

## 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. But having tools from both the cloud and the premises can create bifurcated 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 with Cisco Spark in the cloud to provide a single integrated experience. If you like the capabilities of [Cisco Spark](#), you can integrate those capabilities with what you currently deploy for an even better end-user and administrator experience. There are three Hybrid Services: Call, Calendar, and Directory.

**Hybrid Call Service:** This service is ideal for organizations that want the capabilities of Cisco Spark but that already have or would prefer to use [Cisco Unified Communications Manager, Business Edition 6000](#) or [7000](#), or [Cisco Hosted Collaboration Solution](#) for call control. Hybrid Call Service enables organizations to use the Cisco call control you have and integrate it so tightly with Spark message and meetings that your end users will never know they are not a single service.

**Hybrid Calendar Service:** This service integrates your Microsoft Exchange with Cisco Spark message and meeting capabilities. Hybrid Calendar Service easily and automatically creates a Spark room when scheduling meetings and makes it easier to schedule a meeting, especially from a mobile device.

**Hybrid Directory Service:** This service 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.

Each of the three services can be deployed together or individually.

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## Cisco Spark Hybrid Services Benefits

- **It's highly secure.** Security is integral to Cisco Spark and its hybrid services. Cisco has used its extensive experience gained from securing the world's largest networks. Combining this knowledge with the hardware and the software elements of our market-leading communications and cloud services, we've built the Cisco Spark Service and its hybrid capabilities.
- **It's a better user experience.** 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.
- **It eases the transition to 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 service to an organization's premises or to Cisco Hosted Collaboration Solution in a partner cloud. Hybrid Call Service Connector and Hybrid Calendar Service Connector run as applications within [Cisco Expressway](#). The Directory Service Connector runs as a service on a Microsoft Windows Server for Microsoft Active Directory synchronization.

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 message, meeting, and call, but already have a Cisco phone system. They may also be using Cisco Jabber® for their mobile calling and collaboration, and they are not ready to, nor 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 Spark message and meeting 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 Spark Hybrid Services)

Cisco Spark Hybrid Call Service has two services 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 enables calls between Cisco Spark and your existing call control so that, to users they appear as one system. Call Service Aware must be enabled first activate Call Service Connect. Call Service can enable the following use cases:

- **Instant Desktop Sharing** – 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 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 Spark user, the 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 softphone by connecting the app to a user's current Cisco call control. Spark users can make and receive calls to anyone just as if they were at their desk. They can call co-workers through their extensions using the company dial plan. This includes any number reachable by their desk phone, including video bridges. Calls from the 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 from within the Spark app itself.
- **Easier reachability** – Users can use their office phone number across all their devices, even when making and receiving calls from the Spark app. When called, their desk phone, Jabber, and Cisco Spark will ring. Answering the call on any one of them stops the ringing on the other devices.
- **Voice and video calling between Cisco Spark and Jabber** – Call Service Connect allows Cisco Jabber, Cisco Spark, or 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.
- **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 hybrid Call Service Aware, that valuable call history is unlocked from on-premises devices and made available in Cisco Spark. Specifically, the Cisco Spark app has a call tab that will show all of the calls made by the user, across their enterprise phone system and Cisco Spark. As you make and receive calls from your Cisco desk phone, Jabber client, or your Spark app, your call history is pushed into the cloud. When combined with Call Service Connect, this allows you to call people back from the Spark app easily.
- **Communications history in one place** – With Call Service Aware, your call history isn't just available from the calls tab in the Spark application. If the person you called is also a Spark user, the call event is added to your one-to-one Spark room with that person. This means that your one-to-one room includes not only your messaging, but also your calling interactions with that person too. Have you ever placed a call to someone, and wished you remembered when you last spoke with him so that you can make reference to it in your call? "Hey Bob, when we spoke three weeks ago on Tuesday, I told you I'd follow up with a new proposal." With Spark Hybrid Services, the history of that call three weeks earlier is right there in the room. Scroll up to see all of your Spark messages and calls with that person.

### **How Cisco Spark Hybrid Call Service Works**

Similar to other Spark Hybrid Services, Call Service uses a hybrid service call connector software application that runs as a module within [Cisco Expressway](#). The 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 enable instant desktop sharing and updates Spark rooms and call history. The 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 Services, 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 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)SU3, 11.0(1)SU2, 11.5(1) and above
Cisco Hosted Collaboration Solution (check to see if your provider is offering 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 Basic Meetings	A-SPK-NU-M2
Business Messaging, Basic Meetings and Advanced 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	x8.7.1 and above

### Cisco Spark Hybrid Calendar Service

As more and more users become mobile, they want to schedule meetings from their mobile phones. Built-in mobile calendar applications do not allow plugins. Consequently, there is no easy way to add Cisco Spark or Cisco WebEx meeting join information in a mobile app. Using Microsoft Outlook Web Access (OWA) is difficult and forces users to manually copy and paste the meeting join information into OWA. This problem is so significant that many users wait until they get to the office or open up their laptop to schedule meetings.

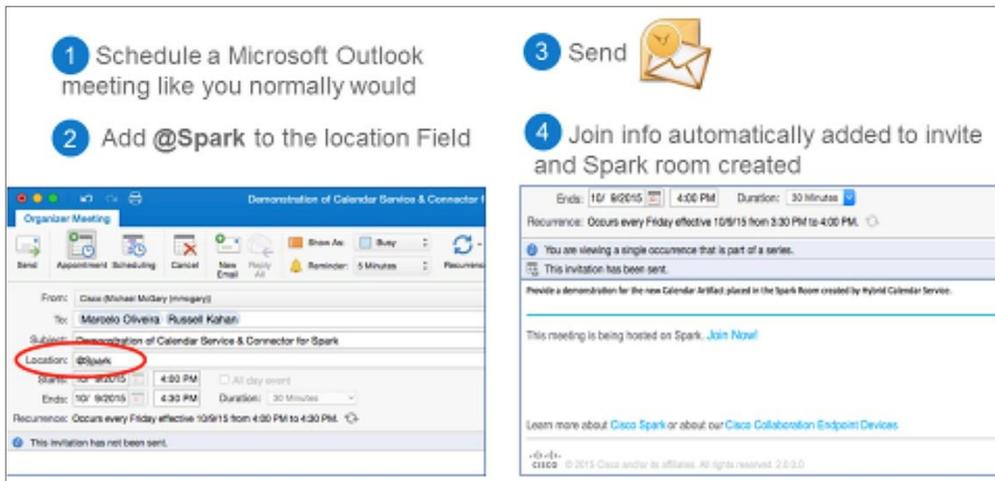
Cisco Spark Hybrid Calendar Service overcomes these issues so that you can schedule meetings and create a Spark room on any device, anywhere.

For users with Cisco Spark basic meeting capabilities, adding @Spark to an outlook invitation automatically opens a new Spark room with the invitees, allowing that team to begin the conversation, and share documents and ideas before the meeting even starts (Figure 1).

Users with a Cisco Spark advanced meeting subscription are able to add @WebEx to an outlook invitation to automatically populate the body of the invitation with the Cisco WebEx meeting join information (Figure 3). They can alternatively add both @Spark and @WebEx to the location field. @WebEx adds the WebEx meeting join information to the invitation, and the @Spark will automatically create a room with the people invited.

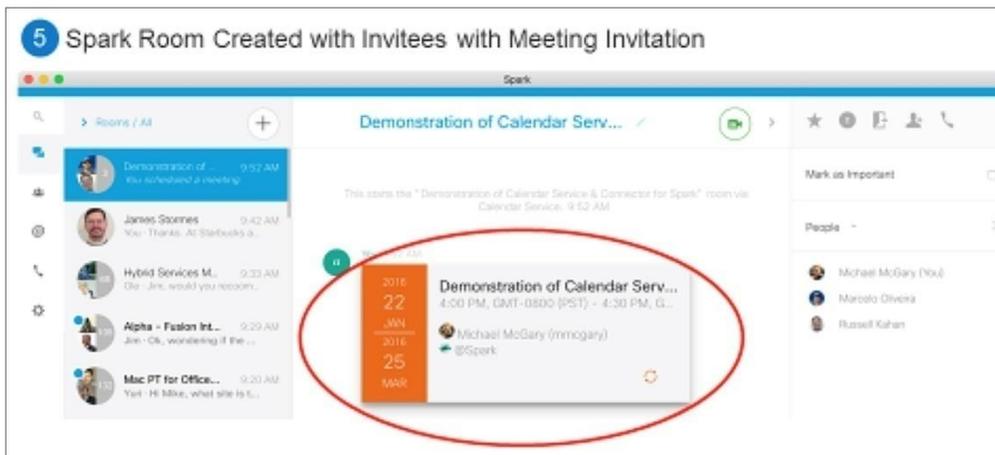
All these capabilities do not require any plugins. No manual cutting and pasting of information is necessary. Simply adding @WebEx to a meeting invitation allows people to schedule meetings from anywhere on any device, including OWA and any mobile device that supports adding Microsoft Exchange.

**Figure 1.** Adding @Spark



Adding @Spark can also enable users to join the meeting directly from the Spark room (Figure 2). A calendar artifact is also added to the room with the schedule details, including the booking owner.

**Figure 2.** Creating a Spark Room



**Figure 3.** Adding @WebEx

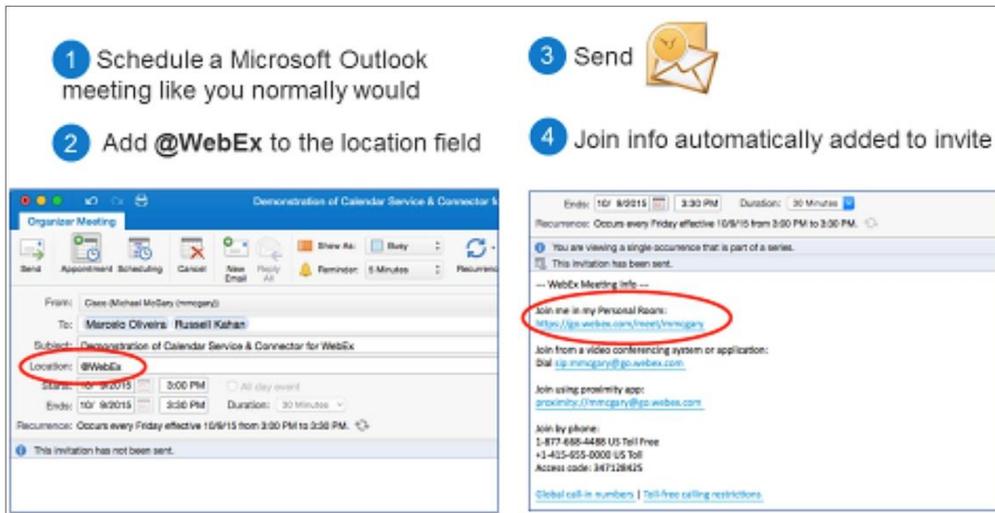


Table 4 outlines the different capabilities available to users when scheduling meetings, based on the company's chosen Spark level of service.

**Table 4.** Scheduling Capabilities by the Level of Spark Used

Cisco Spark Service Level Purchased	Description of Cisco Spark Service Level	Cisco Spark Hybrid Calendar Service Benefits by Level
<b>Business Messaging</b>	<ul style="list-style-type: none"> <li>• Business-class messaging</li> <li>• 1:1 and 3 way video calling with screen sharing with other Cisco Spark users</li> <li>• Ability to join Spark and SIP-based meetings</li> </ul>	Adding @Spark to the Outlook invitation creates a Spark room and puts the meeting information in the room.
<b>Business Messaging and Basic Meetings</b>	<ul style="list-style-type: none"> <li>• Everything included with Cisco Spark message service above</li> <li>• Ability to host instant 25-party meetings with screen sharing with other Cisco Spark users</li> </ul>	Includes everything within the Cisco Spark message service above but users can schedule basic meetings in Microsoft Outlook with up to 25 users Cisco Spark users.
<b>Business Messaging, Basic Meetings and Advanced Meetings</b>	<ul style="list-style-type: none"> <li>• Everything included with Cisco Spark message and basic meetings service above</li> <li>• Ability to host Cisco WebEx-powered meetings with screen sharing and with external participants on any device, including third-party standards-based devices</li> <li>• Collaboration Meeting Rooms</li> <li>• Ability to schedule meetings from within Cisco WebEx</li> </ul>	<p>Adding @WebEx to the Outlook invitation's location, users can schedule advanced, WebEx-powered meetings with up to 200 users.</p> <p>Adding @Spark to the Outlook invitation's location, a Spark room is automatically created with all the attendees and the WebEx meeting information in the room. This allows users to start the conversation before the scheduled meeting.</p> <p>Note: Cisco Spark advanced meetings can be scheduled in Microsoft Outlook without Cisco Hybrid Calendar Service by using capabilities inherent with Cisco WebEx. The benefit of using Cisco Hybrid Calendar Service is the simplicity of only needing to add @WebEx to the meeting location. This is especially useful on a mobile device as no plugins are needed.</p>

### How Cisco Spark Hybrid Calendar Service Works

Cisco Spark Hybrid Calendar Service uses a Calendar Connector deployed on [Cisco Expressway](#) on premises to enable the service. The Calendar Connector subscribes to Exchange Web Service (EWS) calendar feedback messages for each user. When a user adds @Spark to the invitation's location field, the Calendar Connector securely creates a new Spark room and adds the invitees to the Spark room, then updates the invitation with the Spark room link for each attendee to see in their own calendar.

When a user adds @WebEx, the Calendar Connector retrieves WebEx Personal Meeting Room join details from the user's WebEx site, then updates the meeting with the booking owner's own WebEx link, video address, and telephone dial-in numbers for each attendee to see in their own calendar.

## 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
Any Cisco Spark paid offer (check for country availability)	Any paid offer
Cisco Expressway (can be downloaded from Cisco.com at no charge)	Version 8.7.1 and above
Microsoft Exchange	2010 SP3/2013/2016/O365
Cisco WebEx – Use for @WebEx scheduling only; not required for @Spark (If purchasing Cisco Spark advanced meetings, Cisco WebEx does not need to be purchased as its capabilities are already included in Spark advanced meetings.)	T29.13 and above

## 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 message, meeting, and call capabilities.

For administrators, Cisco Spark Hybrid Directory Service not only simplifies the Cisco Spark on-boarding experience, but also the day-to-day operations. Without Cisco Spark Hybrid Directory Service, administrators must manually add, delete, or edit Cisco Spark users through the Cisco Cloud Collaboration Management portal or, use a file upload 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 the Cisco Spark Service. And Cisco Spark 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 Spark account is deactivated. The user will no longer be able to log in to Spark and will be removed from all rooms and services.

For end users, Cisco Spark Hybrid Directory Service provides accurate and up-to-date directory content for all 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 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
Easy-to-use dashboard	The dashboard provides a synchronization schedule, summary, and status of synchronization, and the status of the Directory Connector. Administrators can view the dashboard when they log in to the Directory Connector.
Full and incremental synchronization	Synchronize the entire directory. Or just synchronize the incremental changes to save on processing power and shorten synchronization time.
Scheduled synchronization	Set a synchronization schedule by day, hour, and minute.
LDAP filters	Define LDAP search criteria and provide efficient imports.

Feature	Description and Benefit
<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

The Directory Connector provides all the features of the Cisco Spark Hybrid Directory Service. The Cisco Spark Hybrid Directory Service Connector is the client software installed on a local Microsoft Windows server that synchronizes identities between the on-premises Microsoft Active Directory and Cisco Spark user management system. Microsoft Active Directory acts as the system of record. The 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 [Cisco Cloud Collaboration Management portal](https://admin.ciscospark.com/), free of charge at <https://admin.ciscospark.com/>.

## Requirements for Cisco Spark Hybrid Directory Service

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

**Table 7.** Hybrid Directory Service Requirements

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

## Cisco Capital

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### For More Information

To learn more about how the Cisco Spark Hybrid Services can transform your communications, visit <http://www.cisco.com/go/sparkhybrid>.

To learn more about how the Cisco Spark service, visit <http://www.ciscospark.com>.



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