

## Cisco Spark Hybrid Services

Use Cisco Spark™ Hybrid Services to integrate your on-premises assets with Cisco Spark in the Cisco® Collaboration Cloud. When you do, you can protect your investments and provide even greater collaboration capabilities for a more delightful end-user and administrator experience.

### Cisco Spark Hybrid Services overview

More and more, organizations are choosing collaboration services from the cloud. Why? Cloud services are easier and faster to deploy, they don't require the upfront capital of on-premises systems, and they can free up IT staff to focus on what matters most to the business.

Many organizations, however, are unable or do not want to move all their services to the cloud. Often, they are not ready to replace everything they have on-premises or they want to augment their current collaboration tools with those from the cloud. However, having tools from both the cloud and the premises can create poor user experiences with tools that do not work together as one.

Cisco solves this problem with Cisco Spark Hybrid Services. These services connect what you have today with [Cisco Spark](#) to provide a single, integrated experience. If you like the capabilities of Cisco Spark, you can integrate those capabilities with what you currently have for even better end-user and administrator experiences. The Cisco Spark Hybrid Services are Call Service, Calendar Service, Directory Service, Media Service, and Data Security Service.

**Hybrid Call Service:** This service is ideal for organizations that want the capabilities of Cisco Spark but already have or would prefer to use [Cisco Unified Communications Manager, Business Edition 6000 or 7000](#), or a Cisco Powered™ cloud service from a certified [Cisco Hosted Collaboration Solution](#) partner for call control. Hybrid Call Service can enable you to use the Cisco call control you have and integrate it so tightly with Cisco Spark Message and Meetings that your end users will never know they are not a single service. It makes the Cisco Spark service aware of all calls across the unified communications system and connects them so they work together. Capabilities include instant desktop sharing, using the Cisco Spark app as a mobile client, and an integrated call history in the Cisco Spark app.

**Hybrid Calendar Service:** This service integrates your on-premises Microsoft Exchange, Office 365, or Google Calendar with Cisco Spark Message and Meetings capabilities. Hybrid Calendar Service easily and automatically creates a Cisco Spark workspace when scheduling meetings and makes it easier to schedule a meeting, especially from a mobile device. For example, adding the phrase "@spark" to the meeting invitation's location field will automatically create a Cisco Spark workspace and populate the meeting join information in the meeting invitation. Hybrid Calendar Service also allows Cisco Spark users to press a single button to join almost any upcoming meeting within the app itself.

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**Hybrid Directory Service:** This service connects Active Directory to Cisco Spark and enables a user to see all company contacts in the Cisco Spark app so that they can click to meet, message, or call. It also provides user synchronization between Microsoft Active Directory and Cisco Spark user management. Hybrid Directory Service simplifies the administrative experience by automatically synchronizing Microsoft Active Directory users with Cisco Spark (creating, updating, deleting) so that users are always current in Cisco Spark.

**Hybrid Media Service:** This revolutionary capability removes the deployment decision of premises versus cloud for Cisco Spark meetings. It places our Cisco Spark meeting engine on-premises to provide local media processing. The result is on-premises video quality and optimized Internet bandwidth. And it delivers this with simplicity, flexibility, and rapid iteration of new functionality of the cloud.

**Hybrid Data Security Service:** Ideal for security-conscious customers, Cisco Hybrid Data Security Service takes our industry-defining data security a step further by allowing customers to own and manage their own keys on-premises. You will still experience end-to-end encryption, helping ensure that all messages, files, and whiteboards remain secure and available at all times, while retaining full access to features such as search. With Cisco Spark, your data is private. This includes all content, messages, and files—even your whiteboard drawings.

Each of these services can be deployed together or individually.

### Cisco Spark Hybrid Services benefits

- **Highly secure.** Security is integral to Cisco Spark and the Cisco Spark Hybrid Services. Cisco has used its extensive experience gained from securing the world's largest networks. By combining this knowledge with the hardware and software elements of our market-leading communications and cloud services, we've built Cisco Spark and its hybrid capabilities.
- **Better user experiences.** End users and IT administrators get the best of cloud and premises. Cisco Spark Hybrid Services combine the cloud and the premises together for integrated experiences that are unique and improved. Examples include the ability to instantly share your desktop, automatic directory synchronization, and simplified meeting scheduling from mobile devices.
- **Ease the transition to the cloud.** Cisco Spark Hybrid Services can enable organizations to take advantage of Cisco cloud services without discarding their existing investments. Instead, they can integrate them deeply together for better user experiences.

### How Cisco Spark Hybrid Services work

Cisco Spark Hybrid Services use Hybrid Service Connectors to securely connect Cisco Spark to an organization's premises or to the Cisco Hosted Collaboration Solution (HCS) in a partner cloud. The connectors are software applications that are installed on-premises or in the Cisco HCS partner cloud and that enable integration with Cisco Spark. Two of them—the Call Connector and Calendar Connector—run as modules within [Cisco Expressway™](#). The Directory Service Connector runs as a service on a Microsoft Windows Server for Microsoft Active Directory synchronization. Cisco Spark Hybrid Media Service uses a Hybrid Media Node, software that is installed on a Cisco UCS® server on the customer premises. Data Security Service uses software similar to the Hybrid Media Service software and can be installed on VMware ESXi.

There are no incremental subscriptions or fees for deploying Cisco Spark Hybrid Services. The Hybrid Service Connectors and Cisco Expressway are downloadable free of charge and are part of the Cisco Spark service.

## Cisco Spark Hybrid Call Service

Many organizations want the full capabilities of Cisco Spark Meetings, Messaging, and Calling, but already have a Cisco phone system. They may also be using Cisco Jabber® for their mobile calling and collaboration, and may not be ready to, or may not want to, move their call capabilities to the cloud.

Cisco Spark Hybrid Call Service allows these organizations to keep their existing Cisco call control and get all the additional benefits of the Cisco Spark service. Hybrid Call Service combines the Cisco Spark Meetings and Messaging capabilities in the Cisco Collaboration Cloud with these Cisco call control systems:

- [Cisco Unified Communications Manager](#)
- [Cisco Business Edition 6000](#)
- [Cisco Business Edition 7000](#)
- [Cisco Hosted Collaboration Solution](#) (check to see if your Cisco Hosted Collaboration Solution provider offers Cisco Spark Hybrid Services)

Cisco Spark Hybrid Call Service has two service components, called **Call Service Aware** and **Call Service Connect**. Call Service Aware makes Cisco Spark aware of calls within your existing Cisco call control. Call Service Connect can enable calls between Cisco Spark and your existing call control so that they appear to users as one system. Call Service Aware must be enabled in order to activate Call Service Connect. Hybrid Call Service can enable the following use cases:

- **Instant meetings:** A very common case today is that you pick up your desk phone to call a coworker, and while on the phone, you suddenly realize that sharing a document, slides, or a photo, for example, would speed the decision making and the understanding of the topic. Call Service Aware can enable instant desktop sharing when you call another Cisco Spark user. No formal meeting is required. When Cisco Spark sees you have made a call to another Cisco Spark user, the Cisco Spark app on your desktop will automatically begin a meeting and allow screen sharing with a single click.
- **Mobile audio and video calling using the Cisco Spark app:** Call Service Connect enables Cisco Spark to become a soft phone by connecting the Cisco Spark app to a user's current Cisco call control. Cisco Spark users can make and receive calls to anyone just as if they were at their desk. They can call coworkers through their extensions using the company dial plan. This includes any number reachable by their desk phone, including video bridges. Calls from the Cisco Spark app are routed through their enterprise phone system. This promotes a great user experience, especially on the go, as you do not have to switch between apps. "Click-to-call" is available from within the Cisco Spark app itself.
- **Easier reachability:** Users can use their office phone number across all their devices, even when making and receiving calls from the Cisco Spark app. When called, their desk phone, Cisco Jabber, and Cisco Spark will ring. Answering the call on any one of them stops the ringing on the other devices.
- **Calling between Cisco Spark and Cisco Jabber:** Call Service Connect allows Cisco Jabber, Cisco Spark, and Cisco IP phone users to call anyone and not worry which device or application the other person is using. This gives end users the choice to use the application that best suits their needs.
- **Video device calling:** Connect your Cisco Spark video device registered to Cisco Spark in the cloud with your Cisco Unified Communications Manager or Cisco HCS. Assign an extension and E.164 number from your enterprise dial plan to your Cisco Spark video devices (including the Cisco Spark Room Series, Cisco Spark Board, and Cisco DX Series). Users can make and receive calls to or from other Cisco Unified Communications Manager registered devices and external PSTN numbers using the assigned number.

- **Unified call history:** Today, call history is often locked onto the device on which the call was made. Yet the call history is one of the most convenient ways to find and reach someone. With Call Service Aware, that valuable call history is unlocked from on-premises devices and made available in Cisco Spark. All calls made by a user will be listed in the Cisco Spark app and also across their enterprise phone system. As you make and receive calls from your Cisco desk phone, Cisco Jabber client, or Cisco Spark app, your call history is pushed into the cloud. When combined with Call Service Connect, this allows you to call people back easily.
- **Communications history in one place:** With Call Service Aware, your call history isn't just available from the Cisco Spark app. If the person you called is also a Cisco Spark user, the call event is added to your one-to-one Cisco Spark space with that person. This means that your one-to-one space includes not only your messaging, but also your calling interactions with that person. Have you ever placed a call to someone and wished you remembered when you last spoke, so that you could refer to it in your call? Such as, "Hey Bob, when we spoke three weeks ago, I told you I'd follow up with a new proposal." With Cisco Spark Hybrid Services, the history of that call three weeks earlier is right there in the space. Scroll up to see all of your Cisco Spark messages and calls with that person.

### How Cisco Spark Hybrid Call Service works

Hybrid Call Service uses the Call Connector software that runs as a module within [Cisco Expressway](#). Call Connector uses APIs to discover user devices configured in Cisco call control and monitors them for call activity. Call events are reported to Cisco Spark, which creates instant meetings and updates Cisco Spark spaces and call history. Call Connector also creates or updates a virtual remote device that represents Cisco Spark within Cisco call control. Call Service Connect uses this remote device to extend calls to Cisco Spark, and to allow calls from Cisco Spark to be identified with the calling user. In addition, Call Service Connect requires a Cisco Expressway firewall traversal solution to enable these calls between Cisco Spark and your existing call control.

### Requirements for Cisco Spark Hybrid Call Service

To enable Hybrid Call Service, organizations will need to use one of the Cisco call controls in Table 1. Note that Cisco Business Edition has Cisco Unified Communications Manager as part of all of its packages, so make sure you have the right version.

**Table 1.** Cisco call control options

On-premises call control	Version
Cisco Unified Communications Manager	10.5(2)SU5, 11.0(1a)SU3, 11.5(1)SU3, 12.0(1), and above
Cisco Hosted Collaboration Solution (check to see if your provider is offering Cisco Spark Hybrid Services)	10.6 and above

Customers will need to procure one or more of the Cisco Spark offers outlined in Table 2.

**Table 2.** Cisco Spark offers

Cisco Spark applicable offers	SKU
Business Messaging	A-SPK-NU-M1
Business Messaging and Meetings	A-SPK-NU-M3

Customers will need to deploy Cisco Expressway (Table 3). Organizations using Cisco Hosted Collaboration Solution do not need Cisco Expressway on their premises. Instead, their Hosted Collaboration Solution partner will deploy it in the cloud as part of their Cisco Spark Hybrid Service offering.

**Table 3.** Cisco Expressway details

Requirements	Version
Cisco Expressway - No charge. Download from Cisco.com	We recommend the latest release of Expressway. See <a href="#">Expressway Connector Host Support for Cisco Spark Hybrid Services for information</a> about Expressway version support.

## Cisco Spark Hybrid Calendar Service

Cisco Spark Hybrid Calendar Service leverages information from users' Microsoft Exchange, Office 365, or Google Calendar to make meetings and their workflow more efficient. It provides these benefits:

- **The simplest meeting scheduling on the market:** This benefit applies to all users, whether they are in the office or on a mobile device. However, it especially makes scheduling from mobile devices easier. As more and more users become mobile, they want to schedule meetings from their mobile phones. Built-in mobile calendar applications do not allow plug-ins. Consequently, there is no easy way to add Cisco Spark space or meeting join information in a mobile app. Using a web-based calendar for scheduling, such as Microsoft Outlook Web Access (OWA), is difficult and forces users to manually copy and paste the meeting join information. This problem is so significant that many users wait until they get to the office or open up their laptop to schedule meetings.

Cisco Spark Hybrid Calendar Service overcomes these issues so that you can schedule meetings and create a Cisco Spark space on any device, anywhere. Adding the phrase “@spark” to the location line of the meeting invitation automatically opens a new Cisco Spark workspace with the invitees, allowing that team to begin the conversation and share documents and ideas before the meeting even starts. It also automatically populates the body of the invitation with the meeting join information and adds an artifact to the team workspace so the team knows a meeting has been scheduled. Attendees can then join the meeting from the Cisco Spark workspace.

If users do not need a workspace and just need to meet, they can add the phrase “@webex” to the location field of the invitation. The invitation is automatically populated with the meeting join information, allowing the users to enjoy a Cisco WebEx® meeting.

These capabilities do not require any plug-ins. No manual cutting and pasting of information is necessary. Simply adding “@spark” or “@webex” to a meeting invitation allows people to schedule meetings from any device.

- **Simple and fast joining:** Users can schedule workspace meetings or Cisco WebEx meetings in Outlook and can join directly from Cisco Spark using the green “Join” button.
- **Calendar integration:** Cisco Spark’s calendar tab lets Microsoft Exchange and Office 365 users see their calendar right in Cisco Spark, without having to toggle between applications. All their meetings and activities are together in one place. They can view details about their upcoming Cisco Spark and Cisco WebEx meetings and even see other activities on their calendar within Cisco Spark. When it’s time for a meeting to start, they can join it from the meeting list, too.

- **Context related to people:** The Hybrid Calendar Service Exchange and Office 365 integration provides two key use cases:
  - **Ability to see whether people are in the office:** This capability helps people communicate more effectively and redirect communications and work if necessary. If a user changes his or her status to out of office in their calendar, the Hybrid Calendar Service automatically updates the user's status in the Cisco Spark app. The user's avatar changes to an airplane to indicate out-of-office status, and shows the time frame when he or she will be gone.
  - **Ability to see who has or has not accepted a meeting invitation—regardless of who scheduled the meeting:** Cisco Spark, when deployed with Hybrid Calendar Service, is the only service on the market today that lets users see the acceptance status of meeting invitees, even if someone else scheduled the meeting. Users can decide which meetings to attend based on who is or is not going, allowing them to manage their day more effectively and to better understand the context of the meeting before they join. All this is made visible in the Calendar tab in Cisco Spark.

Table 4 outlines the different capabilities available to users when scheduling meetings, based on the company's chosen Cisco Spark level of service.

**Table 4.** Scheduling capabilities by the level of Cisco Spark used

Cisco Spark service level purchased	Cisco Spark Hybrid Calendar Service benefits by level
<b>Business Messaging</b> <ul style="list-style-type: none"> <li>• Persistent messaging</li> <li>• One-to-one and 3-way video calling with screen sharing</li> <li>• Ability to join Cisco Spark and SIP-based meetings</li> </ul>	Users add "@spark" to the invitation's location field for simple scheduling for up to 3 people. Users also experience simple joining and can get context related to people and their availability.
<b>Business Messaging and Meetings</b> <ul style="list-style-type: none"> <li>• Everything included with Business Messaging</li> <li>• Ability to host meetings powered by Cisco WebEx with screen sharing and with external participants on any device, including third-party standards-based devices</li> <li>• A personal room</li> <li>• Ability to schedule meetings from within Cisco WebEx for up to 200 people</li> <li>• Ability to schedule and meet in the Cisco Spark workspace with 25 participants</li> </ul>	In addition to the option of adding "@spark," users can choose to add "@webex" to the invitation's location. With "@webex," users can schedule meetings powered by Cisco WebEx. <b>Note:</b> Cisco Spark meetings can be scheduled without Hybrid Calendar Service by using capabilities inherent in Cisco WebEx. The benefit of using Hybrid Calendar Service is the simplicity of needing only to add "@webex" or "@spark" to the meeting location. This is especially useful on a mobile device, as no plug-ins are needed.

## Requirements for Cisco Spark Hybrid Calendar Service

Table 5 shows the product requirements for Cisco Spark Hybrid Calendar Service deployment.

**Table 5.** Product requirements for Cisco Spark Hybrid Calendar Service deployment

Product	Version
Cisco Spark or Cisco WebEx	Any cloud paid offer
Microsoft Exchange, Microsoft Office 365 (Exchange Online), Google G Suite Calendar	2010 SP3, 2013, Office 365
Cisco Expressway: Can be downloaded from Cisco.com at no charge. For use with Microsoft integrations only.	We recommend the latest release of Expressway. See <a href="#">Expressway Connector Host Support for Cisco Spark Hybrid Services</a> for Expressway version support.

## Cisco Spark Hybrid Directory Service

Deploying Cisco Spark Hybrid Directory Service simplifies the administrator's experience. It takes the hassle out of updating user information in the cloud by automatically synchronizing it with the Microsoft Active Directory on your premises. Cisco Spark Hybrid Directory Service supports Cisco Spark Meetings, Messaging, and Calling capabilities.

For administrators, Hybrid Directory Service simplifies not only the Cisco Spark onboarding experience, but also the day-to-day operations. Without Hybrid Directory Service, administrators must either manually add, delete, and edit Cisco Spark users through the Cisco Cloud Collaboration Management portal or upload a file every time they need to add or change a user that has changed in the Microsoft Active Directory. The Cisco Spark Hybrid Directory Service automatically synchronizes an organization's on-premises Microsoft Active Directory users to Cisco Spark. And Hybrid Directory Service securely eliminates the need to manage multiple directory databases. When an employee leaves the company, as soon as the user is deleted from Microsoft Active Directory their Cisco Spark account is deactivated. The user will no longer be able to log in to Cisco Spark and will be removed from all spaces and services.

For end users, Hybrid Directory Service provides accurate and up-to-date directory content for all Cisco Spark users. And because profile data in the Cisco Collaboration Cloud is synchronized with the premises (verified names, email addresses, and company avatars), it can help ensure that your users are communicating with the right people.

Table 6 outlines Cisco Spark Hybrid Directory Service features and benefits for administrators.

**Table 6.** Cisco Spark Hybrid Directory Service features and benefits for administrators

Feature	Description and benefit
<b>Easy-to-use dashboard</b>	The dashboard provides a synchronization schedule and summary, the status of synchronization, and the status of the Directory Connector. Administrators can view the dashboard when they log in to the Directory Connector.
<b>Full and incremental synchronization</b>	Synchronize the entire directory, or just synchronize the incremental changes to save on processing power and shorten synchronization time.
<b>Scheduled synchronization</b>	Set a synchronization schedule by day, hour, and minute.
<b>Lightweight Directory Access Protocol (LDAP) filters</b>	Define LDAP search criteria and provide efficient imports.
<b>Dry run</b>	Conduct a dry run of changes to the directory before they are implemented. Then run a report to see that the changes you want to make are what you expect.
<b>User attribute mapping</b>	Map Microsoft Active Directory attributes to corresponding Cisco Spark attributes.
<b>Event viewer</b>	Use the event viewer to determine if there were any issues with the synchronization.
<b>Troubleshooting</b>	Once an administrator enables troubleshooting, logs will be written that can be sent to technical support.
<b>Automated upgrade</b>	The administrator is sent a notification when a new version of Directory Connector is available, and is given a choice of whether to upgrade.
<b>High availability</b>	Configure multiple connectors so that there is a backup, in case the main connector or the machine hosting it goes down.



## How Cisco Spark Hybrid Directory Service works

Directory Connector provides all the features of the Cisco Spark Hybrid Directory Service. It is client software installed on a local Microsoft Windows server and synchronizes identities between the on-premises Microsoft Active Directory and Cisco Spark user management system. Microsoft Active Directory acts as the system of record. Directory Connector communicates with Active Directory, then communicates with Cisco Spark through a highly secure API to create, update, or delete users.

You can run synchronizations, view and monitor synchronization status, and configure Hybrid Directory Service using the Directory Connector user interface.

Customers can download Cisco Spark Hybrid Directory Service from the [Cisco Spark Control Hub](#), free of charge.

## Requirements for Cisco Spark Hybrid Directory Service

Table 7 shows the requirements for Cisco Spark Hybrid Directory Service.

**Table 7.** Cisco Spark Hybrid Directory Service requirements

Products	Version
Any Cisco Spark paid offer (check for country availability)	Any paid offer
Windows Server (to host the Hybrid Directory Service)	Windows Server 2003, 2008, 2012
Microsoft Active Directory	2008, 2008 R2, 2012, and 2012 R2
.NET Framework	V3.5

## Cisco Spark Hybrid Media Service

Users want simple meeting experiences with rich audio, video, and content sharing. They want to join a meeting from whatever device they choose, with a great, consistent experience on each one.

Providing this capability is not always simple. IT has to be concerned with scalability, reliability, and costs, along with delivering these great experiences to their users. And one of the biggest decisions can be whether or not to deploy cloud-based or premises-based meetings. Each meeting deployment model has its own benefits. But why should IT have to choose between those benefits? What if they could buy and deploy the right mix of on-premises and cloud meetings? That is what Cisco Spark Hybrid Media Service does for Cisco Spark meetings.

Hybrid Media Service is a simple, secure way to create unique value by enabling Cisco Spark meetings to be deployed not just from the cloud, but also on-premises and even as a mix of both. It provides:

- **Quality and privacy:** Local media processing improves audio, video, and data sharing quality and reduces Internet bandwidth consumption. Anyone can join a meeting from any standards-based video device or app, whether registered to on-premises or cloud-based call control, and from Skype for Business.
- **Simplified resource planning:** Transparent overflow to the cloud simplifies resource planning and solution sizing. It eliminates resource limitations for your meetings, even very large ones. Best of all, users get one seamless meeting experience, regardless of whether they are joining from the cloud or your premises.
- **Cloud simplicity on your premises:** Hybrid Media Service enables on-premises meetings without the operational overhead. It offers a single management system across all Cisco Spark meeting deployment types. And it provides cloud-based provisioning, usage metrics, and automated delivery of software updates right to your premises—just as if it was in the cloud.

To learn more about Hybrid Media Service and its benefits for Cisco Spark meetings, please read its [data sheet](#).



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## Cisco Spark Hybrid Data Security Service

One of the key benefits for enterprises of consuming cloud services is the ability to leverage value-added features and functionality as quickly as they become available. But for many cloud providers, “adding value” often means having full access to user data and content.

On the other hand, consumer services tend to be geared toward protecting consumer privacy by offering end-to-end encryption at the expense of features that add value. Cisco Spark provides the best of both worlds: an end-to-end encrypted cloud collaboration platform that offers enterprises the ability to choose which, if any, value-added integrations Cisco and third parties provide.

Cisco Spark Hybrid Data Security Service takes our cloud security one step further. It allows security-conscious customers to deploy and own the security realm services, including key management services, on their premises. This works no differently than using the key management services in the cloud, except that keys are obtained and accessed through an on-premises deployment of the servers. Hybrid Data Security Service includes:

- On-premises deployment and management of the security realm through the Pro Pack for Cisco Spark Control Hub
- Key management services and storage
- Search indexer: Ability to securely search encrypted Cisco Spark content
- E-discovery on-premises engine: Although the e-discovery user interface will be hosted in the cloud, the engine remains on-premises for customers who opt to deploy Hybrid Data Security Service in their own data centers
- Automatic upgrades, alerts, and notifications
- Local logs and audits of access to keys using an on-premises “bring-your-own” syslog

To learn more about Hybrid Data Security Service and its benefits for Cisco Spark, please read its [data sheet](#).

## Cisco Capital

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### For more information

To learn more about how Cisco Spark Hybrid Services can transform your communications, visit <https://www.cisco.com/c/en/us/solutions/collaboration/spark-hybrid-services/index.html>.

To learn about deploying Cisco Spark Hybrid Services, visit <https://www.cisco.com/go/hybrid-services>.

To learn more about Cisco Spark, visit <https://www.ciscospark.com/>.




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