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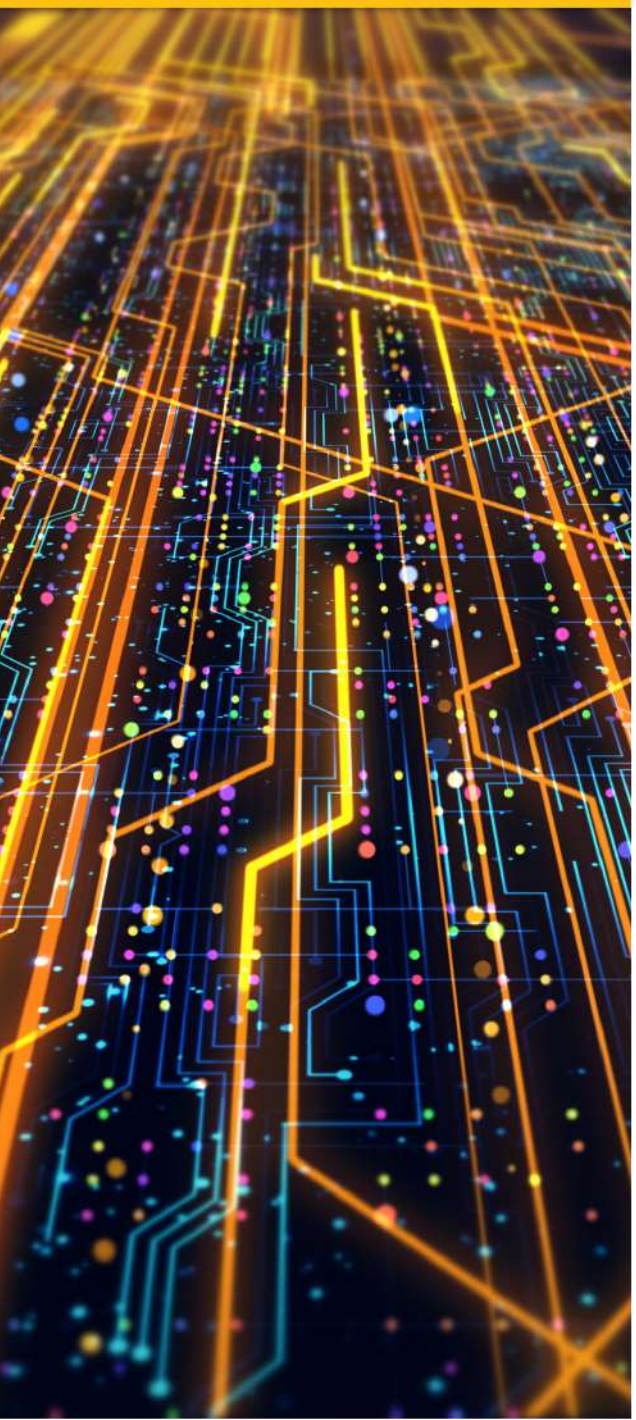

The Modern Integrated Organization

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TechTarget

In this handbook:

- Integration strategy key to fuel cross-company collaboration
- Craft an application integration strategy and pick the best tool
- Untangle cloud application integration spiderwebs

Integration has taken many different forms in the organization--from team collaboration to application data exchange to cloud management.

Discover how to make integration work for you, reviewing the common pitfalls to avoid and the best opportunities integration can offer you in one comprehensive guide.

Read on to learn more.

In this handbook:

Integration strategy key to fuel cross-company collaboration

ANDREW FROEHLICH, PRESIDENT

An intracompany team collaboration strategy is great, but it doesn't address the need to communicate with people outside the organization. Today, businesses rely on a mix of external service providers, consultants, suppliers and other stakeholders.

As a result, cross-company collaboration is a must-have. Let's look at the advantages of cross-company collaboration, along with ways to enable it on your existing enterprise-grade collaboration platform of choice.

THE BENEFITS OF EXTERNAL COLLABORATION

Many business projects include customers or partners external to an organization. In-person meetings, email, and voice and video conferences have all enabled people to communicate during a project. But what's needed these days is a single, unified virtual hub, where all parties can gain access to group chats, files, applications and historical meeting notes.

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Because team collaboration tools are now the key way to manage intracompany communication, it makes sense to open up these same tools for use outside the corporate boundary. Doing so gives all parties the same visibility to relevant communications, applications and data that, in turn, can streamline team assignments.

USING THE RIGHT INTEGRATION STRATEGY

Depending on the platform in use, the following cross-company collaboration options may be available:

- **Guest account access.** Most collaboration applications let organizations create guest accounts for external party use. The use of these accounts is best in situations where a small number of external users are expected.

  The higher the number of guest access accounts created, the more difficult they are to manually manage. Failing to carefully oversee guest accounts can lead to abandoned accounts that can be compromised down the road.
- **Direct federation.** Instead of providing guest accounts, another option is to establish a direct or closed federation between two companies. This deployment methodology features more granular access controls and is more secure than guest accounts. But many platforms offer only a limited set of collaboration features between federated users.

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For example, Microsoft Teams direct federation supports intercompany one-to-one chat, presence, voice and meeting features, but it does not support others, such as file sharing and group chat. Be sure to understand what features your internal and external users require before integrating this method.

- **Open federation.** Popular enterprise collaboration tools usually offer open federation interoperability. Using the standards-based Extensible Messaging and Presence Protocol, this method lets separate organizations communicate easily, as long as they use the same collaboration platform. While not as secure as direct federation, one-to-one setup isn't required. Instead, if both companies use the same platform with open federation, intercompany communication is automatically established.
- **Cross-platform federation.** It may be the case that external partners use a different collaboration platform than your organization. Cross-platform federation lets users work with the collaboration application they are most comfortable with.

  For example, a company that uses Microsoft Teams can communicate with external partners that use Slack, Zoom or Webex when cross-platform federation is configured. That said, some features may not be compatible 100% of the time; updates and patches on collaboration platforms can potentially break this cross-platform interoperability.

COLLABORATION WITH ANYONE AND ANYWHERE IS THE FUTURE

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Whether you need to communicate inside or outside your organization, persistence and anytime communication are key. Depending on the number of external users, the collaboration tools they use and the level of data security required, it's likely you can use an existing integration strategy to provide the level of cross-company communication you need. Collaboration platform vendors, meanwhile, are racing to develop new integration options that will provide connections that are more secure and easier to manage.

NEXT ARTICLE

In this handbook:

Craft an application integration strategy and pick the best tool

JOYDIP KANJILAL, SOFTWARE ARCHITECT

Forming a proper application integration strategy is an essential part of enabling applications to work with one another. While it can be a difficult process, the benefits are worth it.

Application integration enables apps to exchange data with one another by invoking services that are exposed by those applications -- it helps create interoperability between disparate systems. It also helps enterprises transition to new technologies quickly and easily, which increases productivity.

Application integration is especially important in these scenarios when enterprises need to:

- Integrate a large number of applications
- Integrate several APIs in the near future
- Publish services or APIs for external consumption
- Have a seamlessly scalable platform
- Expand the number of communication protocols you can support

This process should not be confused with data integration. While the purpose of data integration is to link, transform and translate application data, application

integration consolidates data from several sources into a single repository. This helps simplify and automate business processes, keep applications updated and reduce data redundancy.

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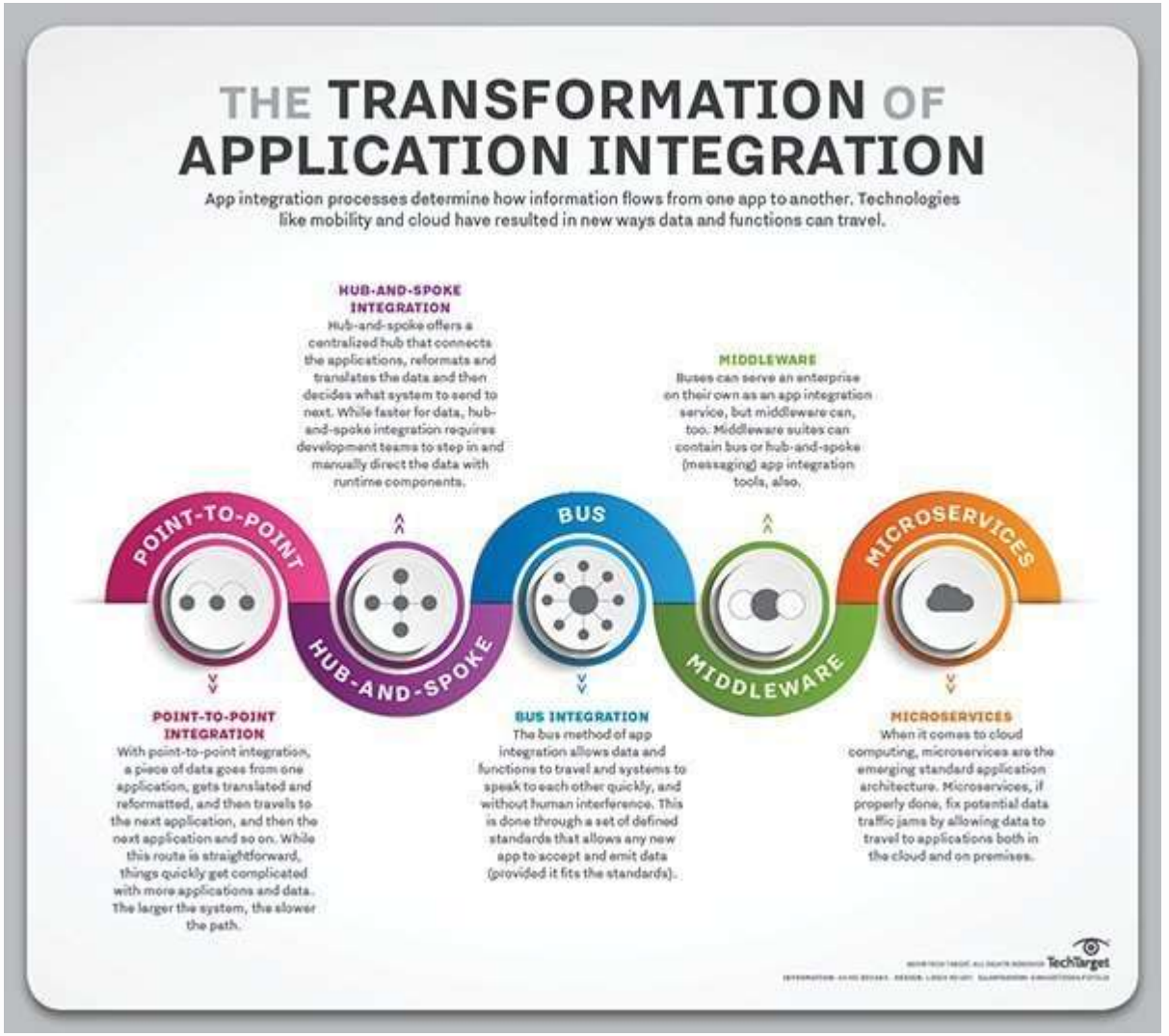

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APPLICATION INTEGRATION STRATEGY BENEFITS

A well-defined application integration strategy helps an organization in numerous areas. Here are few of the top reasons to adopt an application integration strategy for your organization:

- **Costs.** Once you have a defined strategy in place, costs decrease because developers don't need to reinvent the wheel each time there is a need for application integration.
- **Scalability.** A scalable integration platform that supports all types of apps helps the business to grow.
- **Control.** Application integration improves the control of the information flow. It provides improved data visibility, which enables organizations to observe, measure and embrace data all through the workflow.

TOP APPLICATION INTEGRATION TOOLS

With a wide variety of application integration tools available, selecting the right tool for your organization might be difficult. Try to focus on three particular factors:

- Flexibility
- Integration beyond the cloud
- Connection to several endpoints

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Here are a few popular application integration tools:

IBM MQSeries is an enterprise application tool that works with multiple computing platforms, application types, web service frameworks and communications protocols. You can use this tool to link disparate applications residing in diverse environments and to integrate the back end with external systems in a consistent manner.

Microsoft BizTalk Server helps organizations optimize business processes through adapters that are built for multilanguage communication. BizTalk contains tools that help develop, design, deploy and manage business processes across large organizations.

Oracle Fusion represents one of the most complete and unified application integration tools. Fusion aims to maintain optimized portability as teams develop, monitor and improve processes over time. One of the striking features of this tool is modularity, which allows you to install, configure and use only the services the organization needs.

Tibco Software's integration tools possess some of the most advanced business process management features available in application integration services. These tools are widely used to integrate enterprise applications residing in heterogeneous business systems.

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Talend offers various tools, such as Talend Data Fabric and Talend Cloud Data Integration. These open source integration tools can help organizations achieve better operational agility. One standout feature in its portfolio of offerings is a simple GUI that allows developers to quickly build, test and publish application services.

Specific use cases for application integration

Application integration has a significant, tangible impact on organizational processes. Here are some industry-specific examples of where it affects the business:

- **Banking.** Banks need to integrate customer profiles, credit card accounts and other back-end services with easy-to-use mobile apps.
- **Manufacturing.** Manufacturing plants need to monitor production processes across various systems, such as scheduling systems.
- **Healthcare.** Healthcare organizations must integrate patient records with electronic health record systems and allow doctors to easily access medical histories, treatment details and other related information.
- **Business mergers.** Many times, enterprises have multiple independent systems that contain the same data due to mergers and acquisitions. This requires the integration of multiple data repositories.
- **Sales.** Marketing and sales personnel need dashboards that provide customer information and insights on ROI. This means they must integrate data from multiple sources, particularly point-of-sale applications.

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BRIAN KIRSCH, IT ARCHITECT, INSTRUCTOR

When some organizations contemplate a shift to the cloud, they envision that their cloud provider will simply take over all their IT needs. Of course, it never really works out that way.

An enterprise can leave on-premises equipment and software management behind when it moves to the cloud, but it's still responsible for cloud application integration. But with so much focus on the resources freed up by a migration, the application's dependencies within the organization are often overlooked.

Today, few workloads are just a single application in a stand-alone environment. Systems such as electronic health records and email interact with each other to provide a feature-rich environment for internal staff, and users expect those tools to integrate so they can provide quick and complete services to their customers.

However, when there is poor cloud application integration and the connection breaks, it negatively affects the customer experience. So whether you're talking about IaaS or SaaS or anything in between, how your enterprise interfaces with those providers is essential. Once an application is in cloud, you must find all the integration points that could cause failure.

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API ISSUES

A majority of applications use APIs to communicate with each other and share data. APIs are critical links that enable seamless integration between systems. These links function because the software vendors have agreed on common data exchange standards to prevent potential communication issues.

However, APIs often change in form and function when a vendor adds features or makes other alterations, often for security purposes. These adjustments can hinder full and open communication between endpoints. With on-premises applications, enterprises can alter API security settings or even delay updates until after testing. But, this is not possible in the cloud.

A cloud provider may push users into a new set of API security standards, even if an individual user isn't ready to support it. That enterprise will have to scramble to ensure its applications support the update or risk losing API integrations. If the latter scenario occurs, the cloud application itself might not be offline, but it might as well be if its overall function doesn't work as expected. The enterprise will have to rush to fix it or find a workaround.

For example, this can happen when a vendor moves an application interface from a known software platform such as Java to something newer, like HTML5. These interfaces can break if they were written for Java, so the enterprise will

need to update them. This isn't necessarily difficult if the updates are available, but it's still work that needs to be done -- most likely at a time that is not ideal.

AUTHENTICATION TROUBLES

While the application might be hosted in the cloud, authentication is often still tied to the data center. In this scenario, if the primary on-premises location goes offline -- due to a physical issue, bandwidth problems or a simple denial-of-service attack -- the cloud-based application will not be accessible to users, even if it continues to run. Without authentication, it's possible to lose access to any application that uses single sign-on. For example, it could cut users off from an application such as Office 365, which would render staff unable to do simple document tasks.

An enterprise needs to ensure the links and interfaces lead back to its data center so it can actually take advantage of the uptime benefits of the cloud. This doesn't mean users should avoid the cloud. The key is to not fall victim to the spiderweb of connections and understand how the cloud environment truly works within an application stack, as well as the effect it can have when problems arise.

OPEN THE LINES OF COMMUNICATION

In this handbook:

The first step to untangle potential cloud application integration problems is to map out all communications and dependencies. It can be difficult, if not impossible, to find the appropriate documentation for your own software and interfaces, but application mapping software, such as SolarWinds or VMware vRealize Network Insight, can help organizations identify the communication interactions. Mapping enables users to know who is talking to whom, at which point IT teams need to assess the effects of critical communication channel failures. Such mapping will enable enterprises to understand which communication channels are critical and what to expect when things do go down.

Of course, understanding the impact won't protect users from an outage. But if enterprises track the scale and details of the issue, they can notify users quicker and help mitigate communication problems. These plans can also help IT teams understand where they should deploy additional resources for redundancy and workload protection. A focused approach that reveals risks can go a long way when budgets and other resources are not always available.