

# Secure web conferencing with Adobe® Acrobat® Connect™ Pro

Adobe web conferencing software delivers a media-rich collaborative environment that meets the strictest government regulations and follows security best practices

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How do you share business-critical information? If you're like many organizations, you walk a fine line between sharing information freely with partners, suppliers, and customers, and carefully guarding your intellectual property. Adobe enterprise collaboration solutions offer a way to do both. With Adobe Acrobat Connect Pro software as a secure web conferencing solution, businesses can dynamically share information with distributed teams, both inside and outside the firewall, enabling increased productivity with rich, clear collaboration. Whether your team is designing a new cell phone or devising a way to expand into overseas markets, Adobe's online meeting environment lets you share ideas in real time, while protecting the online meeting environment and safely archiving files for future compliance requirements.

For organizations in regulated industries, Acrobat Connect Pro allows you to protect, store, and track electronic communications in a virtual meeting room. You can "lock down" the meeting room environment, so every comment made through text chat, video, or Voice over Internet Protocol (VoIP) is recorded and more securely archived. Acrobat Connect Pro uses industry-proven encryption and authentication technologies to protect against intrusions or security breaches to online meeting sessions and stored files.

The rich communication features within Acrobat Connect Pro help your online meetings, seminars, and training sessions be more productive and compelling. With Adobe web conferencing software, you get the value of person-to-person interaction without the expense or environmental impact of business travel. Using electronic communications—such as real-time video streaming, presentations, and chat, and on-demand presentations and training—instead of in-person meetings with handouts, enables companies to lower their paper and printing costs and reduce waste.

## Acrobat Connect Pro

Acrobat Connect Pro is a collaborative solution that you can use for a variety of tasks: web conferencing, eLearning and training, and web seminars. It supports rich multimedia and interactive features, including live video conferencing, recorded video streaming, integrated audio conferencing, VoIP, and integrated instant messaging. You can use Acrobat Connect Pro to collaborate in real time. Online meeting rooms simulate the experience of a face-to-face meeting. You can share your computer screen with other meeting attendees, selecting your entire desktop or just a single application or file. Interact privately, in small groups, or with everyone via robust whiteboarding, chat, and breakout room features.

Acrobat Connect Pro can also be used to deliver training courses and presentations on-demand. It's easy for subject matter experts to create course content using Adobe authoring tools, such as Adobe Presenter and Adobe Captivate® software, that are fully integrated with the eLearning environment. Asynchronous delivery offers cost and convenience benefits. End users have ultimate flexibility to access web presentations at any time and complete them at their own pace. It gives businesses a cost-effective way to train large groups or a dispersed sales team, without requiring travel or real-time attendance. And Acrobat Connect Pro also offers reporting tools that track and measure completion rates, participation level, and performance of end users.

For businesses that don't wish to host and manage their own web conferencing solution, Adobe offers hosting services as well as licensed software for self-deployment of Acrobat Connect Pro. For the highest levels of secure collaboration and training, Adobe also offers fully managed services through its partner network, including hosting with physical security and advanced compliance and archiving features. For more information, see "Flexible deployment options".

### **The Adobe solution**

Acrobat Connect Pro integrates with other products in the Adobe portfolio, such as:

- Adobe Captivate
- Adobe Presenter
- Adobe Flash® Professional
- Adobe Contribute®
- Adobe Dreamweaver®

You can use these products together with Acrobat Connect Pro to build efficient, more secure, and customized solutions for eLearning, marketing and sales, and enterprise collaboration.

With Adobe Captivate software, you can rapidly author professional eLearning content with advanced interactivity, software and scenario simulations, quizzes, and other experiences that engage users. Adobe Presenter software enables Microsoft PowerPoint authoring of narrated, self-paced eLearning courses and on-demand presentations. The software also provides support for high-impact content through adaptive streaming of audio and video. You can use both of these products to generate Adobe Flash Player content that is media rich and easy to access.

You can use Adobe Contribute to edit and publish web pages from within your browser, and build event pages for your Acrobat Connect Pro events, such as web seminars and presentations. You can also integrate content created in Adobe Dreamweaver, Flash Professional, or Acrobat Pro software into your Acrobat Connect Pro meeting.

### **Adobe's commitment to software security**

Adobe is committed to developing software that withstands all forms of attack. Company-wide, Adobe uses an established approach, called the Secure Development Lifecycle which draws from industry best practices and the extensive experience of our software engineering teams, partners, and peers.

Our approach applies rigorous testing procedures, peer review, and industry best practices to product development and quality engineering. From threat modeling to penetration testing, the Adobe Secure Software Engineering Team is dedicated to helping ensure that Adobe products are designed and validated with security in mind.

### **Secure instant access**

To communicate effectively, you need to reach your audience and keep them engaged with media-rich information—and you need to do it without the hassles of complicated tools and costly IT support. Acrobat Connect Pro offers key features that are designed to help you increase productivity, control costs, and communicate effectively. And since Acrobat Connect Pro is engineered to work on a variety of operating systems—including Microsoft® Windows®, Macintosh®, Linux®, and Solaris™—even the most diverse and distributed teams can collaborate with ease.

Users can access Acrobat Connect Pro using only a web browser and the Adobe Flash Player plug-in. With Flash Player already deployed on more than 98% of Internet-connected PCs worldwide, users can avoid complicated downloads and installations. Flash Player also provides added security—since it is widely used, highly sophisticated threat models can be developed and tested to help ensure the tightest security.

The media-rich capabilities of Acrobat Connect Pro make it an effective solution for live online meetings, training courses, events, and on-demand presentations.

Acrobat Connect Pro allows you to create content directly from Microsoft PowerPoint using Adobe Presenter software. You can also capture screen recordings, or create interactive simulations, using Adobe Captivate software. And with full support for SWF movies, animations, streaming video and audio, and high-resolution graphics, Acrobat Connect Pro gives you the tools to create engaging content rapidly. Acrobat Connect Pro also interworks with Adobe Contribute software, so you can create completely customized web pages for your events.

Acrobat Connect Pro assigns a persistent URL to the meeting room, which exists until you decide to delete it, allowing you to access meetings with just one click, and include the address of your virtual meeting room on your business card.

The ability to integrate Acrobat Connect Pro with existing systems, such as Microsoft Live Communication Server (LCS) and Microsoft Office Communications Server, means that within a meeting or virtual classroom, hosts can view who is attending. Hosts can also initiate chat conversations with LCS instant message users directly from Acrobat Connect Pro.

These rich features are combined with a high level of flexibility, so you can administer Acrobat Connect Pro to meet your unique needs. With Acrobat Connect Pro, you have the power to enable or disable features and to manage the capabilities of users, allowing you to lock down the application to meet the highest security and compliance levels. In addition, Acrobat Connect Pro offers flexible deployment options and the ability to develop your own APIs to customize and extend the solution.

The combination of robust security and rich, on-demand features have made Acrobat Connect Pro the standard collaboration tool for many organizations, including the U.S. Army, the Defense Information Systems Agency (DISA), FoodSHIELD, and others. Acrobat Connect Pro is able to meet the needs of such a diverse range of organizations because it allows you to:

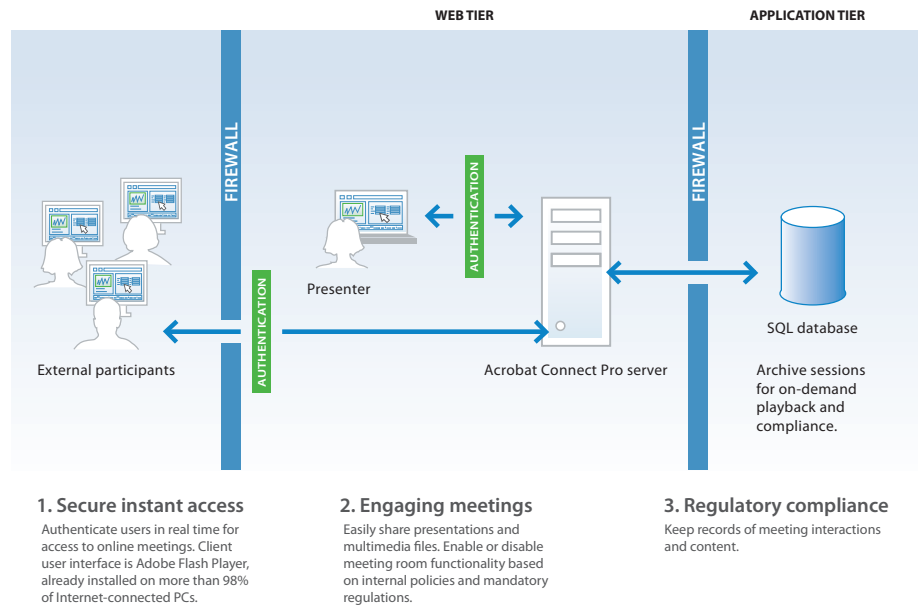
- Safeguard your organization's resources
- Help ensure compliance with internal and mandated policies
- Choose from flexible deployment options
- Customize and extend the software to meet your needs

These capabilities are built on Adobe's commitment to a more secure development process, which helps to ensure that industry best practices and quality engineering are included in every step of the product development cycle.

## Meeting and file protection

Network and application security are critical to protect your organization against unauthorized access, loss of intellectual property, and other malicious acts. Acrobat Connect Pro provides security through a range of features, including robust authentication methods, SSL/TLS encryption and configuration, and protection of data during upgrades and migrations.

### Deploying a more secure web conferencing solution



Acrobat Connect Pro uses proven technologies to authenticate users and encrypt real-time data, making communications more secure within the application and across the network.

Authentication is the process of identifying whether a user (or client) is eligible to access the Acrobat Connect Pro server. A range of authentication methods—including usernames and passwords, NTLM and HTTP header authentication, and public key infrastructure (PKI)—helps ensure that only approved users can access your data.

Users are required to authenticate by entering a valid username and password before accessing private content and meetings; users are also required to choose strong passwords and to change them regularly. For on-site solutions, users can be authenticated directly against your organization's LDAP server. The easy-to-use administration console enables you to configure LDAP server details, authentication methods, and advanced settings, such as timeouts and query page-size limits. In addition, the use of NTLM and HTTP header authentication allows Acrobat Connect Pro to be used in a single sign-on (SSO) authentication solution.

Acrobat Connect Pro supports PKI-based authentication. PKI authentication is a mechanism that is based on certificates: A trusted third party, called a certification authority, verifies the identity of a client and binds a certificate to the client. With the PKI mechanism, the server authenticates itself to the clients using public key certificates, and the clients also use public key certificates to authenticate their identity to the server.

Security attacks typically involve an unauthorized user “sniffing” or “eavesdropping” on user information while the data is in transit from user's browser to the server. Adobe Acrobat Connect Pro uses 128-bit SSL/TLS to create a more secure end-to-end connection and to encrypt all communications between the server and connected users. Encryption provides security for the entire lifetime of the session: from the initial authentication so that user credentials are not disclosed during transmission, and throughout the duration of the Acrobat Connect Pro session, until the user logs out of the application.

Like PKI, SSL/TLS also uses certificates to verify the identity of the server to the client. The use of SSL certifications for both the meeting server and the application server means that each connection is verified and protected. SSL/TLS is easy to administer: a built-in tool allows you to configure SSL for the application server, the meeting server, or both. Acrobat Connect Pro also supports the use of a hardware-based SSL accelerator for added security, as an alternative to the native support for SSL in the Acrobat Connect Pro software.

When upgrading or migrating, you can help ensure the integrity of your data with new logging, warnings, customization handling, and efficient schema updates.

### **Regulatory compliance**

Governments, military forces, publicly listed companies, and organizations in a range of sectors—from health care to finance—store and exchange sensitive information in the normal course of business. Corporate policies set requirements for how these business records are managed and in some industries, regulatory bodies have mandated rules for managing these records. Business records have evolved to include much more than e-mail—web conferencing and instant messaging are types of electronic communications that must also be managed in a way that helps ensure their confidentiality, and also their compliance with internal or mandated policies. Acrobat Connect Pro offers features that allow administrators to manage how communications are conducted, as well as to manage the recordings and content—both during and after meetings.

You can use the compliance features of Acrobat Connect Pro to protect your intellectual property while meeting internal policies for privacy and security, as well as regulatory requirements for your industry. The compliance features of Acrobat Connect Pro give you the ability to:

- Enable or disable the functionality you want
- Manage the capability of users
- Retain records and manage access to them
- Notify users about recordings, disclaimers, or other terms of use
- Audit system activity

### **Enable or disable the functionality you want**

You can enable and disable features in Acrobat Connect Pro, allowing you to lock down access to tools and information. The ability to restrict share settings within a meeting, for example, allows you full control over sharing of desktops, windows, applications, and content. As the administrator, you can disable share functionality as needed, and you can restrict the content that users upload to meeting rooms.

Content in a meeting room is displayed in pods, which are panels that contain various types of media. Individual pods contain meeting content, such as notes, chat, files, and video. In addition to controlling the share setting, you can also control pod functionality, so that the information displayed in pods—lists of attendees, notes, chat, files, and video—are available only to select users. Pod functionality can be selectively forced; for example, you can clear the chat pod after each meeting session, or you can disable private chat pods. With Acrobat Connect Pro, you have full control over what information is shared, and who it is shared with.

### **Manage the capability of users**

In addition to controlling the capabilities of users, you can also control the level of access that users have. Specific users—or entire groups—can be blocked from accessing meetings. Users who are participating in meetings are managed through role-based permissions. Role-based permissions allow you to determine the capabilities of users within a meeting, so that you can manage who has capabilities for sharing, broadcasting, and other activities. You can promote or demote a user's role to add or remove permissions during the meeting, or you can change the rights of a participant without promoting the role. For example, you may not want to promote

the user to a role with more capabilities, but you may want to give the user control over selected pods. This flexibility in assigning roles and enhancing a participant's rights gives you full control over who can access a meeting, and what capabilities they have.

### **Retain records and manage access to them**

In addition to the tools to manage users and capabilities, Acrobat Connect Pro also provides features for managing the content generated by the meeting. Communications generated through web conferencing and instant messaging must also be managed in a way that helps ensure their confidentiality, and also their compliance with internal or mandated policies. With Acrobat Connect Pro, you can force the recording of all meetings or, when needed, block the recording option to help ensure confidentiality. Forced recordings are protected from deletion by nonadministrative users.

You can control who has access to the recording. You can allow meeting participants to access the recording, or move the recording from the meeting room to the Content library within Acrobat Connect Pro and set specific user permissions for accessing it. You can also make the recording public—the level of access is entirely up to you.

Acrobat Connect Pro also allows you to save transcripts of text-based chat sessions, and it formats them for easy archiving. The transcripts contain the name of the room, sender, and recipient; the date and time; and the message body for each chat message.

You can archive all your records by storing them offline, on network attached storage or storage area network devices. You can configure storage for any content that is published to Acrobat Connect Pro, such as courses; SWF, PPT, or PDF files; and archived recordings.

### **Notify users about recordings, disclaimers, or other terms of use**

When you record a meeting, you can display a notice to let users know when their information is being recorded. This notice is displayed to the participant prior to joining the meeting. You can also display a disclaimer notification to help ensure that meeting participants agree to your organization's terms of use before they enter the meeting room. Their acceptance of these notifications is recorded in the server log.

### **Audit system activity**

In addition to archiving meeting information, Acrobat Connect Pro generates server logs. The server log provides a record of the compliance settings that you implemented. They also provide an audit trail so you can track which participants had access to meetings and information, and which functions were enabled or disabled for the meeting.

### **Flexible deployment options**

Acrobat Connect Pro supports a range of deployment options to meet your organization's needs. You can choose to deploy Acrobat Connect Pro as a hosted service or a managed service, or you can install a licensed solution in your own network.

Hosted services provided by Adobe allow you to maintain control over the administration of users, groups, and meeting resources, while outsourcing the management of hardware and software infrastructure.

Managed services, provided by an Adobe solutions partner, provide additional services for organizations in highly regulated industries, such as log parsing tools, managed procedures and processes, and integration with an existing SSO architecture.

You need to choose a licensed solution to deploy Acrobat Connect Pro behind your own firewall. This solution allows you to integrate Acrobat Connect Pro with your existing network infrastructure. For example, if you have a Jabber server in your network, you can use it to exchange message and presence information with Acrobat Connect Pro while isolating it from the public network.

### **Acrobat Connect Pro customization**

When you deploy Acrobat Connect Pro as an on-site solution, you can take advantage of its APIs and SDKs to customize and extend the software. The Acrobat Connect Pro XML API is technology agnostic, so you can easily access it and write your own extensions. Create your own portal, for example, or create an SSO process. Add Acrobat Connect Pro meeting content to your corporate search engine or integrate Acrobat Connect Pro with reporting applications, content management systems, or other corporate systems.

See the sidebars on FoodSHIELD and Defense Information Systems Agency (DISA) for examples of how Adobe customers are using and extending the functionality of the Acrobat Connect Pro web conferencing software.

### **Security evaluations**

According to a report by the Gartner Group, more than 70% of attacks are made at the application layer, not at the network or system layer. So the importance of rigorous testing cannot be overstated. That's why Acrobat Connect Pro has also been independently tested by Security Innovation, a leading company in vulnerability assessment and software risk. Security Innovation evaluated the security of the Acrobat Connect Pro hosted and licensed solutions—including authentication, password management, data management, auditing, and logging—and verified that the software properly implements security measures.

To review the most current reports, visit [www.adobe.com/products/acrobatconnectpro/security](http://www.adobe.com/products/acrobatconnectpro/security).

### **Case studies**

DISA and FoodSHIELD are two examples of Adobe customers that are using and extending the functionality of Acrobat Connect Pro web conferencing software.

#### **DISA**

United States military personnel on land, sea, and in the air can collaborate and communicate around the clock using Adobe Acrobat Connect Pro through a single, more secure portal.

Defense Connect Online (DCO) is a two-part Adobe Acrobat Connect Pro solution for collaboration and engagement across Department of Defense global operations. Two different systems comprise the Acrobat Connect Pro implementation: one for the unclassified network and one for the classified network. A prerelease version of DCO was tested over a five-month period and went live in April 2008, enabling deployed troops, supporting personnel, and military leaders to collaborate effortlessly across locations worldwide.

DCO supports a wide range of activities that include operations worldwide, from tactical war fighting to day-to-day office use. Users engage with the system for briefings, mission rehearsals, one-to-one and group on-the-spot collaboration, training, eLearning, and dozens of other functions. "Adobe Acrobat Connect Pro enables us to accomplish more work in less time. Smaller groups, featuring subject matter experts, can more quickly analyze a problem, arrive at a solution, and recommend a plan of action to the larger group," says Lieutenant Colonel Karl Kurz.

What sets the DCO Acrobat Connect Pro web conferencing solution apart is that it is based on Adobe Flash technology and it only requires a single port through the network to operate. This means that users can instantly collaborate with anybody, anywhere, without any complicated setup or downloads. From initial login to a DCO meeting in Acrobat Connect Pro, users can participate in application and screen sharing; whiteboarding; and persistent and nonpersistent meeting rooms while easily customizing layouts, switching presenters, polling, using VoIP, and more. Lieutenant Colonel Kurz notes that the streamlined administration features in Acrobat Connect Pro enable faster delegation of administrative tasks, such as the ability to easily invite others and efficiently manage access to different Acrobat Connect Pro rooms.

## FoodSHIELD

FoodSHIELD is a web-based platform that creates community, increases collaboration, and facilitates communication among thousands of public and private entities involved in protecting and defending the United States food supply. From laboratories and regulatory agencies at local, county, state, and federal offices, to academia and industry, FoodSHIELD is a central portal where people in all 50 states work collectively to safeguard the national food supply through more secure, integrated resources.

“The solution built on Adobe technologies has given us the ability to help secure the U.S. food supply in ways previously unimaginable—on the web, via mobile devices, and on the desktop,” says Eric Hoffman, technical lead on the FoodSHIELD project. “Adobe provides a more secure integrated technology platform that simply cannot be found elsewhere. For the first time, there is a national overview of what’s happening to our food supply.”

FoodSHIELD touches personnel across agencies responsible for inspecting and regulating the U.S. food supply, including local, state, and federal food and health inspectors, laboratory analysts, and regulatory officials. Epidemiologists and public health officials who investigate food-related outbreaks are also important users. In addition, emergency responders, academicians, and industry experts could use the application to streamline collaboration. Once fully adopted, the system will serve an estimated 100,000 users across a range of regions and specialties.

Hoffman explains how FoodSHIELD is transforming the way previously siloed agencies and fragmented laboratories—with their own protocols and expertise—can now interrelate. In the case of a contamination outbreak, there may be one laboratory that has figured out the cause and knows exactly what to do. Previously, that knowledge would exist in a vacuum, and other labs would waste time developing their own protocols.

State and local agencies often have their own particular ways of organizing information. “In Alaska, for example, food safety falls under the state environmental protection agency,” says Bill Krueger, a visiting research fellow at the Department of Homeland Security and former lab director for Minnesota’s Department of Agriculture. In other states, it might be handled by different groups, with each manager having a different title.

“We had to put the system in place to accurately identify the right department and the right person,” Krueger says. “Now we can instantly send secure communications to all the appropriate staff to attend urgent meetings or review new information.”

One idea behind FoodSHIELD is to shorten the lifecycle of a recall using a central place to rapidly share documents, exhibits, and information. Now, with the updated proficiencies that the FoodSHIELD rich Internet application brings to the table, any member can log on and rapidly find who the subject-matter expert is, how to detect the problem, and what measures to take. “When we all have access to the same systems, lives can be saved during outbreaks,” says Hoffman.

## Summary

Acrobat Connect Pro provides a more secure, reliable web conferencing platform that provides the capabilities you need to safeguard your organization’s electronic communications—while also providing you with the media-rich features that you need to engage your customers and colleagues. Robust security features, such as disabling undesired functionality and controlling access to meeting rooms, allow you to protect sensitive data and manage communication flows, while complying with internal policies and external regulations. Proven encryption methods help ensure that your organization is protected against unauthorized access, loss of intellectual property, and other malicious acts. And with Adobe’s commitment to creating more secure, trusted technology, you can focus on using Acrobat Connect Pro to provide a rich, user-friendly experience—and collaborate with confidence.

