, your role as a reseller involves the following tasks:

- **Managing your customers.** This includes, for example, explicitly terminating a customer's subscription.
- **Preparing billing and payment for the customers.** As users work with a service, CT-MG calculates the usage charges based on the fees defined in the related price model. This billing data can be used for generating invoices. You are responsible for the processing of the billing data and for the payment collection. CT-MG enables you to integrate and use the facilities of a commercial payment service provider (PSP) for this purpose.
- **Handling revenue shares.** As a reseller, you are usually not entitled to keep the entire revenue collected from your customers, but only a certain share thereof. This revenue share is defined by the operator. It may be different for each marketplace where you offer services or even for individual services. Depending on your contracts with the operator, marketplace owner, and suppliers, you have to pay them their respective shares or they will collect their shares from you. CT-MG allows you at any time to retrieve billing data and information on your actual revenue depending on the usage of the services you offer.

If required, you can also act as a customer in CT-MG. As a reseller, you are automatically privileged to subscribe to services and work with the services you have subscribed to.

If you need to perform marketplace owner tasks, your organization must be assigned the corresponding role by the CT-MG operator. Note that a reseller organization cannot additionally be assigned the technology provider, supplier, or broker role.

## 1.2 Accessing CT-MG

To perform your tasks, you use the CT-MG user interface. The role of your organization as a reseller and your user role within the organization determine which features are available to you at the CT-MG user interface.

CT-MG distinguishes between the following user roles within reseller organizations:

- **Administrator:** Each organization must have at least one user with this role. An administrator can manage the organization's account and subscriptions as well as its users and their roles. The first administrator of an organization is defined when the organization is created.
- **Reseller:** This role allows a user to publish a supplier's marketable services under different terms and conditions.

To access the CT-MG user interface, you use the login information provided by CT-MG in the email confirming the creation of your user account. If your organization uses an external authentication system, passwords are managed in this system. This means that you log in with the password as stored in this system, and the email sent by CT-MG does not contain a password.

To log in to the administration portal where you will perform most of your tasks:

1. Click the link provided in the email, or type the access URL in your Web browser's address bar.

The access URL has the following format:

```
http://<server>:<port>/<context-root>
```

<server> is the Web/application server where CT-MG has been deployed. <port> is the port to address the Web/application server (default: 8080 for HTTP, 8081 for HTTPS).



`<context-root>` is the context root of CT-MG as set by the platform operator (default: `oscm-portal`)

2. On the **Login** page, type your user ID and password.
3. Click **Login**, or press **Return**.

You are either logged in directly, or you are prompted to change your initial password when you log in for the first time. It is highly recommended to change the initial password.

If you try to log in with a wrong password, your account may be locked after the third attempt. This depends on whether your organization maintains its user data in an external authentication system. In this case, passwords can only be changed or reset in this system. If user data are maintained in the platform, contact your administrator who can reset your password. You will get a new temporary password for your next login.

If you have forgotten your password, click **Forgot your password?** on the **Login** page. This allows you to define a new password for your user ID. Defining a new password is not possible if your account is locked or if your organization maintains its user data in an external authentication system.

If you have forgotten your user ID, contact your administrator who can look up the IDs of all users registered for your organization.

If your session expires, you have to log in again.

## 2 Service Management

Your main task as a reseller is to sell services defined by suppliers. To this end, you prepare the services and offer them on a marketplace to which you have been granted access by the marketplace owner.

The supplier of a service is responsible for:

- Defining the service and specifying its parameters, conditions, and restrictions.
- Defining a price model for the service which specifies whether and how much customers subscribing to the service will be charged for using it.
- Granting you the permission to publish the service on a marketplace of your choice.

As a reseller, you cannot change the service definition and the price model. The contract between you and the customer subscribing to a service is based on the prices defined by the supplier. It is up to the supplier to change the prices, if required.

As a reseller who has been granted the permission for a service, you can:

- View the service definition and price model.
- Define your own license agreement for using the service.
- Publish the service.

These tasks are described in more detail in the sections below.

### 2.1 Viewing and Updating Services

You can view the details of all services for which you have been granted a resale permission. The following information on a service is available:

- The service name and short description which are shown in the service catalog on a marketplace when you publish the service.
- The service description which provides details of the features offered by the service. It is displayed on a marketplace when customers request details of the service.
- The license agreement which must be read and accepted by customers when they subscribe to the service.
- The details of the price model defined by the supplier of the service. The service can be free of charge or with costs. If customers are charged for using the service, you can view the charging conditions and prices.

The information can only be viewed, except for the license agreement. You are free to use the license agreement as defined by the supplier, or you can specify a new one.

To view and update the details of a service, use the **Manage service** menu option in the **Marketable service** menu of the CT-MG administration portal. The license agreement you specify is stored in the language defined by your user profile. If you want to localize the text, change the language in your user profile and enter the corresponding translation.

### 2.2 Publishing Services

Publishing a service means making it available to customers for subscription on a marketplace.

The following prerequisites must be fulfilled for publishing a service:

- You need the permission to publish the service by the supplier.
- You must have been granted access to the marketplace by the marketplace owner.

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Publishing a service involves selecting the marketplace, activating the service, and publishing the URL of the marketplace. These tasks are described in more detail in the sections below.

## Specifying a Marketplace

As a prerequisite for publishing a service, you need to specify the desired marketplace.

A service can be published to exactly one marketplace. If you want to publish it to a different marketplace, you have to deactivate it before you can select the new marketplace.

Specifying a marketplace includes:

- Deciding whether the service is to be public.  
A public service is visible in the service catalog for anybody accessing the marketplace. A service that has not been marked as public is available for subscription to registered customers only.
- Selecting the marketplace.  
You can publish the service to a marketplace that is open to any seller, or to a marketplace that is not open but for which you have been granted access as a seller by the marketplace owner.
- Assigning categories.  
Provided that categories are defined for the marketplace you select, you can assign one or multiple categories to your service. The marketplace owner is responsible for creating the categories you can choose from. Customers can use the categories for browsing the service catalog and filtering the services on the marketplace. The marketplace owner may also decide to display the services on the marketplace home page grouped by categories.

To specify the marketplace, use the **Define publishing options** menu option in the **Marketable service** menu of the CT-MG administration portal.

## Activating a Service

To make a service available for subscription, you must activate it. To do this, use the **Activate or deactivate services** menu option in the **Marketable service** menu of the CT-MG administration portal.

The menu option can also be used for deactivating a service. This is required if you do not want to offer it any longer or if you want to change the marketplace. If you deactivate a service, customers can no longer subscribe to it. Existing subscriptions are not affected.

## Publishing the URL of a Marketplace

To make your service offering known to customers, you publish the URL of the marketplace. You can do this, for example, by email or on your website or portal. You can obtain the URL from the marketplace owner, who receives it from CT-MG via email when the marketplace is created.

The URL has the following format:

```
http://<server>:<port>/<context-root>/marketplace?mId=<mId>
```

<server> is the Web/application server where CT-MG has been deployed. <port> is the port to address the Web/application server (default: 8080 for HTTP, 8081 for HTTPS). <context-root> is the context root of CT-MG as set by the platform operator (default: `oscm-portal`). <mId> is the ID of the marketplace.

People who use the URL for accessing a marketplace can view all services that are marked as public. When subscribing to a service, they are either redirected to the registration Web page or they can log in to CT-MG directly, provided they are already registered as a customer.

You can also publish the URL of the registration Web page of CT-MG. This allows customers to directly register with CT-MG. Registered customers can see all services, no matter whether they are marked as public or not. A registered customer is sent an email with the login data and an initial password to be used for the first login.

The URL of the registration Web page has the following format:

```
http://<server>:<port>/<context-root>/marketplace/registration.jsf?mId=<mID>
```

**<server>** is the Web/application server where CT-MG has been deployed. **<port>** is the port to address the Web/application server (default: 8080 for HTTP, 8081 for HTTPS). **<context-root>** is the context root of CT-MG as set by the platform operator (default: `oscm-portal`). **<mId>** is the ID of the marketplace.

## 3 Customer Management

CT-MG offers various features for managing your organization's interaction with customers. Customer management involves the following tasks:

- Registering customers.
- Configuring an external user authentication system, if required.
- Handling subscriptions.

These tasks are described in more detail in the sections below.

### 3.1 Registering Customers

You can register customers with CT-MG so that they do not need to do this themselves. The new customer automatically receives the login information that enables him to access the given marketplace and subscribe to services.

Registering a customer includes entering the following user data for the first administrator of the new customer organization:

- **Title, first name, and last name** of the administrator.
- **Email address** that is used for notifying the customer about the registration.
- **User ID** to be used for the administrator.
- **Language** in which the user interface, available documentation, and emails are presented to the administrator.

Registering a customer includes entering the data for the new organization:

- **Name, address, and phone number.**
- **Email address.**
- **Website.**
- **Country** where the customer organization is located.
- **Description** that provides, for example, information from the company's profile.
- **Marketplace** to which the customer is directed.

To register a customer, use the **Register customer** menu option in the **Customer** menu of the CT-MG administration portal.

Once you have registered a customer, the organization data can only be edited by the customer's administrators. If you want to update the organization data, you must be registered as an administrator of your customer.

As a reseller, you can view the organization data that is defined for your customers. To view the data, use the **View customer** menu option in the **Customer** menu of the CT-MG administration portal.

### 3.2 Configuring an External User Authentication System

Instead of maintaining user IDs and passwords in CT-MG, your customer may want to connect to his organization's own identity management system for user authentication. CT-MG supports user authentication against remote LDAP systems via secure VPN connections.

When using an LDAP system, your customer does not need to register his users manually with CT-MG. The administrator of the customer organization can import the users, thus automatically registering them.

To enable access to the customer's LDAP system, you need to perform the following steps:

1. Create an LDAP configuration file on your file system.
2. Define the LDAP connection settings in the file. For a list of the relevant keys, refer to *LDAP Keys* on page 22.
3. Activate the LDAP-based authentication when registering the customer, and use the **LDAP settings** option to store the connection settings specified in the configuration file in CT-MG. If you do not store any organization-specific connection settings in CT-MG, CT-MG will use default settings for LDAP connections.

Access to the LDAP system is enabled for the customer as soon as the customer is registered with CT-MG. The administrator of the new customer organization can then import the required users from the LDAP system. The administrator can choose to import all users from the LDAP system or apply filter criteria to select specific users only. The imported users are sent an email with the URL for accessing the provided services. If required, the administrator of the customer organization can change the LDAP settings you defined for the organization.

User data maintained in the LDAP system such as the password, first name, or last name, can only be changed in the LDAP system. If the data is changed, CT-MG automatically synchronizes its own data with it. An automatic synchronization is not possible in case a user ID is changed in the LDAP system. Such a user has to be imported again.

### 3.3 Handling Subscriptions

You can view the details of all subscriptions customers have created for your services. The following information on a subscription is available:

- Activation date and number of users assigned to the subscription.
- Details of the marketable service to which the customer subscribed.
- Details of the underlying technical service.
- Details of the price model defined for the marketable service.

To view the details of a subscription, use the **View subscription** menu option in the **Customer** menu of the CT-MG administration portal.

To offer support to customers, CT-MG enables you to enter a support email address for your organization. This allows administrators and subscription managers of customer organizations to directly contact you in case they have questions or want to report issues on a service they have subscribed to. To enter a support email address, use the **Edit profile** menu option in the **Account** menu of the CT-MG administration portal.

You can explicitly terminate a customer subscription. This may be required, for example, if a customer does not comply with a license agreement or does not pay for a subscription. Terminating a subscription is possible even if users are currently using the underlying service.

To terminate a subscription, use the **Terminate a subscription** menu option in the **Customer** menu of the CT-MG administration portal. As soon as you terminate a subscription, the customer is sent an email informing him about the termination and the reason you have entered.

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## 4 Billing and Payment

As users work with the services, CT-MG automatically calculates the charges based on the related price models. It aggregates all the events, users, and configuration data associated with a subscription and rates them according to the associated price model.

At daily intervals, the database content is checked for organizations which have produced billing-relevant data. The data is collected and stored in the database. At monthly intervals (billing periods), the billing data is calculated. These checks and calculations are called "billing runs for customer billing data". The costs for all customer subscriptions that were produced in the course of a billing period are calculated by the billing run executed on the start day of the next billing period plus the offset defined by the operator.

Examples:

- You define that the billing period is to start on the 8th of a month, and the offset is set to 5 days and 4 hours. In this case, the billing run is executed on the 13th of each month at 04:00:00.000. The start day of the billing period, and thus the billing period itself, may be different for each supplier and reseller.
- Assume, the offset is set to 0 and the billing period starts on the 8th of a month. On January 5th, a customer subscribes to a service. The price model of this service defines per time unit calculation with charges based on MONTH as well as a one-time fee. On January 20th, the customer terminates this subscription.

In this case:

- The billing run executed on January 8th calculates the one-time fee only.
- The billing run executed on February 8th calculates the time unit that ended on January 31st, i.e. the month of January is fully charged.

The customer billing data can be used for creating invoices. You are responsible for charging your customers and for collecting the payments.

As a reseller, you are usually entitled to keep a share of the revenue from your customers' service usage. The operator is responsible for defining the revenue shares you can claim. They may be different for each marketplace where you offer services or even for individual services. You are not authorized to change any revenue shares. CT-MG offers various features that support you in paying the other participating parties their shares of the revenue.

The revenue shares are calculated every month based on the results of the daily checks for customer billing data. This calculation is called "billing run for revenue share data". The billing period for this billing run cannot be changed; it is always executed for the previous calendar month on the first day of a month plus the offset defined by the operator.

The following sections describe your tasks involved in billing and payment, and in handling revenue shares.

### 4.1 Managing Billing and Payment for Customers

Managing the billing and payment for customers involves the following tasks:

- Specify the payment types to be offered to customers. This is a prerequisite for enabling customers to subscribe to a service.
- Define your own billing period.
- Export billing data to make it available to external accounting systems.
- Integrate and use the facilities of a commercial payment service provider (PSP).

## Managing Payment Types

You are responsible for specifying how your customers may pay for their subscriptions:

- On receipt of invoice.
- With credit card.
- By direct debit.

Your operator is responsible for configuring the payment types you want to offer. Payment on receipt of invoice is automatically set up for all suppliers and resellers. This means that you can always allow your customers to pay on receipt of invoice without additional preparations by your operator. Payment on receipt of invoice implies that you are responsible for creating invoices and collecting payments. For details, refer to *Exporting Billing Data*.

If you request a payment type other than invoice, you need to have a contractual relationship with a commercial payment service provider (PSP). Your operator can then set up the types of payment as allowed in your agreement with the PSP. The responsibility for creating invoices and collecting payments is thus delegated to the PSP. For details, refer to *Integrating PSP Support*.

CT-MG allows you to specify the payment types for individual customers and individual services used by the customers. If you decide to offer more than one payment type to a customer, the customer is free to choose the type he prefers when subscribing to a service. If you remove a used payment type, the customer must specify a new one before he can continue using the service.

Be aware of the following effects of removing a used payment type:

- If you remove a used payment type during a customer's free trial period, the free trial period is not extended by the time the service could not be used.
- If you remove a used payment type for a subscription for which the charges are calculated per time unit, the customer may be charged with additional costs from stepped prices. Any customer who does not continue using the service in the time unit in which you removed the payment type, is affected. The resumed subscription is treated like a new subscription. This means that additional costs result, for example, from the sum of time units the users are assigned to the subscription or from the number of events that occur.

To specify the payment types, use the **Manage payment types** menu option in the **Customer** menu of the CT-MG administration portal.

## Defining the Billing Period

A billing period is the time interval for which billing data for customer subscriptions is generated. It is always one month.

By default, a billing period starts on the 1st day of a month at 00:00:00.000 and ends on the last day of a month at 23:59:59.999. However, this is not always suitable in real business. For this reason, you can define your desired start day of the billing period.

When you change the start day of the billing period, this affects all subscriptions which are created or reactivated afterwards. Existing subscriptions are not affected.

The billing period start and end date and time are displayed in the **Revenue share report**.

To define the start day for billing periods, use the **Define billing period** menu option in the **Account** menu of the CT-MG administration portal.



## Exporting Billing Data

You can export the billing data from CT-MG and process it using billing and payment facilities that have already been established in your organization. This is the standard procedure for all customers who have decided to pay on receipt of invoice.

You can export the data of one or several customers for a specific time frame. The data can be saved to an XML file or opened in an editor of your choice. You can edit it and work with it as required. The data can be forwarded, for example, to an accounting system.

To export billing data, use the **Export billing data** menu option in the **Account** menu of the CT-MG administration portal.

For a detailed description of the elements and attributes that may occur in the XML file, refer to the *Developer's Guide*.

## Integrating PSP Support

CT-MG enables you to use the facilities of a commercial payment service provider (PSP) for the creation of invoices and payment collection. The billing data generated in CT-MG are transferred to a PSP at regular intervals. The PSP can then create and deliver customer invoices, thus initiating the payment request.

For using the services of a PSP, you must have a valid contractual relationship with the PSP. Using the public Web service interface of CT-MG, the services of any PSP can be integrated for your organization. Your operator is responsible for defining the necessary configuration settings in CT-MG. He must specify the parameters for establishing the communication between CT-MG and the PSP, and he must set up the payment types you want to offer to your customers. The operator can set any of the payment types allowed for you by the respective agreement with the PSP.

For details on integrating the services of a PSP with CT-MG, refer to the *Operator's Guide*.

## 4.2 Handling Revenue Shares

CT-MG offers the following options for handling your revenue share from your customers' service usage:

- You can view the revenue share that is defined.
- You can retrieve and export information on the actual revenue.

For details, refer to the following sections. You can also use reports for retrieving information on your actual revenue. For details, refer to *Reporting* on page 19.

### Viewing the Revenue Share

You can view the percentage you are entitled to keep from the total revenue generated by a service.

For this purpose, use the **Define publishing options** menu option in the **Marketable service** menu of the CT-MG administration portal.

### Exporting Revenue Share Data

At the end of each calendar month (plus an offset defined by the operator), CT-MG calculates the revenue share data for a marketplace.

To retrieve information on your actual revenue for a specific time frame, CT-MG allows you to export the corresponding data. To do this, use the **Export billing data** menu option in the **Account** menu of the CT-MG administration portal.

The data can be saved to an XML file or opened in an editor of your choice. You can edit it and work with it as required. The data can, for example, be forwarded to an accounting system. Depending on your contracts with the operator, the marketplace owner, and the suppliers, you can use it for paying them their respective shares, or for forecasting the shares that they will collect from you.

For a detailed description of the elements and attributes that may occur in the XML file, refer to the *Developer's Guide*.

## 5 Reporting

CT-MG offers comprehensive reports for different purposes and at different levels of detail.

As a reseller, you can generate a reseller revenue share report which shows your actual revenue depending on the usage of the services you sell. The report breaks down the data to the individual suppliers who provide the services.

The report outputs your liabilities to the other participating parties. Depending on your contracts with the operator, the marketplace owner, and the suppliers, you can use the report data for paying them their respective shares, or for forecasting the shares that they will collect from you.

To create a report, use the **Create report** menu option in the **Account** menu of the CT-MG administration portal and choose **Reseller revenue share report**. The menu option allows you to specify the month for which to generate the report.

The generated report is instantly displayed at the CT-MG administration portal. You can choose to print the report or save it in several formats.

**Note:** Contact your platform operator if the reporting functionality is not available. He is responsible for defining the respective configuration parameters.

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## Appendix A: Menu Options and User Roles

This appendix provides an overview of the user roles required for using the menu options at the CT-MG administration portal which are of relevance to a reseller. For details on the menu options, refer to the *Online Help*.

### Account Menu

The following user roles are required for using the menu options in the **Account** menu:

<b>Edit profile</b>	Any user role
<b>Import users</b> (if the organization uses LDAP-based user authentication)	Administrator
<b>Change password</b> (if the organization does not use LDAP-based user authentication)	Any user role
<b>Register new users</b> (if the organization does not use LDAP-based user authentication)	Administrator
<b>Manage users</b>	Administrator
<b>LDAP settings</b> (if the organization uses LDAP-based user authentication)	Administrator
<b>Create report</b>	Administrator
<b>Process triggers</b>	Administrator
<b>Manage processes</b> (if the organization is connected to an external process control system)	Any user role
<b>Export billing data</b>	Reseller
<b>Define billing period</b>	Reseller

### Customer Menu

The following user roles are required for using the menu options in the **Customer** menu:

<b>Register customer</b>	Reseller
<b>View customer</b>	Reseller
<b>Manage payment types</b>	Reseller
<b>View subscription</b>	Reseller
<b>Terminate subscription</b>	Reseller

**Marketable Service Menu**

The following user roles are required for using the menu options in the **Marketable service** menu:

<b>Manage service</b>	Reseller
<b>Define publishing options</b>	Reseller
<b>Activate or deactivate services</b>	Reseller

## Appendix B: LDAP Keys

The following keys must be defined in a configuration file for enabling access to an organization's LDAP system:

Key	Description
LDAP_URL	Mandatory. Provider URL of the LDAP server. This LDAP server is used for user authentication. Example: <code>LDAP_URL=ldap://myldapserver.lan.est.company.de:389</code>
LDAP_BASE_DN	Mandatory. Position in the LDAP directory tree at which to start looking for users. Example: <code>LDAP_BASE_DN=ou=people,dc=est,dc=mycompany,dc=de</code>
LDAP_PRINCIPAL	Optional. Name of the user who is allowed to query the LDAP server. Example: <code>LDAP_PRINCIPAL=uid=admin,ou=system</code>
LDAP_CREDENTIALS	Optional. Password of the user who is allowed to query the LDAP server. Example: <code>LDAP_CREDENTIALS=secret</code>
LDAP_ATTR_UID	Mandatory. LDAP attribute from which a user ID is read. The default used when an organization is created is <code>uid</code> unless the operator has defined a different value in the platform LDAP settings. Example: <code>LDAP_ATTR_UID=uid</code>
LDAP_ATTR_EMAIL	Optional. LDAP attribute from which the email address of a user is read. Example: <code>LDAP_ATTR_EMAIL=scalixEmailAddress</code>
LDAP_ATTR_FIRST_NAME	Optional. LDAP attribute from which the first name of a user is read. Example: <code>LDAP_ATTR_FIRST_NAME=givenName</code>
LDAP_ATTR_LAST_NAME	Optional. LDAP attribute from which the last name of a user is read. Example: <code>LDAP_ATTR_LAST_NAME=sn</code>
LDAP_ATTR_ADDITIONAL_NAME	Currently not used.
LDAP_ATTR_LOCALE	Optional. LDAP attribute from which the default language to be stored for a user is read. Example: <code>LDAP_ATTR_LOCALE=locale</code>

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LDAP_CONTEXT_FACTORY	<p>Mandatory. Context factory which provides the API to query the LDAP server. The default used when an organization is created is <code>com.sun.jndi.ldap.LdapCtxFactory</code> unless the operator has defined a different value in the platform LDAP settings.</p> <p>Example: <code>LDAP_CONTEXT_FACTORY=com.sun.jndi.ldap.LdapCtxFactory</code></p>
LDAP_ATTR_REFERRAL	<p>Optional. Property defining how LDAP referrals are to be processed.</p> <p>If an organization uses an Active Directory with sub-domains from which users are to be imported into CT-MG, the sub-domains can be modeled as referrals. In this sense, a referral is a reference to another directory partition or sub-domain. By default, values from referrals are not retrieved.</p> <p>This property can take on the following values:</p> <p><code>follow</code>: Referrals are followed, i.e. users are imported from all referenced directory partitions or sub-domains.</p> <p><code>ignore</code>: Referrals are ignored (default), i.e. users are imported from the current domain directory only.</p> <p>Example: <code>LDAP_ATTR_REFERRAL=ignore</code></p>

## Glossary

### **Administrator**

A privileged user role within an organization with the permission to manage the organization's account and subscriptions as well as its users and their roles. Each organization has at least one administrator.

### **Application**

A software, including procedures and documentation, which performs productive tasks for users.

### **Broker**

An organization which supports suppliers in establishing relationships to customers by offering the suppliers' services on a marketplace, as well as a privileged user role within such an organization.

### **Cloud**

A metaphor for the Internet and an abstraction of the underlying infrastructure it conceals.

### **Cloud Computing**

The provisioning of dynamically scalable and often virtualized resources as a service over the Internet on a utility basis.

### **Customer**

An organization which subscribes to one or more marketable services in CT-MG in order to use the underlying applications in the Cloud.

### **Infrastructure as a Service (IaaS)**

The delivery of computer infrastructure (typically a platform virtualization environment) as a service.

### **Marketable Service**

A service offering to customers in CT-MG, based on a technical service. A marketable service defines prices, conditions, and restrictions for using the underlying application.

### **Marketplace**

A virtual platform for suppliers, brokers, and resellers in CT-MG to provide their services to customers.

### **Marketplace Owner**

An organization which holds a marketplace in CT-MG, where one or more suppliers, brokers, or resellers can offer their marketable services.

### **Marketplace Manager**

A privileged user role within a marketplace owner organization.



**Operator**

An organization or person responsible for maintaining and operating CT-MG.

**Organization**

An organization typically represents a company, but it may also stand for a department of a company or a single person. An organization has a unique account and ID, and is assigned one or more of the following roles: technology provider, supplier, customer, broker, reseller, marketplace owner, operator.

**Organizational Unit**

A set of one or more users within an organization representing, for example, a department in a company, an individual project, a cost center, or a single person. A user may be assigned to one or more organizational units.

**OU Administrator**

A privileged user role within an organization allowing a user to manage the organizational units for which he has been appointed as an administrator, and to create, modify, and terminate subscriptions for these units.

**Payment Service Provider (PSP)**

A company that offers suppliers or resellers online services for accepting electronic payments by a variety of payment methods including credit card or bank-based payments such as direct debit or bank transfer. Suppliers and resellers can use the services of a PSP for the creation of invoices and payment collection.

**Payment Type**

A specification of how a customer may pay for the usage of his subscriptions. The operator defines the payment types available in CT-MG; the supplier or reseller determines which payment types are offered to his customers, for example payment on receipt of invoice, direct debit, or credit card.

**Platform as a Service (PaaS)**

The delivery of a computing platform and solution stack as a service.

**Price Model**

A specification for a marketable service defining whether and how much customers subscribing to the service will be charged for the subscription as such, each user assigned to the subscription, specific events, or parameters and their options.

**Reseller**

An organization which offers services defined by suppliers to customers applying its own terms and conditions, as well as a privileged user role within such an organization.

**Role**

A collection of authorities that control which actions can be carried out by an organization or user to whom the role is assigned.

**Seller**

Collective term for supplier, broker, and reseller organizations.

**Service**

Generally, a discretely defined set of contiguous or autonomous business or technical functionality, for example an infrastructure or Web service. CT-MG distinguishes between technical services and marketable services, and uses the term "service" as a synonym for "marketable service".

**Service Manager**

A privileged user role within a supplier organization.

**Standard User**

A non-privileged user role within an organization.

**Software as a Service (SaaS)**

A model of software deployment where a provider licenses an application to customers for use as a service on demand.

**Subscription**

An agreement registered by a customer for a marketable service in CT-MG. By subscribing to a service, the customer is given access to the underlying application under the conditions defined in the marketable service.

**Subscription Manager**

A privileged user role within an organization with the permission to create and manage his own subscriptions.

**Supplier**

An organization which defines marketable services in CT-MG for offering applications provisioned by technology providers to customers.

**Technical Service**

The representation of an application in CT-MG. A technical service describes parameters and interfaces of the underlying application and is the basis for one or more marketable services.

**Technology Manager**

A privileged user role within a technology provider organization.

**Technology Provider**

An organization which provisions applications as technical services in CT-MG.