

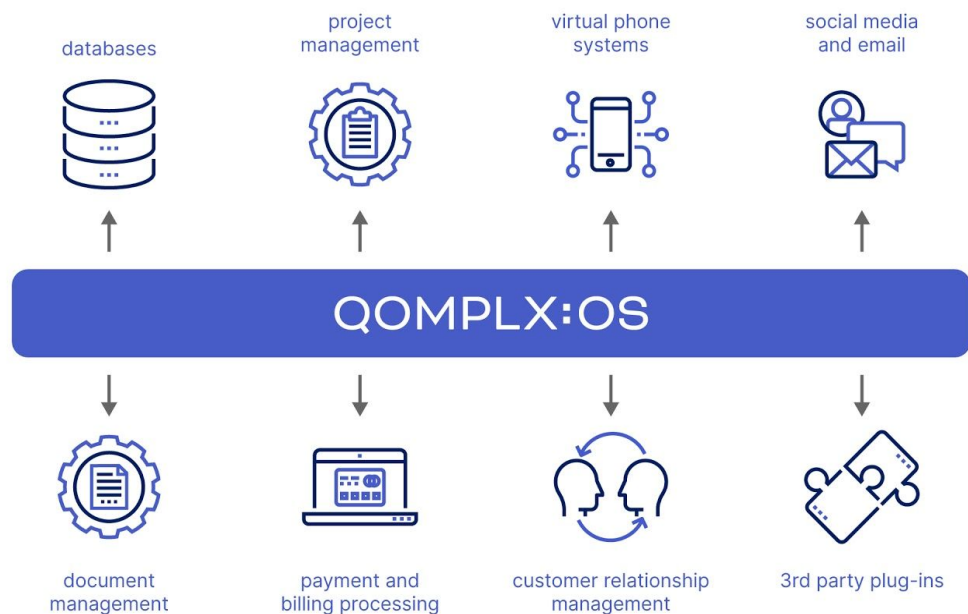
Q:Connector

Integrate and automate workflows to and from third-party applications

Background

In a dynamic business environment, large-scale analytics and decision platforms, such as Q:OS, sit within a growing ecosystem of enterprise and vendor technology systems. The ability to integrate data inputs and insights from many disparate systems is an increasingly critical function to enable data to be widely and effectively used. Q:Connector was designed to automate a broad range of integrations involving systems with widely varying technologies and ensure that data from any source can be effectively leveraged to drive better decision-making.

Q:Connector supports arbitrary connections between web applications and other information services with custom logic for event and data handling. It addresses rudimentary processes like the automation of event notifications as well as mission-critical needs such as immediately initializing triage workflows to minimize the impact of a security breach. Q:Connector has an intuitive drag-and-drop interface that allows users to easily build highly customizable workflows that automate triggered responses to user-specified events or conditions. Q:Connector makes it easy to enrich data and business processes with meaningful context through user-adjustable automations. Notifications become both timely and informative.



Q:OS

More complex operational workflows are supported as well, including triggering automatic analytic routines that triage and escalate or even take corrective actions for mission-critical events without human intervention if desired, or even requiring human confirmation if deemed appropriate.

QOMPLX: OS: Implementation

Q:Connector utilizes a multi-tenant software architecture design that allows a single instance of software to simultaneously serve multiple user groups with specific access privileges. When compared to designs with a single instance per client, this implementation provides inherent benefits of greater scalability and control over release management, as well as increased flexibility with data mining and aggregation.

At the core of Q:Connector's functionality is its use of micro-services to facilitate interoperability between disparate services and applications using APIs. In general, micro-services provide many inherent benefits over monolithic systems (where aspects of the software architecture can be interwoven in the case of data processing, error handling, and user interfaces), including:

- **Reduced overhead and latency:** micro-services by design utilize lightweight protocols and granular services to minimize resource consumption and optimize execution rates
- **Compartmentalization and independent scalability for both network-workgroups and system components:** improves fault tolerance by reducing interdependencies between services and applications, so that one failure does not impact the entire system and individual workloads can scale independently to ensure performance goals are met
- **Easy adaptability to multiple and new technologies and programming languages:** particularly important in the quickly changing world of digital technology and the Internet of Things (IoT)
- **Targeted security measures:** rather than a single policy surrounding a monolithic system, variously sensitive components can be isolated or grouped together with different access constraints
- **Rapid release of new functionality:** changes to individual components can be deployed on running production systems without breaking existing functionality, so there is no need to wait for major release dates as with monolithic systems

Functionality

The RESTful APIs utilized by QOMPLX's Q:Connector provide stateless, client-server, and cacheable communications using a lightweight JSON format. The connection policy used by Q:Connector includes metadata within the JSON object that sets expectations for input data, aggregation and/or transformation requirements, output characteristics, and other user-defined logic as needed.



Inputs: Q:Connector accepts input from streaming and polling data sources, and can also interact directly with external service providers to obtain data based on user-defined triggers



Transformations: After data passes through input gates, basic processing and transformation occurs in accordance with the configured policy. Q:Connector ensures that downstream modeling constraints are met by parsing, enriching, and casting heterogeneous data into formats acceptable for long-term persistence or direct use inside the Qomplx Q:OS platform (including within user-specified logic inside Q:Connector). Multiple transformations can be linked in sequence, and outputs from individual transformations can be utilized as inputs or triggers for additional downstream transformations as part of a sequential process. Unlike similar offerings from other providers, Q:Connector can apply internal and external transformations to the entire data stream in advance of output processing.



Aggregations: Aggregations are defined by methods of combining fields within data sets, both from processed raw data and from data generated as part of the user-defined transformation processes. This process is typically a necessary precursor to meeting policy output requirements.



Outputs: Outputs in Q:Connector policies define actions such as persistence to a data store, publication to a report or data stream, or even triggering another Q:Connector policy. Multiple outputs can be defined in a single policy, and outputs can leverage unique transformations to support different formats. Furthermore, outputs can optionally be multiplexed, and additional transformations can be applied only to a particular output under which the array of transformations is placed (to allow for even greater specificity).

Ready to learn more about *QOMPLX:OS*? Contact us today.

+1 (703) 995-4199

info@QOMPLX.com

www.QOMPLX.com

Why QOMPLX®

QOMPLX makes it faster and easier for organizations to integrate all of the disparate data sources across the enterprise into a unified analytics infrastructure to make better decisions. This broader analytics infrastructure is provided through QOMPLX:OS, an enterprise operating system that powers QOMPLX's decision platforms in cybersecurity, insurance underwriting, and quantitative finance. Headquartered in Tysons, VA, QOMPLX, Inc. also has offices in New York and London. More information about QOMPLX can be found at <https://www.qomplx.com/>.