# OPEN PAYMENT FRAMEWORK

The foundation for our Enterprise Payments products and solutions
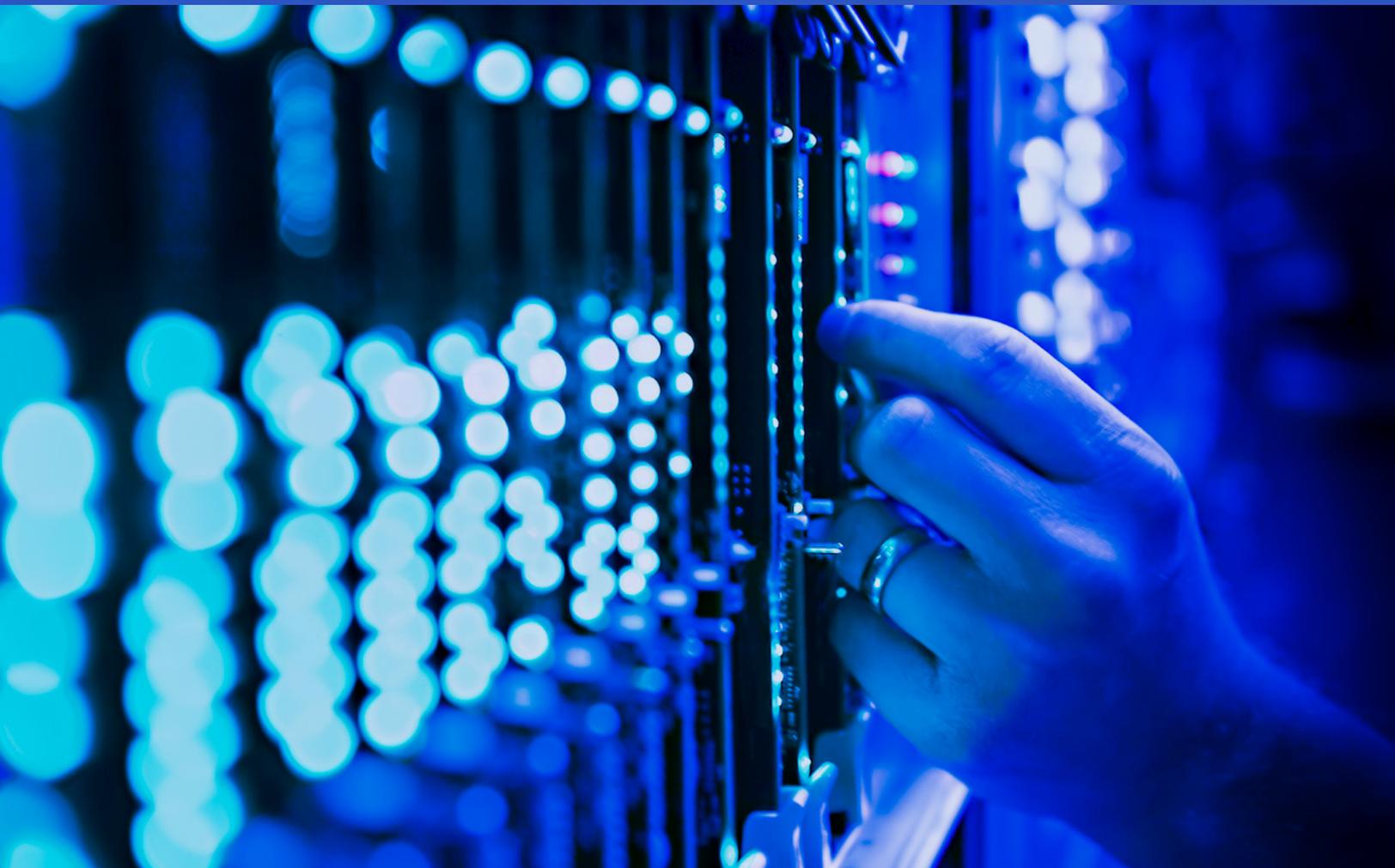
FIS® offers innovative, pre-built payment solutions running on the Open Payment Framework (OPF). Our cloud-native, ISO 20022–based application delivers common, reusable services that support a wide array of pluggable payment products.

OPEN PAYMENT FRAMEWORK

Modernising payments infrastructure is essential

From cutting cost to gaining a strategic advantage, it's no longer a question of whether or not financial institutions need to modernize their existing payment infrastructures, but how. Traditional payment solutions are rigid, expensive to maintain and lack the agility to adjust to changes in the marketplace. Replacing an entire system is untenable, yet a piecemeal approach is burdensome and risky.

Financial institutions typically have two options: build and maintain custom applications to meet their unique requirements, or modify operations to be compatible with a pre-packaged solution. Either way, it's a costly endeavor that wrestles control of the process away from those that know it best. Technical capability is often duplicated across numerous departments and lines of business, resulting in excess costs and delays.

Fortunately, institutions have another option: a staged and managed migration to a proven, cloud-native solution.
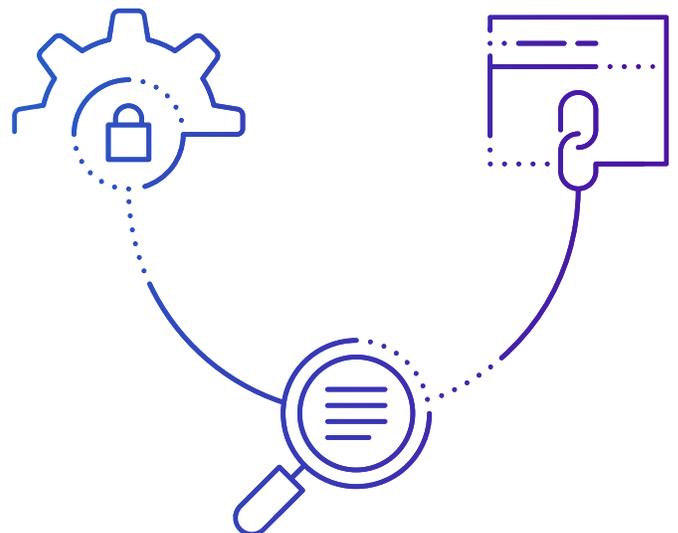
A foundation for payments

The FIS Open Payment Framework provides a flexible foundation for an expanding array of pre-built payment modules. With OPF, multiple payment products can be plugged in to quickly deliver operational solutions for real-time payments (NPP, SCT Inst, UK FP/ NPA, IP India, FPS HK, Singapore FAST, etc.), high-value domestic payments (Fedwire, CHIPS, TARGET2, EBA EURO1/STEP1 CHAPS, etc.), international payments and ACH payment (SEPA, NACHA, EFT, BACS, etc.).

OPF is a cloud-native application that provides common, reusable services consisting of a comprehensive data model, choreographed payment business processes and configurable services including parsing, validation, cost based routing, warehousing, security, auditing and more.

Instant payments
UKFP/NPA, SCT Inst, P27, US RTP, MYRPP, NPP, HK FP, SG FAST etc

High Value
Fedwire, CHIPS, EBA EURO1/ STEP1, TARGET2, CHAPS etc

International Payments
SWIFT Correspondent Banking, Ripple, Visa B2B

ACH Payments
SEPA, P27, NACHA, EFT, BACS, etc

Payments Order Management
Credit Transfers, Direct Debits, Single, Bulk
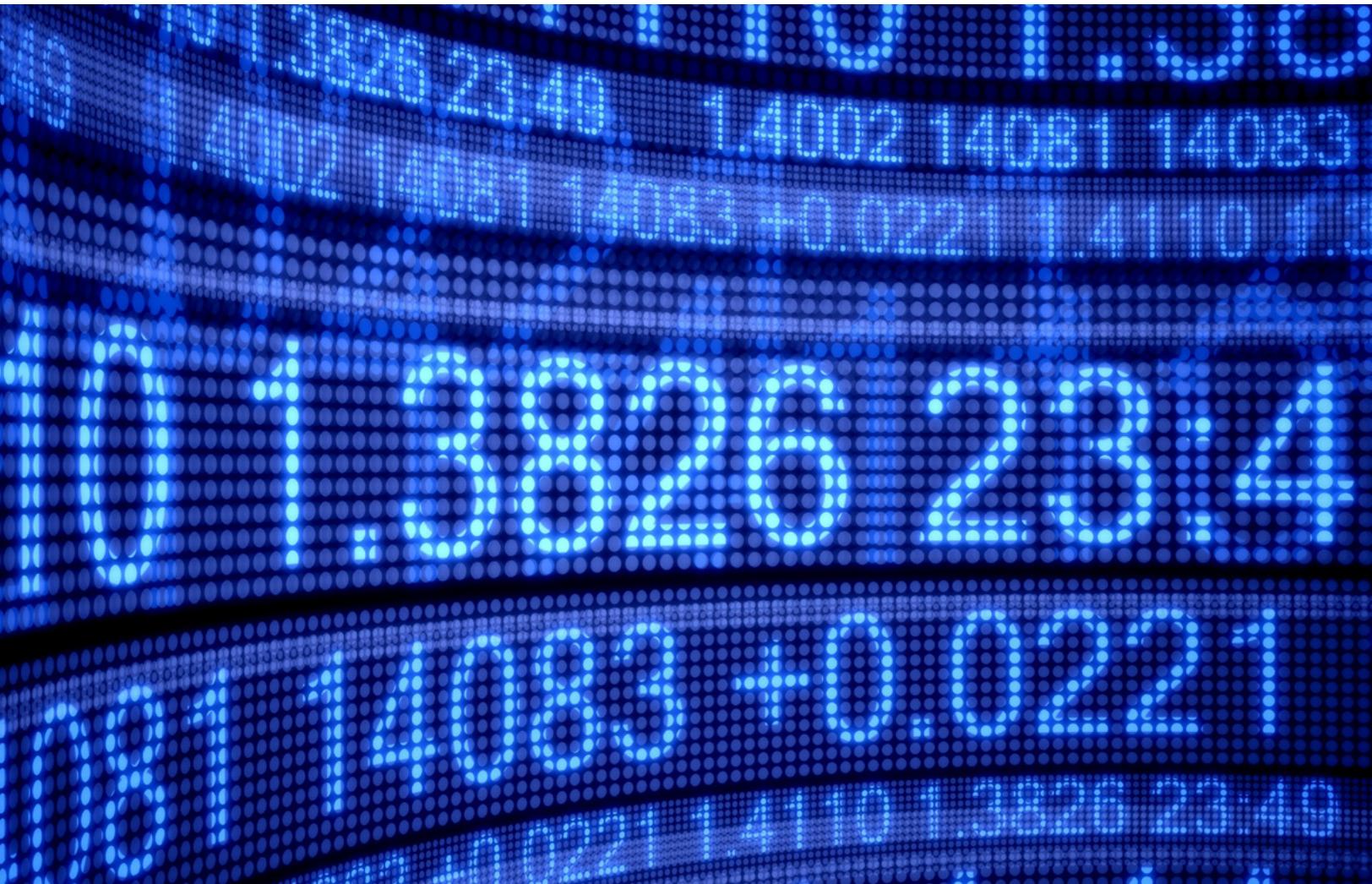
THE FIS REFERENCE ARCHITECTURE

Payment Order Management

Payment Order Management (POM) is a mid-office channel integration layer in the bank's payment solution value chain. It captures payments initiated on the bank's channels (including standing orders) and distributes them to the various payment execution engines, thereby decoupling channels from back-office execution systems.

POM is built on a cloud-native, always-on, resilient and dynamically scalable architecture platform that runs API-based services in a containerized orchestration. POM allows secure and gradual migration of legacy systems towards a modern architecture, as well as easy onboarding of future product distribution channels.

Payments Execution

A flexible payment engine supporting all key payment services including multiple domestic schemes, SEPA, cross-border, SWIFT and real-time payments. It includes full back-end connectivity for flexible and configurable payment execution for multiple payment types, all in real time (book transfer, domestic credit transfer, international credit transfer, direct debits, etc.). The solution provides powerful payment enrichment, auto-repair, auto-reconciliation and automated reject and cancellation handling capabilities.

Modular Payments Hub

OPF-based modules can be combined to form an all-encompassing Payments Hub that can process all payment types. A typical Payments Hub includes a Payment Order Manager (POM) and one or more Payment Execution modules.

Modular architecture provides many important advantages compared to traditional monolithic applications. It allows for a phased implementation that matches your timeframes and business goals and decreases the overall time to market.

Using separate modules for different payment types provides the ability to size and tune each one for optimum performance. This is especially important as traditional batch payments and real time instant payments do not share the same throughput and availability requirements.

Modular architecture also reduces the total cost of ownership by decoupling customer-facing channels from execution functionality and simplifying maintenance. Shared microservices simplify integration, further reducing cost and accelerating implementation.

Modular Payments Hub

Order Management	POM			Utility Micro-Services	↔	Bank Systems
Payment Execution	OPF **XCT** SWIFT/RTGS	OPF **FAST** Instant	OPF **ACH** Bulk			
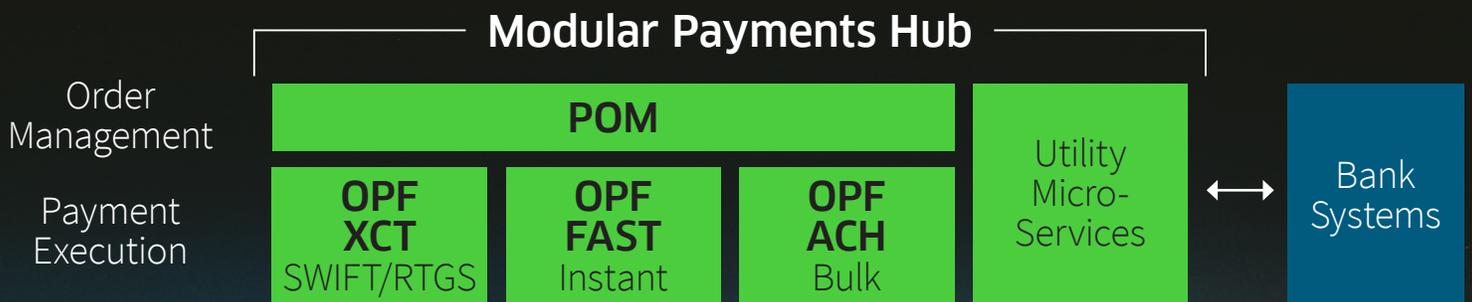
FIS Reference Architecture

- Cloud-native
- ISO 20022-based
- Always on – 99.999% available
- Containerized
- Easy internal integration
- Standardized REST APIs
- Flexible channel integration

Easy integration with microservices

Microservices decouple processing from the integration with existing bank and external systems. Simplified links with established fraud, AML and sanctions screening, charges, fees, forex, etc. services ensures quick time to market based on sophisticated rules processing, adapters and mapping.

Powerful business events

A flexible event triggering service enables fine-detailed and real-time notifications on payments as they are processed giving a consolidated view on all activity in real time to track payments or monitor elements within the system. Any triggered events feed a data lake and can be used as a base for sophisticated reporting on payments and trends, highlighting problem areas or confirming completed actions.

The case for open frameworks

Embracing open frameworks and the underlying architectures offers a wide range of benefits.

• Flexibility, cost and time to market

FIS' pre-packaged product modules are derived from a common underlying framework (the Open Payment Framework) and offer *the best of both worlds*: low cost and quick time to market without sacrificing flexibility and adaptability. Our solutions *can adapt to your unique landscape and requirements*, enabling you to protect previous investments and minimise disruption to systems and processes.

• Modularity

FIS' modular Payments Hub architecture *reduces the total cost of ownership*, enhances maintainability and facilitates phased implementation–all which help decrease risk. New product modules and components can be added gradually and extended to help *keep pace with the ever-changing payments landscape*.

• The right solution for the long term

Scheme-specific modules include ongoing support for scheme and rulebook updates. A *cloud-native ISO 20022-based architecture* and a rich product roadmap ensure that FIS solutions are future-proof and aligned to the bank's long-term strategy.

Performance and scalability enable FIS' solutions to meet the payments demands today and in the future, and support the increasing use of instant payments.

Core Banking Integration Service (CBIS)

The OPF based Core Banking Integration Service (CBIS) allows a seamless integration of OPF with your institution's core banking and G/L systems.

By isolating core banking specific integration in CBIS, payment hub business processes are not impacted by core banking specifics and core banking changes. Core banking interfaces can be managed independently from the payment hub. CBIS allows a bank to meet the more stringent requirements of real time payment processing by standing in when a core banking system is down, during scheduled or unscheduled downtime, and by converting real-time calls into core batch based integration.

OVA

OPF comes with the Operations Visibility Application, a next-generation REST API-based GUI. The browser-based OVA has a clear intutive design, makes use of split-screen navigation and includes extensive contextual help. This translates into greater efficency and productivity. The OVA comes with a library of reusable components to ensure a consistent and holistic user experience across the OPF solutions. Because of its extensive configurability, the OVA drastically speeds up time to market for a bank to publish new screens.

Deployment options tailored to your needs

OPF has many deployment options. Depending on your needs, OPF can either be installed on-premise or as a cloud based solution. FIS hosts many of the OPF solutions as a Payment as a Service (PaaS) offering.

About FIS

FIS is a leading provider of technology solutions for merchants, banks and capital markets firms globally. Our more than 55,000 people are dedicated to advancing the way the world pays, banks and invests by applying our scale, deep expertise and data-driven insights. We help our clients use technology in innovative ways to solve business-critical challenges and deliver superior experiences for their customers. Headquartered in Jacksonville, Florida, FIS is a Fortune 500® company and is a member of Standard & Poor's 500® Index.

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