Essential Features of an Integration Solution
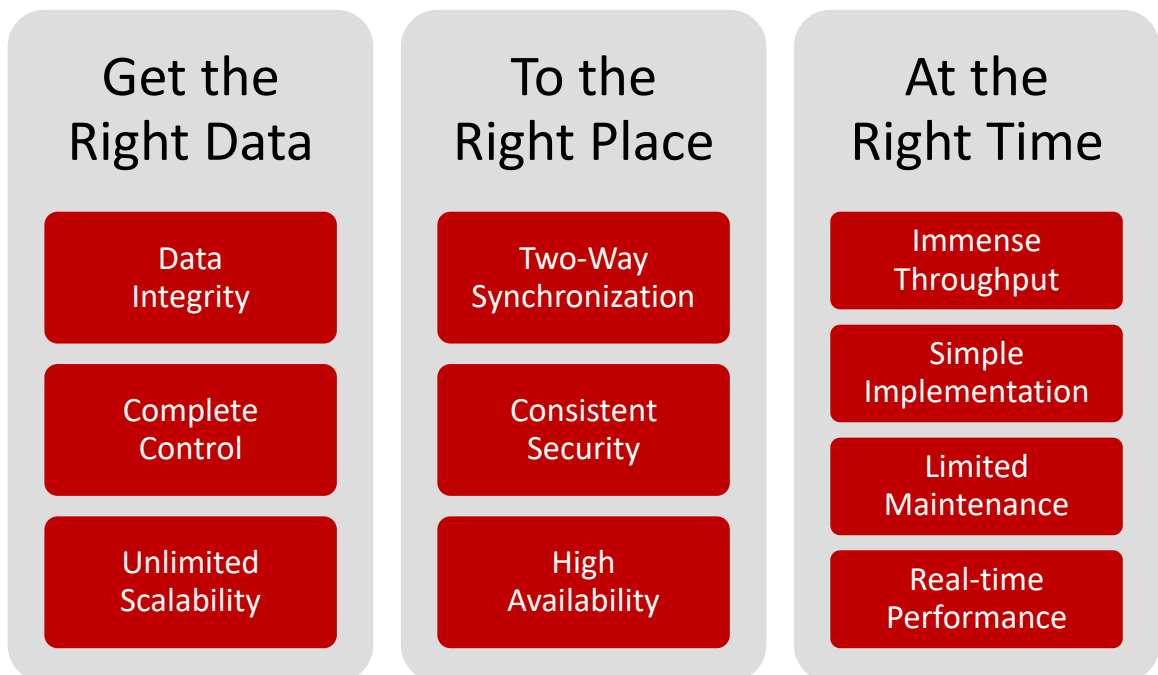
February 2019

Essential Features of an Integration Solution

When an enterprise uses multiple applications, it needs to connect them for a variety of reasons. Whether the business needs to look up a single record, bill a customer, run reports to discern trends, or carry out any of a number of needed functions, that business must count on consistent, accurate data.

To integrate these systems, a business faces remarkable challenges. When it tackles them on its own without doing all the right homework or when it purchases the wrong solution, the implementation is complex, the system performance lags, the data security is compromised, and the business is left with ongoing maintenance problems.

Fortunately, the right integration solution will keep the enterprise humming. But it is important to know what to look for.

So, what are the essential features an effective integration solution? In short, your solution needs to get the right data to the right place at the right time.

Get the Right Data	To the Right Place	At the Right Time
Data Integrity	Two-Way Synchronization	Immense Throughput
Complete Control	Consistent Security	Simple Implementation
Unlimited Scalability	High Availability	Limited Maintenance
		Real-time Performance

Get the right data ...

1. **Data integrity.** Your data should propagate without any loss to that data. To ensure data integrity, look for a cloud-based integration service that understands a variety of data schemas, including attachments, reference fields, hierarchical tables, and journal fields.

2. **Complete control.** Select a solution that allows you to maintain control over your data. You should get to decide not only what data gets sent but also which applications have access to it.

3. **Unlimited scalability.** Avoid obstacles to your growth. Pursue a solution that places no limits on your current or future volume of data to be sent.

Get the Right Data

- Data Integrity
- Complete Control
- Unlimited Scalability

... to the right place ...

4. **Two-way synchronization.** If the first application pushes information to the second, then the second should be able to return the favor. You modify records on both, so they should be able to talk bi-directionally. Ensure that records in one system always match records in the other.

5. **Consistent security.** Know where your data is going. Is it encrypted at the source to ensure protection? Does it require a key at the destination to ensure retrieval? For maximum security, pursue a solution that never sees unencrypted data.

6. **High availability.** With your integration solution, you should have the option to receive data at multiple targets after sharing once. Publish once, subscribe everywhere. Also, check on the solution's ability to function in the face of power and network outages.

To the Right Place

- Two-Way Synchronization
- Consistent Security
- High Availability

… at the right time.

7. **Immense throughput.** A solid integration solution will copy mountains of application information, including complex objects, with negligible impacts on performance during application use. The solution should offer a real-time view of your data exchange. Look for activity monitoring that reveals performance and current status.

8. **Simple implementation.** To get up and running fast, select a solution that does not require coding or a complicated setup. Ideally, the solution is implemented as soon as you turn it on. The interface should also have familiar language and technology, enabling ease of use.

9. **Limited maintenance.** Beware of do-it-yourself toolkits or packaged integrations, which can drain your time by requiring constant maintenance. Opt for a complete solution, fully maintained and supported by the solution provider.

At the Right Time

- Immense Throughput
- Simple Implementation
- Limited Maintenance
- Real-time Performance

10. **Real-time performance.** Scheduling your data exchanges for the "off" hours means working with obsolete data. In fact, if your data does not sync within seconds, it is out of date and could lead to costly errors. When you sync in real time, you work with certainty.

Perspectium Integration Solutions

Meeting the criteria for an effective integration solution, Perspectium delivers relentless application synchronization with a monitored, real-time data replication and synchronization cloud service that propagates application database objects — without loss — to other applications.

Perspectium provides the highest data transfer rate, with the least performance impact to the applications. Unlike a typical point-to-point database replication tool, Perspectium solutions are built on a highly scalable enterprise message-bus architecture and provide a flexible publish and subscribe framework that is integrated into your existing ServiceNow/Salesforce administrative user interfaces.

The cloud-based service, with all data encrypted at the source, creates a safe environment to transfer data, all security controls remaining in the customer's hands.

The Advantage Over Traditional Models

What makes Perspectium so fast, so reliable, and so scalable? Perspectium uses a message bus that allows database loads of 200 records per second, per thread. This architecture differs significantly from traditional solutions.

To connect applications, enterprises historically have used solutions that follow three main information architectures.

> 1. **Point-to-point integration**. In this model, data flows directly from system to system. Point-to-point integration starts simple, but becomes complicated as it gets larger.

> 2. **Hub-and-spoke integration**. With a hub, data flows through a central point. The hub may reformat the data, or make decisions on where to send it next. Hubs can simplify integration because they can connect systems with different data formats and data transfer methods. But hubs introduce complication because they add another place where development must take place and another runtime component.

For both of the above models, scalability quickly switches from a non-issue to a critical problem as datasets grow. Years of application use will often push data sizes into the terabytes and record counts into the 100 million+ record count range. Batch polling using SOAP starts to break down. The additional overhead not only limits transfer time but also significantly degrades application performance.

> 3. **Message-bus integration**. With a bus, all systems follow the same standards and can share in a consistent method of transferring data between the systems. Any new system can plug into the bus, as long as it meets the standards.

point to point

hub and spoke

bus
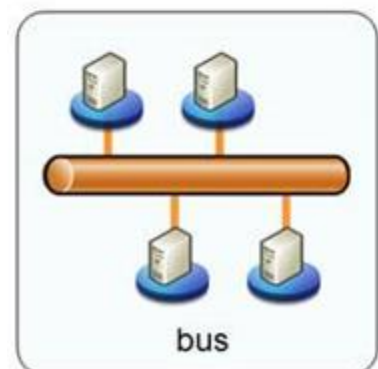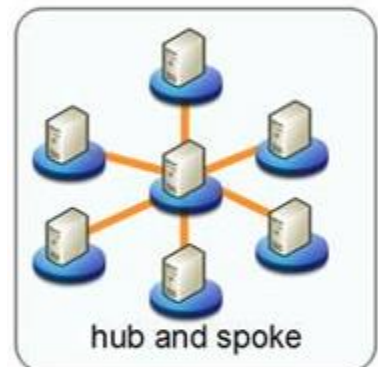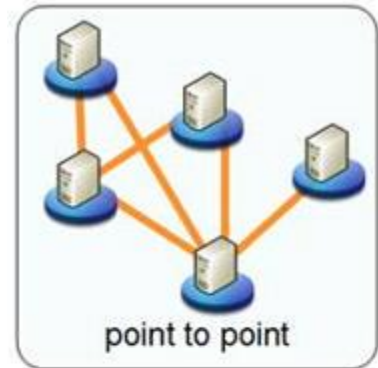
Maximizing Throughput and Availability for Your Data

Perspectium's message-bus architecture is a Message Broker Service (MBS) that combines with a native application to reduce the overhead involved with web services and to keep control over what is shared within the application. Data is encrypted before it leaves and pushed into a single stream to multiple endpoints.
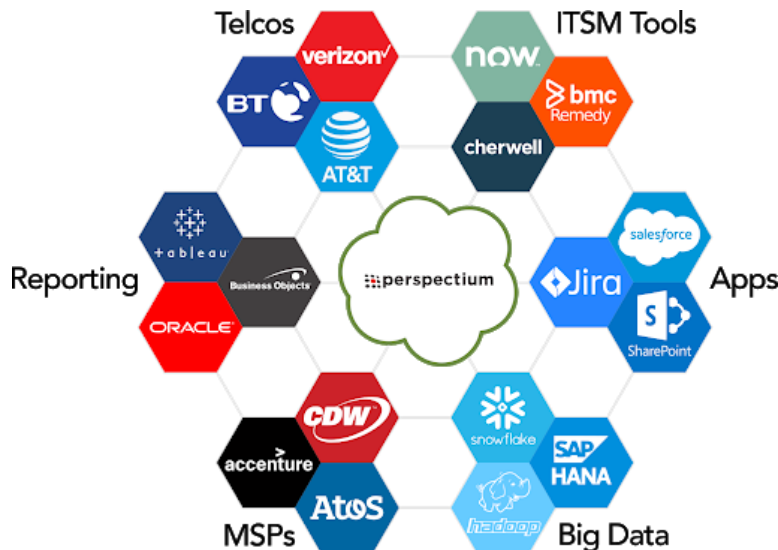
Enhanced Availability

Perspectium also dynamically detects changes in data. Rather than relying on a batch poll, it pushes only the data that has changed, enabling the best possible throughput and flexibility with the least impact to the publishing application.

Perspectium's MBS is a highly scalable and distributable cloud-based service. Maximizing availability, businesses can easily replicate data to as many endpoints as desired with no impact or change to the endpoints. Any data source that can post to or retrieve data from the MBS can be effectively integrated to any other data source that can do the same.

Enhanced Throughput

Several of Perspectium's largest customers are moving tens of millions of records per month, and one is moving 13 million records a day.

Combining the MBS with native applications and function-specific agents provides the optimum solution for a unified integration platform.

Perspectium's Network Keeps Your Apps Talking

To ensure 99.7% contractual availability, Perspectium's MBS uses a redundant infrastructure:
- Load-balanced network connections with multiple IP's using one customer URL
- Load-balanced servers supporting the MBS

Amazon EC2 datacenters around the world host Perspectium's MBS. Customer preference and geographic proximity determine which data centers host the MBS for the customer.
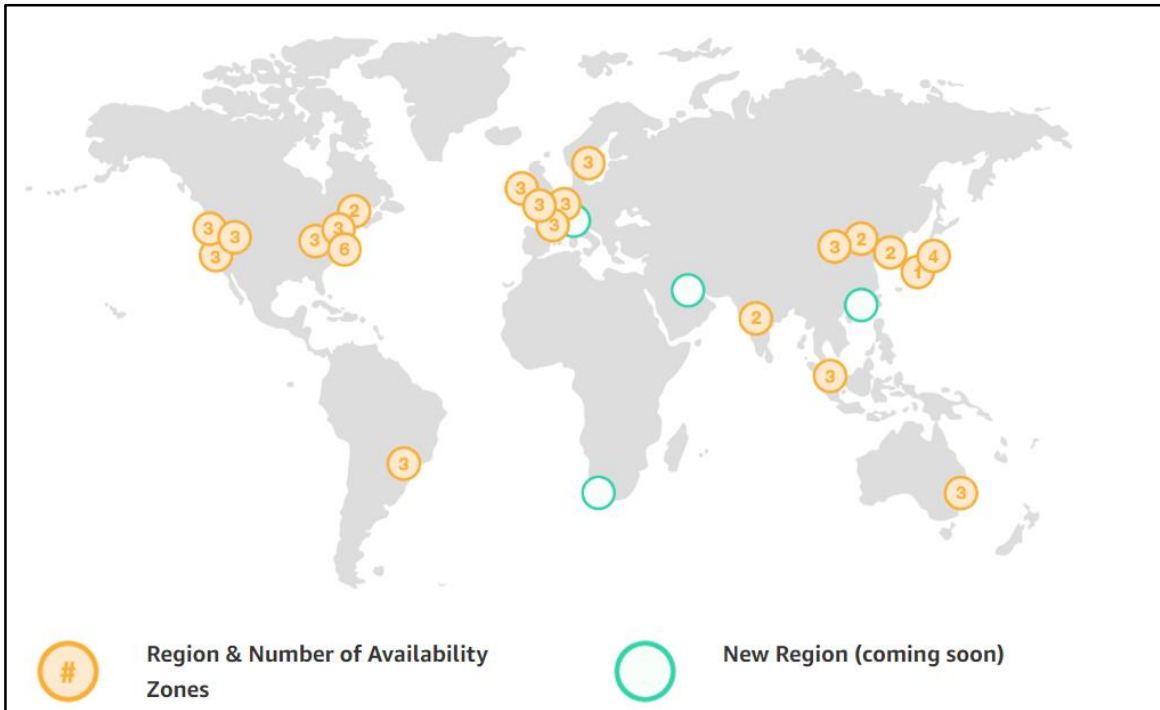

Source: AWS Global Infrastructure, https://aws.amazon.com/about-aws/global-infrastructure/

Perspectium Keeps Your Transactions Secure

When customers encrypt data in the native replicator application, they alone control and view the encryption key. Perspectium supports Triple DES or AES-128 encryption.

If there is no native application for an application that you are integrating, the encryption takes place with a shared public/private key. This method is necessary when the data source or the destination does not support encryption, so Perspectium must decrypt the data before allowing the destination to receive the data.
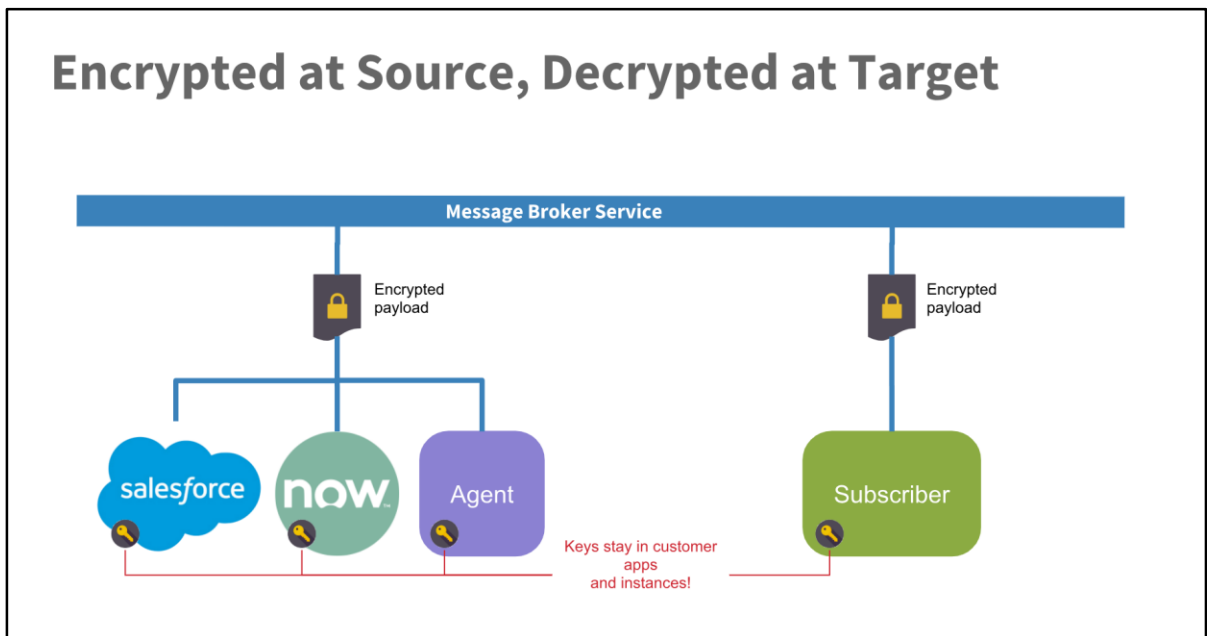
All communication with Perspectium's MBS is over either HTTPS or AMQPS.

The Power to Track, Retain and Control Your Data

Track Your Data

A dashboard allows customers to track the data flowing in the MBS. See the number of records per day, week, and month, along with the record types shared or subscribed to and the amount by megabytes.

Any errors from the data sources are tracked and displayed in metric form on the dashboard. Details of these errors appear in the ServiceNow native application or the agent logs.
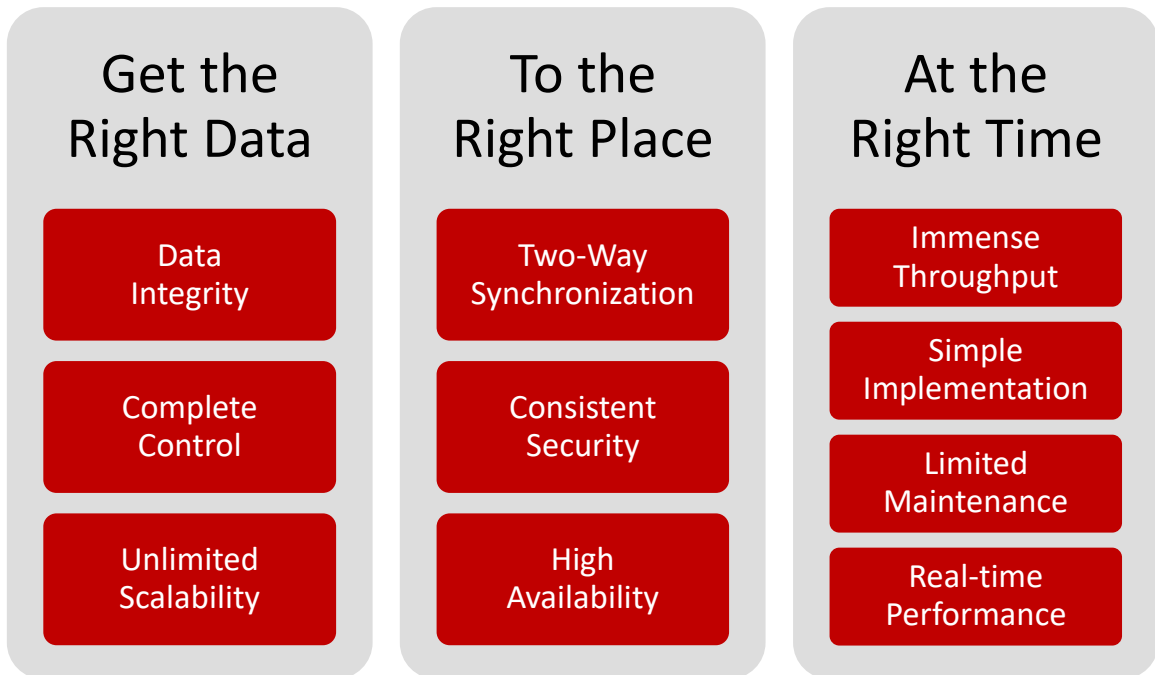

Retain and Control Your Data

Perspectium's MBS holds a message only until it is consumed by the intended data source. Usually, the data source will consume the data in less than a second. Perspectium will never retain any messages after they are consumed.

If an endpoint is not able to consume the data right away, the messages will be cached on the MBS until the endpoint is available again to consume data. If the messages are held long enough they may be written to disk, but never backed up.

Perspectium Has the Essential Features of an Integration Solution

Having all the essential features of an integration solution, Perspectium, with its highly scalable enterprise message-bus architecture, gets the right data to the right place at the right time.

Get the Right Data

- Data Integrity
- Complete Control
- Unlimited Scalability

To the Right Place

- Two-Way Synchronization
- Consistent Security
- High Availability

At the Right Time

- Immense Throughput
- Simple Implementation
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To learn more about Perspectium solutions, visit perspectium.com or join one of the upcoming webinars to find out how Perspectium can help you achieve relentless data synchronization.

What are your integrations costing you today?

You are spending a lot more on replication than you think. Our TCO calculator will figure out how much your integrations are costing you today - and tell you how much they could cost you with Perspectium. Try it out to calculate your TCO.