i-net Clear Reports 2016

Repository

Administration and Usage

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Clear Reports
2016

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1 Introduction

i-net Clear Reports is widely used as a central point of report generation throughout companies. Report designers need to have direct access to the servers' report file locations to create new reports or modify existing ones. Administrators have to set up scheduling tasks or distribute URLs to the resulting reports for the recipients. In addition, they have to make sure that security measures are taken to separate certain groups from each other or make sure that they do not accidentally modify their co-workers' report template files.

Since those approaches are difficult to handle manually, and a lot technical skills are required by each affected party - report designer, system administrators and report file recipients - we have come up with a convenient and easy-to-use solution that takes everyone's requirements into account.

The Repository is a unified report template file store that can be accessed in many ways. Designers will only need the i-net Designer to create, access and modify their report template files - without any network shared file systems. This enables report modification from virtually any location with a network connection to the report server.

Administrators will not have to provide network file shares to the report locations (e.g. smb, nfs or afp) - just one URL to the report servers' repository.

Report recipients can still receive their reports on a regular base using the scheduler. But in addition they will not need a specialized link list to their reports for calling them directly. They can just open the Repository Browser in the Remote Interface or i-net Designer and render or export the report files from there. One URL beats the many.

Note that the name "Repository" might remind you of code repositories such as

CVS, SVN, or Git. Unlike code repositories, however, at this point, the Report Repository does not offer versioning of report files.

The Report Repository is simply a unified store where users can put and access all their report files with just one URL, suffixed by their report's file name.

2 Configuration

Activating the Repository Browser can easily be done by using the Configuration Manager via Remote Interface. The options can be found in the dialog Repository.
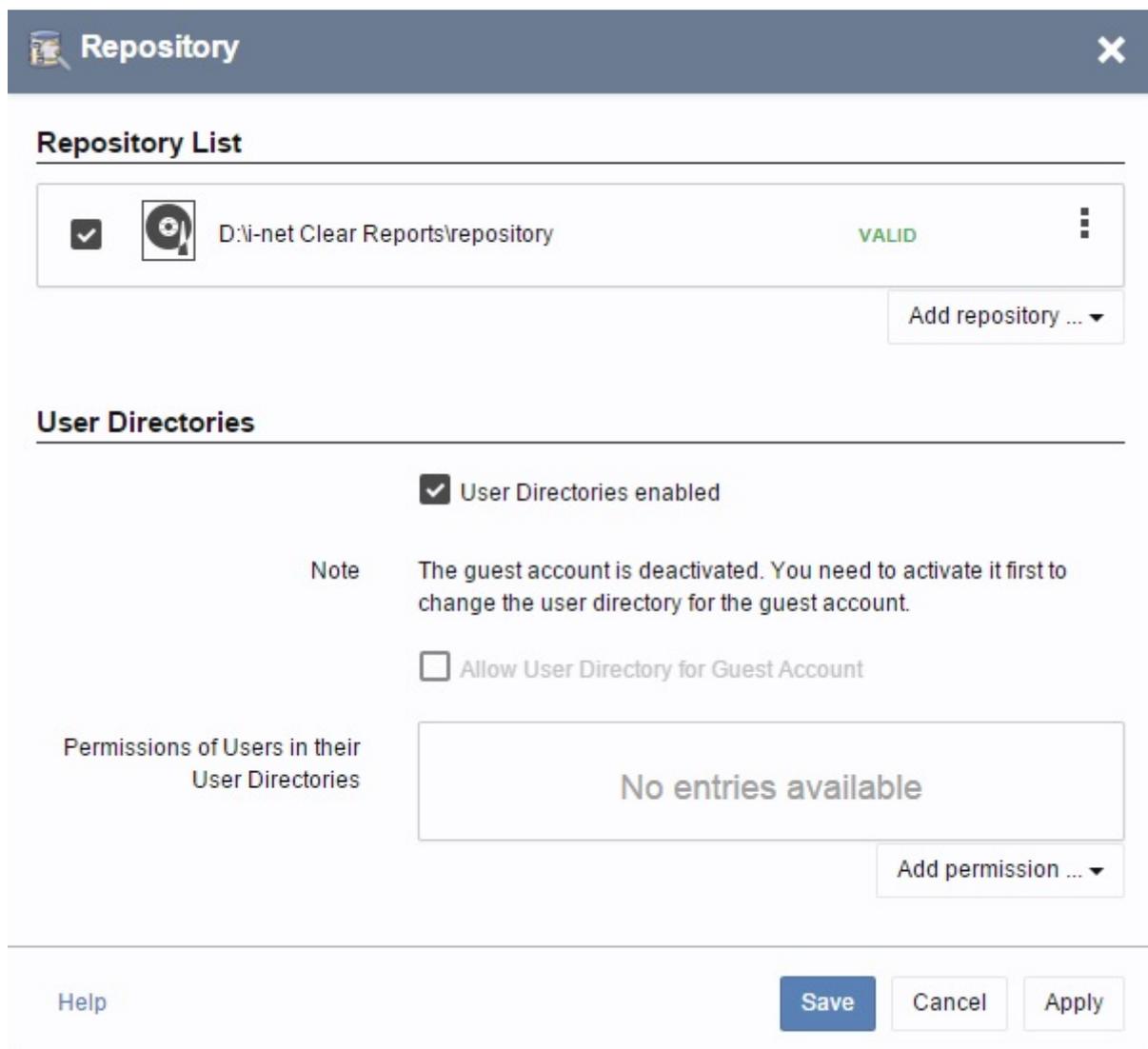

Figure 1: Administration of the Repository

The report repository currently supports two types as report store: hard disk and database. You can add multiple repositories to your configuration, but only one can be active at a time. To manage the different repositories you'll find a list of

the already defined locations in a list.

The list consists of:

- a check box to select the current repository (only one can be active at a time)
- the selected location on your hard disk
- a status message containing "VALID" or detailed information about the reason for an invalid repository

Important: Please note, that the repository does not offer any version control or backup mechanism. To avoid accidental loss of data such as your report templates we encourage you to use third-party programs.

2.1 Hard Disk Repository

To add a hard disk repository simply select "from file system" in the drop down list "Add repository" and enter the desired path in the text box. You can also browse the file system to choose the path.

2.2 Database Repository

Instead of a hard disk based repository you can also use a database - depending on your desired environment. To add a new database repository select "from a database" in the drop down list "Add repository". The following dialog will appear:
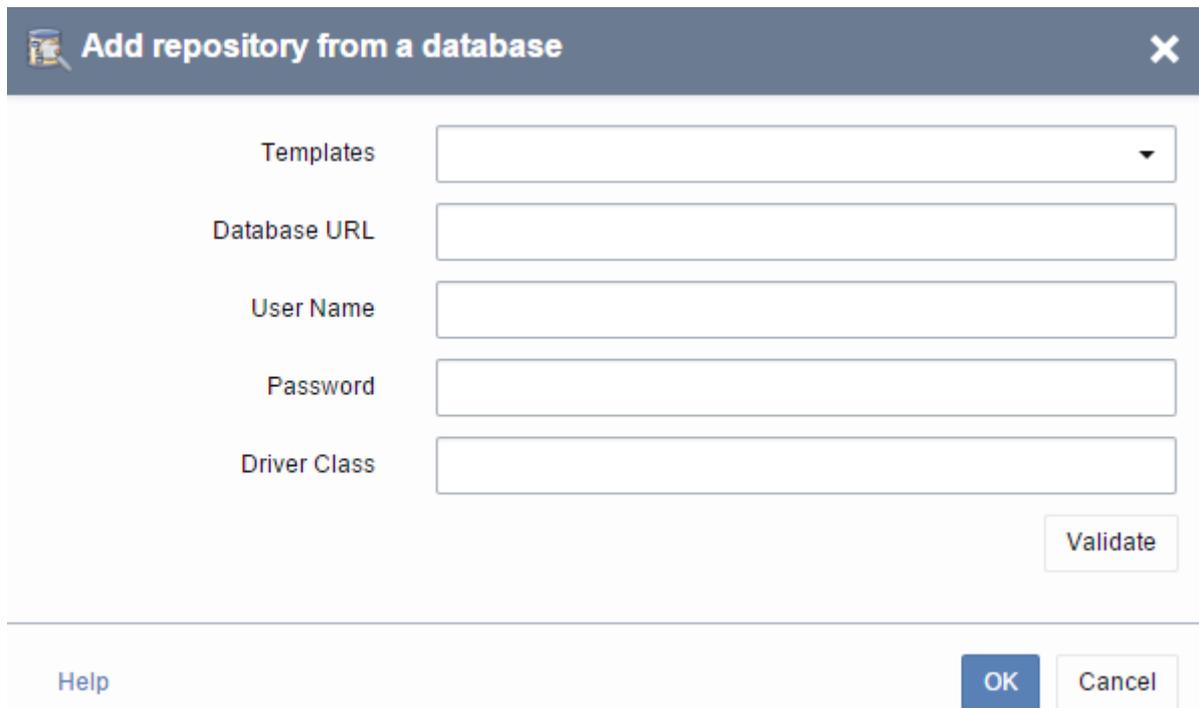
Figure 2: Database Repository Connection

You have to specify a JDBC URL including your database, the username and password for the database and the name of the driver class. To ease the settings there is a template selector for drivers that can be installed together with i-net Clear Reports during setup.

The system will create the needed structure in your database once the connection can be opened successfully.

2.3 User Directories

A user directory is a location in the report repository where each user can save it's own reports. Ad hoc reporting also uses these user directories to store the ad hoc reports of the user instead of central storage location.

User directories is a feature exclusive to i-net Clear Reports Plus. Therefore a Plus license is required.

2.3.1 Where are user directories available?

The node "My Reports" is available in the repository browser, in the dialog "Open Report File" dialog of the i-net Designer and user directories are available using WebDAV. A user who has the right for the configuration manager (see dialog: Permissions), can see the additional node "All Users" that contains the user directories of all users.

The user directory is just a link to the directory: "<repository directory>/users/<domain>/<username>". If a user logs on for the first time, then a directory is created for him in "<repository directory>/users". If the user name contains a domain name, then a subdirectory for the domain will be created, if it does not exists already.

2.3.2 Where and how can I configure the user directories?

You can enable and configure the user directories in the dialog "Repository" of the configuration manager. In this dialog it is possible to configure the user's rigths to his user directory. To manage the user directories it is necessary that "Restrict Permissions" is activated in the "Permissions" dialog. Please note that you need to configure report permissions at least for the *.rpt pattern, if this property is enabled. Otherwise no user can open or execute a report.

If a user has all rights, then he can read, write and execute reports in his user directory. Any user who is not defined in the section "User Directories", has no rights to his user directory.
If the asterisk symbol (*) is used as name for user or role, then the permissions configured for this user or role are valid for all users or roles. Also the permissions are additive, which means that a right is granted to the current user or role if it is granted to the current user or role itself, or to user "*" (all users), or to a special group, where current user belongs to.

To see the user directory "My Reports" in the repository browser, the user must have the right to use the repository browser (see "Permissions"). You can find more information about permissions in the Security Guide.

2.3.3 Default user rigths

By default, only read and write is allowed for all users. Each logged in user can open and save reports in the user directory but he can not execute it by default. This is done to protect the server from extremely long-running reports. Therefore, it is necessary to active the right to execute reports manually. You should not give it to all (*) users, but to users who need it.

2.3.4 What are the restrictions regarding report permissions?

If user directories are enabled, the permissions set in the section "User Directories" are used for this directory instead of the permissions configured in the repository folders.

3 Security Issues

The Remote Repository seamlessly integrates into the security measures of i-net Clear Reports. To unlock the full potential of the Repository to individual users you should provide the system with a valid login type, e.g. Windows authentication (for more information see the Security Guide).

3.1 Permissions

With activated "Restrict Permissions" you can decide which users/groups can access features, like the "Repository". The feature "Repository" enables the user to use the repository feature in the Remote Interface. The feature "Remote Designer" enables the user to access the Repository from within the i-net Designer.
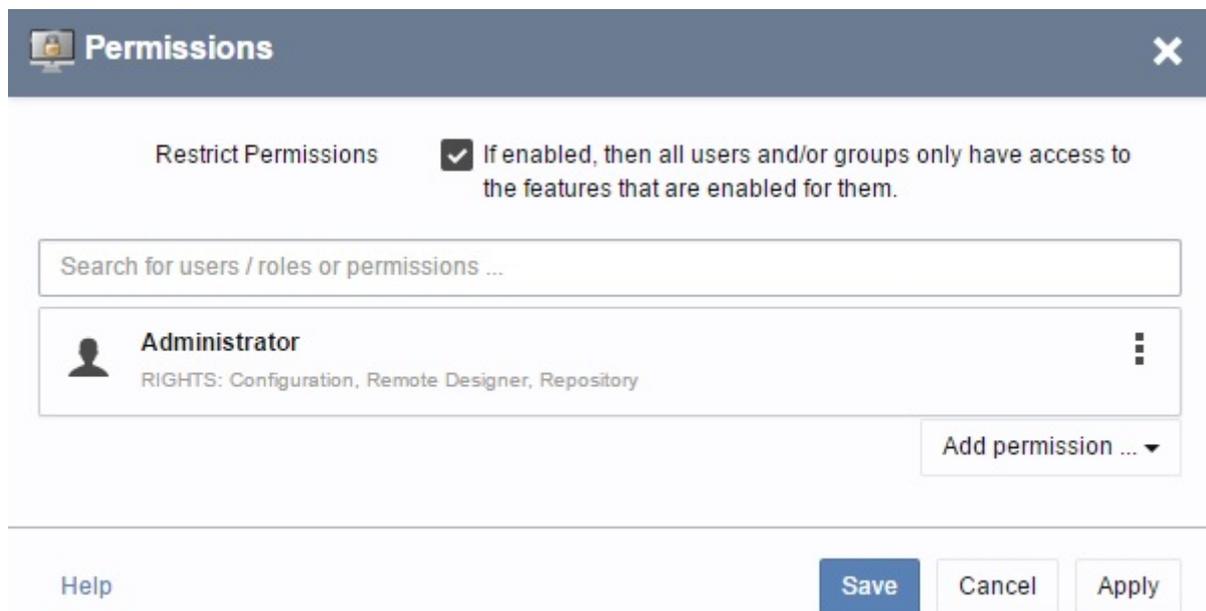

Figure 3: Permissions for Users and/or Groups

3.2 Report Permissions

The Report Permissions fully apply to the report files in the repository, meaning

you can provide individual read, write and execute permissions for your reports.

Privileged users can edit the report permissions directly in the Repository Browser of the Remote Interface. For more information about i-net Clear Reports security, have a look at the Security Guide.

The "Administrate Permission" button in the repository browser will be enabled if Permissions are enabled and one of the following conditions apply:

- The user is System Administrator (if the login type 'Master Password' is activated in the configuration or the selected authentication mechanism is not available).
- The user has the right to access the Configuration Manager.
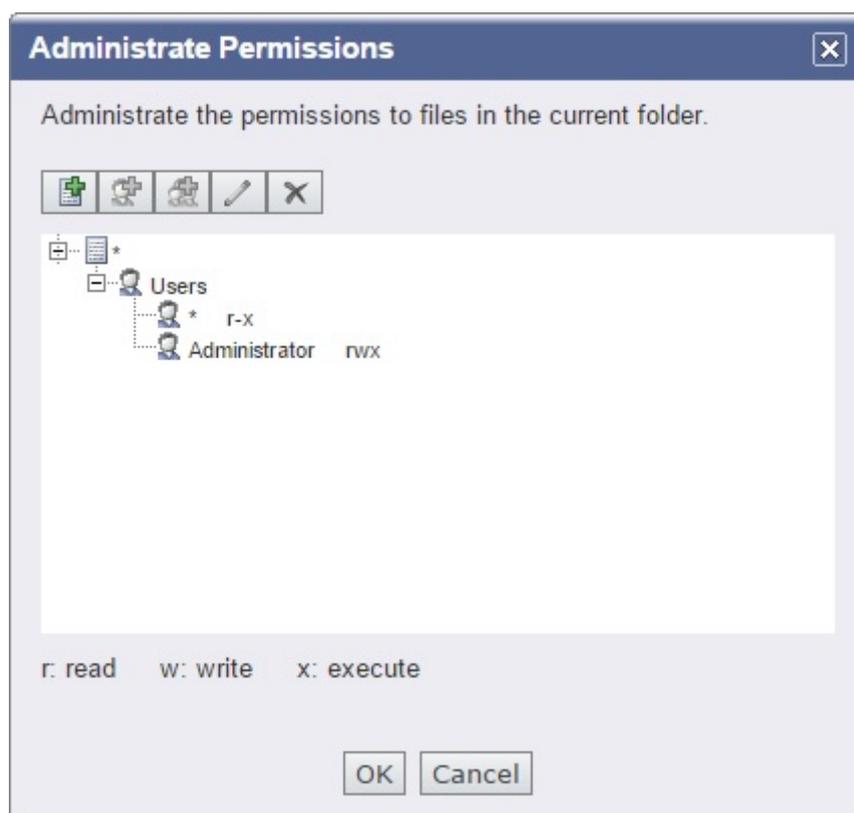- The user is allowed to read and change the selected folder.

Figure 4: Permissions in Repository Browser

3.2.1 Displaying the permissions

Users can see their permissions in the report file table of the Repository Browser or the properties panel of a report file. There are three distinct rights to limit the access:

- "r" - report file is readable, meaning the user can see and download it
- "w" - report file is writable, meaning it can be altered, renamed, moved and deleted
- "x" - report file is executable, meaning the current user can run and export the report

The user rights are being displayed color-coded depending on where the right has been set: global or in the folder.

- **Blue:** The right has been defined width "Execute All Reports" in the "Permissions" of the Configuration Manager.
- **Green:** The right comes from a reportPermission.xml file in the current folder (privileged users can define them directly from the Repository Browser)

3.2.2 Simulated Folder Permissions

Since i-net Clear Reports does not directly offer folder permissions - unlike UNIX or Windows file systems - the folder permission depends on the rights the user has for reports in this folder.

A folder is visible if there is at least one pattern defined which grants read access to a report file in this folder. There must not actually be a report in the folder yet - the possibility to read a report file fulfills the condition.

To upload reports or create sub-folders, rename or move folders in the Repository, there has to be at least one pattern defined which grants write access to a report file in this folder. There must not actually be a report in the folder yet - the possibility to write a report file fulfills the condition.

4 Accessing the Repository

The Repository offers several different access methods depending on the scenario.

The Remote Interface, which comes with the server installation, has an embedded graphical Repository Browser. The browser can be used for all management purposes.

The i-net Designer offers the file chooser, a convenient way for report designers to access reports from within the program using a version of the Repository Browser which is less powerful in terms of managing the repository. The main purpose is to open, modify and save report files from the repository and render them directly on the server. The report can use the report servers embeddable fonts for local modifications.

In addition i-net Clear Reports runs a WebDAV interface that allows file system access to the repository. This enables users to interact with the repository like they do with network shares. (See below for detailed information on how to connect to a repository from your operating system.)

For direct access to the renderer of i-net Clear Reports you can use the newly created "repo" URL protocol. It is an addition to the current report URL parameter "report" that allows a shorter way to call the report renderer:

- **Current Format:**

```
http://reportserver.com/reporting?report=file:C:/repository_files
/path/to/report_name.rpt
```

- **Repo URL Format:**

```
http://reportserver.com/reporting?report=repo:/path/to/report_nam
```

```
e.rpt
```

4.1 Remote Interface

- **Access URL:**

```
http://<yourserver:port>/<context>/remote/repositorybrowser
```

The Remote Interface offers a fully featured GUI for the Report Repository. It is file browser like, having a directory tree and a list of the report files. Using the interface you can manage every aspect of the repository, which includes:

- adding and removing files or directories
- tagging of reports
- setting file permissions
- and of course rendering and exporting report files

4.2 i-net Designer

- **Access URL:**

```
http://<yourserver>:<port>/<context>/repository
```

The i-net Designer comes with a file chooser that has a built-in browser for the Repository. It is almost as feature rich as the Repository Browser GUI in the Remote Interface - but you can directly open, edit, save and render the reports from the designer program. Additionally the opened reports will be added to your recent document list to make them available for quick starts.

You can distinguish reports that have been opened locally or from the report repository by their render tab which has an additional "Remote" flag for Repository reports.

To connect to your repository you have to insert the access URL in the configuration dialog that you can access with the menu item: "Options | Repository Server". Specify the login credentials if necessary.
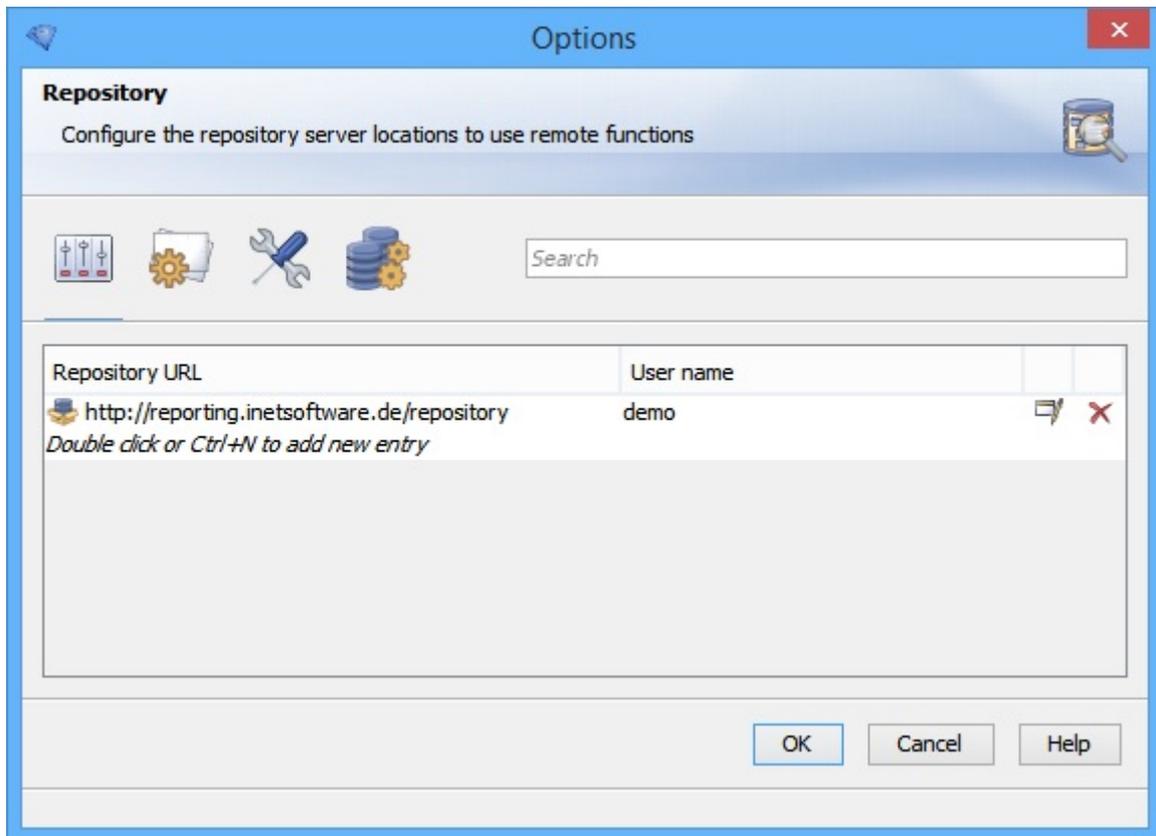

Figure 5: Repository Configuration in i-net Designer

4.2.1 Examples

- i-net Clear Reports as local standalone server

```
http://localhost:9000/repository
```

- i-net Clear Reports in Tomcat in local intranet

```
http://tomcat-server:8080/reporting/repository
```

- i-net software sample repository

```
http://www.inetsoftware.de/external-
services/remote/public/repository
```

4.3 WebDAV support

- **Access URL:**

```
http://<yourserver:port>/<context>/repository
```

The Repository supports the WebDAV connection standard. You can type in the above mentioned URL in your browser and will get the browse able and download able repository content. But you can also use the above URL to add a network storage to your operating system file browser.

4.3.1 Connecting to your Repository using Windows

- **On Windows:** In the Windows Explorer right click on the computer icon and select "Add Network Location".
- **On Windows XP and Windows Server 2003:** Open "My Network Places" from the desktop and click on "Add a Network Place".

In the field "Internet or network address" specify the access URL of your WebDAV interface (see above for examples).

4.3.2 Connecting to your Repository using Linux (GNOME)

- Go to Places → Connect to Server
- Select Service Type → WebDAV (HTTP)
- Insert the name and port of the i-net Clear Reports server
- Insert "/<context>/repository" as Folder

The login credentials need not be provided here. The server will ask for them if necessary.

4.3.3 Connecting to your Repository using OSX

In the Finder press `CMD+K` to open up the server connection dialog. Enter the access URL from above and click "Connect". The Finder will now attempt to

establish the WebDAV connection - and maybe ask for your authentication credentials (which can be saved to your keychain).

The established connection will be displayed as a remote network device.

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