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Rezolve Overview – Payment Flows

Version 1.7

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Introduction to Rezolve

Rezolve™ is a ground-breaking mobile-payments SDK and platform that allows banks, mobile network operators, retailers, media companies and other mobile consumer audience owners to deliver rich and engaging consumer experiences to their users. With the Rezolve Inside™ SDK embedded in a host mobile app, consumers can pay bills, top-up mobile devices, and shop for retail products and services with simple navigation and a 'scan-and-tap' on their mobile device. By combining the native capture mechanisms of the mobile device – camera, microphone and location awareness – with a mobile wallet and Rezolve's powerful merchant integration technologies, Rezolve turns any mobile device into an active engagement tool for shopping and for managing consumer mobility. The consumer's experience is intuitive, fast and secure, while Rezolve orchestrates all user flows, data flows, order creation and payments, integrating to merchant commerce platforms and payment providers as needed. With Rezolve Inside™, the host app owner benefits from new lines of consumer engagement and participates in transaction revenues, without having to develop code, host operations, or manage security.

Introduction to Payment Flows in Rezolve

In the context of this document, a Payment Flow indicates the series of steps that comprise the system interactions from initiation to completion of a payment transaction in Rezolve. The payment transaction itself exist within the context of the whole end-to-end consumer user process that encompasses user interactions that precede the payment transaction, and user interactions that follow the payment transaction. The pre-payment interactions can include, but are not limited to, such activities as: opening the app, scanning a Shoppable Ads trigger, browsing the Rezolve Mall, checking a 'shopping cart', modifying user account details, and more. In this document, the Payment Flows are described from the action of 'GetProductInfo'. GetProductInfo represents an API call that retrieves product information including name, description, images, base pricing, and other elements which are required to display a specific product offer to the end user. For more information about the interactions that surround Payment Flows, see the documentation concerning *Shoppable Ads User Experience*, and *Mall User Experience*.

Merchant Integration

For the Rezolve mobile commerce process to function end-to-end Rezolve connects with Merchants' commerce systems and their payment providers' systems for the following purposes:

- Getting and updating product information
- Creating and updating shopping carts
- Placing orders
- Processing payments

The two primary models for these connections are the Rezolve Merchant API and RAIN™ (Resolve Artificial Intelligence Network). Both models can exist within the same Rezolve implementation, such that some Merchants are connected via RAIN and others via the Merchant API.

Where the connection is via API, Rezolve supports a variety of Payment Flows, each suited to the needs and limitations of different Merchants' business processes and systems. They are termed as follows:

- One Step
- Two Step
- Three Step

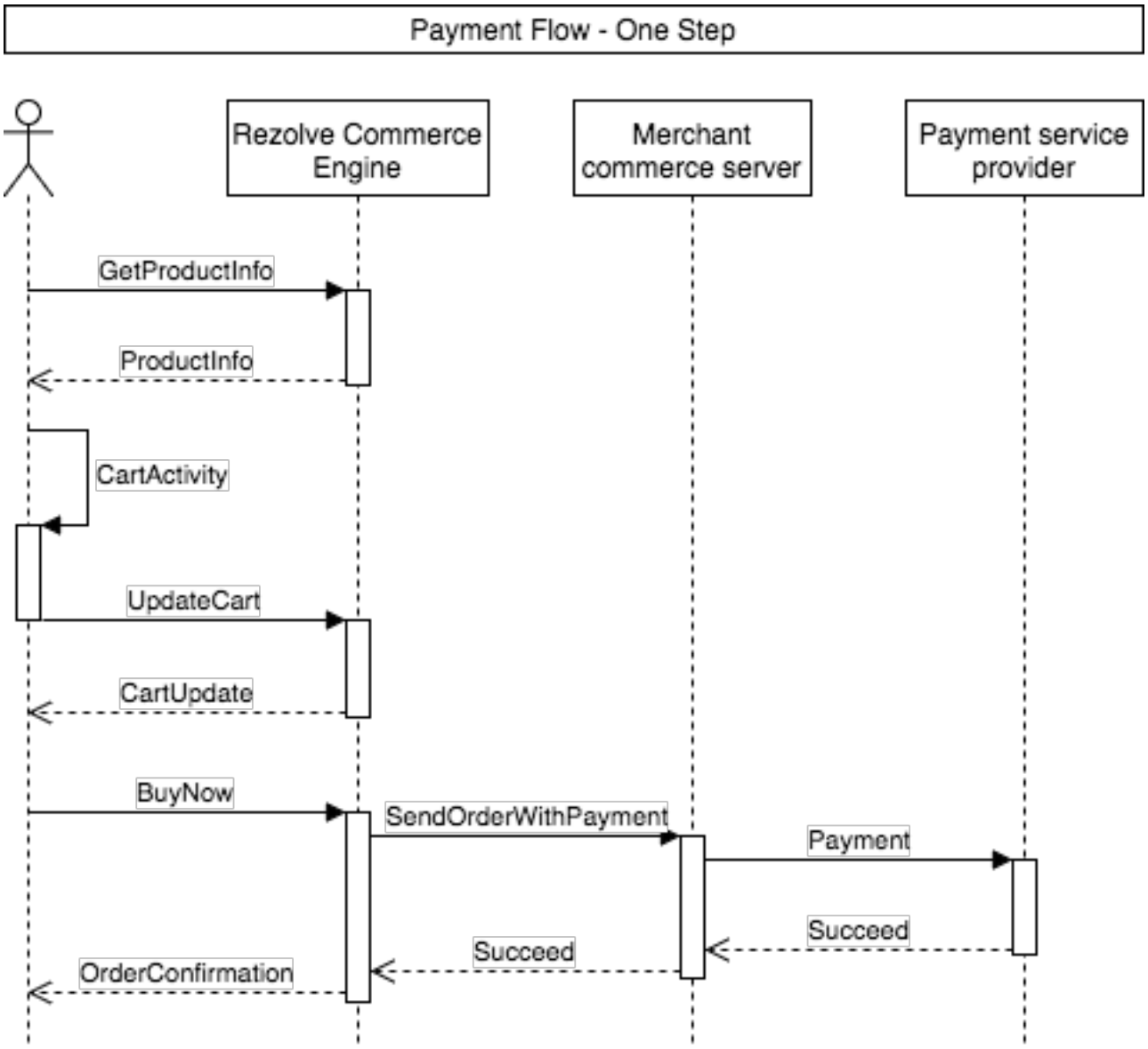
The *One*, *Two*, and *Three* step notations refer to the number of communication steps in the order and payment process between the Rezolve Commerce Engine, the Merchant commerce server, and the Payment service provider. Specifically, some Merchant commerce servers can accept the order *and* payment information in one API call (*One step*). Some require the payment transaction to be processed first, *and then* the order to be processed only if payment succeeds (*Two step*). And some require a *provisional* order to be placed, *then* the payment to be processed, *and then*, if the payment succeeds, the provisional order to be confirmed (*3 Step*).

One Step Payment Flow

The *One Step* Payment Flow is used where Merchants' commerce servers can accept the order and payment information in one transaction.

In this case the Rezolve Commerce Server uses a single API call to send order and payment details to the Merchant's commerce server, and the Merchant commerce server returns a *succeed* or *fail* response. The manner and sequence in which the Merchant's commerce server handles the order and payment transactions need not be known to the Rezolve Commerce engine, which needs only know that each order has succeeded or failed.

Where the one step succeeds the end user receives a positive confirmation that the order succeeded, and where the one step fails the end user receives a positive confirmation that the order failed.



Two Step Payment Flow

The *Two Step* Payment Flow is used where Merchants' commerce servers require each payment transaction to be processed (and succeed) prior to processing the order. A common example of this case is where a Merchant uses hosted payment pages* for the payment processing.

In this case the Rezolve Commerce Server uses a *first* API call to send the payment transaction to the payment service provider which responds with a *succeed* or *fail*, *and*, if the payment transaction succeeds, a *second* API call is used to send the order to the Merchant's commerce server. In the case where the order transaction (the second API call) fails, the initial payment transaction is reversed.

Where the final step succeeds the end user receives a positive confirmation that the order succeeded, and where the final step fails the end user receives a positive confirmation that the order failed.

** Hosted Payment Pages are frequently used on merchants' e-commerce websites where the payment service provider supplies the user interface for payment processing. In this case the user interface is often presented in an iframe or lightbox within the merchant's e-commerce website so that the merchant is absolved from the regulatory and security responsibility of handling the cardholder data. The end user is seamlessly directed from the merchant's e-commerce website to the (service provider-hosted payment pages where they complete the payment details before being seamlessly redirected back to the merchant's e-commerce website for their final order confirmation. In the best UI implementations of this model the consumer may be unaware that any third party was involved in the process, assuming that they were dealing direct with the merchant at all times.*

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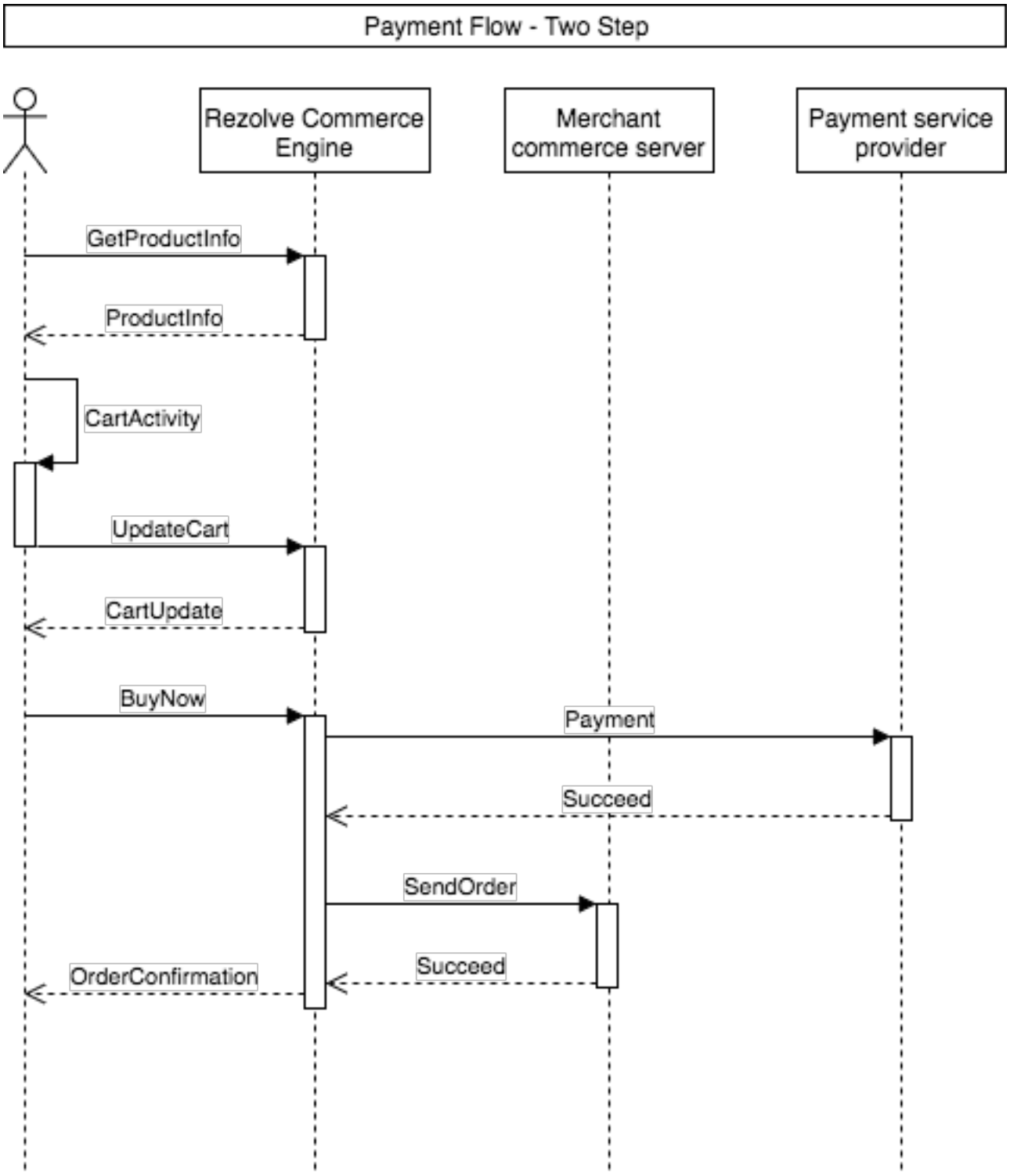
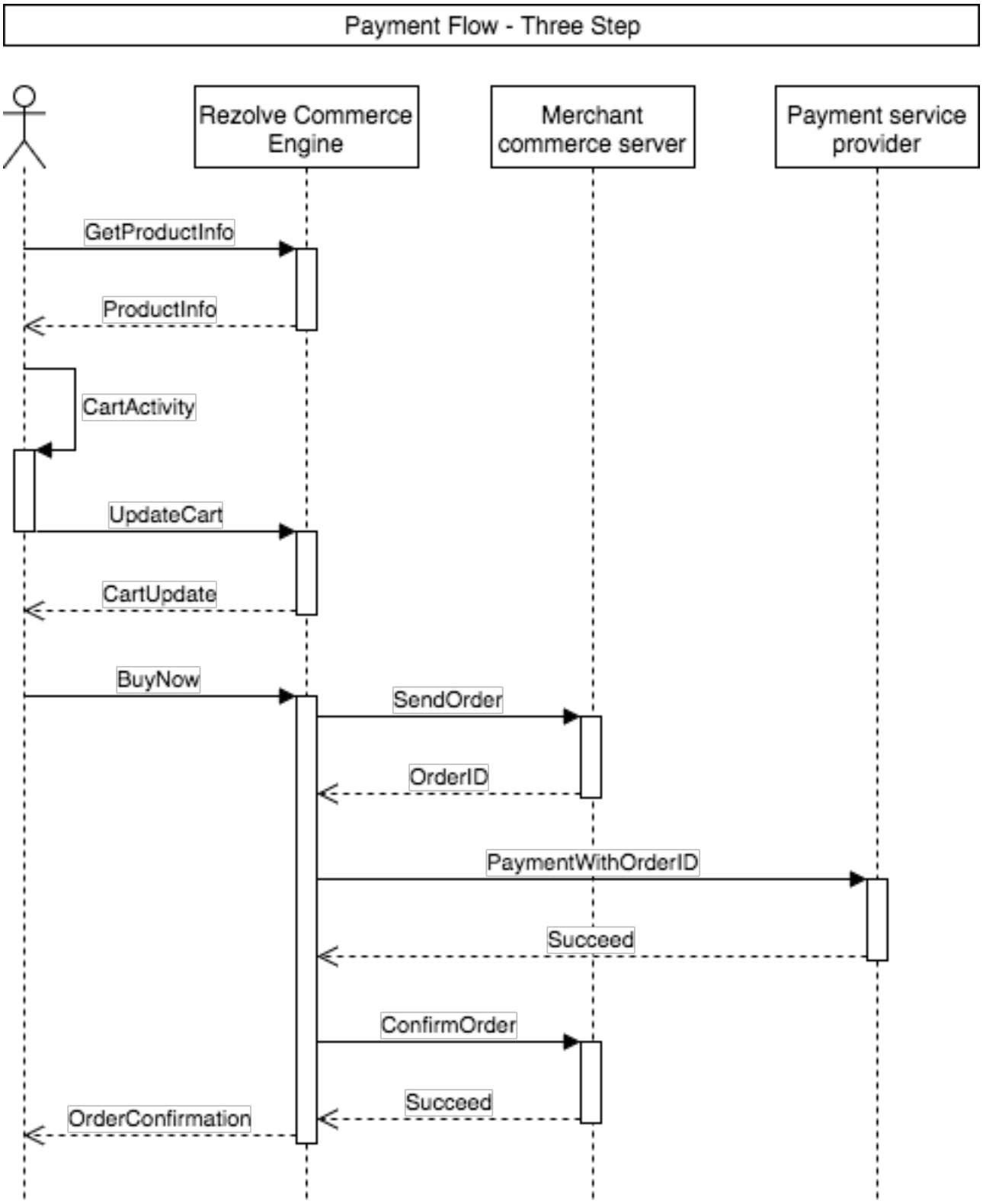


Three Step Payment Flow

The *Three Step* Payment Flow is used where Merchants' commerce servers require each payment transaction to be processed (and succeed) prior to processing the order *and* where the Payment service provider requires an order ID to be presented with the payment transaction.

In this case the Rezolve Commerce Server uses a *first* API call to place a provisional order with the Merchant's commerce server and receive an order ID, *then* a *second* API call to send the payment transaction (including the order ID) to the payment service provider which responds with a *succeed* or *fail*, *and*, if the payment transaction succeeds, a *third* API call is used to send a confirmation of the successful payment against the specific order ID to the Merchant's commerce server to that the order is made firm. In the case where the payment transaction (the second API call) fails, the initial order is released. In the case where the final order (the third API call) fails, the payment transaction is reversed.

Where the final step succeeds the end user receives a positive confirmation that the order succeeded, and where the final step fails the end user receives a positive confirmation that the order failed.



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