Use Case

Electronic Payment Server

Indoor Prepay for Fuel

March 6, 2023

API Version 1.0

Document Summary

This document describes the use case for prepaying for a fuel transaction inside the store. The use case is strictly for payment.

Copyright © IFSF, CONEXXUS, INC., 2023, All Rights Reserved

Contributors

Clerley Silveira, Conexxus
Darryl Miller, Verifone
Brian Russell, Verifone
Ian Brown, IFSF
Sue Chan, W. Capra
Linda Toth, Conexxus
Casey Brant, Conexxus

Revision History

Revision Date	Revision Number	Revision Editor(s)	Revision Changes
March 6, 2023	Version 1.0	Kim Seufer, Conexxus	Final Release Version 1.0
October 24, 2022	Draft 1.0	Kim Seufer, Conexxus	Resolved comments from legal review
September 6, 2022	Draft 0.5	Casey Brant, Conexxus	Removed references to Loyalty and added FDC wording to assumptions section.
August 10, 2022	Draft 0.4	Casey Brant, Conexxus	Accepted changes in preparation for legal review
July 22, 2022	Draft 0.3	Sue Chan, W. Capra	Clarifications/formatting
July 12, 2022	Draft 0.2	Sue Chan, W. Capra	Updates: watermark, copyrights, formatting
May 17 2022	Draft 0.1	Sue Chan, W. Capra	Initial Use Case

Copyright © IFSF, CONEXXUS, INC., 2023, All Rights Reserved

Copyright Statement

Copyright © IFSF, CONEXXUS, INC., 2023, All Rights Reserved

The content (content being images, text or any other medium contained within this document which is eligible of copyright protection) are jointly copyrighted by Conexxus and IFSF. All rights are expressly reserved.

IF YOU ACQUIRE THIS DOCUMENT FROM IFSF. THE FOLLOWING STATEMENT ON THE USE OF COPYRIGHTED MATERIAL APPLIES:

You may print or download to a local hard disk extracts for your own business use. Any other redistribution or reproduction of part or all of the contents in any form is prohibited.

You may not, except with our express written permission, distribute to any third party. Where permission to distribute is granted by IFSF, the material must be acknowledged as IFSF copyright and the document title specified. Where third party material has been identified, permission from the respective copyright holder must be sought.

You agree to abide by all copyright notices and restrictions attached to the content and not to remove or alter any such notice or restriction.

Subject to the following paragraph, you may design, develop and offer for sale products which embody the functionality described in this document.

No part of the content of this document may be claimed as the Intellectual property of any organisation other than IFSF Ltd and Conexxus, Inc, and you specifically agree not to claim patent rights or other IPR protection that relates to:

a) the content of this document; or
b) any design or part thereof that embodies the content of this document whether in whole or part.

For further copies and amendments to this document please contact: IFSF Technical Services via the IFSF Web Site (www.ifsf.org).

IF YOU ACQUIRE THIS DOCUMENT FROM CONEXXUS, THE FOLLOWING STATEMENT ON THE USE OF COPYRIGHTED MATERIAL APPLIES:

Conexxus members may use this document for purposes consistent with the adoption of the Conexxus Standard (and/or the related documentation), as detailed in the Implementation Guide; however, Conexxus must pre-approve any inconsistent uses in writing.

Except in the limited case set forth explicitly in this Copyright Statement, the Member shall not modify, adapt, merge, transform, copy, or create derivative works of the Conexxus Standard, including the documentation suite and the application programing interface ("API"). Conexxus recognizes that the API may include multiple Definition Files, and accordingly recognizes and agrees that the Member may implement one, some, or all Definition Files within the API, unless otherwise specified in the Implementation Guide, provided that each Definition File implemented is implemented in full. Here implementing a Definition File in full means that all functionality defined by the Conexxus Standard for the Definition File is implemented. Regardless of whether the Member implements one, some, or all Definition Files, the Member agrees to abide by all requirements under this Copyright Statement for each of the Definition Files implemented.

Note that some functionality within a Definition File is specified for predefined error or non-implementation codes to be returned. For functionality where such predefined codes are specified, returning such a predefined code constitutes an implementation. However, in such cases, a Member may not return codes or values different from the predefined codes, nor may the Member simply not implement the functionality, as this would create a Definition File that was not fully implemented as required under this Copyright Statement.

The Member hereby waives and agrees not to assert or take advantage of any defense based on copyright fair use. The Member, as well as any and all of the Member's development partners who are responsible for implementing the Conexxus Standard for the Member or may have access to the Conexxus Standard, must be made aware of, and agree to comply with, all requirements under this Copyright Statement prior to accessing any documentation or API.

Conexxus recognizes the limited case where a Member wishes to create a derivative work that comments on, or otherwise explains or assists in its own implementation, including citing or referring to the standard, specification, code, protocol, schema, or guideline, in whole or in part. The Member may do so **ONLY** for the purpose of explaining or assisting in its implementation of the Conexxus Standard and the Member shall acquire no right to ownership of such derivative work. Furthermore, the Member may share such derivative work **ONLY** with another Conexxus Member who possesses appropriate document rights or with an entity that is a direct contractor of the Conexxus Member who is responsible for implementing the standard for the Member. In so doing, a Conexxus Member shall require its development partners to download Conexxus documents, API, and schemas directly from the Conexxus website. A Conexxus Member may not furnish this document in any form, along with any derivative works, to non-members of Conexxus or to Conexxus Members who do not possess document rights or who are not direct contractors of the Member, including to any direct contractor of the Member who does not agree in writing to comply with the terms of this Copyright Statement. A Member may demonstrate its Conexxus membership at a level that includes document rights by presenting an unexpired digitally signed Conexxus membership certificate.

Copyright © IFSF, CONEXXUS, INC., 2023, All Rights Reserved

This document may not be modified in any way, including removal of the copyright notice or references to Conexxus. However, a Member has the right to make draft changes to schema or API code for trial use, which must then be submitted to Conexxus for consideration to be included in the existing standard. Translations of this document into languages other than English shall continue to reflect the Conexxus copyright notice.

The limited permissions granted above are perpetual and will not be revoked by Conexxus, Inc. or its successors or assigns, except in the circumstance where an entity, who is no longer a member in good standing but who rightfully obtained Conexxus Standards as a former member, is acquired by a non-member entity. In such circumstances, Conexxus may revoke the grant of limited permissions or require the acquiring entity to establish rightful access to Conexxus Standards through membership.

Disclaimers

IF YOU ACQUIRE THIS DOCUMENT FROM CONEXXUS, THE FOLLOWING DISCALIMER STATEMENT APPLIES:

Conexxus makes no warranty, express or implied, about, nor does it assume any legal liability or responsibility for, the accuracy, completeness, or usefulness of any information, product, or process described in these materials, even if such liability was disclosed to Conexxus or was foreseeable. Although Conexxus uses commercially reasonable best efforts to ensure this work product is free of any encumbrances from third-party intellectual property rights (IPR), it cannot guarantee that such IPR does not exist now or in the future. Conexxus further notifies each user of this standard that its individual method of implementation may result in infringement of the IPR of others. Accordingly, each user is encouraged to seek legal advice from competent counsel to carefully review its implementation of this standard and obtain appropriate licenses where needed.

Copyright © IFSF, CONEXXUS, INC., 2023, All Rights Reserved

Project

Electronic Payment Server

Use Case Name

Indoor Prepay for Fuel

Category

Processes

Description/Context of Use

Consumer pre-pays for fuel inside the store.

Scope

The scope includes the Point Of Sale (POS), the Electronic Payment Server (EPS), and the Outdoor Payment Terminal (OPT).

Level

User

Actors

- Consumer
- Cashier
- OPT – Outdoor Payment Terminal (Outdoor Sales Processor (OSP) and Point of Interaction (POI))
- POS – Point of Sale
- POI – Point of Interaction
- FDC – Forecourt Device Controller (Optionally)
- EPS – Electronic Payment Server
- PFEP – Payment Front End Processor
- Site System – (This could be in the form of FDC)

Stakeholders and Interests

- Merchant
- Consumer
- Payment Front-End Processor
- EPS/POS Vendors

Copyright © IFSF, CONEXXUS, INC., 2023, All Rights Reserved

Trigger

Consumer needs to refuel the tank and goes inside the store to pre-pay for fuel.

Assumptions

- POS/EPS/POI systems are using IFSF/Conexxus standard API.
- There is an OPT at the fueling position and it performs both outdoor sales processing (OSP) and point-of-interaction (POI) functions.
- An FDC may be utilized in some implementations. Communication with an FDC is out of scope of the EPS API standard. Please refer to the appropriate FDC specification for interface details.

Pre-Conditions

- The fueling position is available and operational.
- The system architecture at the site uses an EPS.
- There is connectivity from the POS, POI and OPT or FDC to the EPS.

Minimal Guarantees

- The consumer will be properly charged.
- The consumer will not be able to walk away with free fuel.

Success Guarantees

- The consumer will dispense fuel and it will be properly charged for it.

Normal Flow

1. The consumer goes inside to prepay for fuel. The consumer provides the fueling point and the desired amount of the fuel prepay.
2. The cashier rings up the prepay on the fueling point for the desired amount.
3. The POS sends an authorization transaction to the EPS with the desired fuel, fueling point and fueling amount.
   <Alternate Flow> A1. POS Sends Card Read First
4. The EPS acquires card information from the consumer via the POI.
   <Alternate Flow> A2. This Site System is Operating with an FDC
   <Alternate Flow> A3. Prompting via the POI
5. The EPS formats an authorization request and send it to the PFEP.
6. The PFEP authorizes the transaction and returns the approved amount to the EPS.
   <Exception Flow> E1. Authorization Declined
   <Exception Flow> E2. Authorization Times-Out

Copyright © IFSF, CONEXXUS, INC., 2023, All Rights Reserved

7. The EPS responds to the POS and with the Site System authorizes the dispenser for the desired or approved amount.
8. The consumer dispenses fuel.
9. The consumer hangs up the nozzle; the OPT is notified.
10. The OPT sends a financial advice request to the EPS. The request contains the amount dispensed and a link to the original transaction.
    <Alternate Flow> A4. The Request is sent by the FDC
11. The EPS pulls information from the original transaction.
12. The EPS formats a Financial Advice (Completion) and sends the request to the PFEP.
13. The PFEP approves the Financial Advice.
    <Alternate Flow> A5. Financial Advice Declined
    <Alternate Flow> A6. Financial Advice Times-Out
14. The EPS receives the response and formats the network portion of the receipt.
15. The EPS sends receipt to OPT via event.
16. The EPS replies to the Financial Advice request from the OPT.
17. The entire system is ready for another consumer.

Alternate Flow(s)

A1 POS Sends Card Read First

A1.1 From Normal Flow Step 3. POS sends a card read message to the EPS.
A1.2 The EPS acquires the card data via the POI.
A1.3 The EPS sends the card data back to the POS.
A1.4 The POS sends a card payment to EPS containing items to purchase and tender amount.
A1.5 Continue with Normal Flow Step 4.

A2 The Site System is Operating with an FDC

A2.1 From Normal Flow Step 4. If the Site-System is operating with an FDC, that FDC device may read the card information from the OPT.
A2.2 Return to Normal Flow Step 5.

A3 Prompting via the OPT

A3.1 From Normal Flow Step 4. Based on results of parsing, perform consumer prompting via the OPT. (e.g., Odometer, Driver ID, Zip Code)
A3.2 Return to Normal Flow Step 5.

A4 The Request is sent by the FDC

A4.1 From Normal Flow Step 10. Depending on how the site operates, that function could be performed by the FDC.
A4.2 Return to Normal Flow Step 11.

A5 Financial Advice Declined

A5.1 From Normal Flow Step 13. The PFEP declines the financial advice.
A5.2 The EPS logs the decline for manual reviewal and submission.
A5.3 Return to Normal Flow Step 14.

Copyright © IFSF, CONEXXUS, INC., 2023, All Rights Reserved

A6 Financial Advice Times-Out

A6.1 From Normal Flow Step 13. The financial advice times-out from the PFEP.
A6.2 The EPS places the financial advice in Store & Forward to resend when the connection is reconnected.
A6.3 Return to Normal Flow Step 14.

Exception Flow(s)

E1 Authorization Declined

E1.1 From Normal Flow Step 6. The PFEP declines the authorization.
E1.2 The EPS/OPT/POS cancels the transaction.
E1.3 End of Use Case.

E2 Authorization Times-Out

E2.1 From Normal Flow Step 6. The authorization times-out from the PFEP.
E2.2 The EPS sends an authorization reversal to the PFEP.
E2.3 The EPS/OPT/POS cancels the transaction.
E2.4 End of Use Case.

Extension Points

None

Related Use Cases

None

Data Requirements and Instance Documents

None

Miscellaneous

None

Open Issues

None

Copyright © IFSF, CONEXXUS, INC., 2023, All Rights Reserved