Kaspersky Subscription Service 3.0

Integration guide

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# [INTRO] Introduction

## [INTRO-1] Document purpose

The document contains a description of the requirements for integration of Service Provider infrastructure with **Kaspersky Subscription Service 3.0** using the Unified Provider Interface (UPI).

## [INTRO-2] Target audience

The document is intended for technical specialists of Service Providers and Kaspersky Lab.

## [INTRO-3] Definitions, acronyms, and abbreviations

***Operations with Subscription*** – operation performed with a subscription: activate, renew, hard cancel, soft cancel, pause, and resume.

***KSS 3.0 Web Service*** – component implemented on the side of Kaspersky Lab and processing requests for operations with subscriptions.

***Web Service Client*** – component implemented on the Service Provider side sending the requests for operations with subscriptions to KSS 3.0 web service.

## [INTRO-4] Changes to this document

Change instructions for this document are available in [knowledge management procedures](http://redirect.kaspersky.com/it-tech-docs?service=all&doctype=updproc) at IT Quality portal.

# [DESCR] General description

Service Providers manage subscriptions using the KSS 3.0 web service implemented by Kaspersky Lab. The service supports the following operations with subscriptions:

* Activate subscription for the specified Subscriber with defined parameters (subscription until the specified date/time or open-ended subscription, subscription for selected product, etc.). Every Subscriber must have a unique identifier (SubscriberId) on the Service Provider’s side.
* Renew subscription. This implies extending the subscription for the specified Subscriber (SubscriberId) to the defined date/time or indefinitely.
* Hard-cancel subscription. This implies cancelling of a subscription for the specified Subscriber (SubscriberId) since the defined date.
* Soft-cancel subscription. This implies cancelling of a subscription for the specified Subscriber (SubscriberId) since the defined date with a grace period.
* Pause subscription. This implies putting a subscription on a pause for the specified Subscriber (SubscriberId) since the defined date.
* Resume subscription. This implies resuming a paused subscription for the specified Subscriber (SubscriberId).
* Getting subscription info. This implies obtaining information on subscription for the specified Subscriber (SubscriberId).

Subscriptions are managed via the KSS 3.0 web service available to Service Provider over the Internet. To manage subscriptions, Service Providers send SOAP requests in established format via HTTPS (as described further). The web service uses bidirectional authentication based on digital certificates. Every Service Provider receives a username and a password for access to the web service, which must be placed in the header of subscription management requests. Username and password are transferred in the accessInfo part of the request. Clients for the web service are developed by Service Providers on their own based on the provided WSDL description.

In addition, filtering of IP addresses is implemented. Every Service Provider submits a list of IP addresses from which Service Provider will send requests to the web service. Requests from this Service Provider from other IP addresses will be rejected.

# [INP] Input requests format

Service Provider manages subscriptions using requests for operations with subscription. Each request may contain multiple commands of various types for operations related to multiple Subscribers.

## [INP-CMN] Common request part format

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Description | R/O/C[[1]](#footnote-2) | Field value type/limitations |
| **SubscriptionRequest‌Container** | Root element | R |  |
| Timestamp | Time stamp of the moment when a request has been created. Generated by Service Provider upon sending the request. | R | Date/time format:  2009-10-20T18:00:00Z  A time zone different from UTC can be specified, for example:  2009-10-20T18:00:00-05:00  Microseconds can be specified, for example:  2009-10-20T18:00:00.120980Z  2009-10-20T18:00:00.120980-05:30 |
| TransactionId | Unique transaction identifier used for the request-response association.  Generated by Service Provider upon sending the request. | R | See [[APDX-02] Subscriber Id Format](#_[APDX-02]_Subscriber_Id). |
| **SubscriptionRequest** | Contains a set of commands for operations with subscriptions. | R | The following commands can appear in the set:   * [Activate](#_[INP-ACT]_Activate_Command) * [Renew](#_[INP-REN]_Renew_Command) * [Hard Cancel](#_[INP-HC]_Hard_Cancel) * [Soft Cancel](#_[INP-SC]_Soft_Cancel) * [Pause](#_[INP-PAUSE]_Pause_Command) * [Resume](#_[INP-RES]_Resume_Command) * [GetInfo](#_[INP-GET]_GetInfo_Command) |

## [INP-ACT] Activate command format

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Description | R/O/C | Field value type/limitations |
| **Activate** | “Activate” command | O | One per each Subscriber. |
| UnitId | Internal command number within the request | R | Commands within one request are numbered with sequential integers. |
| SubscriberId | Unique Subscriber identifier | R | See [[APDX-02] Subscriber Id Format](#_[APDX-02]_Subscriber_Id). |
| ActivationType | Field in which type of activation can be specified | O | Possible values: “Standard”, “Secondary”.  If not specified, “Standard” is assumed by default. |
| StartTime | Date/time since which the subscription will be activated (date/time of subscription purchase) | R | Date/time format:  See [Common request part format](#_[INP-CMN]_Common_Request) for the description of Timestamp field. |
| EndTime | Date/time of subscription expiration (last day of subscription maintenance inclusive). If the subscription is activated for an indefinite period, then “indefinite” must be specified in this field. | R | Value “indefinite”  or  Date/time format:  See [Common request part format](#_[INP-CMN]_Common_Request) for the description of Timestamp field. |
| LicenseCount | Number of licenses for subscription. Licenses count cannot be changed during the subscription period. | O | 1 is selected by default if the value is not specified.  Acceptable values are defined for each service provider individually. |
| ProductId | Unique identifier of the application for which the subscription is being activated. Application type cannot be changed during the subscription period. | R | String value.  Acceptable values are defined for each service provider individually. |

## [INP-REN] Renew command format

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Description | R/O/C | Field value type/limitations |
| **Renew** | “Renew” command | O | One per each Subscriber. |
| UnitId | Internal command number within the request | R | Commands within one request are numbered with sequential integers. |
| SubscriberId | Unique Subscriber identifier. | R | See [[APDX-02] Subscriber Id Format](#_[APDX-02]_Subscriber_Id). |
| EndTime | New date/time of subscription expiry (last day of subscription maintenance inclusive). If a subscription is renewed for an indefinite period, then “indefinite” must be specified in this field. | R | Value “indefinite”  or  Date/time format:  See [Common request part format](#_[INP-CMN]_Common_Request) for the description of Timestamp field. |

## [INP-HC] Hard Cancel command format

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Description | R/O/C | Field value type/limitations |
| **HardCancel** | “HardCancel” command | O | One per each Subscriber. |
| UnitId | Internal command number within the request | R | Commands within one request are numbered with sequential integers. |
| SubscriberId | Unique identifier of the Subscriber whose subscription is being discontinued. | R | See [[APDX-02] Subscriber Id Format](#_[APDX-02]_Subscriber_Id). |
| EndTime | Date/time of subscription hard cancel (last day of subscription maintenance inclusive). | R | Date/time format:  See [Common request part format](#_[INP-CMN]_Common_Request) for the description of Timestamp field. |

## [INP-SC] Soft Cancel command format

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Description | R/O/C | Field value type/limitations |
| **SoftCancel** | “SoftCancel” command | O | One per each Subscriber. |
| UnitId | Internal command number within the request | R | Commands within one request are numbered with sequential integers. |
| SubscriberId | Unique identifier of the Subscriber whose subscription must be discontinued. | R | See [[APDX-02] Subscriber Id Format](#_[APDX-02]_Subscriber_Id). |
| EndTime | Date/time of subscription soft cancel (last day of subscription maintenance inclusive). | R | Date/time format:  See [Common request part format](#_[INP-CMN]_Common_Request) for the description of Timestamp field. |

## [INP-PAUSE] Pause command format

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Description | R/O/C | Field value type/limitations |
| Pause | “Pause” command | O | One per each Subscriber. |
| UnitId | Internal command number within the request | R | Commands within one request are numbered with sequential integers. |
| SubscriberId | Unique identifier of the Subscriber | R | See [[APDX-02] Subscriber Id Format](#_[APDX-02]_Subscriber_Id). |
| PauseTime | Date/time of subscription pause (last day of subscription inclusive). | R | Date/time format:  See [Common request part format](#_[INP-CMN]_Common_Request) for the description of Timestamp field. |

## [INP-RES] Resume command format

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Description | R/O/C | Field value type/limitations |
| Resume | “Resume” command | O | One per each Subscriber. |
| UnitId | Internal command number within the request | R | Commands within one request are numbered with sequential integers. |
| SubscriberId | Unique identifier of the Subscriber | R | See [[APDX-02] Subscriber Id Format](#_[APDX-02]_Subscriber_Id). |

## [INP-GET] GetInfo command format

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Description | R/O/C | Field value type/limitations |
| GetInfo | “GetInfo” command | O | One per each Subscriber. |
| UnitId | Internal command number within the request | R | Commands within one request are numbered with sequential integers. |
| SubscriberId | Unique identifier of the Subscriber | R | See [[APDX-02] Subscriber Id Format](#_[APDX-02]_Subscriber_Id). |
| InfoSection | Specifies which particular information is requested | R | Possible values:  InfoSection=”Subscription” – requires information on subscription  InfoSection=”SubscriptionUsage” – requires information on usage of the subscription by the end user  InfoSection=”Subscription, SubscriptionUsage” – requires both. |

# [RESP] Response format

In response to a request, KSS 3.0 web service returns to Service Provider the information about execution of each subscription management command (in case of Activate, Renew, HardCancel, SoftCancel, Pause, Resume), or the current information related to the subscription (in case of GetInfo). If command processing results in an error, the corresponding error code and description will be included in the response (see [Subscription management errors](#_Ошибки_операций_по)).

Elements within the response are sorted by their Unit ID in increasing order.

If an error occurs on the transport or system level while processing a request (e.g., the Service Provider authentication has failed), the response will not contain individual result for every command, but rather the code and description of a single transport or system error (see [Transport and system errors](#_Ошибки_транспортного_и)).

## [RESP-CMN] Common response part format

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Description | R/O/C | Field value type/limitations |
| **SubscriptionResponse‌Container** | Root element | R |  |
| Timestamp | Time stamp of the moment when a response has been created. KSS generates the timestamp while sending a response. | R | Date/time format:  See [Common request part format](#_[INP-CMN]_Common_Request) for the description of Timestamp field. |
| TransactionId | Unique transaction identifier used for the request-response association. | R | See [[APDX-02] Subscriber Id Format](#_[APDX-02]_Subscriber_Id). |
| **TransactionError** | Contains the error code of a system or transport error and its description. Such errors are not related to any specific subscription. | C | Note: «Transaction Error» cannot appear in a response together with «Subscription Response» and «Subscription Error». |
| ErrorCode | Contains the error code of a system or transport error. Note that the error is not related to any specific commands contained in the request. | R | See [Transport and system errors](#_Ошибки_транспортного_и) |
| ErrorMessage | Description for the code of a transport or system error. | R | See [Transport and system errors](#_Ошибки_транспортного_и) |
| **SubscriptionResponse** | Contains a set of items describing the result of request processing. | С | See [Subscription response](#_Subscription_Response)  Note: «Subscription Response» cannot appear in a response together with «Transaction Error». |
| **SubscriptionError** | Contains a group of one or more items describing an error related to each Subscriber. | С | See [Subscription error](#_Subscription_Errors)  Note: «Subscription Error» cannot appear in a response together with «Transaction Error» |

## [RESP-SUB] Command-specific response part format

### For Activate command

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Description | R/O/C | Field value type/limitations |
| **<Order>** | Command for which the response is provided. | O | Activate |
| UnitId | Internal number of the original command within the request. | R |  |
| SubscriberId | Unique Subscriber Id for which the subscription is activated. | R | See [[APDX-02] Subscriber Id Format](#_Формат_SubscriberID) |
| ActivationCode | Activation code required for the application to start working as specified in the subscription. | R | 20-character alphanumeric sequence consisting of 4 quintets. Format: XXXXX-XXXXX-XXXXX-XXXXX |

### For Renew, HardCancel, SoftCancel, Pause, and Resume commands

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Description | R/O/C | Field value type/limitations |
| **<Order>** | Command for which the response is provided. | O | One of the following values:   * Renew * HardCancel * SoftCancel * Pause * Resume |
| UnitId | Internal number of the original command within the request. | R |  |
| SubscriberId | Unique Subscriber Id for which the subscription is activated. | R | See [[APDX-02] Subscriber Id Format](#_Формат_SubscriberID) |

### For GetInfo command

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Description | R/O/C | Field value type/limitations |
| **<Order>** | Command for which the response is provided. | O | GetInfo |
| UnitId | Internal number of the original command within the request. | R |  |
| SubscriberId | Unique Subscriber Id for which the subscription is activated. | R | See [[APDX-02] Subscriber Id Format](#_Формат_SubscriberID) |
| **<Subscription>** | Included if the request contained InfoSection=”Subscription” or InfoSection= “Subscription, SubscriptionUsage”. | O |  |
| Status | Subscription status at the moment of command processing. | R | One of the following values:   * NotStarted * Started * Paused * SoftCancelled * HardCancelled |
| StatusChangeTime | Date and time of the last change of subscription status. | O | Date/time format:  See [Common request part format](#_[INP-CMN]_Common_Request) for the description of Timestamp field.  Absent if SubscriptionStatus is ”NotStarted”. |
| StartTime | Date and time since when the subscription is active. | O | Date/time format:  See [Common request part format](#_[INP-CMN]_Common_Request) for the description of Timestamp field.  Absent if SubscriptionStatus is ”NotStarted”. |
| EndTime | Date and time when the subscription ends, or “indefinite” if it is activated indefinitely. | O | Date/time formatted as in [Common request part format](#_[INP-CMN]_Common_Request), or “indefinite”  Absent if SubscriptionStatus is ”NotStarted” |
| LicenseCount | Number of licenses for the subscription | R |  |
| ProductId | Unique ID of the application for which the subscription is activated. | R | String value, for example “KAV”.  Allowed values are set for each provider individually. |
| ActivationCode | Current activation code for the subscription | R | 20-character alphanumeric sequence consisting of 4 quintets. Format: XXXXX-XXXXX-XXXXX-XXXXX |
| **<SubscriptionUsage>** | Included if the request contained InfoSection=”SubscriptionUsage” or InfoSection= ”Subscription, SubscriptionUsage” | O |  |
| FirstActivationTime | Date and time of the first activation of the current activation code for the subscription.  Note that FirstActivationTime parameter cannot be used for billing or checking purposes in the role of subscription activation time, because it represents the moment of activation of the current activation code, which is probably **not** the first activation code for the subscription. | O | For already activated codes: date/time of the first activation, formatted as in [Common request part format](#_[INP-CMN]_Common_Request).  For codes that were never activated: null |

## [RESP-ERR] Error response format

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Description | R/O/C | Field value type/limitations |
| **<Command>Error** | Command to which the error refers. | O | One of the following values:   * ActivateError * RenewError * HardCancelError * SoftCancelError * PauseError * ResumeError * GetInfoError |
| UnitId | Internal number of the original command within the request. | R |  |
| SubscriberId | Unique Subscriber identifier. | R | See [[APDX-02] Subscriber Id Format](#_[APDX-02]_Subscriber_Id). |
| ErrorCode | Error code associated with the specified SubscriberId | R | See [Error codes](#_Коды_ошибок_1). |
| ErrorMessage | Error code description | R | See [Error codes](#_Коды_ошибок_1). |

# [EXM] Examples of SOAP messages

## Sample request for operations with subscription

<?xml version='1.0' encoding='UTF-8'?>

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">

<soapenv:Header>

<AccessInfo xmlns="http://schemas.kaspersky.com/services/subscription/2.0/">

<UserName>XXX</UserName>

<Password>XXX</Password>

</AccessInfo>

</soapenv:Header>

<soapenv:Body>

<SubscriptionRequestContainer xmlns="http://schemas.kaspersky.com/services/subscription/2.0/">

<Timestamp>2008-10-10T10:10:10.120980Z</Timestamp>

<TransactionId>010000001</TransactionId>

<SubscriptionRequest>

<Activate UnitId="1" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C1" ActivationType="Secondary" StartTime="2008-04-09T10:10:10Z" EndTime="2009-04-08T10:10:10Z" LicenseCount="1" ProductId="KIS"/>

<Activate UnitId="2" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C2" StartTime="2008-04-09T10:10:10.120980Z" EndTime="2009-04-08T10:10:10.120980Z" LicenseCount="1" ProductId="KIS"/>

<Renew UnitId="3" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C3" EndTime="indefinite"/>

<Activate UnitId="4" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C4" StartTime="2008-04-09T10:10:10-05:00" EndTime="2009-04-08T10:10:10-05:00" LicenseCount="1" ProductId="KIS"/>

<SoftCancel UnitId="5" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C1" EndTime="2010-04-08T10:10:10.120980-05:30"/>

<Renew UnitId="6" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C1" EndTime="indefinite"/>

<Resume UnitId="7" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C9" />

<HardCancel UnitId="8" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C9" EndTime="2010-04-08T10:10:10.120980Z"/>

<Pause UnitId="9" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C5" PauseTime="2010-04-15T10:10:10.120980Z"/>

</SubscriptionRequest>

</SubscriptionRequestContainer>

</soapenv:Body>

</soapenv:Envelope>

## Sample response

<?xml version='1.0' encoding='UTF-8'?>

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">

<soapenv:Body>

<SubscriptionResponseContainer xmlns="http://schemas.kaspersky.com/services/subscription/2.0/">

<Timestamp>2008-10-10T10:11:10.120980Z</Timestamp>

<TransactionId>010000001</TransactionId>

<SubscriptionResponse>

<Activate UnitId="1" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C1" ActivationCode="XXXXX-XXXXX-XXXXX-XXXXX" />

<Renew UnitId="3" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C2"/>

<Activate UnitId="4" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C4" />

<SoftCancel UnitId="5" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C1"/>

<Renew UnitId="6" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C1"/>

<Resume UnitId="7" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C9"/>

<HardCancel UnitId="8" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C1"/>

<Pause UnitId="9" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C5"/>

</SubscriptionResponse>

<SubscriptionError>

<ActivateError UnitId="2" SubscriberId="C8147E02-8A91-43B2-AD48-5D04DAFD38C2" ErrorCode="01" ErrorMessage="SubscriberId specified in the activate order was previously activated."/>

</SubscriptionError>

</SubscriptionResponseContainer>

</soapenv:Body>

</soapenv:Envelope>

## Sample response with a system or transport error

<?xml version='1.0' encoding='UTF-8'?>

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">

<soapenv:Body>

<SubscriptionResponseContainer xmlns="http://schemas.kaspersky.com/services/subscription/2.0/">

<Timestamp>2008-10-10T10:11:10.120980Z</Timestamp>

<TransactionId>010000001</TransactionId>

<TransactionError ErrorCode="12" ErrorMessage="Authentication error" />

</SubscriptionResponseContainer>

</soapenv:Body>

</soapenv:Envelope>

# [APDX] Appendix

## [APDX-01] Service provider activities

1. Service Provider must implement a *web service client* that will be used to send subscription management requests. The client must send requests and receive responses in the format described herein. Service Provider must submit a list of IP addresses from which the requests will be sent. Username/password for access to the subscription management service will be provided by Kaspersky Lab.
2. Service Providers must arrange storage of the “Subscriber Id – activation code” association in their databases for every Subscriber.

Sample table containing the Subscriber Id and activation code:

|  |  |  |
| --- | --- | --- |
| Field | Value type | Description |
| Subscriber Id | String | Unique Subscriber identifier in the Service Provider system |
| Activation Code | String | Activation code |

1. Service Provider must offer a link to the subscription management section at its web site; the link will appear in the application interface (in the license information) after application setup on the Subscriber’s computer.
2. If **Parallel** value is selected for the "The order for provision of activation codes" option, Service Provider must regularly order new pools of activation codes and Subscriber Id (as old pools become depleted).

## [APDX-02] Subscriber ID format

Subscriber Id must be a sequence of up to 50 characters. The allowed characters are Latin letters, digits, dash “-”, and underscore “\_”. The identifier is not case-sensitive.

Subscriber ID must be unique within one provider account.

## [APDX-03] Transaction ID format

Transaction Id must be a sequence of up to 50 characters. The allowed characters are Latin letters, digits, dash “-”, and underscore “\_”. The identifier is not case-sensitive.

See also the description of [errors](#_[APDX-07]_Error_codes) 14 and 06.

## [APDX-04] User name format

User name must be a sequence of up to 50 characters. The allowed characters are Latin letters, digits, dash “-”, and underscore “\_”. The user name is not case-sensitive.

Leading and trailing spaces are ignored.

## [APDX-05] Requirements for digital certificates

To establish connection with KSS, the certificates of following types may be used:

* Certificates issued by the external trust center. These certificates are associated in KSS with one or several provider accounts, and are accepted only for these accounts.

Providers may also use their own certificates. To operate such a certificate, its entire chain must be presented to Kaspersky Lab. For each certificate in the chain having a CRL, that CRL should be publicly accessible.

* Certificates issued by Kaspersky Lab. These certificates are accepted from all provider accounts.

## [APDX-06] Sequence of command processing

Commands within one request are processed in order of increasing Unit ID.

Responses to the commands within one reply are sorted similarly.

Example:

*A provider sends a request containing the following commands:*

Activate, Unit ID=2

HardCancel, Unit ID=1

*Despite the order of commands within request, they would be processed (and the responses would be returned) in order of increasing Unit ID:*

*HardCancel, Unit ID=1*

*Activate, Unit ID=2*

## [APDX-07] Error codes

The error codes are returned in the following order:

1. Transport and system level errors.
2. Subscription management errors, including:
   1. Error 602 with reason “The date could not be earlier than the subscription start date” when both the start and end dates are set in the command, or with any other possible reason for this error.
   2. Error 06 (Duplicate request).
   3. Error 08 (Activation code pool is empty), error 602 with reason “The date could not be earlier than the subscription start date” when only the end date is set in the command, and all other errors.

Error 99 (Unknown error) may be included on either stage.

### Transport and system level errors

|  |  |
| --- | --- |
| Code | Description |
| 11 | SOAP request contains invalid data.  ***Note****:*  *The possible sources for this error include the case if the request contains two or more commands with the same Unit ID.* |
| 12 | Service provider authentication error. |
| 13 | Service unavailable. |
| 14 | Duplicate request; the previous request is still being processed.  ***Note****:*  *This error is returned if a duplicating request (i.e. the request with identical Transaction ID) arrives while the previous request with that Transaction ID is still being processed.*  *If the previous request has already been processed, no error is returned. Instead, the response to the original request is repeated, including results on every command, regardless whether that was an error or a successful execution.*  *See also error 06 below.* |

### Subscription management errors

|  |  |  |
| --- | --- | --- |
| Code | Description | Originating command |
| 01 | The subscription with specified Subscriber ID is already activated. | Activate, Pause |
| 02 | The subscription with specified Subscriber ID is not yet activated. | Renew, Pause, Resume, HardCancel, SoftCancel |
| 03 | Incorrect subscription end time: the end time specified in the renew order is earlier than the previous subscription end time. | Renew |
| 04 | The subscription with specified Subscriber ID is already hard‑cancelled. | Renew, Pause, Resume, HardCancel, SoftCancel |
| 05 | The Subscriber ID does not exist in KSS.  ***Note****:*  *This error is returned in the following cases:*   * *Subscriber ID specified in Renew, Pause, Resume, HardCancel, SoftCancel, or GetInfo command is not registered in KSS within given provider account.* * *Subscriber ID is not registered in KSS within given provider account for the values of Product ID and License Count specified in Activate command (if the delivery method is* ***Parallel****).* | Activate (if the delivery method is **Parallel**), Renew, Pause, Resume, HardCancel, SoftCancel, GetInfo |
| 06 | Duplicate request.  ***Note****:*   * *Duplicates are recognized by coincidence in TransactionID and all fields of the command.* * *If the original request is not immediately preceding the duplicate, this error is returned.* * *If the original request is immediately preceding the duplicate, the error is not returned. Instead, the result of the original request is returned again, regardless whether that was an error or a successful execution.* | Activate,  Renew, Pause, Resume, HardCancel, SoftCancel |
| 08 | Activation code pool for the service provider is empty. | Activate (if the AC delivery method is **Successive**) |
| 09 | Unknown product in the Activate order.  ***Note****:*  *This error is returned if the given combination of Product ID and License Count is not allowed for the given provider.* | Activate |
| 98 | Subscription usage information cannot be retrieved.  ***Note****:*  *This error is returned when KSS is unable to retrieve the subscription usage information due to some internal error. However, another GetInfo command requesting just the subscription information may still succeed.* | GetInfo |
| 99 | Unknown error. | All commands |
| 101 | The difference between the subscription end time and subscription start time specified in the Activate order is less than 28 days. Subscription period must not be shorter than 28 days. | Activate |
| 103 | Subscription start time specified in the activate order is later than the current time or the request timestamp. A subscription cannot start in the future.  ***Note****:*  *If StartTime in Activate command is set less than 1 hour ahead of current timestamp or the request timestamp, this error is not returned, the command is processed normally, and the subscription is activated.* | Activate |
| 105 | The subscription with specified Subscriber ID is soft-cancelled and cannot be activated. | Activate |
| 202 | Renew request received for an open-ended subscription. Open‑ended subscriptions cannot be renewed. | Renew |
| 204 | The subscription with specified Subscriber ID is paused and cannot be renewed. Use Resume order to resume the subscription. | Renew |
| 303 | The subscription with specified Subscriber ID is paused and cannot be soft‑cancelled. | SoftCancel |
| 304 | The subscription with specified SubscriberId cannot be soft-cancelled or hard-cancelled, because the new subscription end time should not be set earlier than N[[2]](#footnote-3) days before the current date. | SoftCancel, HardCancel |
| 401 | The subscription with specified SubscriberId cannot be paused (only open-ended subscriptions can be paused). | Pause |
| 402 | The subscription with specified SubscriberId is already paused. | Pause |
| 403 | The subscription with specified SubscriberId cannot be paused (pause time should not be earlier than 14 days before the current date). | Pause |
| 501 | The subscription with specified SubscriberId cannot be resumed because it is not paused. | Resume |
| 601 | The command is not allowed for the service provider.  ***Note****:*  *This error may also indicate that though the command itself is allowed for the given service provider, the particular combination of its parameters is not. For example, EndTime is specified for a provider account that is allowed to issue only open-ended subscriptions.* | Renew, Pause, Resume, HardCancel, SoftCancel, GetInfo |
| 602 | Incorrect command attribute.  The date could not be earlier than 2008-01-01.  The date could not be earlier than the subscription start date.  Incorrect SubscriberId format. | All commands |

## [APDX-08] Activation codes issuance rules

This section specifies the rules of issuance of activation codes depending on the type and state of the provider account (given the absence of errors).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Account state** | **Position state (Product ID + License Count)** | **Testing account**  Code delivery method is **Parallel** | **Testing account**  Code delivery method is **Successive** | **Production account**  Code delivery method is **Parallel** | **Production account**  Code delivery method is **Successive** |
| **Active** | **Disabled** | Previously generated activation codes are issued[[3]](#footnote-4) for given SubscriberId. | UPI: Error 09 | Previously generated activation codes are issued for given SubscriberId. | UPI: Error 09 |
| **Active** | **Enabled** | Previously generated activation codes are issued for given SubscriberId. | Activation code is issued from the previously generated pool.  If the codes in the pool run out:  UPI: Error 09. | Previously generated activation codes are issued for given SubscriberId. | Activation code is issued from the previously ordered pool.  If the codes in the pool run out:  UPI: Error 05. |
| **Active** | **Absent** | UPI: Error 09 | UPI: Error 09 | UPI: Error 09 | UPI: Error 09 |

## [APDX-09] Activation codes change rules

Rules described below are only applicable with delivery method **Successive**. When delivery method is **Parallel**, the activation code cannot be changed.

|  |  |
| --- | --- |
| Condition | Result |
| Activate command for a HardCancelled subscription is received from the provider account. The command contains **current** values of Product ID and License Count for the subscription. | The response to Activate command contains **current activation code** |
| Activate command for a HardCancelled subscription is received from the provider account. The command contains values of Product ID and/or License Count **different from current** for the subscription. | The response to Activate command contains **new activation code** (associated with the new values of Product ID and License Count from then on) |

**Example 1:**

1. Activation of subscription #1 for the product KIS:1   
   Result: activation code 11111-11111-11111-11111
2. Hard cancelling the subscription #1.
3. Activation of subscription #1 for the product **KIS:1**  
   Result: activation code **11111-11111-11111-11111**

**Example 2:**

1. Activation of subscription #1 for the product KIS:1   
   Result: activation code 11111-11111-11111-11111
2. Hard cancelling the subscription #1.
3. Activation of subscription #1 for the product **KAV:5**  
   Result: activation code **22222-22222-22222-22222**

1. R – required field

   O – optional field

   С – two-option choice field. [↑](#footnote-ref-2)
2. Number of days depends on account settings. [↑](#footnote-ref-3)
3. Here and below it is implied that the activation codes are issued in absence of errors listed in [Error codes](#_Коды_ошибок_1). [↑](#footnote-ref-4)