# Microsoft Office Groove 2007

# **Extending SharePoint with Groove Collaboration**

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Groove collaboration is as easy as socializing. But it is not limited by time or location. Groove users can interact with colleagues and other contacts in a wide range of work environments, even with offline contributors, via a single familiar interface. As part of the Microsoft Office 2007 suite, Groove 2007 partners well with SharePoint, extending collaboration beyond members of a SharePoint team to include field personnel and partners who need to work offline or do not have access to a SharePoint site.

Groove workspaces are similar to SharePoint sites, providing virtual meeting areas where team members can jointly assemble information, share files, write reports, discuss plans, design forms, manage meetings, and perform other tasks. Groove enhances the workspace experience by allowing members to efficiently collaborate with external contributors or work offline. Groove synchronizes online and offline work with documents stored in SharePoint libraries via an onboard SharePoint Files tool.

A Groove workspace with a SharePoint Files Tool provides the following benefits to organizations that store file content in SharePoint document libraries:

* Offline access to file content. The Groove SharePoint Files tool provides mobile workers and those who have limited Internet access with an environment in which they can view and update files in a team’s SharePoint library while offline or in a low-bandwidth environment.
* Access to file content for selected contributors outside of the enterprise. The Groove SharePoint Files tool enables internal and external members of a workspace to conveniently and efficiently collaborate on files stored in a SharePoint library.

Groove is easy to set up and does not require IT assistance. Built-in security safeguards provide a protected environment for collaboration among internal and external Groove users. If centralized Groove management is required beyond what is supported by Windows and SharePoint systems, Groove Server can be installed to oversee client activity.

## Offline Work

All members of a Groove workspace can easily create, update, and reference shared files whether they are connected to the corporate network, the Internet, or offline. Adding a SharePoint Files tool to a Groove workspace lets team members work locally on documents stored in a SharePoint library even when offline or on a slow connection. When an offline contributor reconnects to the internet after updating documents, Groove automatically synchronizes the offline work with documents in a designated SharePoint library and applies other offline updates to the workspace for every online client. No user or administrative input is necessary to trigger synchronization.

For example, a project manager in a large research firm collaborates with in-house colleagues using documents stored in a SharePoint library. In order to complete a time-critical report, the manager needs prompt input from field workers who spend most of their time offsite where they cannot easily setup a VPN to access their team’s SharePoint servers. To accommodate all contributors, the manager invites his in-house and offsite team members to a Groove workspace that contains a SharePoint Files tool. This tool allows all workspace members to retrieve documents from a designated SharePoint library for review and updating on their local machines, regardless of their connectivity. Field and consultants work offline as needed, and when they reconnect, Groove automatically synchronizes updates and additions with the SharePoint library.

## Beyond the LAN

A Groove workspace with a SharePoint Files Tool provides a central working environment for teams that are widely dispersed geographically. Because Groove can be installed as a standalone application or as part of a Microsoft Office installation, collaboration teams can accommodate external contacts, such as field-workers and consultants who do not have access to other Office applications. Anyone can download a trial version of Groove for free from the Microsoft Web site, and Groove will still function (with some limitations) even after the trial period ends.

By inviting external contributors to a Groove workspace that contains a SharePoint Files tool, a SharePoint team can work efficiently with contributors who need to read or update documents in a SharePoint library but who cannot access a SharePoint site . All workspace members, including remote partners can use the tool to view, update, and create files in a designated SharePoint library on their local PCs. Groove automatically synchronizes updates for all online members of the workspace. Offline users are updated as soon as they come online.

In the above example, the project manager can further extend his collaboration efforts by inviting select consultants to his team’s workspace. While these consultants cannot access internal company resources, with Groove workspace membership and the SharePoint Files tool, they can contribute to documents in the designated SharePoint library and to workspace discussions. Groove synchronizes their contributions, regardless of their inclusion in corporate access-control lists.

The Groove client application supplies all the functionality necessary for directly connected users to collaborate. However, Groove synchronizes only the changes to documents with other Groove client computers, so it is optimized for WAN connections. To handle all aspects of Groove communication that take place outside the LAN and to process the work of offline team members, Groove relies on relay servers.

Groove relay servers, hosted by Microsoft or installed onsite, enable virtual peer communication across the Internet. They facilitate access through firewalls for users outside corporate networks, support presence detection so that users can find each other over the Internet, and provide store-and-forward services for distributing workspace updates generated by online and offline users. Relay servers also expedite communications, for example by efficiently handling the distribution (fanout) of messages addressed to multiple recipients.

## Fast and Easy Setup

Groove users begin collaborating by inviting each other to workspaces on their local PCs, regardless of their network location. No additional VPN or client software is necessary and even external partners outside the corporate network can participate.

To quickly establish an ad hoc collaboration environment, a Groove user creates a workspace and invites a colleague or consultant to the workspace by sending an invitation via e-mail, packaged with a Groove download link. When a Groove user receives and accepts a Groove workspace invitation, a copy of the workspace is sent to the user’s PC. Once the workspace is downloaded, the recipient opens it to see other workspace members, be seen by them, and use workspace tools. Groove keeps all copies of the workspace synchronized automatically.

## Secure Environment

Groove automatically and securely distributes and saves data that workspace members produce during their interactions. All Groove communications are private, protected by an initial key exchange between workspace members. Groove data is either integrity-protected or signed, depending on the protocol and message/data type, and data is encrypted, both on disk and over the wire. Groove relies on Public Key Infrastructure (PKI) certificates to authenticate Groove identities.

Groove avoids storing user data on remote servers that can compromise security and over which administrators have no control. Instead, user data is transmitted directly to workspace members and stored on member PCs. To help maintain a secure transmission environment, client data is not readable on relay servers and relay servers do not store copies of workspaces. Secret keys and key pairs are managed exclusively by Groove clients.

## Usage Management

For IT departments that need to oversee and standardize collaboration practices, Groove can be installed in conjunction with Groove Server – a single product consisting of two applications: Manager and Relay. The Manager application provides a Web-based interface that allows administrators to distribute usage and security policies to Groove users, integrate Groove with Active Directory, and automate Groove client deployment.

In conjunction with the Relay application, the Manager allows administrators to assign dedicated relay servers to Groove users. This allows IT organizations to provision Groove users with dedicated relay services that meet their enterprise’s specific capacity and failover needs and to locate relay servers in accordance with corporate security requirements.

## Groove Topology

For each team of users, a Groove client computer is typically designated as SharePoint synchronizer. SharePoint and Groove synchronize with the team of Office Groove users through this client computer. The team member who serves as the SharePoint synchronizer should have a reliable wide area network (WAN) connection to the corporate network to synchronize content from the Groove workspace to the SharePoint library. When documents are updated, the entire document is synchronized with the SharePoint site.

The following figure shows a connection between SharePoint and Groove, with Office Groove 2007 running onsite in a managed environment:



## Groove Features and Tools

Key features of Microsoft Office Groove include:

* Collaboration workspaces - Groove workspaces contain tool sets that allow invited users, with or without other Office applications, to jointly plan and contribute to team projects. Typically, Groove workspaces accommodate teams of 10 to 20 users.
* Online/offline synchronization – Groove users can work online or offline and stay in-sync with team mates.
* SharePoint file synchronization – Groove’s SharePoint Files tool enables users to synchronize files updated in Groove, with files in a SharePoint library.
* Rich standard tools – A standard Groove workspace provides tools that facilitate desktop collaboration. These easily accessed tools facilitate file sharing, organization and execution of ad hoc tasks, participation in ongoing projects, and synchronization with SharePoint libraries. Standard workspace tools include: SharePoint Files, Files, Discussion, Calendar, Meetings, Notepad, Pictures, and Sketchpad.
* File sharing workspaces - Groove users can create a basic file-sharing workspace to enable file sharing among team members who do not need to use Groove tools. Groove file sharing supports the following:
	+ Immediate access to latest file versions
	+ Offline file editing
	+ Bandwidth optimization (only changes to files are exchanged)
* Customizable forms - Groove Forms and Groove InfoPath Forms tools provide a development interface for designing Groove custom tools. The Forms tool allows application developers to work within Groove to create and lay out all design objects such as forms, fields and views. The InfoPath Forms tool allows application developers to import Microsoft Office InfoPath templates into Groove to use as the basis for tool design.
* Firewall compatibility – Groove employs a set of protocols to help ensure delivery of Groove transmissions under a range of challenging network conditions. Starting with its native Simple Symmetric Transfer Protocol (SSTP) via TCP over port 2492, Groove may apply any of its supported communications protocols in order to successfully deliver messages, even when confronted with firewalls. Other Groove communications protocols include SSTP over port 443 and encapsulated SSTP over Hypertext Transfer Protocol (HTTP) port 80.
* Built-in security – Groove’s Public Key Infrastructure (PKI) supports authentication of workspace members. Groove data is integrity-protected or signed, and data is encrypted on disk and over the wire.
* Governance – Groove usage policies and relay assignments can be distributed to users via a Web-based administrative interface provided by Groove Server. Groove management services can also be procured via Microsoft Groove Enterprise Services, to avoid the overhead of installing and maintaining onsite servers.