Persistent

Datasheet

API Monetization & Management

The fastest way to create monetization opportunities

> **Cisco estimates that IoT has the potential to generate $19 trillion of value over the coming years. But, over 70% of organizations do not generate service revenues from their IoT solutions.**
>
> Capgemini Consulting

Introduction

The API Monetization & Management enables rapid monetization of enterprise amd Internet of Things (IoT) ecosystems APIs. Its powerful rule definition engine provides the versatility to implement virtually any business model, setting it apart from the competition in its ability to adapt to evolving, new revenue models. It can be deployed as an independent standalone product for pure monetization requirements or as part of an integrated solution comprised of other, complementing Intel products. The solution also includes a payment engine capable of abstracting the payment lifecycle while integrating with multiple payment gateways, including: telco-billing systems, PayPal, and stored-value accounts.

Multi-Party Settlement

The solution allows definition of multi-faceted revenue models based on pre-defined contracts and terms, producing revenue-share reports that can be processed by third-party financial systems for payment disbursement to stakeholders. Pre-defined models, such as rate-cards, create standardized revenue share models in minutes while an advanced rule definition engine allows creation of custom dynamic revenue share rules. Pre- aggregate millions of events to a subset of representative events for scalable and high-performing settlement processing.

Payment Abstraction

Enterprise or IoT solutions can be enhanced with the ability to accept payments from partners and consumers without worrying about the complexities of transaction and account management, payment gateway integration, and secure transaction processing. Directly utilize existing pre-integrated payment instruments or integrate a preferred alternate payment gateway through its extendable gateway design.
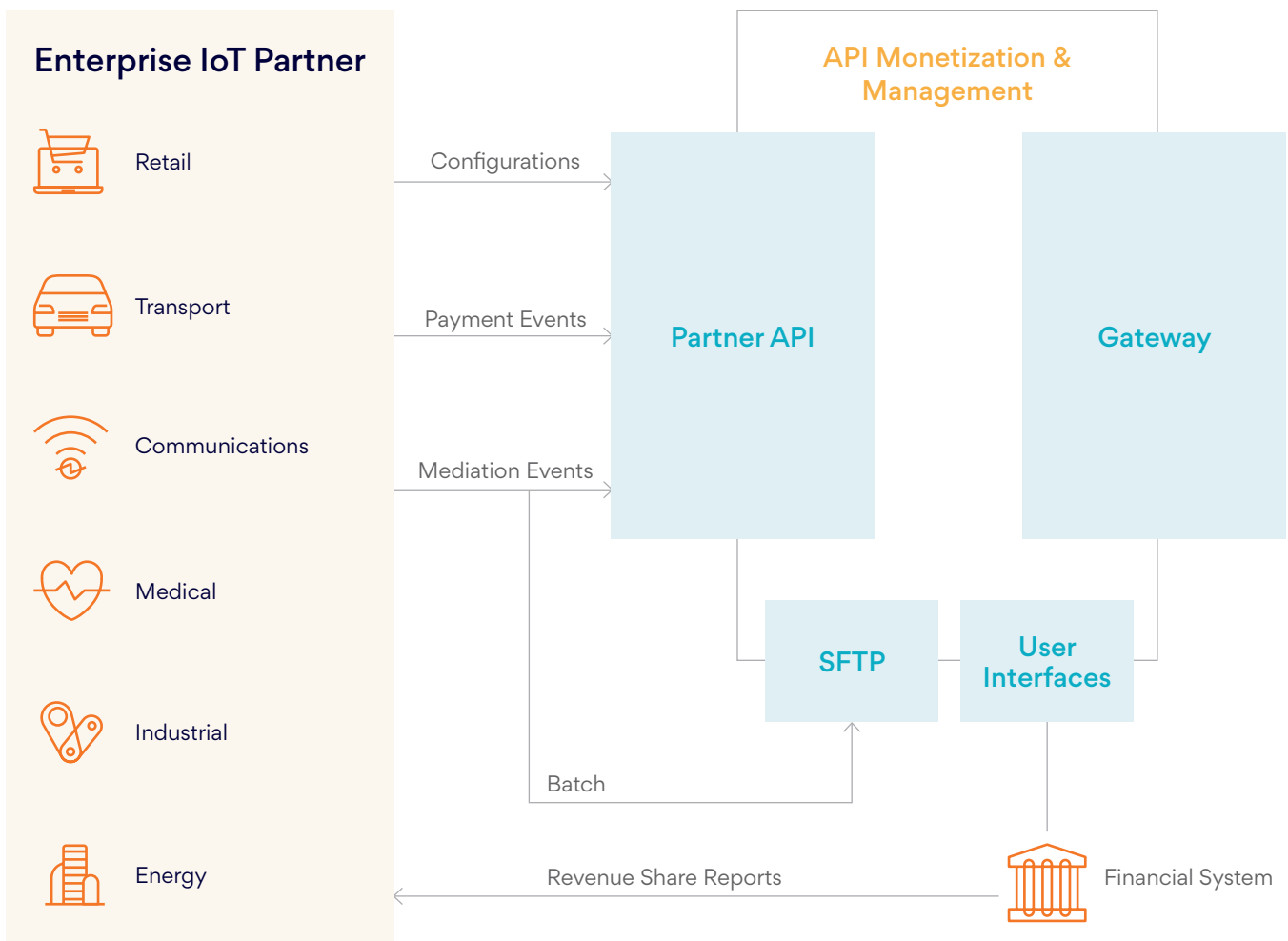

Figure 1: Domain agnostic API Monetization

Internet of Things Challenge

The number of connected devices has already surpassed the number of humans on the planet, with predictions of reaching **40 billion devices by 2020**. Cisco estimates the IoT value potential at over $19 trillion. However, over **70%** of organizations do not generate service revenues from their IoT solutions due to numerous concerns:

\ High cost of acquiring new capabilities

\ Unclear return on investment

\ Unpredictability evolving business models

\ Security and privacy concerns

\ Lack of standards

API Monetization & Management boasts an impressive track record of providing world class security and unparalleled experience in implementing best of breed, enterprise grade solutions. With the solution, businesses adopting IoT solutions are able to create their own best- being able to change it to match evolving business needs. Our team has close to a decade of experience implementing monetization solutions that process millions of transactions daily, which allows customers to retain focus on core business interests while the solution manages monetization related complexities in a seamless and transparent manner. It is a high performance solution capable of meeting scale and performance needs paramount to IoT ecosystems where large transaction volumes are norm. Companies that eventually garner the greatest success in IoT will be those that acknowledge IoT as still being in its infancy, and thus, adopt technology able to cater to a broad range of possibilities. It is tailor-made to satisfythis eventuality.

Enterprise API Monetization

The Big-Data era resulted in enterprises investing heavily in data storage, pattern recognition and business intelligence solutions with the aim of deriving tangible business value from data archives. It provides a data independent mechanism of monetizing vital business insights and information exposed via APIs. The solution online API interfaces and event batch interfaces allow enterprises to monetize API consumption through pre-paid or post-paid plans. Internal (pre-paid) stored-value-accounts can be topped up through popular external payment gateways such as PayPal.

It will also calculate revenue share based on intricate event parameters ensuring all participants derive tangible financial value. It provides enterprises with the opportunity to monetize assets in innovative ways and create new revenue streams by effectively leveraging existing assets.

Mobile Network Operator

In-app billing allows mobile consumers to purchase digital content without leaving the mobile application, resulting in a seamless user experience. The solution allows app developers to provide customers with direct-to-bill services, where charges are billed directly to the consumers mobile bill account. Direct-to-bill conversion rates can be up to five times that of credit card payments.

The solution delivers a business-to-business, multi- merchant billing services solution that solves the business needs of merchants, operators, and developers with a diverse range of merchant types, payment types, and consumer needs. While providing differentiated value that opens a large addressable market of subscribers, it also delivers high aggregate value for connected service providers frommerchant partners. Service providers around the globe process millions of transactions daily through the solution generating significant revenue year-over-year.

Time to Market

Organizations in the past have failed in attempting to implement proprietary monetization solutions by underestimating the associated complexities and

cost. API Monetization & Management customers have achieved their monetization goals in quick time by opting to focus on their core business, while letting the solution take care of API commercialization challenges. It provides one of the most mature and stable monetization platforms available on the market today. An optimal combination of API and user interface enabled settings and configurations allow quick integration with external systems and convenient application administration.

Best-Fit Solution

Despite being a product rich in features and capabilities, it is important to acknowledge that there is no such thing as a one-size-fits-all solution. By adopting a modular architecture based on conceptual building-blocks, t is built for convenient extension through configuration and customization, such that the optimal solution catering to each unique business requirement is satisfied, while ensuring that core functionality and capabilities are never compromised.

Openness

It is built using an optimal combination of open-source, community-endorsed technologies and commercial components to provides a robust product with minimal licensing overhead. It is also built with the premise of being used as an independent product or as an enabling engine for monetization of existing assets and data.

World Class Support

Our worldwide presence and unblemished record provide customers with the assurance of receiving high quality, professional and ethical service through out the product lifecycle. API Monetization & Management Managed Services Division provides continuous production support and technical assistance using comprehensive reports and audit trail information for precise and quick troubleshooting. Support for dispute handling and refund management also adds to the value proposition of selecting the solution's gateway as your preferred monetization platform.

Use Cases

Direct-to-Bill Diversification

It provided early adopters of direct carrier billing (DCB) with a potent platform for service monetization. It continues to be the trusted DCB solution for operators handling millions of transactions daily as well as smaller scale service providers. Operators today are expanding beyond the traditional bill-to-mobile for digital goods purchase by allowing consumers to make physical goods and service payments through their mobile phone bills. Parking tickets and toll payment are classic examples of such transactions. The solution leverages the payment agency model to monetize such transactions with complete regulatory compliance providing carriers with the opportunity to extend their direct-to-bill reach to new horizons.

API Monetization

APIs have proven to be a potent enablement tool for modern enterprises providing secure access to information and capabilities internally and externally. APIs are also considered to be the "glue" that binds together the Internet of Things. While organizations traditionally used APIs to derive indirect value to their businesses, the direct revenue potential of API exposure has continued to become increasingly evident in recent times. With API Monetization & Management enterprises can easily convert their API strategy to a significant direct revenue channel.

IoT Ecosystems

Internet of Things (IoT) solutions evolving today are complex ecosystems with multiple participants adding

value and synergizing in different ways towards an integrated value proposition to end users. Figure 2 depicts a typical IoT use case where consumers interact with an IoT ecosystem using devices serviced through the collaboration of application developers, analytic providers, and connectivity service providers who combine their offerings via an enterprise API platform. Data gathered throughthis ecosystem is distilled and shared with external stakeholders such as healthcare and insurance providers. Such environments may consist of explicit stakeholders who are direct participants to a transaction as well as implicit participants who benefit from the transaction without direct involvement. Investors and state government bodies are typical examples of such implicit stakeholders. The solution provides the ideal platform for the monetization of such rich and diverse IoT ecosystems where complex revenue capture and dissemination models can be configured and managed effectively.

Business Intelligence

Advance analytics on Big Data offer valuable and actionable insights to enterprises. Organizations today are moving away from investing significant revenue in costly on premise Big Data solutions with a growing preference towards cloud based analytics and business intelligence. Such services can be paid for through subscriptions, pay-for-use and freemium type models. It provides cloud-based solution providers with the ability to offer a multitude of revenue capture models to best fit unique business and customer needs.

Enterprise Cloud Storage

Enterprise cloud storage companies providing secure access to data repositories can use it to control storage volumes based on pre-paid credit units which may also be automatically re-loaded through an external payment gateway. Alternatively, consumers may be billed periodically based on usage frequency or storage capacity. Subscriptions managed via the solution automatically capture revenue from consumers at predefined intervals with the provision of allowing free access for a period of time, after which usage is billed by time or storage volume, while spend controls protect the consumer from unintentional over- expenditure.
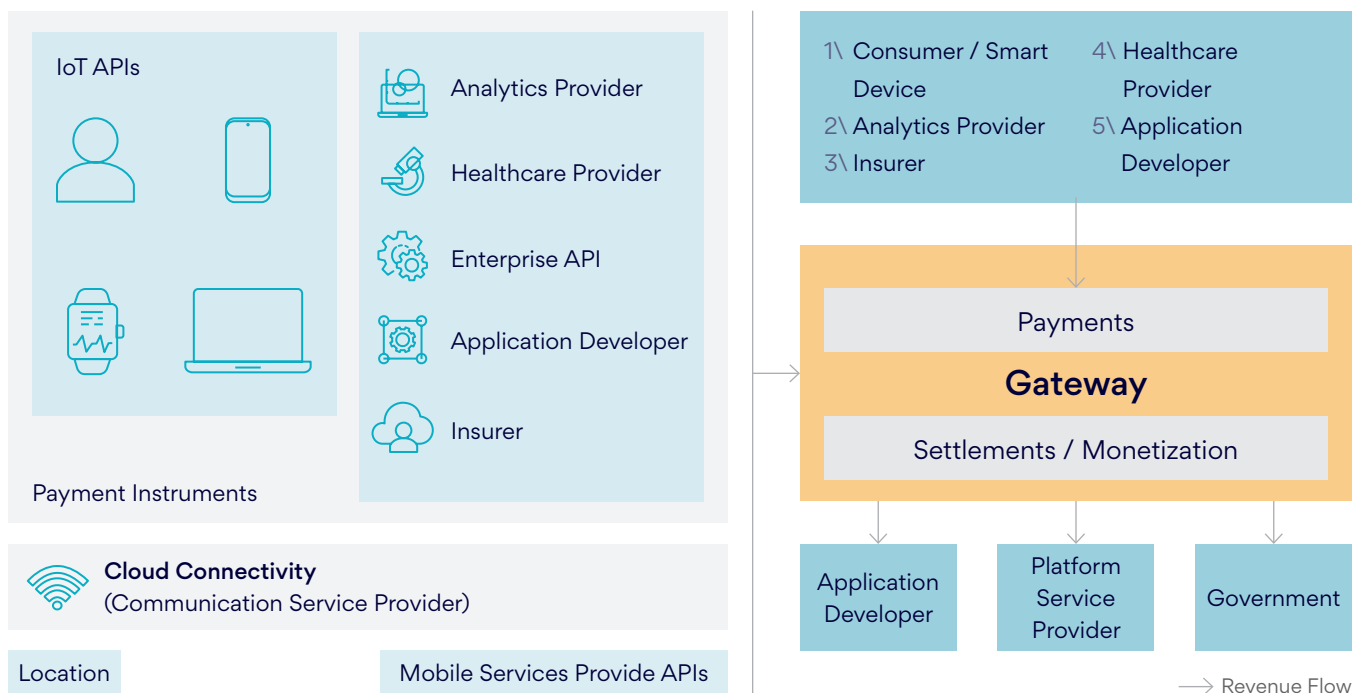

Figure 2: Revenue Flow Depiction in a Typical IoT Use Case

Capabilities	Benefits
Payment Transactions	\ Complete payment lifecycle management \ Authorise and confirm or charge in a single API call \ Cancellation and refund management, including partial refunds \ Complete transparency through audit trails and detailed transaction reporting
Payment Accounts	\ Account provisioning via API or business management application \ Multiple account types: Bill Account (Telco), Credit Account, Stored Value Account and PayPal \ New account type exposure thorough gateway integration \ Complete account lifecycle management
Spend Controls	\ System and account level spend controls prevent fraud and unintended over expenditure \ Period or transaction based control \ Allows definition of a minimum value for charge
Advice of Charge	\ Real-time customer consent during the payment process \ Support for Web, WAP and SMS based channels \ Pre -configured support for PayForIt standard
Platform Managed Subscription	\ Manage recurring charges for a define period of time without the payer needing to re-authorise every payment \ Multiple access models: Unlimited consumption or pre-defined licenses available for consumption within the defined subscription period \ Multiple charging models such as free-period and commitment period within subscription cycle
Mandates	\ Partner controlled subscriptions where charges are initiated by a partner \ Advice of charge only during mandate provisioning \ Expenditure can be controlled by period, value or frequency
Physical Goods Purchase	\ Support for physical goods purchase through payment agency model \ Physical goods purchase reports directly transferrable
Versatile Monetization	\ Highly flexible monetization rule definition \ Express settlement configuration using value, percentage or rate card based revenue share \ Simultaneous settlement processing for multiple system stakeholders \ Define settlement contracts for individual stakeholder roles \ Batch process event files from external systems \ Event pre-aggregation/ summarization for scalable a high performant settlement calculation

Stakeholder User Interfaces	\ Individual portals for platform administrators, partners, service providers and consumers \ Role based access control \ Complete visibility of transactions and pre-defined levels of functional control \ Multi-language support
Reporting	\ Stakeholder specific summarized/detailed transaction and settlement reports \ Dynamic reporting frequencies \ Exportable to CSV, PDF or HTML format \ Transfer to external systems via SFTP
Security and Data Transfer	\ API security using secure keys \ Secure file transfer via SFTP \ Encrypted storage of sensitive information
Platform Management	\ Rich management console for system management and configuration by platform administrators
Flexible Deployment	\ Monolithic, Clustered \ On-premise, Hosted \ Platform Management including SNMP, Traps, Metrics and Detailed Logs

About Persistent

With over 15,500 employees located in 18 countries, Persistent Systems is a global services and solutions company delivering Digital Engineering and Enterprise Modernization. We combine deep technical expertise and industry experience to help our clients anticipate what's next and develop solutions that create unique competitive advantage. Persistent was named to the Forbes Asia Best Under a Billion 2021 list, representing consistent top-and bottom-line performance as well as growth.

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