Onboarding API Guide

The smartest way to get paid

rubean

Version	Date	Items
1.0	9/2/2023	First version
1.3	25/04/2023	Extensions to support unassisted enrolment
1.4	01/06/2023	Added new configuration key, BOOKING, Paygate specific
1.5	14/08/2023	Extended with amend request
1.5.1	11/12/2023	Endpoint for QA environment updated ros -> onboarding-service
1.20.7	27/06/2024	Updated to reflect the changes in the latest version of the Unified ROS API 1.20.7: • Versioning of this document has been changed to reflect and always match with the version of ROS it is describing (previous versions 1.0-1.5 were the version of the document, not the version of ROS), hence the jump from the version 1.5.1 to 1.20.7 • New Notations section is added describing the Data Attributes and Formats acronyms used in this document • terminal.merchantId now supports up to 30 characters length for non-ISO-based acquirers • For the RESET method support of the new parameter reuseData has been added

Overview

Rubean enables its customers to have control over their terminals using ROS (Rubean Onboarding Service).

API supports these five methods:

- Create terminal
- Update terminal
- Amend terminal
- Deactivate terminal
- Get onboarding status
- Reset terminal

General endpoint structure:

```
Create:  /api/{acquirer}/{client}/create
Update:  /api/{acquirer}/{client}/update
Amend: /api/{acquirer}/{client}/amend
Deactivate:  /api/{acquirer}/{client}/deactivate/{terminalId}
Get status: /api/{acquirer}/{client}/status/{requestId}
Reset: /api/{acquirer}/{client}/reset/{terminalId}
```

Corresponding parameters will be provided by Rubean during initial onboarding setup

Technology

- JSON-based
- HTTPS protocol with basic authorization. Please contact Rubean support (support@rubean.com) to get credentials
- RESTful web service

Authentication

A basic authentication method is used. Please request it from your Rubean contact.

Notations

Data attributes and Format

Notation	Definition
A	Alphabetic characters
N	Numeric characters
AN	Alphabetic and numeric characters
ANS	Alphabetic, numeric and special characters
ANS	Alphabetic, numeric and special characters
8	Fixed length of 8 characters
..50	Variable length of up to 50 characters
DD	Day
MM	Month
YYYY	Year
HH	Hour
MM	Minute
SS	Second

Occurances

Notation	Definition
M	Mandatory. Required to be present in the message
O	Optional. Not required, but can be provided by the requester to fulfil desired use case
C	Conditional. Required under specific conditions, described for particular data element

Create Terminal

HTTP POST

Environment	Endpoint
QA	https://onboarding-service.{instance}.qa.rubean.io/api/{acquirer}/{client}/create
PROD	https://onboarding-service.{instance}.phonepos.online/api/{acquirer}/{client}/create

> ⓘ **CLIENT**
>
> parameter "client" could be skipped in case terminal is to be onboarded on acquirer level which would mean, that the particular client has no access to any other terminals that were created not under his identification.

Request

Request Message Structure

```
{
  "id" : "ID",
  "timestamp" : "TS",
  "terminal" : {
    "terminalId" : "TID",
    "hardwareId" : "MDM hardwareId",
    "entity" : {
      "type" : "COMPANY",
      "name" : "CompanyName",
      "subEntity" : {
        "type" : "BRANCH",
        "name" : "BranchName",
        "contact" : {
          "name" : "Support at Rubean AG",
```

```
        "email" : "support@rubean.com",
        "phoneNumber" : "+491510123401234",
        "address" : {
          "street" : "Kistlerhofstrasse",
          "street2" : "168",
          "city" : "Munich",
          "postalCode" : "81379",
          "countryCode" : "DE"
        }
      }
    }
  },
  "currency" : "EUR",
  "language" : "de",
  "countryCode" : "DE",
  "merchantId" : "000105000001756",
  "merchantCategoryCode" : "5610",
  "transactionTypes" : [ "PURCHASE", "REFUND", "REVERSAL" ],
  "capabilities" : {
    "PIN" : "true"
  },
  "receiptLines" : [ "RUBEAN SOFTPOS", "Kistlerhofstraße 168", "81379 München"
],
  "activationInfo" : {
    "name": "USER NAME",
    "code" : "AI_CODE",
    "smsCode" : "AI_SMS_CODE",
    "email" : "contact@mail.com",
    "phoneNumber" : "+491510123401234",
    "token" : "ACTIVATION_TOKEN"
  },
  "configurations" : [ {
    "cardType" : "VISA",
    "values" : [ {
      "key" : "MCC",
      "value" : "5610"
    } ]
  }, {
    "cardType" : "UNDEFINED",
    "values" : [ {
      "key" : "BOOKING",
      "value" : "true"
    } ]
  }, {
    "cardType" : "MAESTRO",
    "values" : [ {
```

```
            "key" : "MCC",
            "value" : "5610"
        } ]
    } ]
}
}
```

> **① INFO**
>
> Terminal ID: In case the value is not provided by the requestor, a value will be generated by ROS and returned by onboarding service as part of the response. Otherwise, the requestor can explicitly send the desired TID in the request body.

> **⚠ WARNING**
>
> Knowing Terminal ID is crucial for subsequent operations as update/delete/reset.

Minimal Request Message

```
{
  "terminal": {
    "terminalId": "TID",
    "countryCode": "DE",
    "merchantId": "000105000001756",
    "activationInfo": {
      "code": "AI_CODE",
      "email": "contact@mail.com"
    }
  }
}
```

Minimal Request(unassisted enrollment)

```
{
    "terminal": {
        "merchantId": "000105000001756",
        "hardwareId": "56797fc2e88f5eec"
    }
}
```

Parameter	Fromat	Occurance	Description
id	e.g. 6e8fb61c-e97c-4ed9-a4e5-2450058afd33	O	External Id generated and maintained by a requestor. This is used in the case that a response was not delivered by ROS in a given time (a typical time-out scenario)
terminal	collection	M	A collection of parameters required to on-board a single terminal
terminal.terminalId	AN 8	O	The terminal can be generated by the requestor or assigned by ROS from a terminal pool for a given acquirer (configuration)

Parameter	Fromat	Occurance	Description

terminal.hardwareId	AN	C	MDM hardware identification. Required in case when unassisted enrollment program is used. Hardware ID is unique and can be assigned only to one terminal at particular moment of time. If during creation/update there's another terminal with such hardwareId, that terminal will be deactivated and hardwareId will be unassigned.
terminal.entity	collection	O	This is a business entity that shall operate the terminal. The collection is required only for internal purposes. It can be replaced with the data provided for requestor. This means that a set of terminals will be created under one company. If properly populated, the data can be used for the aggregation, statistics and presentation on the portal. See Terminal.entity
terminal.currency	AN 3 (ISO currency code)	O	This is a default terminal ISO 4217 currency
terminal.language	AN 2 (ISO	O	Language, ISO 639-1: two-

Parameter	Fromat	Occurance	Description
	639-1)		letter code
terminal.merchantId	AN ..15	M	Merchant id - a contract between the acquirer and a merchant. **Note:** Non ISO based acquirer hosts may support extended MID length, e.g. AN 30
terminal.merchantCategoryCode	AN 4	O	Merchant Category Code (MCC) listed in ISO 18245 for financial services.
terminal.transactionTypes	list of Strings	O	["PURCHASE", "REFUND", "REVERSAL"]
terminal.countryCode	A 2 (ISO 3166-1)	M	Terminal country. This is ISO 3166-1 Alpha-2 code.
terminal.receiptLines	list of Strings	O	Set of optional lines that can be printed on the receipt.
terminal.activationInfo	collection	M	At least one of the personalization methods to be provided
terminal.activationInfo.name	AN	O	User Name
terminal.activationInfo.code	ANS	O	Code / Password for terminal activation
terminal.activationInfo.email	valid email address	C	E-mail address. Required if chosen activation method includes any deliveries to

Parameter	Fromat	Occurance	Description
			email, e.g. activation link, OTP
terminal.activationInfo.phoneNumber	valid mobile phone number	C	Mobile phone number, required in case when terminal is set to use OTP method activation with code delivery via SMS
terminal.activationInfo.token	ANS	O	Can be utilized in case when unassisted enrollment program is used. Must be provided further during terminal activation as additional layer of security.If not provided during create call, it's generated and returned in a response message.
terminal.configurations	collection	O	This is a collection of card type specific parameters that can be required for particular acquirer as MID, MCC code, etc.
terminal.configurations.cardType	ENUM	O	Supported card types: MAESTRO, MASTERCARD, VISA, UNDEFINED - terminal configuration valid for all card types
terminal.configurations.values	list of Configuration values in NVP	O	Supported configuration values: • key = MCC, value = AN 4 (merchant category

Parameter	Fromat	Occurance	Description
			code) • key = MID, value = merchant ID, if different for given card type • key = BOOKING, value = true/false, acquirer specific, valid only for some specific gateways
terminal.capabilities	AN	O	A list with capabilities or features supported on the terminal. Supported capabilities: • PIN = true/false • RECEIPT_TYPE = JSON/TEXT/DEFAULT • REFERENCED_REFUND = true/false

Terminal.entity

Parameter	Fromat	Occurance	Description
entity.type	ENUM	O	Terminal's business entity type: • COMPANY • STORE • BRANCH • MERCHANT • CLIENT
entity.name	AN ..40	CM	Name of terminal's business entity. Required if type

Parameter	Fromat	Occurance	Description
			provided
entity.contact	collection	O	see Terminal.entity.contact
entity.subEntity	collection	O	see Terminal.entity

Terminal.entity.contact

Parameter	Fromat	Occurance	Description
contact.name	AN	O	Name of terminal's business entity contact.
entity.email	valid email address	O	Terminal's owning business entity e-mail address.
contact.phoneNumber	valid phone number	O	Terminal's business entity phone number.
contact.address	collection	O	Contact's address
contact.address.street	AN ..50	O	Contact's street
contact.address.street2	AN ..50	0	Contact's street (2nd line)
contact.address.city	AN ..50	0	Contact's City
contact.address.postalCode	AN ..10	O	Contact's Postal Code
contact.address.countryCode	A 2 (ISO 3166-1)	O	ISO 3166-1 Alpha-2 code.

Response

Successful response message

```json
{
        "id": "3fa85f64-5717-4562-b3fc-2c963f66afa6",
        "terminalId": "12345678",
        "activationCode": "1234567890123" // or          "activationToken": "WdEq3p3EmvL"
        "status": {
                "result": "COMPLETE",
                "timestamp": "2022-03-01T13:00:00Z",
                "uuid": "9a1a37a2-b779-434a-a28b-de98ec692f59",
        "description": "Terminal successfully created"
        }
}
```

Parameter	Fromat	Occurance	Description
id	6e8fb61c-e97c-4ed9-a4e5-2450058afd33	M	Echoes request id as provided by requestor in onboarding request or generated by ROS in case the value was not set.
terminalId	AN 8	M	The terminal can be generated by the requestor or assigned by ROS from a terminal pool for a given acquirer (configuration)
hardwareId	AN	C	MDM hardware id. Provided if client is subscribed for unassisted enrollment program
activationCode	ANS	M	Code / Password for terminal activation. Either the one provided during onboarding or generated by Rubean

Parameter	Fromat	Occurance	Description
activationToken	AN	O	Returned and can be utilized in case when unassisted enrollment program is used.If not provided during create call, it's generated and returned in a response message.
status	collection	M	This is a collection representing the result of the request consisting of a timestamp and a result description.
status.result	ENUM	M	Result code: • COMPLETE • REJECTED • FAILED
status.timestamp	YYYY-MM-DD'THH24:MM:SS:TimeZone	M	e.g. 2022-03-01T13:00:00Z
status.uuid	UUID	M	Request ID as generated by Rubean (ROS).
status.description	AN	O	In case of failure contains a more detailed failure explanation.

Update Terminal

Updates the terminal parameters values that have been previously set by the createRequest message or by the last update. As a result, an already existing terminal is re-onboarded and a new activation will be required if the terminal has been already activated.

HTTP POST

Environment	Endpoint
QA	https://onboarding-service.{instance}.qa.rubean.io/api/{acquirer}/{client}/update
PROD	https://onboarding-service.{instance}.phonepos.online/api/{acquirer}/{client}/update

> ⊘ **CLIENT**
>
> parameter "client" could be skipped in case terminal is to be onboarded on acquirer level which would mean, that the particular client has no access to any other terminals that were created not under his identification.

Request

When sending an update request, the same message structure as createRequest applies with only difference - **terminalId** is mandatory for an update request. It's possible to provide only values that have to be updated, in this case all other values will be obtained from initial create request.

> ⚠ **WARNING**
>
> merchantId cannot be updated in case terminal is already live (there's at least one transaction has been made using this terminal)

Response

The same as the create response.

Amend Terminal

Alters the terminal parameters values that have been previously set by the createRequest message or by the last update. As a result, an already existing live terminal stays operational – no re-onboarding and reactivation is required.

HTTP POST

Environment	Endpoint
QA	https://onboarding-service.{instance}.qa.rubean.io/api/{acquirer}/{client}/amend
PROD	https://onboarding-service.{instance}.phonepos.online/api/{acquirer}/{client}/amend

> ⊘ **CLIENT**
>
> parameter "client" could be skipped in case terminal is to be onboarded on acquirer level which would mean, that the particular client has no access to any other terminals that were created not under his identification.

Request

When sending an amend request, the same message structure as update request applies. Only provided in request values will be patched.

Response

The same as the update response.

Deactivate Terminal

Used to deactivate terminal.

HTTP POST

Environment	Endpoint
QA	https://onboarding-service.{instance}.qa.rubean.io/api/{acquirer}/{client}/deactivate/{terminalId}
PROD	https://onboarding-service.{instance}.phonepos.online/api/{acquirer}/{client}/deactivate/{terminalId}

> ⊘ **CLIENT**
>
> parameter "client" could be skipped in case terminal is to be onboarded on acquirer level which would mean, that the particular client has no access to any other terminals that were created not under his identification.

Response

Successful response message

```
{
        "terminalId": "12345678",
        "status": {
                "result": "COMPLETE",
                "timestamp": "2022-03-01T13:00:00Z",
                "uuid": "9a1a37a2-b779-434a-a28b-de98ec692f59",
        }
}
```

Parameter	Fromat	Occurance	Description
terminalId	AN 8	M	Terminal id that is mirrored from the request
status	collection	M	This is a collection representing the result of the request consisting of a timestamp and a result description.
status.result	ENUM	M	Result code: • COMPLETE: onboarding request finished without problems and terminal is ready to use. • REJECTED: invalid request, e.g. terminalId format error • FAILED: Internal system error • FAILED_TO_COMPLETE: timeout exception
status.timestamp	YYYY-MM-DD'THH24:MM:SS:TimeZone	M	e.g. 2022-03-01T13:00:00Z
status.uuid	UUID	M	Request ID as generated by Rubean (ROS).
status.description	AN	O	In case of failure contains a more detailed failure explanation.

Get Onboarding Status

Used for retrieving an onboarding result/response.

HTTP GET

Environment	Endpoint
QA	https://onboarding-service.{instance}.qa.rubean.io/api/{acquirer}/{client}/create/status/{requestid}
PROD	https://onboarding-service.{instance}.phonepos.online/api/{acquirer}/{client}/status/{requestid}

> ⓘ **CLIENT**
>
> parameter "client" could be skipped in case terminal is to be onboarded on acquirer level which would mean, that the particular client has no access to any other terminals that were created not under his identification.

Parameter	Fromat	Occurance	Description
requestId	ANS 36	M	Either Rubean generated Request id (comes inside create response message) or one provided by requestor in onboarding request

Request Example

Retrieve an onboarding response using Rubean uuid:

https://onboarding-service.{instance}.qa.rubean.io/api/{acquirer}/{client}/status/3fa85f64-5717-4562-b3fc-2c963f66afa6

Retrieve an onboarding response using the externalID:

https://onboarding-service.{instance}.qa.rubean.io/api/{acquirer}/{client}/status/12345678

Response Example

Response Message Structure

```
{
  "id": "string",
  "terminalId": "string",
  "activationCode": "string",
  "status": {
    "result": "COMPLETE",
    "timestamp": "string",
    "uuid": "3fa85f64-5717-4562-b3fc-2c963f66afa6",
    "description": "string"
  }
}
```

Reset Terminal

Triggers terminal re-onboarding, as a result a new activation will be required if the terminal has been already activated. Used instead of update request when only password/activation code is required to change to reinstall and reactivate terminal

HTTP POST

Environment	Endpoint
QA	https://onboarding-service.{instance}.qa.rubean.io/api/{acquirer}/{client}/create/reset/{terminalId}
PROD	https://onboarding-service.{instance}.phonepos.online/api/{acquirer}/{client}/reset/{terminalId}

> ⚠ **CLIENT**
>
> parameter "client" could be skipped in case terminal is to be onboarded on acquirer level which would mean, that the particular client has no access to any other terminals that were created not under his identification.
>
> reset request accepts **hardwareId** instead of **terminalId** in case when only hardwareId is known

Parameter	Fromat	Occurance	Description
code	ANS36	O	It's terminal.activationInfo.code from create request – activation code/password to activate and personalize terminal. Exact code format depends on configured client's password policy
token	ANS36	O	It's terminal.activationInfo.token from create request – activation token for unassisted enrollment flow

Parameter	Fromat	Occurance	Description
reuseData	BOOLEAN	O	Allows to reset terminal, using the same activation code, provided during initial onboarding or last terminal update. Possible values: • true • false