

# **FUJITSU Software Enterprise Service Catalog Manager V17.5.0**

## **Broker's Guide**

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## About this Manual

This manual describes how brokers can support service suppliers in establishing relationships to customers with ) FUJITSU Software Enterprise Service Catalog Manager, hereafter referred to as ESCM.

This manual is structured as follows:

Chapter	Description
<i>Introduction</i> on page 6	Outlines the role of a broker in ESCM and gives an overview of the broker's tasks.
<i>Service Management</i> on page 9	Describes the basic concepts of services and explains how to publish services to a marketplace.
<i>Customer Management</i> on page 12	Describes the different tasks involved in customer management.
<i>Billing and Payment</i> on page 14	Describes how ESCM supports brokers in calculating and collecting their revenue shares.
<i>Reporting</i> on page 15	Describes the reports available for brokers in ESCM.
<i>Menu Options and User Roles</i> on page 16	Gives an overview of the menu options relevant for brokers.
<i>LDAP Keys</i> on page 18	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 as defined by suppliers to customers for subscription and use. It assumes that you are familiar with the ESCM concepts as explained in the *Overview* manual.

## Notational Conventions

This manual uses the following notational conventions:

<b>Add</b>	Names of graphical user interface elements.
<code>init</code>	System names, for example command names and text that is entered from the keyboard.
<code>&lt;variable&gt;</code>	Variables for which values must be entered.
<code>[option]</code>	Optional items, for example optional command parameters.
<code>one   two</code>	Alternative entries.
<code>{one   two}</code>	Mandatory entries with alternatives.

## Abbreviations

This manual uses the following abbreviations:

<b>ESCM</b>	Enterprise Service 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 ESCM is available:

- *Overview*: A PDF manual introducing ESCM. It is written for everybody interested in ESCM and does not require any special knowledge.
- *Online Help*: Online help pages describing how to work with the administration portal of ESCM. The online help is intended for and available to everybody working with the administration portal.
- *Operator's Guide*: A PDF manual for operators describing how to administrate and maintain ESCM.
- *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 ESCM.
- *Supplier's Guide*: A PDF manual for suppliers describing how to define and manage service offerings for applications that have been integrated with ESCM.
- *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 ESCM.
- *Developer's Guide*: A PDF manual for application developers describing the public Web services and application programming interfaces of ESCM and how to integrate applications and external systems with ESCM.
- *Amazon Web Services Integration*: 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 ESCM.
- *OpenStack Integration*: A PDF manual for operators describing how to offer and use virtual systems controlled by OpenStack through services in ESCM.
- Javadoc and YAML documentation for the public Web services and application programming interfaces of ESCM and additional resources and utilities for application developers.

# 1 Introduction

Enterprise Service Catalog Manager (ESCM) is a set of services which provide all business-related functions and features required for turning on-premise applications and tools into "as a Service" (aaS) 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, ESCM 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 ESCM 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 ESCM. They register the applications as technical services in ESCM.
- **Suppliers** (e.g. independent software vendors or sales organizations) define service offerings, so-called marketable services, for the technical services in ESCM. They publish the services to a marketplace.
- **Customers** register themselves or are registered by an authorized organization in ESCM 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 deploying and maintaining ESCM.

ESCM is provided as Docker images and deployed in a container environment such as OpenStack or Kubernetes clusters providing for optimum performance, scalability, failover, and non-stop operation. The applications integrated with ESCM and their data may be hosted in the same containers or Virtual Machines as ESCM or in different locations.

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 Broker's Tasks in ESCM

Your main task as a broker is the promotion of marketable services defined by one or more suppliers. To this end, you publish the services to marketplaces to which you have been granted

access. A subscription to a service establishes a contract between the customer and the supplier of the service.



In order to offer a service on a marketplace, you need an explicit permission by the supplier. The supplier defines the price model for the service as well as the terms and conditions. As a broker, you cannot change any of these.

For subscribing to services you offer, customers need to register with ESCM, or you can register them. The customers can register or import any number of users who work with the services. As a broker, you can view the customer subscriptions, but you cannot change or terminate them.

Brokers usually receive a share of the revenue for the services they offer. This revenue share is defined by the operator. It may be different for each marketplace where you offer services or even for individual services. You can at any time retrieve billing data and information on your actual revenue depending on the usage of the services. The data can be used as the basis for collecting the shares from the suppliers or marketplace owners, depending on who is responsible for paying you according to your contracts.

If required, you can also act as a customer in ESCM. As a broker, 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 ESCM operator. Note that a broker organization cannot additionally be assigned the technology provider, supplier, or reseller role.

## 1.2 Accessing ESCM

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

ESCM distinguishes between the following user roles within broker 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.
- **Broker:** This role allows a user to publish a supplier's marketable services without changing the terms and conditions defined by the supplier.

To access the ESCM user interface, you use the login information provided by ESCM 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 ESCM does not contain a password.

To log in to the administration portal where you will perform 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 ESCM 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 ESCM 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 broker is to support suppliers in establishing relationships to customers. To this end, you promote the suppliers' services by offering 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.
- Defining a license agreement for the price model which is presented to customers and needs to be accepted by them.
- Granting you the permission to publish the service on a marketplace of your choice.

As a broker, you cannot change the service definition, the price model, and the terms and conditions. It is up to the supplier to change these elements, if required.

When you are granted the permission to publish a service, you can view it and publish it to a marketplace. These tasks are described in more detail in the sections below.

### 2.1 Viewing 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.

To view the details of a service, use the **View service** menu option in the **Marketable service** menu of the ESCM administration portal.

### 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 and admitted as a seller to the marketplace by the marketplace owner.

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 admitted as a seller by the marketplace owner. The marketplace must be public or you need to be granted access 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 ESCM 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 ESCM 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 ESCM 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 ESCM 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 ESCM 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 ESCM directly, provided they are already registered as a customer.

You can also publish the URL of the registration Web page of ESCM. This allows customers to directly register with ESCM. 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 ESCM 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 ESCM as set by the platform operator (default: `oscm-portal`). `<mId>` is the ID of the marketplace.

**Note:** The marketplace owner may restrict the access to a marketplace to the users of specific organizations. In this case, the users need to log in to be able to see, subscribe to, and use the services published on the marketplace. New customers cannot register themselves on the marketplace but need to be registered by a supplier, broker, reseller, or the platform operator.

## 3 Customer Management

ESCM 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 ESCM 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 ESCM 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 broker, 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 ESCM administration portal.

### 3.2 Configuring an External User Authentication System

Instead of maintaining user IDs and passwords in ESCM, your customer may want to connect to his organization's own identity management system for user authentication. ESCM 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 ESCM. 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 18.
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 ESCM.

If you do not store any organization-specific connection settings in ESCM, ESCM 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 ESCM. 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, ESCM 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 the subscriptions customers have created for services you promote. 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.

You cannot change subscriptions or terminate them. To view the information, use the **View subscription** menu option in the **Customer** menu of the ESCM administration portal.

The suppliers of your services can explicitly terminate a 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. As soon as a supplier terminates a subscription, your customer is sent an email informing him about the termination and the reason the supplier has entered for it.

To offer support to customers, ESCM allows the suppliers of your services to enter a support email address for their organization. This allows administrators and subscription managers of customer organizations to directly contact a supplier in case they have questions or want to report an incident on a service they have subscribed to.

## 4 Billing and Payment

A subscription by a customer to a service you offer establishes a contract between the customer and the supplier of the service. Therefore, it is the supplier's responsibility to prepare billing and payment, and collect payments from the customer. As users work with the services you promote, the usage charges are calculated based on the fees defined in the related price models. The resulting billing data can be used by the supplier for generating invoices and collecting payments.

As a broker, you usually receive a share of the revenue from your customers' service usage. The operator is responsible for defining the revenue share you can claim. You are not authorized to change it.

ESCM offers the following options that support you in collecting your revenue share:

- 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 15.

### Viewing the Revenue Share

You can view the percentage you receive 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 ESCM administration portal.

### Exporting Revenue Share Data

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

To retrieve information on your actual revenue for a specific time frame, ESCM allows you to export the corresponding data. To do this, use the **Export billing data** menu option in the **Account** menu of the ESCM 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. You can use it to collect your share from the suppliers or marketplace owners, depending on who is responsible for paying you according to your contracts.

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

## 5 Reporting

ESCM offers comprehensive reports for different purposes and at different levels of detail.

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

You can use the report data as the basis for collecting the shares from the suppliers or from the owners of the marketplaces to which you published the services, depending on who is responsible for paying you according to your contracts.

To create a report, use the **Create report** menu option in the **Account** menu of the ESCM administration portal and choose **Broker 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 ESCM administration portal. You can choose to print the report or save it in several formats.

<b>Note:</b> 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 ESCM administration portal which are of relevance to a broker. 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 an external system for user authentication)	Any user role
<b>Register new users</b>	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>	Broker

### Customer Menu

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

<b>Register customer</b>	Broker
<b>View customer</b>	Broker
<b>View subscription</b>	Broker

### Marketable Service Menu

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

<b>View service</b>	Broker
<b>Define publishing options</b>	Broker



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Activate or deactivate services	Broker
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## 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:</p> <pre>LDAP_CONTEXT_FACTORY=com.sun.jndi.ldap.LdapCtxFactory</pre>
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 ESCM, 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.

**Billing System**

A system responsible for calculating the charges for using a service.

**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 ESCM 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 ESCM, 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 ESCM to provide their services to customers.

**Marketplace Owner**

An organization which holds a marketplace in ESCM, 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 ESCM.

**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 ESCM; 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. ESCM 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 ESCM. 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 ESCM for offering applications provisioned by technology providers to customers.

**Technical Service**

The representation of an application in ESCM. 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 ESCM.