

## Attributes Your Enterprise Messaging System Needs

Consumer messaging apps and enterprise messaging solutions share many of the same functions. Both seek to connect users, allowing them to share files and information instantly. The main difference between the two boils down to the features that characterize a first-rate enterprise messaging system.

It's important to remember that enterprise messaging technology is different from consumer applications because your employees will be sharing sensitive company information. And while internal messaging software should be as easy to use as everyday instant messaging applications, you need an enterprise messaging system with features that ensure successful communications:

1. **Robust Security Measures** – The integrity of company data should never be compromised. Look for enterprise messaging software that offers a minimum 256-bit level of encryption. It's also useful to select a platform with elliptical curve key exchange, which secures messages with a unique key during transmission. The message is only unlocked once it reaches the receiver's mobile device.
2. **Reliable Message Delivery** – It's not uncommon for everyday messaging apps to experience delivery errors in areas with weak cell or Wi-Fi reception. A strong enterprise messaging system is still able to deliver messages via secure SMS capabilities. In the event employees are out of Wi-Fi or cellular data range, they'll receive important messages in a timely manner.
3. **Cloud-Based Storage** – Updated federal regulations require companies with instant messaging software to comply with a strict set of data retention standards. Cloud-based storage makes managing account and message information simple. Most platforms store messages for up to 90 days, eliminating the need for users to delete old messages.
4. **Complete Account Access** – Just because employees are using messaging software on their devices doesn't mean you should sacrifice account access and control. Robust enterprise messaging technology gives you complete, unhindered visibility into employee accounts. IT administrators can call up, wipe data and deactivate employee accounts.

5. **BYOD- Enabled** – Outfitting your entire organization with mobile devices can get expensive fast. Look for an enterprise messaging system that is Bring Your Own Device (BYOD) enabled. Employees simply download the messaging app to their iOS or Android device, log on with unique user information and can start communicating internally with fellow employees.

## **An Enterprise Messaging System You Can Rely On**

NetSfere helps companies leverage messaging for internal corporate communications. Our enterprise messaging system is a robust, user-friendly platform that enhances device-to-device communications for your employees.

Featuring advanced algorithms and top-level security measures, our enterprise-class messaging software eliminates the hassles and worries associated with consumer-grade messaging apps, without sacrificing ease of communication.

### **Unified Messaging Features**

Unified Messaging in Exchange Server 2007 gives users features such as:

- **Call Answering** - Call answering includes answering an incoming call on behalf of a user, playing their personal greeting, recording a message, and submitting it for delivery to their Inbox as an e-mail message.
- **Fax Receiving** - Fax receiving is the process of submitting a fax message for delivery to the Inbox. The fax receiving feature lets users receive fax messages in their Inbox.
- **Subscriber Access** - The subscriber access feature enables dial-in access for company users. Company users or subscribers who are dialing into the Unified Messaging system can access their mailbox using Outlook Voice Access. Subscribers who use Outlook Voice Access can access the Unified Messaging system by using the telephone keypad or voice inputs.

### **Key Features in Hosted Unified Messaging**

Features you need to consider in planing your Hosted Unified Messaing deployment include:

**Auto Attendants** - In telephony or Unified Messaging environments, an automated attendant or auto attendant menu system transfers callers to the extension of a user or department without the intervention of a receptionist or an operator. In many auto attendant systems, a receptionist or operator can be reached by pressing or saying zero. The automated attendant is a feature on most modern Private Branch Exchange (PBX) and Unified Messaging solutions.

**Hunt Groups** - In a telephony network, a hunt group is defined as a set of extension numbers that are grouped as a single logical unit. When an incoming call is received, the PBX or IP-PBX uses the hunt group or group of extensions that are defined to "hunt" for an available or open line, extension, or channel that can be used to receive the call.

**Dial Plans** - Although Exchange Server 2007 Unified Messaging has many Active Directory directory service objects that must be created and configured during deployment, Unified Messaging dial plan objects are the central component of the Unified Messaging system. A Unified Messaging dial plan object is an Exchange Server 2007 organization-wide object that is created in Active Directory. The Unified Messaging dial plan is an Active Directory container object that logically represents sets or groupings of PBXs that share common user extension numbers. For Microsoft Solution for Hosted Messaging and Collaboration hosted OUs will function as PBX demarks.

**IP Gateways** - Exchange Server 2007 Unified Messaging relies on the ability of the IP/VoIP gateway to translate Time Division Multiplex (TDM) or telephony circuit-switched based protocols, such as Integrated Services Digital Network (ISDN) or Q signaling QSIG , from a PBX to protocols based on VoIP or IP, such as Session Initiation Protocol (SIP), Realtime Transport Protocol (RTP), or T.38 for real-time facsimile transport.

**Mailbox Policies** - Unified Messaging Active Directory mailbox policies are required when you enable users for Exchange Server 2007 Unified Messaging. They are useful for applying and standardizing Unified Messaging configuration settings for Unified Messaging-enabled users. You create Unified Messaging mailbox policies to apply a common set of policies or security settings to a collection of Unified Messaging-enabled mailboxes

**Unified Messaging Servers** - The Unified Messaging Active Directory computer objects are the connection between your organization's telephony infrastructure and the Exchange Server 2007 Unified Messaging Active Directory networking environment.

**Outlook Voice Access** - There are two Exchange Server 2007 Unified Messaging user interfaces available to Unified Messaging-enabled subscribers: the telephone user interface (TUI) and the voice user interface (VUI). In Exchange Server 2007, these two interfaces together are called Outlook Voice Access. A subscriber can use Outlook Voice Access when they access the Unified Messaging system from an external or internal telephone. They can use Outlook Voice Access to access their Exchange Server 2007 mailbox, including their personal e-mail, voice messages, and calendar information.

### **Why Every Intranet Needs Chat & Instant Messaging Features**

Most people may understand real-time chat as being specifically for personal use, but that has shifted dramatically over the course of just the past decade or so. These days, more and more business are embracing chat as a tool for employees to communicate with each other, and that's just scratching the surface of what's possible.

Take a look at the many uses of chat in a business setting, and it becomes quite clear just how important it is for forward thinking organizations to embrace **intranet chat software**.

For those who are new to using chat for business purposes, here are just a few ways it can be embraced:

#### **Internal Communication**

It's essential that your employees can communicate with each other as easily as possible, and for a long period of time. This is where email came into play, however, email comes with a great deal of limitations, some of which can hinder productivity. Intranet chat software makes communicating with other members of your team an absolute breeze, as you can see who is online or leave a message for those who aren't. For [internal communication](#) purposes, there may be no better solution than live chat.

## **Customer Service**

How we go about providing customer service have changed dramatically since real-time chat has become so prominent in the business world. Gone are the days where customers would have to wait for long periods of time to get answers; today's customers expect instantaneous responses. In this regard, intranet chat software is the perfect solution. Your customers can approach you with a question, to which you can begin working on a response immediately. In terms of improving customer retention, this is one of the best things that any business can do for itself.

## **Group Communication**

Sometimes, it's important to have a method to communicate with not only one member of your staff, but an entire team. Group communication can truly come in handy when tackling projects and troubleshooting issues, and it serves as an extension of the real-time chat feature inherent in [social intranet software](#) like Communifire. When group messaging is properly utilized, the need for email lessens dramatically, as intranet chat software serves as a more natural, easy to follow vehicle for conversation.

## **Communifire Intranet Chat Software Features**

When it comes to your social intranet, you need a well-designed chat feature to get the most out of your workflow. Communifire comes equipped with built-in chat and private messaging, both of which ensure that starting and maintaining conversations is as stress-free a process as possible. The features inherent in Communifire's intranet chat software are tailored specifically to support the needs of modern businesses and are adaptable to your very own organization, allowing you to personalize the experience for you and your team.

Here are just a few features you can expect to find in Communifire's chat system, all of which help keep you and your team on task and impervious to communication breakdown:

- **Administrative Privileges** — Being an administrator in a social community means having the right tools at your disposal, and Communifire has got you covered with its

built-in administrative privileges. Your intranet chat can be turned on or off by administrators, and user roles and permissions can be set to determine who is able to chat and create their own conversations. With Communifire, you'll never have to worry about control issues.

- **List of Online Members** — When communicating with members of your organization, it helps immensely to know who is online. After all, there's nothing worse than sending a message to someone who isn't available when you need a quick response. Communifire's chat window lists the names of each person who is currently online, and starting a chat with someone is as easy as clicking on their name. If they're available to chat, they'll have a green dot placed next to their name, while no icon or a grey dot indicates that someone is currently unavailable.
- **New Chat Window and Multiple Chat Tabs** — If you end up in over your head during a project, you'll most likely need to call upon some help from your colleagues. In this instance, it's not uncommon to chat with a number of people while still being engaged with the project details in your social intranet. This means you'll need to open a new chat window or tab in your browser as well as multiple tabs within your chat window. Communifire makes this simple, as each conversation you start with a different user is given its very own tab within your chat window. This can not only help to cut down on confusion, but makes multitasking all the more accessible for you and your team.
- **Chat Status and Offline Mode** — It's common for things to pop-up that require your immediate attention, in which case you won't be focusing on chat for awhile. Instead of having to log-out of Communifire, you can change your status by clicking the dot next to your name. This gives you the options of online, away, do not disturb, invisible, or go-offline.
- **Notification Sounds** — Those who are busy handling multiple tasks throughout the day need to make sure they don't miss an important message from a staff member or customer. This is where notification sounds come into play. Communifire allows users to toggle notification chimes or dings that go off as a message is received, which means you don't even need to be looking at your chat window to know when you've been contacted. For those who are always multitasking, this feature can be exceptionally useful.

- **Saved Chats** — In many cases, your chats will contain important information that may need to be called upon in the future. When you're trying to wade through countless emails, finding the information you need can be quite difficult. Communifire's intranet chat software saves your chats and instant messaging sessions, which means recalling important information is only a few clicks away.

## **The Benefits of a Robust Intranet Chat & Instant Messaging System**

Even though chat is such a huge part of how many people use the web (as it's been since its inception), some business owners are unaware of the many benefits that can come along with incorporating intranet chat software into a professional setting. Understanding how your organization can benefit from embracing real-time chat doesn't have to be difficult, as the positive effects that come along with it are well-documented.

Once you and your team start utilizing intranet chat software, these and other benefits will surely follow —

- **Customer Satisfaction** — Keeping your customers and clients happy is an essential part of providing the best customer service possible. Since great customer service typically leads to enhanced customer retention, it's easy to understand just how important it is to focus on giving your audience what they need. When you use intranet chat software as a vehicle for providing customers with solutions, time is saved on everyone's part, and your customers will no doubt appreciate the personal touch.
- **Less Reliance on Email** — Email is one of the most commonly used platforms for virtual communication, yet the issues that come along with managing email threads are difficult to ignore. When you use Communifire's intranet chat software to interact with your employees, team members, and customers, your email inbox becomes more of a notification center than a hub for communication. This means less time moving between applications and an overall improved sense of organization, both of which can lead to increased productivity.
- **Reduced Expenses** — A lot of managers and CEOs tend to overlook communication costs. Telephone service, for example, can be quite costly, especially when you're dealing

with international employees or clients. Since every business owner is looking to reduce their expenses as much as possible, it's important to figure out how communication costs can be streamlined. In most cases, social intranet software like Communifire and its built-in chat system are exactly what modern businesses need to cut ties with outdated methods of communication, hence reducing costs to a large degree.

- **Transcriptions** — One of the biggest challenges of handling customer service queries over the telephone is transcribing the conversation. This can be essential in many situations, as it's often important to have a written record of what is said on both ends of the phone. Since every chat in Communifire is saved and can be called upon in the future, there's never a need to worry about transcribing an interaction with a client, customer, or team member.
- **Customer Feedback** — Understanding whether or not your customers are happy with your products and services is an important part of helping your business move in a forward direction, yet obtaining customer feedback is often a struggle. In many cases, it's important to follow up with a customer on whatever feedback they provide, as this will help to clarify exactly what they have to say. Communifire's intranet chat software is an excellent platform for gaining customer feedback, and continuing the conversation is a simple, straight-forward process.
- **Improved Collaboration** — While many people choose to handle tasks and projects on their own, there's no substitute for collaboration when it comes to the creation of great ideas and solutions. Anything you can do to improve collaboration between your staff members is a worthwhile venture. When team members chat with one another in Communifire, collaboration becomes that much easier.
- **Higher Levels of Employee Engagement** — Employee engagement is an important focal point for modern businesses. It can take a great deal of effort from management to improve engagement levels within your organization, but sometimes, all it takes is getting them collaborate with each other. Higher levels of [employee engagement](#) can come from using Communifire's built-in chat system, and it all happens naturally without the need for intervention.



Real-time chat is a crucial part of social intranet software, and it's no doubt going to stick around. When you take the time to embrace and get the most out of Communifire's intranet chat software, both internal and external communication become second-nature.

## **Useful Solace Messaging Platform Features**

This section describes the following key messaging features from the Solace Messaging Platform that are useful for Web Messaging use cases. This is not a complete list of features from the Solace Messaging Platform, nor is it a detailed presentation of each feature. The intent is to introduce the reader to key messaging features that may be of interest for Web Messaging applications, and then refer to the appropriate document for further information.

### **Solace Client APIs**

The Solace provides Java, C, .Net, and JMS messaging Application Programming Interfaces (APIs) for developing server-based applications, as well as source code for various sample applications to get you going quickly and easily. They provide all the information developers need to write and test server applications.

Solace also provides a JavaScript Web messaging API. This API follows the same structure as the server-based APIs to allow application designers to be very proficient regardless of the language and development environment they use.

### **Multi-Node Routing**

Solace routers support the ability to peer together to dynamically exchange topology and subscription information. This feature can be used to link together routers in the DMZ with those inside the intranet to:

- allow JavaScript API to communicate with back-end server applications to receive streaming information or perform request/reply interactions
- link DMZ routers to help reduce the flow of streaming data over the internal firewall of the DMZ

The internal routers could be in the same data center, or could be in remote data centers if required.

Subscriptions from Web messaging API clients are aggregated by the routers in the DMZ to reduce the subscription and traffic load on the internal messaging system, thereby ensuring a highly scalable solution.

### **Client Authentication**

Solace routers in the DMZ support the Lightweight Directory Access Protocol (LDAP) for authentication using the username and password model from Web Messaging applications. Thus, a centralized authentication repository can be used to perform all external user authentication.

This mechanism can also be used to support Single Sign On (SSO) authentication models whereby the Web Messaging application retrieves the SSO token from the SSO server and uses this token in the password field to connect to the DMZ Solace router. The Solace router uses LDAP to transfer the username/password==SSO Token back to the SSO authority to allow or disallow the login.

### **Data Access Controls**

Per-user, per-topic customer access control rules for both publish and subscribe operations can be enforced by the Solace router by:

- using Access Control List (ACL) profiles
- implementing custom access control rules using the “On Behalf Of” subscription capability

ACL profiles are rules provisioned on the Solace routers. They are used to provide coarse-grained access control to topics based on the hierarchical nature of the topic structure. ACL Profiles contain the list of topics that a client is or is not allowed to publish to, and the list of topics that a client is or is not allowed to subscribe to. These rules are enforced by the router in real time as applications dynamically publish and subscribe. A given ACL Profile is typically referenced by multiple clients, so the rules are configured once for a “class” of user.

The “on behalf of” subscription feature allows a Subscription Manager application you write to:

1. Receive all subscription requests from a set of clients.
2. Then apply your own business rules to allow or disallow the subscription.
3. Then add the subscription for the data “on behalf of” the client.

This feature is very useful where:

- tiered information is available, as in FX Single Dealer Platforms, and the client needs to receive the right “tier” of streaming data based on who the client is
- the number of rules and clients is very large
- the access control rules are not static

For example, in a foreign exchange Single Dealer Platform application, a client may want to receive streaming USD/CAD spread quotes, but he needs to receive the quote stream that is determined by his business tier. In this case, the Subscription Manager application, upon validating access to USD/CAD quotes, can add a topic subscription for the topic as appropriate for the business tier level of the client.

For an application example of how to use the “subscription on behalf of” feature, refer to the sample applications in the applicable server-side Solace messaging API.

### **Limiting Client Message Stream Rates**

In many applications where streaming quotes are to be delivered to end users, it is desirable to reduce the rate of updates to the end user to be less than the rate produced by the source—especially if the end user is human or reachable over a WAN or the internet. This is typical for both equity and foreign exchange market data.

Solace supports a feature called message eliding which allows a maximum per-topic message rate to be configured individually for each end user application. In this case, sources of market

data can publish at the message rate they like, with some (perhaps internal) applications receiving the full unlimited message rate, while other applications (internal or external) can have this same message stream limited to the rate they desire—all without additional infrastructure—to ensure that these applications always receive only the most recent updates, rather than queued or outdated information.

## **Last Value Caching**

SolCache is a software product from Solace that provides message caching and retrieval services. It caches up to a configured number of messages deep per topic for configured topics and makes them available to requesting clients. SolCache provides various plug-ins to allow customer-specific message handling – such as merging delta updates from a streaming publisher into a larger “initial image” stored in SolCache to create a complete book image from delta updates, for example.

SolCache is often used in applications such as price and odds distribution for client applications to acquire the latest value of some stock or currency pair without needing to wait for the next update message.

Querying SolCache can be performed by some applications directly from the JavaScript API by web client applications, thereby reducing the amount of infrastructure that application developers need to implement.

## **Message Priority**

It is sometimes desirable to deliver high priority messages ahead of lower priority messages when there is congestion and queueing occurs. Such queueing can occur, for example, toward an internet application due to the lack of bandwidth or slow processing by the application.

For these reasons, the Solace Messaging System allows publishers to assign each message a priority which then causes higher priority messages to be delivered ahead of lower priority messages to end applications during congestion