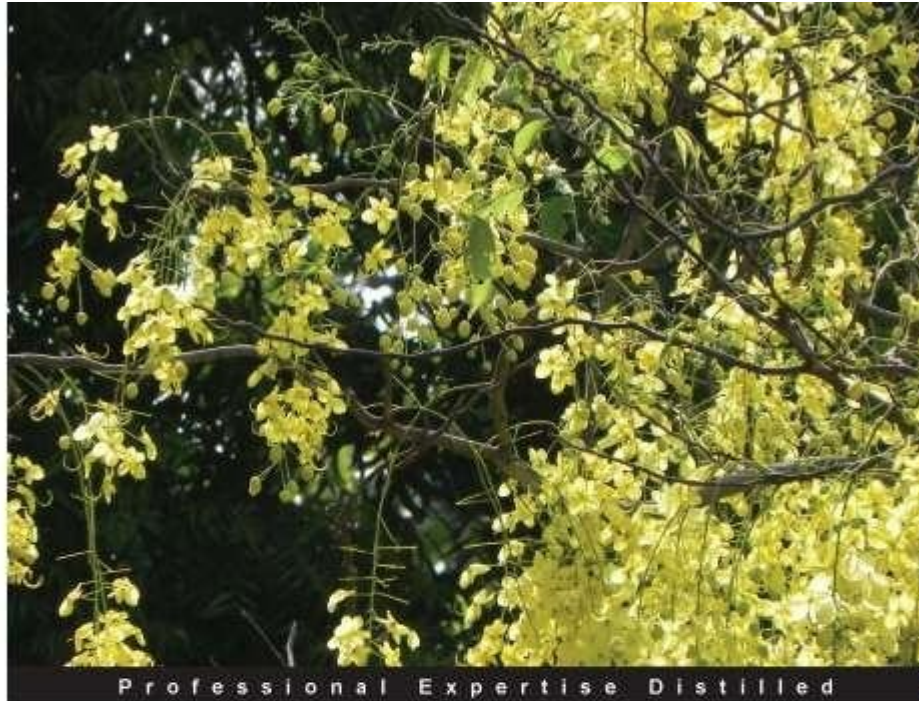




Professional Expertise Distilled

Developing Applications with Salesforce Chatter

Leverage the power of Chatter to boost collaboration in your organization

Rakesh Gupta
Sagar Pareek

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Table of Contents

[Developing Applications with Salesforce Chatter](#)

[Credits](#)

[About the Authors](#)

[About the Reviewers](#)

[www.PacktPub.com](#)

[Support files, eBooks, discount offers and more](#)

[Why Subscribe?](#)

[Free Access for Packt account holders](#)

[Instant Updates on New Packt Books](#)

[Preface](#)

[What this book covers](#)

[What you need for this book](#)

[Who this book is for](#)

[Conventions](#)

[Reader feedback](#)

[Customer support](#)

[Downloading the example code](#)

[Errata](#)

[Piracy](#)

[Questions](#)

[1. Introducing Salesforce Chatter](#)

[An overview of cloud computing](#)

[An overview of salesforce.com](#)

[Collaboration in the past](#)

[The future of collaboration – Salesforce Chatter](#)

[Salesforce Chatter](#)

[Few Chatter benefits](#)

[The Chatter data model](#)

[Chatter data model – user](#)

[Chatter data model – feed](#)

[Chatter data model – group](#)

[Maximizing your customer satisfaction](#)

[Improving your ROI](#)

[Summary](#)

[2. Configuring and Setting Up Chatter](#)

[Turning on Chatter](#)

[Configuring the Chatter tabs](#)

[Chatter license types](#)

[The Chatter Free license type](#)

[The Chatter External license type](#)

[The Chatter Only a.k.a. the Chatter Plus license type](#)

[Enabling Chatter invites](#)

[Adding Chatter users](#)

[If you are not an admin](#)

- [If you are an admin](#)
 - [Manually creating Chatter users](#)
 - [Adding users through Data Loader](#)
- [Improving your Chatter profile](#)
 - [The About Me section](#)
 - [Uploading a profile photo](#)
 - [Updating contact details](#)
 - [Be specific when deciding whom to follow](#)
- [Additional features of Chatter](#)
 - [Updating your status](#)
 - [Posting comments](#)
 - [Adding links](#)
 - [Chatter Polls](#)
 - [Adding topics in your Chatter status updates](#)
 - [Making a topic your favorite](#)
 - [Bookmarking a post](#)
- [Enabling feed tracking, creating groups, and following records](#)
 - [Enabling feed tracking](#)
 - [Follow records](#)
 - [Method 1](#)
 - [Method 2](#)
- [Group creation](#)
 - [Creating groups](#)
 - [Joining a group](#)
 - [How to add members in groups](#)
 - [The Email Daily Digest setting](#)
- [Managing files](#)
 - [Uploading a file](#)
 - [Deleting a file](#)
 - [Following a file](#)
 - [Version control for Chatter files](#)
 - [Sharing files with people](#)
 - [Sharing files with groups](#)
 - [Advantages of using Chatter files](#)
 - [Attaching files to a post or comment](#)
 - [Attaching files to a post](#)
 - [Attaching files to a comment](#)
- [Other Chatter features](#)
 - [Chatter e-mail setting](#)
 - [Chatter Messenger](#)
 - [Enabling Chatter Messenger](#)
 - [Enabling Chatter Messenger for Visualforce pages](#)
- [Installing Chatter Desktop and Chatter Mobile](#)
- [Installing Chatter Desktop](#)
 - [Steps to install the Chatter Desktop application](#)
 - [Managing user sessions](#)
 - [Installing and configuring Chatter Mobile](#)
- [Installing Chatter Mobile](#)

- [Configuring the Chatter Mobile app](#)
 - [How to log in to the Chatter Mobile app](#)
 - [Revoking Chatter Mobile access](#)
 - [Chatter publisher actions](#)
 - [Enabling publisher actions](#)
 - [Creating global actions](#)
 - [Adding global actions to the page layout](#)
 - [Creating object-specific actions](#)
 - [Summary](#)
- 3. [An Introduction to Development with Chatter](#)
 - [Displaying a chat window on the Visualforce page](#)
 - [Enabling chat settings for all Visualforce pages](#)
 - [Enabling chat settings for a particular Visualforce page](#)
 - [Displaying a Chatter follower on the Visualforce Page](#)
 - [Displaying a list of followers without using the Chatter tag](#)
 - [Displaying a user's profile image](#)
 - [Displaying a list of followers for a user](#)
 - [Displaying news feed](#)
 - [Displaying feed with followers](#)
 - [Posting status from the Visualforce page](#)
 - [Entity feed and how to display it on the Visualforce page](#)
 - [Following a record/user from the Visualforce page](#)
 - [Automatically following a record after its creation](#)
 - [Automatically following a group](#)
 - [Applying filters on group creation](#)
 - [Applying filters on a Chatter post](#)
 - [Applying filters on comments on a Chatter post](#)
 - [Filtering a post for some records](#)
 - [Posting opportunity-closed details to a Chatter group](#)
 - [Creating a group that allows read-only access](#)
 - [Summary](#)
- 4. [Building the Chatter Application and Cleaning the Chatter Data](#)
 - [The mass follow and unfollow application](#)
 - [The Mass follow page](#)
 - [Developing an application](#)
 - [The Mass unfollow page](#)
 - [Steps to install the mass follow/unfollow Chatter application](#)
 - [Tasks](#)
 - [Cleaning Chatter data](#)
 - [Removing and deleting files and links from the Chatter feeds](#)
 - [Removing a file from the Chatter feed that is on record](#)
 - [Who can delete what?](#)
 - [Deleting a post from the Chatter feed](#)
 - [Deleting a comment made on a post](#)
 - [Deleting a poll from the Chatter feed](#)
 - [Deleting a link from the Chatter feed](#)
 - [Removing topics from the posts](#)
 - [Deleting topics from Salesforce](#)

[Removing a bookmark from a post](#)

[Managing Chatter groups](#)

[Adding/removing member\(s\) from the Chatter group](#)

[Changing the roles of the Chatter group](#)

[An overview of the Chatter-group role](#)

[Deactivating a Chatter user](#)

[What happens when an owner of a Chatter Group is deactivated?](#)

[Deleting feeds using the developer console](#)

[The path to delete feed\(s\) from the developer console](#)

[Using a scheduled Batch Apex to clean the Chatter data](#)

[Summary](#)

[5. Understanding Chatter REST API](#)

[Introducing Chatter REST API](#)

[Authentication](#)

[OAuth 2.0](#)

[Benefits of Chatter REST API](#)

[Governor limits](#)

[Understanding Chatter Rest API](#)

[When to use Chatter REST API](#)

[Understanding OAuth](#)

[Configuring OAuth 2.0 access for your application](#)

[Authorization code](#)

[Access token](#)

[Refresh token](#)

[Posting a feed item](#)

[Summary](#)

[Index](#)

Developing Applications with Salesforce Chatter

Developing Applications with Salesforce Chatter

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I would like to thank my parents and my sister, Sarika Gupta, for supporting me through each stage of my life. I would like to thank **Packt Publishing** for giving me this opportunity to share my knowledge through this book. Special thanks to my friend Meenakshi Kalra for taking care of me while I was writing this book. I would also like to thank Adam Seligman (Vice President, Developer and Partner Marketing, salesforce.com) for encouraging me. Many thanks to my friends Brendan Conroy (salesforce.com MVP), Matt Lacey (salesforce.com MVP), and Naveen Gabrani (CEO, Astrea IT Services) for reviewing the book and for providing valuable suggestions. I would also like to thank Kundan Bendale (Salesforce Technical Architect) for his help and support.

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I would like to thank my parents, Chanchal Pareek and Sushil Pareek, my siblings Dr. Sugita and Nikita, and my gurus, Manish Shandilya and Pankaj Pandey. I would also like to thank my mentors, Kavindra Patel (Director, Developer programs and Events, salesforce.com), and Paresh Gupta (Co-founder, Sharp Edge Learning). Special thanks to Naveen Gabrani (CEO, Astrea IT Services) and all the other reviewers for giving up their precious time to review our content. We would also like to thank Anil Bhargava for giving us his precious time working on the images used in this book.

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I would like to thank the authors of this book for their valuable time. I would also like to thank my parents and my brothers for their support and encouragement.

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Preface

Developing Applications with Salesforce Chatter is written for salesforce.com developers, customers, and partners to get started with one of the best features of the Salesforce platform, Chatter. This book will act as both a reference for developers and a customization guide for the newbies who want to set up Chatter for their organization.

This book covers the development, configuration, and customization of Chatter for an enterprise. It takes a hands-on approach with a few Chatter recipes such as one for turning a Chatter group into a notice board. This book does not cover Apex and Visualforce basics and only covers the aspects of Chatter.

What this book covers

[Chapter 1](#), *Introducing Salesforce Chatter*, starts with a basic knowledge of Salesforce Chatter using examples and the benefits of implementing Salesforce Chatter for your organization. You will learn the difference between collaborations in the past and the present, the impact and effect of Chatter on your business, and how you can improve your customer satisfaction.

[Chapter 2](#), *Configuring and Setting Up Chatter*, will help you go through the Chatter license types, the configuration of Chatter for your organization, e-mail settings for Chatter, and various other settings for Chatter, such as sharing a file and adding topics to a post.

[Chapter 3](#), *An Introduction to Development with Chatter*, will help you learn how to configure Chatter for your organization using Apex and Visualforce pages; you will also learn how to develop Salesforce Chatter.

[Chapter 4](#), *Building the Chatter Application and Cleaning the Chatter Data*, will serve as a climax of the book, in which the reader will take a given project and design/implement it. At the end of this chapter, the reader will have a fully functional Chatter app with Chatter data cleaning feature.

[Chapter 5](#), *Understanding Chatter REST API*, will give us a basic understanding of Chatter REST API, OAuth, and how to generate various tokens.

What you need for this book

This book requires basic understanding of Apex and Visualforce pages to customize Chatter. Understanding the configuration of Salesforce Chatter doesn't require any prerequisites apart from developer credentials to configure Chatter.

Who this book is for

This book is intended for audiences who are newbies in the Salesforce arena and want to improve collaboration in an organization using Chatter. After reading this book, you will be able to do all the configuration yourself, but for customization, such as improving UI, you need a basic understanding of Apex and Visualforce pages.

Conventions

In this book, you will find a number of styles of text that distinguish between different kinds of information. Here are some examples of these styles, and an explanation of their meaning.

Code words in text, database table names, folder names, filenames, file extensions, pathnames, dummy URLs, user input, and Twitter handles are shown as follows: "The Chatter data model is based on the `FeedItem` object that represents a Chatter post."

A block of code is set as follows:

```
for (CollaborationGroup CollaborationGroups:
trigger.new)
{
    if
    (CollaborationGroups.Name.containsIgnoreCase('Advertise')
||
CollaborationGroups.Name.containsIgnoreCase('Adult')
||
CollaborationGroups.Description.containsIgnoreCase('adult'))
    {
        CollaborationGroups.addError('You are not
allowed to create this type of group');
    }
}
```

When we wish to draw your attention to a particular part of a code block, the relevant lines or items are set in bold:

```
for(cEntitySubscriptionCon:
getEntitySubscriptions()) {
// getEntitySubscriptions() store list of
following by current user, for more info see
point 1

if(cCon.selected == true) {
// If users is selected then add in list

selectedEntitySubscriptions.add(cCon.con);
}}
```

New terms and **important words** are shown in bold. Words that you see on the screen, in menus or dialog boxes for example, appear in the text like this: "Click on the **Download Now** badge to download Chatter desktop application".

Note

Warnings or important notes appear in a box like this.

Tip

Tips and tricks appear like this.

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Chapter 1. Introducing Salesforce Chatter

This chapter will give you a basic overview of cloud computing and Salesforce.com and will discuss about collaboration in the new era by comparing it to the ancient age. We will also discuss and introduce Salesforce Chatter and its effect on **ROI (Return of Investment)**.

In the following chapters, you will get a brief about the Chatter configuration and customization using the APEX and Visualforce pages with a few recipes. We will also go through our Mass Follow/Unfollow Chatter app given in this book with the Chatter data cleaning concept. In the last chapter, we will go through the Chatter REST API concepts.

The following topics will be covered in this chapter:

- An overview of cloud computing
- An overview of salesforce.com
- Collaboration in the past and future
- Salesforce Chatter
- The Chatter data model
- Maximizing your customer satisfaction
- Improving your ROI

An overview of cloud computing

Cloud computing is a subscription-based service that provides us with computing resources and networked storage space. It allows you to access your information anytime and from anywhere. The only requirement is that one must have an Internet connection. That's all. If you have a cloud-based setup, there is no need to maintain the server in the future.

We can think of cloud computing as similar to our e-mail account. Think of your accounts such as Gmail, Hotmail, and so on. We just need a web browser and an Internet connection to access our information. We do not need separate software to access our e-mail account; it is different from the text editor installed on our computer. There is no need of physically moving storage and information; everything is up and running over there and not at our end. It is the same with cloud; we choose what has to be stored and accessed on cloud. You also don't have to pay an employee or contractor to maintain the server since it is based on the cloud.

While traditional technologies and computer setup require you to be physically present at the same place to access information, cloud removes this barrier and allows us to access information from anywhere.

Cloud computing helps businesses to perform better by allowing employees to work from remote locations (anywhere on the globe). It provides mobile access to information and flexibility to the working of a business organization.

Depending on your needs, we can subscribe to the following type of clouds:

- **Public cloud:** This cloud can be accessed by subscribers who have an Internet connection and access to cloud storage
- **Private cloud:** This is accessed by a limited group of people or members of an organization
- **Community cloud:** This is a cloud that is shared between two or more organizations that have similar requirements
- **Hybrid cloud:** This is a combination of at least two clouds, where the clouds are a combination of public, private, or community

Depending on your need, you have the ability to subscribe to a specific cloud provider. Cloud providers follow the pay-as-you-go method. It means that, if your technological needs change, you can purchase more and continue working on cloud. You do not have to worry about the storage configuration and management of servers because everything is done by your cloud provider.

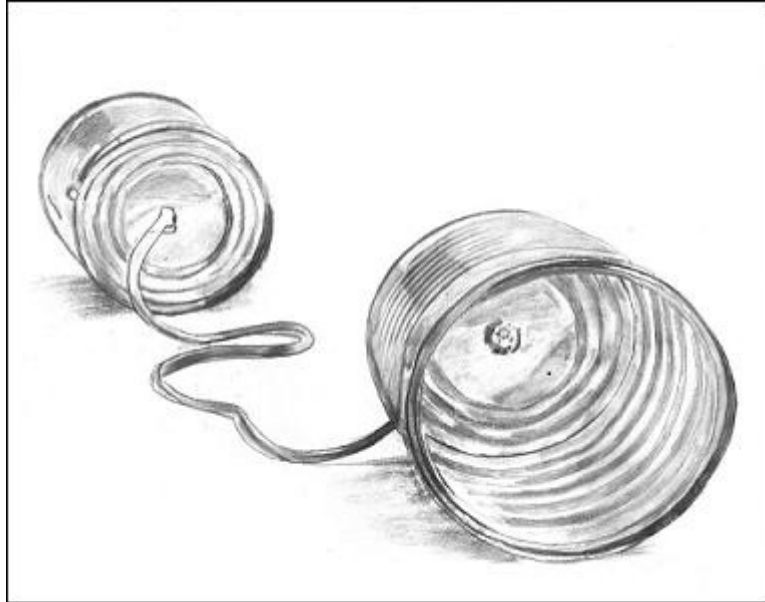
An overview of salesforce.com

Salesforce.com is the leader in pay-as-you-go enterprise cloud computing. It specializes in CRM software products for sales and customer services and supplies products for building and running business apps. Salesforce has recently developed a social networking product called Chatter for its business apps. With the concept of no software or hardware required, we are up and running and seeing immediate positive effects on our business.

It is a platform for creating and deploying apps for social enterprise. This does not require us to buy or manage servers, software, or hardware. Here you can focus fully on building apps that include mobile functionality, business processes, reporting, and search. All apps run on secure servers and proven services that scale, tune, and back up data automatically.

Collaboration in the past

Collaboration always plays a key role to improve business outcomes; it is a crucial necessity in any professional business.



The central meaning of communication has changed over time. With changes in people's individual living situations as well as advancements in technology, how one communicates with the rest of the world has been altered. A century or two ago, people could communicate using smoke signals, carrier pigeons and drum beats, or speak to one another, that is, face-to-face communication. As the world and technology developed, we found that we could send longer messages from long distances with ease. This has caused a decline in face-to-face-interaction and a substantial growth in communication via technology.

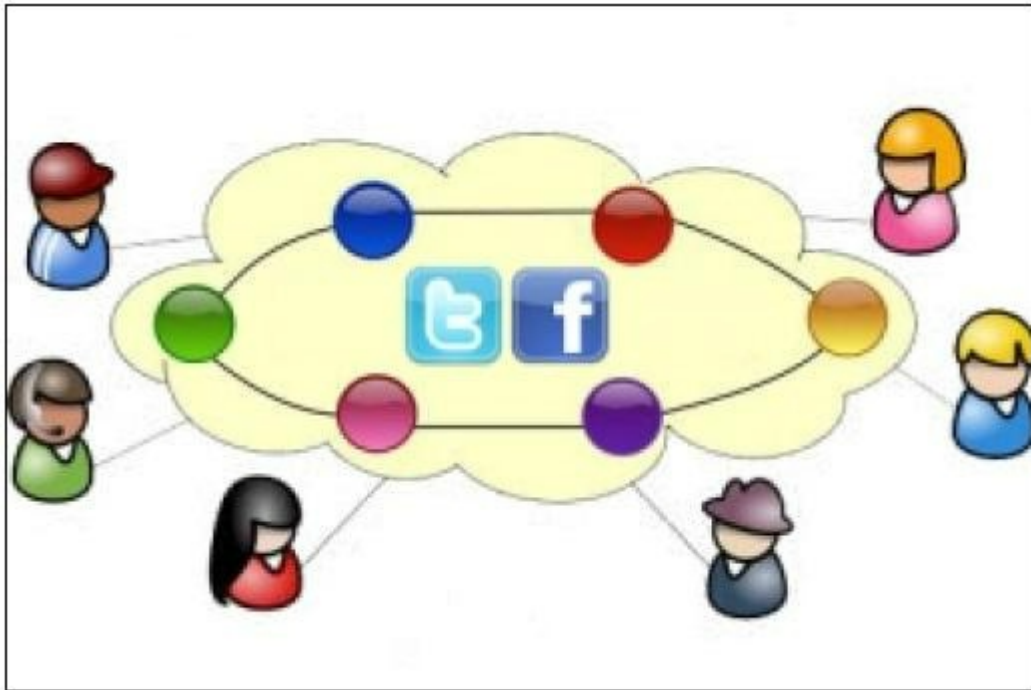


The old way of face-to-face interaction impacted the business process as there was a gap between the collaboration of the client, company, or employees situated in distant places. So it reduced the profit, ROI, as well as customer satisfaction. In the past, there was no faster way available for communication, so collaboration was a time-consuming task for business; its effect was the loss of client retention.

Imagine a situation where a sales representative is near to closing a deal, but the decision maker is out of the office. In the past, there was no fast/direct way to communicate. Sometimes this lack of efficient communication impacted the business negatively, in addition to the loss of potential opportunities.

The future of collaboration – Salesforce Chatter

An organization is a person's first home as they spend the majority of their time there.



Few enterprise businesses exist purely for the sake of existing. It is essential for an organization to set goals and find the tools necessary in order to achieve them fully. How does an organization become successful? How will an organization reach its goals?

When an organization gets maximum customer satisfaction, it maximizes its ROI and collaboration between its employees and clients. It also improves the transparency between the group members and allows free flow of data from superiors to subordinates.

Imagine a condition where we want certain reports from our team members to be forwarded to the managing director of the organization. What if our team misinterprets the information? It may impact the overall success of the project and possibly preclude it from being submitted within the deadline. The managing director will literally sit on our head and make our life horrible. The bad communication can actually cost you your job.

To achieve organizational goals, employees and employers need to understand each and everything about their clients. This can come from social media such as Facebook, Twitter, and LinkedIn because the

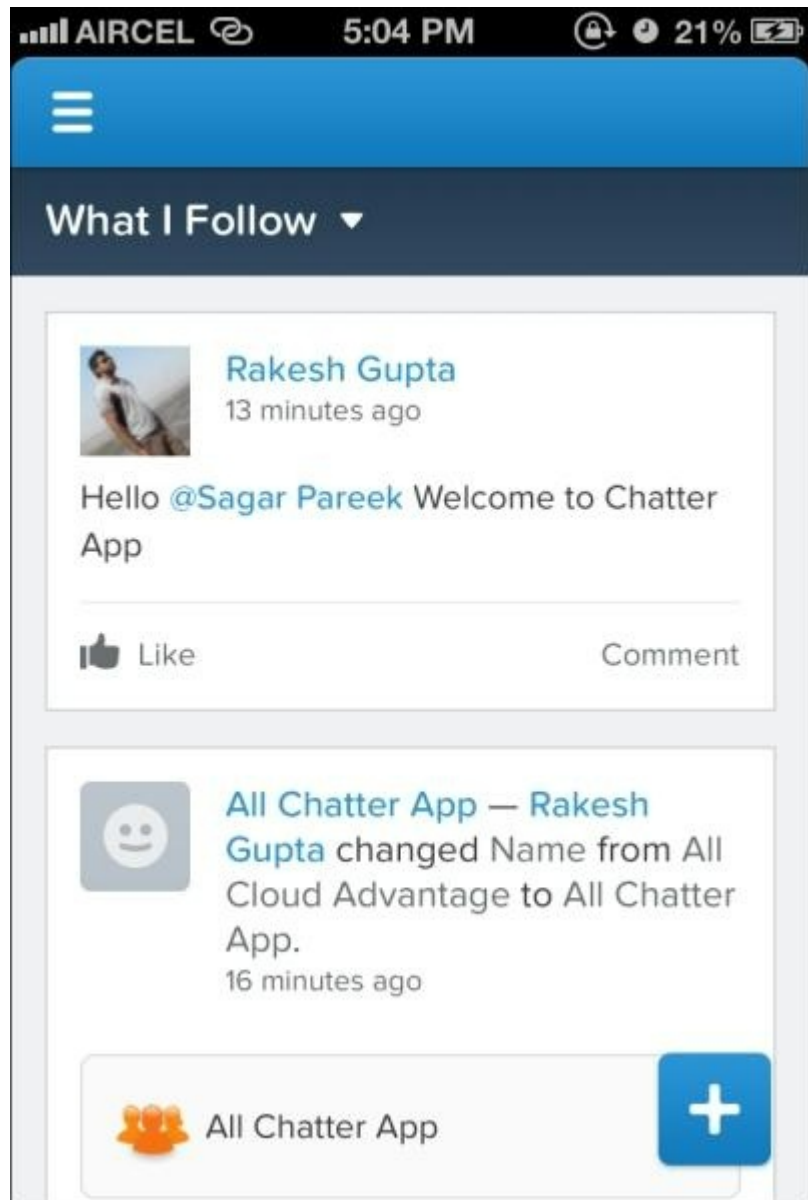
information is constantly updated for accuracy and thus promotes transparency in communication.

Salesforce Chatter

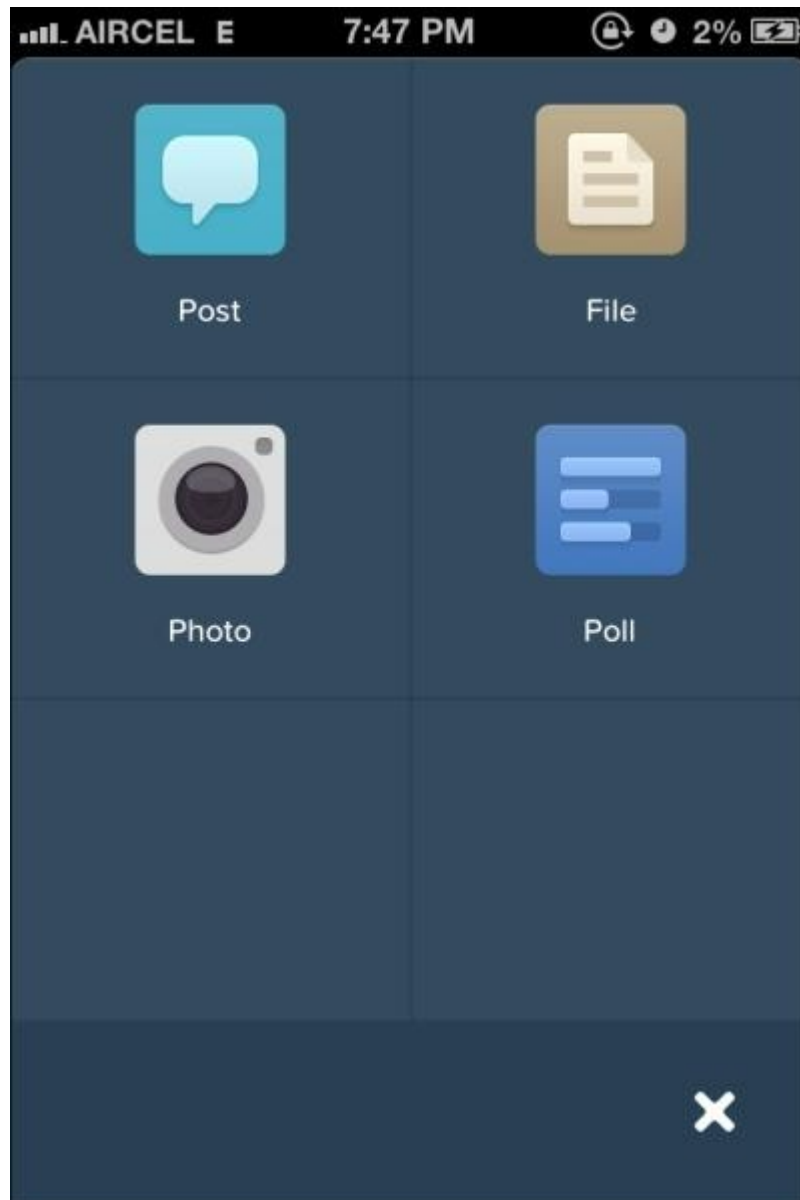
Chatter is a social platform that integrates with the Salesforce infrastructure and development platforms. In other words, Chatter is a way to collaborate at work.



It's a combination of Twitter and Facebook. It helps organizations to implement transparency in communication and improve customer satisfaction. It gives users access to real-time information about what's going on in the company. It is necessary to empower our entire organization with tools to communicate quickly and effectively with the right information at the right time, and that's what Chatter does.



The previous screenshot shows that you can **Comment** or **Like** a Chatter post via the Chatter mobile application. The next screenshot is all about what you can do with the Chatter mobile application, such as posting status, uploading files, and so on.



Users can use Chatter from their mobile devices. Salesforce Chatter Mobile is the world's first social and mobile app that lets you stay up-to-date on your most important records, files, conversations, and dashboards within Salesforce. Using the Salesforce Chatter mobile app enables us to perform the same operations as we are doing with the browser. A statistic discovered by Salesforce indicates that the Chatter mobile app can improve employee productivity by 33 percent and sales productivity by 32 percent. So we can use Salesforce Chatter to boost sales productivity (You can get the Salesforce Chatter mobile app on the salesforce.com website, www.salesforce.com/mobile/).

Real-time information can be delivered to an individual user's e-mail inbox or just reside within the Chatter feed itself. One can customize how they would like to receive the information in their personal settings. They are able to create groups to share highly confidential information; additionally, they can post their comments, tag some users, post files, comment on a

post, share a link, approve/ reject records, and also perform Chatter actions (from Salesforce Summer'13 Release Notes). You will get more details on these topics in the next chapter.



Chatter also provides recommendations to help users identify the people, groups, and records that are closely related to their job and interests. For example, users can **Like** a Chatter post, comment on a post, and mention other users using the `@Sagar Pareek`([@Mention function](#)) notation. One can also share files privately with selected users, follow files, and add topics immediately after posting using the powerful suggestions. You can also add topics to anyone's post at any time in any feed and also view currently trending topics.

In addition to this, Chatter allows users to set up their own profile and create private groups in which they can add members, and share files, links, or thoughts. One example would be if we're working on an opportunity and want to share highly confidential information only with your sales team members.

In this case, you can create a Chatter group for your team. Chatter groups are of two types: public or private. As the name indicates, anyone can create and join a public group. However, you have to ask the group owner for permission to join a private group.

Few Chatter benefits

Using Chatter can lead to many organizational benefits. These are listed as follows:

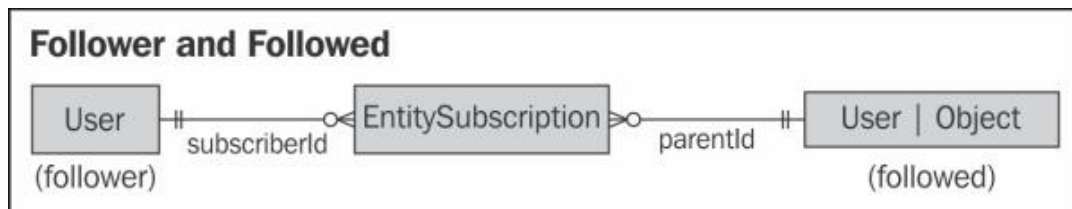
- Improved sales collaborations
- Increased productivity
- Increased manager visibility
- Improved responsiveness
- Improve customer satisfaction
- Improves ROI

The Chatter data model

The Chatter data model is based on the [FeedItem](#) object that represents a Chatter post. [FeedItems](#) can be a multitude of different types of topics and may have comments and likes related to them. [FeedItems](#) have a list of feed track changes that are identified as trackable. Here we classify the Chatter data model in three parts.

Chatter data model – user

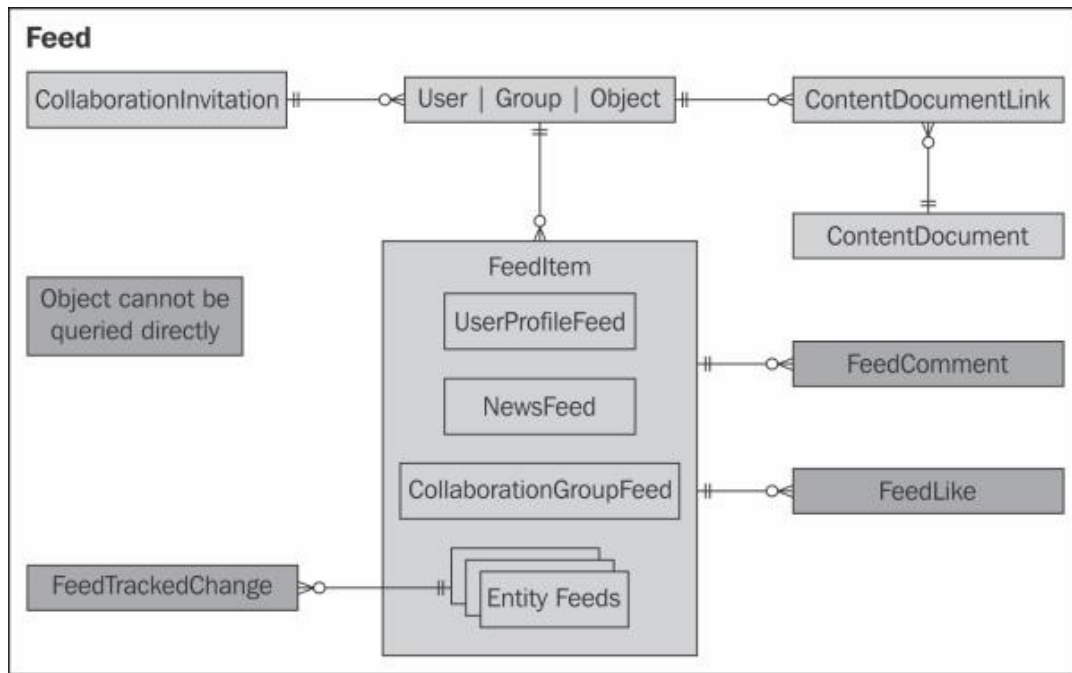
Suppose we have a sales manager at Acme Services, and he wants to know what their sales reps are doing.



The sales rep is a person who is working on several opportunities, and people are following them on Chatter. The sales rep's subordinates can follow them on Chatter. In the current model, the user is the sales manager who is following the sales rep. The **User | Object** is the users or objects that are being followed (in this case, the sales rep is following an opportunity object). The entity subscription object supports many-to-many entity relationships between the follower and the followed. You will get more details on these objects in [Chapter 3](#), *An Introduction to Development with Chatter*, and [Chapter 4](#), *Building the Chatter Application and Cleaning the Chatter Data*.

Chatter data model – feed

The purpose of Chatter is to improve collaboration in an organization.

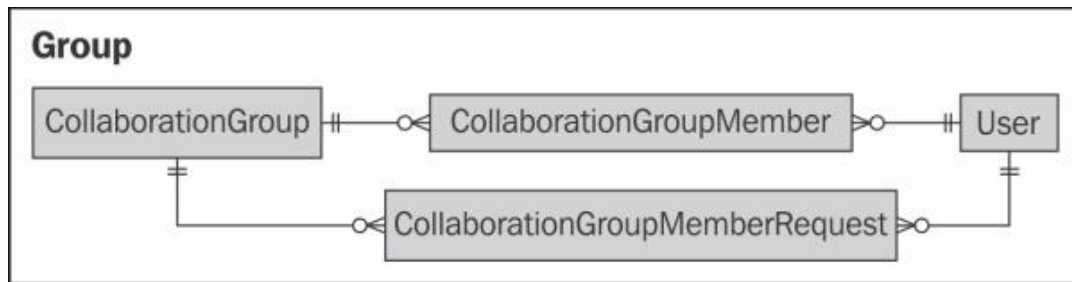


The following are a few feed objects:

- **FeedPost:** This object signifies the following type of modifications in a record feed, such as contact feed, text posts, link posts, and content posts. You can post anything from this through the Chatter feed.
- **FeedComment:** You can comment on the post via the Chatter feed. This is the FeedComment object. The FeedComment object can be bound to a user/standard object/custom object. For example, when a sales manager posts a comment about an opportunity; here, User --> Manager, FeedPost --> Post, FeedComment --> Comments, FeedTrackChanges --> Changes Made.
- **FeedItems:** It comes in four flavors:
 - **UserProfileFeed:** Represents a user profile feed, which tracks all actions by a user on records that can be tracked in a feed. This feed is displayed on the user profile page.
 - **NewsFeed:** When you enter an organization, you can see what's happening in the entire organization and the people you are following.
 - **EntityFeeds:** Represents a subscription for a user following a record or another user. A user can subscribe to a record or to another user.
 - **CollaborationGroupFeed:** It is related to the group activity.

Chatter data model – group

We have two types of groups in Salesforce Chatter. They are public and private groups.



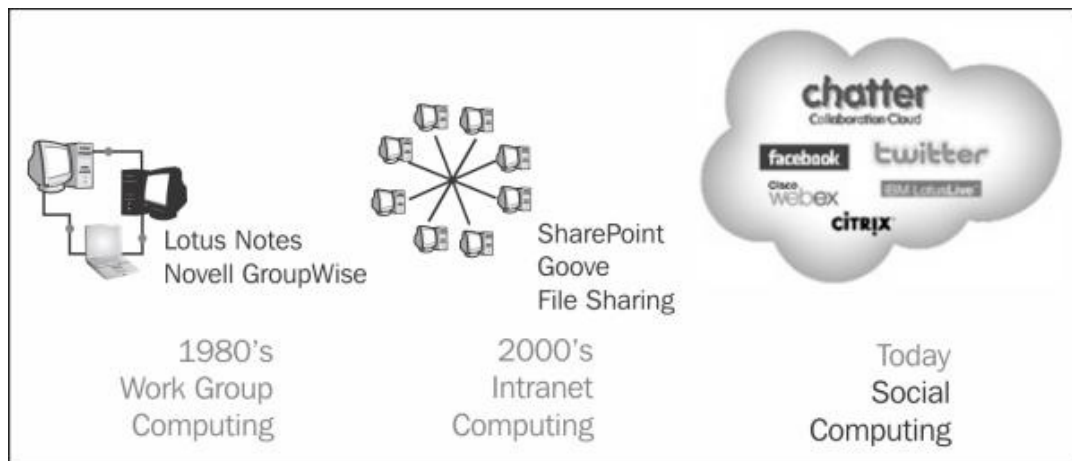
To follow a group (private), the sales rep has to request the sales manager to be added in that group. Once the sales manager approves the request, the sales rep is able to collaborate with the group members.

Maximizing your customer satisfaction

As Sam Walton quoted in 1977:

"There is only one boss: the customer. And he can fire everyone, from the chairman down, simply by spending his money somewhere else."

Collaboration is moving to Cloud 1980s Work Group Computing, 2000s Intranet Computing, Today Social Computing Lotus Notes, Apple iCloud, and file sharing applications (Box and so on).



Many large corporations have difficulty in maintaining organizational-wide collaboration due to the sheer size and complexities of their individual businesses. Too often, valuable information about a customer doesn't make it out of marketing or support into sales. Intelligence gets lost, and opportunities to advance a deal are missed. Further, sales tactics that solve the emerging market problems may not be shared. In essence, solutions to common customer problems may be known to a few people but not easily shared across offices.

Too often we miss out on critical information; we missed connecting with a pricing expert, missed the new product updates, or missed a critical customer update that resulted in a lost deal or an angry customer. If the channel for collaboration (this is the medium to share your thought across organizations or groups such as Facebook or Twitter) is not streamlined in an organization, then it will typically affect the company's overall performance by reducing customer satisfaction and thus the ROI.

It is the 21st century and social, mobile, and cloud applications are changing the work environment and the overall process of collaboration.

Now it has also changed how people interact with businesses and with each other. Customer loyalty is the currency by which companies will live or die.

Salesforce Chatter gives powerful real-time collaboration across different corporate roles. It energizes teams from sales to service and also marketing. It connects people faster and shares the information that they need so that more output is achieved. Your data becomes shareable, searchable, and social. By using Chatter for Salesforce, an organization can be brought closer together, allowing employees to give their time and resources as the best possible service to their clients.

To improve your customer satisfaction, first you need to understand the differences between new customers and existing clients. If you are able to understand their habits and needs, it will make your job much easier. Here are a few facts about customers that are changing the game for your business:

- Research says that 42 percent of support agents are unable to resolve customer problems proficiently due to disconnected systems, ancient user interfaces, and several applications (according to the Forrester's site).
- 89 percent of customers have stopped doing business with an organization after experiencing poor customer service (according to RightNow Customer Experience Impact Report).
- Always connect with your customer as they have no off button. You can use the Salesforce Chatter desktop app to connect with your customer 24 * 7. It's easy to use, has a rich user interface, and users can share files as well.

The following are mobile facts:

- In 2013, more than 21 percent of all the Internet access was being done via handhelds of some sort.
(<http://www.smartinsights.com/mobile-marketing/mobile-marketing-analytics/mobile-marketing-statistics/>)
- In Q1 2013, tablets exceeded traditional desktop devices for conversion rates for the first time
- 45 percent of enterprises offering web or mobile-based applications reported an upturn in site traffic and reduced phone inquiries (according to CRM Magazine)

There are 4 billion mobile users across the globe. Almost every customer is using their smartphone to connect with vendors. So we can use Salesforce Chatter to always connect with our customer, sales team member, and product experts. The Salesforce Chatter mobile app is easy to configure and use. These days customers expect to connect with businesses across many channels in real-time as it makes it easy for them to buy from and

interact with you. Few points about the Salesforce Chatter mobile app are as follows:

- Portability and ease of use
- Access to real-time data
- Connectedness and collaboration
- Increased productivity
- Reduced response time

The following are challenging facts:

- 45 percent of US consumers will abandon an online transaction if their questions or concerns are not addressed quickly (Forrester).
- Customers are very demanding, and their purchase decision is based on many factors and not just on price. They are expecting you to give your best. We are living in a digital age; thus, when customers have a question, it needs to be answered quickly. The sales and service teams need to have everything at their fingertips—even when on the road.
- We can achieve this by configuring the Salesforce Chatter desktop and mobile app for our sales and service teams. Using the Salesforce Chatter mobile app, sales and service reps can reply even when on the road.

The following are positive facts:

- Customers are expected to share their poor customer service experiences twice more than they are to talk about their positive experiences (2012 Global Customer Service Barometer)
- It takes 12 positive customer experiences to make up for one negative experience (Parature)
- 70 percent of buying experiences are based on how the buyer feels they are being treated (McKinsey)
- 55 percent of customers would pay more for a better customer experience (De Facto Research)

Always give your customers good service, faster response to their queries, and take less time to resolve a case. Use Salesforce Chatter to connect with experts and close more deals. Always maintain high-quality customer support to maintain your customer's trust. The more eyes on the problem, the more perspectives can be obtained for a solution. Almost instantly, a group is being created via Chatter for solving a real-time problem that needs a prompt solution.

Improving your ROI

For every organization, the ROI is very important. What is ROI? It stands for Return of Investment. ROI deals with the money you invest in the company and the return we realize on that money based on the net profit of the business. ROI is typically expressed as a percentage and usually used for personal financial decisions, to compare an organization's profitability or to compare the efficiency of different investments.



The formula for return on investment is:

$$\text{ROI} = (\text{Net Profit} / \text{Cost of Investment}) \times 100$$

For example, an investor buys \$ 10,000 of stocks and sells the shares two years later for \$ 13,000. The net profit from the investment would be \$ 3,000, and the ROI would be calculated as follows:

$$\text{ROI} = (3,000 / 10,000) \times 100 = 20\%$$

The ROI in the example above would be 30 percent. The calculation can be altered by deducting taxes and fees to get a more accurate picture of the total ROI.

Note

Salesforce ROI Calculator can be obtained at www.salesforce.com/roi/.

After implementing Salesforce Chatter, employees have more visibility into the business than before, and users can filter the incoming content to find the right information. Chatter standardizes the flow of information while reducing the information overload.

Chatter increases collaboration and reduces the daily e-mail volume. Sometimes due to unwanted mails in inboxes, important information is either lost or forgotten. Chatter brings people together on common topics

and gets them more in tune with our competition, business, and product line announcements.

Let's walk through an example. Suppose you have a sales team of 15 employees, and the team is dedicated to working on leads. For collaborating between members of the team, they need to rely on e-mail or phone calls, but none of these are centralized (in one place). Due to high-volume mail, sales reps may sometimes lose the e-mail or may not attend the phone calls due to some reason.

Salesforce Chatter allows you to create groups that are central to a particular purpose. Let's say, for the above example, that sales manager can create a group and add their sales team member to that group. Now they discuss their ideas and issues in one place where each and every person is informed if some new comment or post is added to this group. This means that everyone is on the same page.

Sales reps can also access Salesforce Chatter from their smartphones so that it improves time utilization, the overall time that the sales process takes, and ultimately the ROI.

Summary

In this chapter, you learned about cloud computing and Salesforce Chatter. You also learned how you could maximize customer satisfaction by using Chatter and then the ROI calculation with some facts related to marketing and mobile uses. In the next chapter, we will go through the Salesforce Chatter configuration and setting for your organization.

Chapter 2. Configuring and Setting Up Chatter

In this chapter, we will learn how to configure Chatter. We will also unravel how to set up Chatter for your organization and explore some additional features of Chatter. The following topics will be covered in this chapter:

- Turning on Chatter
- Configuring the Chatter tabs
- Chatter license types
- Enabling Chatter invites
- Adding Chatter users
- Improving your Chatter profile
- Additional features of Chatter
- Making a topic a favorite
- Feed tracking, creating groups, and following records
- Managing files
- Sharing files
- Chatter e-mail settings
- Chatter Messenger
- Installing Chatter Desktop and Chatter Mobile
- Configuring the Chatter Mobile app
- Chatter publisher actions

Chatter is enabled by default for organizations created after June 22, 2010. For existing organizations, your administrator must enable Chatter. You can access the Chatter app from the app menu in the top-right corner of any page. Salesforce Chatter is available in the following editions as well as in Performance edition:

Available in: Group, Professional, Enterprise, Unlimited, Contact Manager, and Developer Editions

Turning on Chatter

To turn on Salesforce Chatter, navigate to **Setup | App Setup | Customize | Chatter**. You will see the following screen on which you have to select the **Enable** checkbox:

Chatter Settings

Chatter is a corporate network that lets your users work together, talk

Edit

Chatter Settings

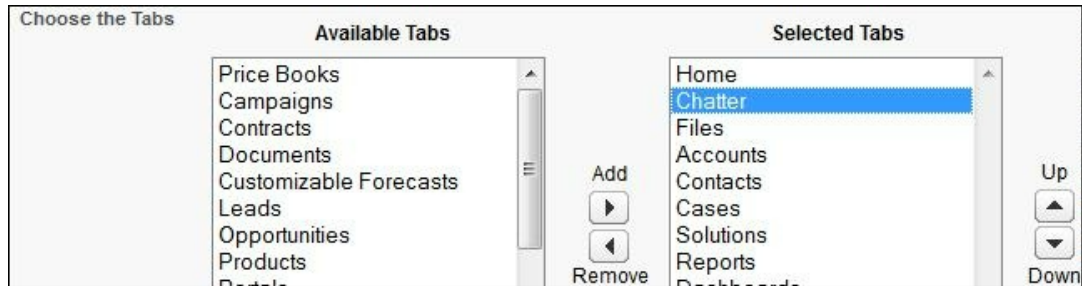
Turn on Chatter and Global Search features. We have given you a he

Enable



Configuring the Chatter tabs

Once you turn on Chatter, you want to make sure everyone from the organization is able to see it. To add Chatter as a popular app, navigate to **Name | Setup | App Setup | Create | Apps | Edit the Apps**, and then move Chatter from the **Available Tabs** pane to the **Selected Tabs** pane.



Chatter license types

Chatter has certain license types that we are going to discuss in brief.

The Chatter Free license type

This license works for Unlimited, Enterprise, and Professional Edition users who don't have Salesforce licenses but want access to Chatter. These users can access standard Chatter people, profiles, groups, and files, but they cannot access any Salesforce objects or data.

Note

You can upgrade a Chatter Free license to a standard Salesforce license at any time; however, you can't convert a standard Salesforce or Chatter Only license into a Chatter Free license.

The Chatter External license type

This license type allows you to invite your customers into Chatter groups. Customers are users outside a company's e-mail domain, for example, a channel partner. This license has very limited Chatter access, users can only see groups they are invited to, and are only able to interact with members of those groups.

The Chatter Only a.k.a. the Chatter Plus license type

This license works for Unlimited, Enterprise, and Professional Edition users who don't have Salesforce licenses, but want access to some Salesforce objects in addition to Chatter. These users can access standard Chatter people, profiles, groups, and files. In addition, users will have the ability to view Salesforce accounts and contacts, use Salesforce CRM content, ideas, and answers, and modify up to ten custom objects.

If your user needs to access only two-three objects (but less than 10) and one custom app with report and dashboard access, you can save money by using this license type.

Note

You must expose the tabs for standard Salesforce objects that the Chatter Only user profile can access as they are hidden by default for these users. Professional Edition organizations must have profiles and page layouts enabled to perform these tasks.

Enabling Chatter invites

To enable Chatter invites, navigate to **Name | Setup | App Setup | Customize | Chatter | Settings | Edit** and select **Allow Coworker Invitations**. Then, enter e-mail domains to define who can join Chatter for your organization. The domains you enter should include those used in e-mail addresses for your company, such as Chatterapp.com.

Note

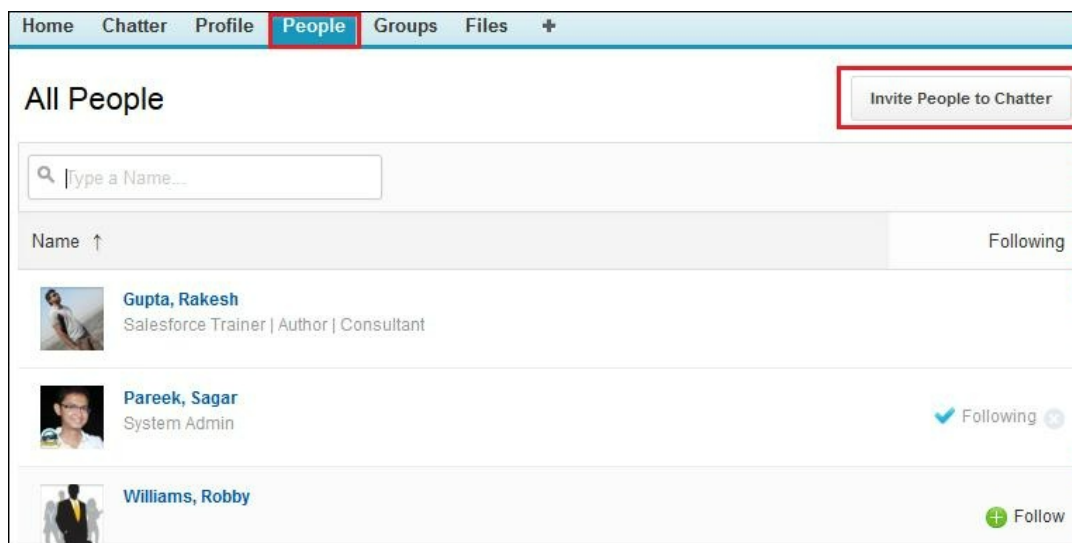
You can include only those domains in your invites that have been defined as company e-mail domains within Chatter settings. Do not use public e-mail domains such as gmail.com, outlook.com, or icloud.com.

Adding Chatter users

By using Chatter Free, you can invite colleagues who don't have Salesforce licenses. With Chatter invites, collaboration at your company is private, secure, and free. There are many ways to add Chatter users.

If you are not an admin

Once Chatter invitation is enabled by your system administrator, you are able to invite your colleagues to join Chatter free of cost. To invite people or users, click on the **People** tab, and then click on the **Invite People to Chatter** button as follows:



Enter the e-mail addresses (you can also add a message, but this is optional), and then click on the **Send** button as follows:

Invite People to Chatter

To

Rakeshistom@gmail.com

For security reasons, only enter email addresses ending in: **gmail.com**, **chatterapp.com**, **icloud.com** and other supported domains.

Message

Robby invited you to join Chatter App on Salesforce Chatter - a private collaboration space for your company! Use Chatter to talk to your coworkers, create groups for your projects, and share files.

Robby Williams says:



Hi Rakesh,

Please join our official chatter group.

Regards,
Robby



Or send your own email invitation.

Send

Cancel

If you are an admin

There are two ways to create Chatter users if you are an admin.

Manually creating Chatter users

To create Chatter users manually, navigate to **Name | Setup | Manage Users | Users | New**. Fill in the required details, such as the last name, e-mail address, and username; select the Chatter user license and the Chatter user profile; check the **Generate new password and notify user immediately** checkbox; and click on **Save**:

User Edit
Robby Williams

User Edit

SaveSave & NewCancel

General Information

First Name	Robby	Role	<None Specified>
Last Name	Williams	User License	Chatter Only
Alias	rwill	Profile	Chatter Only User
Email	rakeshistom@gmail.cc	Active	☒
Username	robby.williams@chatte	Marketing User	☐
Nickname	Robby.Williams	Offline User	☐
Title		Sales Anywhere User	☐
Company		Knowledge User	☐
Department		Force.com Flow User	☐

Adding users through Data Loader

Use Data Loader to add bulk Chatter users at once. To download Data Loader, navigate to **Name | Setup | Administration Setup | Data Management | Data Loader**. To do this, create one CSV file with values for all the fields required to create a user and upload this using Data Loader.

Note

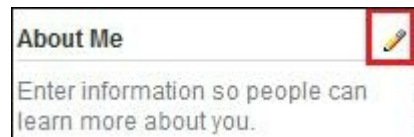
To know more about Data Loader, refer to http://wiki.developerforce.com/page/Data_Loader.

Improving your Chatter profile

Salesforce Chatter is social networking for your Salesforce organization. Here you can connect with your colleagues, channel partners, domain experts, and sales reps. As this is a virtual arena, your profile plays a key role in your organization. So people who viewed your profile can learn about your experience from the **About Me** section. To improve your Chatter profile, there are a few points to remember.

The About Me section

Always remember to fill this section to let people know about you, including who you are and what department you are in:



To edit the **About Me** section, navigate to the **Profile** tab and click on edit (the pencil icon) under the **About Me** section.

Uploading a profile photo

Your profile photo is the first item that your colleague and followers will see, and it will likely have an impact on the conclusion they draw about you.



To add a photo, navigate to the **Profile** tab and click on the **Add Photo** link. You can upload a JPG, GIF, or PNG file. The maximum file size allowed is 8 MB.

Updating contact details

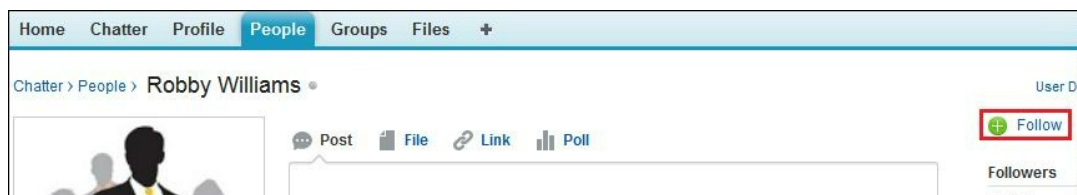
Let your followers and colleagues know how they can reach you.



To edit contact details, navigate to the **Profile** tab and click on edit (the pencil icon) under the **Contact** section.

Be specific when deciding whom to follow

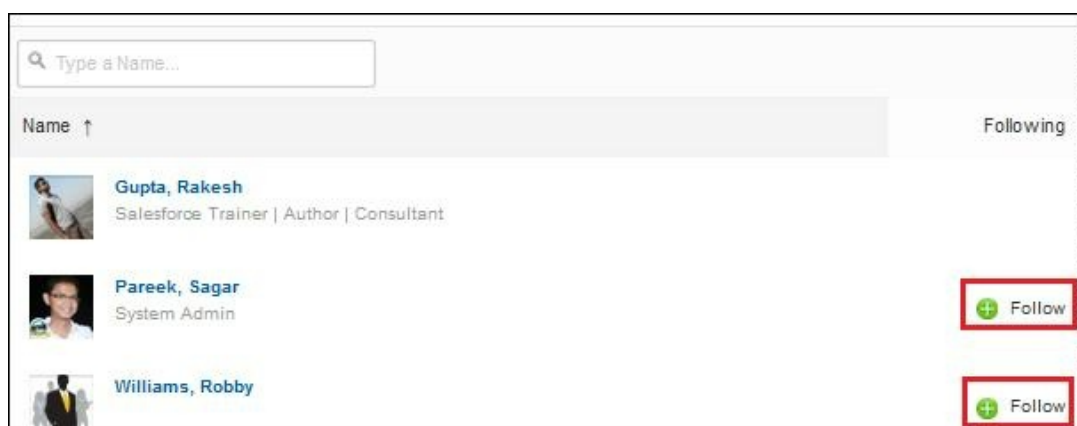
Before following anyone please think about what specifically you would like to know about the person you are thinking of following. If your answer is nothing, that's a problem. Always follow people or users who are related to your work, who have domain expertise, or who are top executives or the key players in your organization.



Note

To follow a person, go to their profile and click on the  button.

To mass follow users, navigate to the **People** tab and search for users by name or go through the list and follow many users from the same place without visiting each and every user's profile. You save precious time.

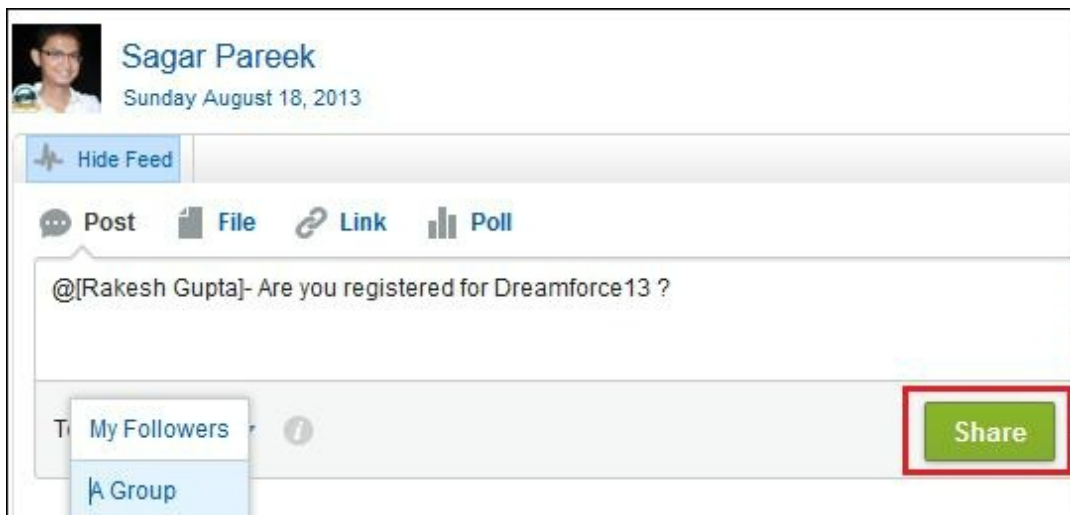


Additional features of Chatter

Salesforce Chatter allows you to let people know insights about you. Additionally, you can share links or files; you can even create polls and ask for voting. Chatter allows other users to share their opinions as comments on your post.

Updating your status

What are you doing? What are you thinking about? Share with your colleagues and followers. In a status update you are also able to tag someone. To do that, just use the `@name` function and Salesforce will give you all relevant users with the exact or a similar name in your organization. In the following example, Sagar Pareek is using `@Rakesh`. Once he is done typing, he will click on the **Share** button.

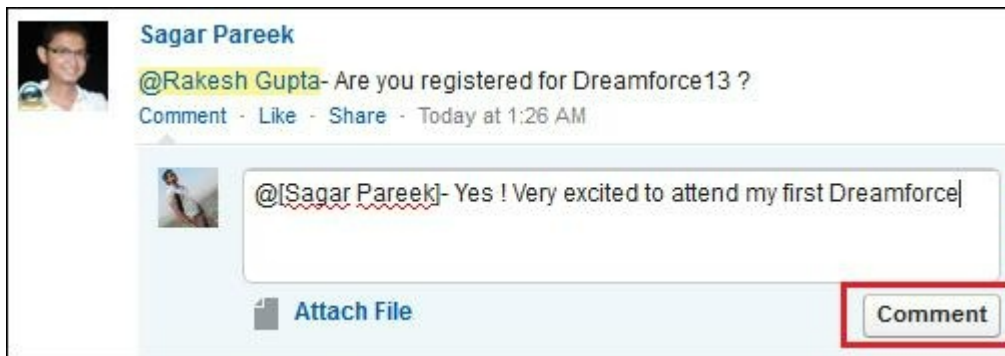


Note

You can share posts with your followers or within a group. To share it with a group, type the group's name.

Posting comments

In the preceding example, your followers are allowed to post comments, like your post, or share it. If you want to tag someone in your comment, use `@mention` (`@name`). In the following example, Rakesh Gupta has tagged Sagar Pareek by using (`@sagar`):



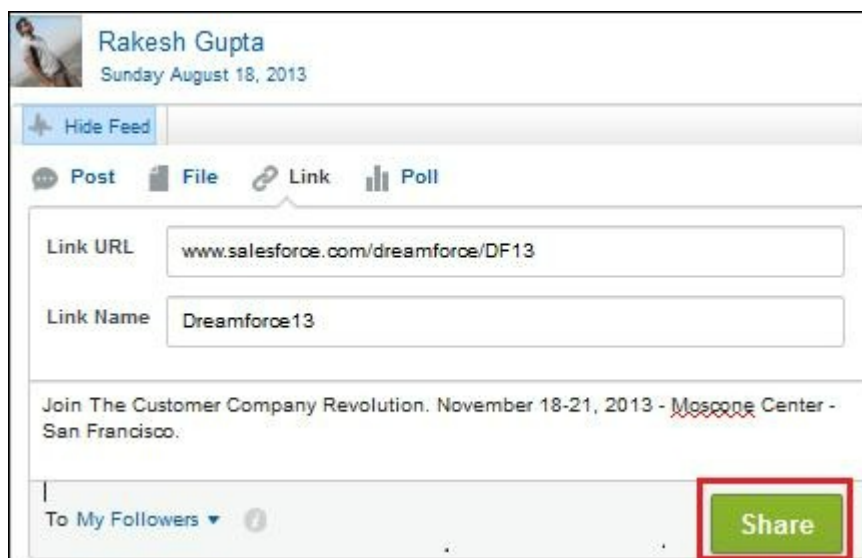
Note

Additionally, you can attach a file while commenting on a post.

You can share the original post, including any files or attachments, but you can't share any comments or likes. You can only share posts with a group that you're a member of.

Adding links

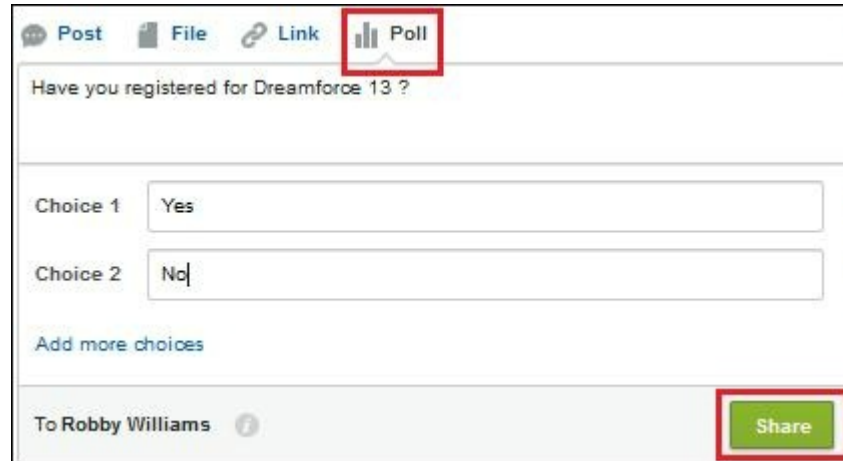
Now you can share (link) content that you found valuable. It shows your followers that you are someone worth following because of the useful information you share, making them a valuable contributor to Chatter.



If you want to share a link, click on **Link** and enter **Link URL**, **Link Name**, and a short description. You can also share a poll with your followers or a group that you are a member of or one you own.

Chatter Polls

User insight is critical to making good business decisions. Chatter Poll is a quick and efficient way to ask for feedback from users on certain topics; for example, you can easily identify the most needed topics for training via a poll instead of emailing everybody and then compiling the replies. Chatter Poll was delivered in the Winter '13 release. This allows you to create a poll in your feed.



Post File Link Poll

Have you registered for Dreamforce 13 ?

Choice 1 Yes

Choice 2 No

[Add more choices](#)

To Robby Williams

Share

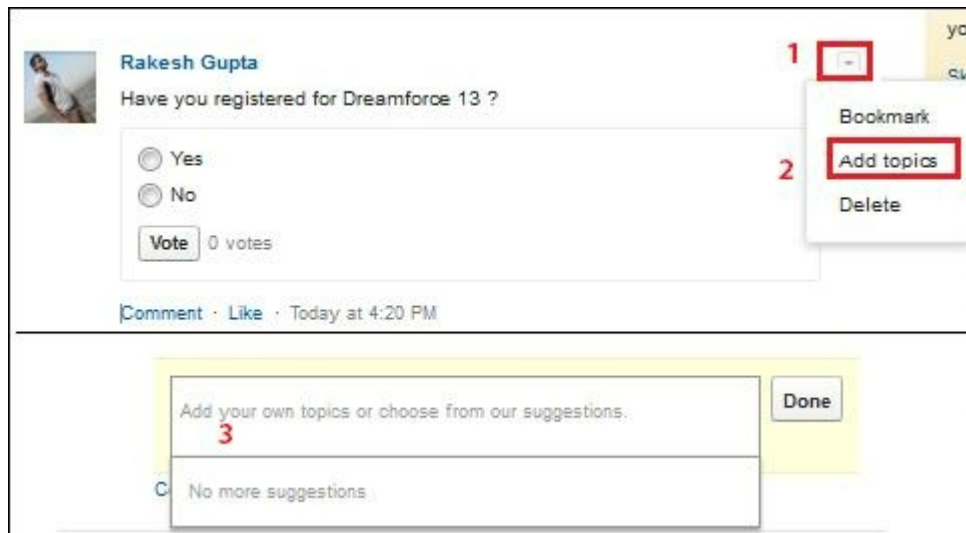
You can add a maximum of 10 choices in a poll. You can share a poll with your followers or a group that you are member of or one you own.

The following are a few noteworthy pointers for creating great polls:

- Keep your questions short
- Keep the choices short
- Mention people by using the `@mentioned` functions to get attention

Adding topics in your Chatter status updates

Now you can associate your updates with other posts and comments on the same topic by using a hashtag (#). Use topics to post, organize, or increase your post visibility. You can also use Chatter search to find updates and comments that match the Chatter topic you're looking for. You can add topics to your own posts immediately after posting, or you can add topics to any posts at any time directly in the feed. Adding topics to posts is now collaborative: anyone can add a topic to any post at any time.



To add topics in a post, follow the ensuing instructions:

1. Click on  in the top-right corner of any post (see **1** in the preceding image).
2. Click on **Add Topics** or **Edit Topics** (see **2** in the preceding image).
3. In the topic editor, start typing your text. As you type, you can pick a topic from the list of suggestions or keep typing to create your own unique topic. To add more than one topic, type a comma after each topic (see **3** in the preceding image). Commas (,) and closing square brackets (]) automatically end a topic. Other punctuation, symbols, and separators are supported in topic names.
4. Once you are done with adding topics, you can click on the **Done** button to save your changes.

Note

These topics appear in our Chatter profile in the **Recently Talked About** section. This section helps us to know the latest updates of interest. We can see up to five topics, with the most frequently and recently added topic appearing first. If we're new to topics or if we haven't used topics in the last two months, the **Recently Talked About** section doesn't appear until we start using topics more frequently.

Making a topic your favorite

You can also make a topic a favorite. The advantage of doing this is that you can quickly see the latest topics you're interested in. To add a topic as a favorite, follow these instructions:

1. Click on any topic.
2. In the topic details page, click on the **Add to Favorites** ([Add to Favorites](#)) link to add a topic as your favorite or click on the ★ icon.

In addition, the topic page includes a list of top influencers so that users will know who has been sharing the most about a specific topic within the organization.

Note

When viewing a favorite topic, you can click on the topic name at the top of the feed to go directly to the topic details page.

Bookmarking a post

Let's assume that people use Chatter very frequently in your organization. You come across hundreds of posts daily and find it difficult to locate an old post that you are interested in. To resolve this problem, you can use the bookmark feature provided by Salesforce. Bookmarking a posts lets you keep track of posts you're interested in. To bookmark a post as your favorite, follow the ensuing instructions:

1. Click on  in the top-right corner of any post you want to bookmark, and then click on **Bookmark**.



2. The **Bookmark** icon () is displayed next to the post to indicate that you have successfully saved the post to your bookmarks.
3. To see all posts that you have bookmarked, click on the **Feed** button ( Feed) bookmarked on the Chatter sidebar.

Note

There is no limit to the number of bookmarks; you can add as many bookmarks as you like.

Enabling feed tracking, creating groups, and following records

In this section, we will briefly go through feed tracking, how to enable feed tracking, group creation, and following records.

Enabling feed tracking

Enabling feed tracking gets real-time field updates from objects if there are any changes. Only the system administrator is able to enable feed tracking for an organization. To enable feed tracking, navigate to **Name | Setup | Customize | Chatter | Feed Tracking**. The system administrator can enable feed tracking for standard and custom objects.

The screenshot shows the 'Feed Tracking' configuration page in Salesforce. On the left, a list of objects is shown with 'Account' selected and highlighted in blue. The 'Tracked' column for 'Account' shows '2 Fields'. The main area is titled 'Fields in accounts' and contains a table of fields to be tracked. The 'Account Name' and 'Account Owner' fields are selected, indicated by checkmarks in the selection column. The 'Enable Feed Tracking' checkbox is checked. At the bottom, there are 'Save' and 'Cancel' buttons.

In the preceding screenshot we have enabled Feed Tracking for the **Account** object by selecting the **Enable Feed Tracking** checkbox. Once feed tracking is enabled, you can select a maximum of 20 fields to track.

Note

You can also display feed activity for related objects. To do that, please select the **All Related Objects** option at the bottom of the page.

This screenshot shows the bottom portion of the 'Feed Tracking' configuration page. It includes the text 'You can also display feed activity for related objects.' Below this text, the 'All Related Objects' checkbox is selected and highlighted with a red box. At the bottom, there are 'Save' and 'Cancel' buttons, and the 'Enable Feed Tracking' checkbox is checked.

Follow records

Once field tracking is enabled for a particular object, you can follow any number of records of that object. Now, the next question is how to follow records; there are two ways to follow a record.

Method 1

Go to any object's record for which your system administrator has already enabled feed tracking. Once you are on the details page of the record, you can easily identify the  **Follow** icon at the top-right corner of the page. Click on the follow icon to follow the record. Once you have followed any record, you can see the  **Following**  icon. If you see this icon on the details page for any record, it means you are following that record. To unfollow a record, click on the  icon.

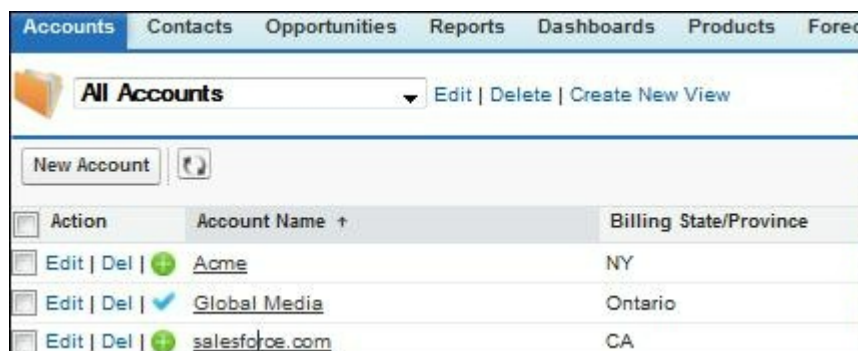


Method 2

Following a record from the list view of the object has two advantages:

- You can follow records en masse
- You can unfollow records en masse

To do this, go to the tab of that object and select the list view (**View**); it will show the records as per your list view setting. Then, click on the follow or unfollow icon according to your need.



Group creation

You can create a Chatter group to collaborate with your project teams. There are two types of Chatter groups:

- **Public:** Anyone can join this type of group, post, add files, or view and add comments.
- **Private:** To join a private group you have to ask to join the group and be accepted by the owner or managers. Only members can see and make posts, add comments, and add files.

The screenshot shows the 'New Group' dialog box in Salesforce Chatter. At the top, it says 'Group Edit' and 'New Group'. There are 'Save' and 'Cancel' buttons. The dialog is divided into two main sections: 'Basic Information' and 'Group Access'. In the 'Basic Information' section, there is a 'Group Name' field with the text 'Dreamforce13', an 'Owner' field with a user icon and the text 'Owner', and a 'Description' text area containing the text 'This group is dedicated to peoples who is planning to attend dramforce13'. In the 'Group Access' section, there are two radio buttons: 'Public' (selected) and 'Private'. The 'Public' option is described as 'Everyone can see updates and join.' The 'Private' option is described as 'Only members can see updates. Membership requires approval.' Below the 'Private' option, there is a checkbox labeled 'Allow Customers' with the text 'You can invite customers to this group.' At the bottom of the dialog, there are 'Save' and 'Cancel' buttons.

Creating groups

To create a group follow these instructions:

1. Go to the **Chatter** tab.
2. Click on the group or directly go to the **Group** tab.
3. Click on the **New Group** button.
4. Enter the group name and description (the group name must be unique).
5. Select the group's access type (public or private).

6. Click on the **Save** button.

Joining a group

If you are interested in joining a group, navigate to the **Groups** tab and click on the **All Groups** link under the left-hand sidebar. If you are not a member of a particular group, you are able to see the  **Join** icon; if it's a public group, you can join directly, while in case of a private group, you have to ask to be added.



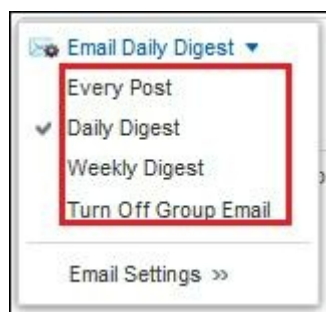
How to add members in groups

To add members in a group, go to the details page of that group and click on the **Add Members** or **Invite Members** links on the right-hand side of the screen.

The Email Daily Digest setting

You can set the **Email Daily Digest** setting for a group you own or are a member of. To do this, go to the group details page, click on the

 **Email Daily Digest** link located on the left-hand side of the screen and then select the option available as per your requirements (the e-mail delivery interval).



Managing files

Use the **Files** tab to upload, search for, follow, share, and view files on the cloud. Any files that you own or have got access to (if it's been shared with you) are available to be shared on Chatter feeds. You can upload the file from your workstation. Once you follow or upload any file, or if someone shares a file with you or uploads a file with a CRM content library, it will automatically be added to the file list. You are able to share a file with users and groups with viewer and collaborator permission as follows:

- **Viewer:** Viewers can view, download, and share the file
- **Collaborator:** Collaborators can view, download, share, edit, change permissions for, and upload a new version of a file

Uploading a file

To upload a file, navigate to the **Files** tab, click on , select a file from your workstation and click on the **Open** button.

Deleting a file

To delete a file, navigate to the **Files** tab, search for the file that you want to delete, go to the details page by clicking on the name of the file, and on the details page, click on the **Delete** link.



Following a file

What is the benefit of following a file? If you follow a file, you can see updates in your Chatter feed on the Home page and Chatter page, including when a new file version is uploaded. If you want to follow a file, navigate to the **Files** tab, enter the filename / relevant name in the search box, and once you get the appropriate file, click on the filename, to move the detail page, click on the  **Follow** icon. Once you start following any file,

you will notice the  Following  icon on the details page. To unfollow a file, click on the  icon.

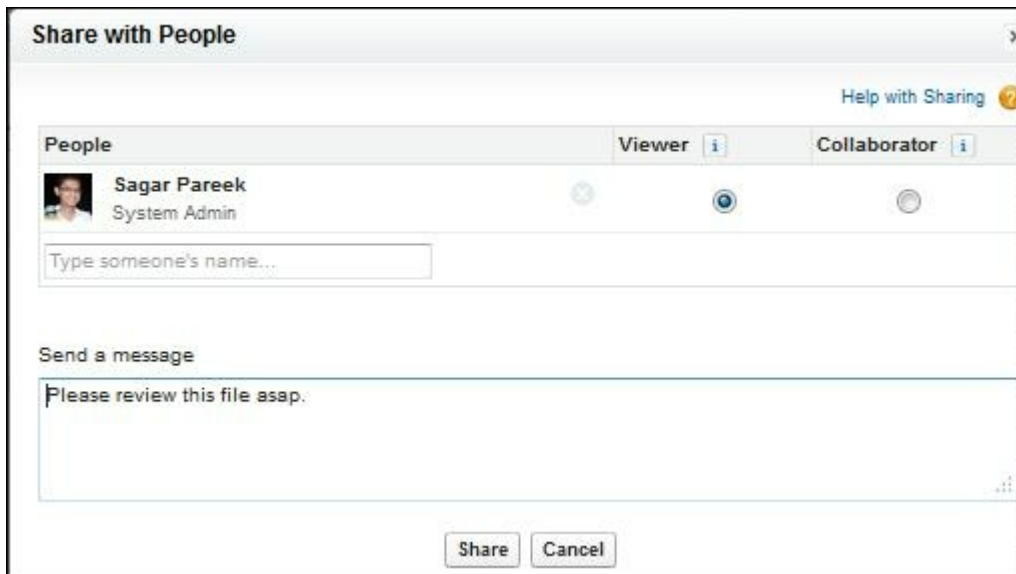
Version control for Chatter files

This is a good feature provided by Salesforce for files as compared to NoteAndAttachment. One advantage of version control over NoteAndAttachment is that users can easily identify which one is the recently updated file. Here you can manage many versions of the same file without deleting the old ones. When you're ready to upload a new version, simply open the file record—either from the Chatter post or the **Files** tab—go to detail page of the file, and select **Upload New Version** from the left-hand side of the screen.



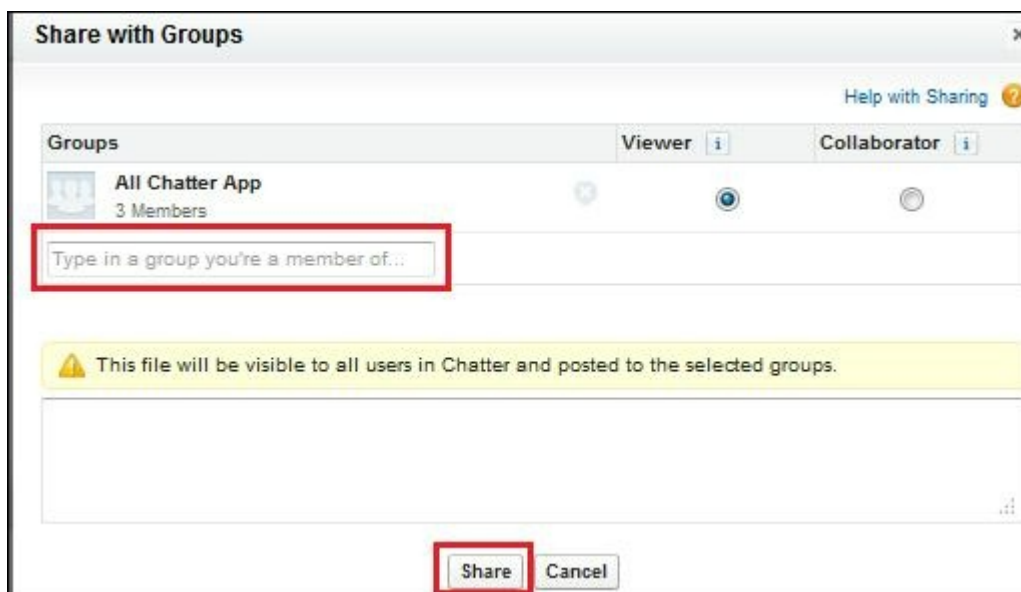
Sharing files with people

To share a file with someone, go to the file, click on , select **Share with People**, type the name of the user whom you want to share the file with, select the permission for the file, type a message (this is optional), and click on the **Share** button.



Sharing files with groups

To share a file with a group, go to the file, click on , select **Share with Groups**, type the name of the group, select the permission for the file, type a message (this is optional), and click on the **Share** button:



Note

This file will be visible to all users in Chatter and is posted to the selected groups.

Advantages of using Chatter files

The following are the advantages of using Chatter files:

- **Improves collaboration:** You can upload a file into Chatter; a Salesforce user is able to detect changes to the file in real time. This cuts down on e-mail traffic.
- **More relaxed file size limitation:** With notes and attachments, users can upload files with a maximum size of 5 MB, which is not always enough. By using Salesforce Chatter files, you are able to upload files up to 2 GB (2048 MB) in size.
- **In-browser file previews:** Here you can preview the file without downloading it onto your system, a functionality that NotesAndAttachment does not provide.



- **Sharing files externally via links:** With Chatter files, you are able to share a link to the file with anyone inside or even outside your Salesforce organization. You can share files with anyone across the globe and they are able to view and download files as well. To share a file via a link, go to the file's detail page and click on **Share File** on the left-hand side of the screen, then select **Share via link**, and share this link via IM or e-mail.

Attaching files to a post or comment

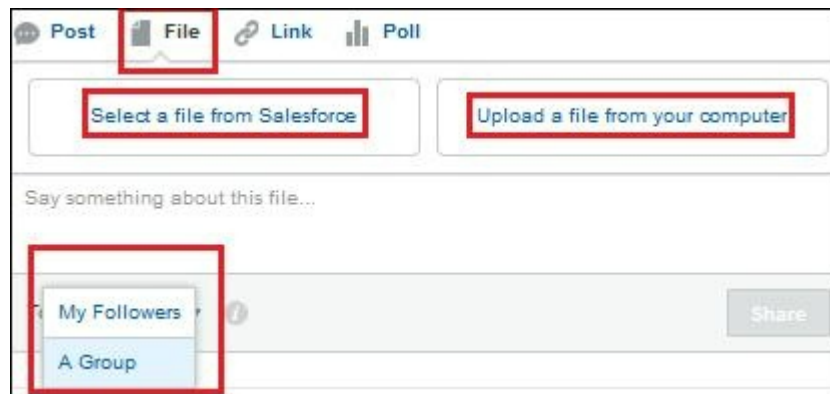
You can share files from your computer or from Salesforce by attaching them to any post or comment.

Attaching files to a post

When you post a file to a feed, everyone in your organization can see it even if the file is marked private. Only files posted in a private group stay private within that group. To attach a file to a post follow these instructions:

1. Select **File** at the top of your feed.

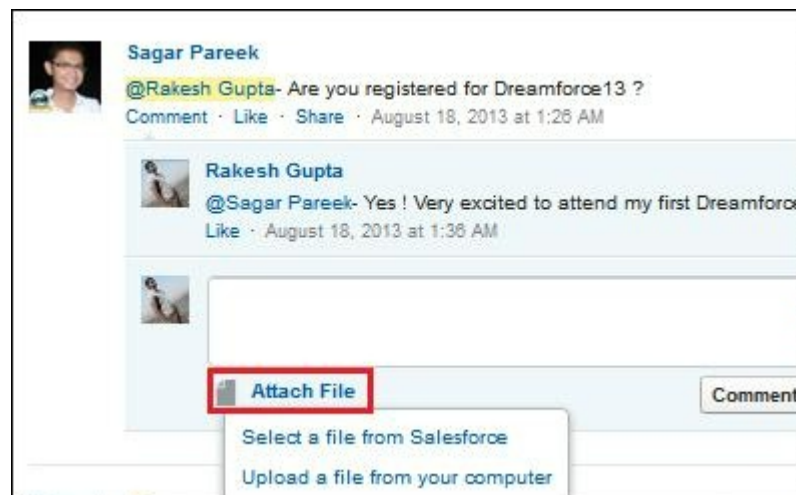
2. Select the file from Salesforce or upload a file from your computer.
3. Add a comment or post about the file.
4. You can share the file with your followers or a group that you are a member of or that you own.
5. Once you select the file for upload, the **Share** button will be enabled; click on it.



Attaching files to a comment

To attach a file to a comment, perform the following steps

1. Click on **Attach File** below the comment box:



2. Select a file from Salesforce or upload a file from your computer.
3. Add a comment about the file.
4. Click on the **Share** button.

Other Chatter features

Here we will discuss a few additional features of Chatter, such as Chatter e-mail notifications and Chatter Messenger.

Chatter e-mail setting

By enabling this option, it will deliver an e-mail to your inbox for each time someone follows you or posts to your profile or groups. You can also receive daily or weekly user and group e-mail digests. Personal digests include the updates that you see in your own Chatter feed, such as updates about people, links posted on your profile, mentions (if someone has mentioned you in a post or comment by using the [@mentioned](#) function) in posts or comments, comments or items you like, records and files you follow, and your groups. Group digests include the updates you see in a particular group's Chatter feed and are configurable on a group-by-group basis.

To configure Chatter e-mail settings, follow the ensuing steps:

1. Navigate to **Name | Setup | Personal Setup | My Chatter Settings | Chatter Email Settings**.
2. Enable the **Receive emails** option under **General** to enable e-mail notifications.



3. Select the type of Chatter e-mail you want to receive as per your choice.
4. Click on **Save**.

Chatter sends daily digests at approximately 12:00 a.m. every day and weekly digests at approximately 12:00 a.m. on Sundays. For user digests, the time is with reference to the user's time zone. For group digests, the time is with reference to the organization's time zone. If you don't receive any Chatter digest e-mail, it means that people and items you're following have no new updates. Daily digests include the 50 latest posts from the previous day, while weekly digests include the 50 latest posts in the week.

Chatter Messenger

In Spring 12, Salesforce released one powerful application, that is, Chatter Messenger; it allows you to secure instant messaging for people who follow each other in Chatter. By default, Chatter Messenger will be enabled for

any organization that uses Chatter, including those that use the Chatter Free and Chatter Only licenses. Chatter Messenger will also be available on custom Visualforce pages.

Enabling Chatter Messenger

The following are the steps to enable Chatter Messenger for your organization:

1. Navigate to **Name | Setup | Customize | Chatter | Chat Settings**.
2. Click on **Edit** and then select the **Enable Chat** option under **Chat Settings**.
3. To disable it, deselect it:



Enabling Chatter Messenger for Visualforce pages

The following are the steps to enable Chatter Messenger for your organization:

1. Navigate to **Name | Setup | Customize | Chatter | Visualforce Setting**.
2. Click on **Edit** and then check the **Allow** option under **Visualforce Settings**.
3. To disable it, deselect it so that the chat option will not appear on the custom Visualforce page.



Note

Only the system administrator or a person with customize-application permission can perform the actions described previously. Internal users can only use Chatter Messenger.

Once Salesforce Chatter Messenger is enabled for your organization, you will see the   icon in the bottom-right corner of the screen; click on  to pop out the chat window.

You can customize your chat settings by clicking on the  icon. As per your setting, you can choose to: use emoticons in your chat, see offline people, see the **People I Follow** or **My Favorites** areas, and have sounds played when there is a new chat message (ping). You can drag any name from the **People I Follow** area to the **My Favorites** area.



Installing Chatter Desktop and Chatter Mobile

In this section we will go through a step-by-step procedure to install Chatter for desktops and various mobiles.

Installing Chatter Desktop

To access Chatter platform you need to open your Internet browser, but Chatter Desktop needs no Internet browser. Chatter Desktop is a free desktop application. It works like an instant messenger. It offers almost all the features of regular Chatter so that you can stay in touch with co-workers even when not browsing the Internet.

Requirements for using Chatter Desktop are as follows:

Operating system name	Windows	Mac
RAM	512 MB of RAM (1 GB recommended)	512 MB of RAM (1 GB recommended)
OS types	Windows XP, Windows Server 2003, Windows Server 2008, Windows Vista, or Windows 7	Mac OS X v10.5, v10.6, or v10.7
Processor	2.33 GHz or faster, x86-compatible processor, or Intel Atom™ 1.6 GHz or faster processor for netbook devices	Intel® Core™ Duo 1.83 GHz or faster

Note

Chatter Desktop uses Adobe® Integrated Runtime (AIR®). Chatter Desktop does not run on operating systems that Adobe AIR does not support, such as 64-bit Linux.

Steps to install the Chatter Desktop application

Salesforce.com provides two Chatter Desktop installers: a standard version for individual installations and a managed version for enterprise

deployments. To download and install Salesforce Chatter, perform the following steps:

1. Navigate to **Name | Setup | Personal Setup | Desktop Integration | Chatter Desktop**.
2. Click on the **Download Now** badge to download the Chatter Desktop application.



3. Follow the on-screen instruction to complete the installation.

Perform the following steps to log in to the Chatter Desktop application:

1. Double-click on the Chatter Desktop icon on your computer.
2. Enter your login credentials
3. Allow the Chatter application to access your Salesforce basic information.
4. Now start collaborating with your followers and those you are following from one place.

Managing user sessions

You can revoke Salesforce Chatter Desktop access from a user remotely. To do this, perform the following steps:

1. Navigate to **Name | Setup | My Personal Information | Personal Information**.
2. Go to the OAuth-connected-apps-related list.
3. Click on **Revoke action** next to Chatter Desktop.

Installing and configuring Chatter Mobile

By using the Chatter Mobile app, you can collaborate in Chatter from anywhere even if, say you're walking along the road.

Free version available in: All editions except Database.com
Full version available in: Unlimited and Developer Editions, and for an additional cost in: Professional and Enterprise Editions

The Chatter Mobile app allows you to:

- Receive updates about the records and people you're following and from your groups
- Post photos from your devices

- View and create posts and comments
- Find and follow people from your organization
- Find and follow groups from your organization
- View colleague profiles
- E-mail, call, or text people directly from their Chatter profiles.

The Chatter Mobile app is free and available for:

- Android phones or tablets with OS 2.2 or higher
- Apple iPad with iOS 5.0 or higher
- Apple iPhone and iPod Touch with iOS 5.0 or higher
- BlackBerry devices with OS 5 or higher

Installing Chatter Mobile

You can download Salesforce Chatter from www.salesforce.com/mobile/apps/download/, or you can download it from iTunes, Google Play, or BlackBerry World. It can be downloaded for different platforms from the following links:

- **iTunes:** <https://itunes.apple.com/us/app/salesforce-chatter/id404249815>
- **Blackberry:** <http://appworld.blackberry.com/webstore/content/26962/>
- **Play Store:** <https://play.google.com/store/apps/details?id=com.salesforce.chatter>

Configuring the Chatter Mobile app

Perform the following steps to configure access to the Chatter Mobile app in your organization:

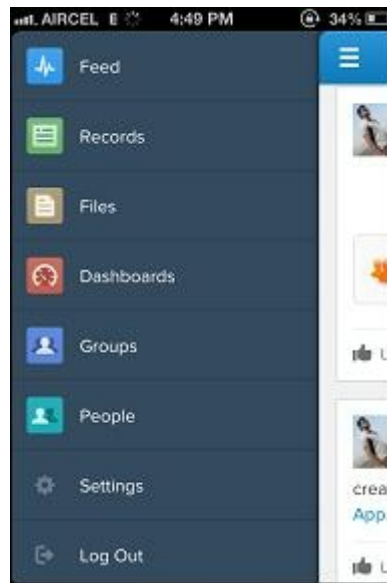
1. Log in into salesforce.com.
2. Navigate to **Name | Setup | Administration Setup | Mobile Administration | Chatter Mobile | Settings**.
3. Click on **Edit** and select enable **Enable Chatter Mobile**.
4. Select the types of mobile devices that can access Chatter Mobile or that your organization allows to use the Chatter Mobile app. If a user tries to access the Chatter Mobile app from a restricted device, the app will display an error.
5. Optionally, select the **Push Notification** option (push notifications are alerts that apps send to your mobile device's home screen when you're not using the app. The Chatter Mobile app can display notifications that keep users aware of relevant Chatter activity when they are not using the Chatter Mobile app or another application).
6. Optionally, select **Session Timeout** for the Chatter Mobile app (if the session expires, Chatter Mobile users must enter their password to start a new session).
7. Click on **Save**.
8. Restart the Chatter Mobile app if configuration changes in Salesforce do not appear on your mobile device.

How to log in to the Chatter Mobile app

The following are the steps to log in to the Chatter Mobile application:

1. Tap the Chatter Mobile app icon on your mobile.
2. Enter your login credentials and activation code.
3. Allow the Chatter application to access your basic Salesforce information.

4. Now start collaborating with your followers and people following you from one place



Revoking Chatter Mobile access

Perform the following steps to revoke Salesforce Chatter Mobile access from a user:

1. Navigate to **Name | Setup | Administration Setup | Mobile Administration | Chatter Mobile | Users and devices**.
2. Select users for whom you want to revoke access.
3. Click on **Revoke**.

Chatter publisher actions

In their Summer '13 release, Salesforce launched an interesting feature: Chatter publisher actions. Publisher actions allow you to create actions and add them to the Chatter publisher on the home page. You can now turn an action into a global action with the help of Salesforce Chatter. For this, you must first enable Chatter publisher actions.

Enabling publisher actions

Only the system administrator or a user who has customize-application permission can perform this setup. To enable publisher actions follow these instructions:

1. Navigate to **Name | Setup | Customize | Chatter | Settings**.
2. Click on **Edit**.
3. Select **Enable Publisher Actions**.
4. Click on **Save**.

Publisher actions only work with those objects for which feed tracking is enabled. Publisher actions/global actions are of two types:

- Creating records
- Creating custom actions

Creating global actions

A user can perform this action in any object, but there's no automatic relationship between the record that's created and any other record. To create a global action perform the following steps:

1. Navigate to **Name | Setup | App Setup | Customize | Create | Global Actions**.
2. Click on the **New Action** button.
3. Select an action type (create a record or custom action).
4. To create a record, select the type of object to create if there is more than one record type for that object, and then select the record type for this action.
5. For a custom action, select the Visualforce page and specify the height of the action window.
6. Type a label for the action. Users will see this text for the action in the publisher menu.
7. Enter the name; this name will be used in API calls or managed packages.
8. Type a description for the action.
9. Optionally, you can change the icon.

10. Click on **Save**.

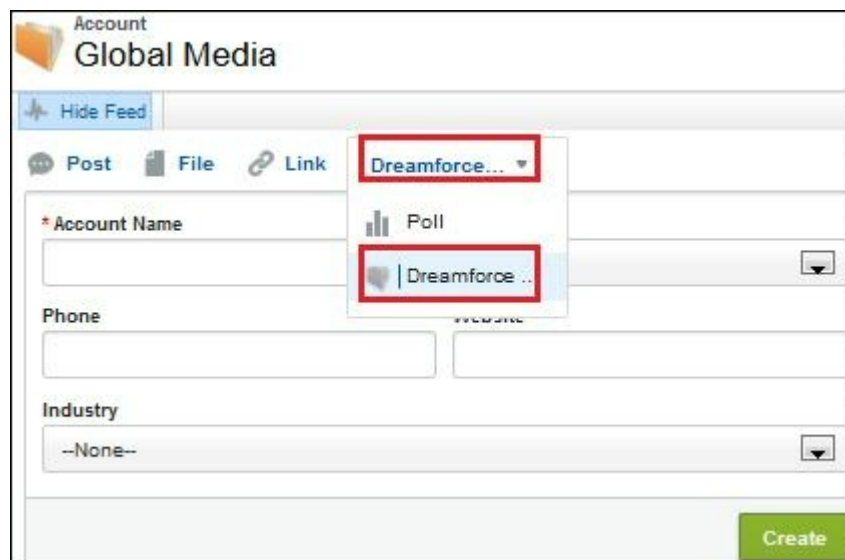
After you create the action, you can customize the layout of the action to choose the different fields users see while creating a record through this action.

Note

You can also define the default value for a field; to do that, go to global action under the list related to **Predefined Field Values**, click on **New**, select the field, and set the value.

Adding global actions to the page layout

The publisher actions feature allows you to create actions and add them into the Chatter publisher on the home page, Chatter tab, and record detail pages as well. It also allows you to customize the order in which the standard Chatter actions appear, including **Post**, **File**, **Link**, and **Poll**:

The screenshot shows the 'Global Media' Chatter publisher interface. At the top, there's a 'Hide Feed' button. Below it are icons for 'Post', 'File', and 'Link'. A dropdown menu is open, showing 'Dreamforce...' (highlighted with a red box) and 'Poll' (also highlighted with a red box). The form fields include 'Account Name' (with an asterisk), 'Phone', and 'Industry' (with a '--None--' selection). A green 'Create' button is at the bottom right.

To add actions in the page layout, perform the following steps:

1. Navigate to **Customize | Object | Page Layouts**.
2. Select an action from the left-hand screen.
3. Drag-and-drop the action in the page layout.
4. Click on **Save**.

Creating object-specific actions

Creating object-specific actions lets users create records that are automatically associated with a related record. To create an object-specific action perform the following steps:

1. Navigate to **Name | Setup | App Setup | Customize | Object | Buttons, Links, and Actions**.
2. Click on the **New Action** button.
3. Select the action type (create a record or custom action).
4. To create a record, select the type of object to create—if there is more than one record type for that object—and then select the record type for this action.
5. For custom action, select a Visualforce page and specify the height of the action window.
6. Type a label for the action. Users will see this text for the action in the publisher menu.
7. Enter the name; this name will be used in API calls or managed packages.
8. Type a description for the action.
9. Optionally, you can change the icon.
10. Click on **Save**.

Note

If you delete an action, it is automatically removed from all layouts it's assigned to.

Summary

In this chapter, you learned about the basic configuration as well as setting up of Salesforce Chatter. With this we went through group creation and adding people to the group. We then discussed file sharing and version controlling for files. We also discussed enabling Chatter Messenger and displaying it on Visualforce pages. We also discussed Chatter Mobile app installation and configuration, and Chatter action as well. In the next chapter, we will take you through how you can use Chatter with Apex to make it more collaborative for your organization.

Chapter 3. An Introduction to Development with Chatter

In the previous chapters, we learned what Chatter is, and how to configure Chatter for your organization. We also discussed how to create groups, add/remove a member from a group, invite your customers to Salesforce Chatter, manage files, update status, feed tracking, and so on. We also learned how to set up an e-mail for Chatter newsletters and publisher actions. In this chapter, we will discuss how to use Chatter with the Visualforce page, and later on we will go through some Chatter recipes such as how to turn a group into a notice board and so on. In this chapter, we will cover the following topics:

- Displaying a chat window on the Visualforce page
- Displaying a Chatter follower on the Visualforce Page
- Displaying a user's profile image
- Displaying a list of followers for a user
- Displaying news feed
- Posting status from the Visualforce page
- Entity feed and how to display it on the Visualforce page
- Automatically following a record after its creation
- Automatically following a group
- Applying filters on group creation
- Applying filters on the Chatter post
- Applying filters on comments on a Chatter post
- Filtering a post for some records
- Posting opportunity-closed details to a Chatter group
- Making a group that allows read-only access

To customize the functionality of Chatter, we can use Salesforce Apex and Visualforce pages as per our needs. Here we will discuss few sections of Chatter in detail.

Starting with Apex and Visualforce coding, it's recommended to create a developer account. Once the developer account is active, navigate to the user record by following the path **Name | Profile | User** to enable the development mode. You can enable it to create a Visualforce page by entering a name in the URL (/apex/Your_PageName).

Note

In this chapter, we have provided example code snippets. However, the complete code can be downloaded from www.packtpub.com/support.

Displaying a chat window on the Visualforce page

A chat window is a box where you can chat with your followers in real time; it will send/receive your message immediately. To display the chat window in the Visualforce page, we have the following two ways.

Enabling chat settings for all Visualforce pages

Follow the given steps:

1. Navigate to **Name | Setup | App Setup | Customize | Chatter | Chat Setting | Edit**.
2. Then check on the **Allow** checkbox under **Visualforce Settings**, as shown in the following screenshot:



3. Once it is enabled, the chat window will appear with all Visualforce pages.

To display the chat window on selected Visualforce pages, go ahead with the following method.

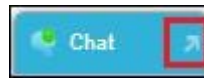
Enabling chat settings for a particular Visualforce page

To enable chat settings for a particular Visualforce page, perform the following steps:

1. Create a Visualforce page (by appending `/apex/PageName` after `https://InstanceName.salesforce.com`), and add a `Showchat="true"` attribute under the `<apex:page>` tag as shown in the following code:

```
<apex:page showChat="true"/>
```

2. Click on the arrow mark within the red box to enlarge the **Chat** window, as shown in the following screenshot:



Displaying a Chatter follower on the Visualforce Page

To show chatter followers or to record follower details on a Visualforce page, use the `<chatter:followers>` tag. The `<chatter:followers>` tag has a few attributes:

- `entityId`: It is the ID of the record for which the list of followers has to be displayed; for example, `Account.Id`.
- `ID`: It is an identifier that allows the component to be referenced by other components in the page.
- `Rendered`: It is a Boolean value that specifies whether the component is rendered on the page. If it is not specified, this value defaults to `true`.

The following code snippet shows the use of these attributes:

```
<apex:page showChat="true">
  <Chatter:followers entityId="00590000001qt4z"/>
</apex:page>
```

In the preceding code, `entityId` is the user ID (*Rakesh Gupta*); so, in output, it will show the followers of the mentioned user; it can be done in the same way for records.



To make the preceding functionality dynamic, Apex code is required. Following is the sample code to control the dynamic behavior of the page.

First create a list of users in your organization. The following code shows whether users from your organization are active or inactive. According to your need, you can modify query in code. To create a dropdown of the available users in an organization, the Visualforce code to be used is as follows:

```
<apex:outputLabel value="Select
user"></apex:outputLabel>
<apex:selectList id="user" value="{!uName}"
size="1" title="User">
  <apex:selectOptions value="{!users}"
></apex:selectOptions>
<apex:actionSupport event="onchange"
action="{!
```

```
followchange}" rerender="feed"
status="loadStatus"/>
</apex:selectList>
```

The following is the controller code:

```
public List
<selectOption>
    getUsers()
    {
        List
        <selectOption>
            options = new List
            <selectOption>
                ();
                options.add(new selectOption('', 'Current
User'));
                for (User users : [SELECT Id, Name FROM
User ])
                {
                    options.add(new selectOption(users.Id,
users.Name));
                }
                return options;
            }
        }
```



From this page, select any username from the dropdown; it will show the followers accordingly. To control the dropdown and show the followers dynamically, refer to the following Visualforce and controller code snippet:

```
<apex:outputPanel id="feed">
    <chatter:followers entityId="{!uid}" />
</apex:outputPanel>
<apex:actionStatus id="loadStatus"
startText="Loading..." />

public PageReference followchange()
{
    uid=uName;
}
```

On the Visualforce page, use the output panel to display the outcome. In the `entityId` attribute of the `chatter:followers` tag, use `{!uid}` to get the list of followers from the controller.

Displaying a list of followers without using the Chatter tag

To display the list of followers without using the Chatter tag, create an output panel to show the result.

The following is the Visualforce code:

```
<apex:outputPanel id="resultPanel">
    <b>Followers ({!followers.size})</b>
    <apex:dataList value="{!followers}" var="f">
        <apex:outputText value="{!f.Subscriber.Name}">
        </apex:outputText>
    </apex:dataList>
</apex:outputPanel>
```

To get the list of followers in the `apex` class, fire a query on the `EntitySubscription` object (this object contains all information about the followers).

The following is the controller code:

```
followers= [select id, subscriberid,
subscriber.name
            from EntitySubscription
            where parentid =:uid];
```

Displaying a user's profile image

To show a user's current profile image on the Visualforce page, use the `<apex:image>` tag with the attribute `url`. To access the current user profile image via Visualforce page, use one of the following fields on the `User` object, if Chatter is enabled:

- `FullPhotoUrl`: The URL for a user's profile photo
- `SmallPhotoUrl`: The URL for a thumbnail of a user's profile photo

The following is the code for Visualforce:

```
<apex:image url="{!UserFullPhoto}" />
<apex:image url="{!UserSmallPhoto}" />
```

The following is the code for the custom controller:

```
public string UserfullPhoto{get;set;}
public string UserSmallPhoto{get;set;}

User p = [Select Name, SmallPhotoUrl,
FullPhotoUrl From User where Id=:uName];
UserfullPhoto = p.FullPhotoUrl;
UserSmallPhoto = p.SmallPhotoUrl;
```

In the preceding code, you will get the `FullPhotoUrl` and `SmallPhotoUrl` fields by querying and pass it to the respective URL to display the profile image:



If you change the user, it dynamically changes the profile image of the user.

Displaying a list of followers for a user

To get the list of users that you are following, use the following Visualforce code:

```
<apex:outputPanel id="resultPanel">
  <b>Following ({!followings.size})</b>
  <apex:dataList value="{!followings}" var="f">

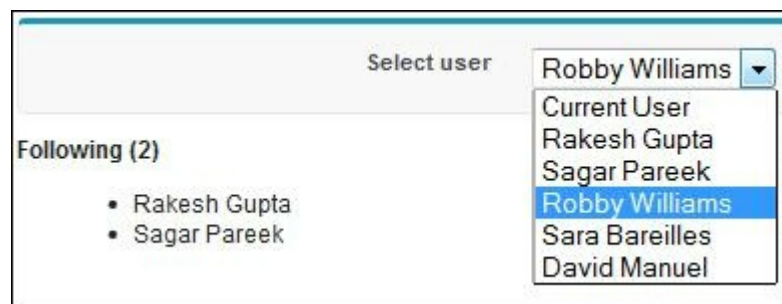
    <apex:outputText value="{!f.parent.name}">
  </apex:outputText>
  </apex:dataList>
</apex:outputPanel>
```

The following is the code for the custom controller:

```
public List
<EntitySubscription>
  getfollowings()
  {
    EntitySubscription[] followingES = [select id,
parentid, subscriberid,
parent.name,subscriber.name from
EntitySubscription where subscriberid =:uid];
    List
    <EntitySubscription>
      following = new List
    <EntitySubscription>
      ();
    String userSObjectPrefix =
User.sObjectType.getDescribe().getKeyPrefix();
    for( EntitySubscription es: followingES )
    {
      if( ('' + es.parentid).substring(0,3) ==
userSObjectPrefix)
        following.add(es);
    }
  }
  return following;
}
```

The [EntitySubscription](#) object stores information about entities such as users or records that you are following or subscribed to. In the custom controller code, we are firing a query over the [EntitySubscription](#) object to get the list of users and displaying the result by using the output panel and output text. Following are two attributes of the [EntitySubscription](#) object that we used in the preceding code:

- **Parented:** People ([subscriberid](#)) subscribed to my feeds
- **Subscriberid:** Subscribed to other peoples ([parentid](#)) feeds



The screenshot shows a web interface with a 'Select user' dropdown menu. The dropdown is open, showing a list of users: 'Current User', 'Rakesh Gupta', 'Sagar Pareek', 'Robby Williams' (highlighted), 'Sara Bareilles', and 'David Manuel'. Below the dropdown, the text 'Following (2)' is displayed, followed by a bulleted list of users: 'Rakesh Gupta' and 'Sagar Pareek'.

In this change, when you choose the user from the dropdown, it will show the list accordingly.

Displaying news feed

To displays the Chatter news feed for the current user, use the `<Chatter:Newsfeed>` tag.

The sample code is given as follows:

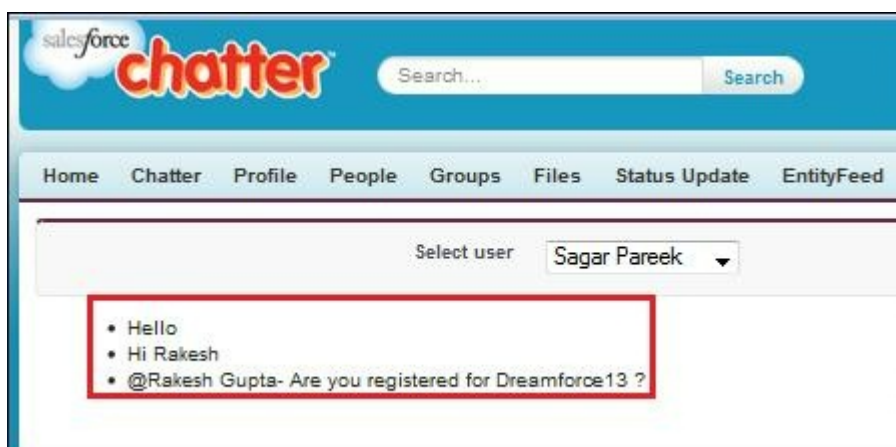
```
<apex:page >
<Chatter:Newsfeed />
</apex:page>
```

The preceding code will give you the current user's news feed. To make it dynamic in nature as with the preceding code, use the `controller` class with the Visualforce Page. By using the following code, you will make the page behavior dynamic; once you select the user name in the dropdown, it will show the news feed according to that.

The code for the Visualforce Page is given as follows:

```
<apex:outputPanel id="feed">
  <apex:dataList value="{!newsfeeds}" var="Nf">
    <apex:outputText
value="{!Nf.body}"></apex:outputText>
  </apex:dataList>
</apex:outputPanel>
```

We have taken an output panel with the `id` attribute, the data list that is bound with the `newsfeeds` list, and the variable `Nf`. The following screenshot is the output that shows the body of the newsfeed:



The controller code is given as follows:

```
public List
<feedItem>
```

```

getNewsfeeds()
{
    newsfeeds= [SELECT Type, CreatedDate,
    CreatedBy.name, Body FROM FeedItem WHERE
    ParentId=:uid and type='TEXTPOST' ORDER BY
    CreatedDate DESC LIMIT 10];
    return newsfeeds;
}

```

News feeds are stored in the `feeditem` object. The preceding code will give you the news feed, extract those posts whose type equals `TEXTPOST`, and once you get the required list, pass it to `DataList` in the Visualforce page for printing.

Displaying feed with followers

To display a news feed with followers, you can use the `<chatter:feedWithFollowers>` tag.

The sample code is given as follows:

```

<apex:page >
<chatter:feedWithFollowers
entityId="00590000001qt4z"/>
</apex:page>

```

Here, the entity is nothing but the ID of the record user for which you want to display the feed. The preceding code will give you the news feed with a list of followers for the ID used in the code.

To make the preceding code dynamic as in the following screenshot, select the user name from the **Select user** dropdown, and it will dynamically change the feed with the follower:



The following is the code for the Visualforce page:

```
<apex:outputPanel id="feed">
    <chatter:feedWithFollowers entityId="{!uid}"/>
</apex:outputPanel>
<apex:actionStatus id="loadStatus"
startText="Loading..." />
```

We have taken an output panel with the `id` attribute to show the output. This has the Chatter component, `<chatter:feedWithFollowers>`. This component takes the argument entity ID, which is the user ID.

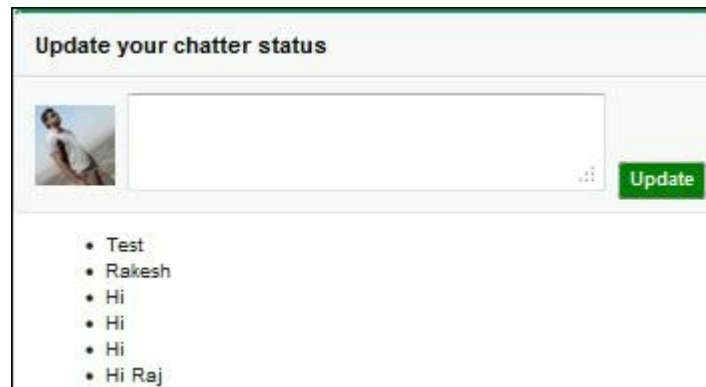
The controller code is given as follows:

```
public PageReference followchange()
{
    uid=uName;
    return null;
}
```

On changing the user, the `pageReference` method, which is the `followChange` method, is always called. It assigns the current `userid` of the selected user to `uid`. The `uid` ID is bound on the page with the `<chatter:feedWithFollowers>` Chatter component that shows the output. On the Visualforce page, the output panel is used to display the output.

Posting status from the Visualforce page

If you update your status from the Visualforce page, your status gets updated in real time. This is shown in the following screenshot:



The following is the code for the Visualforce pages:

```
<apex:outputPanel id="recent">
  <apex:dataList value="{!recentTextUpdates}"
var="update">
    <apex:outputText value="{!update.body}"/>
  </apex:dataList>
</apex:outputPanel>
```

Here we are using an output panel with `id= "recent"` that will show all the recent status updates. The `dataList` attribute has a value attribute that iterates over the list (here we have `recenttextupdates` enclosed in output text that shows the updates).

The following is the controller code:

```
public List<FeedItem> getRecentTextUpdates()
{
    List <feeditem> aNewsFeed = [SELECT Type,
    CreatedDate,CreatedBy.name, Body FROM FeedItem
    WHERE Type='TextPost'ORDER BY CreatedDate DESC
    LIMIT 10];
    return aNewsFeed;
}
```

The list of type `feeditem` is named as `recentTextUpdates`, and we are using its getter to get values so that it is `getrecentTextUpdates`. The list in

this getter is of type `feedItem` named `aNews` feed, and it selects all 10 recent posts of the `textpost` type in the descending order.

In the preceding code, the output panel is used with the data list to display status (current and old). In Chatter, posts are stored in the `FeedItem` object; to get the `textpost` type, you can use `type = "TextPost"`.

Entity feed and how to display it on the Visualforce page

For each of the standard objects and any custom objects configured for feed tracking, an entity feed will be created automatically. For example, it's `AccountFeed (ObjectNameFeed)` in a standard object account and `ObjectName__Feed` in a custom object account.

The following is the controller code:

```
CreatedById, CreatedBy.FirstName,
CreatedBy.LastName, LastModifiedDate,
ParentId, Parent.Name,
Body, Title, LinkUrl, ContentData,
ContentFileName,
(SELECT Id, FieldName, OldValue, NewValue
FROM FeedTrackedChanges ORDER BY Id DESC),
(SELECT Id, CommentBody, CreatedDate,
CreatedBy.FirstName, CreatedBy.LastName
FROM FeedComments ORDER BY CreatedDate LIMIT 10),
(SELECT CreatedBy.FirstName, CreatedBy.LastName
FROM FeedLikes)
FROM AccountFeed
WHERE ParentID = :uName
ORDER BY CreatedDate DESC, Id DESC
LIMIT 10];
```

Following a record/user from the Visualforce page

To follow a record/user from Visualforce page, you have to understand that followers' information is stored in the `EntitySubscription` object. To follow a record, you have to pass the `ParentId` value in the following query.

The following is the controller code:

```
EntitySubscription follow = new
EntitySubscription (parentId =uName, subscriberid
= UserInfo.getUserId());
insert follow;
```

A similar code can be used for the `follow` users.

Automatically following a record after its creation

To automatically follow the record of some object after its creation, a trigger on the account is required. Say, for example, the user, [Robby Williams](#), wants to automatically follow the account's record after its creation.

The sample code is as follows:

```
List
<account>Account = [select id, createdby.name
from account where id in :Accid]; // List of all
account
  for(user users : [select id from user where
name ='Robby Williams']) //Get the list of user
for whom you want to implement this logic
  {

    EntitySubscription[] followingES = [select id,
parentid,subscriberid, parent.name from
EntitySubscription where subscriberid
= :users .id]; // To get list of record follow by
list of users
    Map
    <string,string>
    following = new Map
    <string,string>
    ();
    for( EntitySubscription Entitysub :
followingES )
      following.put( Entitysub.parentid,
Entitysub.parent.name );
    followingcount = following.size();
    If(Account [0].createdby.name != '' &&
followingcount
    < 200)
    {
      EntitySubscription follow = new
EntitySubscription (parentId = Account
[0].id,subscriberid = users.id); // Set
ParentIdas account id and subscriberid as userid.
      insert follow;
    }
  }

}
```

First we need a list of accounts; this list will contain the ID name of the creator. Here, we now iterate over users using a `for` loop and selecting the ID of the user based on its name, here [Robby Williams](#). Then we make a

list of all the records of the entity subscription based upon the subscription ID; note that `subscriberid` corresponds to `userid` as the user acts as a subscriber here. Then we make a map named `following` of types `string` and `string`; this map will contain the entity-subscriber parent ID and the parent name.

Then we iterate over the entity subscription on the limited set of records that we took using `userid` as `subscriberid`. In this iteration, we add values such as records, parent ID, and parent name in the map named `following`. The `followingcount` attribute stores the number of `following` the user is having. If the account created by name is not equal to null and the number of following is less than 200, a new entity subscription is inserted.

Automatically following a group

If all users in an organization want to automatically follow any group in Chatter, then an apex trigger on the user object is required to fulfill this requirement. Some businesses require all users to follow the company news group (Chatter group), once the user is created or updated.

The sample code is as follows:

```
List
<CollaborationGroup>
    chatterGroups=[select id, Name from
CollaborationGroup where name ='Dreamforce 13'];
List
<CollaborationGroupMember>
    chatterGroupMembers=new List
    <CollaborationGroupMember>
        ();
        for(user user: Trigger.new)
        {
            for (CollaborationGroup chatterGroup :
chatterGroups)
            {
                CollaborationGroupMember cand = new
CollaborationGroupMember(CollaborationGroupId=chatterGroup.id,MemberId
= user.Id);
                chatterGroupMembers.add(cand);
            }
        }
        insert chatterGroupMembers;
```

In the preceding code, `chatterGroups` is storing `id` of the automatically following group. The list of `chatterGroupMembers` is of the `CollaborationGroupMember` type. We iterate over users and make all users automatically follow the group by providing the group ID and member ID to the `CollaborationGroupMember` type.

Applying filters on group creation

Do not use a specific keyword on the group name and description while creating the Chatter group. To achieve this, you have to write a trigger on `CollaborationGroup`.

The sample code is as follows:

```
for (CollaborationGroup CollaborationGroups:
trigger.new)
{
    if
    (CollaborationGroups.Name.containsIgnoreCase('Advertise')
    ||
    CollaborationGroups.Name.containsIgnoreCase('Adult')
    ||
    CollaborationGroups.Description.containsIgnoreCase('adult'))
    {
        CollaborationGroups.addError('You are not
allowed to create this type of group');
    }
}
```

Here, we did a simple matching of cases using the `containsIgnoreCase()` string class functions. We checked every `CollaborationGroupName` with a specific name or word by iterating over all the groups.



The screenshot shows the 'Group Edit' interface for creating a 'New Group'. At the top right are 'Save' and 'Cancel' buttons. Below them is a red error message: 'Error: You are not allowed to create this type of group'. The form has a 'Basic Information' section with the following fields:

- Group Name:** A text input field containing the word 'Advertise'.
- Owner:** A dropdown menu showing 'Owner'.
- Description:** A text area containing the text 'This group is for Advertise purpose'.

In the preceding example, the user is getting an error when he is using the word **Advertise** in **Group Name** and in **Description** of a Chatter group.

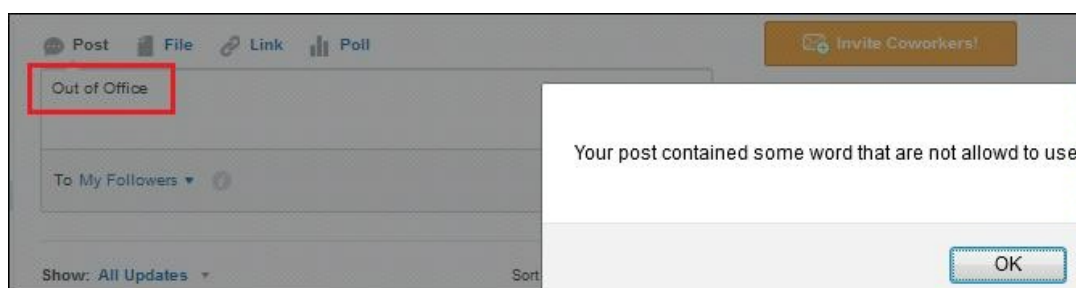
Applying filters on a Chatter post

If you don't want to allow the user to use selected words in the Chatter post, you need to write a trigger on `FeedItem` to achieve it.

The sample code is as follows:

```
trigger FilterOnChatterPost on FeedItem (before
insert) {
    for (FeedItem feeditems: trigger.new)
    {
        if
        (feeditems.Body.containsIgnoreCase('Advertise')
        ||
            feeditems.Body.containsIgnoreCase('OOO') ||
            feeditems.Body.containsIgnoreCase('Out of
Office') ||
            feeditems.Body.containsIgnoreCase('Sex'))
        {
            feeditems.addError('Your post contained
some word that
are not allowd to use');
        }
    }
}
```

By using the `containsIgnoreCase()` string class, we simply match each of the `feeditem` body that has a specific word. If the specific word is found, then the **Your post contained some word that are not allowed to use** error is generated.



In the preceding example, the user is getting an error when he is using the words **Out of Office** in his Chatter post.

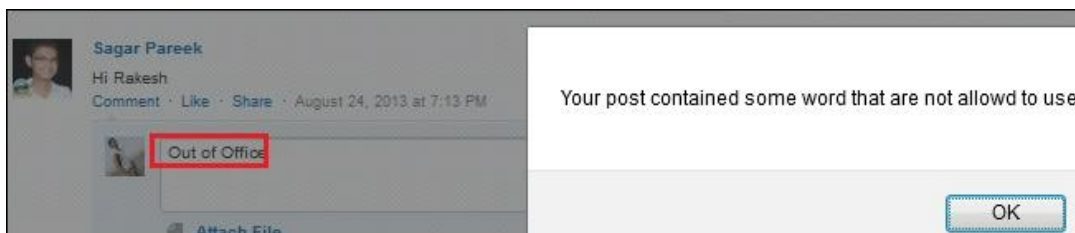
Applying filters on comments on a Chatter post

If you do not want to allow your user to use words in a Chatter post comment, you need to write a trigger on `FeedComment` to achieve it.

The sample code is as follows:

```
for (FeedComment feedcomments: trigger.new)
{
    if
    (feedcomments.commentBody.containsIgnoreCase('Bastard')
    ||
    feedcomments.commentBody.containsIgnoreCase('OOO')
    ||
    feedcomments.commentBody.containsIgnoreCase('Out
of Office')) || feedcomments.commentBody=='Sex' ||
    feedcomments.commentBody.containsIgnoreCase('Sex'))
    {
        feedcomments.addError('Your post contained some
word that arenot allowed to use');
    }
}
```

By using the `containsIgnoreCase()` string class, we simply match each part of the comment body that has the specific word. If a specific word is found, then the **Your post contained some word that are not allowed to use** error is generated.



In preceding example, the user is getting an error while he is using the words **Out of Office** in his Chatter post comment.

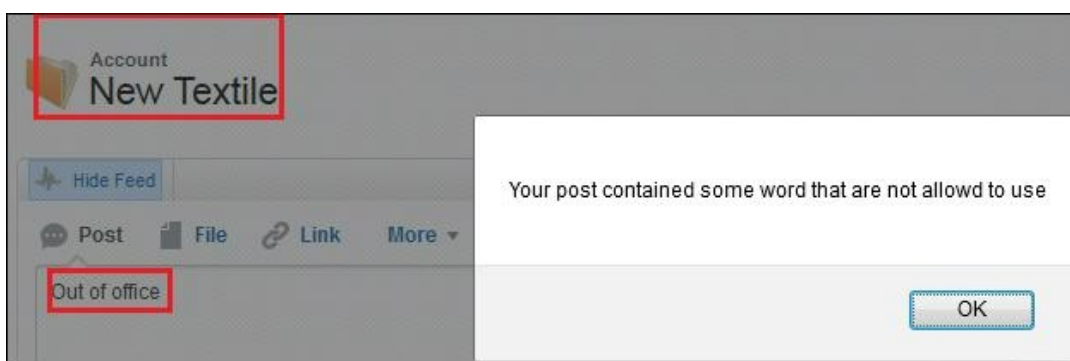
Filtering a post for some records

If you do not want to allow your user to use some selected words in the Chatter post on a record's detail page, you need to write a trigger on `FeedComment` to achieve this.

The sample code is as follows:

```
String oppKeyPrefix =
account.sObjectType.getDescribe().getKeyPrefix();
for (FeedItem feeditems: trigger.new)
{
    String parentId = feeditems.paren
    if (parentId.startsWith(oppKeyPrefix) &&
        feeditems.Body.containsIgnoreCase('Bastard') ||
        feeditems.Body.containsIgnoreCase('Out of
Office') ||
        feeditems.body.containsIgnoreCase('Sex'))
    {
        feeditems.addError('Post contained abused
word');
    }
}
```

First we get the key prefix for the opportunity object using a `describe` call and storing it in `oppKeyPrefix`. On `Feeditem`, we compare the `feeditem` parent ID with `oppkeyprefix` and then check the `feeditem` body for the specific word. If any of the specific words are found, then **Your post contained some word that are not allowed to use** error is displayed.



Here, the user is trying to use the words **Out of office** in the **Account** page post.

Posting opportunity-closed details to a Chatter group

This section will help you to increase collaboration in your organization and reduce the size of the user mailbox. Here, the user wants to post a message on the Chatter group once the opportunity is closed-won with opportunity link. So, the user doesn't need to check e-mail every time they get real information and, most importantly, they are able to discuss everything in one place, and they do not need to go through the mail chain. First, create a group named `Dreamforce 13` that posts opportunity-closed information. To achieve this, write a trigger on the `Opportunity` object.

The sample code is as follows:

```
CollaborationGroup chatterGroups=[select id, Name
from CollaborationGroup where name ='Dreamforce
13'];
for(Opportunity opp : Trigger.new) {
    if(Trigger.isInsert ) {
        if(opp.StageName== 'Closed Won')
        {
            for (Opportunity oppty : [SELECT
Account.Name, Owner.Name FROMOpportunity WHERE Id
=:opp.Id] ) {
                OppAccountName = oppty.Account.Name;
                OppOwnerName = oppty.Owner.Name;
            }
            status ='Opportunity' + opp.Name + ' is
Successfully Closed by' +OppOwnerName +' for ' +
opp.Amount+ '!';
            comment.ParentId = chatterGroups.id;;
            comment.Title = opp.Name;
            comment.Body = status;

            comment.linkurl='https://apl.salesforce.com/'+opp.id;
            insert comment;
        }
    }
}
```

We create a trigger if the `opportunity` stage is `Closed Won`. Then we select the opportunity by iterating on all the opportunities and selecting only those based on the account name and owner name that correspond to the actual owner and account name, and then updating the status to closed by.



In the preceding example, once the **opportunitySalesforce.com** stage is **Closed Won** by the user, a message with an opportunity link is automatically posted to the **Dreamforce 13** group.

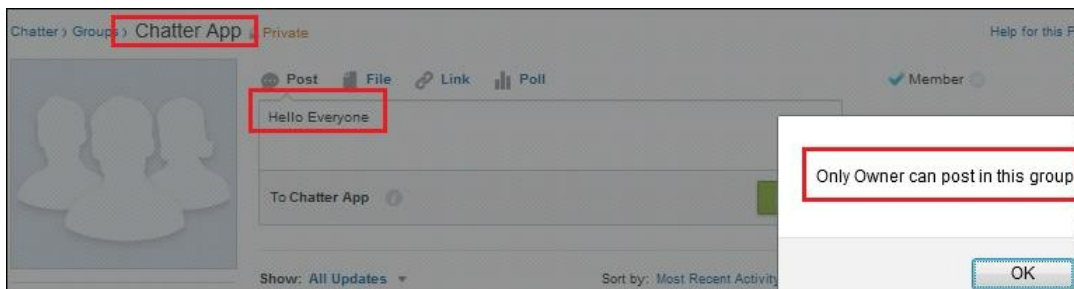
Creating a group that allows read-only access

To make a group that allows read-only access will mean that only the owner of the group is allowed to post in the group—you need to write a trigger on `FeedItem` to achieve this. In an organization, an admin can use this type of group to post news, articles, and so on.

The sample code is given as follows:

```
CollaborationGroup groups = [Select OwnerId, Id
From CollaborationGroup Where Name = 'Chatter
App'];
List
<FeedItem>
    feedItems = new List
    <FeedItem>
        ();
        for(FeedItem items : trigger.new)
        {
            if(items.ParentId == groups.Id &&
            UserInfo.getUserId() != groups.OwnerId)
            {
                items.addError('Only Owner can post in this
group');
            }
        }
    }
```

Here, we are taking groups from the `CollaborationGroup` object. Select `ownerId`; that is the ID where the group name is `Chatter App`. Then we iterate on a list of `FeedItem` named `feedItems`, make a trigger if the user is not the group owner (here we check it using the *if* condition by checking IDs), and show the **Only Owner can post in this group** error.



In the preceding example, the user is trying to post a message on the **Chatter App** read-only group, and he sees an error as he is not owner of this group.

Summary

In this chapter, you gained knowledge of how to use the Apex code with Chatter to make it more meaningful and collaborative for your organization. We also created a read-only Chatter book to reduce the mailbox's size and to share information faster. We also learned how to filter the Chatter post and automatically follow a record. We also discussed ways to display the list of followers, list of followings, status updates, and news feeds in the Visualforce page. In the next chapter, we will take you through the mass follow/unfollow application for Chatter users and Chatter data cleaning.

Chapter 4. Building the Chatter Application and Cleaning the Chatter Data

Until now, we have learned the basics of Salesforce Chatter configuration and customization. In the last chapter, we went through development with Salesforce Chatter. We also learned how to use the Apex code with Salesforce Chatter in different scenarios. In this chapter, we will go through the following topics:

- The mass follow and unfollow application
- Cleaning the Chatter data
- Managing Chatter groups
- Deactivating a Chatter user
- Using schedule Batch Apex to clean the Chatter data

To customize this application in Salesforce, knowledge of Apex and Visualforce is required. After completion of this chapter, you will have a clear idea on how to develop an application with Salesforce Chatter. You will also gain an understanding of the various concepts of Chatter data cleaning.

The mass follow and unfollow application

In the previous chapter, we walked you through the way to follow people in Salesforce Chatter; however, the disadvantage of that way is that you may follow or unfollow each user one by one.

There are a few benefits of following someone on Salesforce Chatter:

- They keep you updated
- They make things easier for you; you will get all the updated news and changes across the company by following them
- It is a more collaborative way to work, and it's a great way to get updates on deals and products

Some tips to get more followers are as follows:

- Include hashtags in your posts to categorize them so that they will reach more people
- Provide frequent status updates
- Use the desktop app to stay up-to-date easily

- Use the Chatter mobile app for updating statuses, replying to posts, and closing deals

Here, we are introducing an application, Mass follow/Unfollow Chatter users. With this application, you will be able to follow many users at a time. You may unfollow all users, a single user, or users in a bunch. You can customize the functionality of this application as per your requirements.

In the application-landing page, that is the **Follow/Unfollow** tab, you can see two buttons: **Follow** and **Unfollow**. Once you click on any of these buttons, it will redirect you to the respective page. The steps to follow and unfollow users are given in the following screenshot:



In Salesforce, mass follow and mass unfollow have never been such an easy task; but once you have the mass follow/mass unfollow application, it will make things easy for you and save your time. For this application, first create two drop-down lists/picklist fields, that is, **role** and **region**. Following are the values for the role and region. You can change the field values according to your requirement:

- Role: SE, SSE, TL, MANAGER, CTO, and CEO
- Region: APAC, EMEA, LATAM, and NA

The Mass follow page

To follow someone, click on the **Follow** button and it will redirect you to the Mass follow page. It will look like the following screen:

First Name

Manager

Role --None--

Last Name

Profile

Region --None--

There is a search panel where you can search for the desired users; you can also customize the search panel according to your requirements, such as adding or removing fields from this panel. Here, you can define the criteria that the user must match in the search result. In addition, you can select as many users as you want to follow. As soon as you follow them, they are removed from the current list. The following is the search-result screen:

Select Checkboxes to follow Users and click on "Follow" button						
Select	First Name	Last Name	Manager Name	Region	Profile	Role
☐	Sagar	Pareek	Rakesh Gupta		System Administrator	
☐	Robby	Williams			Chatter Only User	

Developing an application

Now let us come to the development part. Before starting with development, gather all the details about the application. Once this is done, break this requirement in to small parts and start its development.

The following are the key points to understand this application:

1. Get the list of users that are not being followed by the logged-in user by using the following code:

```

    eseid= new List<id>();//To store list of
    users id that is following by current user
    for(EntitySubscriptionese:
    [select parentid from entitysubscription
    where
    subscriberId=:userinfo.getUserid()]) //return
    list of users that is followed by current user
    {
    followId.add(ese.parentid);// Parentid is id
    of users i.e followed by current user
    }
    userSel = [select id from user where id <>:
    eseid];// This query will return users i.e.
    not following by current user

```

2. To follow users in Chatter, use the following code:

```

for (User UnSelectUsers:selectedUsers){
EntitySubscription follow = new
EntitySubscription ();

```

```
follow.parentId = UnSelectUsers.id;// Add the
id of user (Parentid) whom you want to follow
follow.subscriberid =
UserInfo.getUserId();//Subscriberid is store
id of user who is going to follow
UsersToInsert.add(follow);// Add all selected
user in a list
}
Database.insert(UsersToInsert );// Insert all
records from list
```

Note

The `EntitySubscription` object stores information about user/records that are being followed in Chatter. A user can subscribe to the record as well as to the users.

The code mentioned in the second point will be responsible for enabling users to follow other users/records. Apart from this, you will also be able to customize the output panel and remove or add field(s) according to your requirements.

The Mass unfollow page

To unfollow a single user or multiple users, navigate to the **Follow/Unfollow** tab, and click on the **Unfollow** button, as shown in the following screenshot:



It will redirect you to the **Mass Unfollow** page and a window with a list of users that you are following will appear (shown in the following screenshot):

Select Checkboxes to Unfollow Users and click on "Unfollow" button

Mass Unfollow Users

Unfollow

Unfollow All

	Name
☐	User3 Test
☐	User4 Test
☐	User5 Test

Unfollow

Unfollow All

There are two ways to unfollow users:

1. You can select as many users as you want from the given list and click on the **Unfollow** button.
2. You can unfollow all users by clicking on the **Unfollow All** button.

The following are the key points to understand this application:

1. The list of users being followed by the logged-in user can be obtained using the following code:

```
public
List<cEntitySubscription>getEntitySubscriptions()
{
    if(EntitySubscriptionList == null)
    {
        EntitySubscriptionList = new
        List<cEntitySubscription>();
        String userSObjectPrefix=
        User.sObjectType.getDescribe().getKeyPrefix();//
        To get user object prefix
        for(EntitySubscription c: [select id,
        parentid, subscriberid, parent.name from
        EntitySubscription where subscriberid=:uid
        order by Parentid])//This query will give
        list of user's and records following by
        logged In user
        {
            if( ('' + c.parentid).substring(0,3) ==
            userSObjectPrefix) // users only, by this you
            can eliminate records
            {
                EntitySubscriptionList.add(new
                cEntitySubscription(c));// Add user in
                EntitySubscriptionList
            }
        }
    }
    returnEntitySubscriptionList;
}
```

2. The following code explains how to unfollow the selected user(s):

```

selectedEntitySubscriptions = new
List<EntitySubscription>();
// this list store records selected by user
for unfollow

for(cEntitySubscriptioncCon:
getEntitySubscriptions()) {
// getEntitySubscriptions() store list of
following by current user, for more info see
point 1

if(cCon.selected == true) {
// If users is selected then add in list

selectedEntitySubscriptions.add(cCon.con);
}}
delete selectedEntitySubscriptions;
//once you have list of user that are Logged
in and if the user want to unfollow, use
delete command and delete list.

```

When you select a user and click on the **Unfollow** button, the user will be removed from the list of users that you are following and your list of followers as well.

3. The following code explains how to unfollow all users:

```

selectedEntitySubscriptions = new
List<EntitySubscription>();

for(cEntitySubscriptioncCon:
getEntitySubscriptions()) { // Add list of user
following by current use rin a list

selectedEntitySubscriptions.add(cCon.con);

}
delete selectedEntitySubscriptions; //once
you have list of user that are Logged in user
want to unfollow, use delete command and
delete list.

```

Note

Only example snippets are provided here. However, you can download the complete code from www.packtpub.com/support.

Now follow and unfollow any user whenever you want using the Mass follow/unfollow feature and save your time.

Steps to install the mass follow/unfollow Chatter application

The following steps explain the installation process of the mass follow/unfollow Chatter application:

1. Download code and images from the attached CD.
2. Upload the images [1164EN_04_01](#) and [1164EN_04_02](#) in static resource named [Follow](#) and [Unfollow](#) respectively.
3. Create two fields **Role** and **Region** in the **User** object with the following details:
 - **Role**: SE, SSE, TL, MANAGER, CTO, and CEO
 - **Region**: APAC, EMEA, LATAM, and NA
4. Create the Visualforce pages with names for the follow page (**MassFollowPage**) and unfollowpage (**MassUnfollowPage**), and add supporting classes from the ZIP file that you downloaded from CD.
5. The **MassFollowUnfollow** Visualforce page can be found under the **Visualforce** tab.
6. While creating the **Visualforce** tab, you have to select the **MassFollowUnfollow** page in the **Visualforce** page dropdown.

Tasks

Some tasks that you should perform are as follows:

- Write Apex code to check the number of users following by user; if it reaches more than 500 (as per the Salesforce governor limit) print error in **MassFollowPage**.
- Implement pagination in **MassFollowPage** and **MassUnfollowPage**.

Cleaning Chatter data

In this section, you will gain knowledge of various ways to clean Chatter data. There are various ways to clean Chatter data, such as manually, through Apex code, or through the developer console.

Removing and deleting files and links from the Chatter feeds

There are a few ways to remove the Chatter files and links. If you want to delete a link or remove a file from the Chatter feeds, you have to delete its post. If you want to delete a file, and you are the owner of that file or you have the **Modify All Data** permission, click on **file**, and go to the detail page. There you will find a **Delete** button.

Note

If you delete the file from the base location, it will be deleted from all the locations where it has been shared. If it is shared through a link, the link will no longer have access to the file.

Removing a file from the Chatter feed that is on record

There are a few ways to remove a file from the Chatter feed that is on record:

- Once you delete a Chatter post, it automatically deletes your Chatter file and removes the file from the **Notes and Attachments** related list and from the feed; but the file always remains in its original location. If the file is not posted anywhere in Chatter, it goes back to being private; however, it can be shared again later.
- You can remove a file from the Chatter feed using the **Delete** button next to the feed attachment on the **Notes and Attachments** related list. This will remove the file from all the Chatter feeds where it's been shared and will also delete it from the **Notes and Attachments** related list.
- You can restore the deleted file from the Recycle Bin of your organization at any time. To restore the deleted file, go to **Recycle Bin**, select the file, and click on **Undelete**. The file as well as all of the shares that were associated with it are restored.
- If the file you deleted is sourced from your computer, a Chatter feed, group, or a Salesforce CRM Content library, deleting it from the **Notes**

and Attachments related list also removes it from the post, but doesn't delete it from its original location.

Who can delete what?

Sometimes a user needs to delete the Chatter feed and the comment post. The following list details when you can delete the post and comments that you and others have made:

- You can delete the Chatter feed present on your profile (wall)
- You can delete your comment made on any post
- You can delete other people's comments given on your feed
- You cannot delete other people's feed
- You can delete feeds from the records for which you are the owner
- You can delete the posts and comments that you've made on other feeds

If you are the owner of a group, you can do more things within the group:

- You can edit the group's setting
- You can edit the group's information
- You can edit the group's description
- You can delete people's comments on the group
- You cannot delete the feed after changing the group

Once you delete the post, you can't restore it. The moment a post is deleted, it will disappear from your feed. Users that have the **Modify All Data** permission are able to delete all posts and comments.

Deleting a post from the Chatter feed

To delete a post, follow these steps:

1. Go to the Chatter feed.
2. Click on the  icon next to the post that you want to delete, and expand the dropdown.
3. Now select the **Delete** option from the list, as shown in the following screenshot:

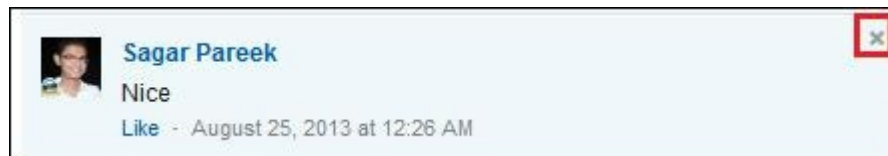


4. When it asks you for a confirmation, click on **Yes**.

Deleting a comment made on a post

To delete a comment that is made on a post, follow these steps:

1. In the Chatter feed, go to the post that contains the comment you want to delete.
2. In the comment pane, click on the **X** icon next to the post that you want to delete.



3. When it asks for a confirmation, click on **Yes**.

Deleting a poll from the Chatter feed

To delete a poll from Chatter feeds, follow these steps:

1. Go to the Chatter feed.
2. Click on the  icon next to the poll that you want to delete and, expand the dropdown.



3. Then select the **Delete** option from the list.
4. When you are asked for confirmation, click on **Yes**.

Deleting a link from the Chatter feed

If you want to delete a link from the Chatter feed, you must delete its post.
To delete a link, follow these steps:

1. Go to the Chatter feed.
2. Click on the  icon next to the link that you want to delete, and expand the dropdown.



3. Then select the **Delete** option from the list.
4. When asked for confirmation, click on **Yes**.

Removing topics from the posts

You can remove topics at any time from any post if it is no longer in use by users. You cannot remove the hashtag topics unless and until the topics are deleted from Salesforce. To remove the topics from the posts, follow these steps:

1. Go to the Chatter feed.
2. Click on the  icon next to the post/link/poll/file from where you want to remove the topics, and expand the dropdown.
3. Select the **Edit topics** option as shown in the following screenshot:



4. Click on **X** next to the topic that you want to remove from the post.
5. Click on **Done**, or press *Enter*.

Note

Removing a topic from a post removes the post from the topic feed on the topic-detail page.

Deleting topics from Salesforce

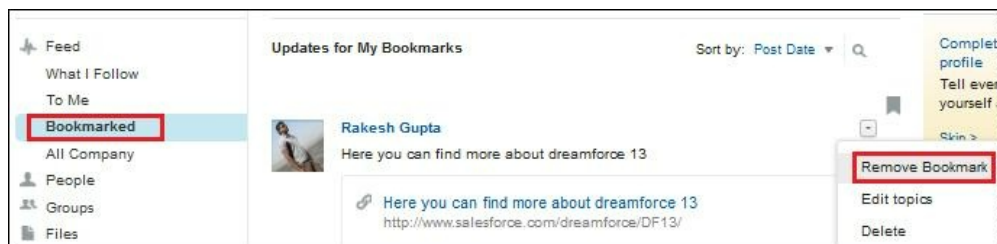
You cannot delete Chatter topics from the UI. To do that you must use the Chatter API or SOAP API. To delete the Chatter topic you must have the **Modify all Data** or **Delete Topics** permission. When deleting topics, consider the following points:

- Once a topic is deleted, it is not available in the recycle bin because topics are hard-deleted.
- The deleted topics are removed from search results, the topics list, all posts, recent topics, related topics, and also the users' favorite topics list. They are then removed from the **Trending Topics** list after the next calculation.
- The deleted topics are not blacklisted. Users can reintroduce a topic after it's been deleted.

Removing a bookmark from a post

Let us assume that you are following Universal Container Opportunity, and one discussion for it is going on in Chatter. Every time you want to track that post, it will take time to find that post from your Chatter feeds. So it's better to use the **Bookmark** feature provided by Salesforce to track the posts faster. Chatter Bookmark is a feature using which you can bookmark posts in your Chatter feed. When anyone comments on the post that you bookmarked, you receive an e-mail notification. E-mail notifications for bookmarks are enabled by default. To remove a bookmark, follow these steps:

1. Navigate to the **Chatter** tab, click on **Feed | Bookmark** on the left-hand side bar to see your saved post.
2. Find the appropriate feed from the list from where you want to remove the bookmark.
3. Click on the  icon next to the post, and expand the dropdown.



4. Click on the **Remove Bookmark** option.

Note

When you remove a bookmark from a post, the post no longer appears in your saved posts when you click on **Bookmarked**.

Managing Chatter groups

In this section, we will learn how to manage Chatter groups, add/remove members from the groups, and assign group roles to some users. To view all groups that you own or recently visited, navigate to the **Chatter** tab, click on **Groups**, and select any option as per your choice.

If you are a group owner or manager, you can do the following:

- Change groups from private to public or from public to private by editing the group settings
- If you change a private group to public, updates and files are visible to all users, all pending requests to join the group are accepted, and then anyone can join that group

Adding/removing member(s) from the Chatter group

To add or remove member(s) from the Chatter group, navigate to the group detail page and follow these instructions:

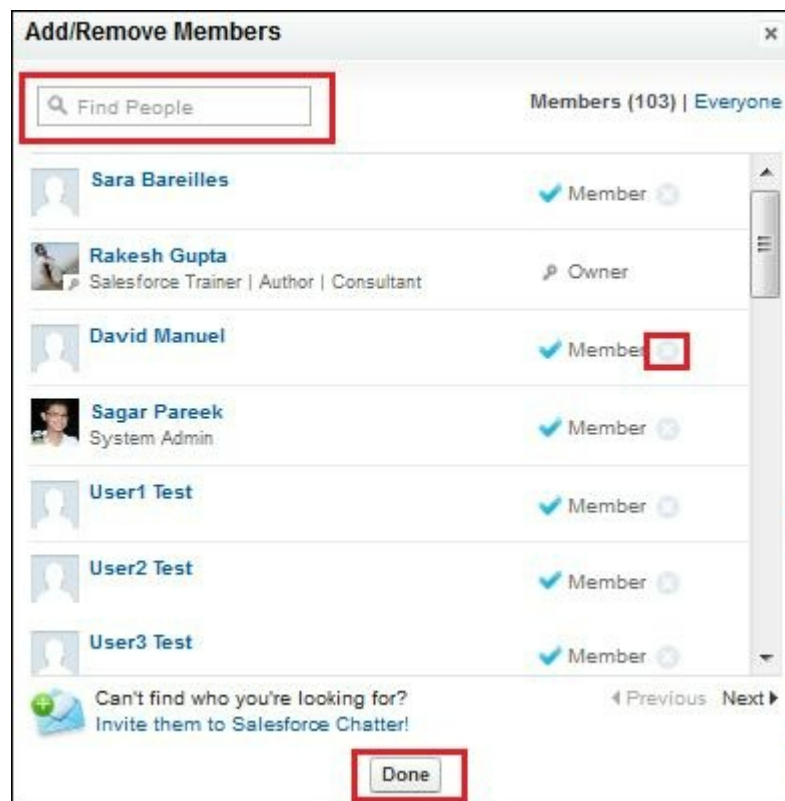
1. If you want to add people, click on **Invite People**, enter their e-mail addresses separated by commas, add an optional message, and click on **Send**.



Note

When someone accepts your invitation, they join Chatter and become a member of the group. If you are unable to invite customers (people outside your company's e-mail domains) to private groups that you own or manage, contact your administrator.

2. If you want remove members from group, click on the **Add/Remove Members** link on the group details page.



3. Then search for the user that you want to add/remove using the **Find People** search box.
4. You will get a list of users based on your search criteria.
5. Use the **Next** and **Previous** links to see more of the list.
6. Click on **Add** to add a customer or **X** to remove a customer.
7. Once you are finished, click on **Done**.

Changing the roles of the Chatter group

Sometimes, we have a requirement to create groups having a high volume of users, and the admin of that group is unable to maintain the user's request to join the group, keep control on posts, or delete unwanted posts. In such a case, you can change the role of a few users to Manager, so that they can manage the group just as an admin. This is like giving privileges to other roles or leveraging them from the users.

To change the roles of the Chatter group or of the groups for which you are the owner or manager, follow these steps:

1. Navigate to the group's detail page, and select **Change Roles** from the right-hand side panel, as shown in the following screenshot:



2. You can search the members in the search box. Optionally, you can sort the list by clicking on **Managers** | **All Members**.



3. Select the **Manager** checkbox for the user whom you want to make that group's manager. If any user is selected as **Manager**, they will be able to see the people who ask to join the group even if they are not in other common groups. They will also be able to approve requests.
4. Once you select a user for the group manager's role, click on the **Done** button.

An overview of the Chatter-group role

The following table gives a list of actions that can be performed by members, managers, and owners of the Chatter groups. Customers can be group members and managers, but not owners.

Action you can perform	Group owner	Group manager	Group member
Post, comment, and search the group's feeds	Yes	Yes	Yes
Change member roles	Yes	Yes	No
Edit the group settings	Yes	Yes	No

Action you can perform	Group owner	Group manager	Group member
Add and remove members from the group	Yes	Yes	No
Delete posts and comments	Yes	Yes	No
Edit the group's information field	Yes	Yes	No
Delete the group	Yes	No	No
Change the group owner	Yes	No	No

People with the **Modify All Data** permission or a system administrator can perform all actions on all groups. People with the **View All Data** permission can view details of all groups, regardless of membership.

Deactivating a Chatter user

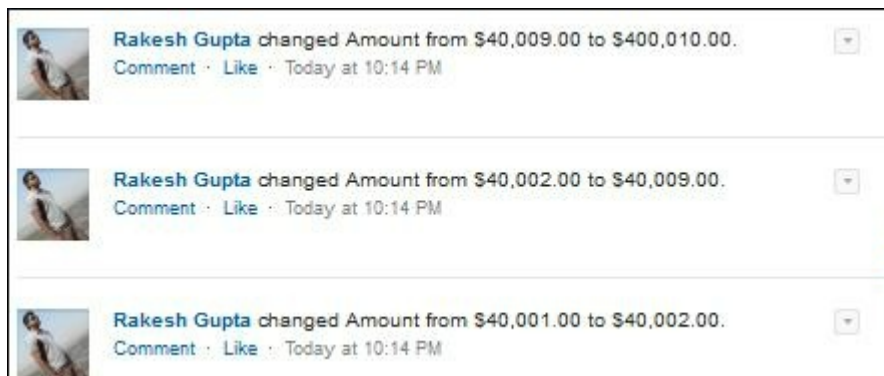
To deactivate Chatter users, follow the path, find the user that you want to deactivate, edit the user records, uncheck the **Active** checkbox, and click on **Save**.

What happens when an owner of a Chatter Group is deactivated?

The deactivated user still owns the group; however, a user with the **Modify All Data** permission can assign a new owner.

Deleting feeds using the developer console

If you enable the Chatter feeds for some object, and some records from that object have lots of Chatter feeds that you want to delete, you can use the developer console to do so as you can't do this by using the user interface.

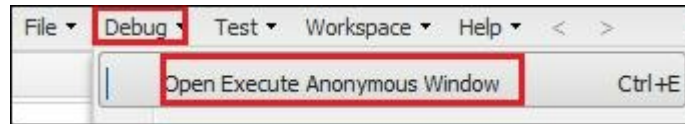


In the preceding example, the user updated **Amount** in the opportunity feed many times, and it created a mass of unwanted posts in the Chatter feed. The people that are following this record will get updated in their Chatter feeds. Standard object feeds are stored in the `ObjectFeed` object (for opportunity, it's `OpportunityFeed`) and custom object feeds are stored in the `Object_Feed` object. You can run a query via the workbench or the developer console.

The path to delete feed(s) from the developer console

The developer console is a cloud-based IDE with a group of tools that you can use to run the SQL query and debug and test applications in your Salesforce organization.

1. Go to the developer console.
2. In the upper-left corner, click on **Debug | Open Execute Anonymous Window**, as shown in the following screenshot:



3. The sample code to be added is given as follows:

```
OpportunityFeed[] feed = [SELECT Id FROM  
OpportunityFeed where CreatedByID = 'UserID'  
LIMIT 10];  
Delete feed;
```

4. Paste the preceding code in the developer console's **Enter Apex Code** window, and click on the **Execute** button. Once the query executes the code, it will delete the last 10 fields tracked by the feed posts. You can modify the sample code according to your requirement.



5. Check the **Open Log** checkbox if you want to see what happens behind the scene. The logs will be opened in the **Log Inspector** window. **Log Inspector** is a viewer that shows the source of the action, what triggered the operation, and what occurred afterwards. You can use log inspector to check and debug logs that include database events, Apex processing, workflow, and validation logic.

Note

You can process only up to 10,000 records at a time using Apex. This limit is called a **governor limit**. When you delete feed items,

they are not moved to the Recycle Bin. They are hard-deleted, and you cannot recover them.

To study more about working with logs in the Salesforce developer console, see the *Log Inspector* section in the Salesforce online help documentation.

Likewise, you can work on an account-object feed by referring the account feed for the custom `Object__Feed` object. The same query can be run from a workbench as well.

Using a scheduled Batch Apex to clean the Chatter data

In the previous section, you used the developer console to delete less than 10,000 records. Let's assume that you need to delete more than 10,000 records. You could write a simple program using Batch Apex to process up to 50 million records.

A `batch` class permits you to define a single job that can be broken up into small parts that will be processed separately. You might be aware about Salesforce having governor limits on its data. When you want to fetch large numbers of records or fire DML on hundreds of rows on objects, it is very difficult in Salesforce; it does not allow you to perform on more than a certain number of records that fulfills the governor limits. For medium to large enterprises, it is necessary to process a large amount of records everyday. You can use this way to add/edit/delete Chatter posts when needed. Salesforce has come up with a great concept called **Batch Apex**. Batch Apex allows you to handle large numbers of records in small parts and manipulate them using a specific syntax.

For example, if you need to make a field update to every contact in your organization, and you have 10,001 contact records in your organization, it is not possible without a way of breaking it up; otherwise it will hit the governor limits. For this, you need to define the query in the `start()` method that you are going to use in this batch context: `select Id from Contact`. Then the `execute()` method runs, but only receives a small list of records (by default it is 200). Within the `execute()` method, everything runs in a transactional context. So each time `execute()` will run, you are allowed 150 DML operations, to modify 10,000 rows, and so on. When this `execute()` is complete, a new one is instantiated with the next group of 200 contacts with a brand new set of governor limits. Finally, the `finish()` method wraps up any loose ends as necessary, such as sending a status e-mail.

Note

To learn more about Batch Apex, go through the Salesforce online help.

To create a Batch Apex in your organization follow these instructions:

1. Navigate to **Name | Setup | App Setup | Develop | Apex Class**, then click on the **New** button. The following is the code snippet:

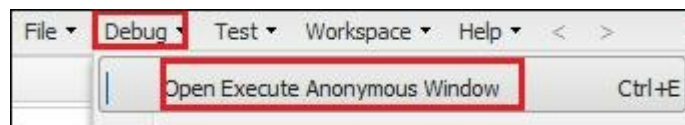
```
globalDatabase.QueryLocator  
start(Database.BatchableContext BC) {return
```

```

Database.getQueryLocator('SELECT Id FROM
OpportunityFeed LIMIT 1000000');// define the
size of jobs
}global void
execute(Database.BatchableContext BC,
List<sObject> scope)// defines size of each
batch of records {
delete scope;
}
global void finish(Database.BatchableContext
BC)// you can use this for any post
notification{
}

```

2. Click on **Save** once you are done with the changes.
3. To execute this class, open the developer console.
4. In the upper-left corner, click on **Debug | Open Execute Anonymous Window**.



5. Paste the following code in this window:

```

DFC batchinstanceid =
database.executeBatch(new
DeleteOpportunityChatter Feed(), 10000);

```

This sends the batch job to the Apex job queue.

6. Now navigate to **Name | Setup | Administration Setup | Monitoring | Apex Jobs**, and see the progress of your job.
7. You can use the `System.scheduleBatch` method to schedule a batch job to be run once at a future time.

Note

You can only have five queued or active batch jobs at one time.

Summary

In this chapter, you learned how to develop a Chatter application. We also discussed various ways to clean Chatter data, such as using the developer console to delete Chatter data and using Batch Apex to delete the Chatter posts. In the next chapter, you will go through the Chatter REST API concept.

Chapter 5. Understanding Chatter REST API

Until now, we have discussed how to develop the Apex and Visualforce page with Chatter to develop some applications. In this chapter, we will go through the Chatter REST API concept. The following are the topics that will be covered in this chapter:

- Introducing and understanding Chatter REST API
- Understanding OAuth
- Generating tokens

Introducing Chatter REST API

Chatter REST (Representation State Transfer) API is available in all editions except the personal edition. To use this API, Chatter must be enabled for the organization. Chatter REST API and Chatter API refer to the same API. Chatter REST API provides programmatic access to the Chatter feed, user details, Chatter groups, the followers list, trending topics, private messages, and files. Use this API when you want to integrate Chatter with a third-party website such as Facebook or Twitter, or with a mobile application. Chatter REST API supports the JSON and XML data formats by using synchronous communication.

Authentication

Authentication verifies who you are. The Chatter API is hosted by salesforce.com and uses the following authentication mechanisms:

OAuth 2.0

OAuth is an industry standard for user authentication. It is an open protocol mechanism that allows secure authentication for accessing a user's data without handing out the user's credentials. Chatter REST API uses OAuth to verify the project before connecting it with Chatter.

Benefits of Chatter REST API

- REST relies on HTTP.
- REST API is a very lightweight web service.
- Information is automatically set to the user's time zone and language.

- Relationships between objects can easily pass through without having to resolve foreign keys. For example, using Chatter API, you can get details about a user's followers or groups with one request per page.

Governor limits

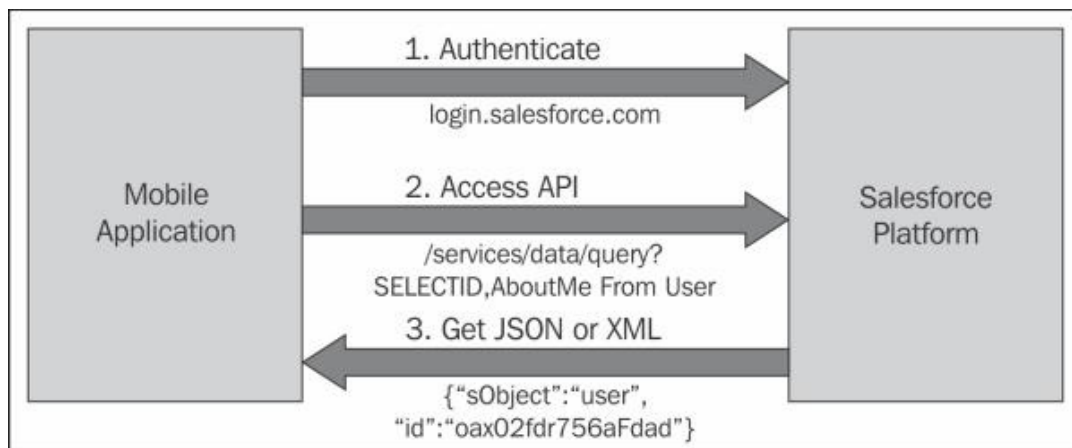
Apex runs in a multitenant environment; governor limits are runtime limits enforced by the Apex runtime engine. Calls to the Apex REST classes count against the organization's API governor limits. All standard Apex governor limits apply to the Apex REST classes. For example, the maximum request or response size is 3 MB. The Chatter API requests are subject to rate limiting. Chatter API has a limit per user, per application, and per hourly rate access. When any organization exceeds the rate limit, all Chatter API assets return a 503 Service Unavailable error code for the user and the application.

Note

To learn more about governor limits, visit the http://wiki.developerforce.com/page/Governors_in_Apex_Code link.

Understanding Chatter Rest API

The following screenshot gives a functional description of Chatter REST API:



In basic terms words, the process flow for using Chatter API is described as follows:

1. First, Chatter API sends an HTTP request to Salesforce.
2. Authentication occurs between the user and the client app.
3. Use HTTP request to access the Chatter API resources.

4. An HTTP return code gets generated. The return code includes additional information, such as a Chatter API response body.

When to use Chatter REST API

The following points guide you on when Chatter REST API can be used:

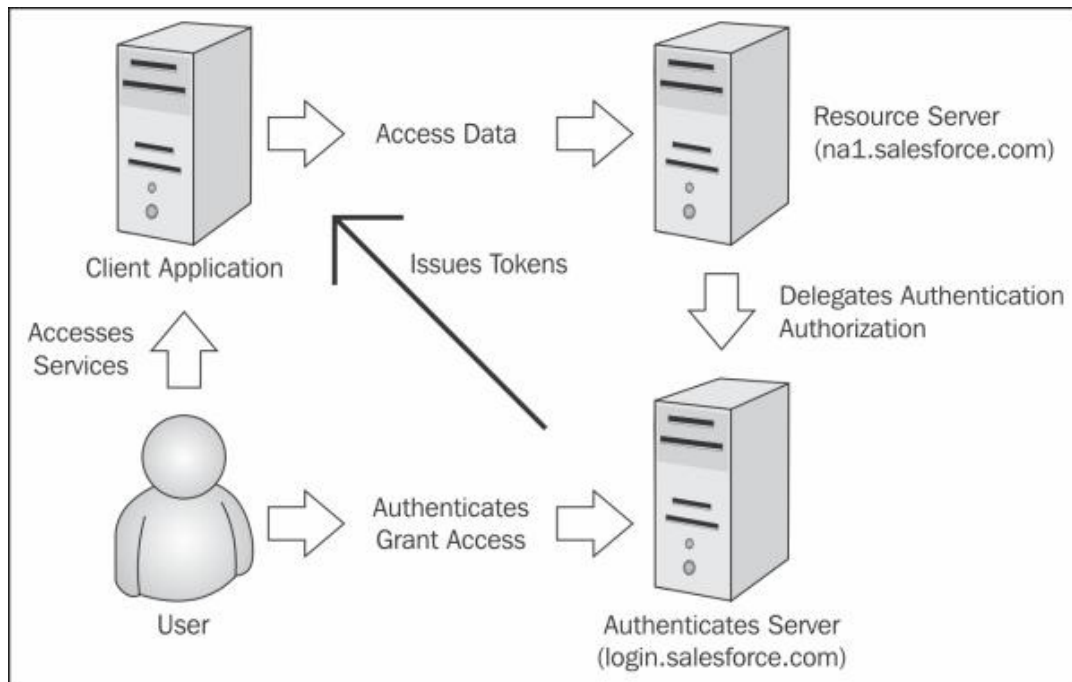
- When you want to build a mobile application that displays Chatter feed
- When you want to integrate a third-party website or some web-based application with Chatter so it can notify groups of users about events
- When you want to display the Chatter feed on a third-party system, such as your company intranet site, Facebook, or Twitter, after users authenticate it
- When you want to create skins for Chatter
- When you want to make Chatter feeds actionable and integrate them with third-party sites
- When you want to create Chatter games

The following are prerequisites:

- A Salesforce developer account
- Familiarity with cURL and the tools for executing the cURL command
- Familiarity with JavaScript Object Notation (JSON)
- Familiarity with OAuth 2.0, which requires some setup

Understanding OAuth

OAuth permits third-party services such as Facebook and Twitter to access an end user's account information without exposing the user's credentials. By using OAuth, users can share their photos or Chatter posts with another site without sharing their login credentials. You can also use OAuth to get a valet key for the Web. OAuth allows the client application to access your data via Token, allotted by an authorization server in response to your access grant.



To get a third-party application access via Chatter REST API, you need an authorization code, an access token, and a refresh token.

- **Authorization code**: An authorization code is a short-lived token that signifies the user's access grant, generated by the authorization server and passed to the client application (third-party application) via the browser
- **Access token**: It's a smart key used by the client to get access to the end user's resource
- **Refresh token**: It's a smart key used by the client to get lifetime access to an end user's resource unless, and until, the end user revokes the application access using this token

Configuring OAuth 2.0 access for your application

In order to configure OAuth 2.0, log in to salesforce.com using the developer edition account credentials, navigate to **Name | Setup | App Setup | Create | App | Connected Apps**, and then click on **New**; you will see the following screenshot:

Connected App Name	Demo Apps
API Name	Demo_Apps
Description	
Logo Image URL	
Icon URL	
Info URL	
Start URL	
Mobile Start URL	
Contact Phone	
Contact Email	rakeshistom@gmail.com

Enable OAuth Settings	☒
Callback URL	https://sagarsag.herokuapp.com/sdk/callback.html
Use digital signatures	☐
Selected OAuth Scopes	Available OAuth Scopes Provide access to custom applications (visualforce) Provide access to your data via the Web (web) Add Selected OAuth Scopes Access and manage your Chatter feed (chatter_api) Access and manage your data (api) Access your basic information (id) Full access (full) Perform requests on your behalf at any time (refresh_token)

Callback URL is nothing but an endpoint in your application where the user's browser redirects after acquiring a valid authentication code; it always starts with <https://>. After entering all the details, click on the **Save** button.

Authorization code

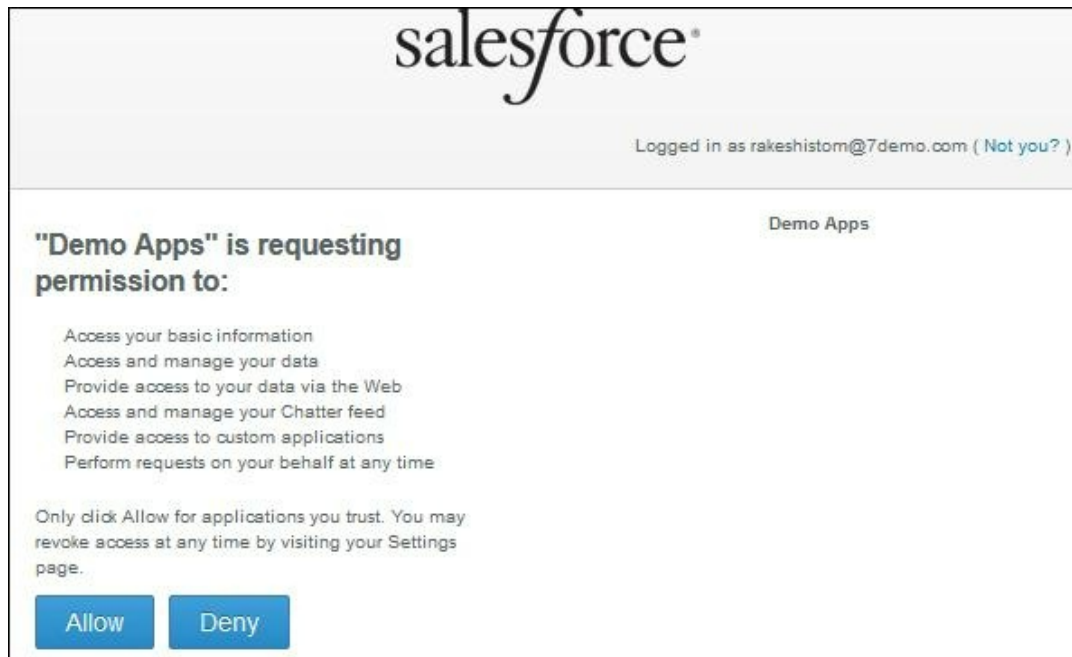
To get the authorization code, use the following code:

```
https://login.salesforce.com/services/oauth2/authorize?
response_type=code&client_id=<your_client_id>&redirect_uri=<your_redirect_uri>
```

Here `client_id` is your application's consumer key and `redirect Uri` is a **Callback URL**.

Clicking on the following login URL in the browser will prompt the user to authenticate and authorize the client application if they have not done it so far.

```
https://login.salesforce.com/services/oauth2/authorize?
response_type=code&client_id=3MVG9Y6d_Btp4xp69Pvj_zhG7jzx0xZONjwEk_R9680tYeWU
```



Once authorization is granted, the user's browser is redirected back to the redirected URL in the client application and the output will look like the following code:

```
https://sagarsag.herokuapp.com/sdk/callback.html?  
code=aPrxaSyVmC8fBbdcLLmy3s6_69zikRWj5jJ8._2N.vpJjR5vpIeC55msiyDEVyUKto5qJ8TV1w  
%3D%3D
```

The preceding code is your authorization code; just replace %3D with =. Extract the authorization code and save it.

Access token

cURL is a tool used to transfer data from or to a server using one of the supported protocols (DICT, FILE, FTP, FTPS, GOPHER, HTTP, HTTPS, IMAP, IMAPS, LDAP, LDAPS, POP3, POP3S, RTMP, RTSP, SCP, SFTP, SMTP, SMTPS, TELNET, and TFTP). The command is designed to work without user interaction.

Note

To learn more about cURL and its installation, browse the link:
<http://curl.haxx.se/docs/manpage.html>

To get the access token, run the following command in the cURL compiler:

```
curl  
https://login.salesforce.com/services/oauth2/token
```

```
-
k -d "grant_type=authorization_code" -d
"client_id=<Consumer_Key>" -d "client_secret=<
Consumer Secret >" -d "code=Authorization code"
-d "redirect_uri=<Call Back URL>"
```

The output command is as follows:

```
{"id":"https://login.salesforce.com/id/00D90000000nqYHEAY/00590000001qt4z
full api visualforce web refresh_token
chatter_api","instance_url":"https://ap1.salesforce.com",
"refresh_token":"5Aep8617VFpoP.M.4uVOHI6W3HypeZguclzIVSUlboGfGbzGgY8qPrzL
ARkAQMPR69REcrAoqwTaKYcG4VYcX_QZSW9QjdKwDqeMwGZ9R7oHChOWu0RDbtvh6UJ5eyth4
```

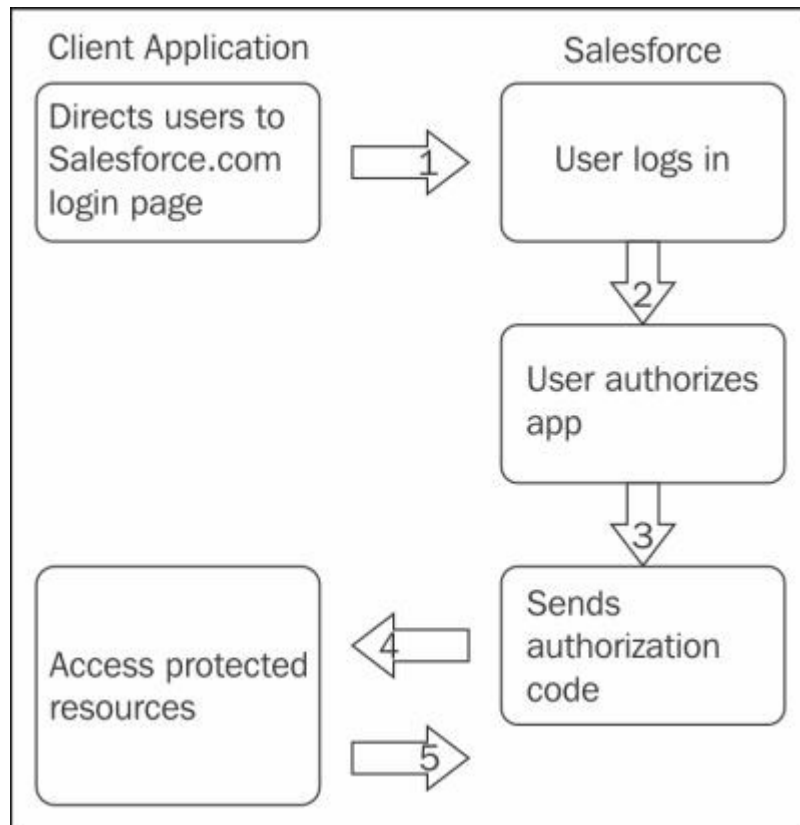
The preceding output contains your Access token and uses it to get access to the application:

Refresh token

The lifetime of an Access token found by the previous mechanisms is limited to the session timeout configured at **Name | Setup | Security Controls | Session Settings**. When an Access token expires, attempts to use it will prompt an error message, shown as follows:

```
https://login.salesforce.com/services/oauth2/tokengrant_type=refresh_token&client
Key>&client_secret=<Consumer Secret>&refresh_token=<Access
Token>
```

Once you have the access and authorization code, you can [GET](#) and [POST](#) data through the API:



This flowchart is basically used by mobile applications that directly access Chatter API from JavaScript. In the previous diagram, the user asks for services to the client application or a third-party application and redirects the end user's browser to a web page hosted on the resource owner's authorization server. The end user logs in to Salesforce to authenticate them; if they haven't logged in, they must authorize the client application. On successful authorization, the user's browser is redirected to the URL. This URL can be used by the client application to retrieve the Access and Refresh tokens.

Posting a feed item

The following example demonstrates how to post a feed item:

Resource	You can use one of the feed resource Chatter/feeds/news/user ID/feed items	
HTTP method	POST	
Request body	Feed Item Input	

Request parameter	Text	
Request body example	<pre>{ "body" : { "messageSegments" : [{ "type": "Text", "text" : "Your post" }] } }</pre>	
Request parameter example	services/data/v28.0/chatter/feeds/news/me/feed-items?text=New+post	
Returns	Feed item	

Note

To know more about Chatter REST API, please refer to the *Chatter REST API Developer Guide*, on [salesforce.com](https://developer.salesforce.com/docs/atlas.en-us/chatter_rest_api/)

Summary

In this chapter, we gained knowledge on how to work with Chatter REST API and authorize a third-party app. We started with OAuth, moved on to understand the capabilities of Chatter REST API, and then to the governor limits for Chatter REST API. We also learned how to get the authorization code, access token, and refresh token for a third-party application.

Index

A

- About Me section / [The About Me section](#)
- access token / [Access token](#)
- application
 - developing / [Developing an application](#)
- authorization code / [Authorization code](#)

B

- Batch Apex
 - about / [Using a scheduled Batch Apex to clean the Chatter data](#)
 - creating / [Using a scheduled Batch Apex to clean the Chatter data](#)
- Blackberry
 - URL / [Installing Chatter Mobile](#)
- bookmark
 - removing, from post / [Removing a bookmark from a post](#)

C

- Callback URL
 - about / [Configuring OAuth 2.0 access for your application](#)
- chat settings
 - enabling, for particular Visualforce page / [Enabling chat settings for a particular Visualforce page](#)
- Chatter
 - turning on / [Turning on Chatter](#)
 - license types / [Chatter license types](#)
 - features / [Additional features of Chatter](#)
 - status, updating / [Updating your status](#)
 - comments, posting / [Posting comments](#)

- links, adding / [Adding links](#)
- Poll / [Chatter Polls](#)
- topics, adding in Chatter status updates / [Adding topics in your Chatter status updates](#)
- topics, making as favourite / [Making a topic your favorite](#)
- post, bookmarking / [Bookmarking a post](#)
- e-mail setting / [Chatter e-mail setting](#)
- Messenger / [Chatter Messenger](#)
- Chatter-group role
 - about / [An overview of the Chatter-group role](#)
- Chatter data
 - cleaning / [Cleaning Chatter data](#)
 - schedule Batch Apex, using / [Using a scheduled Batch Apex to clean the Chatter data](#)
- Chatter data model
 - about / [The Chatter data model](#)
 - user / [Chatter data model – user](#)
 - feed / [Chatter data model – feed](#)
 - group / [Chatter data model – group](#)
- Chatter Desktop
 - installing / [Installing Chatter Desktop](#)
 - user sessions, managing / [Managing user sessions](#)
 - Chatter Mobile, installing / [Installing and configuring Chatter Mobile](#)
 - Chatter Mobile, configuring / [Installing and configuring Chatter Mobile](#)
- Chatter Desktop application
 - installation steps / [Steps to install the Chatter Desktop application](#)
- Chatter e-mail setting / [Chatter e-mail setting](#)
- Chatter External license type / [The Chatter External license type](#)
- Chatter feeds
 - files, deleting from / [Removing and deleting files and links from the Chatter feeds](#)
 - files, removing from / [Removing and deleting files and links from the Chatter feeds](#)
 - links, removing from / [Removing and deleting files and links from the Chatter feeds](#)

- links, deleting from / [Removing and deleting files and links from the Chatter feeds](#)
- deleting / [Who can delete what?](#)
- post, deleting from / [Deleting a post from the Chatter feed](#)
- poll, deleting from / [Deleting a poll from the Chatter feed](#)
- link, deleting from / [Deleting a link from the Chatter feed](#)
- Chatter files
 - version control for / [Version control for Chatter files](#)
 - advantages / [Advantages of using Chatter files](#)
- Chatter follower
 - displaying, on Visualforce Page / [Displaying a Chatter follower on the Visualforce Page](#)
- Chatter Free license type / [The Chatter Free license type](#)
- Chatter group
 - opportunity closed details, posting to / [Posting opportunity-closed details to a Chatter group](#)
 - managing / [Managing Chatter groups](#)
 - member, adding from / [Adding/removing member\(s\) from the Chatter group](#)
 - member, removing from / [Adding/removing member\(s\) from the Chatter group](#)
 - roles, changing / [Changing the roles of the Chatter group](#)
- Chatter groups
 - about / [Group creation](#)
 - public group / [Group creation](#)
 - private group / [Group creation](#)
- Chatter invites
 - enabling / [Enabling Chatter invites](#)
- Chatter Messenger
 - about / [Chatter Messenger](#)
 - enabling / [Enabling Chatter Messenger](#)
 - enabling, for Visualforce page / [Enabling Chatter Messenger for Visualforce pages](#)
- Chatter Mobile
 - installing / [Installing Chatter Mobile](#)

- Chatter Mobile access
 - revoking / [Revoking Chatter Mobile access](#)
- Chatter Mobile app
 - configuring / [Configuring the Chatter Mobile app](#)
 - logging in / [How to log in to the Chatter Mobile app](#)
- Chatter Only / [The Chatter Only a.k.a. the Chatter Plus license type](#)
- Chatter Poll / [Chatter Polls](#)
- Chatter post
 - filter, applying / [Applying filters on a Chatter post](#)
- Chatter post comments
 - filter, applying / [Applying filters on comments on a Chatter post](#)
- Chatter profile
 - improving / [Improving your Chatter profile](#)
 - About Me section / [The About Me section](#)
 - profile photo, uploading / [Uploading a profile photo](#)
 - contact details, updating / [Updating contact details](#)
 - follow, deciding / [Be specific when deciding whom to follow](#)
- Chatter publisher actions
 - about / [Chatter publisher actions](#)
 - enabling / [Enabling publisher actions](#)
- Chatter REST API
 - about / [Introducing Chatter REST API](#), [Understanding Chatter Rest API](#)
 - authentication / [Authentication](#)
 - OAuth 2.0 (Open Authentication) / [OAuth 2.0](#)
 - benefits / [Benefits of Chatter REST API](#)
 - governor limits / [Governor limits](#)
 - using / [When to use Chatter REST API](#)
- Chatter tabs
 - configuring / [Configuring the Chatter tabs](#)
- Chatter user
 - deactivating / [Deactivating a Chatter user](#)

- owner, deactivating / [What happens when an owner of a Chatter Group is deactivated?](#)
- Chatter users
 - adding / [Adding Chatter users](#)
 - adding, for non-admin / [If you are not an admin](#)
 - adding, for admin / [If you are an admin](#)
 - manually, creating / [Manually creating Chatter users](#)
 - adding, through Data Loader / [Adding users through Data Loader](#)
- chat window
 - displaying, on Visualforce page / [Displaying a chat window on the Visualforce page](#)
- cloud computing
 - about / [An overview of cloud computing](#)
- clouds
 - public cloud / [An overview of cloud computing](#)
 - private cloud / [An overview of cloud computing](#)
 - community cloud / [An overview of cloud computing](#)
 - hybrid cloud / [An overview of cloud computing](#)
- collaboration / [Collaboration in the past](#)
- comment
 - files, attaching / [Attaching files to a comment](#)
 - deleting, on post / [Deleting a comment made on a post](#)
- comments
 - posting / [Posting comments](#)
- community cloud / [An overview of cloud computing](#)
- contact details
 - updating / [Updating contact details](#)
- cURL
 - about / [Access token](#)
 - URL / [Access token](#)
- customer satisfaction

- maximizing / [Maximizing your customer satisfaction](#)

D

- dataList attribute / [Posting status from the Visualforce page](#)
- Data Loader
 - URL / [Adding users through Data Loader](#)
- Delete button / [Removing and deleting files and links from the Chatter feeds](#)
- developer console
 - used, for deleting feeds / [Deleting feeds using the developer console](#)
 - feed, deleting from / [The path to delete feed\(s\) from the developer console](#)
- Done button / [Adding topics in your Chatter status updates](#), [Changing the roles of the Chatter group](#)

E

- Email Daily Digest setting / [The Email Daily Digest setting](#)
- Entity feed
 - displaying, on Visualforce page / [Entity feed and how to display it on the Visualforce page](#)
- entityId attribute / [Displaying a Chatter follower on the Visualforce Page](#)
- EntitySubscription object / [Displaying a list of followers for a user, Developing an application](#)
- execute() method / [Using a scheduled Batch Apex to clean the Chatter data](#)
- Execute button / [The path to delete feed\(s\) from the developer console](#)

F

- feed
 - about / [Chatter data model – feed](#)
 - FeedPost / [Chatter data model – feed](#)
 - FeedComment / [Chatter data model – feed](#)
 - FeedItems / [Chatter data model – feed](#)

- deleting, developer console used / [Deleting feeds using the developer console](#)
- Feed button / [Bookmarking a post](#)
- FeedComment / [Chatter data model – feed](#)
- feed item
 - posting / [Posting a feed item](#)
- FeedItem object / [The Chatter data model](#)
- FeedItems
 - about / [Chatter data model – feed](#)
- FeedPost / [Chatter data model – feed](#)
- feed tracking
 - enabling / [Enabling feed tracking](#)
- files
 - managing / [Managing files](#)
 - uploading / [Uploading a file](#)
 - deleting / [Deleting a file](#)
 - following / [Following a file](#)
 - sharing, with people / [Sharing files with people](#)
 - sharing, with groups / [Sharing files with groups](#)
 - attaching, to post / [Attaching files to a post](#)
 - attaching, to comment / [Attaching files to a comment](#)
 - deleting, from Chatter feeds / [Removing and deleting files and links from the Chatter feeds](#)
 - removing, from Chatter feeds / [Removing and deleting files and links from the Chatter feeds](#)
 - removing, from Chatter feeds on record / [Removing a file from the Chatter feed that is on record](#)
- filter
 - applying, on group creation / [Applying filters on group creation](#)
 - applying, on Chatter post / [Applying filters on a Chatter post](#)
 - applying, on comments of Chatter post / [Applying filters on comments on a Chatter post](#)
- finish() method / [Using a scheduled Batch Apex to clean the Chatter data](#)
- follow
 - deciding / [Be specific when deciding whom to follow](#)
- Follow button / [The Mass follow page](#)

- followChange method / [Displaying feed with followers](#)
- followers
 - feed, displaying with / [Displaying feed with followers](#)
- followers list
 - displaying, without Chatter tag used / [Displaying a list of followers without using the Chatter tag](#)
 - displaying, for user / [Displaying a list of followers for a user](#)
- follow records
 - about / [Follow records](#)
 - method 1 / [Method 1](#)
 - method 2 / [Method 2](#)

G

- global actions
 - creating / [Creating global actions](#)
 - adding, to page layout / [Adding global actions to the page layout](#)
- governor limit / [The path to delete feed\(s\) from the developer console](#)
- governor limits
 - about / [Governor limits](#)
 - URL / [Governor limits](#)
- group / [Chatter data model – group](#)
 - creating / [Creating groups](#)
 - joining / [Joining a group](#)
 - members, adding / [How to add members in groups](#)
 - Email Daily Digest setting / [The Email Daily Digest setting](#)
 - following / [Automatically following a group](#)
 - making, read-only access allowed / [Creating a group that allows read-only access](#)
- group creation
 - filter, applying / [Applying filters on group creation](#)

H

- hybrid cloud / [An overview of cloud computing](#)

I

- ID attribute / [Displaying a Chatter follower on the Visualforce Page](#)
- Invite People to Chatter button / [If you are not an admin](#)
- iTunes
 - URL / [Installing Chatter Mobile](#)

L

- license types
 - Chatter Free license type / [The Chatter Free license type](#)
 - Chatter External license type / [The Chatter External license type](#)
 - Chatter Only / [The Chatter Only a.k.a. the Chatter Plus license type](#)
- links
 - adding / [Adding links](#)
 - removing, from Chatter feeds / [Removing and deleting files and links from the Chatter feeds](#)
 - deleting, from Chatter feeds / [Removing and deleting files and links from the Chatter feeds](#), [Deleting a link from the Chatter feed](#)

M

- @mentioned function / [Chatter e-mail setting](#)
- mass follow
 - about / [The mass follow and unfollow application](#)
 - installing / [Steps to install the mass follow/unfollow Chatter application](#)
- Mass follow page
 - about / [The Mass follow page](#)
- Mass unfollow page
 - about / [The Mass unfollow page](#)
- member
 - adding, in group / [How to add members in groups](#)

- removing, from Chatter group / [Adding/removing member\(s\) from the Chatter group](#)
- adding, from Chatter group / [Adding/removing member\(s\) from the Chatter group](#)

N

- @name function / [Updating your status](#)
- New Action button / [Creating global actions](#), [Creating object-specific actions](#)
- New Group button / [Creating groups](#)
- news feed
 - displaying / [Displaying news feed](#)
 - displaying, with followers / [Displaying feed with followers](#)

O

- OAuth
 - about / [Understanding OAuth](#)
- OAuth 2.0 (Open Authentication) / [OAuth 2.0](#)
- OAuth 2.0 access
 - configuring, for application / [Configuring OAuth 2.0 access for your application](#)
 - authorization code / [Authorization code](#)
 - access token / [Access token](#)
 - refresh token / [Refresh token](#)
 - feed item, posting / [Posting a feed item](#)
- object-specific actions
 - creating / [Creating object-specific actions](#)
- Open button / [Uploading a file](#)
- opportunity closed details
 - posting, to Chatter group / [Posting opportunity-closed details to a Chatter group](#)

P

- page layout

- global action, adding to / [Adding global actions to the page layout](#)
- pageReference method / [Displaying feed with followers](#)
- Path
 - used, for deleting feeds from the developer console / [The path to delete feed\(s\) from the developer console](#)
- Play Store
 - URL / [Installing Chatter Mobile](#)
- poll
 - deleting, from Chatter feed / [Deleting a poll from the Chatter feed](#)
- post
 - bookmarking / [Bookmarking a post](#)
 - files, attaching / [Attaching files to a post](#)
 - filtering, for records / [Filtering a post for some records](#)
 - deleting, from Chatter feed / [Deleting a post from the Chatter feed](#)
 - comment, deleting / [Deleting a comment made on a post](#)
 - topics, removing from / [Removing topics from the posts](#)
 - bookmark, removing from / [Removing a bookmark from a post](#)
- private cloud / [An overview of cloud computing](#)
- private group / [Group creation](#)
- profile photo
 - uploading / [Uploading a profile photo](#)
- public cloud / [An overview of cloud computing](#)
- public group / [Group creation](#)

R

- read-only access
 - allowing, for group / [Creating a group that allows read-only access](#)
- record

- following, after creation / [Automatically following a record after its creation](#)
- record/user
 - following, from Visualforce Page / [Following a record/user from the Visualforce page](#)
- refresh token / [Refresh token](#)
- Rendered attribute / [Displaying a Chatter follower on the Visualforce Page](#)
- ROI
 - improving / [Improving your ROI](#)
- roles
 - changing, of Chatter group / [Changing the roles of the Chatter group](#)

S

- Salesforce
 - topics, deleting from / [Deleting topics from Salesforce](#)
- salesforce.com
 - about / [An overview of salesforce.com](#)
- Salesforce Chatter
 - about / [The future of collaboration – Salesforce Chatter, Salesforce Chatter](#)
 - URL / [Salesforce Chatter](#)
 - benefits / [Few Chatter benefits](#)
 - following, benefits / [The mass follow and unfollow application](#)
- Salesforce ROI Calculator
 - URL / [Improving your ROI](#)
- Save button / [Creating groups, Configuring OAuth 2.0 access for your application](#)
- schedule Batch Apex
 - used, to clean Chatter data / [Using a scheduled Batch Apex to clean the Chatter data](#)

- Send button / [If you are not an admin](#)
- Share button / [Updating your status](#), [Sharing files with people](#), [Attaching files to a post](#), [Attaching files to a comment](#)
- start() method / [Using a scheduled Batch Apex to clean the Chatter data](#)
- status
 - updating / [Updating your status](#)
 - posting, from Visualforce page / [Posting status from the Visualforce page](#)

T

- tasks
 - performing / [Tasks](#)
- topics
 - adding, in Chatter status updates / [Adding topics in your Chatter status updates](#)
 - making, as favourite / [Making a topic your favorite](#)
 - removing, from posts / [Removing topics from the posts](#)
 - deleting, from Salesforce / [Deleting topics from Salesforce](#)

U

- Unfollow All button / [The Mass unfollow page](#)
- unfollow application
 - about / [The mass follow and unfollow application](#)
 - installing / [Steps to install the mass follow/unfollow Chatter application](#)
- Unfollow button / [The Mass unfollow page](#)
- user / [Chatter data model – user](#)
 - followers list, displaying for / [Displaying a list of followers for a user](#)
- user's profile image
 - displaying / [Displaying a user's profile image](#)
- user sessions

- managing / [Managing user sessions](#)

V

- Visualforce page
 - Chatter Messenger, enabling for / [Enabling Chatter Messenger for Visualforce pages](#)
 - chat window, displaying / [Displaying a chat window on the Visualforce page](#)
 - status, posting from / [Posting status from the Visualforce page](#)
 - Entity feed, displaying / [Entity feed and how to display it on the Visualforce page](#)
- Visualforce Page
 - Chatter follower, displaying on / [Displaying a Chatter follower on the Visualforce Page](#)
 - record/user, following from / [Following a record/user from the Visualforce page](#)