# **API Reference**

# FerryTix

API Version: 1.0.0

This is the api for the FerryTix Passenger Ferry Ticketing System, that is both accessible to the vending machines and to other clients.

#### **CONTACT**

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# **Security and Authentication**

# **SECURITY SCHEMES**

KEY	TYPE	DESCRIPTION
ApiKeyAuth	apiKey	

# **API**

# 1. FAEHRCARD

#### 1.1 GET /faehrCard/{uuid}

Return full details on a single FaehrCard.

# **REQUEST**

#### **PATH PARAMETERS**

NAME	TYPE	DESCRIPTION
*uuid	uuid	

#### **RESPONSE**

STATUS CODE - 200: faehr card found

#### RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WIT	TH BELOW ST	RUCTURE
uuid	string	
ownedBy	string	
balance	integer	
issuedAt	string	
issuedBy	string	

STATUS CODE - 400: invalid id

STATUS CODE - 404: no FaehrCard with given uuid found

#### 1.2 GET /faehrCard/{uuid}/balance

Return a FaehrCard's balance.

# **REQUEST**

#### **PATH PARAMETERS**

NAME	TYPE	DESCRIPTION
*uuid	uuid	

#### **RESPONSE**

STATUS CODE - 200: faehr card found

#### RESPONSE MODEL - application/json

NAME TYPE		DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
balance	intege	r

STATUS CODE - 400: invalid id

STATUS CODE - 404: no FaehrCard with given uuid found

# 1.3 POST /faehrCard/{uuid}/topup

Top up a FaehrCard's balance.

# **REQUEST**

#### **PATH PARAMETERS**

NAME	TYPE	DESCRIPTION
*uuid	uuid	

NAME	TYPE	DESCRIPTION
uuid	string	
for	string	UUID of the FaehrCard the TopUp is for.
issuedAt	string	
issuedBy	string	The id of the vending machine that the topup has been purchased at. Is null if purchased online
amount	integer	
paid	integer	
payment	object	
uuid	string	
amount	integer	
method	enum	ALLOWED:FährCard, Cash, ECCard, BankTransfer, PayPal
details	object	
ONE:OF	object	
OPTION:1	object	
uuid	string	UUID of the FaehrCard charged.
OPTION:2	object	
denominations	array	
change	array	
OPTION:3	object	
name	string	
OPTION:4	object	
name	string	
OPTION:5	object	

NAME	TYPE	DESCRIPTION
name	string	
initial	boolean	Describes whether the top up was done when the card was issued
saleCounter	integer	
signature	string	

STATUS CODE - 201: faehr card topped up

RESPONSE MODEL - application/json

NAME TYPE DESCRIPTION		DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
newbalance	intege	2 r

STATUS CODE - 400: invalid id

STATUS CODE - 404: no FaehrCard with given uuid found

# 2. MACHINES

#### 2.1 GET /machines

# list all active vending machines

#### **REQUEST**

No request parameters

#### **RESPONSE**

#### STATUS CODE - 200: vending machines listed

#### RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION	
ARRAY OF O	BJECT WITH	H BELOW STRUCTURE	
uuid	string		
publicKey	string		
location	enum	ALLOWED:Bislich,	Xanten

#### 2.2 GET /machines/{uuid}

# returns a single vending machine

# **REQUEST**

#### **PATH PARAMETERS**

NAME	TYPE	DESCRIPTION
*uuid	uuid	

#### **RESPONSE**

#### STATUS CODE - 200: vending machine found

#### RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION	
OBJECT WIT	H BELOW S	TRUCTURE	
uuid	string		
publicKey	string		
location	enum	ALLOWED:Bislich,	Xanten

STATUS CODE - 400: invalid id

STATUS CODE - 404: no machine with given uuid found

# 2.3 GET /machines/{uuid}/status

Returns a single vending machine's status.

# **REQUEST**

#### **PATH PARAMETERS**

NAME	TYPE	DESCRIPTION
*uuid	uuid	

#### **RESPONSE**

STATUS CODE - 200: vending machine found

#### RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
vending	boolean	
batteryCharge	number	
estimatedReceiptPaperFillLevel	number	
receiptPaperRollLength	integer	
cpuTemperature	number	
ticketsSoldToday	object	
withBicycle	integer	
withoutBicycle	integer	
volumeOfSalesToday	integer	
waiting	array	
ticketClass	object	
bicycle	boolean	whether or not a bicycle was carried
return	boolean	whether or not a return trip has been purchased
reduced	boolean	reduced fare for physically disabled persons and children under the age of 14
staff	boolean	only for staff members
waitingSince	string	
saleCounter	integer	Current sale counter. Each vending machine has its own counter, that increases when a sale (TicketSale or TopUp) is completed. The sale counter can't be changed from the outside.

STATUS CODE - 400: invalid id

STATUS CODE - 404: no machine with given uuid found

#### 2.4 PATCH /machines/{uuid}/status

Update machine status manually.

# **REQUEST**

#### **PATH PARAMETERS**

NAME	TYPE	DESCRIPTION
*uuid	uuid	

# REQUEST BODY - application/json

NAME	TYPE	DESCRIPTION
vending	boolean	
batteryCharge	number	
estimatedReceiptPaperFillLevel	number	
receiptPaperRollLength	integer	
cpuTemperature	number	
ticketsSoldToday	object	
withBicycle	integer	
withoutBicycle	integer	
volumeOfSalesToday	integer	
waiting	array	
ticketClass	object	
bicycle	boolean	whether or not a bicycle was carried
return	boolean	whether or not a return trip has been purchased
reduced	boolean	reduced fare for physically disabled persons and children under the age of 14
staff	boolean	only for staff members
waitingSince	string	
saleCounter	integer	Current sale counter. Each vending machine has its own counter, that increases when a sale (TicketSale or TopUp) is completed. The sale counter can't be changed from the outside.

# **RESPONSE**

**STATUS CODE - 200:** Updated config of machine.

# RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
vending	boolean	
batteryCharge	number	
estimatedReceiptPaperFillLevel	number	
receiptPaperRollLength	integer	
cpuTemperature	number	
ticketsSoldToday	object	
withBicycle	integer	
withoutBicycle	integer	
volumeOfSalesToday	integer	
waiting	array	
ticketClass	object	

NAME	TYPE	DESCRIPTION
bicycle	boolean	whether or not a bicycle was carried
return	boolean	whether or not a return trip has been purchased
reduced	boolean	reduced fare for physically disabled persons and children under the age of 14
staff	boolean	only for staff members
waitingSince	string	
saleCounter	integer	Current sale counter. Each vending machine has its own counter, that increases when a sale (TicketSale or TopUp) is completed. The sale counter can't be changed from the outside.

STATUS CODE - 404: no machine with given uuid found

#### 2.5 GET /machines/{uuid}/commands

Retrieve a command for a vending machine with the given id. May return after an undefined timeout

#### **REQUEST**

#### **PATH PARAMETERS**

NAME	TYPE	DESCRIPTION
*uuid	uuid	

#### **RESPONSE**

STATUS CODE - 200: command found

RESPONSE MODEL - application/json

STATUS CODE - 400: invalid id

STATUS CODE - 404: no machine with given uuid found

#### 2.6 POST /machines/{uuid}/commands

Execute a command on a single vending machine.

### **REQUEST**

#### **PATH PARAMETERS**

NAME	TYPE	DESCRIPTION
*uuid	uuid	

**REQUEST BODY - application/json** 

#### **RESPONSE**

#### **STATUS CODE - 201:** Sent command to machine.

#### RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
vending	boolean	
batteryCharge	number	
estimatedReceiptPaperFillLevel	number	
receiptPaperRollLength	integer	
cpuTemperature	number	
ticketsSoldToday	object	
withBicycle	integer	
withoutBicycle	integer	
volumeOfSalesToday	integer	
waiting	array	
ticketClass	object	
bicycle	boolean	whether or not a bicycle was carried
return	boolean	whether or not a return trip has been purchased
reduced	boolean	reduced fare for physically disabled persons and children under the age of 14
staff	boolean	only for staff members
waitingSince	string	
saleCounter	integer	Current sale counter. Each vending machine has its own counter, that increases when a sale (TicketSale or TopUp) is completed. The sale counter can't be changed from the outside.

STATUS CODE - 400: invalid id

STATUS CODE - 404: no machine with given uuid found

# 2.7 PATCH /machines/defaultConfig

Change the default configuration for all vending machines.

# **REQUEST**

NAME	TYPE	DESCRIPTION
forMachine	string	The machine id for which to apply these settings. May be left empty in a POST request if applicable for all machines.
maxBicycles	integer	
maxBicyclesTolerance	integer	Tolerance fot the maximal amount of passengers carrying a bicycle in the waiting area. This will determine, to what extend the maximum may be exceeded in some situations.
maxPassengers	integer	
maxPassengersTolerance	integer	Tolerance fot the maximal amount of passengers in the waiting area. This will determine, to what extend the maximum may be exceeded in some situations.
fares	array	
ticketClass	object	

NAME	TYPE	DESCRIPTION
bicycle	boolean	whether or not a bicycle was carried
return	boolean	whether or not a return trip has been purchased
reduced	boolean	reduced fare for physically disabled persons and children under the age of 14
staff	boolean	only for staff members
fare	integer	

**STATUS CODE - 200:** Updated default config of all machines.

# RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCT	URE	
forMachine	string	The machine id for which to apply these settings. May be left empty in a POST request if applicable for all machines.
maxBicycles	integer	
maxBicyclesTolerance	integer	Tolerance fot the maximal amount of passengers carrying a bicycle in the waiting area. This will determine, to what extend the maximum may be exceeded in some situations.
maxPassengers	integer	
maxPassengersTolerance	integer	Tolerance fot the maximal amount of passengers in the waiting area. This will determine, to what extend the maximum may be exceeded in some situations.
fares	array	
ticketClass	object	
bicycle	boolean	whether or not a bicycle was carried
return	boolean	whether or not a return trip has been purchased
reduced	boolean	reduced fare for physically disabled persons and children under the age of 14
staff	boolean	only for staff members
fare	integer	

# 2.8 PATCH /machines/{uuid}/config

Change the configuration of a vending machine.

# **REQUEST**

#### **PATH PARAMETERS**

NAME	TYPE	DESCRIPTION
*uuid	uuid	

NAME	TYPE	DESCRIPTION
forMachine	string	The machine id for which to apply these settings. May be left empty in a POST request if applicable for all machines.
maxBicycles	integer	
	integer	

NAME	TYPE	DESCRIPTION
maxBicyclesTolerance		Tolerance fot the maximal amount of passengers carrying a bicycle in the waiting area. This will determine, to what extend the maximum may be exceeded in some situations.
maxPassengers	integer	
maxPassengersTolerance	integer	Tolerance fot the maximal amount of passengers in the waiting area. This will determine, to what extend the maximum may be exceeded in some situations.
fares	array	
ticketClass	object	
bicycle	boolean	whether or not a bicycle was carried
return	boolean	whether or not a return trip has been purchased
reduced	boolean	reduced fare for physically disabled persons and children under the age of 14
staff	boolean	only for staff members
fare	integer	

# **STATUS CODE - 200:** Updated config of machine.

# RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCT	URE	
forMachine	string	The machine id for which to apply these settings. May be left empty in a POST request if applicable for all machines.
maxBicycles	integer	
maxBicyclesTolerance	integer	Tolerance fot the maximal amount of passengers carrying a bicycle in the waiting area. This will determine, to what extend the maximum may be exceeded in some situations.
maxPassengers	integer	
maxPassengersTolerance	integer	Tolerance fot the maximal amount of passengers in the waiting area. This will determine, to what extend the maximum may be exceeded in some situations.
fares	array	
ticketClass	object	
bicycle	boolean	whether or not a bicycle was carried
return	boolean	whether or not a return trip has been purchased
reduced	boolean	reduced fare for physically disabled persons and children under the age of 14
staff	boolean	only for staff members
fare	integer	

# STATUS CODE - 404: no machine with supplied uuid found

# 3. TICKETSALES

# 3.1 POST /ticketSales

# Add a ticket sale.

# **REQUEST**

NAME	TYPE	DESCRIPTION
uuid	string	
issuedBy	string	
issuedAt	string	
returnValid	boolean	
from	enum	ALLOWED:Bislich, Xanten
payment	object	
uuid	string	
amount	integer	
method	enum	ALLOWED:FährCard, Cash, ECCard, BankTransfer, PayPal
details	object	
ONE:OF	object	
OPTION:1	object	
uuid	string	UUID of the FaehrCard charged.
OPTION:2	object	
denominations	array	
change	array	
OPTION:3	object	
name	string	
OPTION:4	object	
name	string	
OPTION:5	object	
name	string	
positions	array	
fare	object	
ticketClass	object	
bicycle	boolean	whether or not a bicycle was carried
return	boolean	whether or not a return trip has been purchased
reduced	boolean	reduced fare for physically disabled persons and children under the age of 14
staff	boolean	only for staff members
fare	integer	
count	integer	

NAME	TYPE	DESCRIPTION
saleCounter	integer	
signature	string	

STATUS CODE - 201: The ticket sale has been recorded, if applicable, payment methods have been charged

#### 3.2 DELETE /ticketSales/{uuid}/invalidateReturn

Invalidate a return ticket.

### **REQUEST**

#### **PATH PARAMETERS**

NAME	TYPE	DESCRIPTION
*uuid	uuid	

#### **RESPONSE**

**STATUS CODE - 204:** The return ticket has been invalidated.

**STATUS CODE - 402:** The ticket with the uuid was found, but it isn't a valid return ticket.

**STATUS CODE - 404:** No Ticket with the supplied uuid has been found.