Online Payments Processing Platform

Owner: A development team
Reviewer: A security architect
Contributors: development engineers, product managers, security architects
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Executive Summary

High level system description

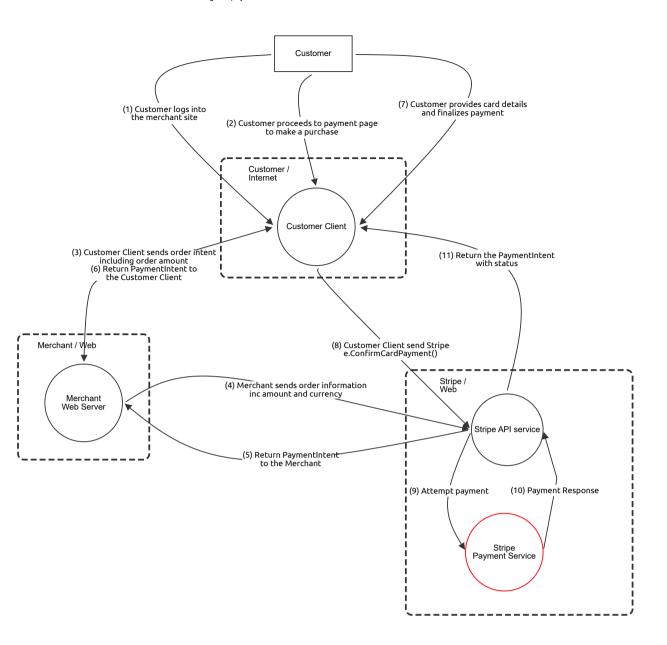
This threat model has been provided by the OWASP Threat Model Cookbook: threat-model-cookbook/Flow Diagram/payment

Summary

Total Threats	1
Total Mitigated	0
Total Open	1
Open / Critical Severity	0
Open / High Severity	1
Open / Medium Severity	0
Open / Low Severity	0

Payment

Demo threat model for an online Payments Processing Platform provided by the OWASP Threat Model Cookbook: threat-model-cookbook/Flow Diagram/payment



Payment

Casconic	г (Actor)						
Number	Title	Туре	Severity	Status	Score	Description	Mitigations
Custome	r Client (P	Process)					
Number	Title	Туре	Severity	Status	Score	Description	Mitigations
1) Custo Description: OAu		into the m	nerchant sit	e (Data Flov	v)		
Number	Title	Туре	Severity	Status	Score	Description	Mitigations
Number	Title	Туре	Severity	Status	Score	Description	Mitigations
				Status finalizes pay			Mitigations
7) Custo							Mitigations Mitigations
7) Custo Number 3) Custo ustomer	mer provi	des card o	details and severity	finalizes pay Status including or	/ment (Dal Score	ta Flow) Description of (6) Return P	Mitigations aymentIntent to t
7) Custo Number 3) Custo ustomer	mer provi	des card o	details and	finalizes pay	/ment (Dal	ta Flow) Description	Mitigations
7) Custo Number 3) Custo ustomer	mer provi	t sends of ata Flow)	details and Severity	finalizes pay Status including or	/ment (Dal Score	ta Flow) Description of (6) Return P	Mitigations aymentIntent to t
7) Custo Sumber 3) Custo ustomer Sumber	mer provi	t sends of ata Flow)	details and Severity	finalizes pay Status including or	/ment (Dal Score	ta Flow) Description of (6) Return P	Mitigations aymentIntent to t
3) Custo Customer Number	mer provi	t sends of ata Flow) Type Type	Severity Severity Flow) Severity	Finalizes pay Status Including or Status	ment (Dal Score	ta Flow) Description The control of the control o	Mitigations AymentIntent to t Mitigations

(11) Return the PaymentIntent with status (Data Flow)

4) Merchant sends order information inc amount and currency (Data Flow) Number Title Type Severity Status Score Description Mitiga Merchant Web Server (Process) Number Title Type Severity Status Score Description Mitiga	Number	Title	Туре	Severity	Status	Score	Description	Mitigations
Merchant sends order information inc amount and currency (Data Flow) Title Type Severity Status Score Description Mitigate erchant Web Server (Process) mber Title Type Severity Status Score Description Mitigate Mitigate Status Score Description	Retur	n Paymen	tintent to	o the Mercha	ant (Data Fl	ow)		
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erchant Web Server (Process) Imber Title Type Severity Status Score Description Mitiga) Merch	ıant sends	s order in	formation in	nc amount a	nd currenc	y (Data Flow)	
lumber Title Type Severity Status Score Description Mitiga	umber	Title	Type	Severity	Status	Score	Description	Mitigations
Merchant Web Server (Process) Number Title Type Severity Status Score Description Mitigar Stripe API service (Process)			.77					
			371					
stripe API service (Process)	1erchan			ess)				
Stripe API service (Process)		t Web Ser	ver (Proc	·	Status	Score	Description	Mitigations
relipe Alliselvice (Flocess)		t Web Ser	ver (Proc	·	Status	Score	Description	Mitigations
	Number	t Web Serv	ver (Proc	Severity	Status	Score	Description	Mitigations
Number Title Type Severity Status Score Description Mitiga	Number	t Web Serv	ver (Proc	Severity	Status	Score	Description	Mitigations
	Number	t Web Servite	ver (Proc _{Type} (Process)	Severity				
Stripe Payment Service (Process)	Number Stripe AF	t Web Servitle PI service	ver (Proc Type (Process)	Severity				Mitigations

The Stripe Payment Service (id: 91a72b16-b05b-463a-b0c6-

62fa2dd0f72b) transmits sensitive payment data over an

unencrypted public network (data.isPublicNetwork=true,

data.isEncrypted=false), risking data interception and disclosure.

Status

Score

Description

Mitigations

Implement TLS 1.2+ for all

communications.

external data transmissions;

enforce mTLS to secure external

Number

Title

External Data

Exposure via
Unencrypted Flow

Information

Disclosure

High

Open

Туре

Severity