KnowNow
Enterprise Syndication Solution
Administration and Developer's Guide

KnowNow, Inc.
997 East Arques Avenue
Sunnyvale, California 94085 USA

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Preface

The *KnowNow Enterprise Syndication Solution Administration and Developer's Guide* is for system administrators and developers who are installing and configuring the KnowNow Enterprise Syndication Solution software (KnowNow ESS).

The chapters in this book are as follows:

- Chapter 1 , "Introducing the KnowNow Enterprise Syndication Solution": A brief overview of the KnowNow Enterprise Syndication Solution software's features and capabilities. It also includes deployment recommendations.
- Chapter 2 , "Installation and Other Administration Tasks": Provides a description of system requirements and describes how to install the KnowNow ESS software. It also provides information on how to start up KnowNow ESS, and provides a quick visual tour of the KnowNow ESS Administration console.
- Chapter 3 , "KnowNow Mobile": Provides information on installing and configuring KnowNow Mobile. KnowNow Mobile integrates with ESS so you can view ESS content using a Blackberry or a J2ME-compliant cell phone just as you would from SpeedReader or KnowNow Live.
- Chapter 4 , "Managing Categories and Group Subscriptions": Provides information on adding or deleting categories one at a time. Also provides information on creating and importing your own default set of categories, and on using Group Subscription Management to subscribe entire groups at a time to one or more channels. Provides information on the Channel Guide as well.
- Chapter 5 , "Managing Channels": Describes the Content Settings tab and provides information on using it to add, create, edit, and delete all the different kinds of supported channels. Includes configuration information where needed.
- Chapter 6 , "Global Settings, Network Settings, and Widgets": Provides information on setting global user options for KnowNow Alerts Desktop, SpeedReader, and

KnowNow Live. Also provides information on specifying proxy setting and on adding or removing widgets for KnowNow Live.

- Chapter 7 , "KnowNow Web Parts": Describes the KnowNow Web Parts for SharePoint MOSS.
- Chapter 8 , "Configuring and Using the Reporting Feature": Describes how to configure the ESS reporting feature and to use the ESS Reporting tool.
- Chapter 9 , "The ESS Reporting Database Schema": Provides detailed information on KnowNow's Reporting database so you can integrate it with third-party reporting tools.
- The index provides quick access to the contents of this book.

Additional Sources of Information

Additional information can be found in the following sources.

- The *KnowNow LiveServer Administration Guide* provides information on installing, configuring, and troubleshooting the LiveServer.
- *KnowNow LiveServer Developer's Guide* provides information for developing applications that take advantage of the LiveServer's capabilities. This book is in PDF and HTML file formats.
- *KnowNow ESS Developer's Guide* describes the ESS reporting schema so you can integrate ESS with third-party reporting tools.
- KnowNow Alerts Desktop, KnowNow Live, KnowNow SpeedReader, and KnowNow SpeedWriter all have built-in help files that document their features.
- *ESS_release_notes.html* contains known issues and late-breaking information.
- The KnowNow Web site, http://www.knownow.com, provides additional documentation and support.
- The RSS 2.0 specification can be found at Harvard Law: http://blogs.law.harvard.edu/tech/rss
- General ATOM information can be found here: http://www.atomenabled.org/
- Status of the ATOM IETF standards effort is here: http://tools.ietf.org/wg/atompub/

Document Conventions

Italic	Italics are used for emphasis, for the titles of books, and for variables.
Boldface type	Boldface type is used for emphasis and for the names of menu, button, and other controls/commands.

`Code`	Code excerpts and command line sequences are shown in this type face.
Ellipsis . . .	An ellipsis is used in code examples and syntax to indicate that irrelevant information is not shown.
/name/ and */name*	A name enclosed in slashes is a directory name. It does not necessarily mean that the directory is at the root level; in fact, in most cases, the directory is a subdirectory in a hierarchy. A name starting with a slash represents a topic name; as with directories, the topic could be anywhere in a topic hierarchy.

How To Contact KnowNow, Inc.

We welcome any comments you may have about our software products or our documentation. Our goal is to provide functional and easy-to-use products that help you work more efficiently. For more information, contact us at

KnowNow, Inc.
997 East Arques Avenue
Sunnyvale, California 94085 USA

Phone: (408) 585-1800
Fax: (408) 585-1801

Web site: http://www.knownow.com

For technical support, or if you have comments or suggestions, contact Support at

support@knownow.com
(408) 585-1835

For sales inquiries, contact sales@knownow.com or call (408) 585-1866.

Chapter 1 Introducing the KnowNow Enterprise Syndication Solution

The KnowNow Enterprise Syndication Solution (KnowNow ESS) is a powerful suite of software tools for managing delivery of information to corporate and end-user computers. KnowNow ESS combines the RSS syndication format with back-office integration and real-time desktop delivery to accelerate information flow across the enterprise and across the Internet.

KnowNow ESS comprises a number of components that provide end-to-end information management and distribution for RSS and real-time content. Together, these components provide an enterprise-oriented gateway to syndicated Web content, adding value by:

- Consolidating feeds into a single, "no-poll" environment
- Allowing corporate oversight of feed content
- Providing easy authoring tools
- Making it easy to view and respond to business events as news events
- Integrating with a wide variety of commercial RSS and ATOM readers
- Integrating with external syndicators for obtaining high relevance events
- Solving the scalability problems of RSS and ATOM in the field by providing publish/subscribe semantics
- Providing end-user RSS managers and readers with alerts capabilities
- Making it possible to pull reports both within KnowNow ESS or by using your own reporting tool

These components include the ESS Administration console, which includes options for managing categories and channels, as well as other configuration capabilities as well as KnowNow Live and SpeedReader (RSS readers for end users), SpeedWriter (for creating items for SpeedWriter channels), and the KnowNow Alerts Desktop (for monitoring channels). Each KnowNow ESS component offers a rich set of well-designed, intuitive features, capabilities, and controls.

KnowNow supplies Web Parts for use with Microsoft SharePoint MOSS. KnowNow's Web Parts can be used to provide live, streaming data on SharePoint pages.

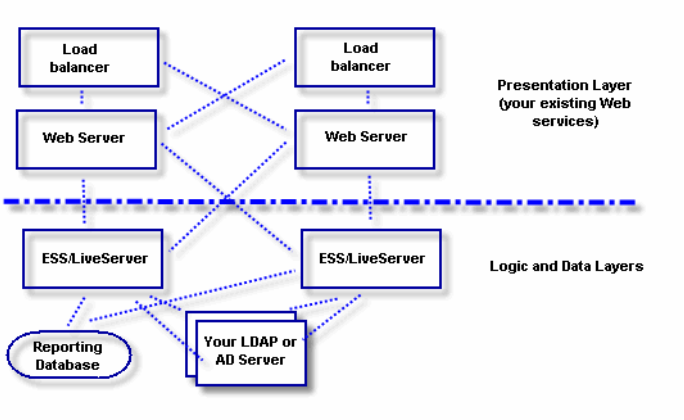
This chapter describes KnowNow ESS and its components and capabilities under the following headings:

Deployment Recommendations

This section provides information on how and where KnowNow ESS fits into an existing Web infrastructure, with recommended ways to deploy ESS within an enterprise Web application environment. Installation and some post-installation administrative tasks are discussed in Chapter 2 , "Installation and Other Administration Tasks."

In a classic three-tier deployment architecture, the recommended tier of deployment for ESS is tier 2. In small installations only, ESS can be deployed fully self-contained as a three-tier application (in concept, as a single server).

Figure 1-1. Recommended deployment.



As part of this deployment recommendation, we also recommend the following:

- For overall UI and system performance, we recommend the use of reverse proxy servers to act as front ends to the ESS Web pages in order to cache frequently fetched icons, HTML, and JavaScript.
- When you are using ESS in tier 2, we recommend that your existing Web load-balancing services act as a front-end to ESS—just as a Web server would be, but with a reverse proxy in front (as mentioned above).
- We recommend that you deploy ESS behind the firewall, though if business needs require it, it can be in the DMZ.
- If you are using LDAP, we recommend that you use a dual LDAP installation, though many other modes are supported. For more information on LDAP and ESS, see the in-depth information on integrating LiveServer with LDAP/AD in the *KnowNow LiveServer Administration Guide*.
- When using the LiveServer's authentication policy 5, anonymous users are not allowed to access the /kness/admin screen. (As intended; the policy prevents

anonymous access to restricted areas.) Therefore, you must use the login screen (for example, from SpeedReader) to get to /kness/admin. In addition, due to certain limitations, do not use the LiveServer's permissions policy 4 with ESS; instead, use one of the other policies (preferably 3 or 5). Session-based authorization and authentication are required. For more information on the LiveServer's authentication policies, see the *KnowNow LiveServer Administration Guide*.

ESS Administration Console

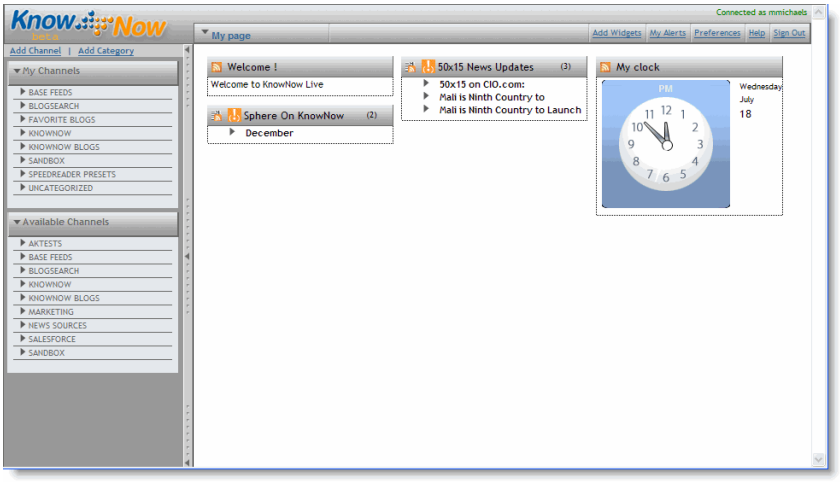
The ESS Administration console includes tools for creating and managing channels, categorization, permissions, configuring global preferences and SpeedReader behaviors, adding widgets to and removing them from KnowNow Live, configuring the ESS reporting feature and using the ESS Reporting tool, and managing the content life cycle.

- Using the Content Settings tab of the ESS Administration console, you can create channels from different sources. You can create and assign categories for channels, and configure a number of options for each channel. You can also set which categories and channels are delivered to SpeedReader. For more information, including instructions on creating each type of channel, see Chapter 5 , "Managing Channels."
- Use the Adapter Configuration tab to: Set properties that support creation of Moreover or Exchange channels, set global defaults on all types of channels, and set properties for reporting. Channel configuration is covered in Chapter 5 , "Managing Channels." Reporting configuration is covered in Chapter 8 , "Configuring and Using the Reporting Feature."
- Using the Global Settings and Network Settings tabs, you can set global settings for SpeedReader, as well as proxy settings for your network. To add or remove widgets for KnowNow Live, use the Widgets tab. For more information, see Chapter 6 , "Global Settings, Network Settings, and Widgets."
- To create items for SpeedWriter channels, use the SpeedWriter tab. See *Using KnowNow's SpeedReader* for information on how to use SpeedWriter.

KnowNow Live

KnowNow Live is installed when you install ESS. It is a browser-based RSS reader intended for end users that has a comfortable, configurable interface. Its capabilities are described in its help file. In the ESS Administration console, you can add or remove widgets for KnowNow Live as described under "Widgets" on page 148.

Figure 1-2. KnowNow Live.



With KnowNow Live, users can

- **Read items**. This includes reading text pages, viewing images, or listening to media items, such as videos and music.
- **Manage their KnowNow Live pages** by creating and renaming them, rearranging the items on them, and placing widgets on them (using a preconfigured list).
- **Subscribe to channels** and create and edit categories for organizing channels.
- **Customize** KnowNow Live by choosing different skins and changing user password and other such information.
- **Apply filters** to channel subscriptions.
- **Manage alerts** for subscriptions.
- **Forward items** by email and clipping items to send to SpeedWriter channels.

SpeedReader

SpeedReader is installed when you install ESS. It is KnowNow's alternative RSS reader for those who prefer a more classical, email-like interface to KnowNow Live's interface. Access SpeedReader by clicking the SpeedReader link. Its capabilities are described in its help file. With SpeedReader, users can

- **View RSS channels and items**. When viewing items, users can choose to view them within SpeedReader or open them in a new browser window. If a user is viewing items with media content, such as audio or video, SpeedReader opens the appropriate media player, if present.
- **Add RSS channels to a list of personal channels** that only the individual user can see (these channels are called My Channels).
- **Apply filters to channels** so that only items matching the specified filter are displayed.
- **Create protected feeds**—feeds that are protected by authentication/authorization.
- **Create SpeedWriter channels.** SpeedWriter channels are special channels that users can create SpeedWriter items for and forward items to. Note that SpeedWriter *items* can only be created for or forwarded to SpeedWriter channels. However, SpeedWriter *channels* can receive any kind of channel item.
- **Set preferences for SpeedReader**, such as whether users see the Preview pane, how many items to view, and other customizations. Users can also create shortcut tabs for their favorite channels.
- Users can also **access the SpeedReader and SpeedWriter books** in PDF and help file formats.

SpeedWriter

SpeedWriter is installed when you install ESS. It is a product for creating SpeedWriter items (posts) for SpeedWriter channels. A SpeedWriter channel is a specific kind of channel that you create using the **Add Channel** command in the Content Settings tab in the KnowNow ESS Administration console. You then use SpeedWriter to create a specific kind of item, called a SpeedWriter item, that can only be published or forwarded to SpeedWriter channels.

For example, if you wished, you could create company-specific SpeedWriter channels, then create individual company notices as SpeedWriter items that you then publish to those channels. People can also forward other kinds of items to SpeedWriter channels; however, *SpeedWriter* items can only be created for or forwarded to SpeedWriter channels.

For your convenience, you can access SpeedWriter from the ESS Administration console as well as from SpeedReader. SpeedWriter's capabilities are described in SpeedWriter's help file.

KnowNow Mobile

KnowNow Mobile integrates with ESS so mobile users can view ESS content using a supported cell phone, just as they would from SpeedReader or KnowNow Live. The KnowNow Mobile client (which is installed on the supported cell phone) is a full-featured reader with offline reading capabilities.

To use KnowNow Mobile, you need to install and configure a server-side component. Once that is done, mobile users use their cell phones to download and install a client. The client connects to the KnowNow Mobile server, so that mobile users can browse categories, channels, add channels, view items, and so on.

KnowNow Mobile is described in more detail in Chapter 3 , "KnowNow Mobile."

KnowNow Alerts Desktop

The KnowNow Alerts Desktop must be installed separately. It manages alerts and much more. It has various interfaces (toolbars for Microsoft© Internet Explorer and Mozilla Firefox, deskbars for the Windows desktop, and a Google Gadget for the Google Desktop). Using the KnowNow Alerts Desktop, users can subscribe to their favorite RSS channels, receive alerts when new items are posted, manage their subscriptions in the Alerts Desktop Browser, and so on.

In addition, some versions of the Desktop work hand-in-hand with SpeedReader. When using KnowNow's SpeedReader, users can set certain options for their favorite channels. One of those options is for specifying whether they want that channel to be enabled for alerts. When a channel is enabled for alerts, the KnowNow Alerts Desktop notifies the user when any such channel is updated.

The Alerts Desktop offer a number of other capabilities. For example, an administrator can make the Alerts Desktop available to users as a download or can install it for a group of users using a command-line command. For more information, see "Installing KnowNow Alerts Desktop" on page 28.

For more information on how Alerts Desktop works, see the Alerts Desktop help.

ESS and KnowNow LiveAdapters

KnowNow LiveAdapters are modules that provide specific interface functions between an outside data source and ESS. Some modules are included with ESS (for example, the LiveAdapter for Microsoft Exchange), and some are separate products that you can purchase (for example, the LiveAdapters Framework and LiveAdapters for RDBMS).

LiveAdapters, which work closely with KnowNow ESS, automate the transformation of database and enterprise information into Web events, making those events accessible as RSS or HTTP subscriptions. With LiveAdapters, enterprise databases can act as both publishers and subscribers in real-time. KnowNow's data filtering, relevancy, and transformation services allow RSS data to be leveraged in many difference contexts. Using the KnowNow ESS Administration console, you can create specific LiveAdapter channels (as described in Chapter 5 , "Managing Channels").

For more information on LiveAdapter for RDBMS, see the *KnowNow LiveAdapters User's Guide*.

Chapter 2 Installation and Other Administration Tasks

This chapter provides information needed for installing the KnowNow Enterprise Syndication Solution, as well as information on accessing ESS, authentication policies, and various configuration tasks under the following headings:

System Requirements and Supported Platforms

When you install LiveServer, you are also given the option of installing KnowNow ESS. For information on installing and configuring LiveServer, see the *KnowNow LiveServer Administration Guide*.

KnowNow ESS is supported on all platforms supported by the same version of KnowNow LiveServer. Also, for the most part, KnowNow ESS has the same system requirements as the LiveServer; for details, see the *KnowNow LiveServer Administration Guide*. The differences are that, for KnowNow ESS, we recommend 2GB RAM for ESS in general and 4GB RAM on 64-bit AMD Opterons running Red Hat Enterprise Linux 4.

Additional requirements are listed under the following headings:

KnowNow Mobile Requirements

If you wish to use KnowNow Mobile,

- You must be using ESS 3.5 or higher.
- Supported cell phone types on the client side are Blackberry, Windows Mobile, and MIDP 2.0 (J2ME) compliant. The phones must be capable of accessing and browsing the Internet.
- You will need Tomcat application server version 5.25 outside your firewall. KnowNow provides KnowNow Mobile in two different files, depending on your needs.
  - If you already have Tomcat 5.25 installed, then you just need the Web applications archive (WAR) file that contains KnowNow Mobile's server-side component.
  - If you also need Tomcat, KnowNow provides a file with both Tomcat and the WAR file.

Complete information on installing and configuring KnowNow Mobile is provided in Chapter 3 , "KnowNow Mobile."

Reporting Requirements

The reporting feature supports the following relational database management systems:

- MySQL (versions 5.0.41 and 5.1.*n* and higher)
- Microsoft SQL Server (versions 2005 and 2007)

Reporting is covered under "Preparing and Installing ESS for Both Reporting and Web Parts" on page 17 and in Chapter 8 , "Configuring and Using the Reporting Feature."

Web Part Requirements

If you are planning to use KnowNow's Web Parts, you will need to have Microsoft SharePoint MOSS installed.

Web Parts are covered under "Preparing and Installing ESS for Both Reporting and Web Parts" on page 17 and "Web Parts Security" on page 19, and in Chapter 7 , "KnowNow Web Parts."

SPNEGO

ESS supports Windows single sign-on using the SPNEGO protocol (simple and protected GSS-API negotiation mechanism). You may need to perform some simple tasks to enable Internet Explorer and Firefox for this mechanism. There are many excellent resources on this topic, both in the browser documentation and on the Web. Here, we provide some overview information on these tasks. As always, consult with your browser's documentation to make sure you have the latest information.

Internet Explorer

For Internet Explorer, access the following Microsoft article and read teh section titled "Client Side—Internet Explorer."

http://msdn.microsoft.com/en-us/library/ms995329.aspx

Firefox

You can configure Firefox to use Kerberos for single sign-on. In order for this functionality to work correctly, you need to configure Firefox to send your Kerberos credentials to the appropriate KDC. The following procedure describes the configuration changes and other requirements to achieve this.

To configure Firefox,

1. In Firefox's address bar, type **about:config** to display the list of current configuration options.
2. In the **Filter** field, type **negotiate** to restrict the list of options.
3. Double-click the **network.negotiate-auth.trusted-uris** entry to display the *Enter string value* dialog box.
4. Enter the name of the domain against which you want to authenticate; for example, **.example.com**.
5. Repeat the above procedure for the **network.negotiate-auth.delegation-uris** entry, using the same domain.

Preparing and Installing ESS for Both Reporting and Web Parts

The following steps provide the order in which to install ESS and other KnowNow products, with the assumption that you will be using both the ESS Reporting feature and KnowNow's Web Parts. The steps that are required only for specific products are indicated. It is assumed you will already have Microsoft SharePoint MOSS installed.

Once you have installed these products, events from any KnowNow client application (for example, KnowNow Live, KnowNow Alerts Desktop, or SpeedReader) are recorded in the Reporting database. Also, KnowNow Web Parts will be available for use on SharePoint pages.

To install ESS with both reporting and Web Parts,

1. **For ESS Reporting:** If you haven't already done so, install a supported RDBMS. The supported RDBMS platforms are listed with the system requirements under "System Requirements and Supported Platforms" on page 14.
2. **For ESS Reporting:** In the supported RDBMS, create a database to be used for the ESS Reporting data. Note the database user's credentials. Ensure that the user has "create table" permissions.
3. Install LiveServer and ESS. During installation, **for ESS Reporting**, enable authentication policy 2. For information on installing these products, and on LiveServer authentication policies, see the *KnowNow LiveServer Administration Guide*. KnowNow Live, SpeedReader, and SpeedWriter are automatically installed with ESS.
4. **For Web Parts:** Run KnowNow's Web Parts installation program. This installer creates virtual directories for KnowNow, copies code to these directories, and installs KnowNow's Web Parts. During the KnowNow Web Parts installation, reply to the dialog boxes with the following values.
   a. Choose **Next**.
   b. Select **I Agree** and choose **Next**.
   c. Choose **Next**.
   d. For the LiveServer URL, specify something like this:

      http://site.example.com:8000/kn

      For the URL of the SharePoint Virtual Server, specify something like this:

      http://example

   e. Choose **Next**.

   f. For the SharePoint WebSite's Name, specify **SharePoint - 80**. Choose **Next**.

   g. For the SharePoint Central Administration Virtual Directory Name, specify **SharePoint Central Administration v3**. Choose **Next**.

   h. Choose **Next**.

   i. Choose **Close**.

5. **For Web Parts:** Using the KnowNow System Administration console, configure LiveServer for cross-domain use by setting the following parameters. These parameters are described in the *KnowNow LiveServer Administration Guide*.

   a. Set the Service Network **Domain** parameter to **example.com**.

   b. Set the Service Network **Hostname** parameter to **example.com**.

6. **For Web Parts:** Set the SharePoint trust level as described under "Web Parts Security" on page 19. For information on the Web Parts themselves, see Chapter 7 , "KnowNow Web Parts."

7. Install KnowNow Alerts Desktop.

8. Install any desired KnowNow Connectors.

9. Restart LiveServer.

10. **For ESS Reporting:** Perform additional configuration steps for reporting as described in Chapter 8 , "Configuring and Using the Reporting Feature."

11. Start up ESS as described under "Accessing ESS" on page 22.

Web Parts Security

You will need to set a trust level in SharePoint as described in this section. KnowNow assumes that all SharePoint security is based on AD with Windows authentication (SP-NEGO or NTLM) as the primary authentication/authorization method.

If you wish to use SharePoint's minimal trust level (recommended), use the first method to set the trust level. If you wish to use the **Full** trust level, use the second method.

Using a Security Policy File to Set the Trust Level to Minimal

After installing Web Parts for KnowNow using KnowNow's installation program, the recommended procedure for security is to create a trust policy file and point your *web.config* file to this file. For KnowNow, the security policy file in which you make these changes is *kn_wss_minimaltrust.config*.

To set the trust level to minimal,

1. Make a copy of *kn_wss_minimaltrust.config*.
2. Open the folder that is mapped with the SharePoint Central Administration virtual directory. (To get the location of this folder, open IIS Snap In. Go to **SharePoint Central Administration v3 > Properties > Home Directory > Local path**.)
3. Open *web.config* from that location.
4. To this file, add the following line:

```
<system.web> <securityPolicy> <trustLevel name="kn_wss_minimaltrust"
policyFile="C:\Program Files\Common Files\Microsoft Shared\web server
extensions\12\CONFIG\kn_wss_minimaltrust.config" />
```

5. Add the <trust> tag so that it refers to the newly defined trust level:

```
<trust level="kn_wss_minimaltrust" originUrl=""
processRequestInApplicationTrust="false" />
```

6. The *kn_wss_minimaltrust.config* file should have the following CodeGroup section for SiteConfiguration:

```
<CodeGroup class="UnionCodeGroup" version="1" PermissionSetName="FullTrust">
<IMembershipCondition class="StrongNameMembershipCondition" version="1.0.0.0"
PublicKeyBlob="0x00240000048000009400000006020000002400005253413100040000010
0010073102D90F68C5DE4EC9A186526744DF1C966489AAAF70B509A6C9AB99BE73ED9C0C281F80
DD2F5E785B664056E918320682B5694CDE2682617903553A712DCE35FB11ABF2FDCE621002688
FE5542A620314034CC5FD700A0275848E8A6919B885F4E241C9A6E646E96510C9D9BE00A4E696
84F1157BBBD00C17A80A6C2269CBE" Name="SiteConfiguration" /> </CodeGroup>
```

Setting the Trust Level to Full in web.config

A less secure method is to raise the net trust level of the bin directory. If you wish to use this method, simply modify SharePoint's *web.config* file. You won't need to have a *kn_wss_minimaltrust.config* file as described in the previous method.

To set the trust level to full,

1. Open the folder that is mapped with the SharePoint Central Administration virtual directory. (To get the location of this folder, open IIS Snap In. Go to **SharePoint Central Administration v3 > Properties > Home Directory > Local path**.)
2. Open *web.config* from that location.
3. In the *web.config* file, find the following line in <system.web>:

   ```
   <trust level="WSS_Minimal" originUrl="" />
   ```

   and change it to

   ```
   <trust level="Full" originUrl="" />
   ```

Uninstalling ESS

To uninstall KnowNow's ESS, run the KnowNow uninstaller program.

In Windows, this program is accessed by choosing **Start > Programs > KnowNow > KnowNow Enterprise Syndication Server > KnESS Uninstaller**. (The exact commands may vary depending on your version of Windows.)

In Linux, the uninstaller is run as follows, assuming that LiveServer has been installed in /opt/knserver directory. From the console, change directory to /opt/knserver/KnessUninstaller. Then execute

```
> Uninstall_KnowNow_Enterprise_Syndication_Solution
```

Accessing ESS

Once you have installed KnowNow ESS, you can access the ESS Administration console, SpeedReader, SpeedWriter, and, as a convenience, the KnowNow System Administration console.

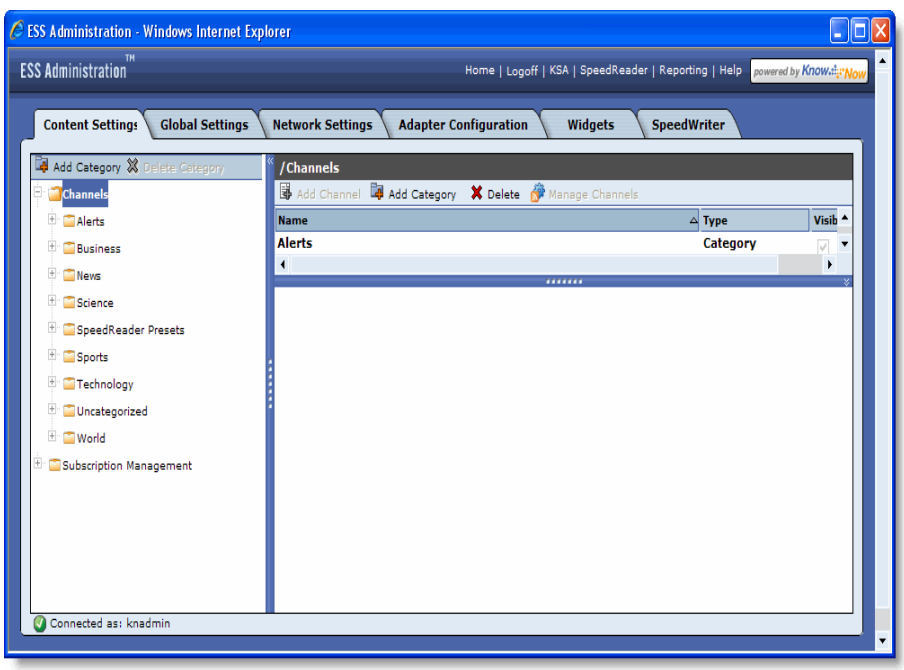
Note: When starting up LiveServer for the first time after installing ESS, or after migrating an ESS/LiveServer system to using an LDAP directory, ESS continues its installation into LiveServer's topic space and permissions database. It is not ready for use until after the following **Warning** appears in the LiveServer's server.log:

Done loading the initial default personal channels for KnESS. It is ok to use KnESS now.

KnowNow recommends that you not use ESS until this message appears in the log.

To access the ESS Administration console, point your browser to http://*machine-name:portnumber*/kness/admin. (Alternatively, click the **ESS Administration** link on the LiveServer's initial page, which is the page that opens when you browse to http://*machinename:portnumber*.)

Figure 2-1. The ESS Administration console.



Depending on the authentication settings, you may first be prompted to log in. (For more information, see "Authentication Policies" on page 24.)

The ESS Administration console provides access to Content Settings, Global Settings, Network Settings, Adapter Configuration, Widgets (for KnowNow Live), SpeedWriter, and SpeedReader.

Note: Because the ESS Administration console, SpeedReader, and KnowNow Live are all browser-based, it may not be possible to access them if cookie prevention is set too high. In such cases, adjust the browser security settings to allow cookies.

In addition, you can access the KnowNow System Administration console by choosing the **KSA** link in the top portion of the ESS Administration console, and you can access the Reporting feature (once it is properly configured) by selecting the **Reporting** link in the top portion of the ESS Administration console.

- For information on the Content Settings tab, see Chapter 5 , "Managing Channels." This tab is where you create and edit channels. This chapter has information on creating every possible type of channel.
- For information on the Global Settings, Network Settings, and Widgets tabs, see Chapter 6 , "Global Settings, Network Settings, and Widgets."
- For information on configuring Moreover channels, see "Configuring a Moreover Channel Source" on page 108.
- To access SpeedReader, click the SpeedReader link at the top of the ESS Administration console or point your browser to

  `http://machinename:portnumber/kness/speedreader`

  For information on SpeedReader, see *Using KnowNow's SpeedReader*, which is accessed through SpeedReader.
- You can access SpeedWriter through the SpeedWriter tab on the ESS Administration console, or through the SpeedWriter link in SpeedReader. For information on SpeedWriter, see *Using KnowNow's SpeedWriter*, which is accessed through SpeedWriter.
- For information on using KnowNow's Web Parts, see Chapter 7 , "KnowNow Web Parts."
- For information on installing and configuring KnowNow Mobile, see Chapter 3 , "KnowNow Mobile."
- For information on using the Reporting feature, see Chapter 8 , "Configuring and Using the Reporting Feature."

Authentication Policies

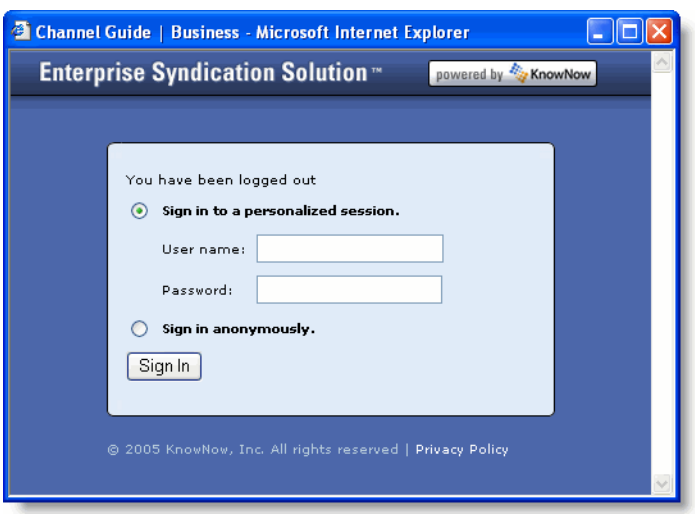
The LiveServer supports several different authentication policies, ranging from open access (anonymous logins allowed) to restricted access in which only authenticated users with passwords can log in. For information on each of the authentication options, see the information on the **Authentication policy** parameter in the *KnowNow LiveServer Administration Guide*. The **Authentication policy** parameter is available for both the Flat Files and LDAP permissions systems. For recommended policies, see "Deployment Recommendations" on page 3.

Note: When users are logged in to SpeedReader anonymously, they will only see the default settings, not their persisted personal settings and subscriptions.

Depending on what settings have been made in the LiveServer authentication policies, you may see different login screens, including both browser-based login dialog boxes to custom login screens.

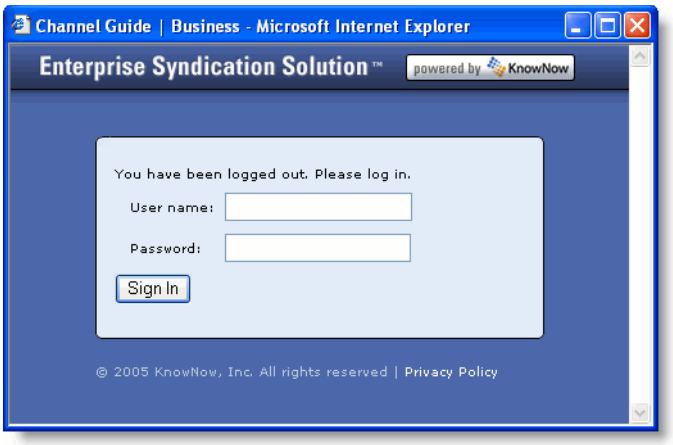
Some aspects of the credentials apply to LiveServer logins and not to ESS logins; especially, you cannot log in to ESS anonymously. For example, if you have selected the LiveServer's **Credentials, anonymous on demand** authentication policy, when you attempt to access the ESS Administration console, you will be shown the following login screen. Even though you could log in to LiveServer anonymously, you cannot log in to ESS anonymously; you must enter a valid user name and password.

Figure 2-2. A custom login screen that offers an anonymous option.



Alternatively, if you have selected the LiveServer's **Credentials required - no anonymous** option, then you will be presented with the following login screen.

Figure 2-3. A custom login requiring credentials.



Access Recommendations

The following recommendations apply to allowing access:

- For cross-domain deployments (that is, deployments in which a separate, non-LiveServer server is handling the LiveBrowser and static pages), for security and access purposes, we recommend that the kness/admin tree be removed from the separate server and users be redirected to the LiveServer for access to the ESS Administration console.
- You may wish to consider using a reverse proxy in the DMZ to re-direct requests.
- In order to allow all RSS readers access to specific files without setting up a cookie or requiring a login (even in LiveServer authentication policy 2), you can set the knsettings.conf variable **Sessions_IgnoreUrlPattern** to the value {/kness/channels/*}.

  For example, if you wish to allow all RSS readers access to exported XML files without needing to log in, you can send the following event to the topic /kn_system/selectable_configuration/knperm_files/Sessions_IgnoreUrlPattern.

```
kn_id Sessions_IgnoreUrlPattern
kn_payload /kness/channels/*
```

Troubleshooting the Login Process

If you have trouble logging in (for example, if the login page keeps returning, instead of displaying the ESS Administration console), check the following items:

- Make sure that the user name and password have been correctly entered.
- Make sure that the user name and password are in the LiveServer's list of users.
- Note that when requiring login credentials, even if a user enters the proper credentials, if the browser is set to block all cookies, the ESS Administration console, KnowNow Live, and SpeedReader will not appear. Users will need to modify their browser security settings to access those components.
- If you are using Zone Labs' ZoneAlarm firewall, add http://*yourmachinename* to ZoneAlarm's **Privacy > Site List**, and make sure you enable all permissions for that machine. You may also need to add *http://yourmachinename* to the **Firewall > Zones** page.

Customizable Login Screens

The login screens can be customized (for example, to add your company logo, use your company colors, and so on). Contact KnowNow Support for more information.

Configuring Email Alerts

If you plan to enable email alerts, you will need to perform a few simple configuration tasks.

Warning: In regard to enabling email and mobile SMS alerts, we recommend very careful use of this feature by your end users. Many RSS feeds re-publish items previously delivered in such a way that they are considered by ESS as updates. ESS sends updates to all subscribers. In the case of SpeedReader and Alerts Desktop subscribers, each update is presented to the user as a single item as opposed to multiple items. This reduces what could be perceived by the user as duplicate entries.

The opposite is true in email clients and SMS devices. Email readers and SMS devices view these updates as new and different items, thus creating the perception of duplicate delivery and potentially flooding the user with messages. This may not be what the user is expecting. Email and SMS alerts delivery is most beneficial on channels where the content is not constantly updating existing items or where an update to an existing item is of value to the end user. Such channels tend to be those of type SpeedWriter, streaming channels, and LiveAdapter channels (RDBMS, Exchange, etc.).

To configure your system for sending email and SMS alerts,

1. First, access the KnowNow System Administration console to configure your SMTP server. The parameter to configure is **Configuration > Service Network > SMTP Server**. Set this parameter to the IP address or host name of the SMTP server.
2. Next, within the ESS Administration console, access the Global Settings tab and enable the following options:
   - **Email Alerts enabled**
   - **Mobile SMS Alerts enabled**

   For more information on these options, see "Email Alerts enabled" on page 143 and "Mobile SMS Alerts enabled" on page 143.

Installing KnowNow Alerts Desktop

The KnowNow Alerts Desktop is included with the ESS installation. For a brief overview of its capabilities, see "KnowNow Alerts Desktop" on page 10.

Administrators can make the Alerts Desktop available to users as a download; instructions for users on downloading and installing the Alerts Desktop are provided both in the Alerts Desktop help file and in a separate file, Alerts_Desktop_installation.html, which is included with ESS (in the /kness/docs/ directory). You can post that HTML file wherever you like to help your users.

The Alerts Desktop can also be installed from the command line. Using this feature, you can provide optional command-line parameters that control which LiveServer the Alerts Desktop is configured for and that set the default user credentials. This is useful when you want to configure the Alerts Desktop with a pre-defined server URL and/or credentials for a group of users; those users would all connect to the same server and use the same credentials. This capability is intended for administrators only.

The command-line parameters (given in Table 2-1) are separated by spaces; data is enclosed in double quotation marks.

Table 2-1. Alerts Desktop command-line parameters.

Parameter	Description	Example
KNESS_SERVER	Specifies the URL for the desired LiveServer.	KNESS_SERVER="http://localhost:8000
KNESS_USERNAME	Specifies the default user's log-in name in clear text.	KNESS_USERNAME="knadmin"
KNESS_PASSWORD	Specifies the password for the default user in clear text.	KNESS_PASSWORD="knadmin"

For example, if you executed a command from the **Start > Run...** prompt, it might look something like this (all on one line):

```
essalertsdesktop.msi KNESS_SERVER="http://www.myserver.com"
KNESS_USERNAME="groupusername" KNESS_PASSWORD="grouppassword"
```

All users of that computer would log into that server with those credentials.

Creating Default KnowNow Live Templates

It is possible to create a default template for KnowNow Live users, where each group sees a different template if that is what is desired. The template file is a configuration file that you use to preconfigure the view for users who are logging in for the first time. You can display any one of or all four of the following types of boxes:

- channel boxes (for setting up a subscription to a channel in ESS)
- PiP boxes (for configuring KnowNow's Picture-in-Picture widget)
- Google boxes (for configuring a Google widget)
- miscellaneous boxes (for configuring KnowNow's internal widgets)

KnowNow provides a base template that you can modify according to your needs. This template is named *knl.template* and is located in the */LiveServer_root*/modules/kness/ directory. That file has information within it for creating a custom template; that information is also provided starting under Syntax for KnowNow Live Templates.

To use knl.template,

1. Make a copy of the *knl.template* file that is located in the */LiveServer_root*/modules/kness/ directory.
2. Customize the copy of *knl.template* as desired using the information starting under Syntax for KnowNow Live Templates.
3. Place the customized file in the */LiveServer_root*/conf/ directory.
4. The template definition is stored in an event **knl_template** under /kness/categories/kn_subscription_manager/*. To pick up changes to the *knl.template* placed in the */LiveServer_root*/conf/ directory, delete this **knl_template** event and restart LiveServer. All new users will use this new template. Note that channels listed in *knl.template* should be defined in the system before new users log in.

Syntax for KnowNow Live Templates

As described under Creating Default KnowNow Live Templates, you can create a default KnowNow Live template using an included template as a base. The order in which the boxes are listed in the template file determines which row and column the boxes will appear in. The boxes are rendered from left to right and from top to bottom in the user interface, with three columns to a row. For example, if you define four boxes (B1, B2, B3 and B4), then boxes B1, B2, and B3 will appear respectively in column 1, column 2, and column 3 of row 1. Box B4 will be rendered in column 1 of row 2.

When editing a KnowNow Live template, you must use double quotation marks (“ “) to surround all values. In addition, if you wish to use apostrophes within a value (for example, as part of a title), you must either use a double backslash to escape each apostrophe, or use the HTML entity for apostrophes ('). If you wish to use quotation marks *within* a value, you must also escape them or use the HTML entities. The HTML entities for quotation marks are " or ". For elegant, true typographic opening and closing quotation marks, use the HTML entities “ and ”.

Configuring a Channel Box

Use the ChannelBox element to set up a subscription to a channel in ESS. The syntax is as follows:

ChannelBox: <*Channel Title*> <*Channel URL*> <*Size*> <*Channel Type*>

Where

- *Channel Title* is a title for the channel.
- *Channel URL* is the channel’s URL.
- *Size* is the count of items to be displayed in the box.
- *Channel Type* is the channel type. The channel type value can be one of *feedwatcher*, *streaming*, *speedwriter*, *liveadapters*, *aggregate*, *exchange*, or *sphere*.

Configuring a PiP Box

Use the PiPBox element to configure KnowNow’s PiP widget for a Web site. The syntax is as follows:

PiPBox: <*Title*> <*URL*> <*Height*> <*Frequency*>

Where

- *Title* is a title for the Web site.
- *URL* is the Web site’s URL.
- *Height* is the initial height of the PiP box in pixels.
- *Frequency* is the interval of time to allow to pass before the URL is reloaded.

Configuring a Google Box

Use the GoogleBox element to configure a Google widget. The syntax is as follows:

GoogleBox: <*Title*> <*URL*> <*Height*>

Where

- *Title* is a title for the widget.
- *URL* is the widget's URL.
- *Height* is the widget's height in pixels.

Configuring a Miscellaneous Box

Use the MiscBox element to configure KnowNow's internal widgets. The syntax is as follows:

MiscBox: <*Title*> <*Type*>

Where

- *Title* is a title for the widget.
- *Type* is the widget's type. Values can be one of **welcome** or **clock**.

Protected Feeds

Protected feeds are channels that are protected by a set of credentials (a user ID and password). Users will need to enter those credentials before they can subscribe to that channel. These channels have a special icon.

Note that a protected feed is different from secure feeds, which are feeds that are accessible over a secure connection like HTTPS.

More about protected feeds is provided under the following headings:

Protected Feeds and ESS Topic Space

There are two ways in which protected feeds can be added to the system. Depending upon which method is used, the feeds end up in different places in the ESS topic space.

- **Method 1:** An RSS channel is added to the system by the ESS administrator with the **Feed Credentials** option set to **Required**. These channels are then available for subscription (just like other channels) from SpeedReader. In this case, the channels are added to the public channel space and are available for all to subscribe to. (The **Feed Credentials** option is described on page 114.)
- **Method 2:** An RSS channel is added to the system by users using Speed Reader with the **Feed Credentials** option set to **Required**. In this case the channel is located in the user's private space. Potentially, two users could add the same channel/URL, but provide different credentials. The channel still ends up in each user's private space. (Instructions are provided to users in *Using KnowNow's SpeedReader*.)

Note that if the channel is *not* protected, then the channel *always* ends up in the public space independently of who (or how many people) added it.

How Protected Feeds Are Identified

A protected feed is uniquely identified by its URL and the user ID used to access it. For example, if a protected feed like http://www.example.com/ is accessed using the user ID *john*, then this feed (identified internally as http://john@www.example.com/) is different from the same URL made available to the user *sue* (in which the feed is internally identified as http://sue@www.example.com).

How Protected Feed Credentials Are Stored

The credentials entered by the user are encrypted and stored in the topic space. This functionality is provided by the underlying LiveServer services using the server's SSL key/certificate to encrypt the credentials. If you need to update the SSL key and certificate are updated, use the Rekey utility, which can be accessed through the following link (or through the LiveServer's utilities link):

http://*host*:*port*/admin/rekey/rekey.html

When you use the Rekey utility to upload the new key and certificate into the cluster, it re-encrypts all the protected feed credentials with the new key.

The Rekey utility can and should be used for SSL certificate and key uploads even if ESS is not installed.

For more information on the Rekey utility, see the *KnowNow LiveServer Administration Guide*.

Chapter 3 KnowNow Mobile

KnowNow Mobile integrates with ESS so you can view ESS content using a compatible cell phone just as you would from SpeedReader or KnowNow Live.

KnowNow Mobile has two components: A server-side component that you install and configure, and a user side component that users can download and install on their Blackberry or cell phones. This chapter describes how to install and configure KnowNow Mobile under the following headings:

Deploying KnowNow Mobile on the Server Side

Before you begin the server-side deployment and configuration of KnowNow Mobile, you will need to have installed the supported version of Tomcat as given under "KnowNow Mobile Requirements" on page 14. KnowNow provides KnowNow Mobile in two different files, depending on your needs.

- If you already have the correct version of Tomcat installed, then you just need the WAR file that contains KnowNow Mobile's server-side component.
- If you also need Tomcat, KnowNow provides a file with both the correct version of Tomcat and the WAR file. If you install Tomcat using this file, the WAR file will already be uploaded and running. However, you will still need to edit the *knownow.properties* file.

The Tomcat server must be hosted outside the firewall.

Once you have installed Tomcat and have downloaded the KnowNow Mobile WAR file, you will need to deploy and configure KnowNow Mobile as described under the following headings:

If You Have An Existing Tomcat Installation

If you have an existing Tomcat installation, you will need to download and deploy the KnowNow WAR file, then edit the *knownow.properties* file.

To install and configure KnowNow Mobile on the server side,

1. Download the KnowNow Mobile WAR file. Make note of the location you downloaded it to.

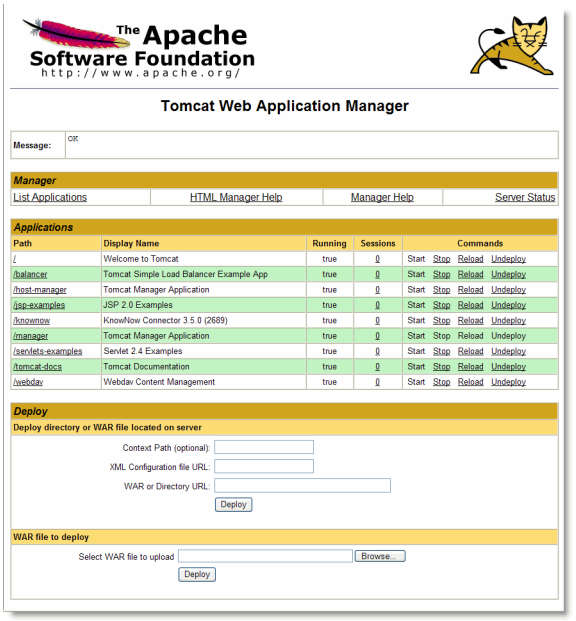
2. Access the Tomcat administration console.

Figure 3-1. The Tomcat administration console.

3. Click on the **Tomcat Manager** link. You will be prompted for your credentials. Out of the box, the Tomcat Manager credentials for a full installation are **admin** for the user and *admin* for the password. After you have entered correct credentials, the Tomcat Web Application Manager page opens. This page lists all applications that are running on the server. (In the figure, the application identified as /knownow is

KnowNow Mobile. You won't see this yet unless you have installed the version of Tomcat provided by KnowNow.)

Figure 3-2. The Tomcat Web Application Manager page.



4. Scroll to the section labeled **WAR file to deploy**.
5. Upload the KnowNow Mobile WAR file from the location you downloaded it to.
6. Edit the *knownow.properties* file (a Java properties file) as described under "Editing the Properties File" on page 40.
   a. At a minimum, set the LiveServer URL.
   b. In addition, set any other variables in the *knownow.properties* file as needed.
7. Once you have edited the *knownow.properties* file, return to the Tomcat Web Application Manager page.
8. In the Commands column, choose Stop to stop the /knownow application.
9. In the Commands column, choose Restart to restart the /knownow application. The KnowNow Mobile service is now available for mobile users.

If You Do Not Have An Existing Tomcat Installation

If you also need to install Tomcat, KnowNow provides a file with both the correct version of Tomcat and the WAR file. If you install Tomcat using this file, the WAR file will already be uploaded and running. However, you will still need to edit the *knownow.properties* file as described here.

To install and configure KnowNow Mobile on the server side,

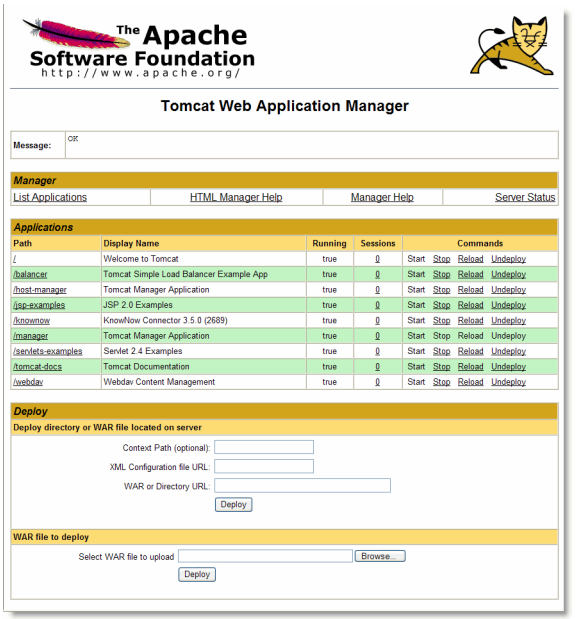
1. Download and install the KnowNow-provided file that contains Tomcat.
2. Edit the *knownow.properties* file (a Java properties file) as described under "Editing the Properties File" on page 40.
   a. At a minimum, set the LiveServer URL.
   b. In addition, set any other variables in the *knownow.properties* file as needed.
3. Once you have edited the *knownow.properties* file, access the Tomcat administration console.

Figure 3-3. The Tomcat administration console.

4. Click on the **Tomcat Manager** link. You will be prompted for your credentials. Out of the box, the Tomcat Manager credentials for a full installation are **admin** for the user and *admin* for the password. After you have entered correct credentials, the Tomcat Web Application Manager page opens. This page lists all applications that

are running on the server. The application identified as /knownow is KnowNow Mobile.

Figure 3-4. The Tomcat Web Application Manager page.



5. In the Commands column, choose **Stop** to stop the /knownow application.
6. In the Commands column, choose **Restart** to restart the /knownow application. The KnowNow Mobile service is now available for mobile users.

Editing the Properties File

At a minimum, when editing the *knownow.properties* file, you must supply the LiveServer URL. For credentials and logging into ESS, KnowNow Mobile uses a pass-through mechanism to connect to the ESS server, and the URL is essential for that purpose. There are other variables in the *knownow.properties* file that you may also wish to set, such as logging levels and other attributes. Those are described in

To configure the LiveServer URL in the properties file,

1. Open the *knownow.properties* file. This file will be located under your Tomcat installation in the \webapps\knownow\WEB-INF\classes\ directory.
2. Find the following line in this file:

```
host=http://localhost:8000/kn
```

3. Change *localhost* to the ESS server that KnowNow Mobile will communicate with.

The variables in the *knownow.properties* file are described in Table 3-1.

Table 3-1. Variables in the *knownow.properties* file.

Variable	Purpose	Default Value
host	Tells KnowNow Mobile what server to use. This setting is mandatory.	http://localhost:8000/kn
realm	Specifies the server's realm.	runtime
ess-proxy-host	ESS proxy host setting.	None
ess-proxy-port	ESS proxy port setting.	None
ess-proxy-userid	User ID for ESS proxy. If you set this value, you must also set ess-proxy-password and ess-proxy-realm as well.	None
ess-proxy-password	Password for ESS proxy user.	None
ess-proxy-realm	Realm for ESS proxy.	None
ess-proxy-buffersize	Buffer size for the ESS proxy. If you set a value here, you must also set a value for ess-proxy-auth-method.	None
ess-proxy-auth-method	ESS authorization/ authentication method.	digest
fs-proxy-host	Sets the host for a full story proxy server. The proxy server must be set to accept proxy requests from this application server.	None
fs-proxy-port	Sets the port for the full story proxy server.	None

Table 3-1. Variables in the *knownow.properties* file. *(continued)*

Variable	Purpose	Default Value
client.version	Indicates the client version. This value should be updated when a new client is deployed.	226
mailserver	The server to use for sending mail.	None
mailserver.username	If your mail server requires a login to send mail, use this value to set the user name.	None
mailserver.password	If your mail server requires a login to send mail, use this value to set the user's password.	None
UseReply-To	Some mail servers do not like it when mail is sent with the From header equal to the To header where the MTA is not the user's MTA. If Reply-ToSelf is set to true, mail is sent with the user in the ReplyTo header and the EMailNoReplyAddress in the From header. If UseReplyTo is set, all mail is sent with the user's address in Reply-To, and the mail message used is itemmail.replyto.message if it exists.	true
Reply-ToSelf	See above.	true
EMailNoReplyAddress	The email address to use for mail that requires that no reply be made to it.	no-reply@knownow.com

Table 3-1. Variables in the *knownow.properties* file. *(continued)*

Variable	Purpose	Default Value
EMailFromName	The name to use as the sender (who the email is from).	Knownow User
itemmail.message	The message for the email.	itemmail.message=\<span style=”font-family:Tahoma, Verdana, Arial, Helvetica, Geneva, sans-serif;font-size:10pt;”> \ Message from KnowNow subscriber <first> <last>: <message> \ Article from KnowNow: \<a href=”<link>” style=3D”font-weight:bold;”/><title></ a> <description>\ </ span>
itemmail.subject	The subject for the email.	itemmail.subject=<title>
itemmail.replyto.message	Message for email when UseReply-To is in effect. Just add a mail-to link around the user name.	itemmail.replyto.message=\<span style=”font-family:Tahoma, Verdana, Arial, Helvetica, Geneva, sans-serif;font-size:10pt;”> \ Message from KnowNow subscriber <a href=”mailto:<email>”><first> <last>: <message> \ Article from KnowNow: \<a href=”<link>” style=3D”font-weight:bold;”/><title></ a> <description>\ </ span>
debug	Application configuration. Set to true to get tons of detailed output.	false

Table 3-1. Variables in the *knownow.properties* file. *(continued)*

Variable	Purpose	Default Value
maxPullSize	Application configuration. Set the maximum response size in Kilobytes.	50
trackSubscriptions	Determines whether the application tracks subscription objects.	false
allowDupFeeds	Determines whether the application allows a single feed in multiple bookmarks.	false
suppressknlog	Determines whether the log file is suppressed.	true

Installing KnowNow Mobile on the Client Side

Mobile users can use their phones to download and run the KnowNow Mobile client. Users' phones must have Internet connectivity.The KnowNow Mobile client can then connect to the KnowNow Mobile server. The client makes it possible to browse categories, add channels, view items, and so on. Channels can be added in various ways. You can drag and drop a channel, add a URL through the **Add Channel** feature, or select from an existing list. Users can view the articles in the client's browser, or they can launch an external Web browser.

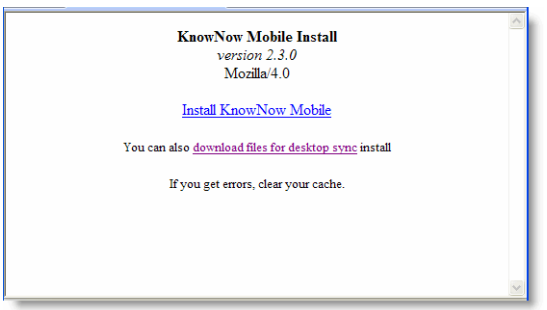
To download and install the KnowNow Mobile client,

1. Using the Blackberry or a compliant cell phone, browse to the following URL:

   `http://kn.mwap.at`

2. This opens a Web page that provides links for downloading the KnowNow Mobile client.

Figure 3-5. The KnowNow Mobile Install page.



3. Click on the **Install KnowNow Mobile** link. The correct client for your phone is detected and downloaded. (If there are difficulties with installing on a phone, you can also download files for desktop sync installation.)

4. When you run the client for the first time, it prompts you for the connectivity information—which server to connect to, your credentials, and so on. The client uses this connection information to connect to the correct server.

Chapter 4 Managing Categories and Group Subscriptions

In addition to using the Content Settings tab to add and create channels as described in Chapter 5 , "Managing Channels," you can also manage categories and group subscriptions on the same tab. If you wish, you can create your own set of default categories to replace the categories that are shipped with ESS. This chapter provides information on these tasks under the following headings:

Adding and Deleting Categories

ESS ships with a default set of categories. Although those may suit your purposes, ESS offers several different ways to manage categories:

- You can add and delete categories one at a time as described later in this section.
- You can create an entire new set of default categories (and channels) by editing certain files in the ESS installation directories as described under "Creating Custom Categories and Channels" on page 51.
- You can create a list of channels for SpeedReader users as described under "About the SpeedReader Presets Category" on page 50.
- You can use a special set of categories to manage subscriptions for groups of users as described under "Managing Subscriptions for Groups" on page 57.

Information on managing channels can be found in Chapter 5 , "Managing Channels."

The procedures for adding or deleting categories are provided under the following headings:

- "Adding Categories" on page 48
- "Deleting Categories" on page 49

Adding Categories

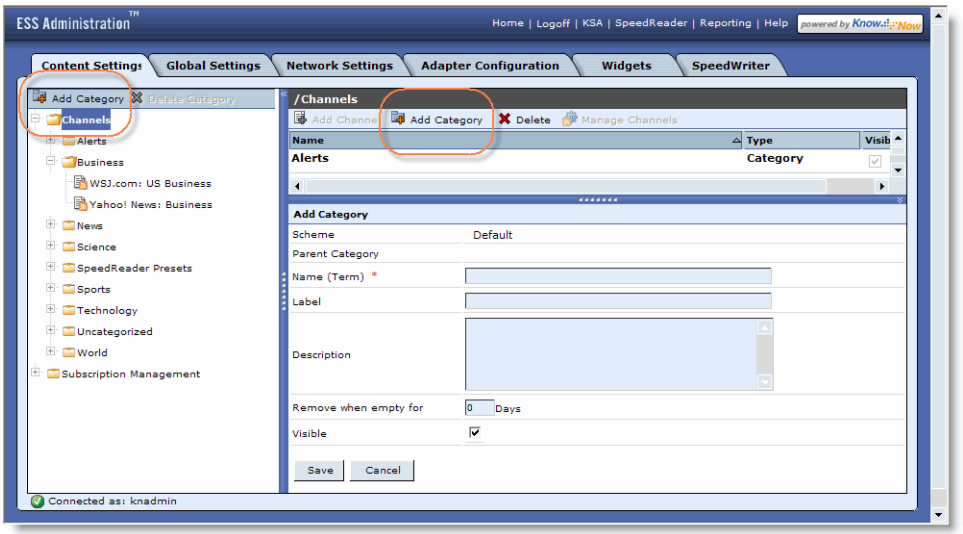
Categories can be added to the top level or as subcategories beneath other categories. Once you create a category, you can edit or delete it as described under "Deleting Categories" on page 49.

To add categories,

1. Access the Content Settings tab.
2. Highlight the top category or navigate to a category you wish to add a subcategory to.

3. Choose **Add Category** ( ). The Add Category page is displayed in the lower right pane.

Figure 4-1. Adding a new main category.



4. Enter a **Name (term)** (required) and optionally a **Label** and a **Description** for the new category.

   About the parent category: If you have chosen a parent category, it is automatically displayed above the **Name** field. If you are adding a category to the top category, no parent category is displayed. If you are adding a subcategory, its parent category or categories are displayed.

5. If you wish the category to be removed after a certain period of time with no activity in the category, set a number of days in the **Remove when empty for *0* Days** field.

6. Enable or disable **Visible**. This determines whether the category will be visible to users.

7. Choose **Save**. If the save is successful, a pop-up window appears and the new category is added to the list in alphabetical order.

Deleting Categories

To delete a category, select it and choose **Delete** (Delete), then confirm the deletion.

About the SpeedReader Presets Category

SpeedReader has an area for displaying preset channels. These are channels that users see when they access SpeedReader for the very first time. You can configure which channels are visible in that area by adding channels to the *SpeedReader Presets* category. You also choose which channel is to appear by default by using an option on the Global Settings tab as described under "User Defaults" on page 138.

To add one or more channels to the *SpeedReader Presets* category, select the *SpeedReader Presets* category, then follow the instructions under "Adding, Creating, and Deleting Channels" on page 67.

Creating Custom Categories and Channels

In addition to being able to add and delete categories individually in the default list of categories as described under "Adding and Deleting Categories" on page 48, and channels as described in Chapter 5 , "Managing Channels," you can also create your own custom set of default categories (and, if desired, channels) as described in this section.

Creating your own set of default categories and channels can be useful in a number of situations, such as when you wish to bulk load your custom settings while setting up preconfigured systems. In addition, using your own set of default categories and channels in conjunction with Subscription Management makes it easier for you to set up channels and subscribe users to them. For more information on Subscription Management, see "Managing Subscriptions for Groups" on page 57.

When ESS starts up, it loads two files, default-channels.opml and default-personal-channels.opml, which are both located in the */LiveServer_Install_Dir*/modules/kness/ directory. These files provide default categories and channels as described under the following headings:

- "default-channels.opml" on page 51
- "default-personal-channels.opml" on page 52
- "Editing the OPML Files" on page 52

default-channels.opml

default-channels.opml defines all the channels that need to be set up at initial load time in a system. It also can be used to set up default categories.

There are some predefined categories in ESS that are not created by this file. Those categories are: *Alerts*, *Subscription Management* (and its *All* subcategory), and *Uncategorized*. Once ESS is started, on the Content Settings tab you will see those predefined categories along with the categories and channels that are defined in default-channels.opml.

If default-channels.opml is not present in the */LiveServer_Install_Dir*/modules/kness/ directory, you will see only the predefined categories (*Alerts*, *Subscription Management*, *All*, and *Uncategorized*).

Note that users are not automatically subscribed to the channels set up in default-channels.opml, but those channels are available for users to subscribe to. Also, it is important to understand that default-channels.opml contains a superset of the channels that default-personal-channels.opml uses.

If you wish, you can edit default-channels.opml or replace it entirely so that your own default categories and channels are loaded into ESS when it starts up. However, the new file must have the exact same name. Information on editing default-channels.opml is provided under "Editing the OPML Files" on page 52.

default-personal-channels.opml

In previous releases, the default-personal-channels.opml file was used to define group-based automatic channel subscriptions. It contains a subset of all the channels that are defined in default-channels.opml; in other words, the existing publicly categorized channels in default-personal-channels.opml are taken from default-channels.opml. This means that if you need to use default-personal-channels.opml, make sure that any channels you wish to use are defined in default-channels.opml.

If a channel in default-personal-channels.opml is not placed under a <group> heading, then all users are automatically subscribed to that channel. Otherwise, if a channel is under a <group> heading, then only users of that group get subscribed to that channel.

However, with the addition of the Subscription Management feature, which you use to subscribe groups to channels, you no longer need to use the default-personal-channels.opml file. Instead, you should use the Subscription Management feature to create subscriptions on a group level. This is a good thing, because Subscription Management is a much faster and easier process. For more information on Subscription Management, see "Managing Subscriptions for Groups" on page 57.

For backward compatibility purposes only, this release supports the use of the default-personal-channels.opml file for setting up default public channels. However, the use of default-personal-channels.opml is now restricted. The file is processed *only once* during the first ESS startup and is never reloaded again. This file automatically subscribes users to the channels listed in it. User subscriptions can be made on a global basis (i.e., for all users in the system) or on a group basis (i.e., for all users in a particular group). Information on editing this file is provided under "Editing the OPML Files" on page 52.

Editing the OPML Files

The procedure provided in this section provides an overview of the tasks required to edit or create an OPML file (most likely, default-channels.opml) containing default channels and categories that will be loaded when ESS next starts up.

Caution: The steps provided in this section are only appropriate for setting up initial content in ESS. If you have already set up content, then following these steps will cause that content to be removed.

When editing the OPML files, there are some rules to follow.

Caution: Before touching these files, copy them to another location as a backup in case you wish to return to the original settings.

- There are two required tags: **xmlUrl** and **title** (or **text**; **title** and **text** are interchangeable).
- When creating a channel, you must specify a channel type. The supported types are rss, SpeedWriter, LiveAdapter, and Streaming Source.
- Ampersand characters (&) must be encoded the following way in all values:

  ```
  &amp;
  ```

  For example,

  ```
  <outline xmlUrl="http://www.fatwallet.com/rssfeed.php?c=18&amp;deals=50"
  text="FatWallet Hot Deals" />
  ```

- Channels enclosed in <outline title=”News”> are categorized in the *News* category.
- The annotated examples provide further guidelines.

To edit the OPML files,

1. Make a backup copy of the original files (which are located in the */LiveServer_Install_Dir*/modules/kness/ directory) and place the backups in a safe place.
2. Open the files in your text or XML editor of choice and edit the files as desired using well-formed XML. If you are familiar with XML, editing these files should be a fairly straightforward process.
3. After editing the files, stop the LiveServer.
4. Delete the */LiveServer_Install_Dir*/knrouter_db/ directory.

Caution: Removing the /knrouter_db/ directory will cause all existing content to be removed.

5. Restart the LiveServer and ESS. If all goes well, ESS reads the new files and displays the new default categories and channels.

The following examples provide some sample files that could be used to set up channels and subscriptions. For help and additional information, contact KnowNow Support.

Example 1: Creating a Set of Populated Categories

In this example, default-channels.opml creates a set of categories and populates them with some channels at ESS startup. These channels are then available to all users in the system. For more information on this file, see "default-channels.opml" on page 51.

Example 4-1. Creating a set of populated categories.

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<!-- OPML for default categories and default channel -->
<opml version="1.1">
<body>
<!-- The above three line are mandatory -->
    <!-- The 'title' for the outermost 'outline' indicates a 'category' -->
    <outline title="Moreover">
<!-- The outline that is contained in the above outline indicates a channel contained -->
<!-- in the above category. -->
        <!-- The channel type is mandatory. -->
        <outline type="rss"
        <!-- Below, the 'text' would be feedName for the channel that is being added. -->
        <!-- Mandatory. -->
            text="Top Stories (Moreover)"
        <!-- The image URL that is associated with the channel. Optional. -->
            imageUrl="http://i.moreover.com/pics/rss.gif"
        <!-- The HTML URL for the channel. Optional. -->
            htmlUrl="http://www.moreover.com/rss"
        <!-- The title for the channel. Optional. -->
            title="Moreover - Top stories"
        <!-- Visibility of channel to the users. Value is either true or false. -->
        <!-- Optional; if you don't set it, it will be set to true by default. -->
            visible="true"
        <!--The removability of channel by users. Values/defaults same as visible. -->
            removable="true"
        <!--The frequency unit for fetching from the channel. Optional. Default "min" --
>
            fetchFrequencyType="min"
        <!--The refresh minutes. Optional. Default "10" minutes. -->
            refreshMinutes="10"
        <!--The unit for the expiration of items in the channel. Optional. Default "hrs"
-->
            expirationOptionsType="hrs"
        <!--The value for the expiration options. Optional. Default "48" hrs. -->
            TTL="48"
        <!-- The XML url that actually contains the RSS data. Mandatory. -->
```

```
            xmlUrl="http://p.moreover.com/cgi-
local/page?o=rss002&amp;c=Top%20stories&amp;client_id=knownow_sapi_bv62"/>
    </outline>
<!-- The next one is similar to the one above, except that this is another category -->
<!-- called "News" and it contains another channel in it. -->
    <outline title="News">
        <outline type="rss"
            text="Top Stories (Moreover)"
            imageUrl="http://i.moreover.com/pics/rss.gif"
            htmlUrl="http://www.moreover.com/rss"
            title="Moreover - Top stories"
            xmlUrl="http://p.moreover.com/cgi-
local/page?o=rss002&amp;c=Top%20stories&amp;client_id=knownow_sapi_bv62"/>
    </outline>
</body>
</opml>
```

Example 2: Creating Group-Based Subscriptions

In this example, default-personal-channels.opml creates group-based subscriptions by subscribing the members of group1 to the four channels specified in the file. The line <outline group="group1"> maps to a permissions group in ESS. The contained <outline title="Alerts"> is ignored. If the specified channels are not publicly categorized (using default-channels.opml), they will end up in the *Uncategorized* category for the members of group1. This example is provided for backward compatibility only. For more information, see "default-personal-channels.opml" on page 52.

Example 4-2. Creating group-based subscriptions.

```
<opml version="1.1">
<body>
    <!-- The outline with a group attribute indicates that the following channel -->
    <!-- needs to be subscribed to by all the users in the "group1" group. -->
    <outline group="group1">
        <!--This next outline is there for a convenience and is not used -->
        <outline title="Alerts">
            <!--This outline is the same as the channel outline in the default-
channels.opml -->
            <outline type="rss" text="One"
xmlUrl="http://www.npr.org/rss/rss.php?id=1043" title="NPR Topics: Pop Music" />
    <!--This outline is the same as the channel outline in the default-channels.opml -->
            <outline type="rss" text="Two"
xmlUrl="http://www.rollingstone.com/rssxml/music_news.xml" title="RollingStone.com Music
News" />
            <outline xmlUrl="http://news.google.com/?output=rss" title="Google News" />
```

```
            <outline xmlUrl="http://www.azcentral.com/rss/feeds/news.xml"
title="azcentral.com news" />
    <!-- The above four lines subscribe the channels to all the users in group1 -->
        </outline>
    </outline>
</body>
</opml>
```

Example 3: Setting Up Channel Subscriptions at ESS Startup

In this example, default-personal-channels.opml creates a subscription to a Moreover channel (indicated by the **xmlURL** element). Since there is no <group> heading in this example, then all users will be automatically subscribed to the channel in this file. This example is provided for backward compatibility only. For more information, see "default-personal-channels.opml" on page 52.

Example 4-3. Setting up channel subscriptions at ESS startup.

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<opml version="1.0">
<head><title>Generated by KnowNow - modified for group group1</title></head>
<body>
<!--The above lines are mandatory. -->
    <!-- The outline title here is a necessary convenience to indicate this channel -->
    <!-- is present in the Moreover category in the public space. Other than that, -->
    <!-- this outline is not used. -->
    <outline title="Moreover">
    <!--The following channel information is the same as in default-personal-
channels.opml. -->
        <outline type="rss"
            text="Top Stories (Moreover)"
            imageUrl="http://i.moreover.com/pics/rss.gif"
            htmlUrl="http://www.moreover.com/rss"
            title="Moreover - Top stories"
            xmlUrl="http://p.moreover.com/cgi-
local/page?o=rss002&amp;c=Top%20stories&amp;client_id=knownow_sapi_bv62"/>
    </outline>
</body>
</opml>
```

Managing Subscriptions for Groups

Sometimes you may wish to create subscriptions for an entire group of users, so that the users are automatically subscribed to one or more channels without you (or they) having to manually subscribe to each channel individually (in SpeedReader or the KnowNow Alerts Desktop). To achieve that goal, you first add groups to ESS. Once you have added the desired groups, you can either use the *Subscription Management* category to assign channels to those groups, or, when creating individual channels, you can use the Group Subscriptions tab to subscribe groups to those channels as you create those channels.

When channel subscriptions have been specified using Subscription Management, when users are later added to a group, they will automatically receive those subscriptions, instead of you having to manually subscribe them to those channels.

If you were previously using the default-personal-channels.opml files to perform this function, you can now use Subscription Management to achieve the same result. For more information on that file, see "default-personal-channels.opml" on page 52.

When you add groups, you are adding your organization's groups that are managed by KnowNow's LiveServer (including LiveServer-specific groups, such as KnowNow Administrators). You can use the KnowNow System Administration console to add or delete users and groups, add or delete users from groups, manage permissions for those users and groups, and so on as described in the *KnowNow LiveServer Administration Guide*.

The following sections provide more information on this feature:

Subscription Management and User Notifications

A subscription is always owned by the user with that subscription. Depending on how the subscription is set up, users might not be able to remove the subscription or change its filters, but users always control the categories they place their subscriptions in.

If a user is logged in when you create a group subscription that includes them, or if you have enabled the Group Subscription Management (GSM) System Notifications enabled option, subscribers will be notified of changes. Otherwise, when a user logs in, they will be subscribed to:

- All the channels they have explicitly subscribed themselves to.
- All the channels that they were previously subscribed to via Subscription Management.
- Their alerts channel.
- Any channels that Subscription Management has determined they must subscribe to while the user was not logged in.

Users of the KnowNow Desktop will receive notifications through whichever Alerts Desktop interface(s) they have active (Internet Explorer, Mozilla Firefox, Google Gadget, or the Deskbar).

Subscriptions can be globally removed from a group by deleting the subscription in the group's category.

Before proceeding, decide which subscriptions you want to set up automatic group subscriptions for, and which groups should receive those automatic subscriptions.

For other information on managing categories and channels, see "Adding and Deleting Categories" on page 48 and "Adding, Creating, and Deleting Channels" on page 67.

Adding Groups

Subscription management starts with the *Subscription Management* category. When that category is selected, you begin by adding groups. For each group you add, a new subcategory is created under the *Subscription Management* category. Once that group's category has been created, you can add channels to that group's category as described under "Managing Group Channel Subscriptions" on page 60. After you add one or more channels to a group's category, every user in the group will be automatically subscribed to each of those channels. When new users are added to the group, they will also be automatically subscribed as well.

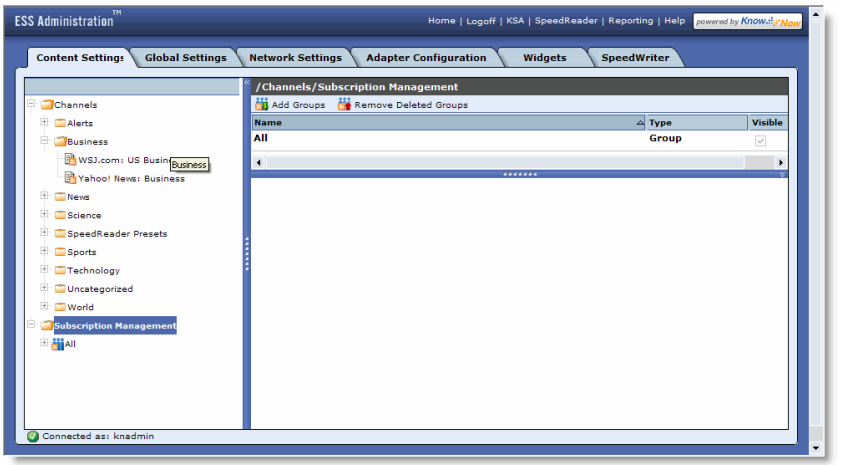
You can also use the Group Subscriptions tab when creating individual channels to assign group subscriptions to that channel. For more information, see the instructions for creating the individual types of channels in Chapter 5 , "Managing Channels."

You can keep the Subscription Management scheme in sync with the underlying group scheme in ESS and LiveServer using the ESS Administration console.

To add a group,

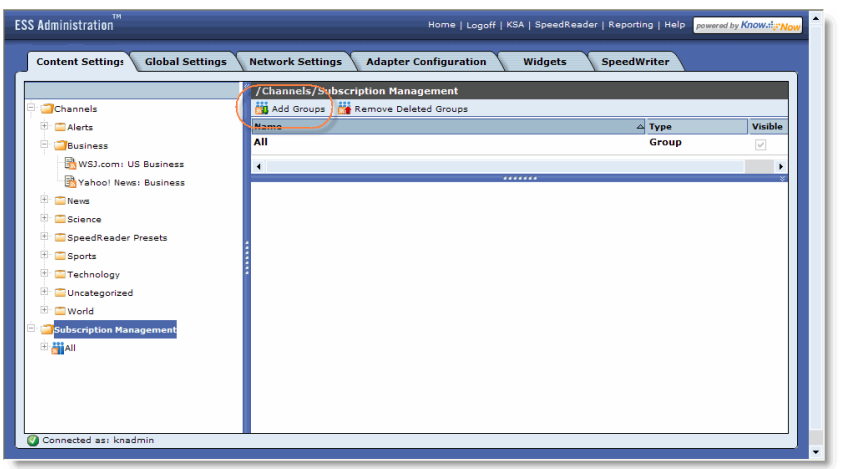
1. Click on the *Subscription Management* category.

Figure 4-2. The Subscription Management category.



2. Choose **Add Groups** ( ). This opens the Add Groups dialog box.

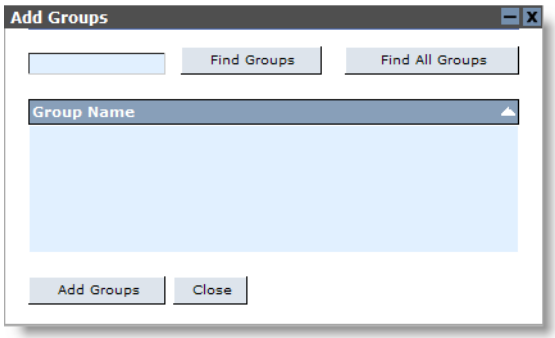
Figure 4-3. The location of the Add Groups command.



3. In the Add Groups dialog box, search for the desired group by entering a search string and choosing **Find Groups**, or search for all available groups by choosing **Find All Groups**. If a group has already been added, it won't appear in the search

results. Once you have search results, you can use the arrow in the Group Name column heading to sort the groups in ascending or descending alphabetical order.

Figure 4-4. The Add Groups dialog box.



4. Click on a group, then choose **Add Groups**. (You can also Shift+Click or Ctrl+Click group names to select more than one group.) A new subcategory under the *Subscription Management* category is created for the selected group.
5. Choose **Close** to close the Add Groups dialog box.

Now you are ready to add channels to that group.

Managing Group Channel Subscriptions

Once you have added one or more groups into ESS, you can add channel subscriptions to each group in one of two ways: Either as described here, using the group's category under the *Subscription Management* category, or when creating channels, using the Group Subscriptions tab.

Note: If you want all groups to be automatically subscribed to one or more channels, use the **All** channel. The following procedure can be used to do so.

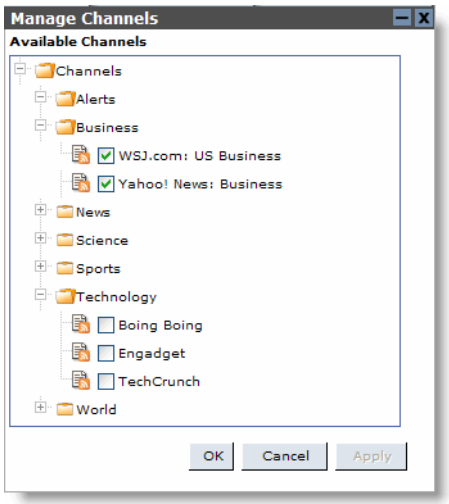
If you don't want users to be able to remove an automatically created subscription, disable the **Removable** option for that channel. The **Removable** option is a checkbox on the Properties tab for each channel.

To manage channels using the Subscription Management category,

1. Click on the group's category under *Subscription Management*. This makes available the **Manage Channels** command (in the same area as the Add Groups command).

2. Choose **Manage Channels**. The Manage Channels dialog box opens.

Figure 4-5. The Manage Channels dialog box.

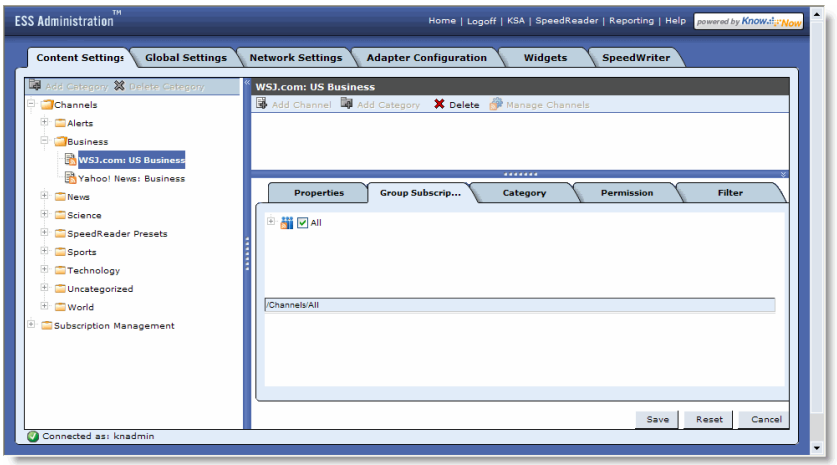


3. Navigate to the channel(s) you want to assign to or remove from this group. To add the channel subscription to this group, enable the checkbox by the channel. To remove the channel subscription, disable the checkbox.

4. Choose **Apply** to add (or remove) the channel subscription(s) while keeping this dialog box open, or choose **OK** to add (or remove) the subscription(s) and close the dialog box. Choose **Cancel** to close the dialog box without making any changes.

Alternatively, if you are creating a channel, you can assign that channel to one or more groups using the Group Subscriptions tab. Here, when creating a channel, you can choose one or more groups that you wish to have automatically subscribed to that channel. For more information on creating channels, see Chapter 5 , "Managing Channels."

Figure 4-6. The Group Subscriptions tab.



Deleting Groups

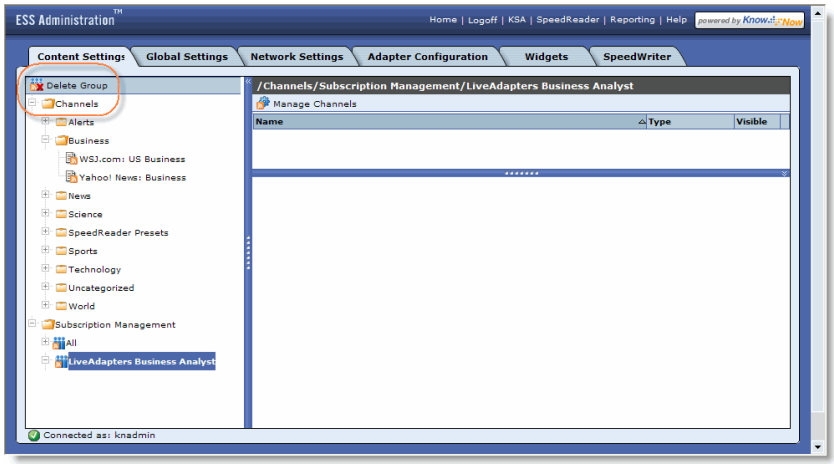
You can only delete a group that has no subscriptions in it.

To delete a group,

1. Select the group.

2. Choose **Delete Group** ( ). The group is deleted. As mentioned, deleting a group will *not* delete the subscriptions for the members of that group.

Figure 4-7. The location of the Delete Group command.



3. To remove the deleted group, choose **Remove Deleted Group** ( ).

Using the Channel Guide

The Channel Guide provides a number of RSS subscriptions organized by categories, with RSS icons ( ) indicating each channel. The categories and channels in the Channel Guide are the same as the categories and channels in the Content Settings tab. If you change the categories and channels, then those new categories and channels will be displayed in the Channel Guide. Information on changing channels and categories can be found as described under "Adding and Deleting Categories" on page 48 and "Creating Custom Categories and Channels" on page 51 and in Chapter 5 , "Managing Channels."

The Channel Guide is available through the KnowNow Alerts Desktop, and is also available by entering the following URL in your browser address field.

http://*host*:*port*/kness/channel_guide/

Figure 4-8. The Channel Guide.

Although you can access the Channel Guide this way, in order to use the Channel Guide, you must have the KnowNow Alerts Desktop installed. Once the Channel Guide is open,

- You can navigate to a desired channel by clicking on the category names.
- You can subscribe to a channel by dragging the RSS icon for that channel to the **Add Channel** field in one of the KnowNow Alerts Desktop interfaces (the Internet Explorer, Mozilla Firefox, or Windows task tray toolbars).
- You can view items by clicking on the channel name.

Chapter 5 Managing Channels

Use the Content Settings tab to manage the channels that are to be listed in the Preset Channels area of SpeedReader. Here, you can add, update, and delete channels and categories, assign permissions, and perform other channel configuration and security tasks. This chapter describes the Content Settings tab under the following headings. For information on managing categories and group channel subscriptions, see Chapter 4 , "Managing Categories and Group Subscriptions."

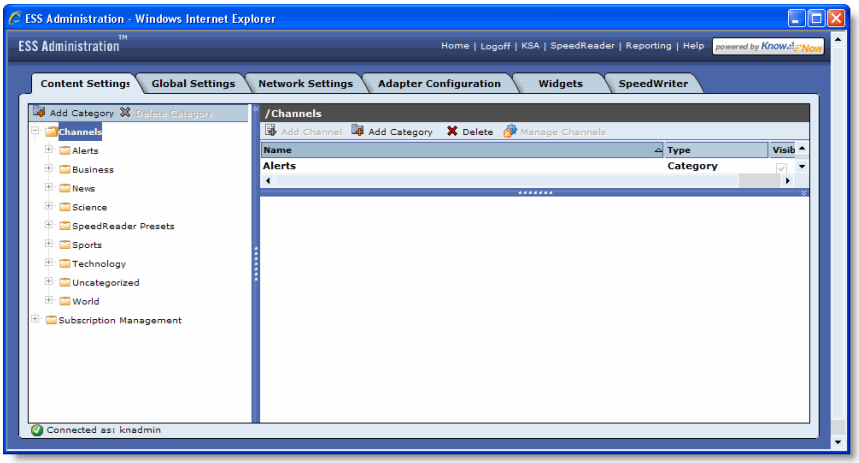
About Content Settings

KnowNow ESS ships with a default set of categories that includes some default general and enterprise categories. These categories are displayed as preset categories in SpeedReader. You can manage these preset categories and channels for your users using the Content Settings tab. To make these preset categories visible to end users, or to hide them from end users, as well as to set other global options, use the Global Settings tab as described in Chapter 6 , "Global Settings, Network Settings, and Widgets."

In addition, if you want to create a different set of categories and channels, you can do that as well. Information on creating new categories can be found in Chapter 4 , "Managing Categories and Group Subscriptions."

To access the Content Settings tab, open the ESS Administration console as described under "Accessing ESS" on page 22.

Figure 5-1. The Content Settings tab.



The remainder of this chapter describes how to add or create channels using the Content Settings tab. For information on managing categories (including creating custom categories) and on managing group channel subscriptions, see Chapter 4 , "Managing Categories and Group Subscriptions."

Adding, Creating, and Deleting Channels

You can add channels to the list of channel categories, including to the *SpeedReader Presets* category. Those channels can then be made available to users. When adding a channel, you select one out of a set of several sources for the channel; depending on the source, you will either be adding a channel using an existing channel source or creating a new channel. Table 5-1 summarizes the different types of channels you can add or create and provides links to instructions for creating each type of channel.

Table 5-1. Channel types.

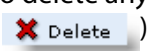
Channel Type	Description	For Information, See
Aggregated	This type of channel combines items from two or more channels and delivers them in one channel.	"Creating Aggregated Channels" on page 73
LiveAdapter: Microsoft Exchange	Once you configure ESS with your Microsoft Exchange information, you can create channels that share information with Microsoft Exchange.	"Creating LiveAdapter Channels" on page 78
LiveAdapter: RDBMS	With this option, you create a LiveAdapter RDBMS business method query as a channel source for the channel items. If you do not have LiveAdapters installed, this option will not appear.	"Creating LiveAdapter Channels" on page 78 For more information on the LiveAdapter for RDBMS and business methods, see the *KnowNow LiveAdapters User's Guide*.
Moreover	With this option, you add channels from Moreover's set of channels. This type of channel is available when you have configured a Moreover source.	"Adding Moreover Channels" on page 108
RSS Source	With this option, you can specify any existing URL that points to valid RSS-formatted source material.	"Adding RSS Channels" on page 113
SpeedWriter	With this option, you are creating an empty channel that can later be populated with custom-created items.	"Creating SpeedWriter Channels" on page 118

Table 5-1. Channel types. *(continued)*

Channel Type	Description	For Information, See
Sphere	WIth this option, you can create a channel that uses Sphere to search for specified key words or phrases. This type of channel is available when you have configured Sphere.	"Creating LiveAdapter for Sphere Channels" on page 99
Streaming Source	With this option, you create a streaming source channel (a channel that produces continuous output). This process creates a topic that you can then publish your streaming data to.	"Creating Streaming Source Channels" on page 122

In addition, you can create custom default categories and channels; for more information, see Chapter 4 , "Managing Categories and Group Subscriptions.".

Deleting Channels

To delete any kind of channel but aggregate channels, select it and choose **Delete** ().

If you wish to delete aggregate channels, you can do it in different ways.

- You can delete the category for the aggregate channel, which then also deletes the aggregate channel.
- You can delete the aggregate channel using the channel-source-specific delete request, in which case both the aggregate channel and the category are deleted.

However, you cannot delete an aggregate channel using the channel utilities **Delete** request, or by deleting the channel topic. In those cases, the category topic remains. If you encounter this event, delete the category topic manually using either the KnowNow System Administration console or the Channel Manager.

Navigating When Adding, Creating, or Editing Channels

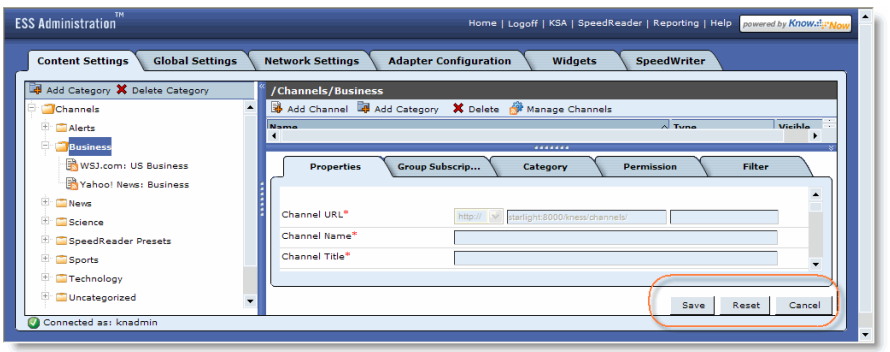
When adding, creating, or editing channels, you will notice the **Save**, **Reset**, and **Cancel** buttons (circled in Figure 5-2).

- The **Save** button saves the channel.
- The **Reset** button clears all the information you've entered so you can start over.
- The **Cancel** button cancels the operation.

- Depending on what kind of channel you are creating, there may also be a **Validate** button, which checks the channel to see if it is valid.

When creating a LiveAdapter business method channel, there are additional buttons that are part of the LiveAdapter business method wizard. These buttons are described under "Creating LiveAdapter Channels" on page 78.

Figure 5-2. Navigation and channel creation buttons.



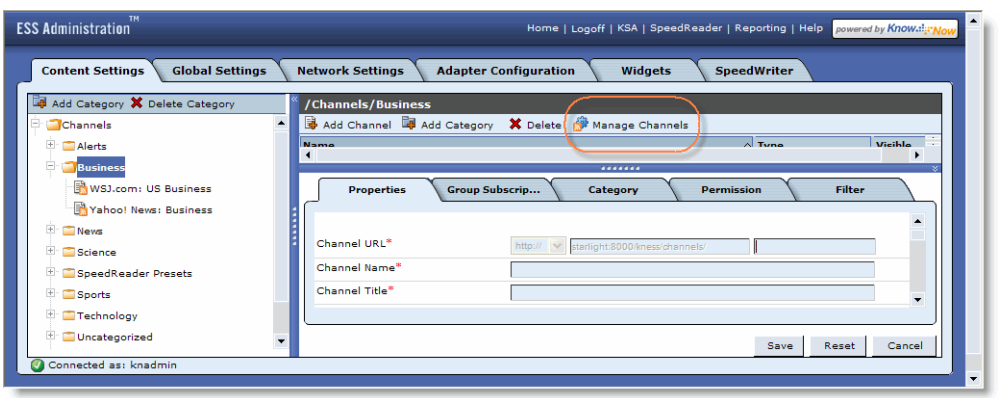
Adding or Removing Multiple Channels at a Time

When you create a channel, you associate it with one or more categories. You can use the Manage Channels feature to add multiple channels to a category or to remove multiple channels from a category.

To access and use the Manage Channels window,

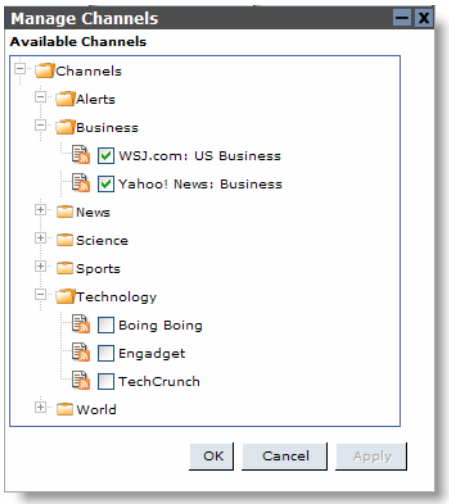
1. Click on the category whose channels you want to manage. When you do this, the **Manage Channels** command is enabled.

Figure 5-3. The location of the Manage Channels command.



2. Click on **Manage Channels** ( ). The Manage Channels window opens. Here, it is shown expanded to show available channels in a different category.

Figure 5-4. The Manage Channels window.

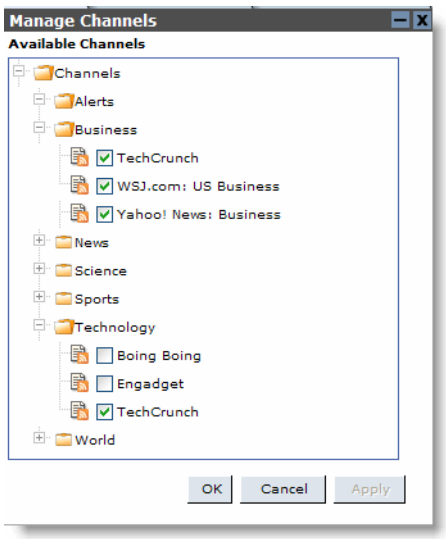


3. Browse to a channel you want to add to the selected category and enable the checkmark next to that channel. To remove a channel from a category, remove the checkmark next to that channel. You can add or remove any number of channels in this step.

4. Choose **Apply** to save your changes and continue making changes, or **OK** to save your changes and close the window. The changes take place immediately when

you choose **Apply** or **OK**. The **Cancel** command only cancels any changes you haven't applied.

Figure 5-5. A channel has been added to a category.



Setting Global Defaults for Channel Options

It is possible to set global defaults for certain options for all the channel types. These defaults are set on the Adapter Configuration tab. The options that can be configured for each channel type are listed in Table 5-2.

Table 5-2. Configurable channel defaults.

Channel Type	Configurable Defaults
Aggregated (see page 73)	Maximum no of Items Channel Item Expiration
LiveAdapter: Microsoft Exchange (see page 79)	Maximum no of Items Channel Item Expiration
LiveAdapter: RDBMS (see page 92)	Maximum no of Items
Moreover (see page 108)	Maximum no of Items Fetch Frequency Channel Item Expiration
RSS Source (see page 113)	Maximum no of Items Fetch Frequency Channel Item Expiration
SpeedWriter (see page 118)	Maximum no of Items
Sphere (see page 99)	Maximum no of Items Fetch Frequency Channel Item Expiration
Streaming Source (see page 122)	Maximum no of Items

To set the global defaults for one of these channel types,

1. Access the Adapter Configuration tab.
2. In the drop-down list, select the channel type for which you wish to set the default values. For **Maximum no of Items**, we recommend that you set the value to double the number of items a feed typically has.
3. Choose **OK**. One or more fields for the specific channel appear.
4. Enter the desired new default values.
5. Choose **Save**.

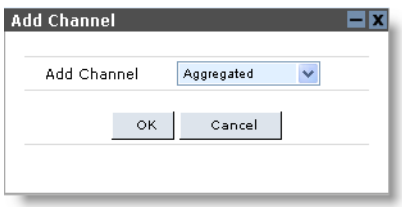
Creating Aggregated Channels

Aggregated channels are channels that contain items from two or more channels. To create an aggregated channel, select two or more channels from the list of channels. The new, aggregated channel displays all items from each channel. Filters can be applied to aggregated channels just as they can be applied to any other channel; for more information on filters, see "Understanding and Creating Filters" on page 132.

To create an aggregated channel,

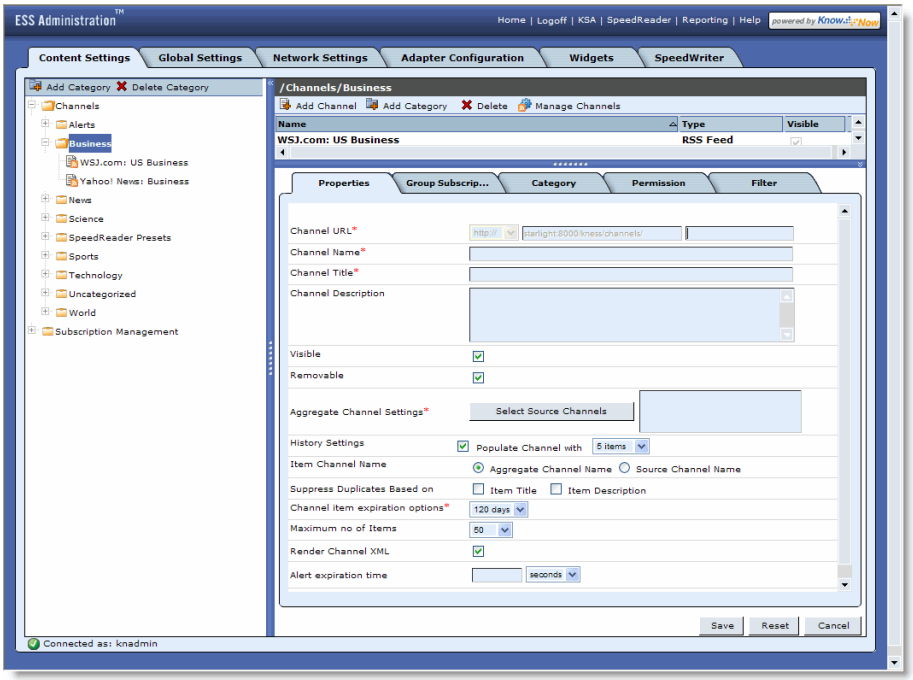
1. Access the Content Settings tab.
2. Navigate to the category where you wish to add the channel.
3. In the upper right pane, choose **Add Channel** (). The Add Channel dialog box opens.

Figure 5-6. Adding a new channel.



4. Select **Aggregated**. This displays a set of tabs in the lower right pane for creating an aggregated channel.

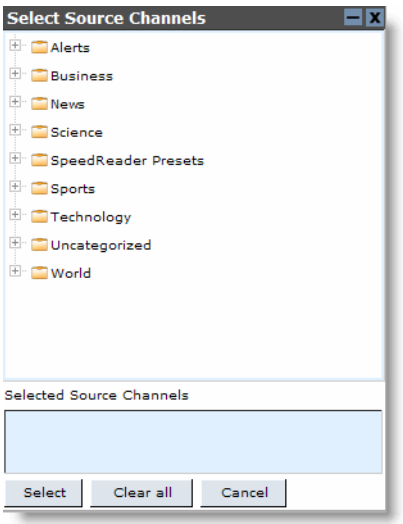
Figure 5-7. The Properties tab for an aggregated channel.



5. On the Properties tab, you can set properties (accessed, if need be, by scrolling down) as described in step 6 through step 19.
6. In the **Channel URL** field, enter the name of the file that is to contain the aggregated information. The initial portions of the file name have already been filled in; you just need to enter the file name itself.
7. In the **Channel Name** field, enter a name for the aggregated channel. This name is displayed in Content Settings and SpeedReader.
8. In the **Channel Title** field, enter a title for the channel.
9. Optionally, in the **Channel Description** field, enter a description for the channel.
10. Enable or disable **Visible**. This determines whether the channel will be visible to users in SpeedReader's list of available channels. This option is available for all channels, regardless of type, and is enabled by default.
11. Enable or disable **Removable**. This determines whether users can remove the channel from their personal lists.

12. For the **Aggregate Channel Settings**, choose **Select Source Channels**. The Select Source Channels dialog box opens. Navigate to and click on the channels you wish to aggregate. As you click on each channel, it appears in the box below the list. If you wish to clear the selections and start over, choose **Clear All**. When the list is as you wish it to be, choose **Select**. The Select Source Channels dialog box closes and the selected channels appear in the field to the right of the **Select Source Channels** button.

Figure 5-8. Selecting source channels.



If you later decide you wish to change the channels for this aggregated channel, click on the channel, open this dialog box again, choose **Clear All**, and choose new channels.

13. To populate the channel with some items, next to **History Settings**, enable **Populate Channel With** and select a number of items from the drop-down list. When the channel is created, that number of items (choosing from the most recent) will be displayed.

14. For individual items in this aggregated channel, you can choose how you wish to have the **Item Channel Name** be identified. Your choices are **Aggregate Channel Name** (the name of the aggregate channel you are creating) or **Source Channel Name** (the original, source channel's name).

15. Normally, duplicate items are identified using the item's GUID. Those duplicate items are not displayed. For an optional, alternate method of identifying duplicate items, use the **Suppress Duplicates based on** option. With this method, you can

specify that the **Item Title**, **Item Description**, or both are to be used to identify duplicate items.

- If you select **Item Title**, then if a second item arrives that has the identical title of an already-arrived item, the second item will be ignored, even if the description for both items is different.
- If you select **Item Description**, then if a second item arrives that has the identical description of an already-arrived item, the second item will be ignored, even if the title for both items is different.
- If you select both options, then an item will only be considered a duplicate if both the title and the description are identical.

16. Select a value for **Channel item expiration options**. When this value is reached, a channel item expires and is no longer displayed.
17. Select a **Maximum no of Items** (available choices are in set quantities starting at 50 and ending with 1000). This option limits the number of items that can be displayed in the channel at a time. The default value is **50**.
18. Enable or disable the **Render Channel XML** option. This option applies to internal channels (channels other than RSS source type that have a URL http://*liveserverhostname*:*port*/kness/channels/*channelspecificpath*). This option will persist these channels to the file system so that third-party RSS readers can access RSS files at the given URL.

    Note that the channel content *must* be in well-formed XHTML or XML in order to be rendered into RSS feeds that are readable by third-party readers. For example, all elements must be closed by , all <li> elements must be closed with , all break, image, and other such elements must have a closing forward slash (
,), and so on.
19. Set an expiration time for alerts for each item using the **Alert expiration time** option. Select the unit of time to seconds, hours, days, weeks, or months, and specify how many of those units you want to be used. For example, you could select **hours** as the unit of time, and enter **3** in the field, so that alerts will expire after three hours.
20. On the Group Subscriptions tab, select which groups, if any, you wish to globally assign this channel to. For information on managing group subscriptions, see "Managing Subscriptions for Groups" on page 57.
21. On the Category tab, assign the category or categories you wish this channel to appear under. Users cannot change this assignment, though they can assign the channel to additional categories if they wish.

22. On the Permission tab, set the permissions for access to this channel. This includes setting permissions for users and groups. For important information about permissions, see "Permissions" on page 130.

23. On the Filter tab, you can specify search terms in order to filter items. Filters are applied to every item in a channel, so that items that do not match the filter are not posted to ESS. For more information, see "Understanding and Creating Filters" on page 132.

24. Choose **Save** to save the channel. A new top-level category, Aggregated Channels, appears, containing the new aggregated channel. Also, a message pops up saying that the channel has been saved and asking if you wish to add another channel of this type. Choose **Yes** to create another channel of the same type, or **No** to exit the process.

Creating LiveAdapter Channels

You can create channels based on special-purpose KnowNow LiveAdapter modules. One such module is KnowNow's LiveAdapter for RDBMS; another is KnowNow's LiveAdapter for Microsoft Exchange; a third is KnowNow's LiveAdapter for Sphere.

- Using the LiveAdapter for RDBMS, you create business methods as channels.
- Using the LiveAdapter for Microsoft Exchange, you set up an interchange between Microsoft Exchange and ESS so that Exchange events can be shared.
- Using the LiveAdapter for Sphere, you can set up a connection with Sphere so that you can create channels using the Sphere capabilities.

The setup for each of these LiveAdapter modules is described under the following sections:

- "Using the LiveAdapter for Microsoft Exchange" on page 79
- "Creating LiveAdapter Channels Using Business Methods" on page 92
- "Creating LiveAdapter for Sphere Channels" on page 99

Using the LiveAdapter for Microsoft Exchange

Using KnowNow's LiveAdapter for Microsoft Exchange, you can syndicate content in Exchange stores such as private and public folders, calendars, task lists, and so on, to ESS. You can also synchronize and make aggregated content in ESS available to clients connecting to an Exchange server. Once you've configured and set up this LiveAdapter,

- Emails posted by users to email folders on Exchange will immediately be transmitted to ESS in the form of RSS-formatted events.
- Exchange folders are mapped 1-to-1 to shared, global, ESS channels with the exact same name.
- ESS users can subscribe to those channels and specify personal delivery options to SpeedReader and the KnowNow Alerts Desktop.

Exchange users can continue to publish content to Exchange Stores via email or using Exchange clients like Outlook. The KnowNow LiveAdapter for Microsoft Exchange will have open subscriptions for updates to folders mapped as ESS channels, and publishes Exchange content to ESS when it receives any updates to those channels.

At a high level, the steps for configuring KnowNow's LiveAdapter for Microsoft Exchange and creating channels for it are

1. Determine whether you need to import your Exchange server's certificate as described under "Step 1: Determine the Need to Import a Self-Signed Certificate" on page 80.
2. Configure the LiveAdapter for Microsoft Exchange with your Exchange server's information as described under "Step 2: Configure the LiveAdapter for Microsoft Exchange" on page 82.
3. Create your LiveAdapter for Microsoft Exchange channels as described under "Step 3: Create LiveAdapter for Microsoft Exchange Channels" on page 83.
4. If desired, add custom properties for use in Exchange channels as described under "Step 4 (Optional): Add Custom Properties to the Item Builder" on page 89.
5. If you later move an Exchange folder, you will need to update ESS as described under "Moving or Renaming Exchange Folders" on page 91.

Step 1: Determine the Need to Import a Self-Signed Certificate

The LiveAdapter for Microsoft Exchange supports connections to a Microsoft Exchange Server using the HTTPS protocol. If the Exchange server is configured to use a server-side digital certificate that has been issued by a well-known public certificate authority (CA), then the LiveAdapter should start and function out of the box without the need for any configuration changes.

However, if the Exchange server has been configured with a server-side digital certificate that has not been issued by a well-known public CA, or if the LiveAdapter doesn't start and function, then the trusted root of the CA generating the server's certificate must be made available to the LiveAdapter.

To do so, you will need to use the *keytool.exe* utility to import a trusted root certificate of the issuing certificate authority into the cacerts keyStore of the JRE that is shipped with LiveServer. Once you have imported the certificate, you can configure the LiveAdapter for Microsoft Exchange.

To create a keyStore file,

1. Install JSDK or JRE.
2. Open a command prompt.
3. Go to the *JSDK/JRE Home*/bin/ folder, which contains the *keytool.exe* utility.
4. Run *keytool.exe* using the following command:

   ```
   keytool -import -trustcacerts -file certificate_filepath -keystore
   storename
   ```

   In this command, *certificate_filepath* is the path to the certificate file and *storename* is the name of keyStore file. This file must be **microsoft_exchange_keystore** for the LiveAdapter for Microsoft Exchange.
5. You will be prompted for a password. Enter any password.
6. Next, you are asked to confirm the addition of the certificate to the truststore. Enter **yes**.
7. A file with the specified storename is generated in the same folder. You can specify an absolute path for the keyStore file, in which case the keyStore file is created there in the directory you specify.

8. Copy this keyStore file to the /security/ folder.

Note: The keyStore file should be placed in the /security/ directory only when your Exchange server requires SSL certificates.

The location of the /security/ folder (and of the cacerts file) is

LiveServer_home/lib/j2re1.4.2_06/lib/security/

For example, on Windows, the default location is

C:\Program Files\KnowNow\Server\lib\j2re1.4.2_06\lib\security\

And on Linux, the default location is

/opt/knserver/lib/j2re1.4.2_06/lib/security/

keyStore Example

In the following example,

- The LiveServer is installed on Windows at C:\Program Files\KnowNow\Server\.
- JSDK is installed in C:\J2SDK\.
- The administrator in the example has an SSL certificate named *certificate.cer* located in C:\SSL\certificates\.

To create a keyStore file using this example scenario,

1. Open a command prompt.
2. Go to C:\J2SDK\bin\.
3. Run this command:

```
keytool -import -trustcacerts -file C:\SSL\certificates\certificate.cer -
keystore microsoft_exchange_keystore
```

4. When asked for a password, enter any password.
5. On confirmation for certificate addition, choose **yes**.
6. A keyStore file named **microsoft_exchange_keystore** is created in C:\J2SDK\bin\. Copy this file into the following directory:

```
C:\Program Files\KnowNow\Server\lib\j2re1.4.2_06\lib\security\
```

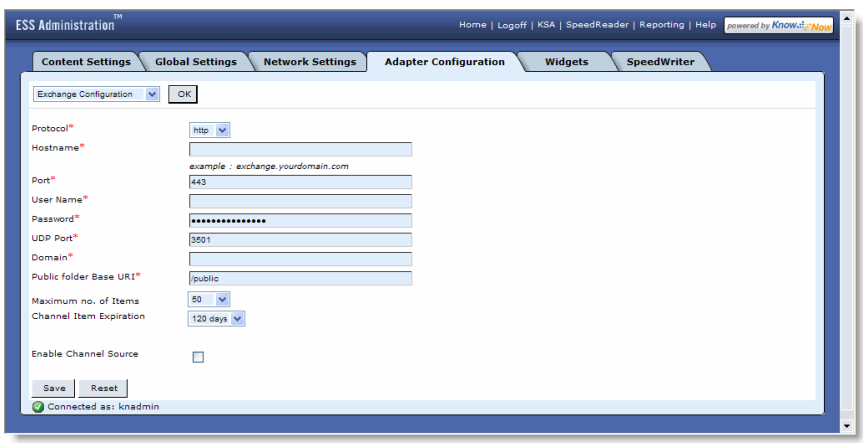
Step 2: Configure the LiveAdapter for Microsoft Exchange

Before you can create a LiveAdapter for Microsoft Exchange channel, you need to configure the LiveAdapter so that it can connect with your Exchange server. If you have a self-signed certificate, you may need to import that certificate. For more information, see "Step 1: Determine the Need to Import a Self-Signed Certificate" on page 80.

To configure the LiveAdapter for Microsoft Exchange,

1. Access the Adapter Configuration tab. There, select **Exchange Configuration** in the drop-down box, then choose **OK**. ESS displays the fields for configuring the LiveAdapter.

Figure 5-9. Configuring the LiveAdapter for Microsoft Exchange.



2. All the following fields are required. Note that these properties can also be set using the KnowNow System Administration console as described in the *KnowNow LiveServer Administration Guide*.

   a. Choose either the HTTP or HTTPS **Protocol**.

   b. In the **Hostname** field, enter your Exchange server's host name; for example, *exchange.example.com*.

   c. Enter the **Port** number for the Exchange server.

   d. Enter a valid Exchange user name and the password for that user in the **Username** and **Password** fields.

   e. Enter the **UDP** port on which the LiveAdapter for Microsoft Exchange will receive UDP notifications for updates from Exchange server.

f. Enter the **Domain** for the Exchange server; for example, *ExampleDomain*.

g. Enter a **Public folder Base URI**; for example, */public*. This will be used as the base URI in the LiveServer. This folder is basically the repository domain.

3. If you want this Exchange server to be used as a channel source, place a checkmark in the **Enable Channel Source** box.

4. Choose **Save**. The LiveServer must be restarted for the changes to take effect.

Step 3: Create LiveAdapter for Microsoft Exchange Channels

After you've configured the LiveAdapter for Microsoft exchange (as described under "Step 2: Configure the LiveAdapter for Microsoft Exchange" on page 82), and added custom properties (if desired) as described under "Step 4 (Optional): Add Custom Properties to the Item Builder" on page 89, you can create LiveAdapter for Microsoft Exchange channels. During this process, you will be specifying channel properties, selecting an Exchange folder, and mapping Exchange message properties to RSS item fields/headers.

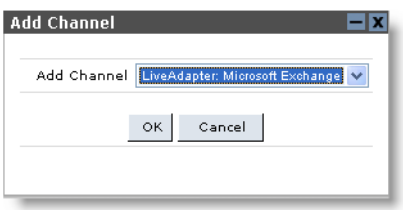
To create LiveAdapter: Microsoft Exchange channels,

1. Access the Content Settings tab.

2. Navigate to the category where you wish to add the channel.

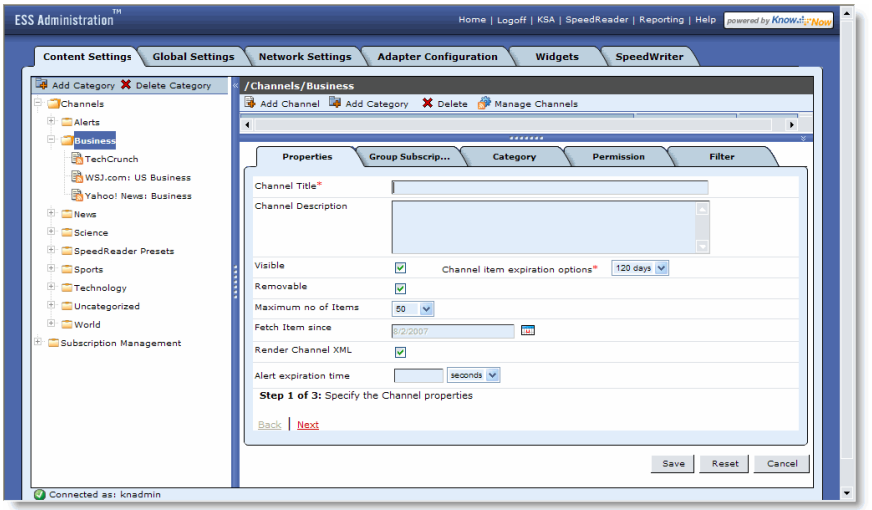
3. In the upper right pane, choose **Add Channel** (). The Add Channel dialog box opens.

Figure 5-10. Adding a new channel.



4. Select **LiveAdapter: Microsoft Exchange**. This displays a set of tabs in the lower right pane for specifying a LiveAdapter for Microsoft Exchange channel.

Figure 5-11. Adding a channel with the LiveAdapter: Microsoft Exchange option.



5. On the Properties tab, set the properties described in step 6 through step 14.
6. In the **Channel Title** field, enter a unique title for this channel.
7. Optionally, in the **Channel Description** field, enter a description for the channel.
8. Enable or disable **Visible**. This determines whether the channel will be visible to users in SpeedReader's list of available channels. This option is available for all channels, regardless of type, and is enabled by default.
9. For **Channel item expiration options**, select from a drop-down list to set the expiration for items from this channel from 24 hours to **Infinity**. The default is **120 days**. You must set an expiration option.
10. Enable or disable **Removable**. This determines whether users can remove the channel from their personal lists.
11. Select a **Maximum no of Items** (from a range of increments from 50 to 1000). This option limits the number of items that can be displayed in the channel at a time. The default value is **50**.
12. For the **Fetch Item since** field, use the calendar image to open a calendar for selecting a date from. By default, the current date is selected, but you can choose any date from the calendar. The LiveAdapter for Microsoft Exchange will fetch items for this channel's folder that are posted on or after the date you specify here.

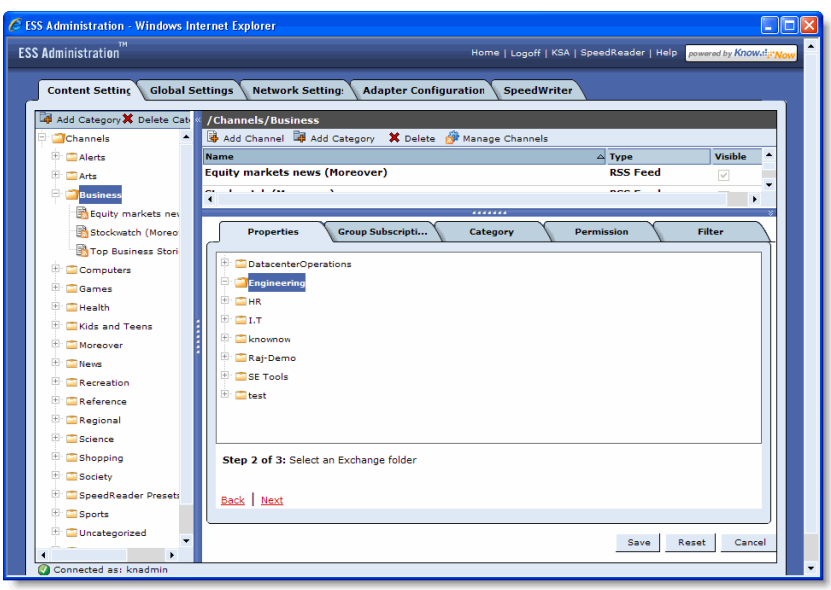
13. Enable or disable the **Render Channel XML** option. This option applies to internal channels (channels other than RSS source type that have a URL http://*liveserverhostname*:*port*/kness/channels/*channelspecificpath*). This option will persist these channels to the file system so that third-party RSS readers can access RSS files at the given URL.

    Note that the channel content *must* be in well-formed XHTML or XML in order to be rendered into RSS feeds that are readable by third-party readers. For example, all elements must be closed by , all <li> elements must be closed with , all break, image, and other such elements must have a closing forward slash (
,), and so on.

14. Set an expiration time for alerts for each item using the **Alert expiration time** option. Select the unit of time to seconds, minutes, hours, days, weeks, or months, and specify how many of those units you want used. For example, if you select **hours** as the unit of time and enter **3** in the field, alerts will expire after three hours.

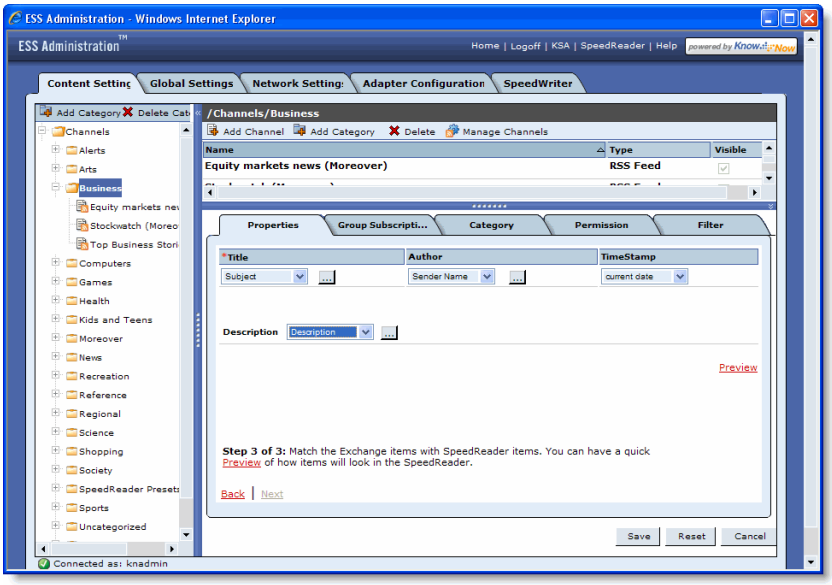
15. Choose **Next**. In this step, select an Exchange folder for this channel. To select a folder, navigate to it and highlight it. You can only map one Exchange folder per channel, though you can always use ESS's aggregate channel capabilities to aggregate Exchange channels. For information on creating an aggregate channel, see "Creating Aggregated Channels" on page 73.

Figure 5-12. Selecting an Exchange folder.



16. Choose **Next**. In this step, use the Item Builder to map Exchange message properties to RSS item fields/headers. When making selections on this page, you can concatenate multiple fields and user-defined literals to create a custom expression to map to **Title**, **Description**, or **Author**. Additional fields may be available if the Item Builder has been customized as described under "Step 4 (Optional): Add Custom Properties to the Item Builder" on page 89.

Figure 5-13. Using the Item Builder.



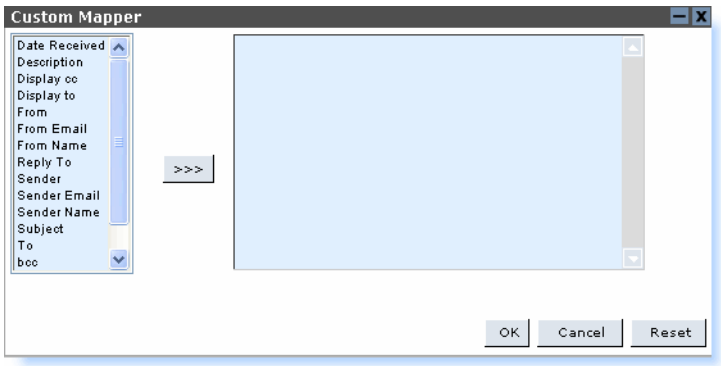
In the process of mapping the properties,

a. The **Title** field is required. There are two ways to create a title: Select an option from the list that is displayed when you access the drop-down box, or create a custom title using the Custom Mapper.

To create a custom title, click on the **...** button next to the title field to open the Custom Mapper. To use the Custom Mapper, select fields from the left pane and move them to the right pane by choosing **>>>**. When you have selected the desired fields, choose **OK** to create the custom title. While working in this

window, you can choose **Reset** to clear your choices and begin again, or **Cancel** to discard your changes.

Figure 5-14. The Custom Mapper.

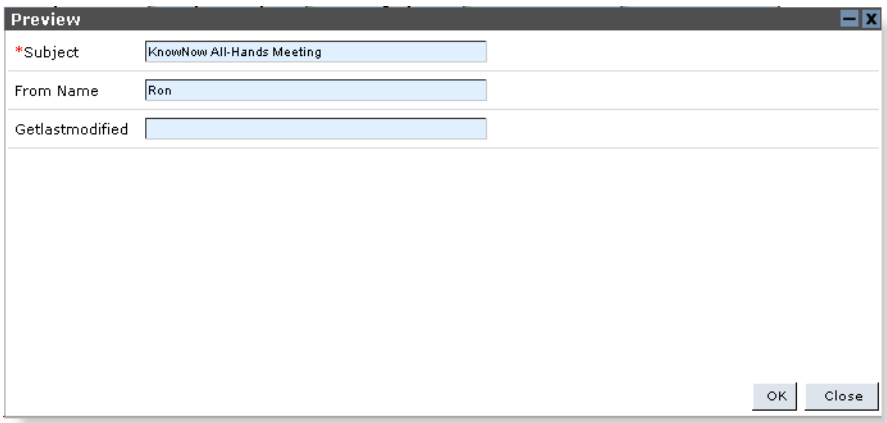


b. The **Author**, **Timestamp**, and **Description** fields also have drop-down boxes to select items from. And like the **Title** field, the **Author** and **Description** fields can be customized using the custom mapper.

Figure 5-15. The Custom Mapper with two fields selected to create a custom title.

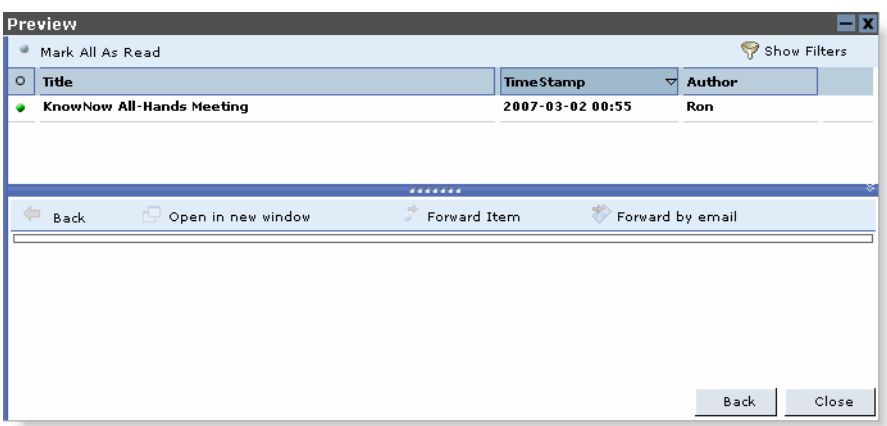
17. The **Preview** command opens a window showing the selected fields. Here, you can enter test data to see how the fields will be displayed in SpeedReader. To use the Preview window, enter some test data.

Figure 5-16. The Preview window with test data entered.



a. Choose **OK**. A window showing how the item would appear in SpeedReader is displayed.

Figure 5-17. How the test data will appear in SpeedReader.



b. Choose **Back** to return to the previous Preview window to adjust the test data, or **Close** to close the Preview and either make further changes to the channel properties, or to continue creating the channel by accessing the other tabs.

18. On the Group Subscriptions tab, select which groups, if any, you wish to globally assign this channel to. For information on managing group subscriptions, see "Managing Subscriptions for Groups" on page 57.

19. On the Category tab, assign the category or categories you wish this channel to appear under. Users can assign the channel to additional categories if they wish.
20. On the Permission tab, set the permissions for access to this channel. This includes setting permissions for users and groups. For important information about permissions, see "Permissions" on page 130.
21. On the Filter tab, you can specify search terms in order to filter items. Filters are applied to every item in a channel, so that items that do not match the filter are not posted to ESS. For more information, see "Understanding and Creating Filters" on page 132.
22. Choose **Save** to save the channel. A message pops up saying that the channel has been saved and asking if you wish to add another channel of this type. Choose **Yes** to create another channel of the same type, or **No** to exit the process.

Step 4 (Optional): Add Custom Properties to the Item Builder

One step when creating or editing LiveAdapter for Microsoft Exchange channels is to use the Item Builder to map Exchange message properties to RSS item fields/headers. (The process of using the Item Builder is provided in step 16 on page 86.) If desired, you can add properties to the Item Builder using a custom XML file named folder_properties.xml.

The properties you can add are based on the properties that Exchange items have. Once you have created folder_properties.xml, the custom properties defined in that file are available in the Item Builder.

In determining which properties are available, refer to Microsoft's documentation for the class named *outlookmessageclass*. This class is provides the properties that can be made available in the drop-downs in Item builder page. For example, ContentClass is identified by *outlookmessageclass*; for email folders, the ContentClass is IPM.Note, for public folders it is IPM.Post, and so on. The LiveAdapter for Microsoft Exchange provides properties for mapping based on this attribute. So, if you need to have some custom or additional properties to be listed in the mapping section for all mail folders, you can add those properties under IPM.Note class, as shown in the example for Employee ID. Once added using folder_properties.xml, these properties are listed along with the standard properties of mail folder items.

To add custom properties to the Item Builder,

1. Create an XML configuration file named folder_properties.xml. For an example of the XML structure for this file, see Example 5-1 on page 90.

2. Stop the LiveServer.
3. Place folder_properties.xml in the following location in your LiveServer installation.

   LiveServer_Home/modules/kness/exchange/conf/

4. Restart the LiveServer and ESS. ESS reads the new file and displays the new properties in the Item Builder.

Example 5-1. XML structure and sample data for folder_properties.xml.

```
<?xml version="1.0" encoding="utf-8" ?>
<ContainerClasses xmlns:a="DAV:" xmlns:b="urn:uuid:c2f41010-65b3-11d1-a29f-
00aa00c14882/" xmlns:c="xml:">
<!-- The ContainerClasses element is the root element for the XML. -->
<!-- It contains your namespace declarations. It need not match the -->
<!-- one given here. -->
    <Class>
        <Name>IPM.Task</Name>
        <Properties>
            <a:description>Description</a:description>
            <a:startdate datatype="dateTime.tz">Start date</a:startdate>
        </Properties>
    </Class>
    <Class>
        <Name>IPM.StickyNote</Name>
        <Properties>
            <a:description>Description</a:description>
            <a:author>Author</a:author>
        </Properties>
    </Class>
    <Class>
        <Name>IPM.Note</Name>
        <Properties>
            <empid>Employee ID</empid>
        </Properties>
    </Class>
        <Class>
        <Name>IPM.Post</Name>
        <Properties>
            <empid>Employee ID</empid>
        </Properties>
    </Class>
</ContainerClasses>
```

Moving or Renaming Exchange Folders

All channels in ESS are identified by an URL. To maintain a one-to-one mapping between an ESS channel and a folder in MS Exchange, ESS uses a relative path to the folder. For example, if a folder's relative path in Exchange is

/example/folder1/folder2

then ESS maps that to an ESS channel that is identified by

http://*liveserver_host*:*port*/kness/channels/example/folder1/folder2

If you want to move the Exchange folder2 from /example/folder1/folder2 to /example/folder3/folder2, then a corresponding change needs to be made to the channel's URL. The same principle applies if you are renaming Exchange folders.

To make this change, delete the channel in ESS, move or rename the Exchange folder, and then recreate the channel using the new folder path or name.

Creating LiveAdapter Channels Using Business Methods

Using KnowNow's LiveAdapter for RDBMS, you can create a LiveAdapters business method query as the source for channel items. Here, you are creating the business method as a channel.

When creating a LiveAdapter channel, you specify the parameters for a valid business method. Therefore, in order to use this option, you must have at a minimum the LiveAdapters Framework and one other LiveAdapter installed (in this case, LiveAdapter for RDBMS), and you must have at least one connection defined in the LiveAdapter. You could also create LiveAdapter channels using the LiveAdapter itself, but you do not need to; ESS supplies all the functionality you need.

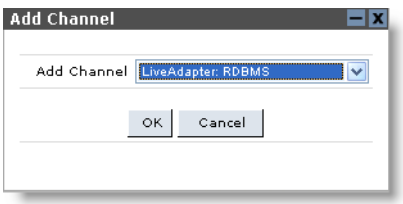
As a bonus, ESS prevents you from making non-RSS choices, so that you know your LiveAdapter channel should be valid. When you create your channel, it will appear in your LiveAdapters software. And finally, you are creating a Scheduler channel; because of how the data is shared (or not shared), the other types of business methods are not suitable for creating channels. For more information on LiveAdapters and business methods, see the *KnowNow LiveAdapters User's Guide*.

Caution: An ESS LiveAdapter for RDBMS channel's data and metadata are stored in two LiveServer directories: /knadapters_db/ and /knrouter_db/. If you must delete /knrouter_db/ for any reason, be sure to also delete /knadapters_db/ as well.

To create LiveAdapter: RDBMS channels,

1. Access the Content Settings tab.
2. Navigate to the category where you wish to add the channel.
3. In the upper right pane, choose **Add Channel** (). The Add Channel dialog box opens.

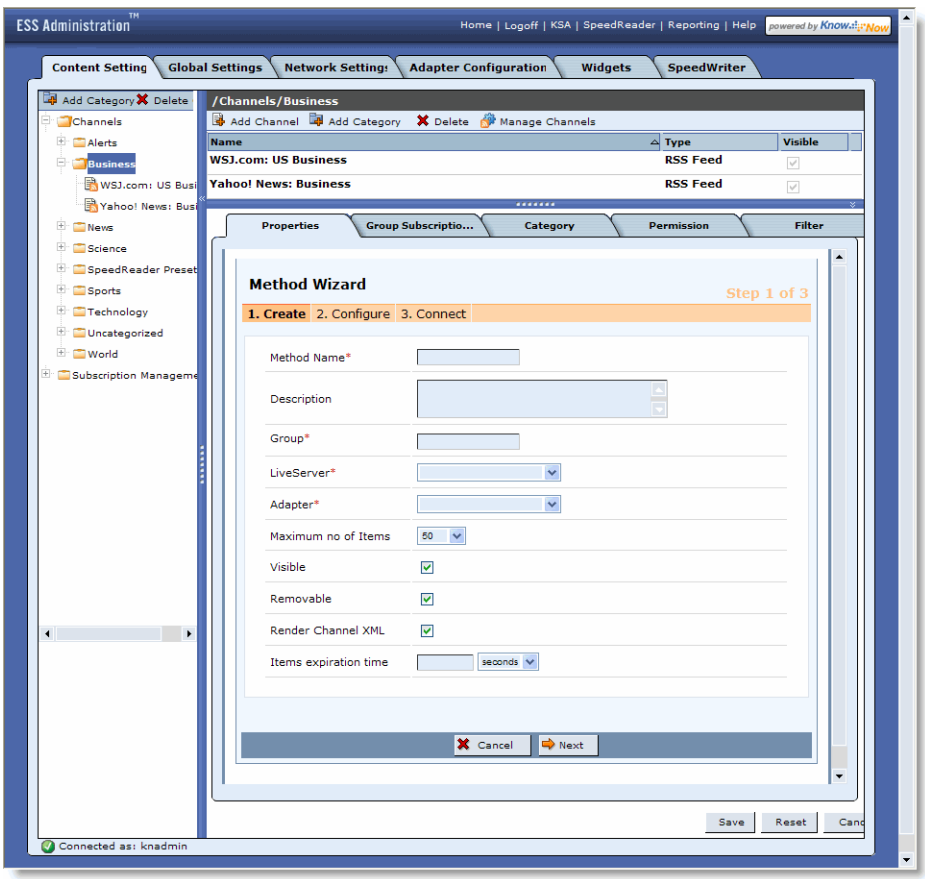
Figure 5-18. Adding a new channel.



4. Select **LiveAdapter: RDBMS**. This displays a set of tabs in the lower right pane for specifying a LiveAdapter business method query for the channel. The results of the query will be displayed as items in the new channel. You may need to scroll down to see all the options.

   Note that when you scroll down within the LiveAdapter channel creation pane, you will see additional buttons for navigating through the LiveAdapter Method Wizard. During the process of creating the LiveAdapter channel, if there is anything you need to change, use the Method Wizard's **Back** button to return to previous pages; make changes as needed, then continue forward again using the Method Wizard's **Next** button. Use the **Cancel** button to cancel the process.

Figure 5-19. Adding a channel with the LiveAdapter: RDBMS option.



5. On the Properties tab, set the properties (accessed, if need be, by scrolling down) described in step 6 through step 15. For important information on creating

business methods, as well as more details on each of the options in the Method Wizard, see the *KnowNow LiveAdapters User's Guide*.

6. In the **Method Name** field, enter a unique name for this business method/channel. Spaces are allowed in the name, but no slashes.
7. Optionally, in the **Description** field, enter a description for the channel.
8. In the **Group** field, enter a group name. Similar to categories in the Content Settings tab, a group is for organizing business methods.
9. In the **LiveServer** field, select the name of a valid LiveServer from the drop-down box. This will be a LiveServer that you have defined using the LiveAdapters software.
10. In the **Adapter** field, select the name of a valid LiveAdapter from the drop-down box. This will be a LiveAdapter that you have defined using the LiveAdapters software.

    If no LiveServer or LiveAdapter is displayed, you will need to access your LiveAdapters software and define at least one LiveServer and LiveAdapter each before you can proceed. For more information, see the *KnowNow LiveAdapters User's Guide*, which is available through Documentation links from the LiveAdapters pages.
11. Select a **Maximum no of Items** (from a range of increments from 50 to 1000). This option limits the number of items that can be displayed in the channel at a time. The default value is **50**.
12. Enable or disable **Visible**. This determines whether the channel will be visible to users in SpeedReader's list of available channels. This option is available for all channels, regardless of type, and is enabled by default.
13. Enable or disable **Removable**. This determines whether users can remove the channel from their personal lists.
14. Enable or disable the **Render Channel XML** option. This option applies to internal channels (channels other than RSS source type that have a URL http://*liveserverhostname*:*port*/kness/channels/*channelspecificpath*). This option will persist these channels to the file system so that third-party RSS readers can access RSS files at the given URL.

    Note that the channel content *must* be in well-formed XHTML or XML in order to be rendered into RSS feeds that are readable by third-party readers. For example, all elements must be closed by , all <li> elements must be closed with , all break, image, and other such elements must have a closing forward slash (
,), and so on.

15. Set an expiration time for alerts for each item using the **Items expiration time** option. Select the unit of time to seconds, hours, days, weeks, or months, and specify how many of those units you want to be used. For example, you could select **hours** as the unit of time, and enter **3** in the field, so that alerts will expire after three hours.

16. Scroll down, if needed, and choose the Method Wizard's **Next** button. This takes you to the next step of the Method Wizard in the Properties tab.

17. In this step,

    a. Enter a valid SQL statement. Alternatively, enter a stored procedure (or browse for it) and enter the stored procedure's package name. Note that SQL SELECT statements are case sensitive; for example, if the database name is db_name, then the statement will not work if you specify DB_NAME (or any variation other than matching the case of the original).

    b. In the **Method Type** area, the **Scheduler** method type has already been selected for you. Likewise, because LiveAdapter channels must be of type RSS, the **OutTopic Data Format** has also been selected: **RSS 2.0**.

    c. Enter a **Polling Interval** and select **Seconds**, **Hours**, **Days**, or **Weeks**. This interval is how often you want this item updated.

    d. Choose either **Always Notify** or **Only When Changed**.

        i. **Always Notify** specifies that you want a response event containing all the polled data to be sent on each poll, even if no data has changed. When using this option, the expiration of items is set to the polling interval.

        ii. **Only when changed** specifies that you want a response event containing data to be sent only if the poll finds that some data has changed. If using **Only When Changed**, the **Deltas Only** option is also available. When this option is enabled, the LiveAdapter will only receive the changed (delta) data instead of the complete set of data. When using this option, the expiration of items is set to infinity.

    For more details on each of these options, see the *KnowNow LiveAdapters User's Guide*.

18. Choose the Method Wizard's **Next** button. (You may need to scroll down to see this button.) This takes you to the next step of the Method Wizard in the Properties tab. It may take a few moments for ESS to make the connection to the database.

19. In the RSS Channel Properties area, enter information as follows. Channel properties are static; that is, they apply to every item in the channel.

    a. A **Channel Title** is required. This is the title that will be displayed in the RSS feed. This title applies to all information supplied on this channel. This information is automatically filled in based on your earlier input.

    b. The **Topic** is also required; again, this information is automatically filled in based on your earlier input.

    c. The **Channel Description** is optional. This description will also appear in the RSS feed. You can use HTML code in this field.

20. To the right of the RSS Channel Properties area, select a field to be the primary key. Even if there is only one field, you will still need to explicitly designate it as the primary key.

21. In the RSS Item Properties area, enter information as follows. Item properties apply to the individual items. Some item properties will change depending on the item. For entering item properties, you can enter text manually or, if you like, place your mouse cursor in a desired field, then select a column name from the drop-down box and choose **Insert**. This inserts code that will display data from the query.

    a. An **Item Title** is required. This is the title for individual items that are retrieved during a query. It can be taken from the query data itself. For example, if applicable, you could enter

    ```
    ${CUSTOMERID}
    ```

    b. An **Item Description** is also required. You can use HTML code in this field, as well as code to pull data from the query. You can also click on the **...** button to open the Item Description dialog box for creating the item description. In the Item Description dialog box, you can enter text and also choose code from the drop-down list.

    As an example, if using the sample query presented earlier in these instructions, you could enter

    ```
    <br /> ${CONTACTNAME} from ${COMPANYNAME} lives in ${CITY}(${COUNTRY}).
    ```

    Here is another example (using a different sample query):

    ```
    ${kn_channel_id} is the ID of channel ${title}. The URL is ${url}. It is of
    type ${channel_type}.
    ```

    c. Provide an optional **RSS Link** to associate with the items.

    d. If you wish, enter the name of an **Author** as you wish it to appear in the RSS field.

e. The **Pub Date** establishes when the item will be published (that is, when it will be visible to subscribers).

22. When you have completed the channel and item properties, choose **Next**. A summary page is displayed. Review the information to make sure everything is correct.

23. On the Group Subscriptions tab, select which groups, if any, you wish to globally assign this channel to. For information on managing group subscriptions, see "Managing Subscriptions for Groups" on page 57.

24. On the Category tab, assign the category or categories you wish this channel to appear under. Users can assign the channel to additional categories if they wish.

25. On the Permission tab, set the permissions for access to this channel. This includes setting permissions for users and groups. For important information about permissions, see "Permissions" on page 130.

26. On the Filter tab, you can specify search terms in order to filter items. Filters are applied to every item in a channel, so that items that do not match the filter are not posted to ESS. For more information, see "Understanding and Creating Filters" on page 132.

27. Choose **Save** to save the channel. A progress report pops up. When the channel has been saved, a message pops up saying that the channel has been saved and asking if you wish to add another channel of this type. Choose **Yes** to create another channel of the same type, or **No** to exit the process.

Business Methods Channels Performance Note

When you configure a LiveAdapter RDBMS channel to create items with the options **Only when changed** and **Deltas Only**, the process of detecting the deltas can create performance issues when dealing with large amounts of data (such as an initial load of 1million rows).

It is possible to use a stored procedure/view so the initial result set does not include all existing rows. For example, you could hard code into the view/stored procedure a start date from which point forward all deltas should be reported via the feed. This assumes that all tables will have a last updated column. Alternatively, you could retrieve only the first *n* rows via the SQL statement, though this assumes that the number of updates within the polling frequency is below *n*.

Disabling Business Method Channels

If you need to disable a LiveAdapter RDBMS channel, use the LiveAdapters administration console to disable the business method. Then use the ESS Administration console to disable the **Visible** option for the channel that uses the business method.

Creating LiveAdapter for Sphere Channels

KnowNow's LiveAdapter for Sphere interfaces with Sphere, a blog search engine that delivers blog posts based on search specifications. This enables creating automated search channels that search blogs for new content that matches your search criteria, then post the results in RSS format to ESS. This type of automated search is referred as a persistent search; you create it once, and then you don't need to create it again. The LiveAdapter periodically polls Sphere for updates and posts new results in RSS format to ESS. The results of these searches are displayed in SpeedReader and KnowNow Alerts Desktop. Users of those programs can subscribe to those channels, and can also create their own Sphere searches.

At a high level, the steps for configuring KnowNow's LiveAdapter for Sphere and creating channels for it are as follows.

1. Configure the LiveAdapter for Sphere with your information as described under "Configuring the LiveAdapter for Sphere" on page 100.
2. Create your LiveAdapter for Sphere channels, with your search criteria, as described under "Creating a Sphere Channel" on page 101. The search syntax is described under "Sphere Search Syntax" on page 107.

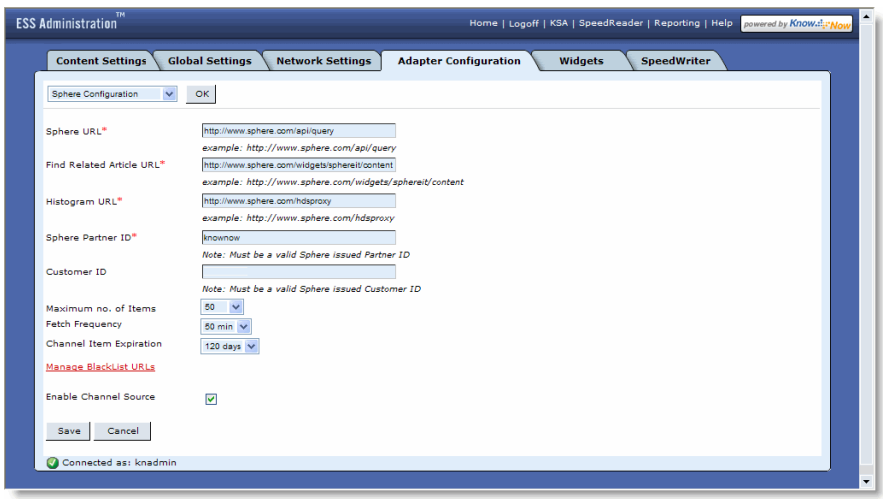
Configuring the LiveAdapter for Sphere

As with the other LiveAdapters, before you can create a channel based on the LiveAdapter for Sphere, you must first configure it on the Adapter Configuration tab as described here.

To configure the LIveAdapter for Sphere,

1. Access the Adapter Configuration tab. There, select **Sphere Configuration** in the drop-down box, then choose **OK**. ESS displays the fields for configuring Sphere.

Figure 5-20. Configuring Sphere.



2. Enter valid data in the following fields. Note that they are all required. You can use the default URLs for the first three fields.

   a. The **Sphere URL** field. ESS posts your search query to this URL and obtains the results from this site. The default value of this field is http://www.sphere.com/api/query.

   b. The **Find Related Article** field. ESS posts a request to this URL to obtain related articles and blogs for an item that is being viewed. (ESS sends the item URL with the request). The default value of this field is http://www.sphere.com/widgets/sphereit/content.

   c. The **Histogram URL** field. A histogram is a graphical representation much like a bar chart, of the results of the search query over a span of time. ESS posts a request to this URL to get statistical data concerning the search query. The results show how many times that keyword or URL has been searched for by

the user in the past last four months. The default URL is http://www.sphere.com/hdsproxy.

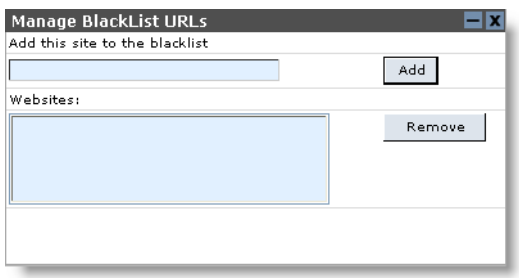
d. The **Sphere Partner ID** field. This is your company's identification, such as ExampleCompany, or some other unique identifier. **This must be a valid partner ID issued by Sphere.**

e. The Sphere Customer ID field. **This must be a valid customer ID issued by Sphere.**

3. If you wish, change the values for **Maximum no. of Items**, **Fetch Frequency**, and **Channel Item Expiration**. These values will apply to every Sphere channel that you create using the **Add Channel** command on the Content tab. However, you can change these values for individual Sphere channels when you create them.

4. If you wish, click on **Manage Blacklist URLs**. Here you can enter the URLs that you wish to be excluded from the Sphere searches. You can later edit this list to add more URLs or to remove URLs you added earlier.

Figure 5-21. Managing blacklist URLs.



5. If you want Sphere to be used as a channel source, place a checkmark in the **Enable Channel Source** box. **You cannot create Sphere channels if you do not enable this checkbox.**

6. Choose **Save**. The LiveServer must be restarted for the changes to take effect.

Creating a Sphere Channel

Once you have configured the LiveAdapter for Sphere as described under "Configuring the LiveAdapter for Sphere" on page 100, the next step is to create one or more Sphere channels.

To create Sphere channels,

1. Access the Content Settings tab.

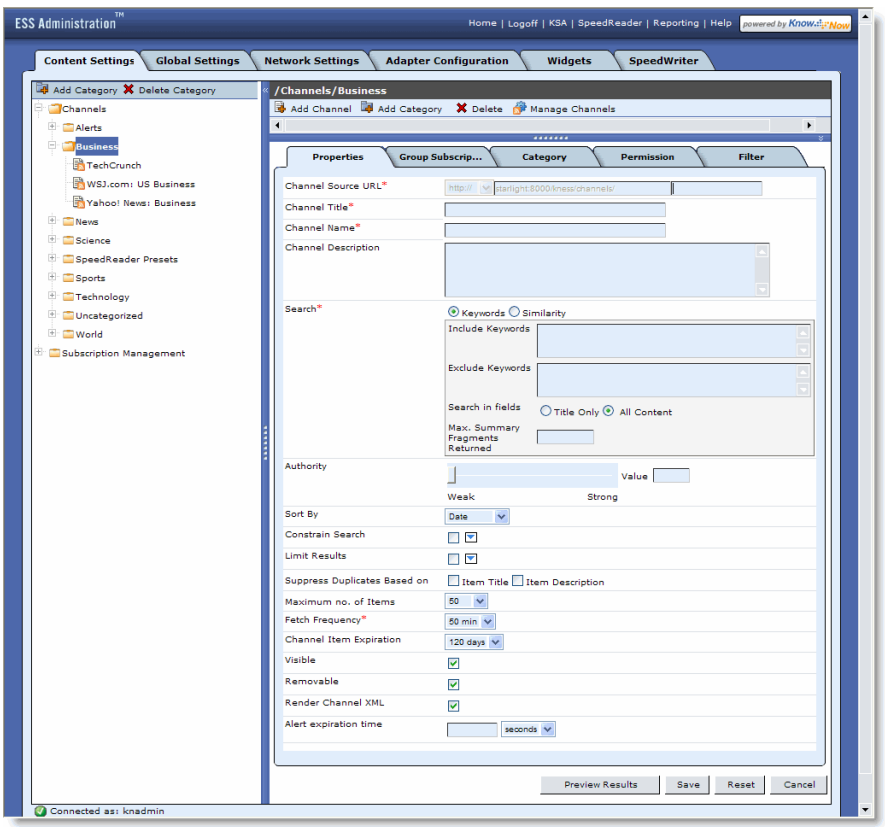
2. Navigate to the category where you wish to add the channel.

3. In the upper right pane, choose **Add Channel** ( ). The Add Channel dialog box opens.

Figure 5-22. Adding a new channel.

4. Select **Sphere**. This displays a set of tabs in the lower right pane for specifying a LiveAdapter for Sphere channel.

Figure 5-23. Adding a channel with the Sphere option.



5. On the Properties tab, set the properties described in step 6 through step 22.

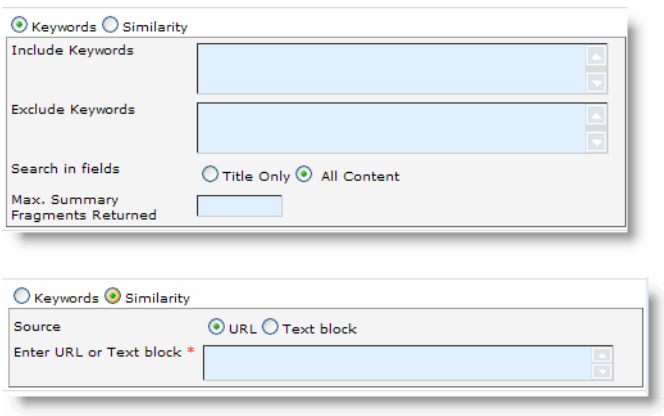
6. In the **Channel Source URL** field, enter a file name to create a unique URL for this channel. The initial portion is already filled out for you; you just need to enter a file name.
7. In the **Channel Title** field, enter a title for the channel.
8. In the **Channel Name** field, enter a name for the channel.
9. Optionally, in the **Channel Description** field, enter a description for the channel.
10. In the **Search** area, first select whether you want to search by **Keywords** or **Similarity**. Depending on which option you choose, different fields appear. (For more on how to create search criteria, see "Sphere Search Syntax" on page 107.)

    - When searching by keywords, specify which keywords you wish to include, which to exclude, which fields to search (**Title Only** or **All Content**), and a maximum number of summary fragments to be returned.

      The number entered in the **Max. Summary Fragments Returned** field determines the maximum number of occurrences of the search keywords per item that are to be displayed in the search results summary. For example, if you enter the number **4** in this field, then four fragments of text (each with an occurrence of the keyword) are extracted from the item and displayed. Even if the keyword(s) appeared more than four times in the item, only four fragments are shown. The keywords are shown in **bold** type in the fragments. If you don't enter anything in this field, up to five occurrences will be displayed.

    - When searching by similarity, select either **URL** or **Text block**, then enter the desired data in the **Enter URL or Text block** field. This query will return documents that Sphere determines to be similar to the document at the given URL or text block.

Figure 5-24. Sphere Search options: Keywords and Similarity.



11. Use the **Authority** slider to set a limit for spam filtering. The lower value will allow more spam through.

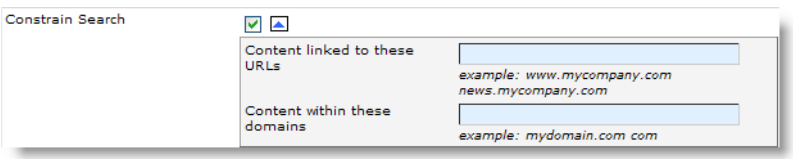
12. For the **Sort By** option, select either **Date** or **Relevancy**.

    - If you choose **Date**, results are sorted by the date of the item, newest first, regardless of relevancy.
    - If you choose **Relevancy**, then the most relevant items based on the **Authority** setting are listed first, regardless of age.

    The sort feature is useful for developers. For example, if developers are working on projects that do not already have a sort in place, the sort feature makes it possible for their projects to receive sorted results.

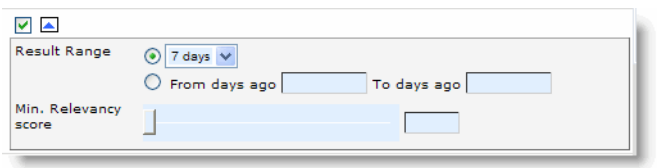
13. By clicking in the checkbox next to **Constrain Search**, additional fields appear. (You can also hide or display these fields by clicking on the small blue triangle.) Sphere will return results that contain the URL specified in **Content linked to these URLs** field or that are within the domains specified in the **Content within these domains** field. In the latter field, you can enter any subset of a domain name, either *host.domain.com* or *domain.com* or simply *com*.

Figure 5-25. The Constrain Search option.



14. By clicking the checkbox next to **Limit Results**, additional fields appear. (You can also hide or display the **Limit Results** fields by clicking on the small blue triangle.) Using these fields, you can set the range of time that you wish the age of the results to fall within and set a relevancy score. If you don't enable the **Limit Results** option, then no time range or minimum relevancy score limit is applied.

Figure 5-26. The Limit Results option.



For the **Result Range**, you have two options:

- Select from a preset range (where the choices are **1 day**, **7 days**, or **All). 1 day** returns results from the last day. **7 days** returns results from the last seven days. **All** returns results from the last 120 days.
- If the preset ranges don't meet your needs, you can specify a custom range from __ days ago to __ days ago; for example, from 60 days ago to 30 days ago.

If desired, use the **Min. Relevancy Score** slider to specify that the results must meet a minimum relevancy score (as a percentage; .9 being 90%, for example).

15. Normally, duplicate items are identified using the item's GUID. Those duplicate items are not displayed. For an optional, alternate method of identifying duplicate items, use the **Suppress Duplicates based on** option. With this method, you can specify that the **Item Title**, **Item Description**, or both are to be used to identify duplicate items.
    - If you select **Item Title**, then if a second item arrives that has the identical title of an already-arrived item, the second item will be ignored, even if the description for both items is different.
    - If you select **Item Description**, then if a second item arrives that has the identical description of an already-arrived item, the second item will be ignored, even if the title for both items is different.
    - If you select both options, then an item will only be considered a duplicate if both the title and the description are identical.
16. Select a **Maximum no. of Items** (from a range of increments from 50 to 1000). This option limits the number of items that can be displayed in the channel at a time. The default value is **50**.
17. For the **Fetch Frequency**, set how often you want the search run by selecting from a drop-down list (5 minutes to 2 days). The default value is **50 min** (50 minutes).
18. For **Channel Item Expiration**, select from a drop-down list to set the expiration for items from this channel from **1 day** to **Infinity**. The default is **7 days**. You must set an expiration option.
19. Enable or disable **Visible**. This determines whether the channel will be visible to users in SpeedReader's list of available channels. This option is available for all channels, regardless of type, and is enabled by default.
20. Enable or disable **Removable**. This determines whether users can remove the channel from their personal lists.
21. Enable or disable the **Render Channel XML** option. This option applies to internal channels (channels other than RSS source type that have a URL http://*liveserverhostname*:*port*/kness/channels/*channelspecificpath*). This option

will persist these channels to the file system so that third-party RSS readers can access RSS files at the given URL.

Note that the channel content *must* be in well-formed XHTML or XML in order to be rendered into RSS feeds that are readable by third-party readers. For example, all elements must be closed by , all <li> elements must be closed with , all break, image, and other such elements must have a closing forward slash (
,), and so on.

22. Set an expiration time for alerts for each item using the **Alert expiration time** option. Select the unit of time to seconds, minutes, hours, days, weeks, or months, and specify how many of those units you want to be used. For example, you could select **hours** as the unit of time, and enter **3** in the field, so that alerts will expire after three hours.
23. The **Preview Results** command opens a window showing the result of your settings and specifications. Choose **Back** to return to the previous Preview window to adjust the test data, or **Close** to close the Preview and either make further changes to the channel properties, or to continue creating the channel by accessing the other tabs.
24. On the Group Subscriptions tab, select which groups, if any, you wish to globally assign this channel to. For information on managing group subscriptions, see "Managing Subscriptions for Groups" on page 57.
25. On the Category tab, assign the category or categories you wish this channel to appear under. Users can assign the channel to additional categories if they wish.
26. On the Permission tab, set the permissions for access to this channel. This includes setting permissions for users and groups. For important information about permissions, see "Permissions" on page 130.
27. On the Filter tab, you can specify search terms in order to filter items. Filters are applied to every item in a channel, so that items that do not match the filter are not posted to ESS. For more information, see "Understanding and Creating Filters" on page 132.
28. Choose **Save** to save the channel. A message pops up saying that the channel has been saved and asking if you wish to add another channel of this type. Choose **Yes** to create another channel of the same type, or **No** to exit the process.

Sphere Search Syntax

For searches, the LiveAdapter for Sphere supports Sphere's advanced syntax. This includes double quotation marks to enclose phrases you wish to search for, and the ability to use Boolean operators (AND, OR, NOT, and parentheses).

Note: The Boolean operators AND, OR, and NOT *must* be provided in all uppercase.

Searching for Words and Phrases

When you enter multiple words or phrases in a query, LiveAdapter for Sphere finds posts that match all of those words and phrases. If your query is *podcast vlog*, Sphere will find posts that contain both *podcast* and *vlog*. Posts that contain the words together will usually turn up first. Posts that contains the words in different places will show up later in the results.

Sometimes you want to find only posts that mention your words together. To accomplish this, use double quotation marks to enclose the words, like this: "*enterprise RSS*" (rather than *enterprise RSS*).

To find posts that match *either* of your words (but not necessarily both), use the OR operator (which must be in all caps). For example, in addition to posts that contain both words, the query *podcast OR vlog* will find posts that contain either *podcast* or *vlog*, as well as posts that contain both these words.

Grouping with Parentheses

You can use parentheses to group terms and expressions together. For example, say you want to find posts that mention Germany and *either* election *or* coalition. You can use a query like *Germany (election OR coalition)*. That will return more posts than the query *Germany election coalition*, which finds only posts that contain all three words.

Adding Moreover Channels

Moreover channels are channels that contain items supplied by Moreover. Moreover is a company that sells real-time news and business information services. KnowNow ESS ships configured with some popular Moreover channels; however, if you are one of Moreover's clients, you can add your own Moreover channels to categories in ESS using the **Add Channel** capabilities of the Content Settings tab as described under "Adding Moreover Channels" on page 108.

Before you can add Moreover channels, you will need to first configure a Moreover channel source. Instructions for these tasks are provided under the following headings:

- "Configuring a Moreover Channel Source" on page 108
- "Creating Moreover Channels" on page 110

Configuring a Moreover Channel Source

In order to add Moreover channels as described under "Creating Moreover Channels" on page 110, you will first need to configure a Moreover source on the Adapter Configuration tab as described in this section (using information you have obtained from Moreover about your account). Once you have configured your Moreover source, a new option, **Moreover**, appears in the list of available channel types when adding channels. Note that you can also perform Moreover configuration using the LiveServer's KnowNow System Administration console. See the *KnowNow LiveServer Administration Guide* for more information.

If you do not already have an account with Moreover, and you are interested in their services, see http://www.moreover.com. Moreover has a sample public instance at

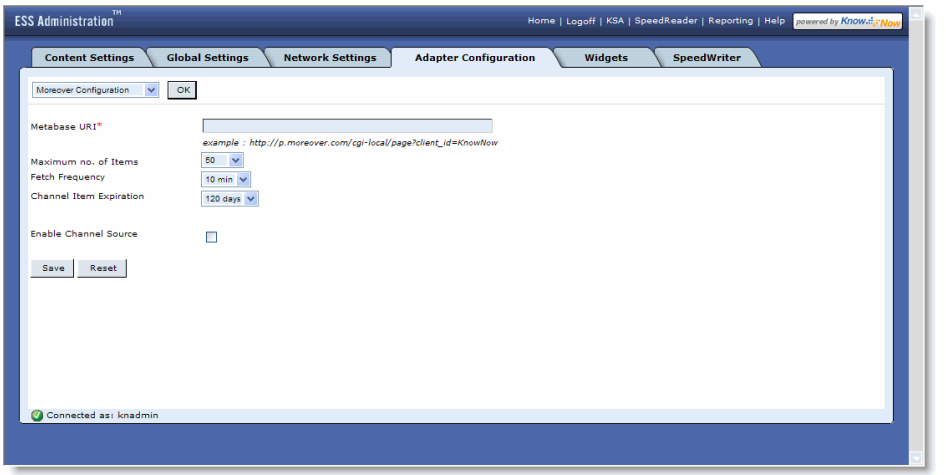
http://p.moreover.com/cgi-local/page?c=Top%20stories&o=html

To configure a Moreover source,

1. Obtain a channel source URI from Moreover.
2. Access the Adapter Configuration tab.

3. Select Moreover Configuration and choose **OK**. The Moreover configuration fields are displayed.

Figure 5-27. The Adapter Configuration fields.



4. In the **Metabase URI** field, enter the URI you obtained from Moreover. This field must have information in it, and the information must be valid.
5. If you wish, change the values for **Maximum no. of Items**, **Fetch Frequency**, and **Channel Item Expiration**. These values will apply to every Moreover channel that you create using the **Add Channel** command on the Content tab. However, you can change these values for individual Moreover channels when you create them.
6. Enable the **Enable Channel Source** check box. This makes it possible for you to add Moreover channels; even if you configure this page with your Moreover information, **until you enable this check box, you will not be able to add Moreover channels**.
7. Choose **Save**. A confirmation pop-up notifies you of the success of that action. After this, when you access the **Add Channel** capability in the Content Settings tab, you will now see **Moreover** as an additional channel type. For information on adding Moreover channels, see "Adding Moreover Channels" on page 108.

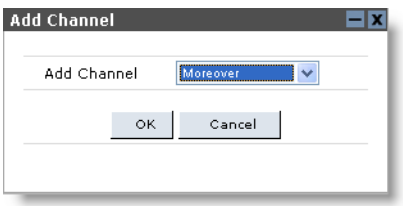
Creating Moreover Channels

Once you have configured a Moreover channel source as described under "Configuring a Moreover Channel Source" on page 108, you can then create Moreover channels.

To create a Moreover channel,

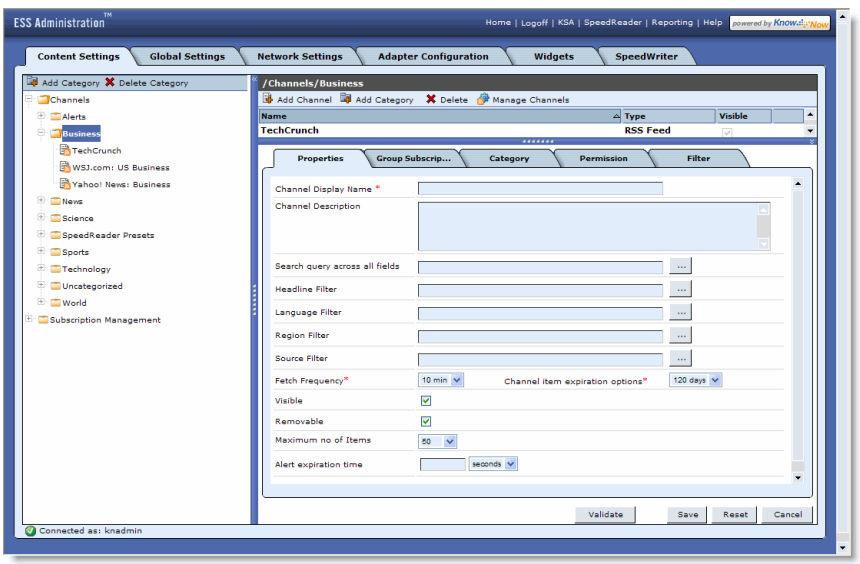
1. Access the Content Settings tab.
2. Navigate to the category where you wish to add the channel.
3. In the upper right pane, choose **Add Channel** ( ). The Add Channel dialog box opens.

Figure 5-28. Adding a new channel.



4. Select **Moreover**. This displays a set of tabs in the lower right pane for adding a Moreover channel.

Figure 5-29. The Properties tab for a Moreover channel.



5. On the Properties tab, you can set the properties (accessed, if need be, by scrolling down) describe in step 6 through step 15.
6. In the **Channel Display Name** field, enter a name for the channel. This name is displayed in Content Settings and SpeedReader.
7. Optionally, in the **Channel Description** field, enter a description for the channel.
8. For the **Search query across all fields** field, use the Query Builder to set a search query that applies to every field in each item. To access the Query Builder, click on the more button (**...**) next to the **Search query across all fields** field. You construct queries using standard logic (AND, OR, and NOT, with parentheses to group and prioritize portions of the query).
9. Just as with the **Search query across all fields** field, you can also create filters using the Query Builder specifically for headlines, as well as filtering for language, region, and item source (in the **Headline Filter**, **Language Filter**, **Region Filter**, and **Source Filter** fields). Depending on which type of filter you are applying, the Query Builder will offer different choices. For example, if setting a language filter, you can choose from a list of languages, specifying, for example, that you want to see all items in French and Spanish, but not in Dutch.
10. In the **Fetch Frequency** drop-down list, select an interval for how often you want the system to check for updated posts (from 5 minutes to 2 days). The default is **10 min** (10 minutes). You must set a fetch frequency.
11. For **Channel item expiration options**, select from a drop-down list to set the expiration for items from this channel from 24 hours to **Infinity**. The default is **120 days**. You must set an expiration option.
12. Enable or disable **Visible**. This determines whether SpeedReader users will see the channel in SpeedReader's list of available channels.
13. Enable or disable **Removable**. This determines whether SpeedReader users can remove the channel from their personal lists.
14. Select a **Maximum no of Items** (from increments from 50 to 1000). This option limits the number of items that can be displayed in the channel at a time. The default value is **50**.
15. Set an expiration time for alerts for each item using the **Alert expiration time** option. Select the unit of time to seconds, hours, days, weeks, or months, and specify how many of those units you want to be used. For example, you could select **hours** as the unit of time, and enter **3** in the field, so that alerts will expire after three hours.

16. On the Group Subscriptions tab, select which groups, if any, you wish to globally assign this channel to. For information on managing group subscriptions, see "Managing Subscriptions for Groups" on page 57.
17. On the Category tab, assign the category or categories you wish this channel to appear under. Users can assign the channel to additional categories if they wish.
18. On the Permission tab, set the permissions for access to this channel. This includes setting permissions for users and groups. For important information about permissions, see "Permissions" on page 130.
19. On the Filter tab, you can specify search terms in order to filter items. Filters are applied to every item in a channel, so that items that do not match the filter are not posted to ESS. For more information, see "Understanding and Creating Filters" on page 132.
20. You can **Validate** the channel before saving it.
21. Choose **Save** to save the channel. A message pops up saying that the channel has been saved and asking if you wish to add another channel of this type. Choose **Yes** to create another channel of the same type, or **No** to exit the process.

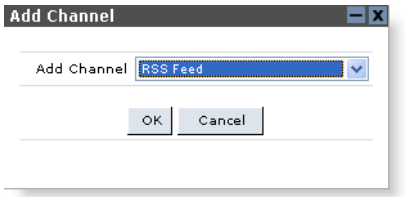
Adding RSS Channels

There are many thousands of RSS sources on the Internet. You can create an RSS channel using any existing URL that points to valid RSS-formatted source material.

To add RSS channels,

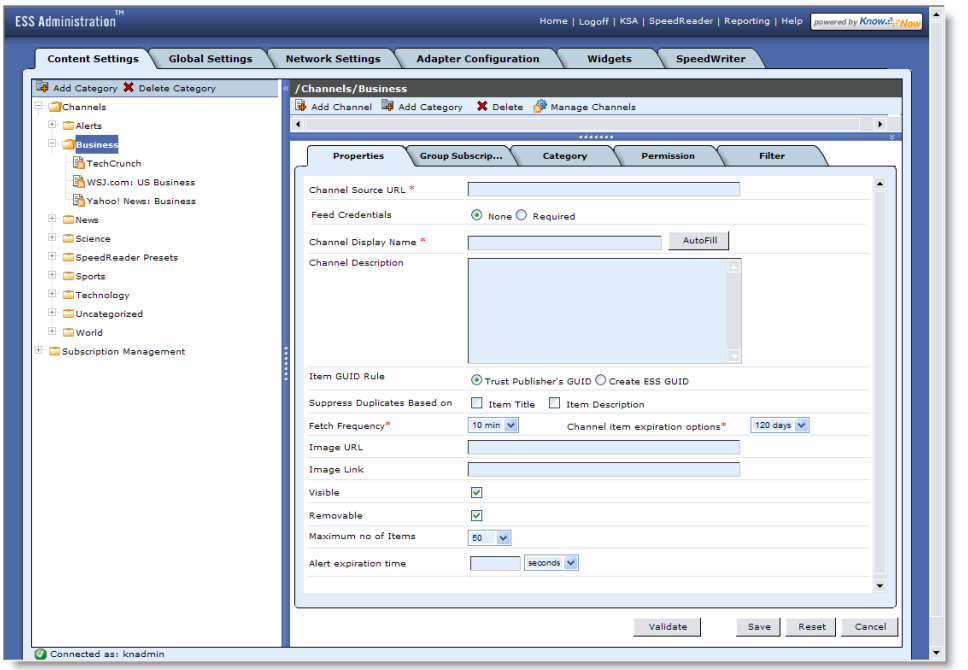
1. Access the Content Settings tab.
2. Navigate to the category where you wish to add the channel.
3. In the upper right pane, choose **Add Channel** ( ). The Add Channel dialog box opens.

Figure 5-30. Adding a new RSS channel.



4. Select **RSS Feed** and choose **OK**. This displays a set of tabs in the lower right pane for specifying an RSS source for the channel.

Figure 5-31. Adding a channel with the RSS Feed option.



5. On the Properties tab, set the properties (accessed, if need be, by scrolling down) described in step 6 through step 19.

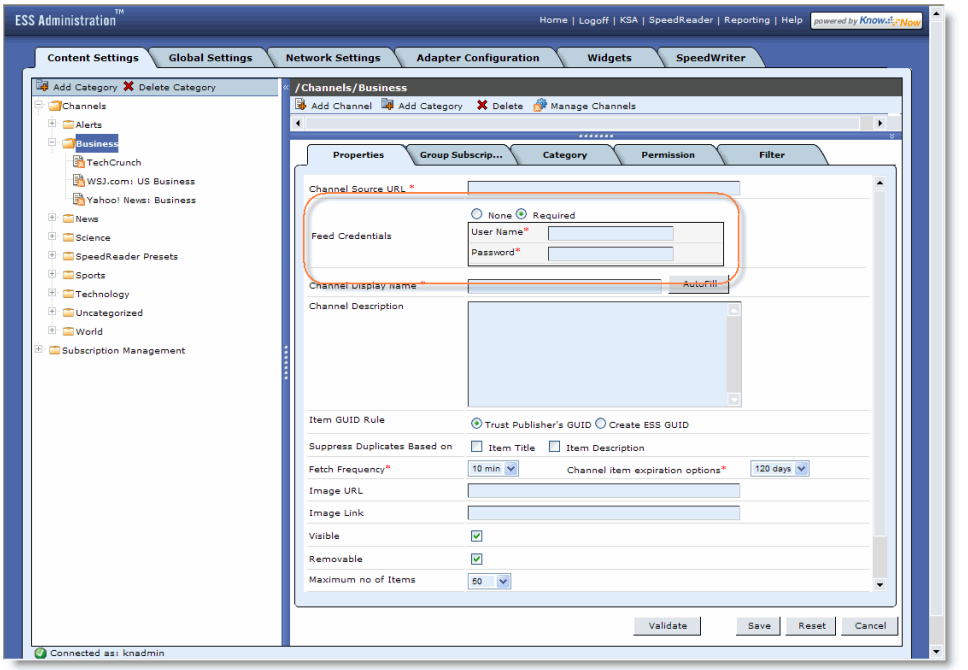
6. In the **Channel Source URL** field, enter a full, valid URL. The URL must point to a valid RSS source. The format might look something like this:

   http://www.example.com/index.rdf

7. For the **Feed Credentials** option, select **None** or **Required**. When you select **Required**, additional fields appear (**User Name** and **password**). Enter valid credentials in those fields. Users will need to enter a valid set of credentials (user ID and password) before they can subscribe to the feed. Note that once you set this option, you cannot later edit it. For example, if you choose **None**, you cannot later

change it to **Required**. You would instead need to delete the channel and recreate it to change this option.

Figure 5-32. Entering credentials for a protected feed



8. In the **Channel Display Name** field, enter a name for the channel. This name is displayed on the Content Settings tab and in SpeedReader.

   As an alternative to entering text in the **Channel Display Name** and **Image URL** fields, you can select **Autofill**. ESS will attempt to fetch the name of the channel and the image URL (if any) from the URL you provided in the **Channel Source URL** field.

9. Optionally, in the **Channel Description** field, enter a description for the channel.

10. For the **Item GUID Rule**, select either **Trust Publisher's GUID** or **Create ESS GUID**. Sometimes publishers use a different GUID to identify an identical story. In those cases, if you have chosen **Trust Publisher's GUID**, you will get duplicate items. If you choose the option **Create ESS GUID**, ESS will create its own GUID and will use other methods to identify those stories as duplicates.

11. Normally, duplicate items are identified using the item's GUID. Duplicate items are not displayed. For an optional, alternate method of identifying duplicate items, use

the **Suppress Duplicates based on** option. With this method, you can specify that the **Item Title**, **Item Description**, or both are to be used to identify duplicate items.

- If you select **Item Title**, then if a second item arrives that has the identical title of an already-arrived item, the second item will be ignored, even if the description for both items is different.
- If you select **Item Description**, then if a second item arrives that has the identical description of an already-arrived item, the second item will be ignored, even if the title for both items is different.
- If you select both options, then an item will only be considered a duplicate if both the title and the description are identical.

12. In the **Fetch Frequency** drop-down list, select an interval for how often you want the system to check for updated posts (from 5 minutes to 2 days). The default is **10 min** (10 minutes).
13. For **Channel item expiration options**, select from a drop-down list to set the expiration for items from this channel from **24 hrs** to **Infinity**. **120 days** is the default.
14. Optionally, in the **Image URL** field, if desired (and if you didn't use the **Autofill** option), enter the full URL for an image you wish to associate with this channel.
15. Optionally, in the **Image Link** field, enter the full URL for the link you wish people to be taken to when they click on the image.
16. Enable or disable **Visible**. This determines whether the channel will be visible to users in SpeedReader's list of available channels. This option is available for all channels, regardless of type.
17. Enable or disable **Removable**. This determines whether SpeedReader users can remove the channel from their personal lists.
18. Select a **Maximum no of Items** (from increments from 50 to 1000). This option limits the number of items that can be displayed in the channel at a time. The default value is **50**.
19. Set an expiration time for alerts for each item using the **Alert expiration time** option. Select the unit of time to seconds, minutes, hours, days, weeks, or months, and specify how many of those units you want to be used. For example, you could select **minutes** as the unit of time, and enter **30** in the field, so that alerts will expire after 30 minutes.
20. On the Group Subscriptions tab, select which groups, if any, you wish to globally assign this channel to. For information on managing group subscriptions, see "Managing Subscriptions for Groups" on page 57.

21. On the Category tab, assign the category or categories you wish this channel to appear under. Users cannot change this assignment, though they can assign the channel to additional categories if they wish.
22. On the Permission tab, set the permissions for access to this channel. This includes setting permissions for users and groups. For important information about permissions, see "Permissions" on page 130.
23. On the Filter tab, you can specify search terms in order to filter items. Filters are applied to every item in a channel, so that items that do not match the filter are not posted to ESS. For more information, see "Understanding and Creating Filters" on page 132.
24. To validate the channel, choose **Validate**.
25. Choose **Save** to save the channel. A message pops up saying that the channel has been saved and asking if you wish to add another channel of this type. Choose **Yes** to create another channel of the same type, or **No** to exit the process.

Creating SpeedWriter Channels

SpeedWriter channels are special channels that contain SpeedWriter items. SpeedWriter items can only be created for or forwarded to SpeedWriter channels, though other kinds of items can also be created for or forwarded to SpeedWriter channels. For additional information, see *Using KnowNow's SpeedWriter*.

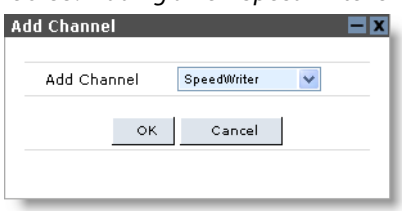
Using the method presented in this section, you are creating an empty SpeedWriter channel that can later be populated with items that have been created using SpeedWriter or other tools. Once you have created one or more SpeedWriter channels, you can use SpeedWriter to create SpeedWriter items for those channels, or you can use other tools to create items for those channels as well.

If you want to share a SpeedWriter channel (so that, for example, other users can forward items to that channel), we recommend that you categorize the channel in a meaningful way in the public category tree so that others can see and have access to it. Also, all users should be allowed to forward items to any SpeedWriter channel in the system that they may have permissions to.

To add SpeedWriter channels,

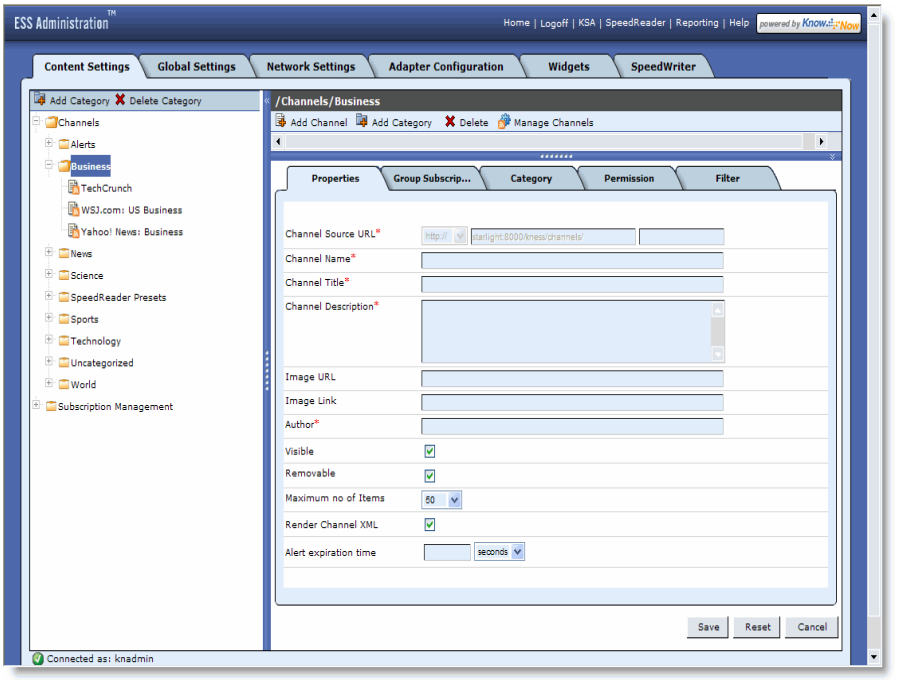
1. Access the Content Settings tab.
2. Navigate to the category where you wish to add the channel.
3. In the upper right pane, choose **Add Channel** (). The Add Channel dialog box opens.

Figure 5-33. Adding a new SpeedWriter channel.



4. Select **SpeedWriter** and choose **OK**. This displays a set of tabs in the lower right pane for using SpeedWriter to create a channel.

Figure 5-34. Adding a channel with the SpeedWriter option.



5. On the Properties tab, set the properties (accessed, if need be, by scrolling down) described in step 6 through step 17.

6. In the **Channel Source URL** field, either *http://* or *https://* is displayed, depending on whether your LiveServer has been accessed using regular HTTP or HTTPS (SSL). KnowNow ESS assumes that your new channel will always be located on the same machine that SpeedReader is running on. Therefore, the middle section of the URL for the new channel is also already filled in.

7. In the **Channel Name** field, enter a name for the channel. This name is displayed in Content Settings and SpeedReader. ESS will create this file (in XML format) when you choose **Save**. If you wish this file to have an extension, such as .xml, enter the extension as well. The file/path name is where the file is persisted to. This means that the file can be viewed using any RSS reader.

   If you wish to make this channel available publicly, the channel URL is made up of the concatenated text from all three fields. So, for example, if the protocol http://, and if SpeedReader is installed in www.example.com:8000/kness/, and if your new

SpeedWriter channel is Company_Events.xml, then the full URL for accessing that new channel would be

http://www.example.com:8000/kness/channels/Company_Events.xml

8. In the **Channel Title** field, enter a title for this channel.
9. In the **Channel Description** field, enter a description for the channel.
10. Optionally, in the **Image URL** field, enter the full URL for an image you wish to be associated with this channel.
11. Optionally, in the **Image Link** field, enter the full URL for the link you wish people to be taken to when they click on the image.
12. In the **Author** field, enter an author's name to be displayed with this channel.
13. Enable or disable **Visible**. This determines whether SpeedReader users will see the channel in SpeedReader's list of available channels.
14. Enable or disable **Removable**. This determines whether SpeedReader users can remove the channel from their personal lists.
15. Select a **Maximum no of Items** (from increments from 50 to 1000). This option limits the number of items that can be displayed in the channel at a time. The default value is **50**.
16. Enable or disable the **Render Channel XML** option. This option applies to internal channels (channels other than RSS source type that have a URL http://*liveserverhostname*:*port*/kness/channels/*channelspecificpath*). This option will persist these channels to the file system so that third-party RSS readers can access RSS files at the given URL.

    Note that the channel content *must* be in well-formed XHTML or XML in order to be rendered into RSS feeds that are readable by third-party readers. For example, all elements must be closed by , all <li> elements must be closed with , all break, image, and other such elements must have a closing forward slash (
,), and so on.
17. Set an expiration time for alerts for each item using the **Alert expiration time** option. Select the unit of time to seconds, hours, days, weeks, or months, and specify how many of those units you want to be used. For example, you could select **hours** as the unit of time, and enter **3** in the field, so that alerts will expire after three hours.
18. On the Group Subscriptions tab, select which groups, if any, you wish to globally assign this channel to. For information on managing group subscriptions, see "Managing Subscriptions for Groups" on page 57.

19. On the Category tab, assign the category or categories you wish this channel to appear under. To select a channel, place a check in the accompanying checkbox next to the category. Users cannot change categories assigned this way, though they can assign the channel to additional categories if they wish.
20. On the Permission tab, set the permissions for access to this channel. This includes setting permissions for users and groups. For important information about permissions, see "Permissions" on page 130.
21. On the Filter tab, you can specify search terms in order to filter items. Filters are applied to every item in a channel, so that items that do not match the filter are not posted to ESS. For more information, see "Understanding and Creating Filters" on page 132.
22. Choose **Save** to save the channel. A message pops up saying that the channel has been saved and asking if you wish to add another channel of this type. Choose **Yes** to create another channel of the same type, or **No** to exit the process.
23. To create items for SpeedWriter channels, use SpeedWriter as described in *Using KnowNow's SpeedWriter*.

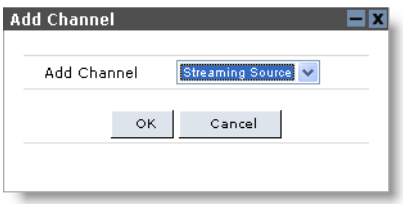
Creating Streaming Source Channels

With this option, you create a streaming source channel (a channel that produces continuous output). Streaming source channels are primarily used for high bandwidth data. Initially, you are creating an empty channel for your streaming source events. After you have created the channel, you will need to perform additional tasks to publish to that channel, as described under "Publishing to a Streaming Source Channel" on page 125.

To create streaming source channels,

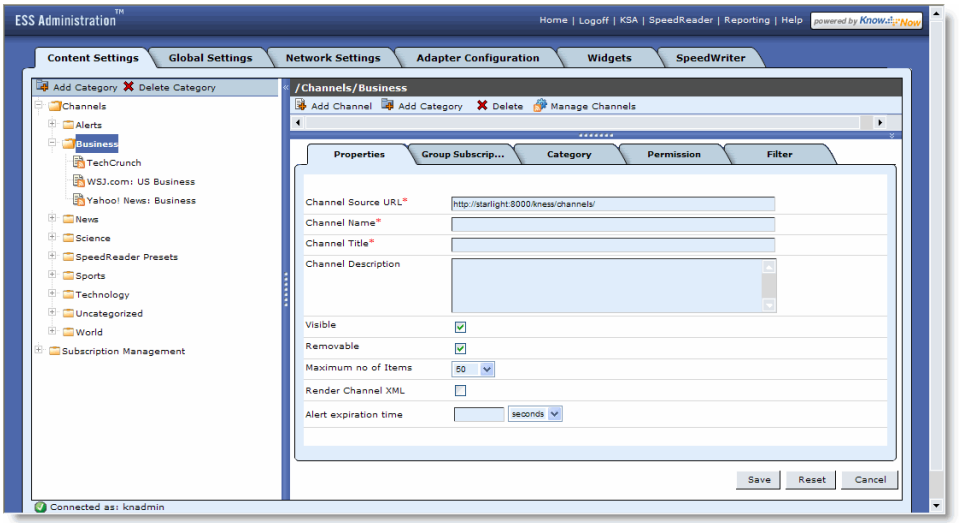
1. Access the Content Settings tab.
2. Navigate to the category where you wish to add the channel.
3. In the upper right pane, choose **Add Channel** ( ). The Add Channel dialog box opens.

Figure 5-35. Adding a new streaming source channel.



4. Select **Streaming Source**. This displays a set of tabs in the lower right pane for creating a channel that uses a streaming source.

Figure 5-36. Adding a channel with the Streaming Source option.



5. On the Properties tab, set the properties (accessed, if need be, by scrolling down) described in step 6 through step 14.
6. In the **Channel Source URL** field, specify the URL for the channel. This creates the topic name as described under "Streaming Source Topic Space" on page 125.
7. In the **Channel Name** field, enter a name for the channel. This name is displayed on the Content Settings tab and in SpeedReader.
8. In the **Channel Title** field, enter a title for this channel.
9. In the **Channel Description** field, enter a description for the channel.
10. Enable or disable **Visible**. This determines whether SpeedReader users will see the channel in SpeedReader's list of available channels.
11. Enable or disable **Removable**. This determines whether SpeedReader users can remove the channel from their personal lists.
12. Select a **Maximum no of Items** (from increments from 50 to 1000). This option limits the number of items that can be displayed in the channel at a time. The default value is **50**.
13. Enable or disable the **Render Channel XML** option. This option applies to internal channels (channels other than RSS source type that have a URL

http://*liveserverhostname*:*port*/kness/channels/*channelspecificpath*). This option will persist these channels to the file system so that third-party RSS readers can access RSS files at the given URL.

Note that the channel content *must* be in well-formed XHTML or XML in order to be rendered into RSS feeds that are readable by third-party readers. For example, all elements must be closed by , all <li> elements must be closed with , all break, image, and other such elements must have a closing forward slash (
,), and so on.

14. Set an expiration time for alerts for each item using the **Alert expiration time** option. Select the unit of time to seconds, hours, days, weeks, or months, and specify how many of those units you want to be used. For example, you could select **hours** as the unit of time, and enter **3** in the field, so that alerts will expire after three hours.
15. On the Group Subscriptions tab, select which groups, if any, you wish to globally assign this channel to. For information on managing group subscriptions, see "Managing Subscriptions for Groups" on page 57.
16. On the Category tab, assign the category or categories you wish this channel to appear under. To select a channel, place a check in the accompanying checkbox next to the category. Users cannot change categories assigned this way, though they can assign the channel to additional categories if they wish.
17. On the Permission tab, set the permissions for access to this channel. This includes setting permissions for users and groups. For important information about permissions, see "Permissions" on page 130.
18. On the Filter tab, you can specify search terms in order to filter items. Filters are applied to every item in a channel, so that items that do not match the filter are not posted to ESS. For more information, see "Understanding and Creating Filters" on page 132.
19. Choose **Save** to save the channel. A message pops up saying that the channel has been saved and asking if you wish to add another channel of this type. Choose **Yes** to create another channel of the same type, or **No** to exit the process.
20. Proceed with the next step of publishing to this channel as described under "Publishing to a Streaming Source Channel" on page 125.

Publishing to a Streaming Source Channel

The streaming source channel that you create using the instructions under "Creating Streaming Source Channels" on page 122 is for external data sources other than what KnowNow builds. Once you create that channel, you will need to publish events to that channel.

The steps to creating and publishing to a streaming source channel are as follows:

1. Create the streaming source channel using the instructions under "Creating Streaming Source Channels" on page 122. This implicitly creates a topic space (for more information on this, see "Streaming Source Topic Space" on page 125).
2. Publish to the topic space. When you publish, you will also need to add information that defines the schema for that data. The schema is described under "Creating the Schema" on page 126.

Streaming Source Topic Space

When you create the streaming source channel, you implicitly create a topic hierarchy for that channel. The complete topic name comprises a prefix (/kness/channels), plus the channel source URL (which will need to be URL encoded; for example, spaces need to be replaced by %20), plus /knitems. The complete formula looks like this:

/kness/channels/*encoded_channel_source_URL*/knitems

You can explore the topic space using the KnowNow System Administration console (as described in the *KnowNow LiveServer Administration Guide*) to see how existing channels appear.

Creating the Schema

When publishing to the topic space, your events need to include both the data itself as well as information on which headers need to be set, which are mandatory, which are not, and so on. Table 5-3 provides a mapping of the KnowNow headers in relation to the RSS 2.0 and Atom 1.0 standards. For information on creating and publishing events, see the *KnowNow LiveServer Developer's Guide*.

Table 5-3. Schema for streaming source channels.

Event Header	RSS 2.0 Mapping	Atom 1.0 Mapping	Description
author	<author> sub-element of <item>	"atom:author" sub-element "atom:entry" element	Publisher or source of the item
date	<pubDate> sub-element of <item>	"atom:published" sub-element "atom:entry" element	RFC 822 format of the date; for example, Fri, 15 Jul 2005 22:32:39 -0700
feedTitle	<title> sub-element of <channel>	"atom:title" sub-element of "atom:feed" element	The channel title could be the same as the feed name
imageLink	<link> sub-element of <image>	"atom:link" sub-element of "atom:feed" element	A URL link to be opened when clicking on the image in the imageURL header
imageURL	<url> sub-element of <image>	"atom:icon" sub-element of "atom:feed" element	A URL link to an image; this could be the logo of the channel provider
kn_expires	NA	NA	Expiration time for events in seconds; for example, "+172800" is equal to 2 days
kn_id	<guid> sub-element of <item> if available	"atom:id" sub-element of "atom:link" element	A unique item/entry ID

Table 5-3. Schema for streaming source channels. *(continued)*

Event Header	RSS 2.0 Mapping	Atom 1.0 Mapping	Description
kn_payload	<description> sub-element of <item>	If “atom:content” in a “atom:entry” element is available, then use it; otherwise, use “atom:summary	Summary or description text applicable to the item
link	<link> sub-element of <item>	“atom:link” sub-element in a “atom:entry” element Note: Only those elements whose attribute “type” is set to “text/html” are used	A URL link to the complete article
timestamp	NA	NA	ISO 8601 format of the date; for example, 2005-07-15 22:32
title	<title> sub-element of <item>	“atom:title” sub-element of “atom:entry” element	A unique title for the item

Editing Channels

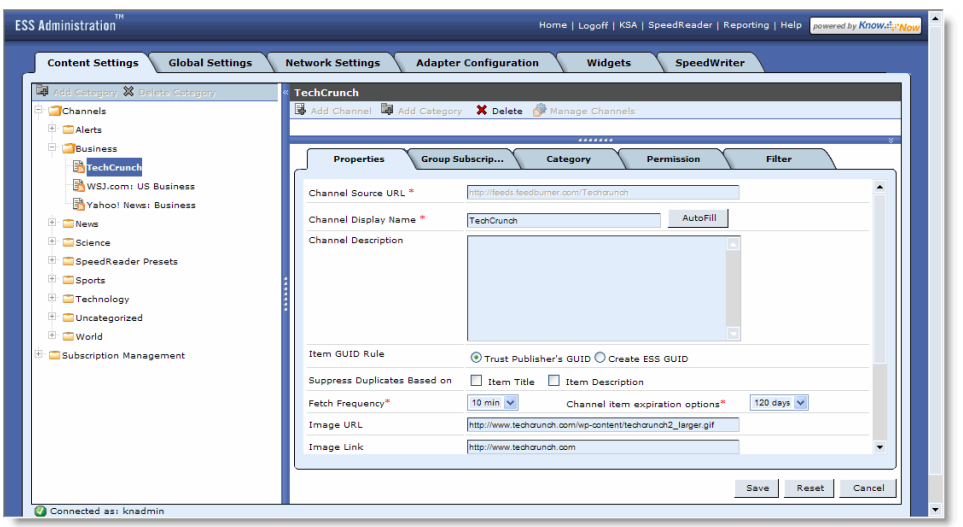
Any channel listed in the Content Settings tab can be edited. Although you cannot edit the source URL or, in most cases, the display name for a channel (the display name is what is displayed in the hierarchical tree), you can edit other aspects of the channel as described here. For information on creating channels, see "Adding, Creating, and Deleting Channels" on page 67.

Before making such changes as deleting or updating a channel, adding new channels, and so on, please wait for all elements of the ESS Administration console to be completely displayed before proceeding with the change.

To edit a channel,

1. Select the category from the list on the left under which the channel you wish to edit is located. The list in the upper right pane fills with channels in that category.
2. When you have expanded the categories so that you see the channel you wish to edit, select the channel in the upper right pane so that it is highlighted. (Or, you can just click directly on the channel you wish to edit in the category/channel list.) The editing window appears in the lower right pane. Depending on which type of channel you are editing, the fields displayed will vary.

Figure 5-37. Editing a channel.



3. On the Properties tab, you can edit any fields that are not disabled. Although you cannot edit the channel name for most channel types, you can edit the name of an

aggregated channel. For information on what each of the enabled fields does, see the instructions for creating the type of channel that you are editing.

Aggregated channels: Sometimes, editing an aggregated channel can take many minutes to complete, during which time a progress bar will be present. The duration of time taken is a function of number of channels aggregated and whether the channels are re-populated with items. The more items selected for re-population, the longer the operation will take. Also, please do not select **Populate Channel** when changing the configuration of aggregated channels.

4. On the Group Subscriptions tab, you can edit the groups that are automatically subscribed to this channel.
5. On the Category tab, you can edit the category or categories this channel appears under.
6. On the Permission tab, you can edit the permissions for access to this channel.
7. On the Filter tab, you can edit or remove the existing filter, or create a new filter for this channel.
8. When you have set your options and filters as desired for this channel, choose **Save**.

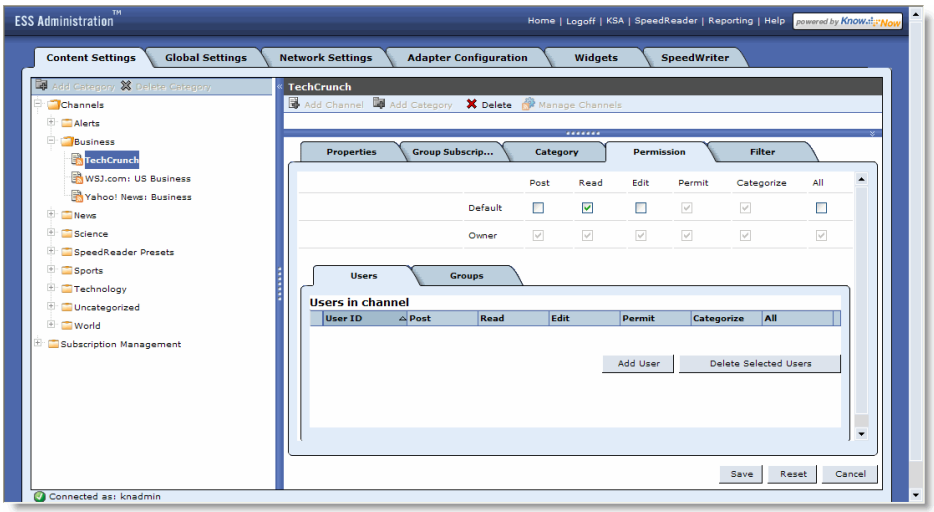
Permissions

When using the ESS Administration console to create channels, one of the tabs offers choices for setting permissions. Although you are working within the frame of the ESS Administration console, the permissions for users and groups are actually being set in the LiveServer. These permissions, along with the users and groups that they apply to, are managed by the LiveServer, and are persisted to the LiveServer's permissions files. Therefore, you will need to use the KnowNow System Administration console to manage users and groups. Then, you can use the ESS Administration console's Permissions tab to assign permissions to those users and groups. You can also use the KnowNow System Administration console to change the permissions of the default users and groups, such as KnowNow Administrators.

The LiveServer's permissions files are regular files that can be easily backed up; it is highly recommended that you do so. Also, if you uninstall KnowNow ESS, the permissions entries in the LiveServer files are *not* removed.

For more information on the LiveServer's permissions, users, and groups, and how to manage them, including on how to create access patterns, see the *KnowNow LiveServer Administration Guide*.

Figure 5-38. Setting permissions for a new channel.



The checkboxes grant or deny the following permissions for the selected channel to the selected user or group. **Default** refers to the default permissions to use if permissions haven't been specifically assigned to a user or group, and **Owner** refers to the owner of the channel.

- Enabling the **Post** checkbox grants permission to post items to the channel. It also implicitly enables the Read permission.
- Enabling the **Read** checkbox grants permission to read items in the channel.
- Enabling the **Edit** checkbox grants permission to make changes to the channel. It implicitly enables the Post and Read permissions.
- The **Permit** checkbox is reserved for the future.
- The **Categorize** checkbox is reserved for the future.
- Enabling the **All** checkbox grants all permissions.

LDAP Information

You can configure ESS to use a Microsoft Active Directory (AD) as a repository of the user/group information that already exists in the enterprise. The ESS Group Subscription Management functionality can leverage the same group information in order to subscribe channels to users based on their group memberships in this directory.

When managing users using the ESS Group Subscription Management capability, there may be situations, especially if the Active Directory administrator is making changes to the groups/users at the same time, when all or some of the users in the group do not get subscribed to the channel(s). This is because Active Directory may return incomplete/inaccurate information about the group during the time when the administrator is changing the user/group memberships. The symptom of this issue is that some users that expect to be subscribed to the channel will not be subscribed.

The workaround for this issue is to have those specific users reconnect using their KnowNow client. These same users will see the channel when they re-log in to the KnowNow client applications (for example, SpeedReader and the KnowNow Alerts Desktop).

In addition, if you are using LDAP, be aware that permissions changes can take some time (from minutes to hours) to propagate and synchronize within Microsoft Active Directory and other LDAP systems. The amount of time required is not controlled by LiveServer. Please allow sufficient time for these changes to propagate.

Understanding and Creating Filters

Filters are keywords that are used to cause ESS to search for items that contain information of interest to you. Using a filter, you put together several words you wish to have searched for in different parts of an item, such as the item's title, description, and so on. When you create a filter for a channel, only items that contain the specified keywords are displayed. This can be of great help when a channel contains dozens or even hundreds of items; by using a filter, you make it possible to view only items that contain the information that is important to you.

Filters are described under the following heading:

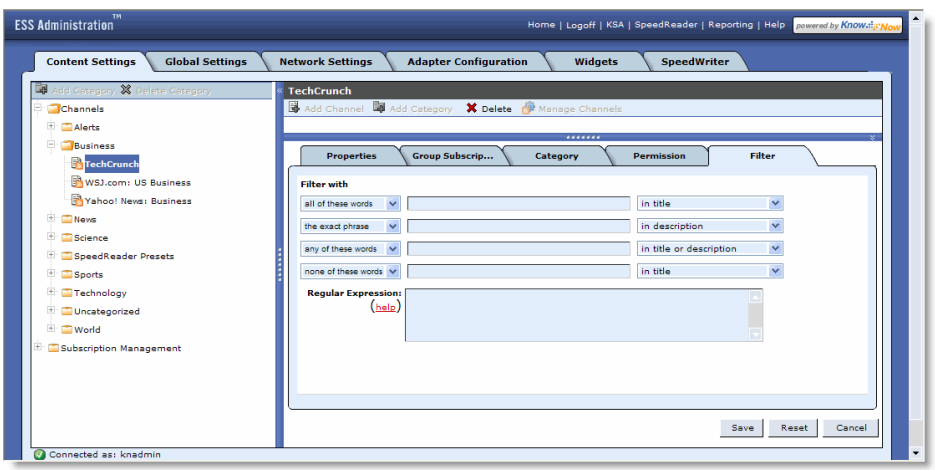
Creating A Filter

Filters can be created, modified, and deleted individually for each different channel. Note, however, that no matter where a channel is located, whether in one category or several, the same filter is applied to that channel in all locations. This is because, although you may have the channel subscription placed under different categories, it is still a single subscription to a single channel.

To create a filter,

1. While creating or editing a channel, access the Filter tab.

Figure 5-39. The Filter tab.



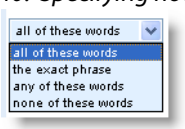
2. When viewing the filter area, you will notice that there are several rows, with down arrows next to certain fields. Each row sets one word or phrase to search for, and

specifies where to search for that word or phrase. You can choose to use just one of these rows, or you can use two or more. You can enter up to 1,024 characters in each field. In addition, there is a field labeled **Regular Expression**. When creating filters, you can either specify a number of conditions using the series of drop-down boxes, or you can create a regular expression. (You can't use both capabilities at the same time.) To create a regular expression instead of using the drop-down boxes, skip to step 7 on page 135.

3. Use the first set of drop-down choices to specify how you want the word(s) or phrase(s) to be searched for. Your choices are

   - **all of these words**. If you choose this option, every word in the field to the right will be searched for. If an item contains all of the words, then it will be displayed. If even one word is not found, then the item will not be displayed.
   - **the exact phrase**. If you choose this option, then the exact phrase you entered, with the words in the exact order, will be searched for. Any items containing that exact phrase will be displayed. If the exact phrase is not found in the item, the item will not be displayed.
   - **any of these words**. If you choose this option, every word in the field to the right will be searched for. If an item contains any of the words, then it will be displayed. Even if one or more words are not found, if at least one word is found in the item, then the item will be displayed.
   - **none of these words**. If the item contains any of the words you enter, it will not be displayed.

Figure 5-40. Specifying how you want your search words to be searched for.



4. In the middle field in the first row, enter the word(s) or phrase you want to search for. To separate single words, use spaces, colons, or semi-colons. If you want to indicate a phrase, use quotation marks.

   For example, here is a valid set of words and phrases:

   ```
   Olympics skiing "downhill sports"
   ```

   In this example, the words *Olympics* and *skiing* are considered two separate search words, and the phrase "downhill sports" is considered a single search phrase.

The following special characters are ignored by the filter; that is, they are not searched for. All other characters are searched for exactly as they are.

\ $ ^ + . [ ] { } ( ) ? : - < > = | , ; % ~ / ' `

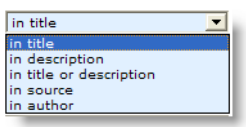
If you want to search for something that includes one or more of these special characters, use a backslash in front of the character. For example, if you want to search for *apple^pie*, including the caret character, then enter

```
apple\^pie
```

5. Finally, the last step in the first row is to specify where in the item you want the search word(s) or phrases to be searched for. Even if the word or phrase appears in another part of the item, the item will not be displayed unless it appears in the part of the item that you specify here. Your choices are

   - **in title**. The word or phrase will be searched for in the title. If it appears there, the item will be displayed.
   - **in description**. The word or phrase will be searched for in the description. If it appears there, the item will be displayed.
   - **in title or description**. The word or phrase will be searched for in the title or the description. If it appears in the title or in the description, the item will be displayed. To be displayed, the filter word or phrase doesn't have to appear in both; it only needs to appear in either the title or the description.
   - **in source**. The word or phrase will be searched for in the source. If it appears there, the item will be displayed.
   - **in author**. The word or phrase will be searched for in the author. If it appears there, the item will be displayed.

Figure 5-41. Specifying what part of the item to search.



6. If desired, repeat step 3 through step 5 for each row. The choices in each row are the same. Several rows are provided so that you can vary what you search for, how it is searched for, and where it is searched for to create a fairly complex filter.

   As you fill out each row, the search becomes narrower because each row is ANDed with the next. This means that an item must pass *each* row of searches in order to be displayed. For example, if you specify a search for an exact phrase in the first row, and specify a search for a specific source in the second row, then an item must have *both* the exact phrase *and* the specific source in order to be displayed.

If you find that your searches return too many items, you may wish to use additional rows to reduce the number of items displayed. If you find that your searches return too few items, you may wish to review what you are searching for and perhaps simplify your searches.

You aren't required to fill out additional rows if you don't wish to. If the filter word search field in a row is blank, the entire row is ignored.

7. As an alternative, if you understand regular expressions, you can instead enter a regular expression in the **Regular Expression** field. If you enter a regular expression, don't enter anything in the preceding rows. You can enter up to 8,192 characters in this field.

   The rules for the **Regular Expression** field, which uses KnowNow's regular expression filter, Expr, are different than the rules for the preceding filter fields. KnowNow's Expr filter implements extended regular expressions using the Henry Spencer regex library. Documentation for the Henry Spencer regex library can be found in many excellent sources. For additional information about Expr, including delimiters and parameters, see the *KnowNow LiveServer Developer's Guide*.

8. If you want to start over with creating your filter, choose **Reset**. This clears all the fields so you can start again.

9. When you are done creating the filter, choose **Save**.

Chapter 6 Global Settings, Network Settings, and Widgets

On the Global Settings tab, you can set global and default options for channels, SpeedReader, and SpeedWriter.

If you are using a proxy server, you can specify settings for that server on the Network Settings tab.

Use the Widgets tab to manage widgets for KnowNow Live.

These tabs are described under the following headings:

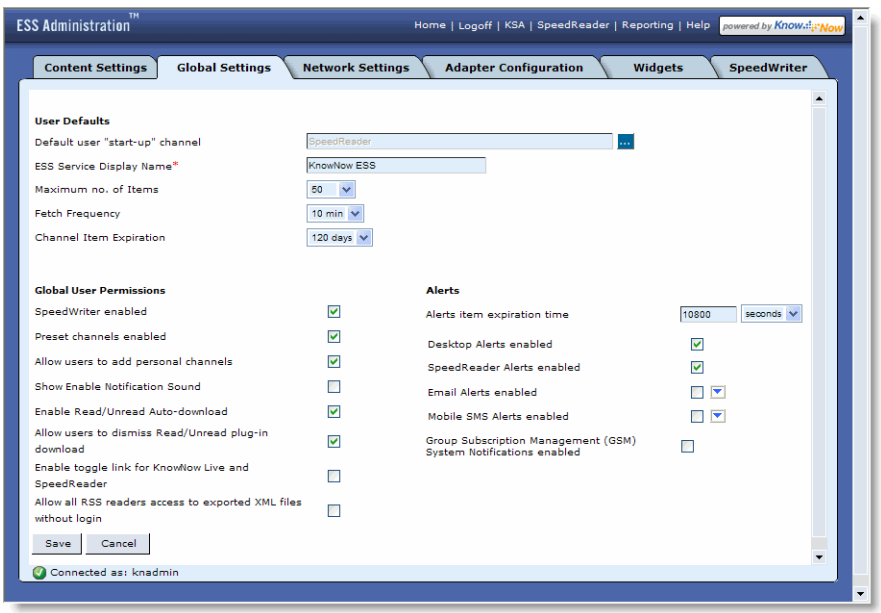
Global Settings

On the Global Settings tab, you can set certain options for channels, SpeedReader, KnowNow Live, and SpeedWriter. To access these options, access the ESS Administration console, then select the Global Settings tab. Once you have made the settings as desired, choose **Save**.

The options on this tab are divided into the following areas:

- "User Defaults"
- "Global User Permissions" on page 140
- "Alerts" on page 141

Figure 6-1. The Global Settings tab showing additional fields.



User Defaults

The settings in this area configure certain aspects of ESS for your users.

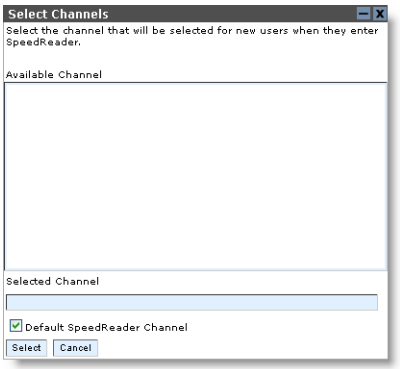
Default user "start-up" channel

The **Default user "start-up" channel** field indicates the channel that will display the very first time a user logs into SpeedReader. After that first time, the user's information (and their personal channels) are persisted, and those settings and channels are what the user will see.

If you change the setting in this field, the only people to see the new setting will be new users logging in for the first time after you make this change.

When you choose the more (**...**) button, an additional window opens, offering a list of channels to choose from.

Figure 6-2. The Global Settings tab: Selecting channels for SpeedReader.



The channels that appear in this list are channels that were added to the *SpeedReader Presets* category (which is available for editing on the Content Settings tab; for more information, see "About the SpeedReader Presets Category" on page 50). If there are no channels in the *SpeedReader Presets* category, then no channels will be displayed here in the Select Channels dialog box.

ESS Service Display Name

This is a required field. Here you can enter the service name for the KnowNow ESS (for example, *Example Company's Syndication Service*). This service name is displayed to users in read-only mode in SpeedReader's **User Preferences** section.

Maximum no. of Items

This option sets the maximum number of items that will be displayed in each channel. In the drop-down list, select a preset number from **50** (the default) to **1000**.

Fetch Frequency

This option sets a default interval for how often the system checks channels for updates. In the drop-down list, select a preset number from **5 min** (five minutes) to **2 days**. The default is **10 min** (10 minutes).

Channel Item Expiration

This option sets the default expiration time for items. After the selected amount of time has passed, items will expire and will no longer be displayed. In the drop-down list, select a preset number from **24 hrs** (24 hours) to **Infinity**. The default is **120 days**.

Global User Permissions

The global user permissions settings affect how end users experience SpeedReader and KnowNow Live in various ways.

SpeedWriter enabled

This option enables or disables access to SpeedWriter, the tool that users can use to create posts for SpeedWriter channels. When this option is disabled, the link to SpeedWriter will not display in SpeedReader. Also, when this option is disabled, channel creation will be available from the Content Settings tab in the ESS Administration console, but not from the My Channel Setup page in SpeedReader. This option is enabled by default.

Preset channels enabled

This option enables or disables the display of preset channels in the Preset Channels pane in SpeedReader. Preset channels are channels you create and manage using the Content Settings tab. When preset channels are visible, users can add preset channels to their list of personal channels in the My Channels pane, view the items in preset channels, forward items from preset channels (to SpeedWriter channels), and apply filters to preset channels, but they cannot delete preset channels. This option is enabled by default.

Allow users to add personal channels

This option enables or disables the ability for users to add preset channels to their personal channels using My Channels Setup in SpeedReader. This option is enabled by default.

Show Enable Notification Sound

This option enables or disables the visibility of SpeedReader's **Enable Notification Sound** option. This option, which is disabled by default, makes it possible for users to enable or disable a sound that is played when new items are received.

Enable Read/Unread Auto-download

This option, which is enabled by default, enables or disables automatic downloading of the ESS Read/Unread plug-in. When enabled, when users first access SpeedReader, they are asked if it is okay to download and install the ESS Read/Unread plug-in. If they confirm, then this plug-in is then downloaded and installed. This option is enabled by default. Users can always still download and install this plug-in by accessing the SpeedReader Add-ons page. Or, if you wish to force readers to get this plug-in, then disable the **Allow users to dismiss Read/Unread plug-in download** option.

The ESS Read/Unread plug-in enables read/unread functionality for Internet Explorer and Mozilla Firefox. When this plug-in is installed, SpeedReader tracks the read or unread state of items across browsers and across SpeedReader sessions. Even if a user logs out and then back in, any items that were previously marked as read or unread will still be marked as read or unread, as appropriate.

Note that this information is stored on the user's local machine. This means that if a user logs into SpeedReader from a different computer, the read/unread states will be different from what is stored on any other computer on which the user may have installed this plug-in.

Allow users to dismiss Read/Unread plug-in download

When this option is disabled, users must accept having the read/unread plug-in installed if the **Enable Read/Unread Auto-download** option is enabled. This option is enabled by default.

Enable toggle link for KnowNow Live and SpeedReader

When enabled, this option enables a toggle link for KnowNow Live and SpeedReader. This option is disabled by default.

Allow all RSS readers access to exported XML files without login

When enabled, this option allows all RSS readers, whether KnowNow's or not, to access exported XML files without having to log in. This option is disabled by default.

Alerts

The Alerts options set various behaviors for alerts.

Alerts item expiration time

This option sets the time for when alerts are to expire. Alert items stop being listed as alerts after the expiration time. SpeedReader and the KnowNow Alerts Desktop will not provide alerts that are older than what is specified in this setting. The default setting is **10800 seconds** (180 minutes, or 3 hours).

Desktop Alerts enabled

This option applies to the KnowNow Alerts Desktop. When you enable this box, users can configure channels for alerts on the Alerts Desktop. This option is enabled by default.

SpeedReader Alerts enabled

When you enable this option, users can configure channels for alerts on SpeedReader. This option is enabled by default.

Email Alerts enabled

When you enable this option, users can configure channels for email alerts. Once you enable this option, set the "From" and "Reply To" email addresses, as well as a "Reply To" name to display, by clicking on the down arrow next to the checkbox. Users can set a "From" email address from SpeedReader's **User Preferences** section. You can also send a test message to make sure the settings are working (after choosing **OK** to save the settings). This option is disabled by default.

Warning: In regard to enabling email and mobile SMS alerts, we recommend very careful use of this feature by your end users. Many RSS feeds re-publish items previously delivered in such a way that they are considered by ESS as updates. ESS sends updates to all subscribers. In the case of SpeedReader and Alerts Desktop subscribers, each update is presented to the user as a single item as opposed to multiple items. This reduces what could be perceived by the user as duplicate entries.

The opposite is true in email clients and SMS devices. Email readers and SMS devices view these updates as new and different items, thus creating the perception of duplicate delivery and potentially flooding the user with messages. This may not be what the user is expecting. Email and SMS alerts delivery is most beneficial on channels where the content is not constantly updating existing items or where an update to an existing item is of value to the end user. Such channels tend to be those of type SpeedWriter, streaming channels, and LiveAdapter channels (RDBMS, Exchange, etc.).

Mobile SMS Alerts enabled

When you enable this option, users can configure channels for receiving alerts via text messages on their mobile phones. Once you enable this option, set the SMS mobile "From" address by clicking on the down arrow next to the checkbox. Users can set a "From" address from SpeedReader's **User Preferences** section. You can also send a test message to make sure the settings are working (after choosing **OK** to save the settings). This option is disabled by default.

Please see the warning under "Email Alerts enabled" on page 143.

Group Subscription Management (GSM) System Notifications enabled

By default, when an administrator adds a subscription for a user using group subscription management, and that user is not logged in, no notification is sent out. If you enable this option, alerts will be sent out on the System Notification channel notifying subscribers of changes. For details on group subscription management, see "Managing Subscriptions for Groups" on page 57.

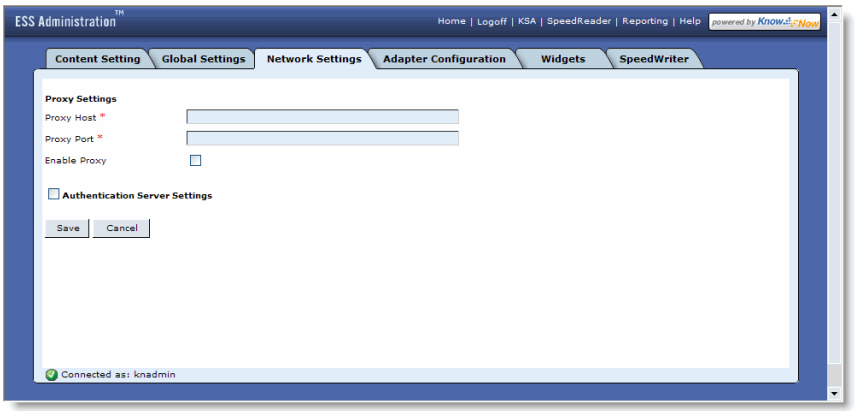
Network Settings

If you are using a proxy server, you can use the Network Settings tab to specify proxy settings. You can also enter the data for multiple authentication servers. If you don't know the values to enter on this tab, consult with your system administrator.

To configure ESS for one or more proxy servers,

1. Access the Network Settings tab.

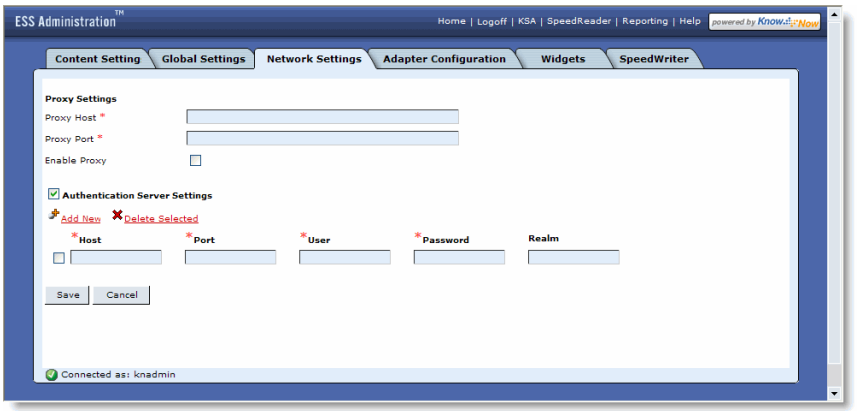
Figure 6-3. The Network Settings tab.



2. In the **Proxy Host** field, enter the name of your proxy host; for example, *proxy.example.com*.
3. In the **Proxy Port** field, enter the proxy server's port number.
4. The **Enable Proxy** checkbox indicates whether the proxy server you have configured is to be used or not. If you are entering proxy server data, enable this check box. **Important!** Proxy settings will only come into effect when you enable this check box and save your settings.

5. If you wish to enter data for multiple authentication servers, or if the proxy server whose information you've entered also acts as the authentication server, enable the **Authentication Server Settings** checkbox. This displays additional fields.

Figure 6-4. Authentication Server Settings.



6. For each authentication server you wish to add, or for the proxy server if it is also the authentication server,

   a. In the **Host** field, enter the host name. If your proxy server is also your authentication server, enter the same information you entered in the **Proxy Host** field.

   b. In the **Port** field, enter the host name. If your proxy server is also your authentication server, enter the same information you entered in the **Proxy Port** field.

   c. In the **User** field, enter the name of the user required for authentication on the authentication server (or for the proxy user if applicable).

   d. In the **Password** field, enter the password for that user.

   e. In the **Realm** field, enter the name of the proxy realm; for example, *examplerealm*. For authenticated proxies (that is, if you are entering a user name and/or a password), then a realm *must* be set; otherwise, users might see errors when adding channels to SpeedReader or the KnowNow Alerts Desktop. Otherwise, when entering neither a user name nor a password, you do not need to enter anything in this field. If you don't know what the realm is, see "Determining a Realm" on page 147.

7. To add another authentication server, choose **Add New** and repeat step 6 on page 146.

8. To delete one or more authentication servers, select the desired server or servers (by enabling the checkbox to the left of each one) and choose **Delete Selected**.
9. Be sure to choose **Save** when you have completed entering your configuration settings; otherwise, your settings won't take place. Because all samplings after you save this configuration will start using the proxy settings, you do not need to restart the proxy or authentication servers, nor do you need to restart LiveServer.

Determining a Realm

If a realm name is required, and you cannot obtain the name of the realm from your system administrator, you may be able to determine the name of your realm by using the following method. (Exact commands may vary depending on which version of Internet Explorer you are using.)

1. Configure Internet Explorer to use your proxy server. Access **Tools > Internet Options > Connections > LAN Settings > Proxy Server**. A dialog box opens.
2. In the dialog box, enter values in the **Address** and **Port** fields, and enable **Use a proxy server for your LAN**. Choose **OK**, then **OK** again.
3. Close and re-open Internet Explorer.
4. Attempt to connect to an external site (for example, http://www.yahoo.com). An authentication dialog box pops up. In this dialog box, the string above **User name** is the name of the realm. This is the string that needs to be entered as the value for **Proxy Realm** on the ESS Network Settings tab.

Verifying Your Proxy Settings

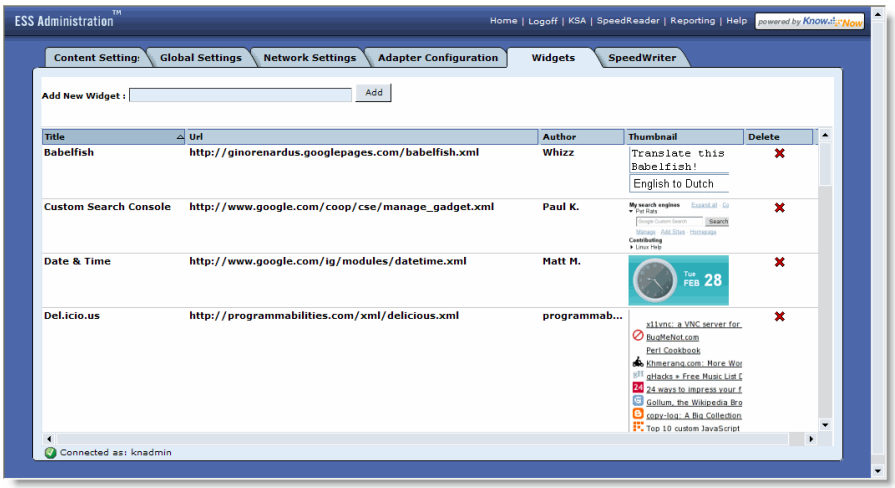
An internal KnowNow process logs proxy configuration information at the NOTICE level. You can use the KnowNow System Administration console to check for alerts for proxy configuration. You can also refer to the LiveServer's log file, server.log, to verify whether your proxy settings are taking place. Here are some sample log messages:

```
[16/Feb/2007:23:07:45:820][0.0][RSS Adapter] Notice: RSS Adapter Proxy settings :
[16/Feb/2007:23:07:45:820][0.0][RSS Adapter] Notice: Proxy Realm: examplerealm
[16/Feb/2007:23:07:45:820][0.0][RSS Adapter] Notice: Proxy Host: proxy.example.com
[16/Feb/2007:23:07:45:820][0.0][RSS Adapter] Notice: Proxy Port: 3566
[16/Feb/2007:23:07:45:820][0.0][RSS Adapter] Notice: Proxy User: proxyusr
```

Widgets

In KnowNow Live, users can add widgets to their pages from a preset list of widgets. Use the ESS Administration console's Widgets tab to add more widgets to the preset list or to remove widgets from the preset list. You can also create custom templates that contain widgets for KnowNow Live users (by group). For more information, see "Creating Default KnowNow Live Templates" on page 29.

Figure 6-5. The Widgets tab.



Although KnowNow Live is compatible with a number of Google Gadget widgets, it is not compatible with all widgets, and neither built-in widgets (an older type of widget from Google) nor inline can be used at all. If you have questions concerning compatibility, contact KnowNow Support.

To add a widget,

1. Enter the path to the widget and choose **Add**. ESS will read the widget's description (provided by the widget author).

To remove a widget,

1. Select the delete icon (the red X) next to the widget.

Chapter 7 KnowNow Web Parts

KnowNow's Web Parts can be used in Microsoft SharePoint MOSS to provide live, streaming data on SharePoint pages. KnowNow's Web Parts support the SharePoint Themes.

KnowNow's Web Parts are discussed under the following headings:

The KnowNow Web Parts

The capabilities of the KnowNow Web Parts are described under the following headings:

Channel Box

This Web Part shares many of the same capabilities as KnowNow Live's Channel Box. the Channel Box displays the newest items, such as news items, for a given channel. A channel is an RSS feed, an aggregated channel, a SpeedWriter channel, a Sphere search, or a Microsoft Exchange folder, calendar, or task list. When you choose an item in the Channel Box, the item's original Web page opens in a new, small pop-up window.

Users can specify properties for this Web Part, such as the channel's URL, title, maximum number of items to display, and so on.

The Channel Box can be edited using the following commands:

Select Channel edit

This option is available when you are editing a SharePoint page. When this option is selected, the Select Channel dialog box opens. This dialog box has two trees: My Channels, and Available Channels. These trees provide access to channels organized by category. You can select one of these channels to assign to the Channel Box. Only one channel can be added to a Channel Box, though of course more than one Channel Box Web Part can be used.

Add Category

To better organize your channel subscriptions, you can use the **Add category** option to add your own categories to the My Channels area. This option is available from within the Select Channel dialog box when you are editing a SharePoint page.

To add a personal category,

1. In the upper right corner of your SharePoint page, choose **Site Actions**, then choose **Edit Page**. You may also see a tab-style button that says **Edit Page**; you can

choose that. Once you are in Edit Page mode, the KnowNow Web Parts have available the **Select Channel edit** and **edit** commands.

2. Choose **Select Channel edit**. The Select Channel dialog box appears.

Figure 7-1. Adding a category.

3. Choose **Add category**. The field for entering the new category name is displayed. (If you wish to make the category a sub-category of an existing category, first navigate to that existing category before choosing **Add category**.)

Figure 7-2. Adding a category, part 2.

4. Enter the desired category name.
5. Choose **Add**. The new category is added to My Channels.
6. To delete a category, click the X to the right of the category name.

edit

Access this option to edit the Channel Box properties, such as title and maximum number of items. This option is available when the SharePoint page is in Edit Page mode.

Channel Reader

The Channel Reader Web Part includes most of the features of the KnowNow Live Channel Reader except the ability to add a new item, edit an item, or delete an item.

The Channel Reader Lists the most recent items for a channel subscription. It also includes an item summary and a link to the item's full article. To view items in the Channel Reader, scroll through the list to see the items in the channel. By default, the title and summary for each item are displayed.

- To read the full article for an item in a new browser window (at its original location), click on the headline.
- To hide the summaries so you only see the headlines, choose **collapse all**.
- To see the headlines and summaries, choose **expand all**.

For detailed information on the Channel Reader's capabilities, see the KnowNow Live help files.

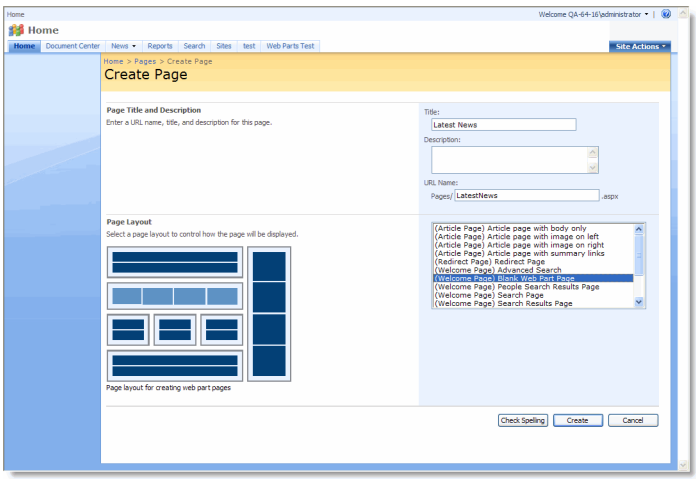
Creating a Web Parts Page in SharePoint

Once you have logged into a SharePoint page, you can create various types of pages that can contain different things. In this example, a new Web Parts page is created, a new KnowNow Channel Box Web Part is placed on it, and that Web Part is edited to add a channel subscription.

To create a Web Parts page,

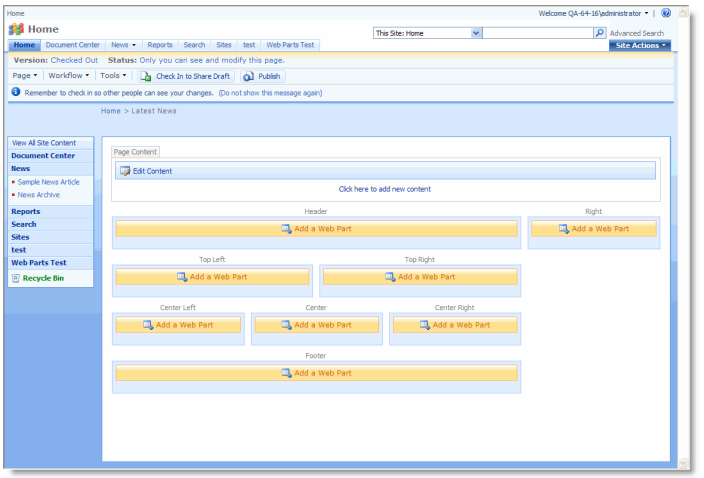
1. Access your SharePoint page. You may be prompted first for your SharePoint login credentials and then for your ESS login credentials.
2. In the upper right corner of your SharePoint page, choose **Site Actions**, then choose **Create Page**.
3. Fill in a title and a description for your new page, then select **Blank Web Part Page**.

Figure 7-3. Creating a SharePoint page.



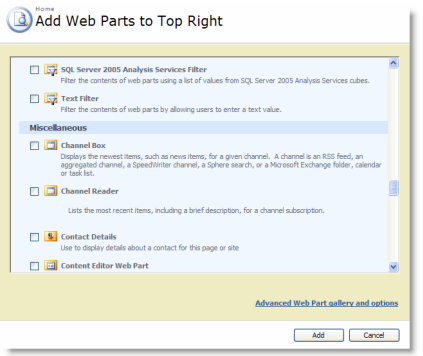
4. Choose **Create**. A new, blank Web Part page is displayed.

Figure 7-4. A new, blank Web Part page.



5. Select any **Add a Web Part** bar and click on it. A new, separate window opens showing all the available Web Parts. Scroll down until you find the **Miscellaneous** section.

Figure 7-5. Choosing a KnowNow Web Part.



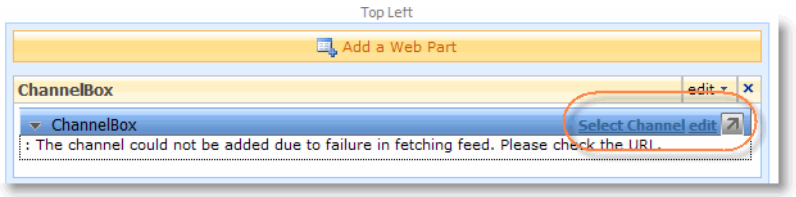
6. Place a checkmark beside the Web Parts you wish to add to the chosen location, then choose **Add**. (You can choose more than one Web Part for any location.) The selected Web Parts are placed on your page. Repeat for any other locations where you wish to add Web Parts.

7. So that the Web Parts can display useful information, you will need to edit them to add a channel subscription. You can do this now; this process is described in the following steps. Or, later, you can edit Web Parts as described under "Editing

KnowNow Web Parts" on page 157. In the next few steps, we show how to edit a Channel Box Web Part.

8. Once you have added a Channel Box Web Part, hover your mouse cursor over the Channel Box's blue bar. **Select Channel edit** appears. (You must still be in Edit Page mode for this to work.)

Figure 7-6. Editing a Channel Box.



9. Choose **Select Channel edit**. The Select Channel dialog box appears.

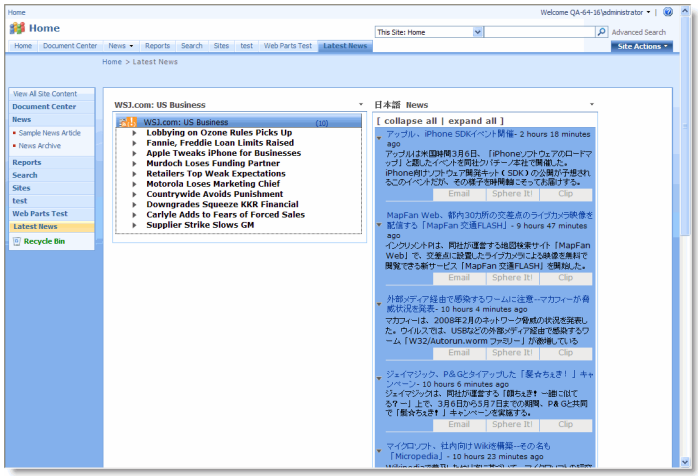
10. Click on the chevrons to expand sections until you find a channel you want to subscribe to.

Figure 7-7. Selecting a channel.

11. Click on the desired channel, then choose **Set Channel**. The channel is now assigned to the Channel Box.

12. When you have completed making changes to your page, choose either **Check in to Share Draft** or **Publish** (near the middle top of your SharePoint page).

Figure 7-8. A sample Web Parts page.



Editing KnowNow Web Parts

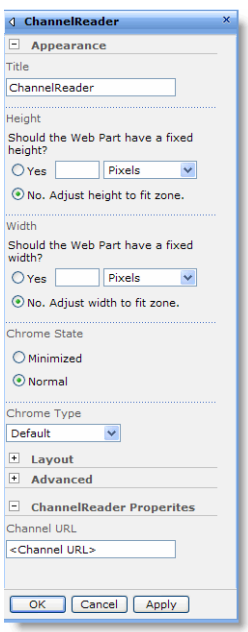
There are different ways to edit a KnowNow Web part.

- When you add a Web Part when first creating a SharePoint page (as described under "Creating a Web Parts Page in SharePoint" on page 153), you can edit some of the Web Part's properties there.
- You can also edit a Web Part once it has been placed on a SharePoint page.

To edit a KnowNow Web Part on an existing SharePoint page,

1. In the upper right corner of your SharePoint page, choose **Site Actions**, then choose **Edit Page**. You may also see a tab-style button that says **Edit Page**; you can choose that. Once you are in Edit Page mode, the KnowNow Web Parts have available the **Select Channel edit** and **edit** commands. The use of the **Select Channel edit** command is described under "Creating a Web Parts Page in SharePoint" on page 153. This procedure describes how to use the **edit** command.
2. In the KnowNow Web Part, choose **edit**, then **Modify Shared Web Part**. The Web Part's edit box appears on the right side of the SharePoint page. In this example, it is a Channel Reader Web Part that is being edited.

Figure 7-9. The Channel Reader Edit box.



3. Modify the properties as desired. The most important property is the channel URL, which for a Channel Reader Web Part is under **ChannelReader Properties**, and for a Channel Box Web Part is under **ChannelBox Properties**. This property is the channel subscription information. In addition, for a Channel Box, directly under the URL, set the maximum number of items to display. You might also wish to edit the title so that it clearly indicates the channel subscription's content, if it doesn't already.
4. Choose **OK** to save your changes.

FireFox and Web Parts

Once you have added a KnowNow Web Parts to a SharePoint page in Firefox, it is not possible to add any other Web Part. This is a Firefox issue. However, there is a fix for it.

To enable the ability to add Web Parts to Firefox pages after adding a KnowNow Web Part,

1. Open the following file for editing:

   Program_files\Common files\Microsoft Shared\web server extensions\12\TEMPLATE\LAYOUTS\webpartgallerypickerpage.aspx

2. Insert the following Javascript code under first <script> tag on the page.

```
var cookiestring=""+document.cookie;
var index1=cookiestring.indexOf("kness_domainname");
if (index1>-1){
    var index2=cookiestring.indexOf(';',index1);
    if (index2==-1)
        index2=cookiestring.length;
    document.domain = unescape(cookiestring.substring(index1+17,index2));
}
```

3. Save and close the file.

Chapter 8 Configuring and Using the Reporting Feature

ESS activity data is provided in a standard relational database so you can integrate with common enterprise reporting tools (such as Crystal Reports) to develop your own reports. In order to do so, you will need to first prepare your system and configure reporting in ESS. You can then either use the ESS Reporting tool or integrate with your existing third-party reporting tool. Use of the reporting feature is described under the following headings:

Configuring the Reporting Feature

The process of configuring reporting is described under the following headings. You will first need to have followed the instructions under "Preparing and Installing ESS for Both Reporting and Web Parts" on page 17.

Configuring User Permissions

Before you can configure and use the ESS Reporting feature, you must create two users and assign access permissions to them. These tasks are described under the following headings:

- "Creating Two Important Users"
- "Assigning Permissions to Specific Reporting Tool Users"

Creating Two Important Users

For the purposes of configuring and using ESS Reporting, use either two pre-existing user accounts or create two new ones. Note that the user names given here are for illustration purposes only; you can use whatever names you wish. If you are using the default flat-file permission scheme, you can use the KnowNow System Administration console to add the users to the system. If using Active Directory or OpenLDAP for authentication, first create the users in your authorization system, then give them permissions as stated below. The user accounts are as follows.

- **reportadmin**: This user account will be used in configuring the ESS Reporting system as described under "Configuring and Initializing the Reporting Database" on page 165.
- **reportuser**: This user account will be used to access and use the ESS Reporting tool as described under "Using the ESS Reporting Tool" on page 173.

Once you've created these users, you can give them permission to use the ESS Reporting tool by adding them to the **KnowNow_Administrators** group. (This is an existing KnowNow group. For more information on this group, see Chapter 9, "Managing Users and Groups," in the *KnowNow LiveServer Administration Guide*.)

All users that are members of the **KnowNow_Administrators** group will automatically be able to use the ESS Reporting tool. However, this may not be what you wish. If you wish to give only a subset of users access to the ESS Reporting tool, then instead of assigning **reportadmin** and **reportuser** to the **KnowNow_Administrators** group, use the procedure given under "Assigning Permissions to Specific Reporting Tool Users" to assign permissions.

Assigning Permissions to Specific Reporting Tool Users

As mentioned under "Creating Two Important Users", you can assign **reportadmin** and **reportuser** to the **KnowNow_Administrators** group to give them access to the ESS Reporting tool. However, if you wish to enforce a higher security policy in ESS, instead of assigning those users to that group, you can use the LiveServer's KnowNow System Administration console to create a new group, assign those users to that group, create access patterns that are specific to ESS Reporting, and assign the new group to those access patterns as described below. As before, the names given are for illustration only; you can use whatever names you wish.

To assign access permissions so that only certain users can access and use the ESS Reporting tool,

1. Using the KnowNow System Administration console, create a new group named **knreportadmin**. (For details on using the KnowNow System Administration console to perform step 1 through step 3, see Chapter 9, "Managing Users and Groups," in the *KnowNow LiveServer Administration Guide*.)
2. Add the user **reportadmin** to the **knreportadmin** group.
3. Add all other users who will need to use the ESS Reporting tool to the **knreportadmin** group. Remember to include **reportuser**.
4. Create a new access pattern named **KnESS Report Administration** that has the values shown in Table 8-1. (For details on using the KnowNow System Administration console to perform step 4 through step 7, see Chapter 8, "Managing Permissions," in the *KnowNow LiveServer Administration Guide*.):

Table 8-1. Values to use for the KnESS Report Administration access pattern.

Field Name	Set to This Value
Pattern Name	KnESS Report Administration
Originator	peer
Protocol	*

Table 8-1. Values to use for the KnESS Report Administration access pattern. *(continued)*

Field Name	Set to This Value
URL	/kness/admin/reporting//.
Port	*
Host	*
Peer URL	//.
Peer Port	*

5. Add the group **knreportadmin** to the **KnESS Report Administration** access pattern and grant **All** permissions.
6. Create a new access pattern named **KnESS Report Queries** that has the values shown in Table 8-2.

Table 8-2. Values to use for the KnESS Report Queries access pattern.

Field Name	Set to This Value
Pattern Name	KnESS Report Queries
Originator	peer
Protocol	*
URL	/kn/who//./reporting//.
Port	*
Host	*
Peer URL	//.
Peer Port	*

7. Add the group **knreportadmin** to the **KnESS Report Queries** access pattern and grant **All** permissions.

Configuring and Initializing the Reporting Database

Before you can use the reporting feature, you will need to enter information concerning the reporting database.

Warning: Use the following procedure only when configuring reporting for the first time.

While configuring the reporting database, you can also configure a partition period for that database. Generally speaking, partitioning is a division of a logical database or its constituent elements into distinct independent parts. Database partitioning is normally done for manageability, performance, or availability reasons. KnowNow's partitioning feature improves performance by making it possible to eliminate entire partitions from the queries being performed. Once a partition period has been configured, partitioning is then done automatically when summarizing reports based on the partition period.

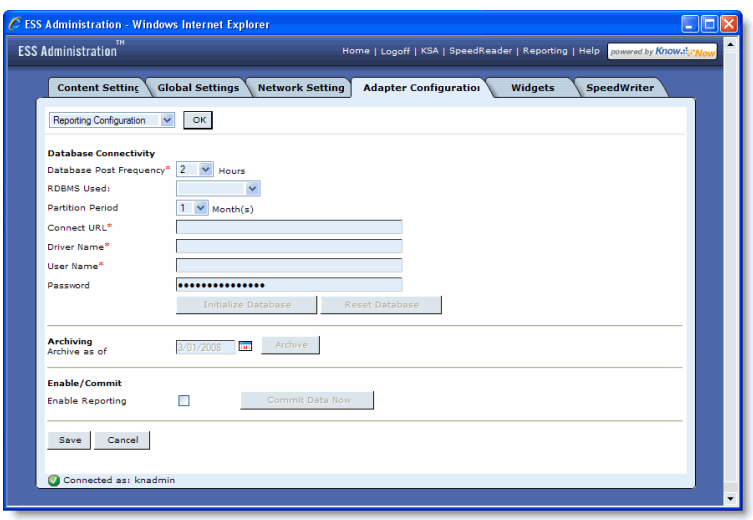
You can later change the reporting configuration information as described under "Changing Your Database Information" on page 171. For information on resetting the database, see "Resetting the Database" on page 172.

Warning: Do not choose the **Reset Database** button at any time during this procedure. You will clear the schema and contents from your database. For information on the **Reset Database** button, see "Resetting the Database" on page 172.

To configure reporting,

1. Access the Adapter Configuration tab. There, select **Reporting** in the drop-down box, then choose **OK**. ESS displays the fields for configuring the reporting feature.

Figure 8-1. Configuring the reporting feature.



2. In the **Database Connectivity** area, choose a **Database Post Frequency** from the drop-down list. This is the polling interval. The polling interval controls how often the reporting and analytical data about usage is recorded or snapshotted to the configured relational database. The options are **1** to **8** hours.

   If you have a need for frequent reporting or reporting with the most current data, then smaller settings, such as 1-4 hours, are better. Additionally, smaller values (1 hour) are better on a heavily used system so that data can be written more often in smaller amounts rather than infrequently and in larger transactions (8 hours).

On a moderately loaded system and where reports are reviewed only daily or weekly, larger values such as 5-8 hours are more appropriate. You can always use the **Commit Data Now** button to retrieve data in between polling intervals; for more information, see "Updating Data Between Polling Intervals" on page 170.

3. Also in the **Database Connectivity** area, from the drop-down list next to **RDBMS Used**, select the relational database you are using.

   The drop-down list is created from a predefined list of tested and supported popular RDBMS platforms. The selection is used by the ESS Reporting System in creating and initializing database tables as well as ESS query optimization. The supported RDBMS platforms are listed under "System Requirements and Supported Platforms" on page 14.

4. Also in the **Database Connectivity** area, enter the **Connect URL** and **Driver Name** for the database.

   To identify a database instance in MySQL:

   Connect URL:
   jdbc:mysql://*DB_server*:*port*/*DB_name*?autoReconnectForPools=true
   Driver Name: com.mysql.jdbc.Driver

   To identify a database instance in Microsoft SQL Server:

   Connect URL: jdbc:sqlserver://*DB_server*;databaseName=*DB_name*
   Driver Name: com.microsoft.sqlserver.jdbc.SQLServerDriver

   To identify a *named* database instance in Microsoft SQL Server:

   Connect URL:
   jdbc:sqlserver://*DB_server*;instanceName=*DB_instance_name*;databaseName=*DB_name*
   Driver Name: com.microsoft.sqlserver.jdbc.SQLServerDriver

5. Also in the **Database Connectivity** area, enter a valid user name for that database and the password for that user in the **Username** and **Password** fields. The user must have "create table" privileges for that database.

6. Also in the **Database Connectivity** area, select a partition period (from **1** to **12** months).

7. In the **Enable/Commit** area, place a checkmark in the **Enable Reporting** box. All configurations you make on this page will be saved regardless of whether you enable this check box. However, none of these configurations will take affect until this check box is enabled.

8. Choose **Save**.

9. Restart LiveServer in order to initialize the connections.
10. Choose **Initialize Database**. This is a one-time task (unless you reset the database; see "Resetting the Database" on page 172).

Verifying the Database Initialization

There are some steps you can take to verify that the database initialization process was successful.

To verify the initialization of the database,

1. Issue the following SQL commands. In these instructions, replace **kn_reporting** with the name of the database you created in step 2 on page 17.

   In MySQL:

   ```
   use kn_reporting;
   show tables;    -- this should list 33 tables and views
   select count(*) from date_table;  -- this should return 4018
   ```

   In Microsoft SQL Server:

   ```
   use kn_reporting;
   Select * From sysobjects where xtype='U' and status >0
   UNION
   Select * From sysobjects where xtype='V' and status >0;    -- this should list
   33 tables and views
   select count(*) from date_table;  -- this should return 4018
   ```

2. Restart LiveServer, access the ESS Administration console, and populate the database with some data as follows:
   a. Create one or more channels.
   b. Log in as two or more different users to any one or all of the KnowNow client applications (KnowNow Alerts Desktop, KnowNow Live, or SpeedReader).
   c. Subscribe to channels in each of these products.
   d. Read items.
   e. Open articles by clicking through on item titles.
3. The collection service will post the data from the topic space to the database at the intervals specified in the **Database Post Frequency** field (configured in step 2 on page 166). You could wait for that period, but for testing you may want to push updates to the database immediately. This is done by clicking the **Commit Data**

Now button on the Adapter Configuration tab (see "Updating Data Between Polling Intervals" on page 170).

4. To verify that data is being posted to the database, execute the following SQL statements:

```
select * from readevent_summary;
```

This is a summary view of the read events data posted to the database of channels in the ESS topic space. Or, for a more detailed view, you can use the following:

```
select * from readevent;
```

This provides the details that are rolled up to the readevent_summary table.

5. Open the Reporting tool (http://*host*:*port*/kness/admin/reporting) and view the data there. For more information, see "Using the ESS Reporting Tool" on page 173.

Updating Data Between Polling Intervals

The **Commit Data Now** button forces polling of ESS data into the database at that instant. The usual reason for using this command is to get the latest data between polling intervals. For example, if the polling interval is four hours and the last poll was made two hours ago, you might wish to use this command to get the latest data now, rather than have to wait another two hours.

When you use it, the button is disabled until the polling process completes; depending on the size of the database, this process can take up to thirty minutes.

Changing Your Database Information

After you have configured reporting as described under "Configuring the Reporting Feature" on page 162, you can make changes to that configuration as described in this section. For example, you may wish to change the database post frequency (polling interval), or you may wish to disable reporting without undoing your configuration.

Warning: Do not choose the **Reset Database** button at any time during this procedure. You will clear the schema and contents from your database. For information on the **Reset Database** button, see "Resetting the Database" on page 172.

To change your reporting configuration,

1. Access the Adapter Configuration tab. There, select **Reporting** in the drop-down box, then choose **OK**. ESS displays the fields for configuring the reporting feature.
2. Make changes to the configuration information as desired.
3. In the **Enable/Commit** area, if you are disabling reporting, uncheck the **Enable Reporting** box. All configurations you make on this page will be saved regardless of whether this check box is enabled or disabled. However, none of these configurations will take affect until this check box is enabled.
4. Choose **Save**.
5. Restart LiveServer.

Resetting the Database

There may be times when you want to entirely clear the contents and the schema from the reporting database. The following procedure describes how to do so.

Warning: When you use the **Reset Database** button, you will clear the schema and contents from your database. The reporting database itself is retained but all data is lost. Only perform this procedure if this is what you want.

To reset the reporting database,

1. Access the Adapter Configuration tab. There, select **Reporting** in the drop-down box, then choose **OK**. ESS displays the fields for configuring the reporting feature.
2. In the **Database Connectivity** area, choose **Reset Database**.
3. Choose **Save**.
4. Restart LiveServer.
5. Choose **Initialize Database**.

Using the ESS Reporting Tool

ESS has its own built-in reporting capabilities. These are simple, tabular-based reporting options that provide a quick and easy view into how the ESS system is being used. In addition, KnowNow makes the ESS data available through a schema for true analytics and advanced report writing through the use of third-party reporting tools such as Business Objects, Cognos, Actuate, and JasperReports. For information on the schema, see Chapter 9 , "The ESS Reporting Database Schema."

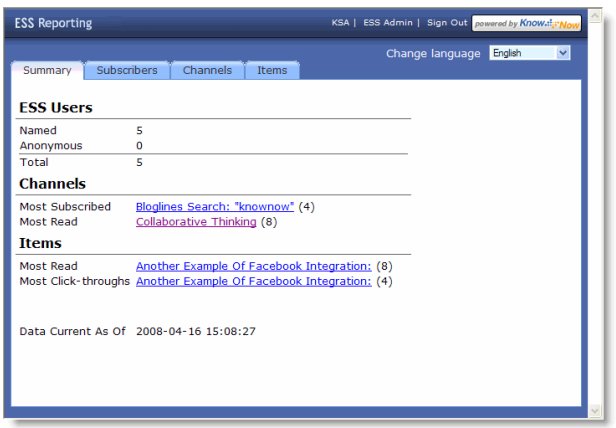
The ESS Reporting tool has a number of reports on the following aspects of channel usage:

- subscribers
- channels
- items

So that you can manage permissions for broader access than that of the ESS Administration console, ESS presents a link to its Reporting tool, which is hosted outside of the ESS Administration console.

To access the Reporting tool, click on the **Reporting** link at the top of the ESS Administration console. The ESS Reporting Summary tab is displayed. Note that you can change the language the reporting feature uses by using the **Change language** drop-down box.

Figure 8-2. ESS Reporting tool Summary tab.



The Summary tab shows

- The number of named, anonymous, and total subscribers that have access the system (and have logged in at least once). This summary does not represent a snapshot of current active logins.
- The names of the most subscribed and most read channels, with data on how many subscribers those channels have and how times those channels were read. The most subscribed channel is the channel that has the largest number of subscribers. The most read channel is the channel that has had the most number of reads of items in that channel.
- The name of the most-read item, with how many times it has been read, and the name of the item with the most click-throughs, with how many times it has been clicked on. The most-read item is the article or item within all the available channels that had been read the most number of times at the time of the last database refresh. The most-click-throughs item is the article or item within all the available channels that had been clicked through the most number of times at the time of the last database refresh. There are two types of click-throughs generated by KnowNow Alerts Desktop, SpeedReader, and KnowNow Live:
  - article: when a user clicks on a link of the item
  - media: when a user clicks on an enclosure of the item
- A date and time showing when the database was last polled (**Date Current As Of**).

Subscribers

On the Subscribers tab, you can view reports on users Users who have logged in using SpeedReader, KnowNow Live, and/or KnowNow Alerts Desktop that show:

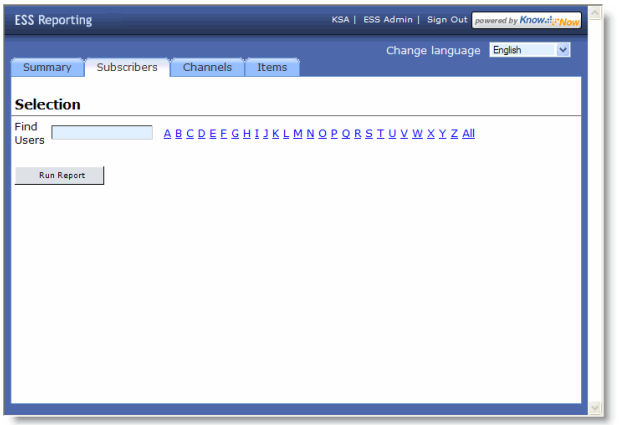
- User name
- Groups that each user belongs to
- How many subscriptions each user has

- The last time a user connected

To view a subscriber report,

1. Access the Subscribers tab.

Figure 8-3. The Subscribers tab.

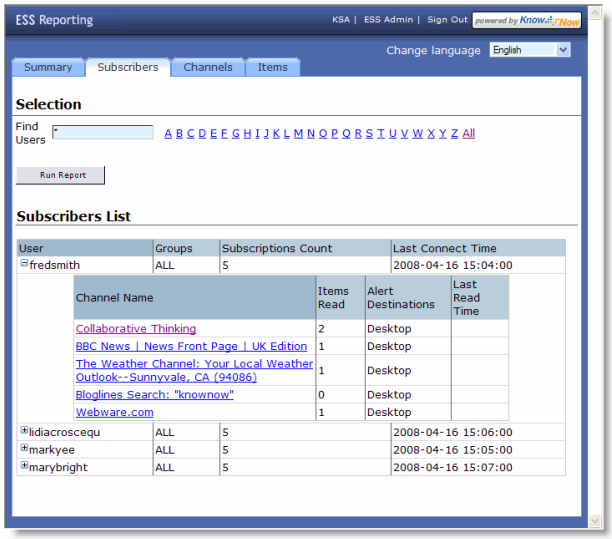


2. Enter a subscriber name in the **Find Users** field. You can also click on a letter to enter a search for data on all subscribers whose names start with that letter, or choose **All** to search for data on all subscribers.

   We recommend that, rather than using **All**, you primarily use very specific user queries such as *a** (which will retrieve data on all users whose family names start with the letter *a*) or even more specific queries, such as *Smith** (which will retrieve data on all users whose family names start with Smith). This is because, if there is a large number of users, selecting **All** could result in a very long query and a list that cannot be rendered in the report.

3. Choose **Run Report**. The report results are displayed.

Figure 8-4. A subscriber report.



- Click on the column headings to sort the list accordingly.
- For expanded details on each subscriber, click on the plus sign (+). When expanded, a user's section displays channels. Each channel name is a link that can be clicked on to see the data/content source in a new browser window. This is provided to make it easy for you to know in more detail what the channel content/data represents.

Channels

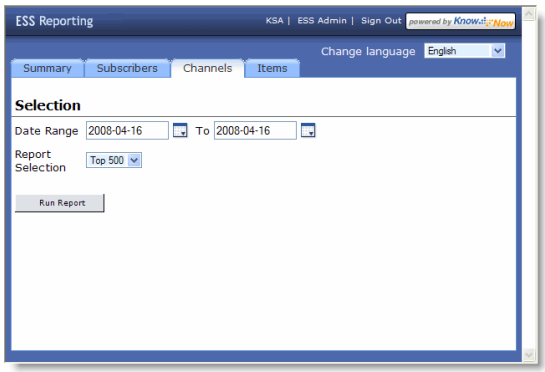
On the Channels tab, you can view reports on the most active top 10, top 100, and top 500 channels for a specified date range. These reports show:

- Each channel's name
- A link to each channel's source
- The channel type
- How many active subscribers each channel has
- The refresh interval
- The date when the properties of each channel were last modified

To view a channel report,

1. Access the Channels tab.

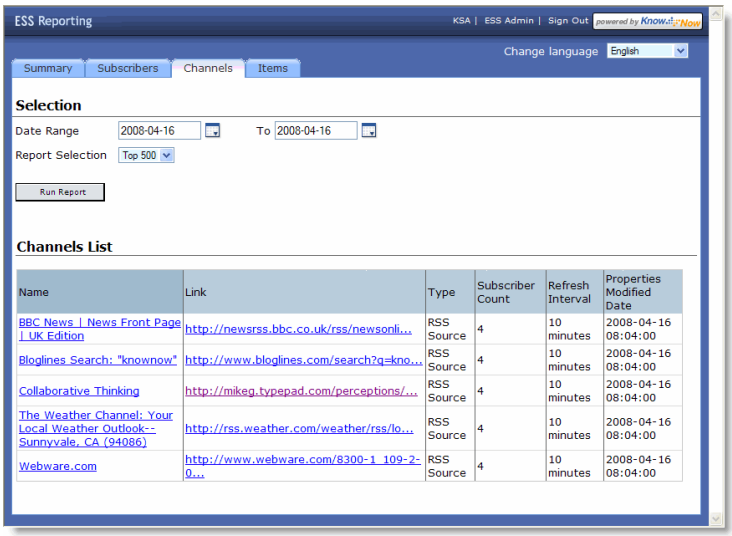
Figure 8-5. The Channels tab.



2. Enter a starting date and an ending date to specify the range you want the report to cover. Using a date range limits the report to data from just that date range so you can see what was happening in the system during that time. Constraining the data range also enhances performance for systems that have been running for some time or that have a lot of data.
3. In the **Report Selection** drop-down box, select the report you wish to view.

4. Choose **Run Report**. The report results are displayed.

Figure 8-6. A channel report.



The name of the channel is displayed as a link. In addition, a link to the channel is displayed in full. Clicking on the link in the **Name** column results in a small window popping up with the content inside it. Clicking on the link in the **Link** column results in the original Web site opening in a new browser window.

Items

On the Items tab, you can view reports on the top 10 click-throughs, top 100 click-throughs, and top 500 most-read items for a specified date range.

The click-through reports show for each item:

- Its title
- A link to that item
- The item type
- The click-through count for that item

The top 500 most-read items report shows:

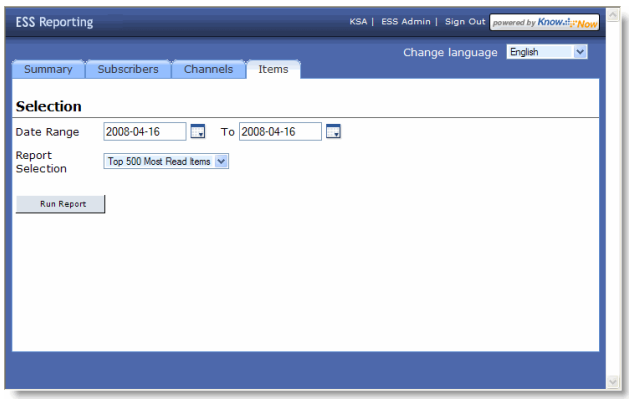
- Each channel's name
- The name of the most-read item
- The total number of subscribers to that channel

- How many times the item was read
- Click link
- The click media count

To view an item report,

1. Access the Items tab.

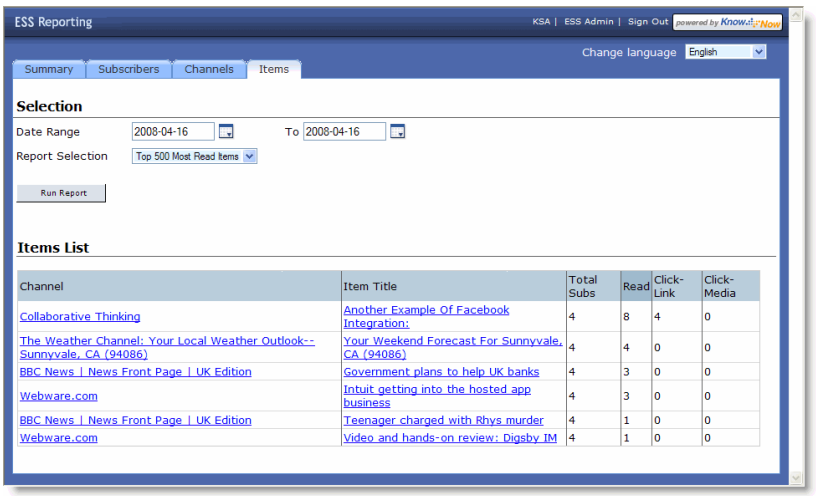
Figure 8-7. The Items tab.



2. Enter a starting date and an ending date to specify the range you want the report to cover.
3. In the **Report Selection** drop-down box, select the report you wish to view.

4. Choose **Run Report**. The report results are displayed.

Figure 8-8. An item report.



As with the channels list, the name of the channel is displayed as a link. In addition, a link to the item is provided. Clicking on the link in the **Name** column results in a small window popping up with the channel content inside it. Clicking on the link in the **Item Title** column results in the item opening in a new browser window.

Archiving

The Reporting database includes the following three tables:

- readevent
- sessionevent
- item

Because each of these tables has the potential to grow very large, and because older data is perhaps not of as much interest, you can archive the data in these tables by moving all records earlier than a particular date into a separate table with the same schema as the source table. These archived tables are named using the prefix *archive*. That data is still available to be searched, but is moved out of the main tables.

In order to archive a database, the database must first have been initialized as described under "Configuring and Initializing the Reporting Database" on page 165.

To archive a database,

1. Access the Adapter Configuration tab. There, select **Reporting** in the drop-down box, then choose **OK**. ESS displays the fields for configuring the reporting feature.
2. In the **Archiving** area, select the final date for data you want archived. For example, if you want all data archived up through December 31, 2007, select that date. You cannot select a date that is greater than today's date.
3. Choose **Archive**.
4. A confirmation message is displayed. Choose **OK** to archive the data or **Cancel** to cancel the action. When you choose **OK**, all data from the earliest date in the database through the specified date is archived.

Integrating With a Third-Party Reporting Tool

In order to integrate with a third-party reporting tool, you will need to understand the ESS schema. The schema is documented in Chapter 9 , "The ESS Reporting Database Schema." You will need to understand how to use the third-party reporting tool in order to use the information in that chapter.

Chapter 9 The ESS Reporting Database Schema

In addition to the simple reporting tool documented in Chapter 8 , "Configuring and Using the Reporting Feature," KnowNow makes the ESS data available through a schema for true analytics and advanced report writing through the use of third-party reporting tools such as Business Objects, Cognos, Actuate, and JasperReports. That schema is documented in this chapter under the following headings:

About the ESS Reporting Database

The ESS Reporting database captures, summarizes, and reports on content delivered and read through KnowNow ESS.

The KnowNow ESS reporting database follows a star-schema design, widely used for OLAP applications. Fact tables representing a summary of activity (such as which RSS items users are reading) are typically accessed from dimension tables such as the objects channel, user subscription, or date. If this language is unfamiliar, you may want to refer to online or print resources on dimensional modeling or data warehouse design.

Data Capture

Certain events that represent user reading behaviors are captured in the KnowNow user interfaces and published to the KnowNow server. These represent opening a channel, reading channel items and clicking through on selected elements within the item. Table 9-1 summarizes the reading event tracked by ESS. Session events, representing each time a user logs into a KnowNow interface (KnowNow Live, KnowNow Alerts Desktop, or SpeedReader), are stored in the sessionevent table.

Table 9-1. Reading events tracked by ESS.

Event	Interface	UI Action	Select Database Values (table: readevent)
Open a channel	KnowNow Live	• Drag a new channel onto a KnowNow Live page • Open KnowNow Live—all channels displayed in channels box • Click to preview in the channels tree pane	element= **open** interface=KNL/*version number* Object IDs: kn_channel_id (hash) kn_channel_uri (link)
	SpeedReader	Click the channel name on the channel tree (opens items list)	element= **open** interface=SR/*version number* Object IDs: kn_channel_id (hash) kn_channel_uri (link)
	KnowNow Alerts Desktop	N/A (all events are from the Alerts channel)	

Table 9-1. Reading events tracked by ESS. *(continued)*

Event	Interface	UI Action	Select Database Values (table: readevent)
Read an item	KnowNow Live	• Click the open bullet on an item in the channel box • Click the item title to open the item viewing window	element= **item** interface=KNL/*version number* Object IDs: kn_item_id (URI/GUID)
	SpeedReader	Click on an item in the items table list (top right pane)	element= **item** interface=SR/*version number* Object IDs: kn_item_id (URI/GUID)
	KnowNow Alerts Desktop	Click the item in the items list to view summary, or click on pop-up alert	element= **item** interface=KAD/*version number* Object IDs: kn_item_id (URI/GUID)
Article click through	KnowNow Live	Click a title link (opens to publisher article)	element= **article** interface=KNL/*version number* Object IDs: kn_item_id (hash) Join to item table for article URL
	SpeedReader	Click a title link (opens to publisher article)	element= **article** interface=SR/*version number* Object IDs: kn_item_id (hash) Join to item table for article URL
	KnowNow Alerts Desktop	Click a title link (opens to publisher article) or pop-up alert title	element= **article** interface=KAD/*version number* Object IDs: kn_item_id (hash) Join to item table for article URL

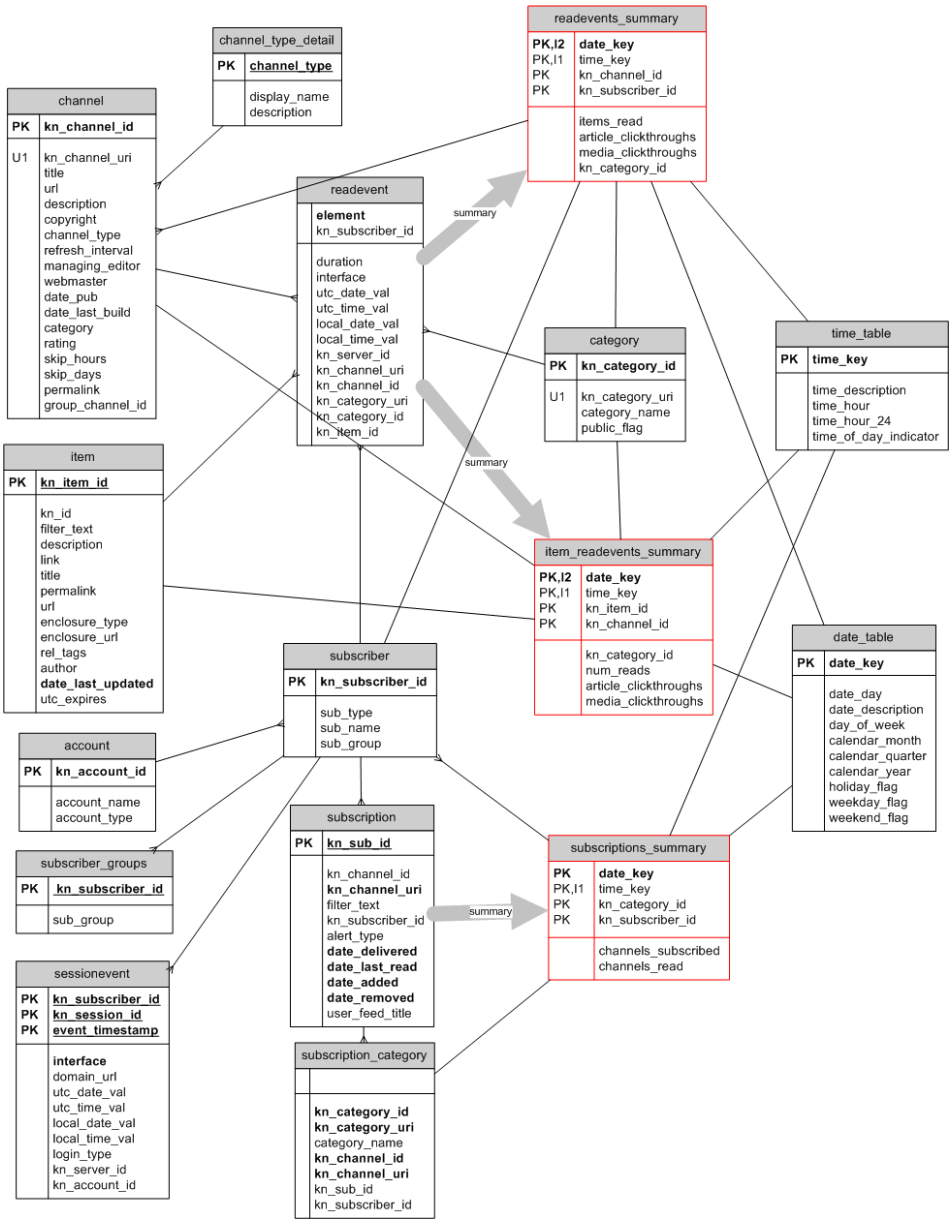
Table 9-1. Reading events tracked by ESS. *(continued)*

Event	Interface	UI Action	Select Database Values (table: readevent)
Media click through	KnowNow Live	Click a media icon title (podcast/video/doc)	element= **media** interface=KNL/*version number* Object IDs: kn_item_id (hash) Join to item table for article URL
	SpeedReader	Click a media icon (podcast/video/doc)	element= **media** interface=SR/*version number* Object IDs: kn_item_id (hash) Join to item table for media URL
	KnowNow Alerts Desktop	Click a media icon (podcast/video/doc)	element= **media** interface=KAD/*version number* Object IDs: kn_item_id (hash) Join to item table for media URL

Database Schema

Figure 9-1 illustrates the KnowNow reporting database schema. The fact tables are outlined in red. Dimension tables are connected to the fact tables.

Figure 9-1. KnowNow reporting database schema.



The Data Dictionary

This section provides details about the tables and the columns of data in each table. The data dictionary has the following types of tables:

- "Dimension Tables"
- "Transaction Tables" on page 197
- "Fact Tables" on page 200

Dimension Tables

The dimension tables are generally used to join to, filter, and view the fact tables based on the common attributes.

The item Table

The item table corresponds one-to-one with the ESS item entity. This typically represents an RSS feed item.

Table 9-2. The item table.

Column	Data Type	Key	Description
kn_item_id	VARCHAR(64)	PRIMARY KEY	KnowNow ESS item ID key (hashed value).
kn_id	TEXT		The identifying kn_id string from LiveServer (not hashed).
filter_text	VARCHAR(4096)		Text of the filter applied at the time this item was read. Intended to be used to parse keywords used to filter (limit) the user's view of the data. (Not currently implemented.)
description	TEXT		Description/payload of the event. If channel source is RSS, then this is expected to be the <description> element.
link	VARCHAR(4096)		The source channel's URL; in other words, the URL to the item's event in the source channel. If channel source is RSS, then this is expected to be the <link> element.

Table 9-2. The item table. *(continued)*

Column	Data Type	Key	Description
title	VARCHAR(4096)		The title of the item per ESS title header. Should match RSS <title> element if channel source is RSS.
permalink	VARCHAR(4096)		If channel source is RSS, then this is expected to be the permalink URL if **is permalink = true**.
url	VARCHAR(4096)		URL of the item itself.
enclosure_type	VARCHAR(100)		MIME type of the enclosure, or NULL if no enclosure.
enclosure_url	VARCHAR(4096)		URL of the media enclosure, or NULL if no enclosure.
rel_tags	VARCHAR(4096)		Relationship tags of RSS item.
author	VARCHAR(255)		<Author> element from RSS.
date_last_updated	TIMESTAMP		Date item was last updated by the publisher.
utc_expires	TIMESTAMP		Item expiration from ESS. Calculated value = RFCDATEFORMAT(kn_time_t + kn_expires)

The account Table

This table is only used with hosted multi-tenancy instances of ESS.

Table 9-3. The customer account table.

Column	Data Type	Key	Description
kn_account_id	VARCHAR(255)	PRIMARY KEY	KnowNow internal account ID. (Not currently implemented.)
account_name	VARCHAR(255),		Customer account name.
account_type	VARCHAR(10)		Customer account type if available.

The subscriber Table

The subscriber dimension table corresponds one to one with the KnowNow ESS subscriber entity. A subscriber is typically a user of the system.

Table 9-4. The subscriber table.

Column	Data Type	Key	Description
kn_subscriber_id	VARCHAR(255)	PRIMARY KEY	KnowNow ESS subscriber key.
sub_type	VARCHAR(50)		Subscriber type.
sub_name	VARCHAR(255)		Name string for subscriber.
sub_group	VARCHAR(32)		Primary group of subscriber.
kn_account_id	VARCHAR(255)	FOREIGN KEY	KnowNow customer account ID (only populated for multi-tenancy instances).

The subscriber_groups Table

This table contains a row for each group of which a subscriber is a member.

Table 9-5. The subscriber_groups table.

Column	Data Type	Key	Description
kn_subscriber_id	VARCHAR(255)	PRIMARY KEY	KnowNow ESS subscriber key.
sub_group	VARCHAR(32)	NOT NULL	The name of the subscription group that the subscriber is a member.

The date_table Table

This table provides date elements/attributes.

Table 9-6. The date_table table.

Column	Data Type	Key	Description
date_key	INTEGER AUTO_INCREMENT	PRIMARY KEY	Unique key for data attribute set.
date_day	DATE	NOT NULL	For example, 2000-03-06.
date_description	VARCHAR(50)		Description of the date.
day_of_week	VARCHAR(10)		Day of the week for this date (Monday, Tuesday, …).
calendar_month	VARCHAR(10)		Calendar month this date occurs in.
calendar_quarter	VARCHAR(10)		Calendar quarter this date falls into.
calendar_year	VARCHAR(10),		Calendar year for this date.
holiday_flag	CHAR(1)		Flag to indicate this date is a holiday (assuming US national holidays).
weekday_flag	CHAR(1),		Flag to indicate this date is a weekday. 1= true, 0 = false.
weekend_flag	CHAR(1)		Flag to indicate this date is a weekend. 1= true, 0 = false.

The time_table Table

This table provides time attributes for queries, such as AM/PM.

Table 9-7. The time_table table.

Column	Data Type	Key	Description
time_key	INTEGER	PRIMARY KEY AUTO_INCREMENT	Unique key for time attribute set.
time_description	VARCHAR(50)		Description of this time element.
time_hour	INTEGER		Hour of the day for this time element. Values are 1–12 (it is assumed that it will be used with an AM/PM value).
time_hour_24	INTEGER		Hour of the day for this time element, in 24 hour format (values are 0–23).
time_of_day_indicator	CHAR(2)		Time of day bracket. Values are 'AM' or 'PM'.

The category Table

This is the dimension table for the channel category. This table is populated from two sources of information:

- First, it is populated directly from LiveServer; categories direct from LiveServer are marked as public (public_flag = '1').
- It is also populated from categories that appear within the readevent table; those categories are marked as private (public_flag = '0').

Table 9-8. The category table.

Column	Data Type	Key	Description
kn_category_id	VARCHAR(64)	PRIMARY KEY	KnowNow ESS category ID. (Note: this key is a hashed string of the category URI.)
kn_category_uri	VARCHAR(4096)	NOT NULL UNIQUE	The category URI provides the link string reference to the category in the ESS server.
category_name	VARCHAR(255)		Name of category.
public_flag	CHAR(1)		Flag indicating whether this category is a public (or shared) ESS category. If not, this is a personal category. 1= true, 0 = false.

The channel Table

The channel dimension table represents the ESS channel entity.

Table 9-9. The channel table.

Column	Data Type	Key	Description
kn_channel_id	VARCHAR(64)	PRIMARY KEY	The hashed version of the channel ID.
kn_channel_uri	VARCHAR(4096)	NOT NULL UNIQUE	This URI string represents the link to the channel resource on ESS.
title	VARCHAR(4096)	NOT NULL	Title of channel from ESS.

Table 9-9. The channel table. *(continued)*

Column	Data Type	Key	Description
url	TEXT		Link to channel source URL. If the source is a blog, this would be the URL to the blog.
description	VARCHAR(255)		Description of channel.
copyright	VARCHAR(255)		Copyright status (if populated from the RSS publisher's source).
channel_type	VARCHAR(50)	NOT NULL	Channel type. ESS supports a number of channel types. Examples: FeedWatcher (RSS/Atom feed), Sphere (persistent search), Streaming (real-time pub/sub); LiveAdapter RDBMS, LiveAdapter Microsoft Exchange, SpeedWriter.
refresh_interval	INTEGER		For channels that poll to refresh data in the system, this is the refresh interval in minutes.
managing_editor	VARCHAR(50)		Corresponding RSS element, if populated by feed source.
webmaster	VARCHAR(50)		Corresponding RSS element, if populated by feed source.
date_pub	TIMESTAMP		RSS pubDate element, if populated by RSS feed source, otherwise value is assigned by ESS. This is used as the "last updated date" in certain reports.
date_last_build	TIMESTAMP		RSS last build element, if populated by RSS feed source.
category	VARCHAR(255)		Category name, if assigned by RSS. This is the category name set by the publisher of the RSS content. It may be different from ESS categories.
rating	INTEGER		RSS rating element, if populated. RSS uses the PICS rating; e.g., "suds 0.5 density 0 color/hue 1."

Table 9-9. The channel table. *(continued)*

Column	Data Type	Key	Description
skip_hours	INTEGER		Skip hours of RSS element, if populated by source.
skip_days	CHAR(10)		Ship day RSS element, if populated by source.
permalink	VARCHAR(4096)		Permalink RSS element, if populated by source.
group_channel_id	INTEGER		Placeholder for future mapping of channels to groups.

The channel_type_detail Table

This table contains descriptions of the different channel types that appear in the channel table.

Table 9-10. The channel_type_detail table.

Column	Data Type	Key	Description
channel_type	VARCHAR(50)	PRIMARY KEY NOT NULL	The channel type as entered in ESS.
display_name	VARCHAR(50)		The display name for the channel type.
description	VARCHAR(250)		Description text for the channel type.

The subscription Table

A subscription is the relationship of a channel to a user. A record indicates a user is receiving the content of the corresponding channel.

Table 9-11. The subscription table.

Column	Data Type	Key	Description
kn_sub_id	VARCHAR(215)	PRIMARY KEY	Subscription ID. (Compound key composed of kn_subscriber_id and kn_channel_id.)
kn_channel_id	VARCHAR(64)		ESS channel ID (hashed key).

Table 9-11. The subscription table. *(continued)*

Column	Data Type	Key	Description
kn_channel_uri	VARCHAR(4096)	NOT NULL	ESS channel URI.
filter_text	VARCHAR(4096)		Text of the filter applied to the channel subscription for all users (ESS shared filter only; personal filters are not supported). The filter text is represented as a regular expression.
kn_subscriber_id	VARCHAR(150)		KnowNow ESS subscriber ID. This is typically a user name. Anonymous users are represented by a hashed key.
alert_type	VARCHAR(255)		This column includes the alert routing options for the subscription. Several alert destination values may be represented in the string (e.g., Desktop|SMS|email.
date_delivered	TIMESTAMP		Date the subscription content was delivered from the server.
date_last_read	TIMESTAMP		Last date the subscription to channel was opened from an interface.
date_added	TIMESTAMP	NOT NULL	Date this subscription was added by the user or by ESS Group Subscription Management.
date_removed	TIMESTAMP		Date subscription to the channel was removed by user or ESS Group Subscription Management. (Not currently supported.)
user_feed_title	VARCHAR(4096)		Tile of channel at subscription level. Users may be allowed to re-title a channel at the personal subscription level.

The subscription_category Table

This table contains the relationship of a subscription to a category.

Table 9-12. The subscription_category table.

Column	Data Type	Key	Description
kn_category_id	VARCHAR(64)		ESS category ID (hashed key).
kn_category_uri	VARCHAR(512)	NOT NULL	ESS category URI string.
category_name	VARCHAR(255)		Name/description of category.
kn_channel_id	VARCHAR(64)		ESS channel ID (hashed key).
kn_channel_uri	VARCHAR(4096)	NOT NULL	KnowNow ESS channel ID.
kn_sub_id	VARCHAR(215)		Subscription ID from KnowNow ESS.
kn_subscriber_id	VARCHAR(150)		KnowNow ESS subscriber ID.

Transaction Tables

The transaction tables hold the raw activity details that are used to create the summary fact tables.

The sessionevent Table

This table stores user log-in events. A user login starts a session.

Table 9-13. The sessionevent table.

Column	Data Type	Key	Description
kn_subscriber_id	VARCHAR(255)	PRIMARY KEY	ESS subscriber ID.
kn_session_id	VARCHAR(50)	PRIMARY KEY	KnowNow ESS session ID. Concatenated account ID + timestamp.
event_timestamp	TIMESTAMP	PRIMARY KEY	Session event date and time.

Table 9-13. The sessionevent table. *(continued)*

Column	Data Type	Key	Description
interface	VARCHAR(255)	NOT NULL	The user interface software that hosted the session event. ESS interfaces used in session are: SpeedReader | KAD (KnowNow Alerts Desktop)| Toolbar | KNL (KnowNow Live)
domain_url	VARCHAR(255)		Domain section of URL from ESS server connection.
date_key	INTEGER		Date key value of the session.
time_key	INTEGER		Time key value of the session.
utc_date_val	DATE		UTC date value.
utc_time_val	TIME		UTC time value.
local_date_val	DATE		Local date value.
local_time_val	TIME		Local time value.
login_type	CHAR(1)		Indicates whether the login was anonymous or authenticated. • 'a' = anonymous • 'i' = authenticated (identified)
server	VARCHAR(255)		ESS server name.
kn_account_id	VARCHAR(255)		ESS account ID (used for multi-tenant hosted instances).

The readevent Table

For each read/click/open event per user, this table stores the details of which users have read what items. It contains four kinds of events distinguished by the **element** column, which can have the following values:

- "open" = channel opened and items delivered
- "item" = channel item opened (Item Read Event)
- "article" = Click-through event for link to original article hosted by the publisher (defined by the RSS <link> clicked through)

- "media" = Click-through event for media. This could be a podcast entry, video, or any mime type. Corresponds to an RSS <enclosure> element.

Table 9-14. The readevent table.

Column	Data Type	Key	Description
element	VARCHAR(50)	NOT NULL	Indicates the kind of the event recorded in the table (open, item, article, or media). See definitions above.
kn_subscriber_id	VARCHAR(255)	NOT NULL FOREIGN KEY	KnowNow subscriber ID.
kn_time_t	TIMESTAMP	NOT NULL	KnowNow event time stamp.
duration	INTEGER		The length of time an item was viewed. This is for future use with media items (e.g., Flash widgets) that will supply the viewing duration data. (Not currently implemented.)
interface	VARCHAR(255)	NOT NULL	KnowNow interface types used to view the data. Values are "SpeedReader," "KAD," "KNL," and "KID."
utc_date_val	DATE		UTC date value (part of the primary key).
utc_time_val	TIME		UTC time value (part of the primary key).
local_date_val	DATE		Local date value.
local_time_val	TIME		Local time value.
kn_server_id	VARCHAR(255)		KnowNow server ID accessed when event was read.
kn_channel_uri	VARCHAR(512)	NOT NULL	Channel URI.
kn_channel_id	VARCHAR(64)	NOT NULL	Channel ID (hashed version of URI).
kn_category_uri	VARCHAR(512)		Category URI.
kn_category_id	VARCHAR(64)		Category ID (hashed version of URI).
kn_item_id	VARCHAR(512)	FOREIGN KEY	KnowNow item ID.

Fact Tables

The fact tables summarize facts from the transaction tables.

The readevents_summary Table

This fact table stores a summarization of item-read events, including the number of items read, number of article and media click-throughs, etc. Each row in the table represents the summary of one (subscriber, channel) pair, for a one-hour time interval. This summary fact table is updated periodically on a regular cadence or time interval that is configured by the administrator.

Table 9-15. The readevents_summary table.

Column	Data Type	Key	Description
date_key	INTEGER	PRIMARY KEY	The date at the start of the summary interval. References the date dimension table.
time_key	INTEGER	PRIMARY KEY	The time of day at the start of the summary interval. References the time dimension table
items_read	INTEGER		Summary count items read for combination from readevents.
article_clickthroughs	INTEGER		Summary count article click-throughs combination from readevents.
media_clickthroughs	INTEGER		Summary count article click-throughs combination from readevents.
kn_channel_id	VARCHAR(64)	PRIMARY KEY	Channel ID.
kn_category_id	VARCHAR(64)		Category ID.
kn_subscriber_id	VARCHAR(255)	PRIMARY KEY	Subscriber ID.

The item_readevents_summary Table

This fact table stores a summarization of read events per item, including the number of times the item was read, number of article and media click-throughs for the item, etc. Each row in the table represents the summary of one (item, channel) pair, for a one-hour time interval.

This table is different from the readevents_summary table in that it is an item-major view, whereas the readevents_summary table is a subscriber-major view.

Table 9-16. The item_readevents_summary table.

Column	Data Type	Key	Description
date_key	INTEGER	PRIMARY KEY	The date at the start of the summary interval. References the date dimension table.
time_key	INTEGER	PRIMARY KEY	The time of day at the start of the summary interval. References the time dimension table.
kn_item_id	VARCHAR(512)	PRIMARY KEY	ESS item ID.
kn_channel_id	VARCHAR(64)	PRIMARY KEY	Channel ID.
kn_category_id	VARCHAR(64)		Category ID.
num_reads	INTEGER		Number of times the item was read for the specific time interval and channel/category.
article_clickthroughs	INTEGER		Number of article click-throughs for the time interval and channel/category.
media_clickthroughs	INTEGER		Number of media click-throughs for the time interval and channel/category.

The subscriptions_summary Table

This fact table stores a summarization of subscription events, including the number of channels subscribed, channels read, etc. Each row in the table represents a summary of one (subscriber, category) pair, for a one-hour time interval.

Table 9-17. The subscriptions_summary table.

Column	Data Type	Key	Description
date_key	INTEGER	PRIMARY KEY	The date at the start of the summary interval. References the date dimension table.
time_key	INTEGER	PRIMARY KEY	The time of day at the start of the summary interval. References the time dimension table.
kn_category_id	VARCHAR(64)	PRIMARY KEY	Category ID.
kn_subscriber_id	VARCHAR(255)	PRIMARY KEY	Subscriber ID.
channels_subscribed	INTEGER		Summary count of channels subscribed for combination of values.
channels_read	INTEGER		Summary count of channels read for combination of values.

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