

CounterSoft™

# Gemini Project Issue Tracking

## User Guide

Product Release 2.2

|  |           |
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## 1. Introduction

Gemini is a .NET web-based project issue tracking system.

### 1.1 Key Features

- ASP.NET web application
- SQL Server database back-end
- Time-tracking
- Source control integration
- Configurable email alert templates
- Custom fields support
- Personal issue filters
- Gemini event sub system– event/listener model
- Gemini Web Services
- Automatic project road map and change logs
- Customisable issue type and priority
- Controlled anonymous user access
- Flexible reporting – based upon XML/XSL
- Export to Microsoft Excel
- Issue linking across projects
- Unicode support
- Windows and web forms authentication

### 1.2 Licensing

Please see <http://www.countersoft.com/Default.aspx?PageID=42> for the latest Gemini product licensing and pricing information.

#### 1.2.1 FREE License

The FREE license has the following restrictions:

- Single installation per license
- No more than 5 Gemini users
- Gemini can only be used internally – installation on an internet-facing server is strictly prohibited

#### 1.2.2 Commercial License

Purchasing a license entitles the following:

- Single installation per license (one license, one install)
- Unlimited number of Gemini users
- Permission to install Gemini on an internet-facing server

### 1.2.3 Other License Types

CounterSoft provides special licensing terms as follows:

- Open Source Projects
- .NET Community Websites
- Not-for-profit Organisations
- Academic Organisations

Please submit your request at our [website](#).

*Terms and conditions will apply.*

## 2. Installation



Why not take advantage of our remote installation and upgrade service? <http://www.countersoft.com/Default.aspx?PageID=70>

Please consult the Gemini Installation guide that can be found at the following location:

<http://www.countersoft.com/Default.aspx?PageID=58>

### 3. Configuration Reference

Most of Gemini's application settings are accessible via under Home → Administration. Additional settings can be found within in the applications' WEB.CONFIG file.

**Note** Any changes to the WEB.CONFIG file will result in the Gemini web application being restarted automatically. If you are using the ASP.NET In-Process session provider, your sessions will be lost!

#### 3.1 Gemini Issues Database Connection String (WEB.CONFIG)

These setting define the SQL connection string to your Gemini SQL database.

```
<nhibernate>
  <!-- The SQL Server dialect (Gemini supports
  <add key="hibernate.dialect" value="NHibernat
  <!-- The SQL Server database connection strir
  <add key="hibernate.connection.connection_str
  <!-- Misc -->
  <add key="hibernate.connection.provider" valu
  <add key="hibernate.connection.driver_class"
</nhibernate>
```

| Setting                                | Description   |
|--|---|
| hibernate.dialect                      | Select correct dialect for your SQL database version: MsSql2000Dialect, MsSql7Dialect, MsSql2005Dialect |
| hibernate.connection.connection_string | Specify the database connection string that points towards your Gemini database                         |

If you would like to use Windows Security to access your database (as opposed to SQL Security), simply change this setting as follows:

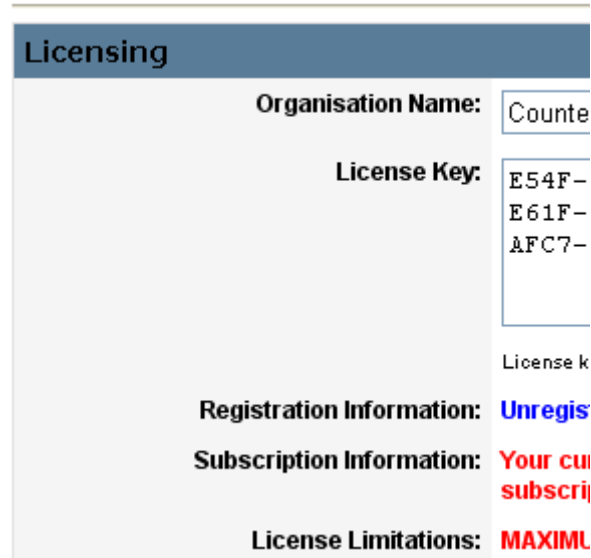
```
trusted_connection=Yes; initial catalog=Gemini; data source=localhost;
```

There is also a second database connection string that should be updated:

```
<connectionStrings>
  <add name="ProfilesServer" connectionString="data source=127.0.0.1;
</connectionStrings>
```

### 3.2 Product Registration Details

To set the product licensing details you will need to login as administrator and click on the “Administration” link. Once in the administration page, select “Licensing”:



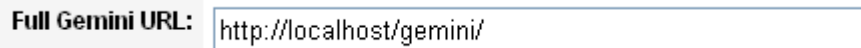
The screenshot shows the 'Licensing' configuration page. It features a blue header with the word 'Licensing'. Below the header, there are several fields and labels:

- Organisation Name:** A text input field containing the text 'Counte'.
- License Key:** A text input field containing the text 'E54F-', 'E61F-', and 'AFC7-' on separate lines.
- Registration Information:** A label followed by the text 'Unregis'.
- Subscription Information:** A label followed by the text 'Your cui' and 'subscrij' on separate lines.
- License Limitations:** A label followed by the text 'MAXIML'.

Once you have set the details click save to update the setting. You should now see your licensing details.

### 3.3 Full Gemini URL

This setting is located in the “Global -> General” section of the administration page. It is used mainly by the email alerts.



The screenshot shows a configuration field for 'Full Gemini URL'. The label 'Full Gemini URL:' is on the left, and the text input field contains the URL 'http://localhost/gemini/'.

### 3.4 Allow User Registration

If set to "YES", a link will be displayed on the login page that will allow new users to register themselves. You can find this setting in the “Security -> General” section of the administration page.

### 3.5 Time in Working Day

This setting is used to validate time input when logging work time against an issue. You can find this setting in the “Issue -> General” section of the administration page.

### 3.6 Web Services Access Code

In order to invoke a Gemini web services method you must provide an access code. This will ensure authorised usage of the web service. Set this to any value and ensure the same value is then used when invoking web services methods. You can find this setting in the "Security -> General" section of the administration page.

### 3.7 Show All Projects

Setting this value to "YES" will result in all projects being visible to all users.

Set this value to "NO" to control individual project visibility. You can then grant VIEW access to users at the project level. You can find this setting in the "Security -> General" section of the administration page.

### 3.8 Global Resource Assignment

This setting controls whether all users have the right to assign a resource against an issue during issue creation.

If you would like to control this setting on a per user basis then set this option to "NO" and use the new "Assign Resource" role. You can find this setting in the "Issue -> General" section of the administration page.

### 3.9 Automatic Issue Alerts

These settings can be found in the "Global -> Notifications" section of the administration page.

#### 3.9.1 Email Issue Creator

This setting controls if the user creating an issue is automatically configured to watch the issue (receive alerts).

#### 3.9.2 Email Issue Resource

This setting controls if the user assigned to the issue is automatically configured to watch the issue (receive alerts).

### 3.10 Allow Anonymous Users

This setting controls whether people can browse/access GEMINI without logging in.

The built-in "Anonymous User" user account is used for this purpose. You can configure this accounts' access and project viewing rights just like any other user account.

If you have set the "Show All Projects" setting to "NO" then please ensure that the "Anonymous User" user account has view privileges on all projects that you wish to be visible to anonymous users. You can find this setting in the "Security -> General" section of the administration page.

### 3.11 Welcome Message

You can customise the welcome caption and message that are displayed on the main page. You can find this setting in the "Global -> General" section of the administration page.

**Note** The welcome content can be customised by Commercial License holders only

### 3.12 Administrator Email

This setting contains the Gemini administrators email addresses separated by a comma. You can find this setting in the “Global -> General” section of the administration page.

### 3.13 Show Gemini Statistics

This setting controls if the top-level Gemini statistics are always visible regardless of user. By default, statistics are only visible to Gemini administrators or if the "Show All Projects" setting is set to "YES". You can find this setting in the “Security -> General” section of the administration page.

### 3.14 Reset Password Messaging

These two settings control the email subject line and content for the password reset email. You can find these settings in the “Security -> General” section of the administration page.

### 3.15 Rich Text Box Usage

A rich text box can be used for data entry when adding an issue or an issue comment. This feature can be turned on or off as desired. You can find these setting in the “Issue -> General” section of the administration page. By default this is set to use the RAD HTML editor.

### 3.16 Source Control Access Code

This setting controls whether the web services access code is used to control access to the LinkSourceControlFile.aspx page. You can find this setting in the “Security -> General” section of the administration page.

### 3.17 Authentication Mode (WEB.CONFIG)

```
<authentication mode="Forms">  
  <forms name="Gemini" loginUrl="Default.aspx" path="/" >  
  </forms>  
</authentication>
```

Windows and Forms authentication modes are supported.

### 3.17.1 Windows Authentication

Changing the mode to “Windows” will configure Gemini to only support Windows authentication.

Before using Windows authentication, you are advised to create a user within Gemini whereby the username is a valid network/Windows user (e.g. “Domain\Username”). This will ensure that at least one user will be able to access Gemini once you switch to Windows authentication.

Ensure that the option “Integrated Windows authentication” is selected on the Gemini website directory security (IIS):



Please note that you still need the “forms” tag for Windows Authentication.

**Note** Anonymous Access to the “Gemini\WebServices” folder must be enabled to allow web service calls to bypass Windows Authentication

### 3.17.2 Web Forms Authentication

Changing the mode to “Forms” will configure Gemini to only support web forms authentication. The default login username and password is “admin”.

### 3.18 Authentication Cookie Name (WEB.CONFIG)

```
<authentication mode="Forms">
  <forms name="Gemini" loginUrl="Default.aspx" path="/" >
</forms>
</authentication>
```

If you have installed Gemini more than once on a single web server, you should change the "name" value of the "forms" setting to something unique across all Gemini installations (recommendation is that the "name" value reflects the IIS Virtual Directory where Gemini is installed).

This is necessary to ensure that cookies are correctly stored and processed for each Gemini web application instance.

### 3.19 Session State Provider (WEB.CONFIG)

```
<!-- SESSION STATE SETTINGS
By default ASP .NET uses cookies to ider
If cookies are not available, a session
To disable cookies, set sessionState coc

InProc
SQLServer (http://support.microsoft.com/
StateServer
-->
<sessionState mode="InProc" stateConnectionStr
```

You are advised to configure the Gemini web application to use an out-of-session state provider (either SQL or State Server). This will ensure that user sessions are not lost when the ASPNET Worker Process is recycled.

### 3.20 File Upload Size Limit (WEB.CONFIG)

```
<!-- File Upload Settings -->
<httpRuntime executionTimeout="90" maxRequestLength="4096"
```

This setting controls the maximum permitted file size for files that are being attached to issues and comments within Gemini. Default is 4MB.

### 3.21 SMTP Configuration

All SMTP configuration settings are now specified under Home → Administration → SMTP Configuration section.

#### SMTP Configuration

|                                |   |
|--------------------------------|---|
| SMTP Server:                   | <input type="text"/>                          |
|                                | <small>Specify SMTP server name or IP</small> |
| SMTP Server Port:              | <input type="text" value="465"/>              |
| POP3 Before SMTP Send:         | <input type="text" value="No"/> ▼             |
| SMTP Authentication Mode:      | <input type="text" value="Auto"/> ▼           |
| SMTP Authentication Username:  | <input type="text"/>                          |
| SMTP Authentication Password:  | <input type="text"/>                          |
| SMTP SSL:                      | <input type="text" value="Yes"/> ▼            |
| SMTP SSL Protocol:             | <input type="text" value="Auto"/> ▼           |
| SMTP Encoding Type:            | <input type="text" value="UTF8"/> ▼           |
| SMTP Service Verbose Logging:  | <input type="text" value="No"/> ▼             |
| Interval specified in minutes: | <input type="text" value="1"/>                |
|                                | <small>Interval specified in minutes</small>  |

The source code for the Gemini Scheduler Windows Service (optional component #4) is available to Commercial License holders for further customisation.

See <http://community.countersoft.com/forums/thread/5015.aspx> for latest SMTP information.

See the Gemini Installation Guide for troubleshooting SMTP.

### 3.22 Notification Engine Configuration

If you have installed the optional Gemini Scheduler Windows Service component then Gemini by default will utilize it. However, if you cannot use/install a Windows Service, then the fallback mode is to use the in-built Mail Plug-in.

The screenshot shows the 'Global Settings' page in the Gemini Project Issue Tracking application. On the left, a navigation menu lists various settings categories: Global Settings, Security Settings, Issue Settings, and System Information. The 'Notifications' option under 'Global Settings' is circled in red. The main content area is titled 'Global Settings' and contains a 'Notifications' section. This section includes several configuration options: 'Email Issue Creator' (set to 'No'), 'Email Issue Resource' (set to 'No'), 'Email Alerts Enabled' (set to 'Yes'), and 'Email Alert Engine' (set to 'SchedulerService'). A dropdown menu for 'Email Alert Engine' is open, showing 'SchedulerService' and 'MailPlugin' as options, with a red circle around it. Below these options is the 'From Email Address' field, which is also circled in red. A 'Save' button is located at the bottom right of the configuration area.

### 3.23 Single Sign-on - SSO Credential Encryption

You can specify the method used to send security credentials to Gemini to enable Single Sign-On capabilities.

The following parameters must be passed to the SSO.ASPX page, which is under the security directory.

| Parameter | Description |
|-----------|-------------|
| U         | Username    |
| P         | Password    |

The user name and password is then authenticated against the Gemini database. These parameters can be sent in clear text or encrypted. You can find this setting in the “Security -> General” section of the administration page.

### 3.24 Session Refresh Interval – Keep Session Alive

By default, user sessions in ASP.NET will expire if no user activity is detected. This setting can be used to ensure that user sessions are kept alive automatically.

If you set this setting to 0, then sessions will not be kept alive and will expire.

This setting is specified in seconds. You can find this setting in the “Global -> General” section of the administration page.

## 4. Gemini Concepts

Gemini provides a browser-based, project-centric approach for logging and viewing issues. Access to the system can be secured or open dependent upon your requirements.

### 4.1 Projects

Gemini is based upon projects. A project is a logical container designed to hold components, versions, resources and issues.

Each project has multiple versions. A version is a specific release or build of a project.

Each project has multiple components. A component is a discrete part of a project. A component could be a software module or non-software such as documentation.

Each project has one or more resources who are assigned to work on the project. A resource is a user within Gemini. A resource can work on multiple projects.

### 4.2 Issues

An issue is associated to a single project.

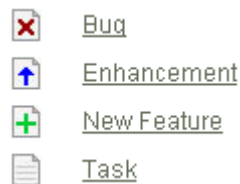
An issue is also associated to a single component within the project – the component to which the issue relates to.

An issue can also belong to a single version – the version in which the issue will be addressed.

Several key attributes of an issue that explained in the proceeding sections.

#### 4.2.1 Type

Issue types allow for classification of an issue. By default, there are four types of issues:



Each issue must have an issue type. The types themselves can be customised as per requirements – see Customisation section.

### 4.2.2 Priority

Issue priority allows for an issue to be graded by urgency. By default, there are four types of priority:

-  [Major](#)
-  [Minor](#)
-  [Show Stopper](#)
-  [Trivial](#)

Each issue must have an issue priority. The priorities themselves can be customised as per requirements – see Customisation section.

### 4.2.3 Status

Issue status is used to specify and identify the current status of an issue:

| Status      | Description  |
|-------------|--|
| Unassigned  | The issue has not been assigned a resource and is lacking progress.          |
| Assigned    | The issue has been assigned to a resource but work has not commenced.        |
| In Progress | The issue has been resourced and work has commenced.                         |
| Closed      | The issue has been closed. No more work will be performed against the issue. |
| Reopened    | The issue has been reopened and work is in progress.                         |

The status values themselves can be customised as per requirements – see Customisation section.

### 4.2.4 Status Transition

Generally speaking, an issue will change status over time. Gemini provides the ability to define pre and post status values relative to an issue status. By default, the following issue status transition logic is provided:

| <u>Valid Pre States</u> | <u>Issue Status</u> | <u>Valid Post States</u> |
|-------------------------|---------------------|--------------------------|
| -                       | Unassigned          | Assigned, In Progress    |
| Unassigned              | Assigned            | In Progress, Closed      |
| Unassigned, Assigned    | In Progress         | Closed                   |
| In Progress, Reopened   | Closed              | -                        |
| -                       | Reopened            | In Progress, Closed      |

The status transition logic can be customised as per requirements – see Customisation section.

### 4.2.5 Resolution

Issue resolution signifies the current and final outcome of an issue:

| Resolution       | Description                        |
|------------------|------------------------------------|
| Unresolved       | The issue has yet to be completed. |
| Won't Fix        | The issue will not be addressed.   |
| Duplicate        | The issue is a duplicate.          |
| Cannot Reproduce | The issue cannot be replicated.    |
| Complete         | The issue has been completed.      |

#### 4.2.6 Risk Level

A risk level indicates the anticipated risk level for the issue. A risk level indicates the potential risk in changing the system based upon the issue.

| Risk Level | Description  |
|------------|--|
| No Risk    | There is no impact on the project if the issue is rectified.         |
| Low        | There is a minor risk associated with implementing the issue.        |
| Medium     | There is a cause for concern associated with implementing the issue. |
| High       | There is a high risk associated with implementing the issue.         |

#### 4.2.7 Resource Assignment

Each issue will require a resource assignment in order for the issue to be worked upon. Only resources assigned to the project can be assigned to issues for that project.

Resources assigned to the project are active by default – they are able to work on project issues. Users that have not been assigned as resources to a project cannot work on issues for that project. A resource can also be deactivated for a project. Deactivated resources cannot be assigned any issues but can continue to work upon any issues already assigned to them.

#### 4.2.8 Work Estimates & Time Tracking

Each issue can be given the estimated effort in days/hours/minutes required to complete the issue.

Resources working upon an issue and issue administrators can log time spent against an issue.

#### 4.2.9 Issue Visibility

Each issue and issue comment can be given either public or private visibility. Private issues and issue comments are only visible by users who have the user role of “View Private Issues”. This provides the ability to “hide” issues and issue comments from certain groups of user.

## 5. Using Gemini

This section describes the various topics that will be encountered whilst using Gemini.

### 5.1 Project Management

When creating new projects the following key steps should be performed:

```

Create Project →
  Assign Resources →
    Create Components →
      Create Versions →
        Define Custom Fields (optional)
        Define Project Attributes (optional)
        Define Version Attributes (optional)
  
```

The above steps ensure that your project is setup correctly and ready to accept issues.

You can optionally assign a default security scheme to a project which will enable new created to be assigned default rights within a given project (i.e. new users automatically receive the right to create issues).

#### 5.1.1 Project Maintenance

Home Administration

Global Settings  
 General  
 Licensing  
 Notifications  
 Projects

Each project has the following attributes:

| Attribute   | Description  |
|-------------|--|
| Code        | A code that can be up to four letters in length. The code is prefixed against each issue within the project.   |
| Name        | A single line name/title for the project.  |
| Description | A multi-line description for the project.  |
| Locked      | A “switch” that can be used to lock a project. A locked project cannot accept any more issues.   |
| Archived    | A “switch” that will remove the project from the home page and any project selection box. An archived project is a locked project that is no longer in use but the details are still kept in the database. |

Project creation, editing and deletion can be performed by users who have been classified as Gemini Administrators.

When creating new projects existing projects can be used as templates:

Optionally, use existing project as template:

Preserve:

- Resources
- Components
- Versions
- Custom Fields
- Attributes

Deleting a project will remove all components, version and issues associated with the project.


## 5.2 Project Home Page

The project home page acts as a project dashboard detailing all open issues by components, versions, resources, status, type and priority.

Component, version and resource management options are accessible from the project administration page. Furthermore, default project security scheme and project/version attributes can also be defined from the project administration page.

### 5.2.1 Project Attributes

Each project can be given custom data attributes (e.g. download link, contact information, current version, etc.).

| Gemini - GEM  |   |
|---|---|
| <b>Website</b>  | <a href="http://www.countersoft.com">http://www.countersoft.com</a> |
| <b>Team Lead</b>  | <a href="#">Fred Bloggs</a>   |
| <b>Documentation URL</b>  | <a href="#">Gemini PDF</a>  |
| <b>Current version</b>  | 1.9.1   |
| <b>Type</b>   |   |
|  <a href="#">New Feature</a> | 102   |
| <b>Components</b>   |   |
| <a href="#">Administration</a>  |   |

This feature is accessed by clicking on the Project Attributes link on the project administration page. This feature is only available to users who are given the Project Administrator role.

## 5.2.2 Components

### Component Maintenance

Create, edit and delete components for this project.  
Locked components cannot have any more issues assigned against them.

[Create component](#) for this project

| ID | Name           | Description                       |
|----|----------------|-----------------------------------|
| 14 | Administration | Administration and maintenance of |
| 44 | Business Logic | Business Logic                    |
| 20 | Custom Fields  | Custom fields                     |
| 7  | Database       | Gemini SQL Database               |

Many components can belong to a single project. Components can be added, edited and removed from a project. Each component has the following attributes:

| Attribute   | Description   |
|-------------|---|
| Name        | The component name.   |
| Description | The component description.  |
| Locked      | A “switch” that can be used to lock a component. A locked component cannot be linked to any new issues. |

At least one component must exist before issues can be created.

## 5.2.3 Versions

### Version Maintenance

Create, edit and delete Versions.  
Multiple versions can be assigned to a Project.  
A Version can be archived -- not visible on-screen.

[Create version](#) for this project

| ID | Version Number | Version Name  | Description       |
|----|----------------|---------------|-------------------|
| 4  | 1.1            | 1.1 Release   | Released 13/11/03 |
| 5  | 1.2            | 1.2 Release   | 1.2 Release       |
| 6  | 1.2.1          | 1.2.1 Release | Hotfix!           |

Many versions can belong to a single project. Versions can be added, edited and removed from a project. Each version has the following attributes:




| Attribute   | Description   |
|-------------|---|
| Number      | The version number – can be numeric or alpha.                 |
| Name        | A single-line name for the version.                           |
| Description | A multi-line description for the version.                     |
| Released    | A “switch” that controls whether a version has been released. |
| Archived    | A “switch” that controls whether a version is obsolete.       |

Versions can be ordered in a sequential order of your choosing using the “Move Up” and “Move Down” links against each version. The version order determines the order in which versions appear in dropdown lists, road map and change log screens.

Released versions appear on the project change log. Not-released versions appear on the project road map.

#### 5.2.4 Version Attributes

Each project can define custom data attributes for versions (e.g. download link, contact information, release date, etc.). Version attributes can be viewed by clicking on the information icon next to version names:

| Versions  |     |
|---|-----|
|  * <a href="#">Unscheduled</a> * | 131 |
|  <a href="#">2.0</a>             | 10  |
|  <a href="#">2.1</a>             | 15  |

Clicking on the information icon will display version attribute data:

| Version Information: 2.0 |   |
|--------------------------|---|
| Release Date             | August 2005   |
| QA Manager               | TBC   |
| Beta Location            | <a href="http://beta.countersoft.com/">http://beta.countersoft.com/</a> |

Version attributes and their default values are defined by clicking on the Version Attributes link on the project home page. This feature is only available to users who are given the Project Administrator role.

Each version can override the default value assigned to a version attribute. This feature is available from the Versions maintenance screen:

| Description       |  |
|-------------------|--|
| Released 13/11/03 | <input checked="" type="checkbox"/> Released <input checked="" type="checkbox"/> Archived <a href="#">Edit</a> <a href="#">Attributes</a>                    |
| 1.2 Release       | <input checked="" type="checkbox"/> Released <input checked="" type="checkbox"/> Archived <a href="#">Edit</a> <a href="#">Attributes</a> <a href="#">Di</a> |

## 5.2.5 Resources

**Project Resourcing**

Add, remove resources to this project

| Assigned Resources |           |  |   | Available Resources |           |                        |
|--------------------|-----------|--|---|---------------------|-----------|------------------------|
| Full Name          | User Name |  |   | Full Name           | User Name |                        |
| David Jones        | David     | <input checked="" type="checkbox"/> Active | <a href="#">Edit</a> <a href="#">Remove</a> | * Anonymous User *  | anon      | <a href="#">Assign</a> |
| John O'Shea        | x         | <input checked="" type="checkbox"/> Active | <a href="#">Edit</a> <a href="#">Remove</a> | Bob Green           | Bob       | <a href="#">Assign</a> |
| Jon Smith          | admin     | <input checked="" type="checkbox"/> Active | <a href="#">Edit</a> <a href="#">Remove</a> | Fred Brown          | Fred      | <a href="#">Assign</a> |
| Nick Connors       | Nick      | <input checked="" type="checkbox"/> Active | <a href="#">Edit</a> <a href="#">Remove</a> | Jane Furlong        | Jane      | <a href="#">Assign</a> |
| Sue White          | Sue       | <input checked="" type="checkbox"/> Active | <a href="#">Edit</a> <a href="#">Remove</a> | Paul Davis          | Paul      | <a href="#">Assign</a> |

Gemini users can be resourced to work on projects. One user can belong to many projects.

Resources can be added and removed from the project as and when required.

A resource assigned to a project can be de-activated. Such a resource cannot be assigned any new issues.

When a resource is removed from a project, any issues assigned to the resource will be marked as “Unassigned” (as opposed to being assigned to the resource).

The “Anonymous User” is a system user that is used to define actions and privileges for unauthenticated users. Typically, the unauthenticated users should not be resourced to any projects.

## 5.2.6 Road Map

Project Road Map

|                    | Component           | Issue Type  | Issue ID                | Summary                                      | Resource       |
|--------------------|---------------------|-------------|-------------------------|--|----------------|
| <b>1.8 Release</b> | Administration      | New Feature | <a href="#">GEM-40</a>  | Project templates                            | Lead Developer |
|                    | Administration      | New Feature | <a href="#">GEM-53</a>  | Public and Private Issues                    | Lead Developer |
|                    | Administration      | New Feature | <a href="#">GEM-55</a>  | Project Cost Codes                           | Lead Developer |
|                    | Administration      | New Feature | <a href="#">GEM-143</a> | Automatic create issue role for all projects | Lead Developer |
|                    | Custom Fields       | Enhancement | <a href="#">GEM-146</a> | Lookup table in another database             | Lead Developer |
|                    | Email Alerts        | Enhancement | <a href="#">GEM-112</a> | Expose Change Log to Email Templates         | Lead Developer |
|                    | Email Alerts        | New Feature | <a href="#">GEM-86</a>  | SMTP authentication support                  | Lead Developer |
|                    | Filters & Searching | Enhancement | <a href="#">GEM-113</a> | Issues List Sortation & Paging Enhancements  | Lead Developer |
|                    | Filters & Searching | New Feature | <a href="#">GEM-117</a> | New Filter: Issue Aging                      | Lead Developer |
|                    | Filters & Searching | New Feature | <a href="#">GEM-76</a>  | Issue Filtering: Show comments in-line       | Lead Developer |
|                    | Import/Export       | New Feature | <a href="#">GEM-122</a> | Get Issues from .NET Assembly                | Lead Developer |
|                    | Import/Export       | New Feature | <a href="#">GEM-142</a> | RSS data feed                                | Lead Developer |

The primary purpose of the project road map is to show exactly what issues are scheduled to be addressed for each unreleased version of a project.

If a project has no unreleased versions, then no issues will be displayed on the project road map.

## 5.2.7 Change Log

|                    |                              |             |                         |   |
|--------------------|------------------------------|-------------|-------------------------|---|
| <b>1.6 Release</b> | Filters & Searching          | Bug         | <a href="#">GEM-94</a>  | Closed issue do not display from Project Home page              |
|                    | Filters & Searching          | Enhancement | <a href="#">GEM-91</a>  | Add due date to My Work   |
|                    | Filters & Searching          | Enhancement | <a href="#">GEM-93</a>  | Retain issue filter when editing issue                          |
|                    | Installation & Configuration | Enhancement | <a href="#">GEM-104</a> | Support for out-of-process sessions                             |
|                    | Security                     | New Feature | <a href="#">GEM-74</a>  | Implementation of anonymous access?                             |
|                    | User Interface               | Bug         | <a href="#">GEM-95</a>  | Attachment filenames do not always appear                       |
|                    | User Interface               | Bug         | <a href="#">GEM-102</a> | User rights not displayed correctly for first user in list      |
|                    | User Interface               | Enhancement | <a href="#">GEM-103</a> | Disable HTML autocomplete                                       |
|                    | User Interface               | New Feature | <a href="#">GEM-84</a>  | Remember me login option  |
|                    | User Interface               | New Feature | <a href="#">GEM-32</a>  | Support for user defined data                                   |
|                    | Workflow                     | Bug         | <a href="#">GEM-92</a>  | My Work issue click-throughs do not inherit project user rights |
|                    | Workflow                     | Bug         | <a href="#">GEM-105</a> | Current Project does not follow current issue                   |
|                    | Workflow                     | Bug         | <a href="#">GEM-81</a>  | Prevent issue creation when project has not been setup          |
|                    | Workflow                     | New Feature | <a href="#">GEM-41</a>  | Issue linking   |
| <b>1.5 Release</b> | Email Alerts                 | Bug         | <a href="#">GEM-67</a>  | Email not automatically sent to assignee                        |
|                    | Email Alerts                 | Enhancement | <a href="#">GEM-75</a>  | Replace alerts service with mail plug-in                        |
|                    | Email Alerts                 | Enhancement | <a href="#">GEM-79</a>  | Template driven email subject line                              |
|                    | Email Alerts                 | Enhancement | <a href="#">GEM-66</a>  | Enable HTML formatted email alerts                              |
|                    | Events & Listeners           | New Feature | <a href="#">GEM-34</a>  | Implement event handling model                                  |

The primary purpose of the project change log is to show exactly what issues have been addressed for each released version of a project.

If a project has no released versions, then no issues will be displayed on the project change log.

## 5.2.8 Custom Fields

Custom fields allow for the capture of additional data against an issue. Custom fields are specified on a per project basis.

Custom fields can be added via the "Custom field maintenance" link on the Project administration Page.

Gemini supports the following types of custom fields:

| Attribute     | Description  |
|---------------|--|
| Textbox       | A single line or multi-line text box with regular expressions validation |
| Dropdown List | A dropdown list box  |
| List box      | A single or multi-select list box  |

The following table describes the input parameters required to define custom fields:

| Parameter                     | Description   |
|-------------------------------|---|
| Custom field name             | Name used to describe the custom field.   |
| Custom field type             | Textbox, dropdown list or list box.   |
| Screen order                  | A numeric value that is used to determine where the custom field appears on-screen (relative to other custom fields).   |
| Screen label                  | The text that is displayed on-screen to users.  |
| Screen tool tip               | The tool tip text for the field that is shown when the mouse hovers over the screen label.  |
| Maximum length                | The maximum length of the field input in characters – only applies to textbox field types.  |
| Number of columns             | The number of columns to display for textbox field types.   |
| Number of rows                | The number of rows to display for either a textbox or list box field type – more than 1 row results in a multiple lines being displayed.  |
| Required field                | Determines whether a textbox field type requires mandatory input.   |
| Regular expression            | Optional regular expression use to validate input for textbox field types.  |
| Default field value           | The default value for the custom field.   |
| Can multi-select              | Determines whether a user can select multiple items in a list box field type.   |
| Lookup table name             | Specifies the SQL table/view to be used to populate either a dropdown list or list box.<br>By default Gemini assumes the lookup table will be in the Gemini SQL database. You can however specify a different database as follows<br>"OTHER_DB_NAME].[MY_LOOKUP_TABLE". |
| Lookup key field name         | Specifies the key field name within the lookup table (value field).   |
| Lookup description field name | Specifies the description field name within the lookup table (description field).   |
| Lookup sort field name        | Specifies the order of item in the list / combo box. If left blank it will be defaulted to the description field.   |
| Is visible on issue create    | Determines whether the custom field is visible to users during issue creation.  |
| Is visible on issue edit      | Determines whether the custom field is visible to users during issue editing.   |
| Is visible on issue view      | Determines whether the custom field is visible to users when viewing an issue.  |

The dropdown list and list box field types are data-driven – the contents of such fields are derived from a SQL table/view. When defining such fields, ensure the following:

- Ensure that a SQL table or view wish to use to populate your custom Dropdown list or list box exists.
- Ensure that the SQL table or view contains two fields: one "code" field and one "description" field.
- Use simple data types for the "code" and "description" fields (VARCHAR, NUMERIC, CHAR, etc.).

A sample table to populate a custom dropdown or list box field would be as follows:

| MyCodeField | MyDescriptionField |
|-------------|--------------------|
| 1           | Red                |
| 2           | Blue               |
| 3           | Green              |

When first experimenting with dropdown or list box custom fields, you are advised to use the Components SQL table (that ships with Gemini) and specify the following parameters when creating the new custom field:

| Parameter                     | Value      |
|-------------------------------|------------|
| Lookup table name             | Components |
| Lookup key field name         | CompID     |
| Lookup description field name | CompName   |

Lookup tables should be present within the Gemini SQL database.

**Note** Please ensure that custom fields do not contain "<>" symbols as these are problematic to the ASPNET Validate Request logic – this logic checks for potentially dangerous requests that could be used for cross-site scripting attacks.

### 5.2.9 Security Scheme

Each project can be assigned a default security scheme which can be used to control which privileges new users inherit by default.

#### Project Security Scheme

This screen enables a default security scheme for the project. All users who have not explicitly been assigned a security scheme will automatically inherit the default project security scheme.

<No Scheme>

Issue Administration

Issue Creator

Issue Worker

No Access

Project Administration

Viewer

### 5.2.10 Project Repository

Each project has a dedicated file repository to which administrators can upload files. All users have read-only access to the repository.



### 5.2.11 Time Tracking

Users with appropriate user rights can view time reports on a per project basis:

[Email Alerts](#) [Repository](#) [Time Report](#) [Project Administration](#)

For a given date range, the report details how much time was spent by each of the project resources.

#### ACME System - Time Report

**Date Range**

Start Date

End Date

| Resource                     | Total Time (HH:MM) | Days | Hours | Minutes |
|------------------------------|--------------------|------|-------|---------|
| <a href="#">David Jones</a>  | 0:0                | 0    | 0     | 0       |
| <a href="#">John O'Shea</a>  | 0:0                | 0    | 0     | 0       |
| <a href="#">Jon Smith</a>    | 9:30               | 1    | 2     | 0       |
| <a href="#">Nick Connors</a> | 0:0                | 0    | 0     | 0       |
| <a href="#">Sue White</a>    | 0:0                | 0    | 0     | 0       |

Clicking a resource name will provide a time report for the individual listing all the issues where time has been logged:

#### ACME System - Jon Smith Time Report

**Date Range**

Start Date

End Date

| Issue  | Total Time (HH:MM) | Days | Hours | Minutes |
|--|--------------------|------|-------|---------|
| <a href="#">ACME -11</a> Main Attachment         | 8:30               | 1    | 1     | 0       |
| <a href="#">ACME -12</a> Another reporting issue | 1:0                | 0    | 1     | 0       |

### 5.2.12 Cross-Project Issue Reporting

Issues can be filtered and viewed from across multiple projects using the link highlighted below. This link exists on the Gemini home page.

|  |
|--|
| <a href="#">All projects issue reporting</a>   |
| <b>Intranet (111)</b>  |
| Corporate intranet development.  |
| <a href="#">Home</a>   <a href="#">Road Map</a>   <a href="#">Change Log</a>   <a href="#">Create Issue</a> <a href="#">All Issues</a> |
| <b>Accounting System (ACT)</b>   |
| Accounting & payroll systems.  |
| <a href="#">Home</a>   <a href="#">Road Map</a>   <a href="#">Change Log</a>   <a href="#">Create Issue</a> <a href="#">All Issues</a> |
| <b>Test (TST)</b>  |
| This is a test project   |
| <a href="#">Home</a>   <a href="#">Road Map</a>   <a href="#">Change Log</a>   <a href="#">Create Issue</a> <a href="#">All Issues</a> |

## 5.3 Issue Management

### 5.3.1 Creating

The Create Issue link is used to create new issues:

### Create New Issue

Provide information to create a new issue

**Component Affected:**   
Data Loader  
**User Interface Design**  
UI design issues

**Issue Title:**

**Detailed Description:**

ABC **B** *I* U ↶ ↷

Font Name Size Apply CSS Class Custom Links

Words: 0 Characters: 0

**Issue Visibility:**

**Issue Type:**

Each new issue must be assigned to a component. The issue title is a mandatory field and should be used to describe the issue in a single line. The issue description is a multi-line text entry used to describe in detail the issue. Issue type and priority should also be set as required. The “Fixed in Version” parameter can be used to indicate in which release the issue should be fixed or addressed.

The “Assigned To” parameter will be visible dependent upon user role. This parameter is used to specify which project resource should work on the issue.

Optionally, a file can be attached to the issue. Any attachment with an issue will be accessible to all users who view the issue. By default, the size of file attachments is limited to 4MB (this setting is configurable).

Any project custom fields will also appear on the “Create New Issue” form. Custom fields will appear before the attachment parameter.

A user who creates an issue is automatically sent email alerts whenever the issue is changed. A user who is assigned to work on an issue is also automatically sent email alerts. Both these behaviours are configurable.

### 5.3.2 Issues List

There are several locations within Gemini that provide “view all issues” links. Clicking on such links will result in the issues list being displayed:

**Gemini**  
[ [Road Map](#) | [Change Log](#) ]

1-30 out of 56 (sorted by Revised descending) [Gantt](#) [Excel](#)

| ID                      | Type | Priority | Component                    | Summary                                     | Assigned To    | Status   | Resolution |
|-------------------------|------|----------|------------------------------|---|----------------|----------|------------|
| <a href="#">GEM-150</a> |      |          | User Interface               | Road Map Enhancements                       | Lead Developer | Assigned | Unresolved |
| <a href="#">GEM-117</a> |      |          | Filters & Searching          | New Filter: Issue Aging                     | Lead Developer | Assigned | Unresolved |
| <a href="#">GEM-128</a> |      |          | User Interface               | Issues List Customisation                   | Lead Developer | Assigned | Unresolved |
| <a href="#">GEM-141</a> |      |          | Installation & Configuration | Premature Session Termination               | Lead Developer | Assigned | Unresolved |
| <a href="#">GEM-113</a> |      |          | Filters & Searching          | Issues List Sortation & Paging Enhancements | Lead Developer | Assigned | Unresolved |
| <a href="#">GEM-148</a> |      |          | User Interface               | Associate RETURN key with Find Issue box    | Lead Developer | Assigned | Unresolved |
| <a href="#">GEM-139</a> |      |          | Security                     | DotNetNuke Single Sign-on                   | Lead Developer | Assigned | Unresolved |

This summary list of issues displays key information for each issue. Clicking on an Issue ID (highlighted in the above screenshot) enables the issue to be viewed.

Users with sufficient privileges within the project will also see an “Edit” column on the far right:

[Gantt](#) [Excel](#) [Print Friendly](#) [Summary Report](#)

| Summary                                     | Assigned To    | Status   | Resolution | Start Date | Due Date | Revised    |                      |
|---|----------------|----------|------------|------------|----------|------------|----------------------|
| Road Map Enhancements                       | Lead Developer | Assigned | Unresolved |            |          | 16/07/2004 | <a href="#">Edit</a> |
| New Filter: Issue Aging                     | Lead Developer | Assigned | Unresolved |            |          | 14/07/2004 | <a href="#">Edit</a> |
| Issues List Customisation                   | Lead Developer | Assigned | Unresolved |            |          | 14/07/2004 | <a href="#">Edit</a> |
| Premature Session Termination               | Lead Developer | Assigned | Unresolved |            |          | 14/07/2004 | <a href="#">Edit</a> |
| Issues List Sortation & Paging Enhancements | Lead Developer | Assigned | Unresolved |            |          | 14/07/2004 | <a href="#">Edit</a> |
| Associate RETURN key with Find Issue box    | Lead Developer | Assigned | Unresolved |            |          | 07/07/2004 | <a href="#">Edit</a> |
| DotNetNuke Single Sign-on                   | Lead Developer | Assigned | Unresolved |            |          | 03/07/2004 | <a href="#">Edit</a> |

Clicking on the “Edit” link enables users to quickly edit an issue.

### 5.3.3 Viewing an Issue

The below screenshot is a typical view of an issue:

#### Cras dignissim tortor ut nunc

Created: 24/12/2004 15:50:20    Revised:24/12/2004 15:53:20

**Description** [\[Update\]](#)

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Cras lacinia elit ac mauris. Nam nulla turpis, posuere sed, sagittis sed, vulputate nec, wisi. Mauris quis lacus a nisl mattis egestas. Etiam luctus, nunc in consectetur tempor, wisi erat porta nisl, at commodo sem metus a justo. Duis vel magna. Aenean vel est at ligula tristique tincidunt. Etiam nec felis. Vestibulum ullamcorper risus quis arcu. Maecenas ornare bibendum mi. Vestibulum mauris dui, convallis in, viverra eget, sagittis eget, wisi. Curabitur nec est ac sapien euismod laoreet. Curabitur dapibus arcu tempor ante.

Pellentesque aliquet commodo libero. Etiam semper. Donec nulla lectus, hendrerit id, rutrum ut, posuere quis, metus. Etiam arcu justo, aliquam eget, rhoncus et, condimentum eget, felis. Mauris in libero. Nam iaculis elementum massa. Nam eros. Morbi fermentum. Mauris tincidunt turpis ac turpis. Fusce tincidunt. Proin sit amet purus. Suspendisse potenti. Sed accumsan neque non massa. Donec malesuada convallis mauris. Phasellus ultricies sodales sem. Nullam tincidunt pede vel quam. In porttitor, risus nec volutpat pulvinar, tellus felis mollis odio, tempor malesuada libero dui quis enim. Donec in leo ac neque facilisis egestas. Mauris aliquam turpis eu enim.

**Additional Information**

Reference Number

**Issue Links** [\[Link\]](#)

*Related*   ← ACME-14    Suspendisse eu lorem   Unassigned 

**Comments** [\[Comment\]](#)

Jon Smith   24/12/2004   [\[Edit\]](#)   [\[Delete\]](#)

In orci justo, venenatis quis, placerat eu, condimentum nec, magna. Aliquam erat volutpat. Sed lectus arcu, dapibus et, porttitor sed, ultrices nec, risus. Suspendisse porttitor. Quisque rutrum erat nec neque. Fusce malesuada. Quisque suscipit elit sed elit. Pellentesque nunc.

Issue attributes are also visible when viewing an issue. Action links are also present when viewing an issue. The types of actions available are dependent upon the user's privileges.

| <b>Issue Details</b> <a href="#">[Edit]</a> <a href="#">[Move]</a> <a href="#">[Delete]</a> |   |
|---|---|
| Issue ID  | <b>ACME-13</b>  |
| Type  |  New Feature                       |
| Priority  |  Trivial                           |
| Visibility  | Public  |
| Assigned to   | Nick Conners  |
| Reported by   | Jon Smith   |
| Component   | Reporting   |
| Fixed in Version  | 2.0   |
| Risk Level  | No Risk   |
| Status  | Unassigned  <a href="#">Update</a> |
| Resolution  | Unresolved  |

| <b>Time</b> <a href="#">[Log]</a> |          |
|-----------------------------------|----------|
| Start Date                        | ?        |
| Due Date                          | ?        |
| Estimated                         | 0d 0h 0m |
| Logged                            | 0d 0h 0m |
| Time Left                         | 0d 0h 0m |

- [View](#) issue history
- [Print](#) view
- [Watch](#) this issue
- [Add](#) Source Control file association

### 5.3.4 Editing

Users can change issue attributes by clicking on the “Edit” link:

**Update Issue TST1-1**

Edit the issue

|                   |   |
|-------------------|---|
| <b>Title</b>      | <input type="text" value="Broken primary key"/> |
| <b>Visibility</b> | <input type="text" value="Public"/> ▼           |

**Assignment**

|                          |  |
|--------------------------|--|
| <b>Assigned To</b>       | <input type="text" value="Harvey Kandola"/>  |
| <b>Fixed For Version</b> | <input type="text" value="2.0"/> ▼   |
| <b>Affected Versions</b> | <input type="text" value="1.0"/><br><input type="text" value="2.0"/>   |
| <b>Component</b>         | <input type="text" value="Data Access Layer"/><br><input type="text" value="Data Loader"/><br><input type="text" value="User Interface Design"/> |
|                          | <small>My data loader</small>  |
| <b>Risk Level</b>        | <input type="text" value="No Risk"/> ▼   |

**Detail**

|                   |  |
|-------------------|--|
| <b>Type</b>       | <input type="text" value="New Feature"/> ▼ |
| <b>Priority</b>   | <input type="text" value="Minor"/> ▼       |
| <b>Status</b>     | <input type="text" value="In Progress"/> ▼ |
| <b>Resolution</b> | <input type="text" value="Unresolved"/> ▼  |

**Dates**

|                   |                               |
|-------------------|-------------------------------|
| <b>Start Date</b> | <input type="text" value=""/> |
|-------------------|-------------------------------|

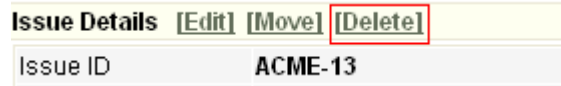
Custom fields are also displayed for editing purposes:

**Additional Information**

|                         |                                     |
|-------------------------|-------------------------------------|
| <b>Reference Number</b> | <input type="text" value="ABC123"/> |
|-------------------------|-------------------------------------|

### 5.3.5 Deleting

When viewing an issue, the “Delete” issue action can be used to permanently remove an issue from a project. All issue data, comments, attachments, history and custom field data will be removed from Gemini.



### 5.3.6 Linking

An issue can be linked to many other issues and links can be created across projects. In order to link an issue, view the issue and click on the “Link” action.



The following screenshot shows the parameters required in order to create an issue link:

 A screenshot of the 'Link Issue' form in the Gemini Project Issue Tracking system. The form has a light green header with the title 'Link Issue' and the instruction 'Link this issue to another issue'. The form contains the following fields:
 

- Link Type:** A dropdown menu with 'Duplicate' selected.
- Issue ID:** A text input field with a 'Find' button to its right.
- Link Direction:** A dropdown menu with 'Inbound' selected, followed by the text '(relative to this issue)'.
- Comment (Optional):** A large text area for entering a comment.

The following two issue linking concepts should be understood before attempting to create issue links:

#### Link Type

A link type is a categorisation used to determine the reason for linking an issue. By default the following link types are provided:

| Link Type | Description  |
|-----------|--|
| Duplicate | Specifies that two or more issues are duplicates of each other |
| Grouped   | Specifies that two or more issues are grouped together         |
| Related   | Specifies that two or more issues are related                  |

Issue link types can be created and maintained via the System Admin menu option.

#### Link Direction

When creating an issue link, the link direction can be specified in order to state the link flow between two issues. Link direction helps users establish parent/child relationship between linked issues.

Two link type values are supported: Inbound and Outbound.

### 5.3.7 Moving

An issue can be moved between projects.

|                      |                        |                        |                          |
|----------------------|------------------------|------------------------|--------------------------|
| <b>Issue Details</b> | <a href="#">[Edit]</a> | <a href="#">[Move]</a> | <a href="#">[Delete]</a> |
| Issue ID             | ACME-13                |                        |                          |

The following parameters must be configured before an issue can be moved:

#### Move Issue

Move this issue to another project

Issue ID

Project

Component

Reported By

Issue History  Keep intact  Reset

Note: Any custom field data for this issue will be lost after the move.

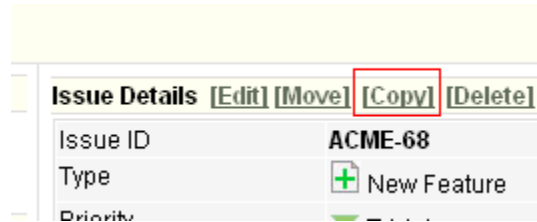
The Issue ID cannot be changed. The issue can be moved to any other Gemini project. The issue being moved must be assigned a component from the target project. Furthermore, the issue reported can be changed where necessary.

Issue history data can either be preserved or removed during the issue move.

**Note** Custom data is not preserved during an issue move.

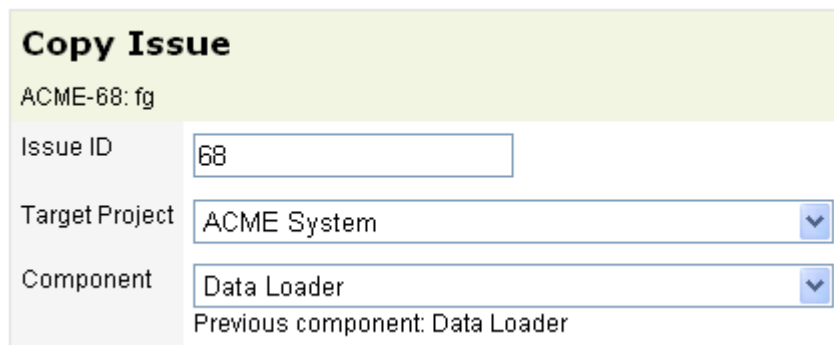
### 5.3.8 Copying

An issue can be copied to other projects.



| Issue Details |               |
|---------------|---------------|
| Issue ID      | ACME-68       |
| Type          | + New Feature |
| Priority      | ...           |

The target project and component must be selected prior to copying an issue:



**Copy Issue**

ACME-68: fg

|                |  |
|----------------|--|
| Issue ID       | <input type="text" value="68"/>          |
| Target Project | <input type="text" value="ACME System"/> |
| Component      | <input type="text" value="Data Loader"/> |

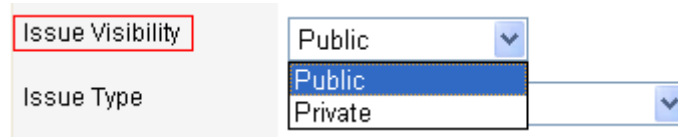
Previous component: Data Loader

The Issue ID cannot be changed. The issue can be moved to any other Gemini project. The issue being moved must be assigned a component from the target project. Furthermore, the issue reported can be changed where necessary.

Issue comments and history are kept intact. Custom field values are maintained if the issue is copied within the same project.

### 5.3.9 Issue Visibility

Each issue and issue comment can be given either public or private visibility. Private issues and issue comments are only visible by users who have the user role of “View Private Issues”. This provides the ability to “hide” issues and issue comments from certain groups of user.

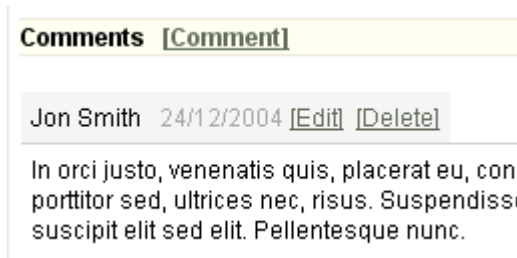


The image shows two dropdown menus. The first menu is labeled "Issue Visibility" and has "Public" selected. The second menu is labeled "Issue Type" and has "Public" selected, with "Private" also visible in the dropdown list.

### 5.3.10 Comments

Multiple comments can be recorded against an issue. Each comment can have a single attachment and its visibility can be specified (public or private).

Comments can be edited (text or attachment) as well as deleted.



The image shows a comment entry in a table. The header is "Comments [Comment]". The entry is by "Jon Smith" on "24/12/2004" and includes links for "[Edit]" and "[Delete]". The comment text is: "In orci justo, venenatis quis, placerat eu, con porttitor sed, ultrices nec, risus. Suspendiss, suscipit elit sed elit. Pellentesque nunc."

### 5.3.11 Issue Watchers

Users can be configured to watch or stop watching an issue. An email alert will be sent to users when they are added to the watch list.

- [View](#) issue history
- [Print](#) view
- [Watch](#) this issue
- [Set](#) issue watchers
- [Add](#) source control file association

### 5.3.12 Time Logging

Users can specify the estimated time to complete the issue.

**Work Estimate** [1 day = 7 hours 30 minutes]

|         |                                |
|---------|--------------------------------|
| Days    | <input type="text" value="0"/> |
| Hours   | <input type="text" value="0"/> |
| Minutes | <input type="text" value="0"/> |

The definition of a working day (in hours and minutes) is specified in the Gemini “web.config” file.

Users can log time spent against an issue:

| Time       | <a href="#">[Log]</a> |
|------------|-----------------------|
| Start Date | ?                     |
| Due Date   | ?                     |
| Estimated  | 4d 6h 30m             |
| Logged     | 2d 2h 20m             |
| Time Left  | 2d 4h 10m             |

When specifying a time entry against an issue, users can specify on which day the time was spent:

Log time against issue

Time entry date: 30/08/2005

| August 2005        |                    |                    |                    |                    |                    |                    |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| ≤                  |                    |                    |                    |                    |                    | ≥                  |
| M                  | T                  | W                  | T                  | F                  | S                  | S                  |
| <a href="#">25</a> | <a href="#">26</a> | <a href="#">27</a> | <a href="#">28</a> | <a href="#">29</a> | <a href="#">30</a> | <a href="#">31</a> |
| <a href="#">1</a>  | <a href="#">2</a>  | <a href="#">3</a>  | <a href="#">4</a>  | <a href="#">5</a>  | <a href="#">6</a>  | <a href="#">7</a>  |
| <a href="#">8</a>  | <a href="#">9</a>  | <a href="#">10</a> | <a href="#">11</a> | <a href="#">12</a> | <a href="#">13</a> | <a href="#">14</a> |
| <a href="#">15</a> | <a href="#">16</a> | <a href="#">17</a> | <a href="#">18</a> | <a href="#">19</a> | <a href="#">20</a> | <a href="#">21</a> |
| <a href="#">22</a> | <a href="#">23</a> | <a href="#">24</a> | <a href="#">25</a> | <a href="#">26</a> | <a href="#">27</a> | <a href="#">28</a> |
| <a href="#">29</a> | <b>30</b>          | <a href="#">31</a> | <a href="#">1</a>  | <a href="#">2</a>  | <a href="#">3</a>  | <a href="#">4</a>  |

**Time spent**

Hours

Minutes

**Resource**

▼

**Comment**

Optionally, a comment can be attributed to the time log entry.

### 5.3.13 Filtering Issues

There are several links within Gemini that will take you the main issues list page. To the left of the page will be the issues filter box:

**Issue Filter**

Exclude closed issues

<All Issues>

View >>

Components ▲

Any  
 Data Loader  
 Documentation  
 Export Wizard  
 Financial ▼

Versions ▲

Any  
 Unscheduled  
 Initial Release  
 Maintenance release  
 NextGen

Types ▲

Any  
 New Feature  
 Task  
 Bug  
 Enhancement

Priorities ▲

Any ▲  
 Trivial ▼  
 Minor ▼

Status ▲

Any ▲  
 Unassigned ▼  
 Assigned ▼

Resolutions ▲

Any ▲  
 Unresolved ▼  
 Won't Fix ▼

Risk Levels ▲

Any ▲  
 No Risk ▼  
 Low ▼

Resources ▲

Any ▲  
 John O'Shea ▼  
 Jon Smith ▼

[Any Reporter]
Pick

The filter box allows users to specify criteria that will result in a filtered issues list.

The list box values pertain to the various issue attributes.

Any combination of list box values and keywords can be used to filter the issues list.

Hold down CTRL to multi-select or deselect items in a list box

Issues submitted by a particular user can also be filtered. Specify either a Gemini username or a users' full name.

The screenshot shows a search and filter interface for Gemini Project Issue Tracking. It is divided into three main sections:

- Keywords:** A single text input field for entering search keywords.
- Issue ID:** A text input field for specifying a unique issue ID.
- Dates:** A section with four date range filters: "Created >", "Created <", "Revised >", and "Revised <". Each filter has a corresponding text input field. Below these is a "View >>" button.
- Saved Filters:** A section with a text input field and a "Save" button. Below this, there are two filter options: "Bugs" and "Init Release", each with a checkbox to the right.

Users can enter keywords to limit the issues list. The keyword search is performed against issues, comments and custom field values.

Users can also specify an Issue ID and only the issue with the matching ID will be returned in the issues list.

Dates can be used to filter issues.

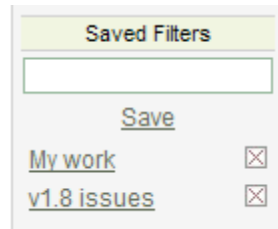
Filters can be saved and subsequently used to filter issues.

To search on multiple keywords separate them with "%". For example: "time%logged" will find issues with either of the two words.

### 5.3.14 Personal Saved Filters

Any filter can be saved and subsequently used. Personal saved filters are defined on a per project basis.

Saved filters are displayed below the filters box:



Simply enter a filter name and click “Save” to save the filter. Clicking on a saved filter will result in the filter being executed – only issues that meet the filter specification will be returned. Saved filters can be deleted by clicking on the “X” icon – no confirmation dialog will be presented so click with care!

### 5.3.15 Gantt View

The Gantt view displays filtered issues against a timeline. Issue Start and Due date fields are used to plot issues against a timeline.

## 5.4 User Management

Gemini currently supports forms authentication: users must provide a username and password security credentials.

Only Gemini administrators have rights to setup users and to assign user roles. The options highlighted below are used to maintain users, security schemes and user privileges within Gemini:



The “Users” link allows for the creation, editing and deletion of users.

The “Schemes” link allows for the creation, editing and deletion of security schemes.

The “User Access” link allows for the assignment of security schemes to users on a per project basis.

### 5.4.1 User Creation

Users can be created in one of two ways:

1. A user clicks on the registration link and self-registers. Such users will not have any default user roles and will require user role assignment.
2. A Gemini administrator creates a user account.

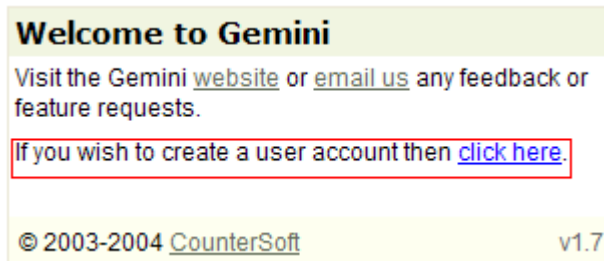
### 5.4.2 Anonymous Access

Anonymous user access can be enabled to allow unauthenticated users to browse Gemini. This situation is useful on public-facing installations of Gemini where the general public can browse Gemini projects without requiring registration.

See the Configuration section to see how this setting can be changed.

### 5.4.3 Self User Registration

Users can register themselves by clicking on a “register” link:



Users are required to fill in a simple Gemini registration form to create a Gemini user account:

### New User Registration

Please enter the required information below.  
Upon successful completion, you will be redirected to the login page.

|               |  |
|---------------|--|
| Username      | <input style="width: 90%;" type="text"/>     |
| Password      | <input style="width: 90%;" type="password"/> |
| Firstname     | <input style="width: 90%;" type="text"/>     |
| Surname       | <input style="width: 90%;" type="text"/>     |
| Email Address | <input style="width: 95%;" type="text"/>     |

All fields are mandatory and the username must be unique within each Gemini installation.

#### 5.4.4 User Maintenance

##### Security Settings

##### General

##### Users

##### User Access

##### Schemes

The “Users” link displays all Gemini users:

| Users   |  |  |  |  |                      |        |
|---|--|--|--|--|----------------------|--------|
| Drag a column header and drop it here to group by that column |  |  |  |  |                      |        |
| Fullname  | User Name                                | Firstname                                | Surname                                  | Email                                    | Edit                 | Delete |
| <input style="width: 90%;" type="text"/>                      | <input style="width: 90%;" type="text"/> | <input style="width: 90%;" type="text"/> | <input style="width: 90%;" type="text"/> | <input style="width: 90%;" type="text"/> |                      |        |
| * Anonymous User *  | anon                                     | * Anonymous                              | User *                                   | anon@anon.com                            | <a href="#">Edit</a> |        |
| Adam Moore  | amoore                                   | Adam                                     | Moore                                    | a@m.com                                  | <a href="#">Edit</a> |        |
| Alex Del  | adel                                     | Alex                                     | Del                                      | a@del.com                                | <a href="#">Edit</a> |        |
| Ana Kornikova   | akorn                                    | Ana                                      | Kornikova                                | A@k.com                                  | <a href="#">Edit</a> |        |
| Anita Fog   | afog                                     | Anita                                    | Fog                                      | A@f.com                                  | <a href="#">Edit</a> |        |
| Ben Carr  | BCarr                                    | Ben                                      | Carr                                     | b@c.com                                  | <a href="#">Edit</a> |        |
| Caroline Payne  | cpayne                                   | Caroline                                 | Payne                                    | c@p.com                                  | <a href="#">Edit</a> |        |
| Colli Todd  | ctodd                                    | Colli                                    | Todd                                     | c@t.com                                  | <a href="#">Edit</a> |        |
| comment comment   | comment                                  | comment                                  | comment                                  | comment                                  | <a href="#">Edit</a> |        |
| Craig Shoul   | csh                                      | Craig                                    | Shoul                                    | c@s.com                                  | <a href="#">Edit</a> |        |

Users can be deleted by clicking on the “Trash can” link. A confirmation dialog box will be displayed asking for deletion confirmation.

User details such as password, first name, surname and email can also be changed by clicking on the “Edit” link.

A user can belong to one or more user groups. In version 2.1 there is only one group – the Gemini-administrator. Assigning this group to the user will make them a global Gemini administrator.

A special “anon” user exists within Gemini and is used to control anonymous user access behaviour. This user cannot be edited or deleted.

### 5.4.5 Security Schemes

#### Security Settings

General

Users

User Access

**Schemes**

A security scheme is a collection of user roles. Such schemes can be applied to both projects and users. Security schemes are defined at Gemini level – they are not defined at the project level.

Clicking on the “Security Schemes” link displays all the current schemes within Gemini. Several security schemes are provided by Gemini out-of-the-box:

### Security Schemes

This screen enables the creation and maintenance of security schemes. Such schemes define a collection of user roles and these schemes can be applied to projects as well as users. Security schemes are akin to “user groups”.

[Create security scheme](#)

|                        |  |                      |
|------------------------|--|----------------------|
| Issue Administration   | Issue Administrator, View Project  | <a href="#">Edit</a> |
| Issue Creator          | Create Issue, Create Issue Comment, View Project   | <a href="#">Edit</a> |
| Issue Worker           | Create Issue, Link Issue, Move Issue, Create Issue Comment, Update Issue Progress, Assign Resource, View Project | <a href="#">Edit</a> |
| No Access              |  | <a href="#">Edit</a> |
| Project Administration | Project Administrator, View Project  | <a href="#">Edit</a> |
| Viewer                 | View Project   | <a href="#">Edit</a> |

Editing a security scheme displays the following screen:

### Security Scheme

This screen enables the definition of a security scheme.

**This scheme is used by the following projects:**  
Accounting System  
Test

Scheme Name

Scheme User Roles

- Project Administration
- Issue Administration
- Create Issue
- Edit Issue
- Delete Issue
- Link Issue
- Move Issue
- Create Comment
- Update Issue Progress
- Assign Resource
- View Project

If a security scheme is assigned to projects, those projects are listed (as highlighted above).

## 5.4.6 User Security



The "User Access" link is used to manage user privileges on a per project basis:

**User Security**  
Assign security schemes to individual users on a per project basis. Users will automatically inherit the default project security scheme where they have not been given an explicit security scheme.

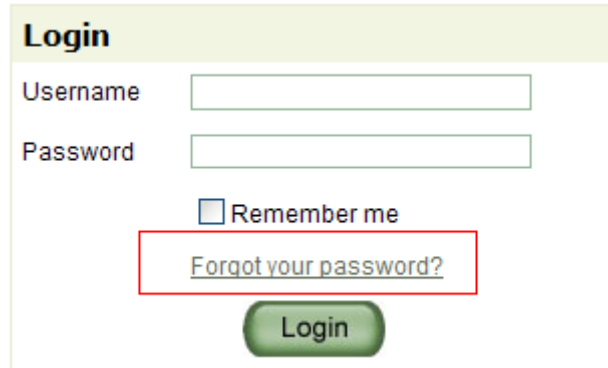
| 1. Select Project   | 2. Select User  | 3. Assign Security Scheme   |
|---|---|---|
| <ul style="list-style-type: none"><li>Intranet</li><li>Accounting System</li><li>Test</li></ul> | <ul style="list-style-type: none"><li>* Anonymous User *</li><li>Anthony Spade</li><li>Bob Jones</li><li>Dave Green</li><li>Fred Bloggs</li><li>Harvey Kandola</li><li>Jon Smith</li><li>Mark Cohen</li></ul> | <ul style="list-style-type: none"><li>&lt;No Scheme&gt;</li><li>Issue Administration</li><li>Issue Creator</li><li>Issue Worker</li><li>No Access</li><li>Project Administration</li><li>Viewer</li></ul> |

Users are assigned a security scheme for each project. The roles defined within the security scheme are given to the user.

### 5.4.7 Passwords

User passwords are stored using one-way MD5 encryption – there is no way to notify a user of their current password.

Users who forget their password are asked to either ask a Gemini Administrator to reset their password or click on the “Forgot your password” link (highlighted below):



**Login**

Username

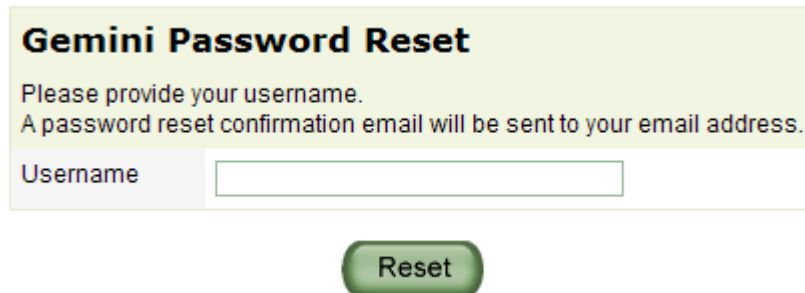
Password

Remember me

[Forgot your password?](#)

Login

Clicking on the “Forgot your password” link will prompt you for your Gemini username:



**Gemini Password Reset**

Please provide your username.  
A password reset confirmation email will be sent to your email address.

Username

Reset

A password reset confirmation email will be sent to the email address associated with the username that was entered. The password reset confirmation email will contain a hyperlink that has to be clicked in order for the password to be reset.

## 5.5 User Roles

The following roles exist within Gemini and operate on a per project basis:

**Security Schemes**  
This screen enables the definition of a security scheme.

Scheme Name:

Scheme User Roles:

- Project Administration
- Issue Administration
- Create Issue
- Edit Issue
- Delete Issue
- Link Issue
- Move\Copy Issue
- Create Comment
- Update Issue Progress
- Assign Resource
- View Private Issues
- Log Time
- Manage Time Logs
- View Time Logs\Reports
- View Project
- Set Issue Watchers
- Batch Edit Issues
- Manage Repository

The following table describes the meaning of each role:

| User Role                     | Description   |
|-------------------------------|---|
| <i>Project Administration</i> | <p>Allows for the following project level operations.</p> <ol style="list-style-type: none"> <li>1. Define project custom attributes</li> <li>2. Define project components</li> <li>3. Define project custom fields</li> <li>4. Define project versions, their order, and associated version attribute values</li> <li>5. Upload files to project repository</li> <li>6. Define project resources</li> <li>7. Configure projects email alerts for any user within Gemini</li> <li>8. Select project default security scheme</li> </ol> <p>This role also inherits the Issue Administration user role.</p> |
| <i>Issue Administration</i>   | <i>Contains all of the subsequent user roles (below)</i>  |
| Create Issue                  | Users in this role can create issues.   |
| Edit Issue                    | Users in this role can create edit issues.  |
| Delete Issue                  | Users in this role can delete issues.   |
| Link Issue                    | Users in this role can link two issues.   |
| Move\Copy Issue               | Users in this role can move issues between projects.  |
| Create Comment                | Users in the role can add comments to issues.   |
| Update Issue Progress         | Users in this role can update issue progress.   |
| Assign Resource               | Users in this role can assign a resource to an issue during issue creation.   |
| View Private Issues           | Users in this role can view issues marked as private.   |
| Log Time                      | Users in this role can log time spent against issues.   |
| Manage Time Logs              | Users in this role can change issue time logs.  |
| View Time Logs/Reports        | Users in this role can view issue time logs and reports.  |
| View Project                  | Users in this role can view a project.  |
| Set Issue Watchers            | Users in this role can set and unset issue watchers for any issue within the project.   |
| Batch Edit Issues             | Users in this role can batch edit issues.   |
| Manage Repository             | Users in this role can view, add, update and delete the files and directories of the repository.  |

## 5.6 Email Alerts

Gemini can send you email alerts whenever issues are created, updated, deleted, etc. Users can configure which type of email alerts they wish to receive on a per project basis.

### 5.6.1 Configuring Your Alerts

Email alerts can be configured for a project by clicking on the “Email Alerts” link as highlighted below:

[Email Alerts](#) [Repository](#) [Time Report](#)

This will display the email alerts configuration link:

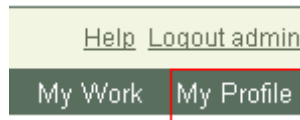
### Configure Project Email Alerts

Choose which email alerts you wish to receive for this project. You can set your preferred email format from My Profile link.

- Receive alert when issue is CREATED
- Receive alert when issue is UPDATED
- Receive alert when issue is DELETED
- Receive alert when COMMENT is added to issue
- Receive alert when resource ASSIGNED to issue
- Receive alert when issue is CLOSED
- Receive alert when issue is RESOLVED
- Receive alert when issue STATUS changes
- Receive alert when issue RESOLUTION changes

Project Administration user role permits users to configure project email alerts for any user within Gemini.

## 5.6.2 Manage Your Profile



Users can change their profile as well as setting their preferences.

User profile:

### Profile

Define your user profile

|                  |  |
|------------------|--|
| Username         | <input type="text" value="Developer"/>               |
| Password         | <input type="password"/>                             |
| Confirm Password | <input type="password"/>                             |
| Firstname        | <input type="text" value="Lead"/>                    |
| Surname          | <input type="text" value="Developer"/>               |
| Email            | <input type="text" value="support@countersoft.com"/> |

User preferences:

### Preferences

Configure your options (affects all projects)

|   |   |
|---|---|
| <b>Maximum number of issues in list</b> | <input type="text" value="20"/>                         |
| <b>After creating issue</b>             | <input type="text" value="Navigate To Issue"/> ▼        |
| <b>After editing issue</b>              | <input type="text" value="Navigate To Issue"/> ▼        |
| <b>When switching projects</b>          | <input type="text" value="Navigate To Project Home"/> ▼ |
| <b>Preferred email format</b>           | <input type="text" value="HTML"/> ▼                     |
| <b>Receive email alerts</b>             | <input type="text" value="Yes"/> ▼                      |
| <b>Email me my changes</b>              | <input type="text" value="Yes"/> ▼                      |
| <b>Language</b>                         | <input type="text" value="English"/> ▼                  |
| <b>Theme</b>                            | <input type="text" value="Default"/> ▼                  |
| <b>Issues Grid Font Size</b>            | <input type="text" value="Smaller"/> ▼                  |

Preference settings definitions are as follows:

| User Role                        | Description  |
|----------------------------------|--|
| Maximum number of issues in list | This setting controls how many issues should be displayed at any time when viewing the issues list.  |
| After creating issue             | This setting controls where the user should be redirected after creating a new issue.  |
| After editing issue              | This setting controls where the user should be redirected after editing an issue.  |
| When switching projects          | This setting controls whether the user should be redirected to the project home page or to the project issues page after switching projects (using the project dropdown list box located on the top navigation bar). |
| Preferred email format           | A user can choose to receive either HTML or TEXT format emails.  |
| Receive email alerts             | This setting allows a user to turn off all email alerts for all projects but still preserve their individual project email alert preferences.  |
| Email me my changes              | This setting can be used to not send a user email alerts when they have initiated the alert (by creating or updating an issue, etc.).  |
| Language                         | This setting allows the user to select the language in which Gemini will be displayed. The available languages are set by Gemini administrator.  |
| Theme                            | This setting allows the user to select which theme (colour scheme) Gemini will display. The available themes are set by Gemini administrator.  |
| Issue Grid Font Size             | Select the size of the font to view when viewing the issues page.  |

## 6. Source Control Integration

### 6.1 Overview

Users can associate source control files with an issue in one of two ways:

1. Automatic: deploy integration code that would intercept file check-in events and post source code file information to Gemini via the URL <http://yourserver/gemini/webservices/LinkSourceControlFile.aspx>.
2. Manual: use the Gemini user interface to specify a link to a source code file.

### 6.2 Manual Source Control File Association

When viewing an issue, click on the “Add Source Control file association” link:

- [View](#) issue history
- [Print](#) view
- [Watch](#) this issue
- [Add Source Control file association](#)

After clicking on the link you'll be presented with the following screen:

**ACME System**  
[ [Road Map](#) | [Change Log](#) ]

**[ACME-5] Add Source Control File**

Add a source control file to this issue

File Name

File Path

Repository

Simply enter the files' name, path and repository. For example: file name: Gemini.doc, file path: \$/Projects/Gemini/Documents, repository: [\\server\\ssafe.ini](#).

After adding a file to an issue you can see all the associated files:

| Issue Links <a href="#">[Link]</a>             |                              |                     |
|--|------------------------------|---------------------|
| None   |                              |                     |
| Source Control Files                           |                              |                     |
| File Name                                      | Path                         | Repository          |
| <input checked="" type="checkbox"/> Gemini.doc | \$/Projects/Gemini/Documents | \\server\\ssafe.ini |

You can click on the  icon to disassociate the file with the issue.

## 6.3 Automatic Integration Basics

Gemini exposes web services and a URL method to allow source control integration.

We also provide a sample VC++ project to allow Gemini to integrate with Microsoft's SourceSafe. This can be used to integrate Gemini with any other source control software that exposes it's events in a similar manner. Below is the structure of the URL:

```
http://yourserver/gemini/webservices/LinkSourceControlFile.aspx?ii=1&fn=gemini.doc&ac=ABC123&scr=\\server\ssafe.ini&fp=Projects/Gemini/Documents
```

These are the URL parameters:

| Query String | Description   |
|--------------|---|
| ii           | Issue ID. The issue ID to associate the file with.  |
| fn           | File name. The file name to associate.  |
| ac           | Access Code. You can disable the use of this code in the web.config file.                                   |
| scr          | Source Control Repository.  |
| fp           | File Path. The path of the file (within source control).  |
| on           | Old Name. This parameter is only used if the issue id is -999. It allows renaming of a source control file. |

**Note** You will have to encode the parameters when using the URL option.

### 6.3.1 Microsoft Visual SourceSafe

Gemini provides a Microsoft Visual C++ COM component that hooks up to Microsoft Visual SourceSafe's (VSS) API. This component will have to be installed on every VSS client machine. It uses registry setting for Gemini's location and page name.

The access code is hard coded in the code for security reasons; you can either change the source code or ask Gemini to ignore the Access Code for the source control URL via the `UseAccessCodeForSourceControl` key in the web.config file.

To install:

1. Copy GeminiVSS.dll to each client machine
2. Run `REGSVR32 GEMINIVSS.DLL`,
3. Double click on `GEMINIVSS.REG` file to install the registry settings (you'll have to change the contents of this file to suit your needs).
4. Create a new file called `ssaddin.ini` under the win32 of your SourceSafe client folder and put the following line: `GeminiVSS.SourceSafe.1=1`. This will ensure that Gemini SourceSafe add-in is used.

When you check in/out files from VSS, put "GEM:XXX" at the start of the comment where XXX is an issue ID (numeric only). This will associate all files part of the check-in with a single issue.

### 6.3.2 CVSNT

The integration with CVSNT is done on commits only. When you commit you will have to specify a message (-m in CVS command line tool) that starts with "GEM:XXX" where XXX is an issue ID (numeric only). This will associate all files committed with that issue.

The access code is hard coded in the code for security reasons; you can either change the source code or ask Gemini to ignore the Access Code for the source control URL via the `UseAccessCodeForSourceControl` key in the `web.config` file.

To install:

1. Copy `GEMINICVSNT.DLL` to your CVSNT folder (on the server).
2. Double click on `GeminiCVSNT.reg` file to install the registry settings (you'll have to change the contents of this file to suit your needs).
3. Check-out the `LOGINFO` file from your CVS root.
4. Put the following line at the end of the `LOGINFO` file: `DEFAULT @GeminiCVSNT.dll`.
5. Commit `LOGINFO` the file.

### 6.3.3 Other Source Control Systems

Most of the source control systems provide some kind of trigger/API functionality, which is similar to SourceSafe or CVSNT. Simply create a trigger that will post the check-in file information to Gemini via the URL <http://yourserver/gemini/webservices/LinkSourceControlFile.aspx>.

We would be happy to provide sample code and guidance if required!

## 7. SMTP Mail Box Processor

### 7.1 Overview

The SMTP Mail Box Processor helps users to add issue via emails.

You specify an Email address to “listen” to and default configuration options and the mail box processor is run periodically checking for new emails and adding their content, including attachments, to Gemini. This works using Gemini web services and runs as Windows Service on any machine that has the .NET framework installed.

All code can be found in the “**Code Samples\MailBox Processor**” folder.

### 7.2 Installing / Uninstalling

Extract the files to a folder of your choice. Navigate to the bin folder and run “installutil.exe”, which can be found under C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727, passing GeminiSMTP.exe as a parameter. This will create a windows service called Gemini SMTP Service.

Before starting the service you should note that it will automatically look for a configuration file called GeminiEmailSettings.xml in the root of your C drive. You can change that by passing a start parameter, which is the file name (including full path), to the service.

To uninstall the service simply run “installutil.exe /u geminismtp.exe”. You should execute this command from the location of GeminiSMTP.exe.

### 7.3 Configuration File

The table below will explain each tag and its use:

| Tag             | Description                                    |
|-----------------|--|
| GeminiURL       | The URL for Gemini (including the trailing /). |
| WebServicesCode | The access code for the web services.          |
| CheckEverySecs  | How long to wait between checks.               |

Below are the tags that are used per project:

| Tag               | Description   |
|-------------------|---|
| ProjectID         | The project ID that will be used to allocate the issues to.         |
| UserID            | The user ID to use when creating issues.                            |
| ComponentID       | The component ID to use when creating an issue.                     |
| IssueType         | The type to set the newly created issue.                            |
| IssuePriority     | The priority to set the newly created issue                         |
| EmailServer       | The name of your email server.                                      |
| EmailAddress      | The email address to check.   |
| EmailUserName     | The emails’ user name.  |
| EmailPassword     | The emails’ password.   |
| DeleteMessages    | Whether to keep or delete processed messages (true/false).          |
| SubjectLikeRegExp | If this is populated the subject must match the regular expression. |

## 8. Customisation

### 8.1 R.A.D Editor

The [Telerik](http://www.telerik.com/help/aspnet/editor/) r.a.d. WYSIWYG rich-text editor for ASP.NET is used by Gemini. This rich-text editor is used on the Create Issue and Add Comment screens for data input.

The documentation for this product can be found within the Documentation folder in the Gemini download file, or by visiting the publisher's website:

<http://www.telerik.com/help/aspnet/editor/>

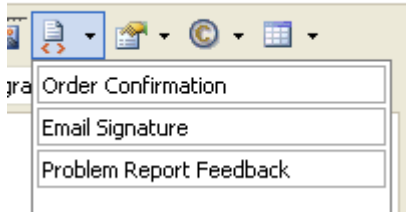
This rich-text editor can be customised to provide default or template driven text box content. This is useful when organisations wish to provide a standard template within the rich-text editor during issue creation. A number of methods exist to specify default content.

#### RAD Editor Tags

Content for the r.a.d. editor can also be placed between the `<radE:RadEditor>` `</radE:RadEditor>` tags located within the `issue/RichTextCtrl.ascx` file.

#### Snippets

Snippets can be used to place content within the r.a.d. editor:

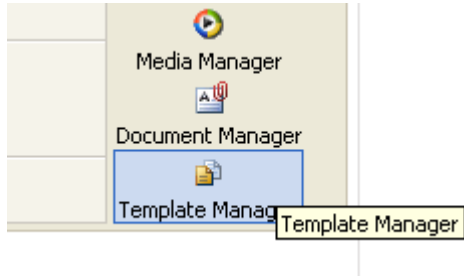


Snippets are defined within the `ToolsFile.xml` file located within the `RadControls` folder:

```
<snippets>
  <snippet name="Order Confirmation">
    <![CDATA[
      <div style="width:300px;
        Dear _____
        Thank you for inquiring
        <br /><br />
        <b>Please, contact u
      </div>
    ]]>
  </snippet>
```

## Templates

HTML templates can be defined and placed into the `issue\RAD\CommonTemplates` folder. Any templates placed in this folder can be selected by users using the Template Manager option within the r.a.d. editor:



## 8.2 Issue Type & Priority

Issue type and priority can be customised as per your requirements. This functionality is available to Gemini administrators via the “Administration” option:

### Issue Type & Priority Data Maintenance

Create, edit and delete issue type and priority data associated with Gemini.

Lookup Data: Issue Type ▼

Issue Type

Issue Priority

| Item ID | Description | Image Path                  |                      |                        |                         |                           |
|---------|-------------|-----------------------------|----------------------|------------------------|-------------------------|---------------------------|
| 3       | New Feature | images/Type_NewFeature.jpg  | <a href="#">Edit</a> | <a href="#">Delete</a> |                         | <a href="#">Move Down</a> |
| 2       | Enhancement | images/Type_Enhancement.jpg | <a href="#">Edit</a> | <a href="#">Delete</a> | <a href="#">Move Up</a> | <a href="#">Move Down</a> |
| 4       | Task        | images/Type_Task.jpg        | <a href="#">Edit</a> | <a href="#">Delete</a> | <a href="#">Move Up</a> | <a href="#">Move Down</a> |
| 1       | Bug         | images/Type_Bug.jpg         | <a href="#">Edit</a> | <a href="#">Delete</a> | <a href="#">Move Up</a> |                           |

#### Create New Item

Specify all data fields

Item ID

Description

Image Path

Issue type & priority item actions can be summarised as follows:

- Create item: specify item name, description and image path.
- Edit item: change item name, description and image path.
- Delete item.
- Define item on-screen sort order: move up & move down.

**Note:** ensure that image paths specified are correct!

## 8.3 Issue Links

Issue link types can be customised by Gemini administrators via the “Administration” option.

## 8.4 Issue Status

Issue status items can be customised by Gemini administrators via the “Administration” option. Items can be created, updated and deleted. Furthermore, issue status workflow can be defined to determine how an issue can change status values.

### Issue Status Maintenance

Create, edit and delete Issue Status values.

[Define](#) new Issue Status value

| Status ID | Status Description |                      |                         |                           |
|-----------|--------------------|----------------------|-------------------------|---------------------------|
| 1         | Unassigned         | <a href="#">Edit</a> |                         | <a href="#">Move Down</a> |
| 2         | Assigned           | <a href="#">Edit</a> | <a href="#">Move Up</a> | <a href="#">Move Down</a> |
| 3         | In Progress        | <a href="#">Edit</a> | <a href="#">Move Up</a> | <a href="#">Move Down</a> |
| 4         | Closed             | <a href="#">Edit</a> | <a href="#">Move Up</a> | <a href="#">Move Down</a> |
| 5         | Reopened           | <a href="#">Edit</a> | <a href="#">Move Up</a> |                           |

One and only one issue status item should be marked as the “final status”. This “final status” value determines the issue status item that relates to the status of CLOSED.

### 8.4.1 Issue Status Workflow

Each issue status can be valid pre and post states. These states determine how an issue status can change: can an issue marked as “In Progress” then be changed to “Closed”?

#### Status Workflow

Define the valid pre and post status values in relation to this issue.  
The values selected below will determine the issue status workflow.

|                   |   |
|-------------------|---|
| Valid Pre States  | Unassigned<br>Assigned<br>In Progress<br>Closed<br>Reopened |
| Valid Post States | Unassigned<br>Assigned<br>In Progress<br>Closed<br>Reopened |

## 8.5 Issue Resolution

Issue resolution items can be customised by Gemini administrators via the “System Admin” option. Items can be created, updated and deleted.

### Issue Resolution Data Maintenance

Create, edit and delete issue resolution data associated with Gemini.

| Resolution ID | Resolution Description |                      |                        |                         |                           |
|---------------|------------------------|----------------------|------------------------|-------------------------|---------------------------|
| 1             | Unresolved             | <a href="#">Edit</a> | <a href="#">Delete</a> |                         | <a href="#">Move Down</a> |
| 2             | Won't Fix              | <a href="#">Edit</a> | <a href="#">Delete</a> | <a href="#">Move Up</a> | <a href="#">Move Down</a> |
| 3             | Duplicate              | <a href="#">Edit</a> | <a href="#">Delete</a> | <a href="#">Move Up</a> | <a href="#">Move Down</a> |
| 4             | Cannot Reproduce       | <a href="#">Edit</a> | <a href="#">Delete</a> | <a href="#">Move Up</a> | <a href="#">Move Down</a> |
| 5             | Complete               | <a href="#">Edit</a> | <a href="#">Delete</a> | <a href="#">Move Up</a> |                           |

#### Create Issue Resolution

Resolution Description

[Create](#)

## 8.6 Email Alert Templates

Email alert templates are located under the "templates" folder of the web application. Email templates are provided for both HTML and TEXT email formats

Email templates are created using the NVelocity template engine. The look and feel of the email template can be customised. Furthermore the actual email content can be defined for each email alert type (issue create, update, deleted, etc.).

See <http://nvelocity.sourceforge.net> for more details.

## 8.7 We Can Help

We provide Gemini customisation services – discuss your requirements with us and we will endeavour to provide a cost-effective solution.

Contact [sales@countersoft.com](mailto:sales@countersoft.com) with your requirements.

## 9. Gemini Event Listener API

### 9.1 Overview

Gemini provides an event listener model enabling users to listen and handle events that have been raised within Gemini. For instance, users can write custom code that could be invoked when a new issue is created within Gemini.

Entity classes are used extensively within Gemini to depict projects, versions, users, issues, etc. Event arguments are used to marshal data from within Gemini to the custom user code that handles the event. Typically event arguments contain entity objects that contain Gemini data (such as issue data).

The CounterSoft.Gemini.Commons.dll assembly contains the event API and associated entity and event argument classes. This assembly enables you to develop your own plug-ins that can consume Gemini events.

### 9.2 Entities

The following table details the Entity classes exposed via the Gemini API:

| Entity            | Description  |
|-------------------|--|
| ChangeLogEN       | Represents a change for an issue.                      |
| ComponentEN       | Represents a component for a project.                  |
| CustomFieldDataEN | Represents custom field data for a given custom field. |
| CustomFieldEN     | Represents a custom field definition.                  |
| FileEN            | Represents a file attachment (for an issue).           |
| FilterEN          | Represents a personal issue filter.                    |
| IssueEN           | Represents an issue.                                   |
| IssueCommentEN    | Represents an issue comment.                           |
| IssueExtraEN      | Represents an issue change log entry.                  |
| IssueLinkEN       | Represents an issue link definition.                   |
| IssueTimeEntryEN  | Represents an issue time log entry.                    |
| IssueWatcherEN    | Represents a user watching an issue.                   |
| ProjectEN         | Represents a project.                                  |
| ProjectResourceEN | Represents an assigned project resource.               |
| ProjectStatsEN    | Represents statistics for all projects within Gemini.  |
| SecuritySchemeEN  | Represents a security scheme within Gemini.            |
| SourceControlEN   | Represents a source file related to an issue.          |
| UserEN            | Represents a user within Gemini.                       |
| UserRolesEN       | Represents a user role for a given user.               |
| VersionEN         | Represents a version for a project.                    |

### 9.3 Helpers

The following table details the Helper classes exposed via the Gemini API:

| Entity                          | Description   |
|---------------------------------|---|
| GeminiHelper                    | Contains various helper methods (exception logging, etc.) |
| GeminiConstant                  | Exposes constants used throughout Gemini.                 |
| GeminiConstant.IssueAlertType   | Enumeration of issue watch types (email alert types).     |
| GeminiConstant.IssueEventSource | Enumeration of possible issue event source types.         |
| GeminiConstant.IssueResolution  | Enumeration of issue resolution values.                   |
| GeminiConstant.IssueStatus      | Enumeration of issue status values.                       |
| Mailer                          | Provides email capabilities                               |

## 9.4 Events

The Gemini API provides interfaces that can be used by custom user code to listen and consume Gemini events:

| Entity                   | Description  |
|--------------------------|--|
| IGeminiListener          | The base interface that all other interfaces are derived from.   |
| IIssueListener           | <p>This interface exposes the following event-handling methods:</p> <ul style="list-style-type: none"> <li>• IssueAssigned</li> <li>• IssueClosed</li> <li>• IssueCommented</li> <li>• IssueCreated</li> <li>• IssueDeleted</li> <li>• IssueProgressUpdate</li> <li>• IssueResolutionChange</li> <li>• IssueResolved</li> <li>• IssueStatusChange</li> <li>• IssueUpdated</li> </ul> <p>Custom user code can implement this interface and provide method implementations to handle the above events. The methods receive the IssueEventArgs parameter (which contains the event date, Issue Entity and Issue Extra Entity (issue comments)).</p> |
| IProjectResourceListener | <p>This interface exposes the following event-handling methods:</p> <ul style="list-style-type: none"> <li>• ProjectResourceAdded</li> <li>• ProjectResourceRemoved</li> </ul> <p>Custom user code can implement this interface and provide method implementations to handle the above events. The methods receive the ProjectResourceEventArgs parameter (which contains the event date and Project Resource Entity).</p>   |
| IUserListener            | <p>This interface exposes the following event-handling methods:</p> <ul style="list-style-type: none"> <li>• UserCreated</li> <li>• UserDeleted</li> </ul> <p>Custom user code can implement this interface and provide method implementations to handle the above events. The methods receive the UserEventArgs parameter (which contains the event date, Project Entity and User Entity).</p>  |

## 9.5 Creating a Plug-in

The following steps should be followed to create a custom assembly (DLL) that can listen and handle Gemini events:

1. Start Visual Studio .NET.
2. Create a new Class Library project (C# or VB.NET) and reference the CounterSoft.Gemini.Commons.dll file (can be found within the Gemini web applications BIN directory).
3. Implement any of the interfaces provided within the CounterSoft.Gemini.Commons.dll assembly. For convenience, users can also simply extend from the AbstractIssueListener abstract class. This abstract class already implements IIssueListener, IUserListener and the IProjectResourceListener interfaces.
4. Provide method implementations for any event you wish to consume.

Simply compile your .NET Class Library project and place the resulting DLL into the web applications "Gemini\Bin\Plugins" folder.

*Sample code that demonstrates how to create a custom plug-in that listens for a Gemini event:*

```
using GeminiLib;

namespace MyGeminiPlugins
{
    public class MyPlugin : AbstractIssueListener
    {
        public MyPlugin()
        {
        }

        public override void IssueCreated(IssueEventArgs args)
        {
            try
            {
                // Your code to handle the issue created event
            }
            catch(Exception ex)
            {
                GeminiHelper.LogException(ex);
            }
        }
    }
}
```

## 10. Gemini Web Services

### 10.1 Overview

Gemini provides web services that allow for the creation and management of issues as well as providing project, version and component data.

Gemini supports Microsoft Web Services Enhancements (WSE) 3.0. Certain web methods will require WSE to be installed on your web server in order to operate:

<http://msdn.microsoft.com/webservices/>  
<http://msdn2.microsoft.com/en-us/webservices/aa740663.aspx>

WSE 3.0 direct download link can be found here:

<http://www.microsoft.com/downloads/details.aspx?familyid=018a09fd-3a74-43c5-8ec1-8d789091255d&displaylang=en>

An article entitled "Why Use WSE?" can be found here:

<http://msdn.microsoft.com/webservices/webservices/building/wse/default.aspx?pull=/library/en-us/dnwse/html/whywse.asp>



Please download the CounterSoft Gemini Services binaries that provide access to all Gemini web services. You will also find a sample test harness that invokes Gemini web services via CounterSoft Gemini Services.

<http://www.countersoft.com/Default.aspx?PageID=58>

## 11. Troubleshooting

Error messages are generally trapped and logged. Gemini administrators can view error messages via the “System Admin” menu option.

Support emails should be addressed to [support@countersoft.com](mailto:support@countersoft.com).

### 11.1 Multiple Gemini Installations

If you have installed Gemini more than once on a single web server, you should change the "name" value of the "forms" setting in the WEB.CONFIG file to something unique (recommendation is that the "name" value reflects the IIS Virtual Directory where Gemini is installed).

This is necessary to ensure that cookies are correctly stored and processed for each Gemini installation/instance.

### 11.2 SQL Server Installation

Gemini only supports case-insensitive installations of SQL Server.

### 11.3 Email Alerts – “Access is denied”

#### 11.3.1 IIS 5.0

The “Access is denied” error occurs can occur when Gemini tries to send email alerts. Ensure that the Windows ASPNET user account has read/execute permissions for the “bin\plugins” folder below the Gemini web application folder.

#### 11.3.2 IIS 6.0

If Gemini is configured to use the “default” application pool, you may need to ensure that the “Network Service” has read/execute permissions on the “bin” folder.

### 11.4 Date Formats

Please ensure that you change **both** the "*DateFormat*" and "*globalization*" settings in the WEB.CONFIG file.

### 11.5 Microsoft SharePoint Portal

Gemini will not run alongside Microsoft SharePoint by default.

<http://support.microsoft.com/?id=828810>

### 11.6 New Issue Creation Disabled

New issues cannot be created when a project is “locked”.

### 11.7 Windows XP Service Pack 2

<http://support.microsoft.com/kb/841249>

<http://support.microsoft.com/kb/842242>

## 11.8 Windows Authentication

Under certain circumstances, it may be necessary to add the following users to Gemini in order to use Windows authentication:

- “NT AUTHORITY\NETWORK SERVER”
- “@@SERVERNAME\ASPNET”

## 11.9 Web Page Source Code Displayed

Under certain circumstances, source code (HTML mark-up) will be displayed when attempting to access Gemini. This is an ASP.NET installation issue and the following command usually resolves this problem:

```
C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727\aspnet_regiis.exe -i
```

[http://msdn.microsoft.com/library/default.asp?url=/library/en-us/cptools/html/cpgrfASPNETIISRegistrationToolAspnet\\_regiisexe.asp](http://msdn.microsoft.com/library/default.asp?url=/library/en-us/cptools/html/cpgrfASPNETIISRegistrationToolAspnet_regiisexe.asp)

## 11.10 Problematic Button Click Events

Under certain circumstances, clicking a button on a Gemini web page does not perform the action. This is an ASP.NET installation issue and the following command usually resolves this problem:

```
C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727\aspnet_regiis.exe -c
```

[http://msdn.microsoft.com/library/default.asp?url=/library/en-us/cptools/html/cpgrfaspnetiisregistrationtoolaspnet\\_regiisexe.asp](http://msdn.microsoft.com/library/default.asp?url=/library/en-us/cptools/html/cpgrfaspnetiisregistrationtoolaspnet_regiisexe.asp)

## 11.11 Installing Gemini onto Network\Shared Drive

Erratic behaviour may be encountered when Gemini is installed onto a network / shared drive.

## 11.12 Database Sizing

Insufficient database space (both data and log) can result in erratic behaviour. Ensure your Gemini SQL database has adequate space to grow.

## 12. We Are Here

We are always on hand to answer any questions and to provide product support.

### 12.1 Support

<http://community.countersoft.com>

### 12.2 Sales

Any queries regarding the product should be addressed to [sales@countersoft.com](mailto:sales@countersoft.com).

### 12.3 Services

If you require customisation of Gemini, please contact [sales@countersoft.com](mailto:sales@countersoft.com) with your requirements and we will be happy to discuss!

### 12.4 Bug Reporting / Feature Requests

<http://gemini.countersoft.com>.

### 12.5 Future Plans

Our future plans can be viewed at <http://gemini.countersoft.com>.

Online testing of latest product beta release is generally available at <http://beta.countersoft.com>.