

How to Deploy Custom Analytics Applications with the Data Push API

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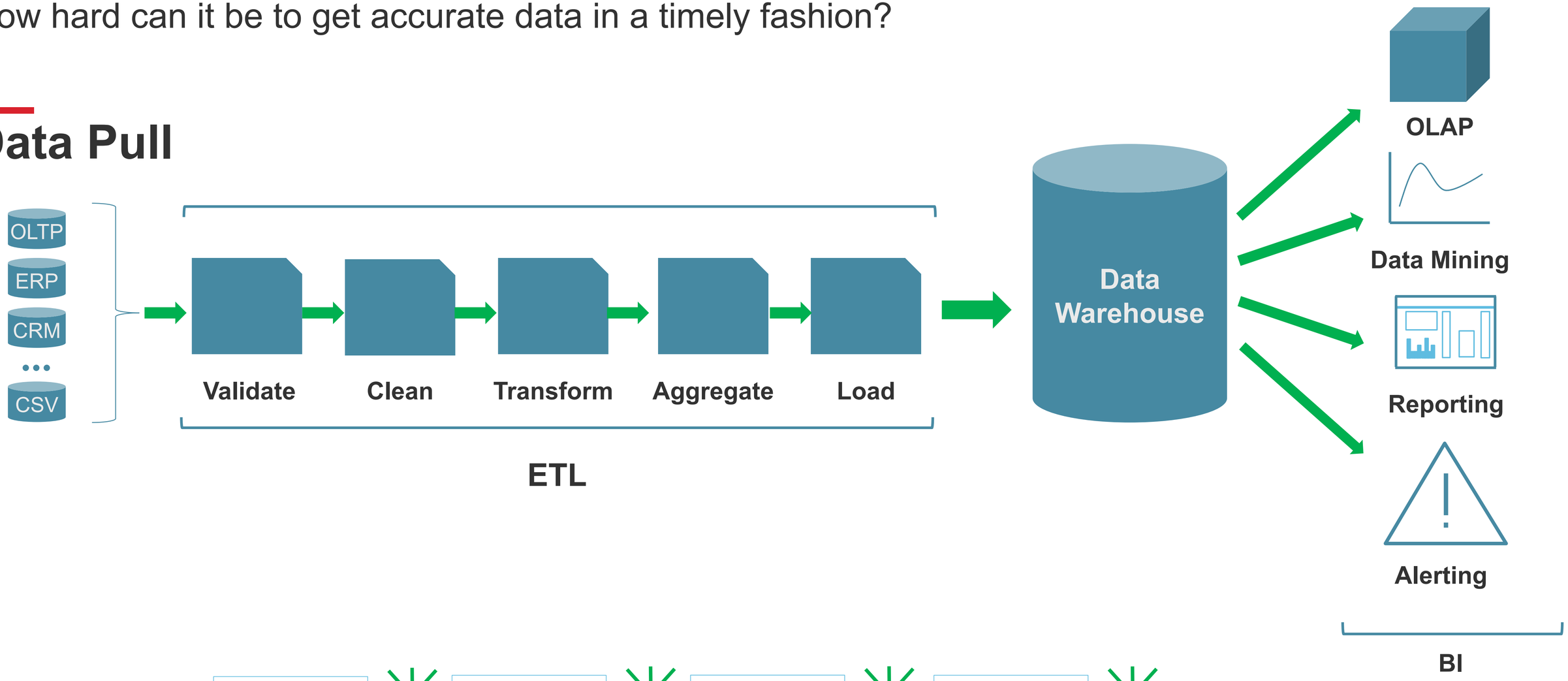
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Common Data Publishing Workflows

How hard can it be to get accurate data in a timely fashion?

Data Pull





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Pros and Cons of a “Pull data” workflow

Historically, Enterprise Data Warehouses have used the pull data model

Pros:

- **Most fault tolerant**
- **Could be re-executed if anything went wrong**
- **Lose coupling between data source/storage and data consumer**

Cons:

- **Lack of real time information**
- **If pull is time scheduled, any failure call lead into delays**
- **Often less efficient pull process to discover what changed and only apply changes**

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How to Deploy Custom Applications with the Data Push API

Agenda

- **Alternative workflows to traditional Enterprise ETL**
- **Capabilities available to help address the single version of the truth and performance challenges**
  - MicroStrategy XQuery Reports
  - MicroStrategy Data Import
- **What enhancements bring the Data Push API to the table?**
- **Data Push API in action**

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Alternative workflows to traditional Enterprise ETL

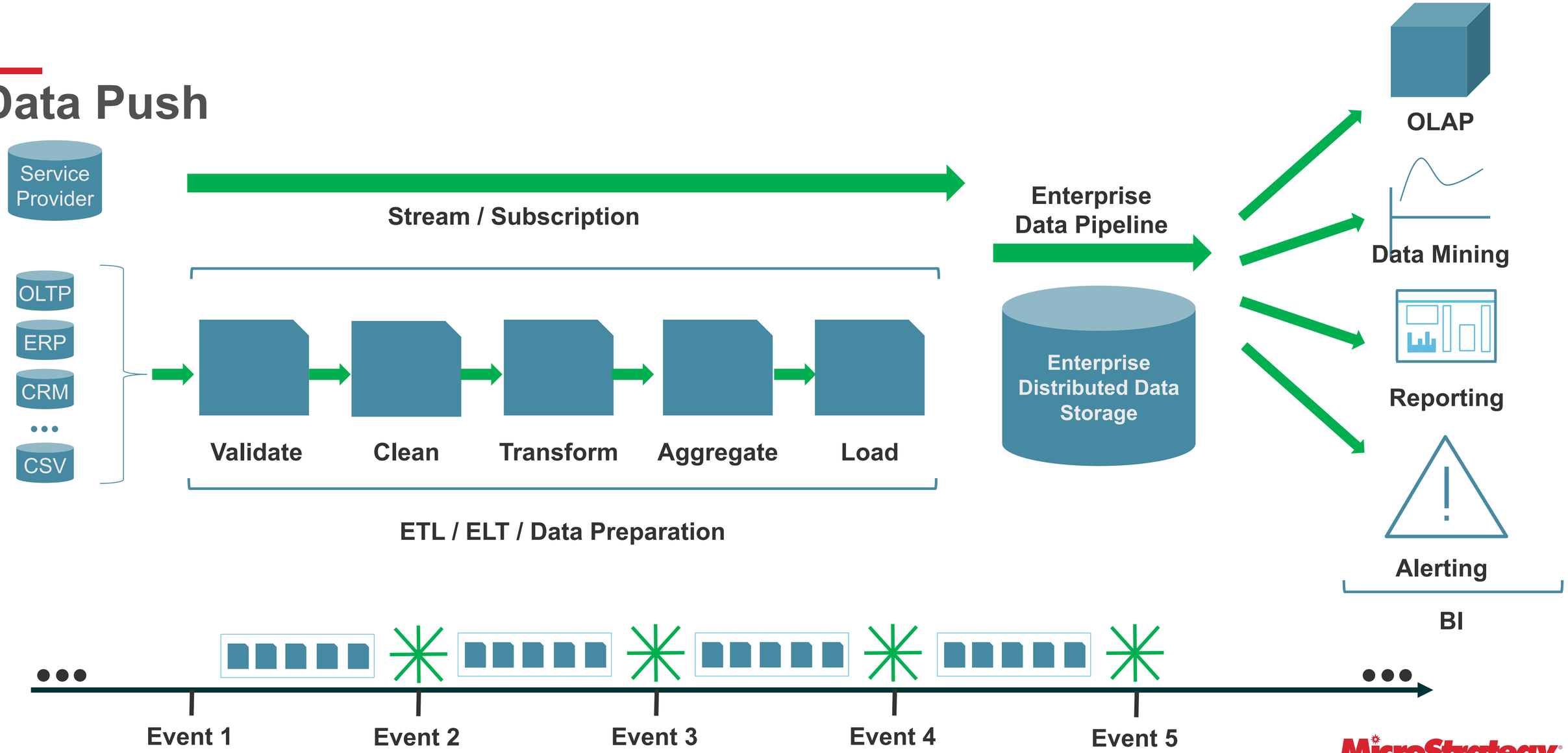
Push and Search

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Common Data Publishing Workflows

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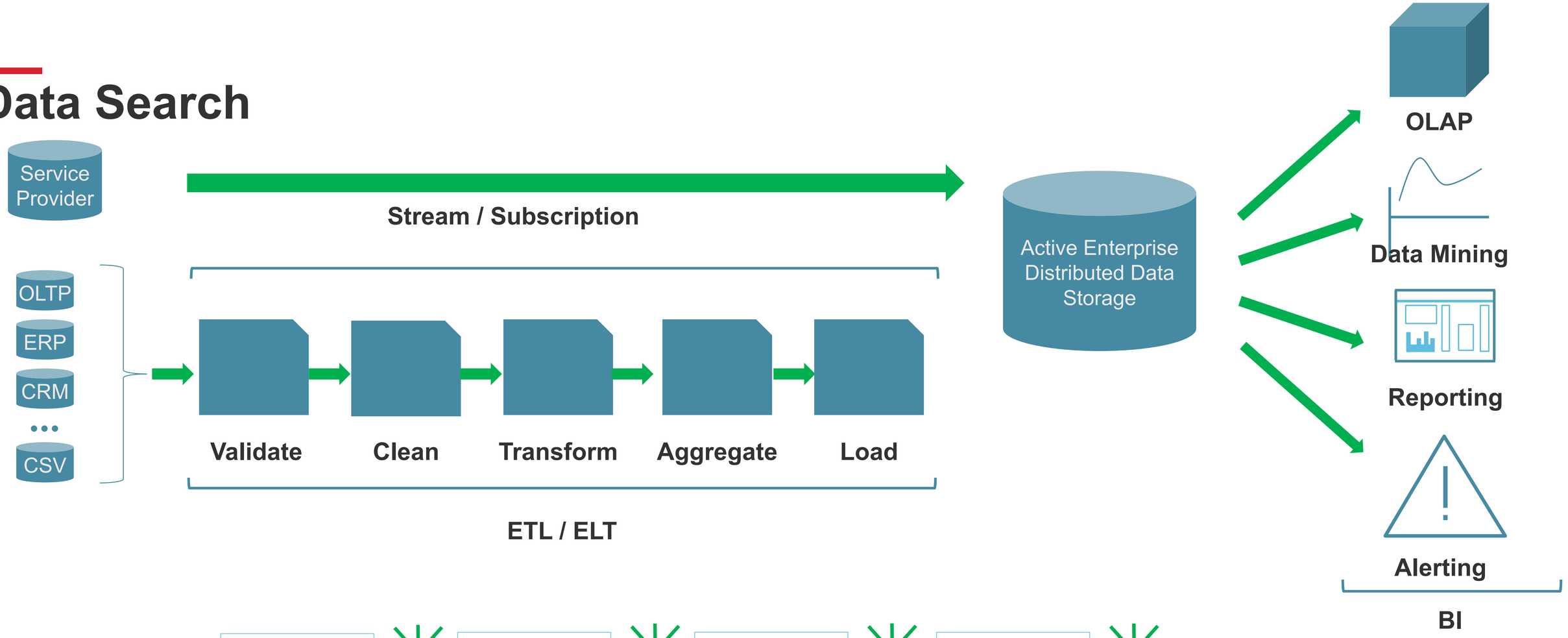
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Common Data Publishing Workflows

How hard can it be to get accurate data in a timely fashion?

Data Search



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MicroStrategy capabilities to help address common application challenges

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MicroStrategy Capabilities

Did you know about all of them?

MicroStrategy Triggers

- Cube refresh and Report execution can leverage triggers that can be time- or event-based.

MicroStrategy XQuery

- Is the language for querying XML data. XQuery for XML is like SQL for databases.
- It is built on XPath expressions.
- Is a W3C Recommendation (2007).
- While originally for XML, XQuery was extended to also work with JSON data sources (Web Services or Files).
- Allows for End-user-, time- or event-triggered execution.
- Could be used with prompts.

MicroStrategy Data Import

- Enhanced with MicroStrategy 10.7 “Data Connector SDK” to allow custom 3rd party connectors to various data sources.
- The Data Connector SDK-built component can be used in various data refresh scenarios that are End-user-, time- or event-triggered.

MicroStrategy REST APIs

- Starting with MicroStrategy 10.6, the MicroStrategy REST APIs offer the ability to have a 3rd party application create a in-memory cube on the MicroStrategy Platform.
- With MicroStrategy 10.7, the 3rd party application can incrementally update the data inside an existing cube.

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MicroStrategy REST API

Data Push API

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MicroStrategy REST APIs

Why another set of APIs?

Standard compliance

- Due to its implementation complexity, SOAP has lost some of its early luster.
- A more recent, lighter weight architecture(*) has emerged: “RESTful Web APIs”.
- In the quest to further open access to the MicroStrategy Platform, adding support for REST interfaces was an obvious choice for highly web services.

Optimization opportunities

- Since MicroStrategy 7, the underlying Web API (Java or COM-based) is using XML. REST makes use of JSON instead which is less stringent and less verbose (i.e. smaller in size).

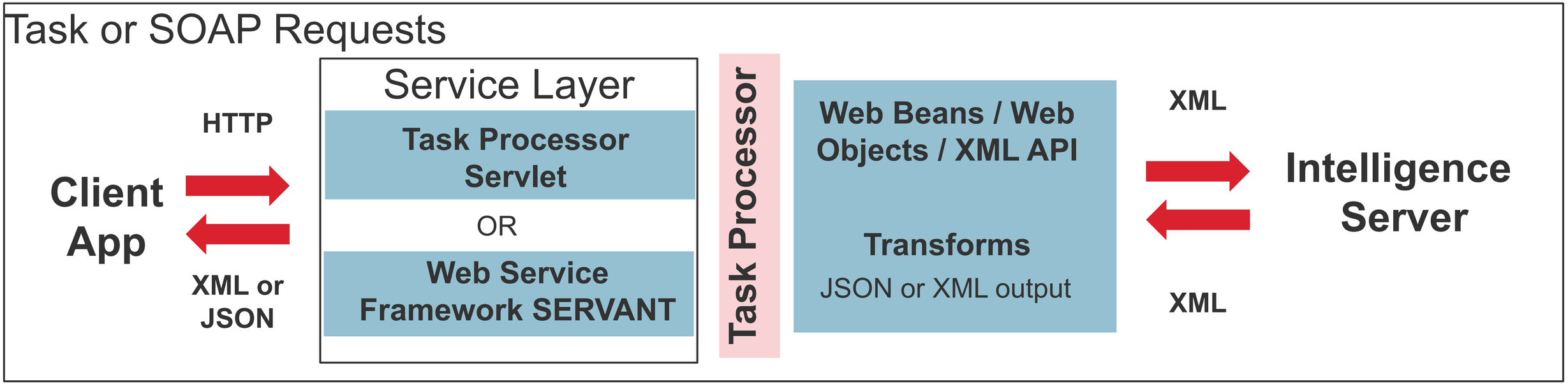
(*) Unlike SOAP-based Web services, there is no "official" standard for RESTful Web APIs.[18] This is because REST is an architectural style, while SOAP is a protocol.

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MicroStrategy REST APIs

REST API Execution Workflow





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MicroStrategy Data Management API

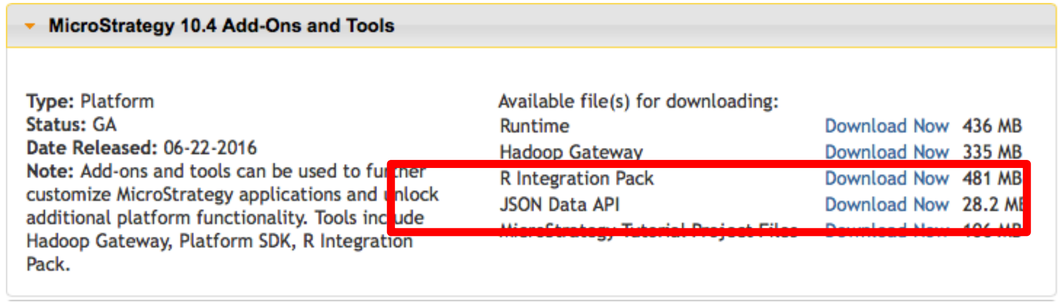
Data Push API released with MicroStrategy 10.6

Authentication end-point

- The /Sessions end-point allows for creating and closing session with the MicroStrategy system [Standard, LDAP].

Datasets end-point

- The /Datasets end-point allows for operations on in-memory cubes..
- The end-points support for
  - Creating a new Intelligence Server in-memory cube [10.6]
  - Define Attributes / Metrics and their mapping [10.6]
  - Append data to an existing in-memory cube [10.7]
  - Replace/Update data in an existing in-memory cube [10.7]



Deployment

- Deployed by default on the MicroStrategy Cloud environments.
- Separate download for on-premise deployments (https://software.microstrategy.com/)

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MicroStrategy Data Push API capability

Anticipated use cases

Non-MicroStrategy triggered data refresh workflows

- Seamless integration with existing data preparation workflows / software (Paxata, Alteryx, Lavastorm, etc.).
- More efficient incremental data refresh processes.

Near real-time data publishing

- Data Subscription-models can now easily integrate directly with MicroStrategy and keep the data flowing to populate Intelligent Cubes.

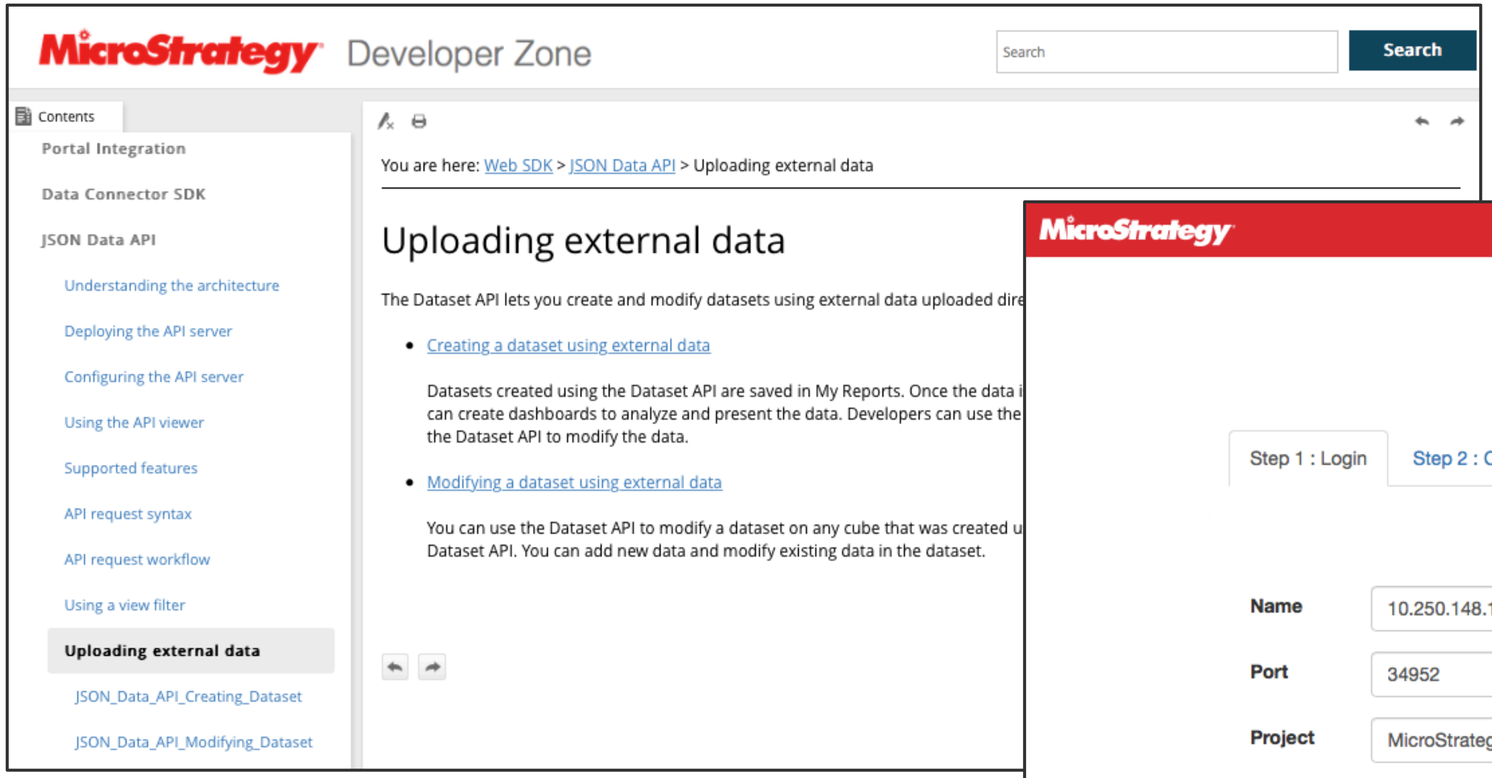
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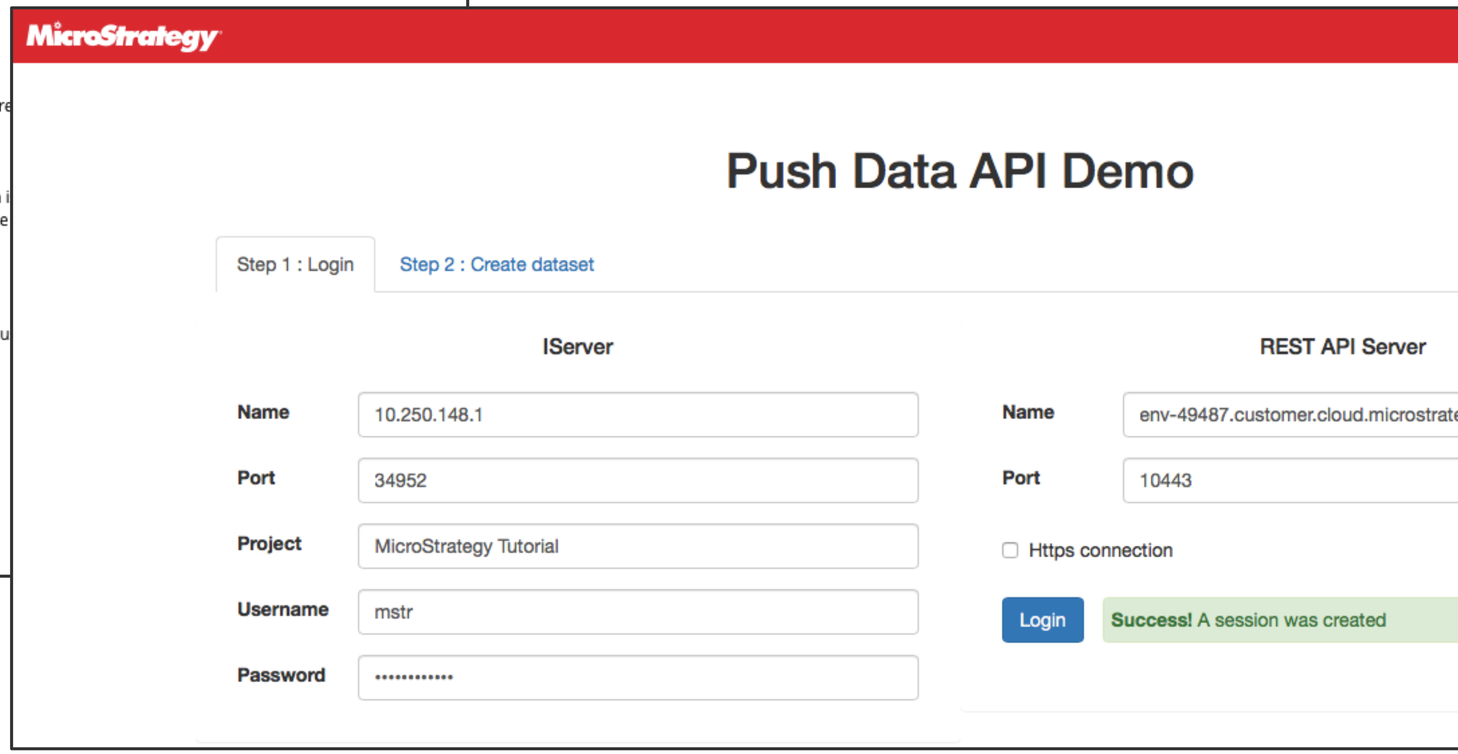
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MicroStrategy JSON Data API

Documentation and sample online

https://lw.microstrategy.com/msdz/MSDL/_CurrentGARelease/docs/projects/WebSDK/Content/topics/json/JSON_Data_API_Uploading_External_Data.htm





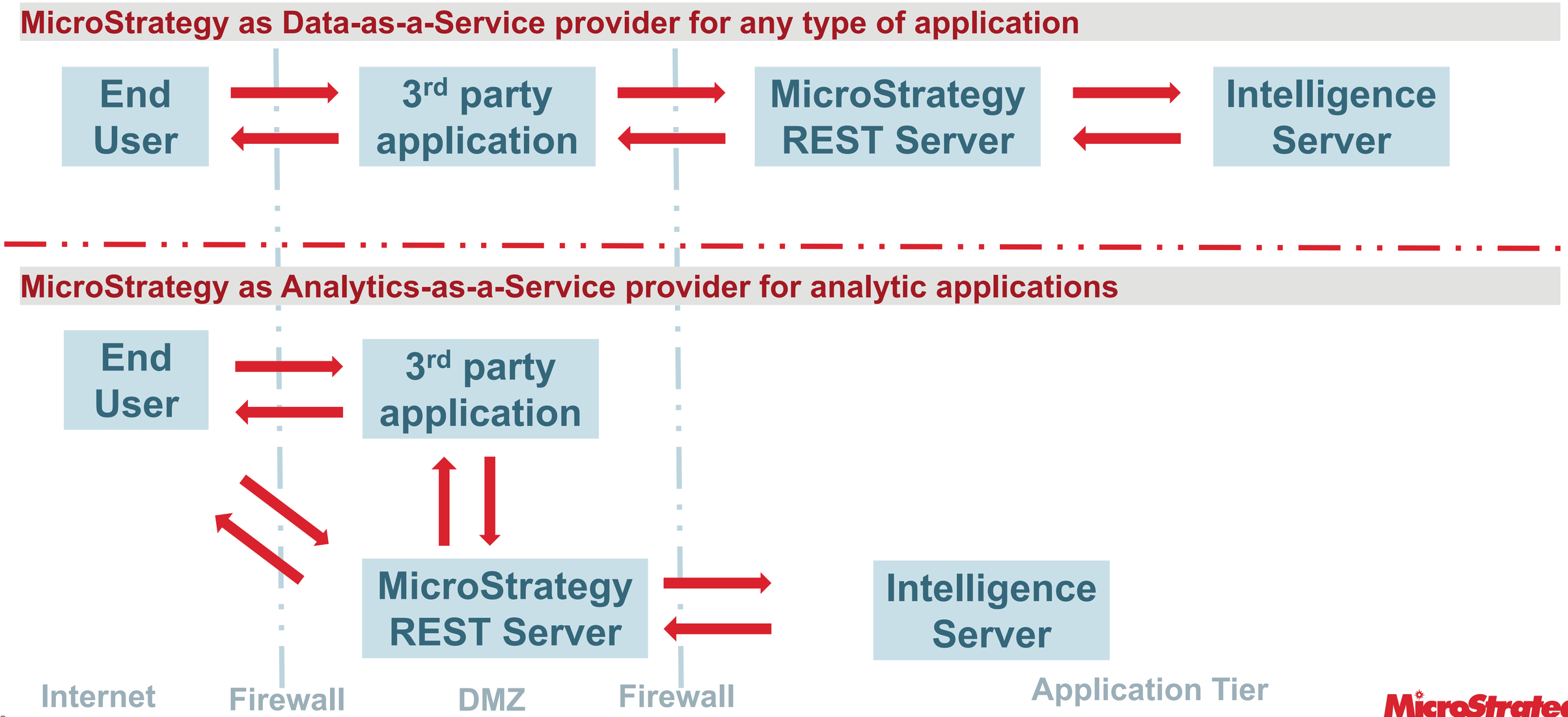
https://developer.microstrategy.com/

To access the developer library

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MicroStrategy REST APIs

Deployment Scenarios



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Demo

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MicroStrategy Data Push API capability

Unlocking new horizons

The Data Push REST API unlocks new data flows

- Near real-time data publishing / analysis
- Incremental cube refresh
- Better integration with data preparation workflows / software (Paxata, Alteryx, Lavastorm, etc.).

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Thank You

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