The Logicom Solutions Payment Engine enables an organization to facilitate electronic payments for their systems or services to external customers and partners, in a secure manner with minimal credit risk, effort and time frame.
Currently, a single universal industry standard protocol for internet electronic payments does not exist and each payment service provider is providing its own implementation.

This creates a recurring development overhead and adds complexity for client applications (e.g. eCommerce sites) that want to provide multiple electronic payment methods.

Each payment method implementation is different and must be:

- Developed,
- Tested
- Configured by the client application.

This problem means recurring
- development costs, and
- lengthier times to market.
Online Payments – The Problem

Point-to-Point Integration Architecture
Hub and Spoke Integration Architecture
Payment Engine - Functionality

- **Asynchronous** Online Payment
- **Synchronous** Online Payment
- **Batch** Payments
- Continuous **Reconciliation**
- Real Time **Fraud Reduction** Rules and Reporting
- Processing of payments through the administration interface (MOTO)
- Standard Integration Protocol for Clients (XML Web Services for cross-platform compatibility)
- Multi-Currency enabled
- Multiplexing Engine
Payment Engine – Logical Design

Client Applications (eCommerce, Portals etc)

Customer

Transaction API
Query API

Fraud Rule Engine

Payment Service Provider Plugin Adapters
PayPal
JCC
Banks

Multiplexing Engine

Client C1
eService E1
Payment Method (PayPal)
USD

Client C2
eService E2
Payment Method (JCC)
EUR

Client C3
eService E3
Payment Method (B)
GBP

Reconciliation Module
Syncronization Module

PE - Web Enabled Administration

Clients Administration Portal
System Administration Portal
Help Desk Portal
Reporting Portal

Payment Engine - Service Layer

PayPal
JCC
Banks
Payment Engine – Key Advantages

- Cross Platform XML/SOAP Services
- Pluggable Architecture
- Multi-layered architecture
- Scalable architecture
- Service Orientation
- Modularity
- PSP Location transparency
- Multi-Level Security
- SMS / Email Notifications
- Hub and Spoke Architecture
  - Fosters reuse
  - Reduces the number of interfaces
Payment Engine – On Premise Installation Topology

- Public Internet
- Internet
- Consumers
- Public Internet
- Router
- DMZ
- Firewall
- On Premise Environment
- eCommerce Web Servers
  (Tier 1)
- P.E. Web Servers
  (Tier 1)
- Network Switch
- Private / Corporate Network
- P.E. Application Servers
  (Tier 2)
- P.E. Database Servers
  (Tier 3)

Consumers
Internet
Firewall
Router
Netwok Switch
Private / Corporate Network
Public Internet
On Premise Environment
DMZ
E-Commerce Web Servers
P.E. Web Servers
(Tier 1)
Network Switch
• Technologies
  – Microsoft .NET Framework 4.5
  – Windows Communication Foundation 4.5
  – Microsoft ASP.NET 4.5

• Server Products
  – Microsoft Windows Server 2012 R2
  – Microsoft SQL Server 2014
  – Microsoft Windows IIS Server
Thank You!

Solving complex problems is easy with ...