# FatWire® SOFTWARE

# Gadget Server

**Version 1.1.1**

## Installation Guide

*FatWire Gadget Server Installation Guide*
Document Revision Date: Jun. 15, 2011
Product Version: Version 1.1.1.1

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Chapter 1

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# FatWire Gadget Server

FatWire Gadget Server is a gadget container application. Gadget Server consists of a management system and production system, as shown in Figure 1.

> **Note**
>
> In this guide, the term "production system" means "delivery system."

**Figure 1:** Gadget Server Installation
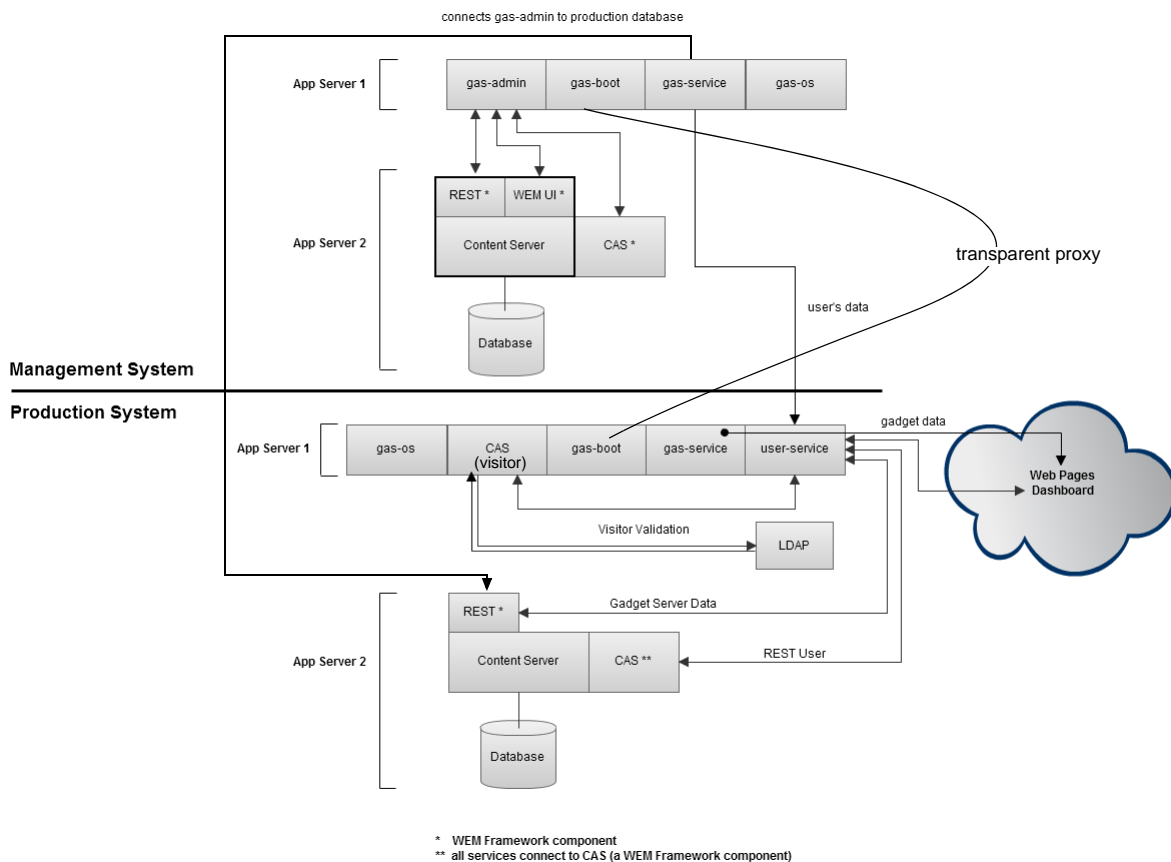


The management system contains the `gas-admin` web application, `gas-boot` web application, `gas-service` web application, `gas-os` web application, and a FatWire Content Server installation running the Web Experience Management (WEM) Framework, which includes Representational State Transfer services (REST), Central Authentication Service (CAS), and the WEM Framework interface.

The production system contains the `gas-os` web application, the CAS application for visitors, `gas-boot` web application, `gas-service` web application, `user-service` web application, and a Content Server installation running the WEM Framework, which includes CAS and REST. The production system does not require the WEM Framework interface. The LDAP server can be configured to replace the native authentication system used by the WEM Framework.

Gadget Server is a set of distributed applications:

- The `gas-os` application is an OpenSocial container, which provides a reference implementation for the OpenSocial standard. `gas-os` provides the code to render gadgets, proxy requests, handle REST and RPC requests, and enable visitor discovery with OAuth. The `gas-os` application is capable of rendering OpenSocial gadgets in a web browser.

- `gas-admin` is Gadget Server's interface. As shown in Figure 1, it runs on the management system.

  The `gas-admin` application is used to register gadgets for display on site visitors' dashboards. Installing the Gadget Server Samples Module provides several gadgets out-of-the-box that can be registered to the `gas-admin` application. The sample gadgets are: List, RSS, ThumbList, and SlideShow. Gadgets with OAuth support can be personalized by visitors and/or retrieve a visitor's personalized data from the gadget's OAuth Service Provider.

  The `gas-admin` application specifies a predefined user, which is a Content Server general administrator (`fwadmin`, by default) who belongs to the `RESTAdmin` group. Real users derive their access rights to Gadget Server through the general administrator's membership in the `RESTAdmin` group, making it unnecessary to add the real users to any REST group.

  Interface functions in `gas-admin` are protected by the roles GeneralAdmin, SiteAdmin, and Designer. If a role does not exist, it is created during the installation process. Each role grants its user access to the `gas-admin` application and exposes a set of interface functions commensurate with the role.

  The `gas-admin` application provides one of two interfaces, depending on the site to which it is assigned:

  - On `{cs_site}`, `gas-admin` displays its global gadget catalog interface, which is protected by the GeneralAdmin role and therefore accessible only to general administrators. The global gadget catalog is used to centrally store gadgets and distribute them to other sites, which run the Gadget Server user interface.

  - On sites other than `{cs_site}`, `gas-admin` displays its user interface, which provides the site gadget catalog for registering gadgets locally, a dashboard to contain the gadgets, and offers options for deploying registered gadgets to the website. Which interface functions are displayed to a user depends on the user's role.

- The `gas-boot` application manages production services and communication between the production and management systems. The `gas-boot` application provides a caching service based on `jmemcached`. It also provides a registry service based on Apache ZooKeeper. ZooKeeper maintains a centralized configuration file that defines how the applications communicate with each other, which eliminates the need to configure each application individually. **Single-server installations require only one instance of gas-boot (the production instance).**

- The `gas-service` application handles gadget data.

  On the management system, `gas-service` provides the JavaScript API to support the `gas-admin` interface and user interactions. For example, when a user invokes an interface function, `gas-admin` sends the user's request to the `gas-service` application, which sends the request to the production system REST layer, which retrieves the requested information from the production system database. The information is displayed in the `gas-admin` interface.

On the production system, `gas-service` serves gadgets to web pages tagged with gadget configuration code. The `gas-service` application maintains the gadget registry, provides gadget code for download, and serves JavaScript API requests from the gadgets to provide them with data.

- The `user-service` application handles visitor data. It serves requests related to visitors, such as registration and editing of visitor profiles. In this manner, `user-service` keeps track of visitors' profile data and collects such information as author IDs, display names, and images.

When the Gadget Server applications are installed, Gadget Server asset types are installed in Content Server's databases. The asset types are used to define gadgets (including the Gadget Server sample gadgets, which must be installed separately), and provide the infrastructure for Gadget Server, such as the dashboard, site visitor account storage, and the skins for Gadget Server's interface.

# Prerequisites for Installing FatWire Gadget Server

Anyone installing Gadget Server must have expertise with FatWire Content Server, the WEM Framework, and the process of installing enterprise-level software. Before installing Gadget Server, complete the following checklist:

- Verify that you have the `Gadget_Server_v1.1.zip` file.

- Review Gadget Server release notes for the latest information regarding supported platforms and Gadget Server installation procedures.

> **Note**
>
> FatWire product documentation is available on our e-docs site, at `http://support.fatwire.com`. The site is password protected. Accounts can be opened from the home page.

- Read this guide to determine your installation options:

  - Gadget Server can be installed to work with either its native identity provider (the database used by the WEM Framework) or an LDAP identity provider.

  - Gadget Server can be installed via the Configuration Tool or manually. Installing Gadget Server via the Configuration Tool is recommended.

  - Gadget Server can be installed on dual-server systems or single servers.

    A dual-server installation consists of two physically separate machines, one hosting the management environment, the other hosting the production environment. A single-server installation consists of a single machine hosting both the management and production environments. This guide is written for dual-server installations. Instructions for single-server installations are provided in this guide, as necessary.

    > **Note**
    >
    > Single-server installations are supported only for development purposes.

  - Unless noted otherwise, all mention of the `cas` application refers to visitor `cas`.

- Gadget Server requires two dedicated application servers: one application server for its management instances and one for its production instances.

- Management and production systems must be Content Server installations running the WEM Framework and CAS. For information about installing Content Server with the WEM Framework, see the *Content Server 7.6 Patch 1 Supported Platform Document* and the rollup installation guide. For information about the WEM Framework, refer to the product guides in the Content Server 7.6 Patch 1 directory on the FatWire e-docs site.

- The general administrator used throughout this guide must be a member of the `RestAdmin` security group on both the management and production systems. Gadget Server users will connect to the Gadget Server interfaces through the general administrator, as explained on page 7.

- On the content management system, mirror the following sites to the production system:
  - `{cs_site}`, which you can create or re-use to host the Gadget Server Global Gadget Catalog interface
  - Sites other than `{cs_site}`, which you can create or re-use to host the Gadget Server User interface

  ---
  **Note**

  Once you have installed Gadget Server and registered the Gadget Server application with the WEM Framework, you will assign the application to the sites mirrored on the production system to host either the Global Gadget Catalog interface or the Gadget Server User interface.
  ---

- On the production system, enable searches as follows: Start the Lucene search engine. Configure search indexing, using the steps in the "Public Site Search" chapter of the *Content Server Developer's Guide*.

- On Unix systems, enable rendering of gadgets by adding the `-Djava.awt.headless=true` JVM parameter to `JAVA_OPTS` on both the management and production application servers used by Gadget Server.

- To ensure an efficient installation process, use the worksheet on page 10 to pre-record information that you will be prompted to enter during the installation process.

Following the Gadget Server installation instructions, this guide provides you with instructions for installing Sample Gadgets on the FirstSiteII sample site (with **StoreDemoData** enabled). For instructions, see Chapter 6, "Adding Sample Gadgets."

# Mappings Worksheet

Use Table 1 as a worksheet to record the information you will provide during the installation process. Properties are listed in the order in which they appear in the dialogs of the Configuration Tool. They are named exactly as they appear in the default Gadget Server configuration files.

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**Note**

Gadget Server uses encrypted passwords (as well as unencrypted passwords when an LDAP server is installed). Enter passwords as follows:

- If using the Configuration Tool, enter passwords in plain text. They will be encrypted automatically by the Configuration Tool.

- If you choose to install manually:

  - Enter encrypted passwords, obtained from the encryption utility provided with Gadget Server. See "Encrypting Passwords Manually," on page 26.
  - LDAP users, enter both the encrypted and unencrypted versions of `{ldap_user_password}`. You will specify the *encrypted* version in the `gas_registry_schema.xml` file and the *unencrypted* version in `deployerConfigContext.xml`, located in the visitor `cas` application (`cas/WEB-INF/classes/deployerConfigContext.xml`).

---

**Table 1:** Mappings Worksheet

| Property | Required | Description | Your Value |
|---|:---:|---|---|
| `{management_cs_ip}` | ✓ | IP address or host name of the Content Server management system (which contains the WEM Admin interface) | |
| `{management_cs_port}` | ✓ | Port for the management Content Server | |
| `{management_cs_context_ root}` | ✓ | Context root for the management Content Server | |
| `{cs_management_username}` | ✓ | User name for a Content Server general admin with full REST permissions (default, `fwadmin`) to the management Content Server | |
| `{cs_management_password}` | ✓ | Password for the above Content Server user `{cs_management_username}` | |
| `{management_cs_cas_ip}` | ✓ | IP address or host name for CAS on the Content Server management system | |
| `{management_cs_cas_port}` | ✓ | CAS port on the Content Server management system | |
| `{management_cs_cas_ context_root}` | ✓ | CAS context root on the Content Server management system. | |

**Table 1:** Mappings Worksheet *(continued)*

| Property | Required | Description | Your Value |
|---|---|---|---|
| {production_cs_ip} | ✓ | IP address or host name of the Content Server production system | |
| {production_cs_port} | ✓ | Port for the production Content Server | |
| {production_cs_context_ root} | ✓ | Context root for the production Content Server | |
| {cs_production_username} | ✓ | User name for a Content Server general admin with full REST permissions (default, fwadmin) to the production Content Server | |
| {cs_production_password} | ✓ | Password for above user {cs_production_username} | |
| {production_cs_cas_ip} | ✓ | IP address or host name for CAS on the production Content Server system | |
| {production_cs_cas_port} | ✓ | CAS port on the production Content Server system | |
| {production_cs_cas_context_ root} | ✓ | CAS context root on the production Content Server system. | |
| {cs_site} | ✓ | The site where Gadget Server's asset types and Global Gadget Catalog interface will be enabled (must be a site that exists on both management and production Content Servers). It is the same site that you created (or selected) and mirrored on page 9. This is a site to which you will assign the Gadget Server application once you have registered the application with the WEM Framework. | |
| {management_gas_ip} | ✓ | IP address or host name for Gadget Server's management system | |
| {management_gas_port} | ✓ | Port for Gadget Server on the management system | |
| {production_gas_ip} | ✓ | IP address or host name for Gadget Server's production system | |
| {production_gas_port} | ✓ | Port for Gadget Server on the production system | |
| {GASHOME} | ✓ | Path to the directory under which Gadget Server will be installed and the following subdirectories will be created: logs, storage, data, install. (For single-server installations, only one {GASHOME} is required.) | |

**Table 1:** Mappings Worksheet *(continued)*

| Property | Required | Description | Your Value |
|---|---|---|---|
| {gas_production_ldap_ip} | When using LDAP | IP address or host name for the LDAP server for Gadget Server's production system | |
| {gas_production_ldap_port} | When using LDAP | Port for the LDAP server for Gadget Server's production system | |
| {ldap_basedn} | When using LDAP | Base DN for Gadget Server (example dc=fatwire,dc=com) | |
| {ldap_username} | When using LDAP | User name with administrative permissions to the given Base DN | |
| {ldap_user_password} | When using LDAP | Password of administrative user {ldap_username}.<br><br>**Note**: If you plan to install Gadget Server via the Configuration Tool, enter the unencrypted password. If installing manually, enter both the encrypted ***and*** unencrypted versions of the password. | |
| {gasvisitor_username} | ✓ | Gadget Server visitor name, used as the default visitor when one is logged in.<br><br>This is also the security user for Gadget Server. | |
| {gasvisitor_password} | ✓ | Password for above Gadget Server visitor {gasvisitor_username}.<br><br>**Note:** If you plan to install Gadget Server via the Configuration Tool, a random and complex password is automatically created. If installing manually, it is strongly recommended that you create a complex password. | |
| {mailhost_ip} | ✓ | IP address or host name of mail server | |
| {mailhost_port} | ✓ | Port on which the mail server is listening (normally 25) | |
| {use_mail_account_to_send_mail} | ✓ | Must be set to true or false | |
| {email_from_account} | ✓ | Email address from which to send mail | |
| {sender_email_account} | Only when {use_mail_account_to_send_mail} is true | User name used to log in to the SMTP server | |

**Table 1:** Mappings Worksheet *(continued)*

| Property | Required | Description | Your Value |
|---|---|---|---|
| {sender_email_password} | Only when {use_mail_ account_to_ send_mail} is true | Password for the above email account {sender_email_account} | |

Chapter 2

# Installation Options

- Selecting an Identity Provider
- Installing Gadget Server with Its Native Identity Provider
- Installing Gadget Server with a New or Existing LDAP Server

# Selecting an Identity Provider

Gadget Server can be installed to work with either its native identity provider (the database used by the WEM Framework) or an LDAP identity provider. Gadget Server can be installed via the Configuration Tool or manually. The Configuration Tool is preferred, as it prompts you for installation parameters (listed on page 10) and encrypts passwords automatically. If you select the LDAP option, the Configuration Tool will configure Gadget Server applications to use the LDAP identity provider.

> **Note**
>
> Before continuing, ensure that you have completed the following steps:
>
> - "Prerequisites for Installing FatWire Gadget Server," on page 8.
>
> - Filled out the installation worksheet (page 10).
>
> - You have carefully chosen the type of identity provider to enable. Once Gadget Server is installed, it cannot be switched to use a different identity provider.

# Installing Gadget Server with Its Native Identity Provider

In this type of installation, users are authenticated by default against the database used by the WEM Framework. Install Gadget Server using instructions in one of the following chapters:

- Chapter 3, "Installing FatWire Gadget Server via the Configuration Tool":
  - "Installing Gadget Server Graphically," on page 20
  - "Installing Gadget Server Silently," on page 25
- Chapter 4, "Installing FatWire Gadget Server Manually"

# Installing Gadget Server with a New or Existing LDAP Server

Using LDAP, instead of WEM, as Gadget Server's identity provider is recommended if you wish to share user accounts between Community Server and Gadget Server, or a third-party application and Gadget Server.

1. Do one of the following:

   - If you are using a new LDAP server, install and configure a supported LDAP server, listed in the Gadget Server release notes. Continue to step 2.

   - To set up an existing LDAP server, create a new Base DN to provide for Gadget Server visitors. Complete the steps below, starting with step 2.

2. Create an `ldif` file with the following information, replacing the `{ldap_basedn}` parameter with the value for your system (you can import multiple users by copying the `# add user` section for each user):

```
dn: {ldap_basedn}
objectclass: dcObject
objectclass: organization
dc: fatwire
description: OpenLDAP pre_gas_setup
o: Fatwire Software

dn: cn=<user_name>,{ldap_basedn}
objectClass: inetOrgPerson
objectClass: top
userPassword: <user_password>
cn: <user_name>
sn: <user_name>
displayName: <user_name>
description: <user_description>
```

3. Import the created `ldif` file.

4. In LDAP, create a default visitor user with the following credentials: `{gasvisitor_username}` and `{gasvisitor_password}`. This visitor will be used by default for anonymous visitors.

5. You are ready to install Gadget Server. For instructions, see one of the following chapters:

   - Chapter 3, "Installing FatWire Gadget Server via the Configuration Tool":
     - "Installing Gadget Server Graphically," on page 20
     - "Installing Gadget Server Silently," on page 25
   - Chapter 4, "Installing FatWire Gadget Server Manually"

Chapter 3

# Installing FatWire Gadget Server via the Configuration Tool

- Overview of the Gadget Server Configuration Tool
- Installing Gadget Server Graphically
- Installing Gadget Server Silently

# Overview of the Gadget Server Configuration Tool

The Configuration Tool guides you through the Gadget Server installation process by prompting you for installation parameters (listed on page 10) and automatically encrypts all passwords that must be encrypted. If you choose the LDAP option, the Configuration Tool will enable the Gadget Server applications to use the LDAP identity provider.

The Configuration Tool provides the following installation options:

- Installing Gadget Server Graphically
- Installing Gadget Server Silently

---

**Note**

Before continuing, ensure that you have completed the following steps:

- "Prerequisites for Installing FatWire Gadget Server," on page 8.
- Filled out the installation worksheet (page 10).
- If you plan to use an LDAP identity provider, you have set up the LDAP server as shown on page 16.

---

# Installing Gadget Server Graphically

For dual-server installations, complete the following steps on both the management and production systems unless otherwise noted. Notes for single-server installations are provided where necessary:

1. Unzip the `Gadget_Server_v1.1.zip` file.

    **Ex.** `/u01/Downloads/GS`

2. Copy the `gasmanagement` and `gasproduction` folders to the `gs_Configure` folder.

3. Creating the home directory: The home directory is where logs, Gadget Server monitoring data, and ZooKeeper data will be stored for Gadget Server. The path to this directory will be the value for `{GASHOME}` throughout this guide.

    **Ex.** `/u01/software/GS`

    - If you wish to have the Configuration Tool create the home directory, skip this step and continue with step 4.
    - If you wish to create the home directory, note the following:
        - On management and production systems, we recommend using the same path.
        - On single-server installations, only one `{GASHOME}` is necessary. In this `{GASHOME}` directory we recommend using two separate paths – one for management logs and one for production logs.

4. Configure two Gadget Server application servers:

    - Dual-server installations: One application server is for the production system, for Gadget Server production applications; the other is for the management system, for Gadget Server management applications.

- Single-server installations: One application server is for the Gadget Server production applications; the other is for the Gadget Server management applications.

**5.** Set `JAVA_HOME` to the `jdk` folder of the version of Java that will be used. The Java version must be 1.6 or higher.

**Ex.** `export JAVA_HOME=/opt/jdk1.6.0_20`

**6.** If installing on a Unix environment, ensure that the `bash` shell and `sed` stream editor are installed and located in the `PATH` environment variable.

**7.** Install Gadget Server:

**a.** Run the `configureGS.sh` or `configureGS.bat` script.
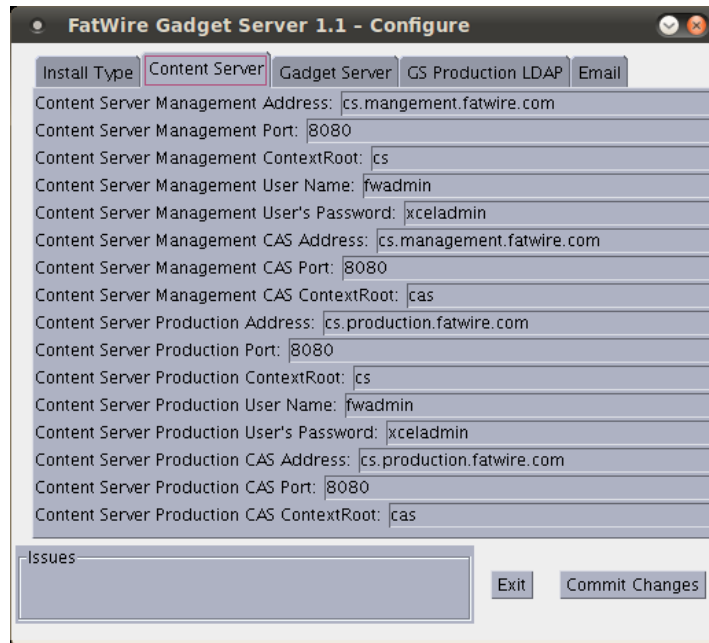
> **Note**
>
> On Unix, the `DISPLAY` environment variable must be set.
> **Ex.** `export DISPLAY=10.120.19.21:0.0`

**b.** In the **Install Type** tab, select **Management** if you are installing on the management application server, or **Production** if you are installing on the production application server.

    **c.** In the **Content Server** tab, enter the values from your mappings worksheet (page 10).



    **d.** In the **Gadget Server** tab, enter the values from your mappings worksheet. You can either enter the value for {GASHOME} (see step 3), or browse to the directory.

e. In the **GS Production LDAP** tab, do one of the following:

- If you are not using LDAP, set "Store GS Users in LDAP" to **False**. The fields "GS Visitor User" and "GS Visitor User's Password" are pre-populated (if necessary you can supply your own values). Continue to the next step.

- If you are using LDAP, set "Store GS Users in LDAP" to **True** and enter the values from your mappings worksheet. **Complete this step on both the management and production systems.**
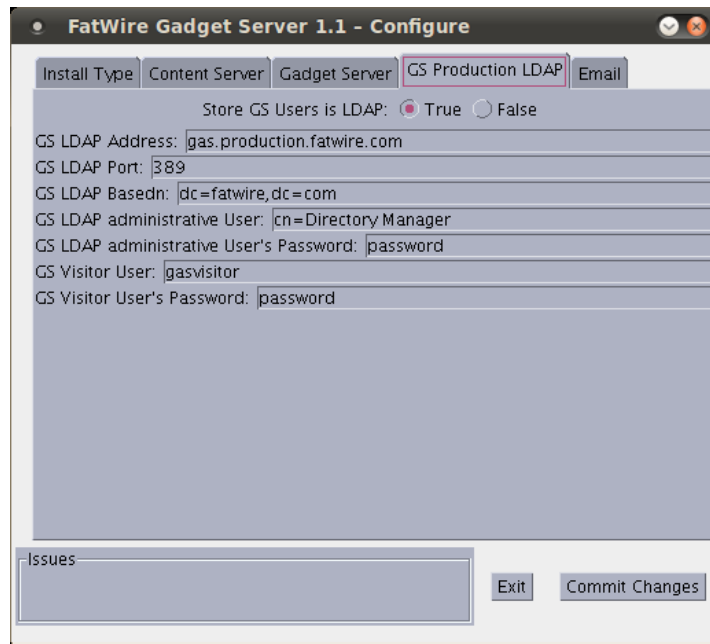
**f.** Click the **Email** tab:

**1)** Enter the values from your mappings worksheet. Set "Require Login to send email" to the value of {use_mail_account_to_send_mail}.

**2)** Click **Commit Changes**.
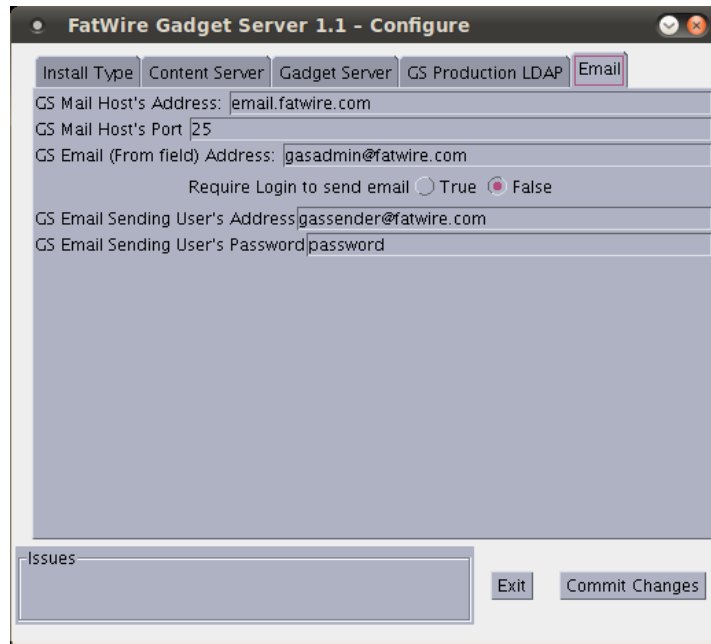


**g.** After the Configuration Tool has completed configuring Gadget Server, click **OK**.



**h.** Deploy the Gadget Server WAR files at {GASHOME}/install, first on the production application server, then on the management application server (as required by boot order):

- Dual-Server installations – On the production application server, deploy gas-boot, gas-os, gas-service, user-service, and visitor cas. On the management application server, deploy gas-admin, gas-boot, gas-os, and gas-service.

- Single-Server installations – On the production application server, deploy gas-boot, gas-os, gas-service, user-service, and visitor cas. On the management application server, deploy gas-admin, gas-os, and gas-service. (Deploy gas-boot only on the production application server. gas-boot is not used on the management environment.)

8. Once the `WAR` files are deployed, proceed to Chapter 5, "Post-Installation Steps" to secure and verify your installation, register the Gadget Server application, and authorize its users.

# Installing Gadget Server Silently

For dual-server installations, complete the following steps on both the management and production systems unless otherwise noted. Notes for single-server installations are provided where necessary:

1. Unzip the `Gadget_Server_v1.1.zip` file.

   **Ex.** `/u01/Downloads/GS`

2. Copy the `gasmanagement` and `gasproduction` folders to the `gs_Configure` folder.

3. Creating the home directory: The home directory is where logs, Gadget Server monitoring data, and ZooKeeper data will be stored for Gadget Server. The path to this directory will be the value for `{GASHOME}` throughout this guide.

   **Ex.** `/u01/software/GS`

   - If you wish to have the Configuration Tool create the home directory, skip this step and continue with step 4.

   - If you wish to create the home directory, note the following:

     - On management and production systems, we recommend using the same path.

     - On single-server installations, only one `{GASHOME}` is necessary.

4. Configure two Gadget Server application servers:

   - Dual-server installations: One application server is for the production system, for Gadget Server production applications; the other is for the management system, for Gadget Server management applications.

   - Single-server installations: One application server is for Gadget Server production applications; the other is for Gadget Server management applications.

5. Create a `GSsettings.ini` file, which is required for running the Configuration Tool in silent mode. The `GSsettings.ini` file can be created either manually or from the `GSsettings.ini` of a previous installation. Both methods are provided below.

   ### Single-Server Installations

   Create one `GSsettings.ini` file.

   **To create `GSsettings.ini` manually**

   a. Open a blank file named `GSsettings.ini` in a text editor and add the following properties:

      1) Add all properties from your mappings worksheet (page 10), in the format `<property>=<value>` (one property per line).

> **Ex.** `{cs_management_username}=fwadmin`
> `{cs_management_password}=xceladmin`

> ### Note
>
> All '=' characters within a property value must be prefixed with a backslash (`'\'`).
>
> **Ex.** `{ldap_username}=cn\=Directory Manager`
>
> `{ldap_basedn}=dc\=fatwire,dc\=com`

  **2)** Add the `InstallationProductType` property and set it to either `MANAGEMENT` or `PRODUCTION` depending on your system.

**b.** Save the changes.

**To create `GSsettings.ini` from a previous installation**

**a.** Copy the `GSsettings.ini` file located in the Gadget Server Configuration Tool directory of the previous installation.

**b.** Open the copied `GSsettings.ini` in a text editor and make the following changes, ensuring that all '=' characters within a property value are prefixed with a backslash (`'\'`), as noted above:

  **1)** Replace the values of the listed properties with the values in your mappings worksheet (page 10).

  **2)** Change the value of `InstallationProductType` to `MANAGEMENT`, `PRODUCTION`, or `SINGLESERVER` depending on your system.

**c.** Save your changes.

**6.** Copy the `GSsettings.ini` file to the directory of the Gadget Server Configuration Tool.

**7.** Set `JAVA_HOME` to the `jdk` folder of the version of Java that will be used. The Java version must be 1.6 or higher.

   **Ex.** `export JAVA_HOME=/opt/jdk1.6.0_20`

**8.** If installing on a Unix environment, verify that the `bash` shell and `sed` stream editor are installed and located in the `PATH` environment variable.

**9.** Run the Configuration Tool in silent mode:

   **-** Dual-server installations: Run the `configureGS.sh` or `configureGS.bat` script on both the management and production systems, adding the `-Dsilent` option to specify silent mode. For example:

   **`configureGS.sh -Dsilent`**

   **-** Single-server installations: Run the `configureGS.sh` or `configureGS.bat` script on the system containing both the management and production environments. For example:

   **`configureGS.sh -Dsilent`**

**10.** After the Configuration Tool has completed configuring Gadget Server, deploy the Gadget Server `WAR` files at `{GASHOME}/install`. Deploy the files first on the production application server, then on the management application server (as required by boot order):

- - Dual-Server installations – On the production application server, deploy `gas-boot`, `gas-os`, `gas-service`, `user-service`, and visitor `cas`. On the management application server, deploy `gas-admin`, `gas-boot`, `gas-os`, and `gas-service`.

  - - Single-Server installations – On the production application server, deploy `gas-boot`, `gas-os`, `gas-service`, `user-service`, and visitor `cas`. On the management application server, deploy `gas-admin`, `gas-os`, and `gas-service`. (Deploy `gas-boot` only on the production application server. `gas-boot` is not used on the management environment.)

**11.** Once the `WAR` files are deployed, proceed to Chapter 5, "Post-Installation Steps" to secure and verify your installation, register `gas-admin`, and authorize its users.

Chapter 4

# Installing FatWire Gadget Server Manually

- Overview of the Manual Installation Process
- Encrypting Passwords Manually
- Installing Gadget Server
- Configuring Gadget Server to Use the LDAP Identity Provider

# Overview of the Manual Installation Process

The manual process for installing Gadget Server requires you to:

1. Manually encrypt passwords (shown on this page).

2. Install Gadget Server by configuring various property files for its applications and deploying the applications (page 31).

3. Configure the Gadget Server applications to use the LDAP identity provider (page 37), if you have set up an LDAP server.
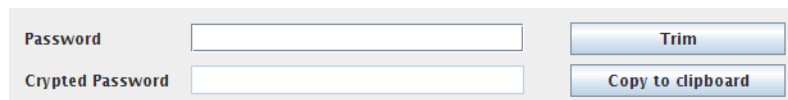
# Encrypting Passwords Manually

Before installing Gadget Server, encrypt all passwords as described in "Mappings Worksheet," on page 10 and record them in the worksheet (Table 1, on page 10).

**To encrypt passwords**
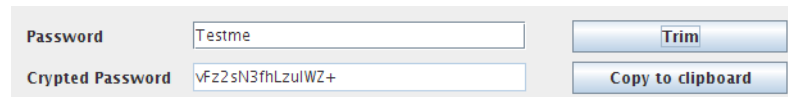
1. Run the following command:

   ```
   java -jar gs-password-encryptor-1.1.jar
   ```

2. Enter your password into the "Password" field and click **Trim**:

   | Password | | Trim |
   |---|---|---|
   | Crypted Password | | Copy to clipboard |

   The encrypted password is displayed in the 'Crypted Password' field. For example, Testme is entered as the password; the encrypted password is displayed in the "Crypted Password" field.

   | Password | Testme | Trim |
   |---|---|---|
   | Crypted Password | vFz2sN3fhLzuIWZ+ | Copy to clipboard |

3. When you have encrypted all passwords that require encryption and filled out the worksheet, you are ready to install Gadget Server. Continue with "Installing Gadget Server," on page 31.

# Installing Gadget Server

---

**Note**

Before continuing, ensure that you have completed the following steps:

- "Prerequisites for Installing FatWire Gadget Server," on page 8.

- Filled out the worksheet (Table 1, on page 10), using encrypted passwords obtained from the utility described on page 30.

- If you plan to use an LDAP identity provider, you have set up the LDAP server as shown on page 16.

---

**To manually install Gadget Server**

For dual-server installations, complete the following steps on both the management and production systems unless otherwise noted. Notes for single-server installations are provided where necessary:

1. Configure two Gadget Server application servers:

   - Dual-server installations: One application server is on the production system for the Gadget Server production applications; the other is on the management system for the Gadget Server management applications.

   - Single-server installations: One application server is for the Gadget Server production applications; the other is for the Gadget Server management applications.

2. Create a home directory where the logs, Gadget Server monitoring data, and ZooKeeper data will be stored for Gadget Server. The path to the home directory will be the value for {GASHOME} throughout this guide. On management and production systems, we recommend using the same path. On single-server installations, only one {GASHOME} is necessary.

   **Ex.** `/u01/software/GS`

3. Create a directory under {GASHOME} for ZooKeeper data.

   **Ex.** `/u01/software/GS/data`

4. Create a directory under {GASHOME} for Gadget Server monitoring data.

   **Ex.** `/u01/software/GS/storage`

5. Create a directory under {GASHOME} for logs.

   **Ex.** `/u01/software/GS/logs`

6. Unzip the Gadget Server applications.

7. Configure the files that are listed in Table 2, on page 32 and described on the referenced pages.

8. If you have set up an LDAP server as shown on page 16, configure the Gadget Server applications to use the LDAP identity provider. For instructions, see page 37.

9. Deploy the Gadget Server `WAR` files first on the production application server, then on the management application server (as required by boot order), as follows:

- Dual-Server installations – On the production application server, deploy `gas-boot`, `gas-os`, `gas-service`, `user-service`, and visitor `cas`. On the management application server, deploy `gas-admin`, `gas-boot`, `gas-os`, and `gas-service`.

- Single-Server installations – On the production application server, deploy `gas-boot`, `gas-os`, `gas-service`, `user-service`, and visitor `cas`. On the management application server, deploy `gas-admin`, `gas-os`, and `gas-service`. (Deploy `gas-boot` only on the production application server. `gas-boot` is not used on the management environment.)

**10.** You have completed the installation process. Go to Chapter 5, "Post-Installation Steps" to secure and verify your installation, register `gas-admin`, and authorize its users.

# Gadget Server Configuration Files

Table 2 lists the Gadget Server applications, their corresponding configuration files, and the pages on which configurable parameters are described.

**Table 2:** Gadget Server Configuration Files

| System | Gadget Server App | Configuration File | | For Parameters, See ... |
|---|---|---|---|---|
| Management and Production | All GS apps | /WEB-INF/classes/ | log4j.properties | page 33 |
| | gas-service | /WEB-INF/classes/ | cos_facilities.xml | page 33 |
| | | /WEB-INF/classes/ | registry_client.properties | page 33 |
| | gas-os | /WEB-INF/classes/ | cos_facilities.xml | page 33 |
| | | /WEB-INF/classes/ | registry_client.properties | page 33 |
| | | /WEB-INF/classes/ | gsoauthkey.pem | page 35 |
| | gas-boot[a] | /WEB-INF/classes/ | Java Key Store (JKS) | page 33 |
| | | /WEB-INF/classes/ | sslproxy.properties | page 34 |
| | | /WEB-INF/classes/ | zoo.properties | page 35 |
| | | /WEB-INF/classes/ | jmemcached.properties | page 36 |
| Production | gas-boot | /WEB-INF/classes/ | gas_registry_schema.xml | page 10 (Table 1) |
| | | /WEB-INF/classes/ | schema_import.properties | page 37 |
| | user-service | /WEB-INF/classes/ | cos_facilities.xml | page 33 |
| | | /WEB-INF/classes/ | registry_client.properties | page 33 |
| | | /WEB-INF/classes/ | user_runtime.xml | page 37 |
| | cas (visitor) | same files as user-service | | |
| Management | gas-admin | /WEB-INF/classes/ | cos_facilities.xml | page 33 |
| | | /WEB-INF/classes/ | registry_client.properties | page 33 |

a. On single-server installations, `gas-boot` is not used on the management environment.

## log4j.properties

Configure this file as follows for all applications listed in Table 2, on page 32.

| Property | Value | Your Value |
|---|---|---|
| `log4j.appender.logfile.file` | {GASHOME} | |
| `log4j.appender.logfile.MaxFileSize` | 10MB | |
| `log4j.appender.logfile.MaxBackupIndex` | 5 | |

## cos_facilities.xml

Configure this file as follows for the applications specified in Table 2, on page 32:

| Bean | Key | Value | Your Value |
|---|---|---|---|
| `storage` | `storageFolder` | {GASHOME} | |

## registry_client.properties

Configure this file as follows for the applications specified in Table 2, on page 32

| Property | Value | Your Value |
|---|---|---|
| `zookeeper.server.host` | {management_gas_ip} for management apps<br>{production_gas_ip} for production apps | |
| `zookeeper.server.port` | 2181<br>**Note:** Do not change this value. | |

## Java Key Store (JKS)

### Single-Server Installations

Configure only the production `gas-boot` application. All URLs that point to `gas-boot` must point to the production `gas-boot` (the management `gas-boot` is not used).

Configuring `gas-boot` instances on management and production starts with the RSA SSL key integration. The Java Key Store file contains the RSA key and must be identical on both the production and management instances of `gas-boot`. Filename and password information for the Java Key Store are configured in the `sslproxy.properties` file.

On the management system, `gas-boot` does not store configurations, but only proxies requests (for configurations) coming from management applications to the production `gas-boot`. The production `gas-boot` serves the request with actual data from the ZooKeeper. Management applications connect to management `gas-boot`, which then connects to production `gas-boot` via an SSL tunnel. The SSL tunnel properties are in the following files: JKS, `sslproxy.properties`, `zoo.properties`, and `jmemcached.properties`.

Gadget Server ships with the default JKS (`cert.jks`) containing an RSA key. Gadget Server also ships with a default `sslproxy.properties` file configured with the `cert.jks` file name and password information. The default key may be used, but should be regenerated for security reasons.

---

**Note**

When using SSL, the preferred method is to ensure that a valid signed certificate is present and can be accepted by both the management and production servers. Alternatively, you can create your own JKS with RSA key, using the following command:

```
<JAVA_HOME>/bin/keytool –genkey –alias sslproxy –keysize
  2048 –validity 936500 –keyalg RSA –dname "<dname>" –
  keypass <keypass> –storepass <storepass> –keystore
  <jks_filename>
```

The following example uses default values from the `sslproxy.properties` file:

```
keytool –genkey –alias sslproxy –keysize 2048 –validity
  936500 –keyalg RSA –dname "CN=fatwire" –keypass
  fatwire –storepass fatwire –keystore cert.jks
```

---

## sslproxy.properties

---

**Single-Server Installations**

Configure `sslproxy.properties` for only the production instance of `gas-boot` (the management instance is not used).

---

The `sslproxy.properties` file must be reconfigured only if you customized the Java Key Store (page 33). The `sslproxy.properties` file must be identical on the management and production instances of `gas-boot` and its parameters must specify the same values that were used to generate the Java Key Store file (page 33).

- If you generated the Java Key Store file, enter the parameter values that you used to generate the file.

- If you used the default Java Key Store (`cert.jks`), do not modify the default `sslproxy.xml` file.

The `sslproxy.xml` file contains the following parameters:

- `ssl.cert=<Java_Key_Store_filename>`

- `ssl.keypass=<keypass>`

- `ssl.storepass=<storepass>`

- `ssl.dname=<distinguished_name>`

By default they are set as follows (to match the parameters that were used to generate the default `cert.jks` file):

- `ssl.cert=cert.jks`

- `ssl.keypass=fatwire`

- `ssl.storepass=fatwire`

- `ssl.dname=CN=fatwire`

## gsoauthkey.pem

This is an SSL private key file. The `gas-os` application uses this key as a default for OAuth gadgets lacking their own consumer credentials. The `gas-os` application ships with a default private key file. For security reasons we recommend generating a custom key for each `gas-os` instance (management and production). Generating a custom private key for `gas-os` requires the OpenSSL tool to be installed. Many Linux distributions come with pre-compiled OpenSSL packages. Windows binaries can be found at `http://www.openssl.org/related/binaries.html`.

To generate a custom SSL private key for OAuth:

1. Create a `gskey.pem` file by executing the following command:

   **`openssl req -newkey rsa:1024 -days 365 -nodes -x509 -keyout gskey.pem -out gskey.pem -subj /CN=GadgetServerKey`**

2. Convert the previously generated certificate from the `gskey.pem` file to PKCS#8 format in the `gsoauthkey.pem` file.

   **`openssl pkcs8 -in gskey.pem -out gsoauthkey.pem -topk8 -nocrypt -outform PEM`**

3. Copy the newly generated `gsoauthkey.pem` file into the `gas-os/WEB-INF/classes` directory. Overwrite the previous directory, if it exists.

## zoo.properties

### Single-Server Installations

Configure `zoo.properties` for only the production instance of `gas-boot` (the management instance is not used).

Configure this file as follows for the `gas-boot` management and production applications, specified in Table 2, on page 32:

- `dataDir`: Replace `{GASHOME}` with the value for your system.

- `tempClientPort`: Either specify the port that is temporarily used to start the ZooKeeper application, or keep the default value.

- `clientPort`: Either specify the port on which the ZooKeeper application starts, or keep the default value.

- `sslClientPort`: Either specify the port used by the ZooKeeper SSL connections, or keep the default value.

> ### Note
>
> For dual-server installations, the value of `sslClientPort` must be the same on both the management and production systems. This port must also be opened on any firewall between management and production. The default value `4181` is appropriate for most installations.

- `sslHost`: Specify the production server host.

## jmemcached.properties

> ### Single-Server Installations
>
> Configure `jmemcached.properties` for only the production instance of `gas-boot` (the management instance is not used).

Configure this file as follows for the `gas-boot` management and production applications, specified in Table 2, on page 32:

- `jmemcached.port`: Either specify the port on which the Java memory cache manager starts, or keep the default value.
- `jmemcached.sslport`: Either specify the port that is used by the Java memory cache manager SSL connections, or keep the default value.

> ### Note
>
> For dual-server installations, the value of `jmemcached.sslport` must be the same on both the management and production systems. This port must also be opened on any firewall between management and production. The default value `22322` is appropriate for most installations.

- `jmemcached.sslHost`: Specify the production server host.

## schema_import.properties

Configure this file as follows for the `gas-boot` production application, specified in Table 2, on page 32:

| Property | Description | Value | Your Value |
|---|---|---|---|
| `importOnStart` | Controls whether the `gas_registry_schema.xml` file is re-imported into `ZooKeeper` on server startup. | `true`, to pick up changes to the schema file | |
| `cleanIfExists` | Controls whether a value is cleaned from the existing schema in `ZooKeeper` before the new schema is imported. | `true`, to pick up changes to the schema file | |

## user_runtime.xml

This file must be identical for both the `cas` and `user-service` applications. Set `{cs_site}` in the `siteName` bean to the value that you specified in the worksheet on page 10. If you are setting up an LDAP identity provider, you must also complete the next section, "Configuring Gadget Server to Use the LDAP Identity Provider."

# Configuring Gadget Server to Use the LDAP Identity Provider

> **Note**
>
> Complete the steps in this section if you have set up a supported LDAP server as shown in "Installing Gadget Server with a New or Existing LDAP Server," on page 16.

**To enable the LDAP identity provider**

1. In the visitor `cas` and `user-service` applications, modify the `user_runtime.xml` file as follows:

   `WEB-INF/classes/user_runtime.xml`

| Bean | Property | LDAP |
|---|---|---|
| `wemIdentityProvider` | `enabled` | `false` |
| | `defaultProvider` | `false` |
| `ldapIdentityProvider` | `enabled` | `true` |
| | `defaultProvider` | `true` |

2. Back up `deployerConfigContext.xml` in `cas/WEB-INF` and rename `deployerConfigContext_onlyLDAP.xml` to `deployerConfigContext.xml` to allow CAS to pick up changes.

3. In the **new** `cas/WEB-INF/deployerConfigContext.xml` file, set the following LDAP properties:

`cas/WEB-INF/classes/deployerConfigContext.xml`

| Bean | Key | Value |
|---|---|---|
| `LdapPrincipalProvider` | `searchBase` | `{ldap_basedn}` `Ex.dc=fatwire,dc=com` |
| `LdapAuthenticationHandler` | `searchBase` | `{ldap_basedn}` `Ex.dc=fatwire,dc=com` |
| `LdapContextSource` | `urls` | `{gas_production_ldap_ip}` `{gas_production_ldap_port}` |
| | `userDn` | `{ldap_username}` `Ex. cn=Directory Manager` |
| | `password` | `{ldap_user_password}` **Note**: Enter the unencrypted password. |
| `LdapPersonAttributeDao` | `baseDN` | `{ldap_basedn}` `Ex.dc=fatwire,dc=com` |

4. Once you have enabled the LDAP identity provider, deploy the Gadget Server `WAR` files first on the production application server, then on the management application server (as required by boot order):

   - Dual-Server installations – On the production application server, deploy `gas-boot`, `gas-os`, `gas-service`, `user-service`, and visitor `cas`. On the management application server, deploy `gas-admin`, `gas-boot`, `gas-os`, and `gas-service`.

   - Single-Server installations – On the production application server, deploy `gas-boot`, `gas-os`, `gas-service`, `user-service`, and visitor `cas`. On the management application server, deploy `gas-admin`, `gas-os`, and `gas-service`. (Deploy `gas-boot` only on the production application server. `gas-boot` is not used on the management environment.)

5. You have completed the installation process. Go to Chapter 5, "Post-Installation Steps" to secure and verify your installation, register `gas-admin`, and authorize its users.

Chapter 5

# Post-Installation Steps

# Overview

Having installed Gadget Server, you are ready to secure your installation and verify your installation by testing the URLs of the Gadget Server applications. You will then register the `gas-admin` application with the WEM Framework of the management system, authorize yourself, and authorize others to use `gas-admin`.

# If Community Server 1.1 is Installed

Verify that Zookeeper and JMemcached in `cos-boot` and `gas-boot` are using different ports.

# Configuring Security

Recommended security measures are the following:

- Securing Ports
- Creating Certificates, JKS, and Private Keys
- Specifying OAuth Consumer Credentials

## Securing Ports

- The following ports should be accessible only from the local machine, to decrease the possibility of leaking information:
    - ZooKeeper port (`2181`, by default). This port is configured in the `clientPort` property of the `gas-boot/WEB-INF/classes/zoo.properties` file.
    - JMemcached port (`11211`, by default). This port is configured in the `jmemcached.port` property of the `gas-boot/WEB-INF/classes/jmemcached.properties` file.
- Open the following SSL `gas-boot` ports on the delivery host:
    - ZooKeeper SSL port (`4181`, by default). This port is configured in the `sslClientPort` property of the `gas-boot/WEB-INF/classes/zoo.properties` file.
    - JMemcached SSL port (`22322`, by default). This port is configured in the `jmemcached.sslport` property of the `gas-boot/WEB-INF/classes/jmemcached.properties file`.

## Creating Certificates, JKS, and Private Keys

- Create a custom JKS (Java Key Storage) with custom RSA key in the `gas-boot` application. For instructions, see "Java Key Store (JKS)," on page 33.

> **Note**
>
> The file (`cert.jks`, by default) must be identical for both `gas-boot` instances.

- Create a custom Private Key, `gsoauthkey.pem` for the `gas-os` application. For instructions, see "gsoauthkey.pem," on page 35.

> **Note**
>
> We recommend creating two `gsoauthkey.pem` files, one for each of the `gas-os` applications.

## Specifying OAuth Consumer Credentials

Consumer credentials are the consumer key and consumer secret (for definitions and other information, see the *Gadget Server User's Guide*). Specify the following sets of consumer credentials in the `gas-boot/WEB-INF/classes/gas_registry_schema.xml` file:

| Bean | Key | Default Value | Your Value |
|------|-----|---------------|------------|
| `gasProductionOS OAuthSecret_ private` | `consumer.key` | `gadgetPrivateConsumer` | |
| | `consumer.secret` | `gadgetPrivateSecret` | |
| `gasProductionOS OAuthSecret_ public` | `consumer.key` | `gadgetPublicConsumer` | |
| | `consumer.secret` | `gadgetPublicSecret` | |

# Enabling Shindig Features

Gadgets that are either developed for *iGoogle* or use *iGoogle* features may require you to enable extra Shindig features for Gadget Server in order for those gadgets to render properly. If you enable these Shindig features, Gadget Server downloads the third-party libraries necessary for rendering the gadgets that require them from the Shindig website. **For Gadget Server to download the necessary third-party libraries, you must have access to the internet.**

If you wish to enable additional Shindig features for Gadget Server, you must uncomment the following lines in the `gas-os/WEB-INF/classes/gas_features.txt` file in both `gas_os` applications (management and production):

```
# features/analytics/feature.xml
# features/com.google.gadgets.analytics/feature.xml
# features-extras/org.jquery.core-1.4.2/feature.xml
```

> **Note**
>
> Once the additional Shindig features are enabled, restart both the management and production application servers for the changes to take effect.

# Verifying Your Gadget Server Installation

You will verify your installation by testing the URLs of the Gadget Server applications.

---

**Note**

URLs in this section are used only to verify that Gadget Server is correctly installed; they must not be used to invoke the Gadget Server application for content management operations. The Gadget Server application must be registered with and accessed from the WEM Framework.

---

**1.** Start Content Server's application server before starting Gadget Server's application servers. **The production application servers must be fully started before the management application servers are started.**

**2.** Verify the following applications:

**a.** Verify the visitor `cas` application:

```
http://{production_gas_ip}:{production_gas_port}/cas/login
```

**Ex.** `http://gas.production.fatwire.com:8580/cas/login`

A successful connection displays the CAS login form. Sign in as `{gasvisitor_username}`/`{gasvisitor_password}`. If the user name and password are valid, the "Log In Successful" message is displayed.

**b.** Verify the `user-service` application:

A successful connection displays the "`Welcome to User Service`" message:

```
http://{production_gas_ip}:{production_gas_port}/user-
service
```

**Ex.** `http://gas.production.fatwire.com:8580/user-service`

**c.** Verify the `gas-service` applications:

A successful connection displays the "`Welcome to GS Service`" message.

**-** To verify the management `gas-service` application, open the following URL:

```
http://{management_gas_ip}:{management_gas_port}/gas-
   service
```

**Ex.** `http://gas.management.fatwire.com:8580/gas-service`

**-** To verify the production `gas-service`, open the following URL:

```
http://{production_gas_ip}:{production_gas_port}/gas-
   service
```

**Ex.** `http://gas.production.fatwire.com:8580/gas-service`

**d.** Verify the `gas-os` applications:

A successful connection displays the "Welcome to GS OpenSocial Container" message.

**-** To verify the management `gas-os` application, open the following URL:

```
http://{management_gas_ip}:{management_gas_port}/gas-os
```

Ex. `http://gas.management.fatwire.com:8580/gas-os`

- **-** To verify the production `gas-os` application, open the following URL:

    `http://{production_gas_ip}:{production_gas_port}/gas-os`

    Ex. `http://gas.production.fatwire.com:8580/gas-os`

**e.** Verify the `gas-admin` application:

**1)** Log in to the Gadget Server interface as a general administrator:

```
http://{management_gas_ip}:{management_gas_port}/gas-
    admin/start.jsp?siteid=<site_name>
```

Ex. `http://gas.management.fatwire.com:8580/gas-admin/`
`start.jsp?siteid=FirstSiteII`

**2)** In the CAS login form, sign in as a general administrator (`fwadmin`/
`xceladmin` by default).

**3)** Open Gadget Server. Its user interface is displayed:
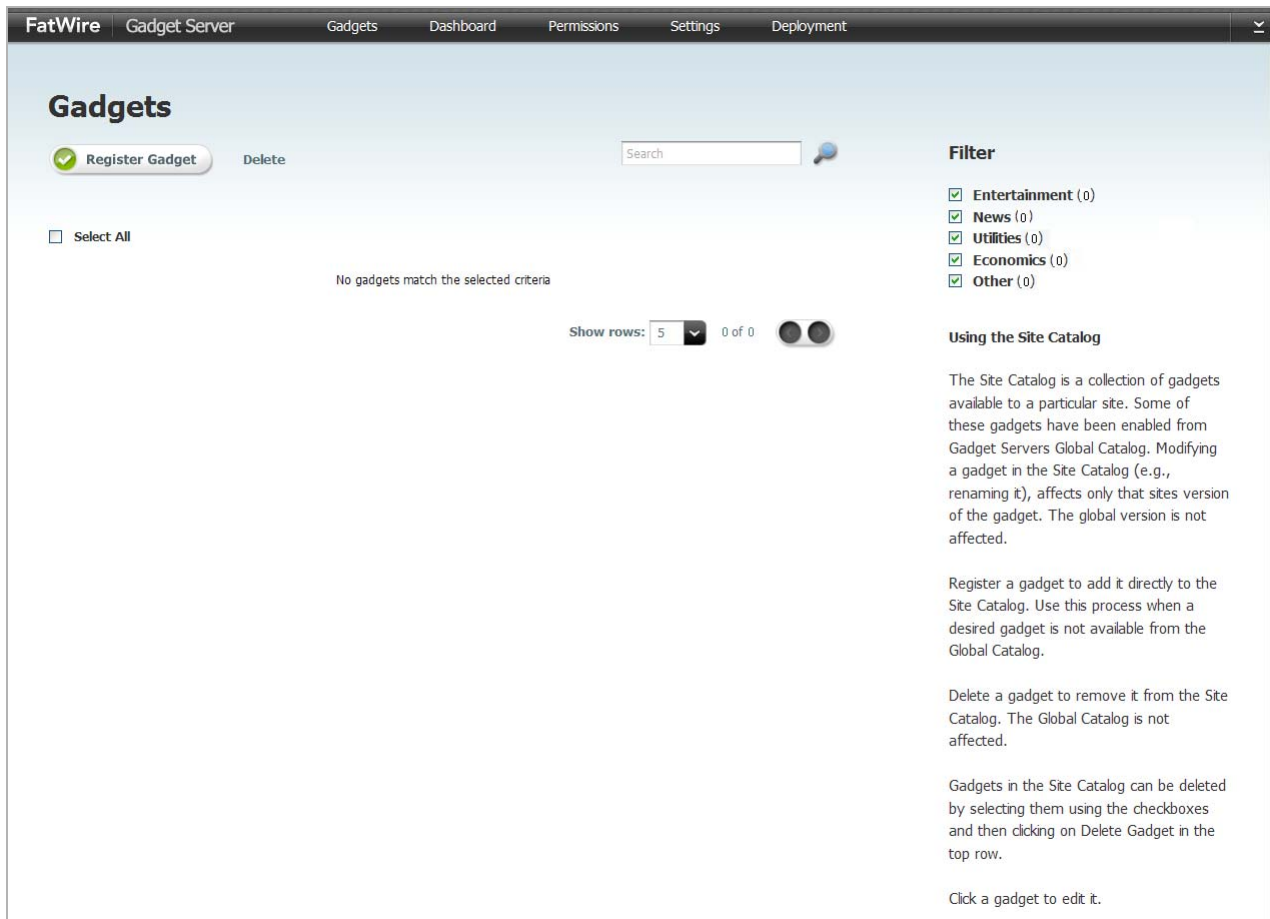


**3.** When all tests have been successfully completed, continue to the next section to
register the Gadget Server application with the WEM Framework.

# Enabling Gadget Server

- Registering the Gadget Server Application
- Authorizing Users to Work with the Gadget Server interfaces

## Registering the Gadget Server Application

In this section, you will register the Gadget Server application with the WEM Framework on the management system. Registration displays the Gadget Server application icon on the login page and WEM banner, lists the application on the **Apps** page, and enables the WEM Framework to render the application's interface.

**To register the Gadget Server application**

1.  On the management system, log in to the Content Server Advanced interface as a general administrator (`fwadmin/xceladmin` by default).

2.  On the **Admin** tab, select **Site** > **AdminSite**, and register the application as follows:

    a.  Create an `FW_View` asset with the following values:

        -   **Name**: `GaSView` (or a name of your own choice)
        -   **Parent Node**: `frame1`
        -   **View Type**: `Iframe`

            **Source Url**: `http:// {management_gas_ip}:{management_gas_port}/ gas-admin/WemContext.gas`

    b.  Create an `FW_Application` asset with the following values:

        -   **Name**: `GS` (or a name of your own choice)
        -   **Icon URL**: `wemresources/images/icons/apps/ GadgetServer.png` ( 🔳 )
        -   **Active Icon URL**: `wemresources/images/icons/apps/ GadgetServerActive.png`
        -   **Layout type**: `Layout Renderer`
        -   **Layout URL**: `wemresources/layout/admin.html`
        -   Add the new `FW_View` asset as an associated view by selecting it from the **History** tab (located on the tree in the left-hand panel) and clicking **Add Selected Items**. Click **Save Changes**.

3.  Log in to the WEM Framework as a general administrator (`fwadmin`/`xceladmin`), select **AdminSite**, click the WEM Admin icon, click **Apps** in the menu bar, and check that Gadget Server is listed on the **Apps** page.

4.  Continue to the next section to authorize access to the Gadget Server interfaces.

# Authorizing Users to Work with the Gadget Server interfaces

Detailed information about user authorization is available in the *Gadget Server User's Guide*. For a quick start, follow the steps below:

**To authorize users to work with Gadget Server interfaces**

1. Log in to the WEM Framework:

   a. Log in to the WEM Admin interface (management system) as a general administrator (the default credentials are `fwadmin/xceladmin`). Access WEM Admin at the following URL:

      ```
      http://<server>:<port>/<context>/login
      ```

      where `<server>` is the host name or IP address of the server running WEM, and `<context>` is the name of the web application that was deployed on `<server>`. Depending on how the system was set up, you may also need to include the port number.

   b. If you are logging in for the first time, select **AdminSite** from the drop-down menu, and click the **Admin** icon.



**Admin** application icon
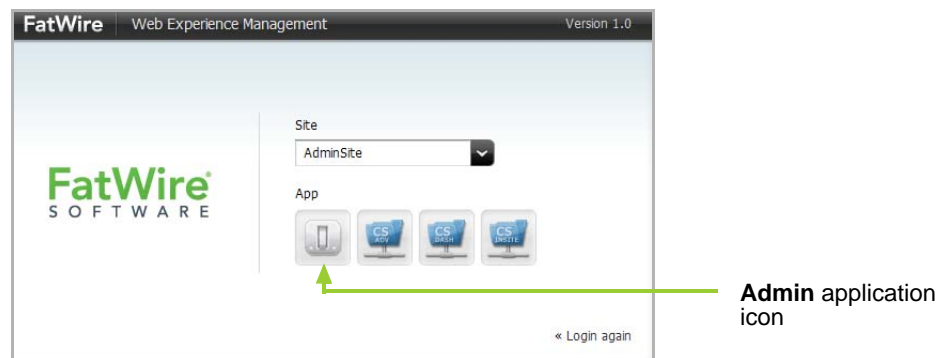
2. Assign the Gadget Server application to {`cs_site`}:

   a. In the menu bar, click **Apps**.

   b. Mouse over the Gadget Server application name and select **Manage App**.

   c. In the "Manage App" screen, click **Assign to Sites**.

   d. Select {`cs_site`} to run the Global Gadget Catalog interface.

   e. Select the GeneralAdmin role for the Gadget Server application.

3. Assign the Gadget Server application to a site other than {`cs_site`} to run the Gadget Server User interface.

   > **Note**
   >
   > To assign the Gadget Server application to sites other than {`cs_site`}, you must first create or select the sites on the management system, then mirror the sites to the production system.

   a. In the menu bar, click **Apps**.

   b. Mouse over the Gadget Server application name and select **Manage App**.

    **c.** In the "Manage App" screen, click **Assign to Sites**.

    **d.** Select the desired site, other than {cs_site}, on which you wish to run the Gadget Server User interface.

    **e.** Select the following roles for the Gadget Server application: GeneralAdmin, SiteAdmin, and Designer.

**4.** Authorize users to access Gadget Server's interfaces. In this step you will assign users to {cs_site} or the site(s) running the Gadget Server User interface, and assign to each user at least one of the roles that was assigned to gas-admin. (Sharing at least one role to an application and a user on the same site grants the user access to the application on that site):

    **a.** In the menu bar, select **Sites**.

    **b.** Mouse over the site to which the Gadget Server application is assigned and select **Manage Site Users**.

    **c.** In the "Manage Site Users" screen, complete one or both of the following steps, as necessary:

        **-** To assign roles to an existing site user, mouse over the user's name and select **Assign Roles to User**.

        **-** To assign a user to the site and assign roles to the user, click **Assign Users >** *select the name of the user you wish to assign to the site* **> Continue**.

    **d.** In the "Assign Roles to User" screen, select at least one of the following roles: **GeneralAdmin**, **SiteAdmin**, **Designer**, (see Table 3 for permissions associated with each role).

**Table 3:** Gadget Server permissions and roles

| Permissions | Gadget Server Roles | | |
|---|---|---|---|
| | **GeneralAdmin** | **SiteAdmin** | **Designer** |
| Enable Gadget Server's Global Gadget Catalog Interface | ✓ | | |
| Enable Gadget Server's User Interface | ✓ | ✓ | |
| Register Gadgets to Global Gadget Catalog | ✓ | | |
| Register Gadgets to a Site Gadget Catalog | ✓ | ✓ | |
| Remove Gadgets from the Global Gadget Catalog | ✓ | | |
| Remove Gadgets from a Site Gadget Catalog | ✓ | ✓ | |
| Enable Gadgets for a Site Gadget Catalog | ✓ | | |
| Modify Gadget Metadata | ✓ | ✓ | |

**Table 3:** Gadget Server permissions and roles

| Permissions | Gadget Server Roles | | |
|---|---|---|---|
| | **GeneralAdmin** | **SiteAdmin** | **Designer** |
| Add Default Gadgets to the Dashboard | ✓ | ✓ | ✓ |
| Modify the Dashboard's Default Layout | ✓ | ✓ | ✓ |
| Modify the Dashboard's Default Color Theme | ✓ | ✓ | ✓ |
| Authorize a Domain | ✓ | ✓ | ✓ |
| Configure Appearance Settings for Gadgets | ✓ | ✓ | ✓ |
| Deploy the Dashboard "Tag" | ✓ | ✓ | ✓ |
| Deploy an Individual Gadget's "Tag" | ✓ | ✓ | ✓ |
| Modify the Deployed Dashboard's Defaults | ✓ | ✓ | ✓ |

**5.** Click **Save and Close**.

> **Note**
>
> Verify that the site administrator is a member of the REST security group `SiteAdmin_AdminSite`. For instructions on adding a user to a group, see the *WEM Framework Administrator's Guide*.

**6.** Verify the user's access to Gadget Server:

   **a.** Log in to the WEM Framework as one of the new Gadget Server users.

   **b.** If the user is a general administrator, access the global gadget catalog by selecting `{cs_site}` and the Gadget Server icon:



**{cs_site}**
(AdminSite, by default)

Gadget Server icon

- If the user is not a general administrator, select the site running the Gadget Server user interface and click the Gadget Server icon:



Site other than **{cs_site}** running the Gadget Server user interface

Gadget Server icon

**7.** Your interface is one of the following:

- If you selected {cs_site}, the Global Gadget Catalog interface is displayed:



Register gadgets to the global gadget catalog

Enable globally registered gadgets on the desired site gadget catalogs
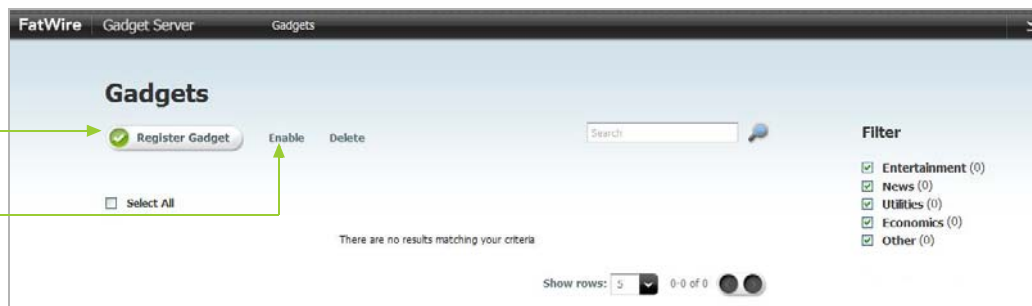
- If you selected a site other than {cs_site} to which gas-admin is assigned, the Gadget Server User interface is displayed:



Register gadgets to the site gadget catalog
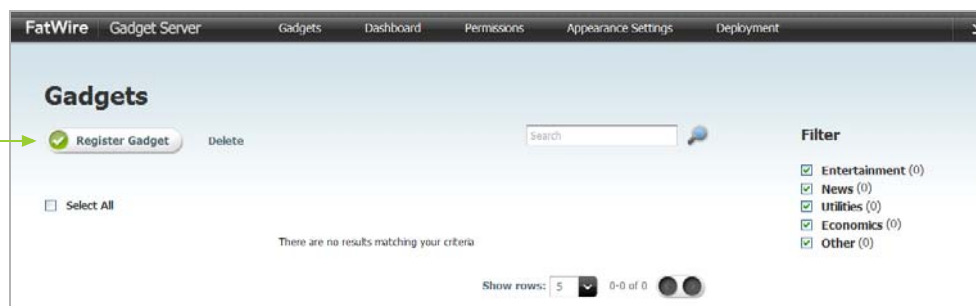
# Next Steps

- If you wish to install Sample Gadgets, continue to Chapter 6, "Adding Sample Gadgets."

- For information and instructions about using Gadget Server, see the *Gadget Server User's Guide*.

Chapter 6

# Adding Sample Gadgets

# Prerequisites for Installing Sample Gadgets

Content Server ships with the following sample gadgets:

ListGadget, RSSGadget, ThumbListGadget, and SlideshowGadget
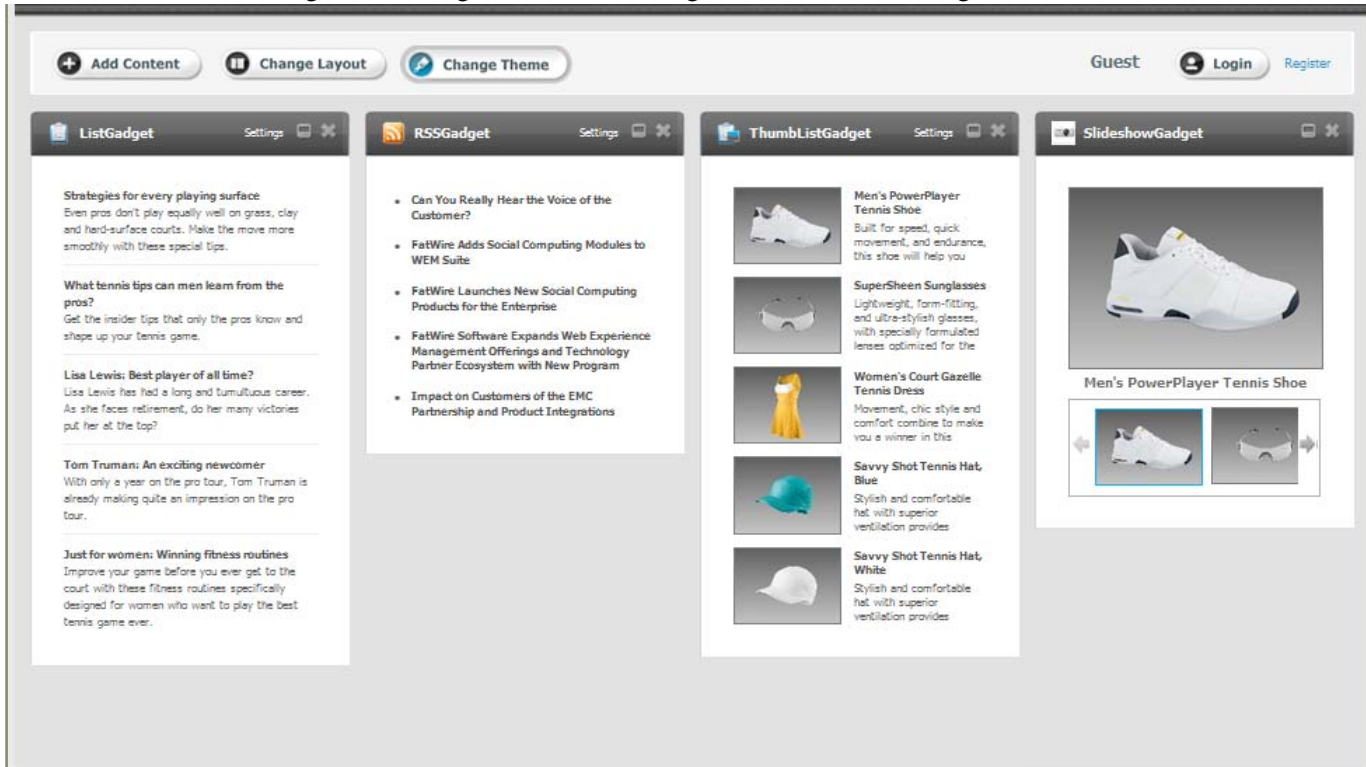


The sample gadgets must be installed on the FirstSite II sample site. The site must be enabled to store demo data:
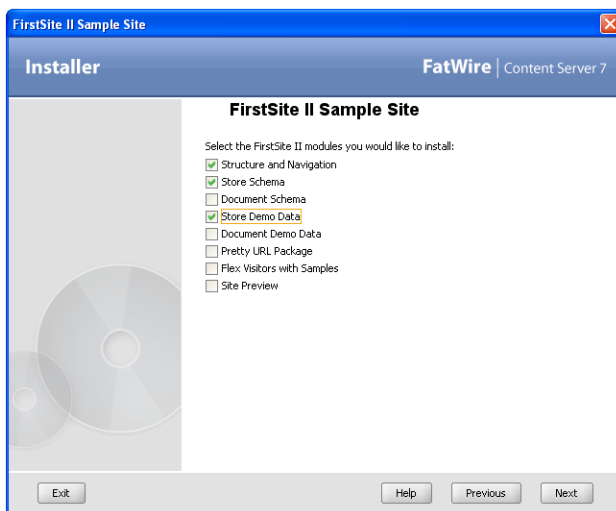


If your target Content Server system does not have FirstSite II, install the sample gadgets on a separate Content Server system that is running FirstSite II with **Store Demo Data** enabled, then publish FirstSite II to the target system.

# Installing the Gadget Server Samples Module

Installing sample gadgets installs the following components:

- `FW_CSGadget` asset type (used to create gadgets)
- Sample gadgets (assets of type `FW_CSGadget`)
- Templates for rendering the gadgets
- Assets that provide content for the sample gadgets. The assets are instances of FirstSite II asset types.

**To install sample gadgets**

1. If your management Content Server system is not running FirstSite II with **Store Demo Data** enabled, create a separate Content Server system. At the end of the installation process, you will publish FirstSite II with sample gadgets to the management Content Server.

2. Extract the installation file named `GadgetServer_v1.1.zip` to the host machine. Extracting this zip file creates a subdirectory named `GS_Samples`.

> **Note**
>
> Do not change the name of this subdirectory or any of its subdirectories, and make sure that you retain the archived directory structure. Otherwise, the installer will fail.

3. Run the Gadget Server Integration Installer script:
   - Windows: `gsInstall.bat`
   - Unix: `gsInstall.sh`

4. In the "Welcome" screen, click **Next**.
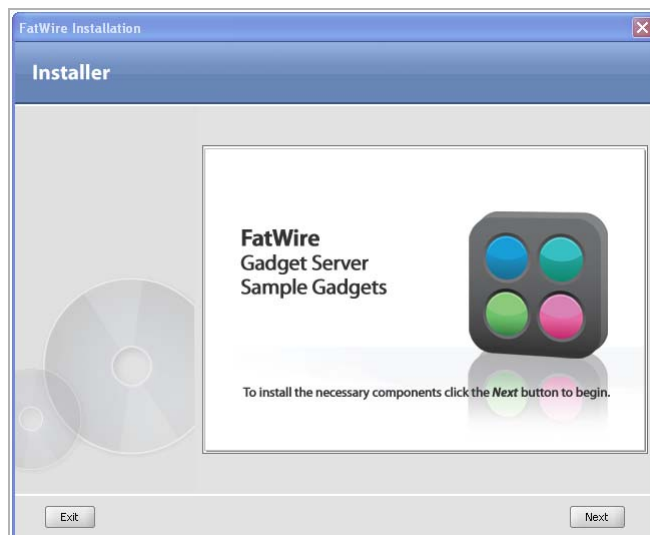
**5.** In the "FatWire License Agreement" screen, select **I accept** and click **Next**.



**6.** In the "Installation Directory and License File" screen, enter the path to your Content Server installation directory.
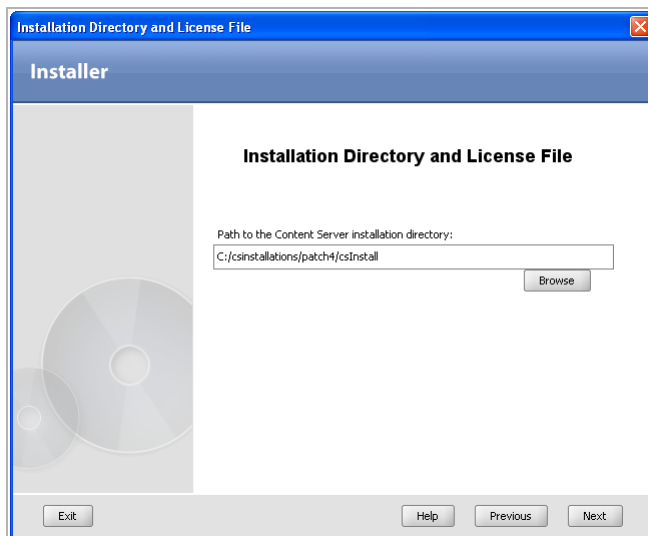
**7.** Select **Gadget Server - Sample Gadgets**.
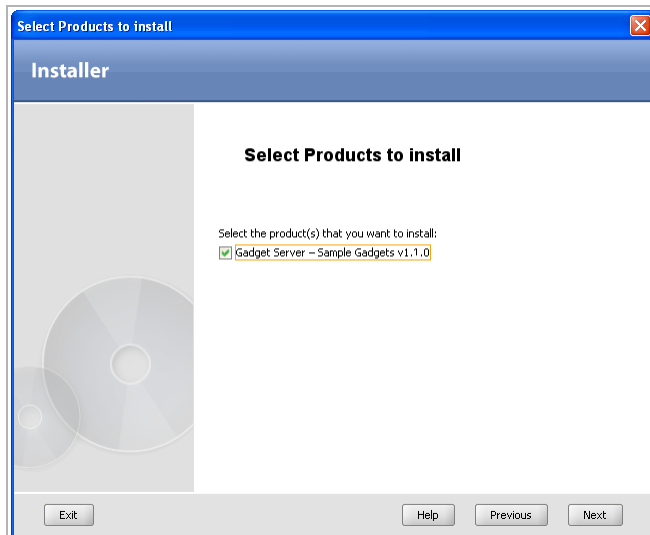


The following components will be installed:

- `FW_CSGadget` asset type (used to create gadgets)
- Sample gadgets (assets of type `FW_CSGadget`)
- Templates for rendering the gadgets
- Assets that provide content for the sample gadgets. The assets are instances of FirstSite II asset types.

**8.** In the "Clustering" screen, determine whether you are installing the sample gadgets on a single server or a secondary cluster member. Click **Next**.
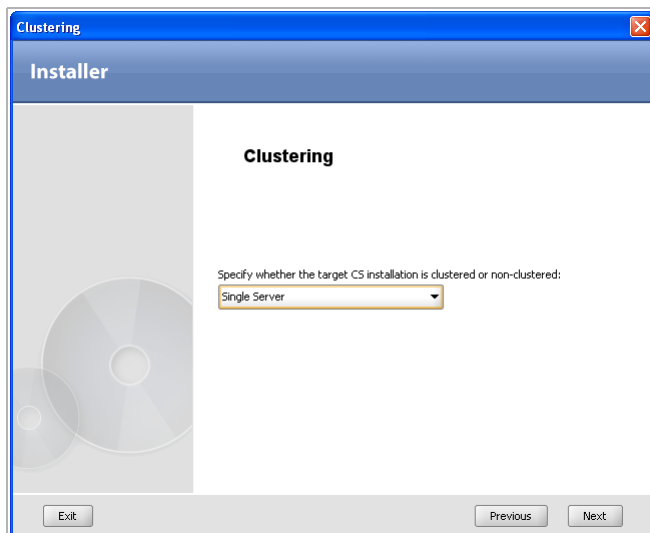
9. In the "Enter Gadget Server Information" screen, select either **http** or **https**, and then enter the host name and port number of your Gadget Server installation.



10. Click **Next**.
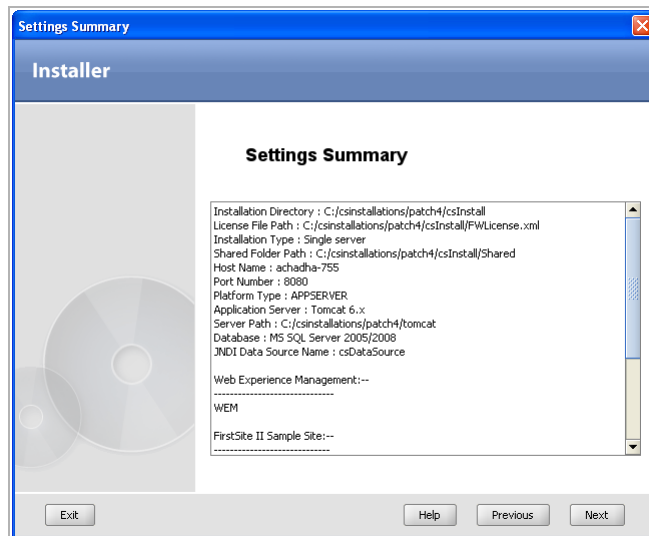
**11.** During the installation, the "Installation Progress" dialog box appears. Click **Install** to begin the installation.
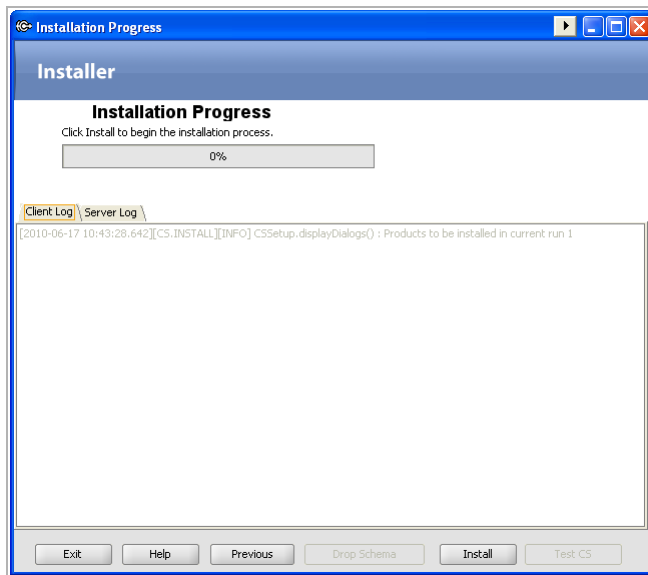


**12.** When the "Installation Actions" dialog box opens, start your Content Server installation, and click **Test** to test your Content Server installation. Click **OK**.
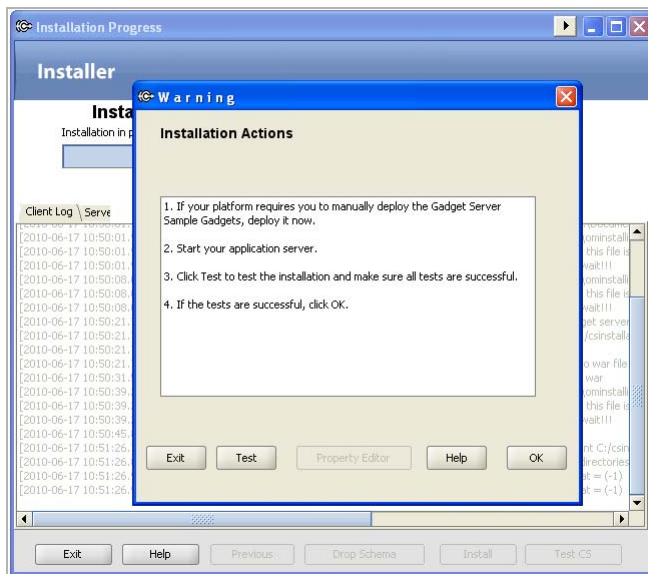
**13.** When the installation is complete, click **OK**.
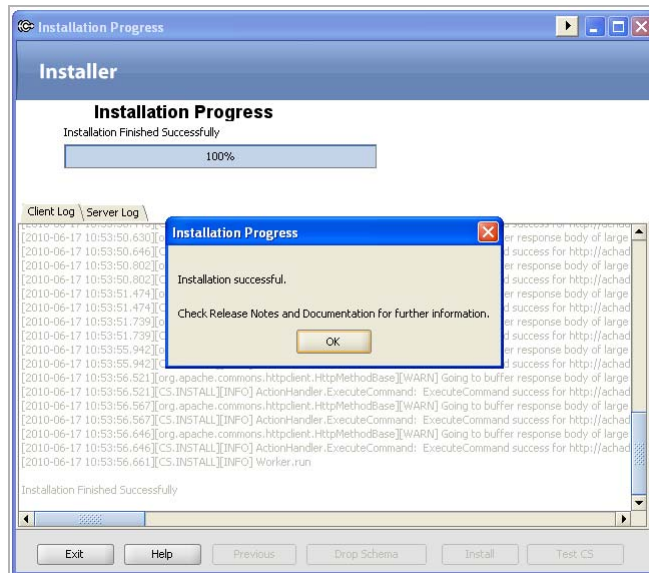


**14.** Register the sample gadgets in either the Gadget Server global gadget catalog or site gadget catalog. For instructions, see "Registering Gadgets" in the *Gadget Server User's Guide*. To register gadgets you need to enter their descriptor URLs. Follow the instructions below to locate the gadgets' descriptor URLs:

**a.** Log in to the Content Server Advanced interface with the credentials of a general administrator (for example, `fwadmin/xceladmin`).

**b.** Select the FirstSite II sample site.

**c.** In the button bar, click **Search**.

The list of asset types is displayed. Make sure that the **CS-Based Gadget** asset type is included in this list:

**d.** In the list of asset types, click **Find CS-Based Gadget**.

**e.** In the "Search for FW_CSGadget" screen, click **Search**.

**f.** Preview any of the sample CS-Based Gadget assets.

**g.** In the "Template" field, select **ListSiteGadgets**.

The gadget descriptor URLs will look similar to the following:



Once you successfully register the sample gadgets, they are displayed as thumbnails on either the global gadget catalog or a site gadget catalog, depending on how you registered the gadgets. For example:



New gadget registered to the global gadget catalog
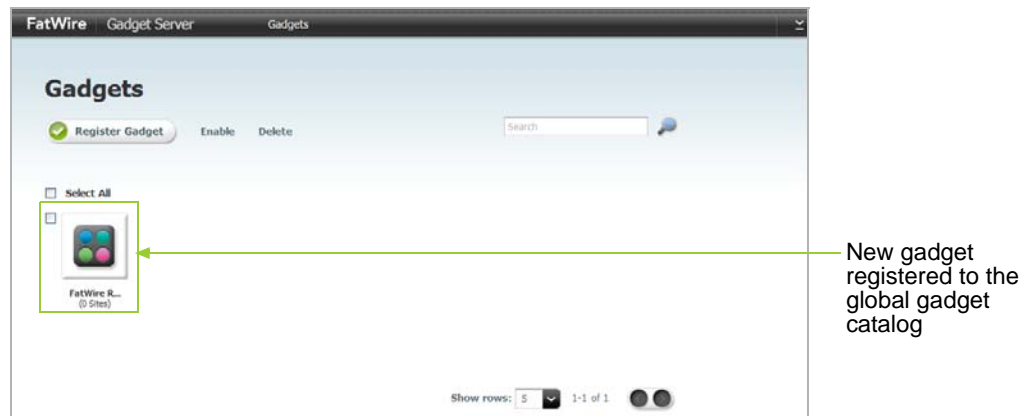
For more information about sample gadgets and creating custom gadgets, see the *Gadget Server Developer's Guide*.