

Volume

1

OPCAT SYSTEMS

Vision

VISION

Administrator Guide

OPCAT SYSTEMS

VISION Administrator Guide

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Version 1-1-10

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Purpose of this Guide

The purpose of this guide is to provide administrators step by step instructions for the installation and configuration of VISION components. This guide is complemented by *Vision User Guide* which provides hands-on user guidance.

Introduction

Vision captures applications logic and interdependencies. It automatically reads RPG applications code and/or manually-created OPM models and provides high-level visual map of the applications' interdependencies and internal logic. This presentation is understandable by experienced programmers and non programmers alike. This makes Vision a key tool in any managerial, planning and technological discussion.

Vision solution is composed of the following components:

User Interface:

- Vision client – A browser based user interface for analysis and “light” editing
- OPS – OPM based IDE for model editing

Server Side

- Database Server – holds information about the models
- Model Control Server – holds the OPM models
- RPG Convertors – converts RPG into OPM models.
- Vision Server – provides interaction between Vision client and the Database and Model Control Servers

Administration Tools

- VisionAdmin – provide security management capabilities.
- Categories Console – provides interface to add external data to OPM models.

This guide will take you through step by step installation and configuration of all Vision components. Before starting the installation, copy all the installation files provided to you by OPCAT to your local media. This location will be referred to later on in this guide as the Installation Source Directory.

Hardware and Operating Systems

Vision is design to work with any operating system running Java. We recommend running the system at the following configuration:

- Database, Model Control and Vision Server on single Windows 2003 server.
- RPG to XML Convertor on iSeries.

- Model Convertor must run on strong computer (see requirements below). We recommend installing it on the same Windows 2003 Server. If the server is not strong enough then the Model Convertor may be installed on any other server which holds the required capabilities, but has network connectivity to the Database and Model Control servers.

Hardware requirements for the Windows Server are high-performance computer with at least 100G available hard disk space and 4GB internal memory. If you are planning to run the Model Convertor on this server then you will need at least **16G** of internal memory.

Installation Stages

In order to install vision you will need to do the following:

- Install and configure Database
- Install and configure Model Control
- Install the Model Convertor (without running conversion)
- Install Tomcat
- Install VisionAdmin
- Install Vision
- Load Data into Vision

In order to load Models and Database converted at another location follow the detailed explanation starting at “[Loading Pre-Made Repository and Database](#)” section below.

Database and Model Control Servers

Installation

The installation of the Database and Model Control servers includes four steps: installation of the database which stores global information; configuration of this database; installation of the Model Control server and its configuration.

1. Database Server Installation

Open Database Server directory at the Installation Source Directory

- Install **database-win32.msi** file
- Press **Next**
- At the installation wizard select **Typical** installation.
- Press **Next**
- Press **Install**
- After installation press **Next** twice
- Make sure that **Configure the My SQL Server** is marked and then press **Finish**

- Press **Next**
- At the next selection window select **Detailed Configuration** and **Next**
- At the next window select **Server Machine** and **Next**.
- Next select **Transactional Database Only** and **Next**
- Select the **drive for installation**. At the drop-down select **MySQL Datafiles**. This is the location of your data in case you would like to backup your data.
- Next select **Manual Setting** and select **100 Concurrent connections** at the drop down and then **Next**
- Leave the **Enable TCP/IP Networking** and **Enable Strict Mode** marked and the port selected. Press **Next**
- Next select the second option **Best Support Form Multilingualism** and **Next**.
- At the next window mark the checkboxes for **Install As Windows Service, Include Bin Directory in Windows Path** and **Launch the MySQL Server Automatically** and press **Next**.
- Next makes sure **Modify Security Settings** is checked. Leave Current root password blank (if exists) and then enter your own selected password. Check **Enable root access from remote machines** and then **Next**.
- At the next window select **Execute**. [See trouble shooting guide tip#1 for problems starting MySQL]
- Press **Finish**

Your database installation is done.

2. Database Configuration

Open Command Prompt.

- Change the directory to Database Scripts at the Installation Source Directory
- Type **mysql -u root -p -h <Server IP>**{IP of your server – if installing from your server the address is 127.0.0.1} **> Enter** [See trouble shooting guide tip#2 for problems starting MySQL]
- Enter your password
- You will get mysql prompt
- Type **source opcat.sql >Enter**
- Type **source messages.sql >Enter**
- Type **source expose.sql >Enter**
- **quit**

We are now done with the configuration of the Database

3. Model Control Installation

Open Model Control directory at your Installation Source directory

- Install **OPCATMC-win32.msi** file
- Select **Next** twice
- At the next window uncheck the **Apache(MOD_DAV_SVN)** and select **Next**
- Select the **Repository Path** for your installation and select **Next**. This is the location of OPCAT repository models.
- Select **Destination Folder** and select **Install**
- Unmark the **Launch Collabnet Subversion**
- Restart your Server

4. Model Control Configuration

Open Command Prompt.

- Change the directory Model Control directory to the Installation Source Directory
- Type **opcat-mc.bat <Repository Path>** {Your chosen OPCAT MC Repository Path – the default is c:\svn_repository} then Enter
- Restart your computer or start the **Subversion Server** service at Windows Computer Management console
- To verify installation go to your repository directory (the default is c:\svn_repository) and verify that **common** and **Systems** directories were created. If this is not the case restart the server and repeat this stage.

The installation will create 6 users SL1 to SL6 with password 12345

5. Troubleshooting

1. During installation of Database you get “Could not start the service MySQL” error message
 - a. Open Command Prompt
 - b. Write **SC stop MySql** and Enter
 - c. Write **SC delete MySql** and Enter
 - d. Return to installation program press **Back** then press **Next**
 - e. Press Execute
2. The command **mysql -u root -p -h <Server IP>** returns with “Mysql is not a recognized as internal or external command”
 - a. This may happen if during installation MySQL command was not added to the installation path.
 - b. In such case you will have to manually insert the complete MySQL installation path.
 - c. At the Installation Source Directory write: \<the installation path of MySQL>\MySQL\MySQL Server 5.1\bin\mysql -u root -p -h <ServerIP>

RPG Convertor

6. Installation

- RPG Convertor is installed together with the Categories Console.
- To install double click on *OPS-admin.exe* file and follow the installation wizard.
- Insert the DB Server name and MC Server name when asked
- Enter the *Repository Root* – we recommend leaving the default parameter
- Enter *RPG Repository Path*- this is the directory that will contain all the models to be generated by the RPG Convertor.
- *RPG File Extension* – this is the extension of the output file of the RPG-XML Convertor

All the parameter you set during the installation are found at *opcat.properties* file located at OPCAT installation directory. At any time you may open the file by any text editor or at VisionAdmin Admin Files (see explanation below) and change those parameters. Later you will find some recommended setting for the RPG conversion process. The installation of *OPS-admin.exe* also includes OPS client. It is not recommended to use this OPS client for modeling purposes since some of the precautions and alerts set for regular users were disabled at this version.

At the end of the installation you will find 4 icons on your desktop:

- OPCAT (OPS user interface)
- RPG Convertor
- Categories Console

7. Introduction to the Convertor

VISION is designed, among other features, to allow the organization to capture the current status of the code fast and accurately with minimum human intervention. The RPG and Model Convertors are the first building block for enabling this capability. It is designed to specifically capture code written in RPG. After capturing, it displays its logic and interdependencies by translating the RPG code into an OPM model, consisting of a set of interconnected OPDs.

The convertor is built of two phases: transferring RPG files to XML (RPG Convertor) and then transferring those XML files to OPM models (Models Convertor).

8. RPG to XML Convertor (Windows installation)

This section describes how to annotate your code found on the iSeries, convert it into XML and copy the XML files to the server where the Model Convertor runs.

- Copy the *Convertor_win* file to the root of your computer
- Run the convertor by double click on *run.bat*
- The convertor user interface will appear.

We first show how to run manual conversion. We will then discuss batch conversion.

- Press *Sign In* and add your host name, user name and password to your AS400. Make sure at this stage that you have stable communication to the AS400.
- At the first column “*Libraries*” you will find a list of all the libraries on your server. Click on the library where your source physical files are.
- The files included in this library will appear. Click on the source file. The members of this source physical file will appear at the *members* column.
- Right click on the member you would like to convert. You can *Download* this member to view it, *Annotate* this member and add the special tags to the RPG code or do *XML Markup* which will produce the XML output files. Note that you need to *Annotate* before you do *XML Markup*.
- Select *Annotate*. You will be asked to save the file at a different name
- Now select the file you just saved, right click on it and select *XML Markup*. Before doing this you may select *Download* in order to view the *Annotate* results before producing the XMLs.
- During *XML Markup* you will be asked to save the output file. Once this is done move the file to the Model Convertor library (see details about the library at the next section) using any FTP client or any other means
- For batch processing select the *Library and Physical Source File*
- Now press the *Batch Annotate* button. Select the output *Library and File*. Then select the members you want to convert. You may save in the same library and add *Append* to the name. Now press *Process*.
- Now select the *File* you just created or the same file if you annotated to the same file. Press *Batch Markup* and select the files to markup and the output library and file.
- Move the file created to the Model Convertor library using any FTP client or any other means

Model Convertor

The Model Convertor takes as input well-formed XML files generated from the RPG source code and convert them into OPM model. The XML files must comply with OPCATPACKAGE.XSD schema. The Convertor then runs in batch mode and converts the XML files into an OPM model. The Convertor assumes that each batch is complete, i.e., that all the RPG files which depend on each other (by call, copied code, etc.) are included in this batch. The Convertor does not take into consideration files which had been previously converted. Therefore, no partial run is possible.

9. Pre-requisites for the Convertor Installation

In order to install the Convertor, you will need the following:

- a. A high-performance computer with at least 100G available hard disk space and at least **16G** internal memory.
- b. Installation of OPCAT Server. This may be done on the same machine or on a remote machine. Note that installation on remote machine will slow down the reverse engineering process, due to communication constrains.
- c. Installation of OPS Admin.

10. Preparing for Model Convertor

The following configuration shall be ready before starting the conversion process:

- Create a directory in OPCAT Repository and check-out this directory. This will be the root directory for all the output models. Make sure you checked it out with the same username you are going to use for the conversion process. If this is the first time you run the conversion, create a directory by the same name you entered when installing OPS Admin under *RPG Repository Path* (default is *RPGConvertedModels*).
- Open *opcat.properties* file and change *gui.show* to false and close OPS. If you did not open OPS at all since installation, this parameter may not be there. In such case, open OPS and then open the file again.
- Remember to change this parameter back to true once you finish the conversion process.
- In addition, you may use the default parameters set during installation or change any of the following parameters:

PARAMETER	DEFAULT	DESCRIPTION
admin.rpg.RPGFolder=	C:\\Program Files\\OPCa t\\RPGConve rtorSourceF	The location of the XMLs to be converted.

	iles	
admin.rpg.ModelsRootFolder=	C:\\Program Files\\Opca t\\Working Copy\\RPGCo nvertedMode ls	The location of the root directory for the output models. Insert here the name and full path for the directory you created and checked out at the previous step.
admin.rpg.ProgramsFolder=	Programs	Sub-root directory name for models describing programs (ProgramModel)
admin.rpg.UndefinedProgramsFolder=	UndefinedPr ograms	Sub-root directory name for models describing programs that do not have XML file in the current batch
admin.rpg.TablesFolder=	Tables	Sub-root directory name for models describing tables (MessageMap)
admin.rpg.UndefinedTablesFolder=	UndefinedTa bles	Sub-root directory name for models describing tables that do not have XML file in the current batch
admin.rpg.TemplatesFolder=	Templates	Name of the templates directory
admin.rpg.ExportFolder=	Export	This sets the directory to which logical processes will be registered for future integration with Business Process Management tools
admin.rpg.MaxFieldsPerTable=	20	Tables with many fields will be graphically separated to separate OPCAT Views. This parameter sets the number of entities to be included in a single View.
admin.rpg.IgnoreMissingComponents=	False	<i>True</i> – if a referenced file is missing write to the log and continue the run. <i>False</i> -stop the run if something is missing.
admin.rpg.RPGFileExtension=	Xml	Supports other extensions of XML files such as BRM. Make sure that all the XML files in the batch have the same extension.
admin.rpg.XSDSchemaFile=	C:\\Program Files\\OPCa t\\RPGFiles \\opcatpack age.xsd	Location of the RPG schema. If the schema exist the Convertor will scan the files for illegal structure before starting the run. If you don't want the Convertor to validate the files leave this parameter empty (nothing after the "=").
admin.rpg.GenerateUnknown	true	If a subroutine is not found in the Internal

nSubroutines=		Subroutines or in the Copied Code, generate a process and mark it as Fictive in the parameters.
admin.rpg.GenerateUndefinedTables=	true	If a tables is not found in the Tables set or in any MessageMap (in case of FormatName), generate a Table model and place it at the Undefined Tables directory.
admin.rpg.MaxInternalSubroutinesPerRow=	10	Subroutines Set with many subroutines will be graphically separated to separate OPCAT Views. This parameter sets the number of Subroutines to be included in a single View.
admin.rpg.AlternateRepositoryPath=		This parameter is used in cases where tables are converted separately from tables. This parameter shall not be used other than by power admin
admin.rpg.DoExport=	False	This parameter determines whether to register the logical processes for future integration with Business Process Management tools
admin.rpg.OpcatIPAddress=	127.0.0.1	This parameter is shall not be used other than for integration with Business Process Management tools
admin.rpg.VisionIPAddresses=	192.168.0.1 10	This parameter is shall not be used other than for integration with Business Process Management tools
admin.rpg.VisionName=	Visionserver	This parameter is shall not be used other than for integration with Business Process Management tools
admin.rpg.GenerateInternalSubProcedures=	true	Set this to false in case you are using free form subprocedures

- Now place all the XML files at the location set at the **admin.rpg.RPGFolder** parameter in *opcat.properties* (default is *RPGConvertorSourceFiles*). Remember, all the files that may have dependencies with files in this batch must be placed in this directory. Make sure that the extension of the files is as set at the *opcat.properties* file.

11. The Model Conversion Process

You are now ready to start converting the XML files into an OPCAT Model. To do so, press the RPGConvertor icon on your desktop. OPCAT will be opened automatically. You will be asked to provide your username and password. Make sure that you use the same username and password that were used to check out the directory which will be the root for all the files. Note that as default 1024MB are allocated for the Convertor. It is recommended to allocate more

internal memory, subject to the capabilities of the computer you are using. In order to allocate more memory, right click on the `RPG Convertor` shortcut on your desktop and *properties*. At the *Target* text box change `Xmx1024m` to the amount of internal memory you can allocate to the conversion process.

12. Errors

Errors occurring during the conversion process will appear at the command window. They are also registered at the error log. The error log, called `opcat-log.xml`, can be found under the `Program Files\Opcat` directory. The log is also available via VisionAdmin at the `Administration>Admin Files`.

13. Analyzing the Results

When concluding the conversion, inspect the following:

Undefined Programs and Undefined Tables – here you will find dummy models for programs and tables which are referenced by files in the batch, but which do not have an XML representation.

The Error Log – this is where other errors are registered. In some cases, the Converter cannot build any model. If you selected `IgnoreMissingComponents=true` then the converter will still run, but an error will be registered. Review the error log and look for such errors. We also recommend reviewing the Expose List and the models themselves to ensure that the results are as anticipated.

14. Re-Run

In some cases you would like to run the Converter again. This may happen if one or more errors occurred during the conversion process, or if you located XML files that had been missing at the previous Converter execution.

14.1 Run Additional Batch without Deleting Old Batch

Repeat the stages stated at “[Preparing for Model Converter](#)” section above, but

- Create a different directory at OPCAT repository for the new files
- Change the `admin.rpg.ModelsRootFolder=` parameter at the `opcat.properties` file to reflect the new directory you created.
- You may use the same `admin.rpg.RPGFolder=` to place your XML files. Make sure that you delete any files which were already converted unless you want those files to be reconverted together with the current batch. Note that the conversion process will not take into consideration dependencies between files that were previously converted and files in the current batch. If you want those dependencies to appear leave the files from the previous batch at the `RPGFolder`.

14.2 Delete Previous Work and Run Additional Batch

- Open the Command Prompt, change to the directory where you stored the Database Script installation files and do the following:
- Type `mysql -u root -p opcat -h <Server IP>{IP of your server – if installing from your server the address is 127.0.0.1} > Enter`
- Enter your password (the one set during the installation of MySQL)
- You will get the mysql prompt.
- Type `source clean_expose.sql >Enter`
- *Quit*
- Open OPS Admin
- Open the *Repository Browser* right click on the directory you want to delete and select *Unlock*
- Open the *Repository Browser* right click on the directory you want to delete and select *Delete*.
- In some cases OPCAT may fail deleting files or directories which were checked out by users. In such case you may as explained later use VisionAdmin to delete those files. Alternatively you may leave those files or folders. This will not impair the new installation and will not be presented in Vision. Yet the leftover files will not have the right corresponding usage data and shall not be used.

You are now ready to re-run the Converter.

Vision Server

15. Pre-requisites for Vision Server Installation

In order to install Vision you will need the following software installed

- Database and Model Control Servers
- Java SDK 1.6 or higher. If you do not have Java SDK installed you may use the files *jdk-6u14-windows-i586.exe* located at your installation files folder. This version can be used for Windows installations. You may also download the latest version at <http://java.sun.com/javase/downloads/index.jsp>
- Apache Tomcat 6.0.20. If you do not have Apache Tomcat installed you may use the file *apache-tomcat-6.0.20.exe* located at your installation files folder. You may also download Apache Tomcat at <http://tomcat.apache.org/download-60.cgi> . If you are using *apache-tomcat-6.0.20.exe* then after the installation you need to copy and replace the content of the *Apache Software Foundation\Tomcat 6.0* directory (usually found at the Program Files directory) with the content of the *apache-tomcat-6.0.20* directory found at the installation files directory.
- After installing Tomcat enter *Tomcat\bin* directory and press *tomcat6w.exe*. At the Java tab set the “initial memory pool” to 256 M and the “maximum memory pool” to 700. Now press OK and close this console.

16. Installing Vision Server

To install Vision Server copy the directory *Vision.war* from your installation files to the directory *webapps* at your Tomcat directory (this can usually found at: *C:\Program Files\Apache Software Foundation\Tomcat 6.0\webapps*). Now start Tomcat service. *Vision* directory will be automatically created at your *webapps* directory. Vision is now installed.

17. Configuring Vision Server

17.1 Vision Server Database Configuration

First we need to configure Vision databases. Use the following commands to configure the database:

- Open Command Prompt and change the directory to the location of your Database Scripts at your installation directory
- Type *mysql -u root -p -h <Server IP> {IP of your server – if installing from your server the address is 127.0.0.1} > Enter*
- Enter your password (the one set during the installation of MySQL)
- You will get the mysql prompt.

- Type `source dm.sql` >Enter
- *Quit*

17.2 Server Properties Configuration

Before running Vision we need to do the following configure the following parameters at the file `server.properties` located at “...*Apache Software Foundation*\Tomcat 6.0*webapps*\Vision*conf*”:

- `category.manual.datapath=C:\\VisionC` (This is the directory from which Vision will read any categories data to be presented in the textual reports. Change this to a directory of your selection. Make sure this directory exists).
- `system.admin.cachepath=C:\\Program Files (x86)\\Apache Software Foundation\\Tomcat 6.0\\webapps\\Vision\\data\\300.ser` (300.ser holds the data for the visual reports. It will be created during the data collection process at the location you state here).
- `system.conf.file=C:\\Program Files (x86)\\Apache Software Foundation\\Tomcat 6.0\\webapps\\Vision\\conf\\server.properties` (this is the location of the `server.properties` file you are now editing).

Next you need to configure you Model Control and database locations. If the Database and Model Control Servers are found at the same computer you do not need to change these parameters. If not, change the parameters below which are found as the same `server.properties` file.

```
system.mc.address=localhost/Systems
system.mc.autozlocation=C:\\svn_repository\\common\\conf\\users
system.db.address=localhost
system.db.user=opcat
system.db.password=0545224014
```

Finally you need go direct the indexer to a directory on the server to which you are going to checkout all you files. Such directory will be created automatically if you are using Categories Console on the server. In such case it location will be ...*Program Files*/*Opcat*/*AdminConsole*/*SourceFiles*. Add this directory or any other directory to which you select to checkout the files to at the following line:

```
system.indexer.workingcopy=C:\\Program Files\\Opcat\\AdminConsole\\SourceFiles
```

Note that files are checked out to this directory only if you are Opening the Categories (Admin) Console and running *Validate*. If you are not planning to do this then set the path as follows:

```
system.indexer.workingcopy=C:\\Program Files\\Opcat\\Working Copy
```

In this case you need to open OPS and use the *Get* command at the *Repository Browser* in order to ensure that all the converted files will be indexed.

18. Vision Ongoing Data Update

The following sections describe how to keep the data presented at Vision updated at all times. You should run this process after finishing Vision configuration and then occasionally according to the frequency of changes in your systems.

18.1 Collect Data

This process will collect the summarized data from the Expose Tables to the relevant Vision Server tables at the Database Server (detailed information about “Exposing” can be found at Vision User Guide). Before starting this operation restart Apache Tomcat 6 service. Now open your browser and type the location of your Vision application. This will be:

<https://localhost:8443/Vision/jsp/collectData.jsp> (local host shall be used if you are running the collectData from a browser on the server in which Tomcat is installed)

This process may take time depending on the size of your expose list. Check your Tomcat error logs for more details about any errors which may occur during the collectData process.

Once data collection is completed you need to restart your Apache Tomcat service. You may run collect data each time a change is made to the models, or periodically.

18.2 Running the Indexer

The Indexer is preparing the data for “deep searching” from Vision client. You should run the indexer from time to time according to the frequency of changes at your files. The Indexer reads the data from local directory on the server. This directory is set at the *webapps/Vision/Conf/server.properties*.

- If you set the *Server.properties* to be “*system.indexer.workingcopy=C:\\Program Files\\Opicat\\AdminConsole\\SourceFiles*” then open Categories Console (by pressing the AdminConsole icon at your desktop) and run *Validate*.
- If you set the *Server.properties* to be “*system.indexer.workingcopy=C:\\Program Files\\Opicat\\AdminConsole\\SourceFiles*” then:
 - Open OPS
 - At the Repository Browser right click on the main directory you need to index and select “*Get*”

To run the indexer open your browser and type: <https://<servername>.<domainname>:8443/Vision/admin?type=index&indexer-mc-user=sl1&indexer-mc-password=12345>

You can also run the indexer for specific file or directory. To do this type the following at your browser: <https://<servername>.<domainname>:8443/Vision/admin?type=index&indexer-mc->

[user=sl1&indexer-mc-password=12345&Index-starting-point=<directory/file_full_path>](#) . Note that this indexing will be incremental to any previous indexing you made.

19. Changing Text Appearances in Vision

Vision appearance is set by the *AppConfig.xml* file. This file can be found at *C:\Program Files\Apache Software Foundation\Tomcat 6.0\webapps\Vision\data* (or at any other location in which Tomcat is found). The AppConfig file enables many configuration changes to the text and appearance of Vision. At this section we will refer to changes that effect the text presented on screen. This is found at the *AppConfig.xml* under *OPCATSite>Text* and *OPCATSite>Links*. The table below shows the effect each Text and Links ID has over the user interface.

ID	Description
4	Dashboard Alerts Label
9	Top bar Search
3	Menu Bar “Category”
5	Regular Search window header
11	Visual reports Categories
20	Visual reports target selection
21	Visual Reports target selection by name
22	Visual Reports target selection by Candidate
24	Visual report target selection OK button
10	Visual reports Zoom
13	Visual reports Radius
12	Visual reports Target button

Links

ID	Description
5	Top bar Dashboard link
6	Top bar Textual reports link
7	Top bar Visual reports link
8	Top bar Trends Link
1	Top bar Home button link
3	Top bar Info button link
4	Top bar Help button (get XML data)
2	Favorites label
20	Help internal relative link for help .xml

Note that most browsers keep information in their cache. In order to see frequent changes made at the *AppConfig.xml* file while using Vision you may need to delete the browsing history at your browser.

20. Personalizing Vision

You can also set different look and feel and different data sources for Vision for specific users. To do this copy the *AppConfig.xml* file at *C:\Program Files\Apache Software Foundation\Tomcat 6.0\webapps\Vision\data* (or at any other location in which Tomcat is found). Now change the name of the copied file to *username-config.xml*. Now change this file to address the special look and feel needed for this user.

21. Setting New Report or Changing a Report in Vision

Vision's reports are defined at the *AppConfig.xml* file found at *C:\Program Files\Apache Software Foundation\Tomcat 6.0\webapps\Vision\data* (or any other location of your Tomcat installation). Reports are shown at the *Reports* page in Vision. Each Report is created in a different tab. This section explains how to:

- Create a new report in a new tab
- Edit current reports.
-

To start open *AppConfig.xml* with any XML editor.

The root of the XML is *OPCATSite*. Now go to the tag called *TextualTabs*. Its content is as follows:

```
<TextualTabs NumberOfTabs="1"> (this is the total number of reports)

  <TextualTab>
    <TabID>1</TabID> (when adding new tab make sure the ID is unique)
    <Header>Information</Header> (Information is the header of this tab)
    <Order>1</Order> (this number sets the order of tabs. Make sure there are no two tabs with the same order)
    <FirstColumnName>Name</FirstColumnName> (Reports are arranged by model name. Do not touch this tag)
    <FirstColumnToolTip>Name</FirstColumnToolTip> (Not implemented. Saved for future use)
    <DataBind>@EntityName</DataBind>(Reports are arranged by model name. Do not touch this tag)
    <TabGrid NumberOfColumns="3"> (the number of columns after the Name column)
      <Column> (starts the description of the column)
        <Order>3</Order> (set the order of columns)
        <CategoryID>C_1200</CategoryID> (this is the category ID. You need to add "C_" before the category
ID. See below at the Categories chapter how to locate the category ID)
        <Header>Description</Header> (the title of the column)
        <HeaderToolTip/> (Not implemented. Saved for future use)
      </Column> (closing the column tag)

      ... add here additional column tags as needed

    </TabGrid>
```

```
</TextualTab>
```

```
</TextualTabs>
```

To create a new report start a new TabID tag, add the columns according to your needs. Then change the total number of columns and the order according to the total number of columns you have.

Note that most browsers keep information in their cache. In order to see frequent changes made at the *Appconfig.xml* file you may need to delete the browsing history at your browser.

22. Adjusting the Dashboard Category Drop-Down and Categories Icons

Categories appear in Vision in 3 places

- **Textual Reports** – As explained at the previous sections the categories are the main data building blocks for the reports.
- **Category Drop-Down** (at the Dashboard and Reports pages) – This drop-down allows users to narrow down the selection of files according to specific category. For example, if you have an Owners category in which John is one of the owners you can immediately select Owners>John at the Category drop-down and get at the textual reports only files that are assigned to John.
- **Categories Icon** (at the *Classification Analysis* tab at the *Dependencies* page). This analysis allows users to visually see how files which belong to different Category Values interact with each other.

This section refers to the last two items. To see how to create new Textual Report please refer to the “*Setting New Report or Changing a Report in Vision*” section above.

First you will need the Category ID and Values IDs. This can be obtained by typing at your browsers **Error! Hyperlink reference not valid.**

Now open *AppConfig.xml* file found at *C:\Program Files\Apache Software Foundation\Tomcat 6.0\webapps\Vision\data* (or any other location of your Tomcat installation).

At the *AppConfig.xml* open *OPCATSite>Categories* tag. You will find there a list of Categories. To add a new Category add the following data (this is example is of the Program Type category):

```
</Category>  
<Category id="C_1500" name="Program Type" visible="true" icon="images/icon8.png"  
  tooltip="Table, Program or Undefined ">(add here C_ your Category ID, visible parameter  
is not implement and can remain true. The icon parameter sets the icon which will be assigned to this  
category at Vision Dependencies page. The icons are located at webapps\Vision\images and they are
```

numbered icon1-icon8. You may place a different icon of your selection at the *images* library and refer to this icon in this tag. The *tooltip* will be presented near the icon at the *Dependencies* page.

The elements below are according to the *Value id* you receive automatically. You can set any *name* to correspond *Value id*. The visibility feature is not implemented at this stage.

```
<Value id="1100" name="Table" visible="true"/>
<Value id="1101" name="Program" visible="true"/>
<Value id="1102" name="Undefined Program" visible="true"/>
<Value id="1103" name="Undefined Table" visible="true"/>
<Value id="1104" name="Technological Services" visible="true"/>
<Value id="1109" name="Business Services" visible="true"/>
</Category>
```

23. Set Styles for New Categories

Now we need to adjust the styles for the newly created Category values. Styles determine the way entities will look at the visual graphs at the *Dependencies* page. In this case we need to determine the style for the new Category Values. To do so, open the *webapps\Vision\styles\300*.

First look at the files named *valueid_<valueID>.style*. this files set the way your Category Value will appear at the *Classification Analysis* tab at Vision Dependencies page. Copy one of the files and change its name according to your Value ID. For example if the value is 9999 the file name will be *valueid_9999.style*. The Category in which this value was created is not relevant to this configuration.

Now open the file and adjust the settings as needed. We recommend that you only adjust the following lines which refer to the colors of the Value.

```
label.background=255,187,255
edge.linecolor=255,187,255
node.importance.normal=255,255,255
node.importance.important=255,0,0
node.fillcolor=255,187,255
```

In addition, you will find at *styles/300* directory files named *category_<categoryID_<valueID_<number>*. These files determine specific styles which will be assigned to an entity in all graphs and override the default style, if it belongs to this category value. For example if you have a category “*Status*” which has three values: no problem, some problems and critical problems, you may want to change the icon of programs in the status of “critical problem” at all the graphs to a red icon. The *<number>* you set at the end of the file name sets the priority of this style over other styles you set. To create style for your category (if needed) copy one of the files and change its names according to your category and value name. Now open the file to adjust the settings according to your preference.

```
label.background=168,168,168
edge.linecolor=0,0,0
icon.path=images/Table.png
node.importance.normal=255,255,255
```

```
node.importance.importent=255,0,0
node.fillcolor=255,255,255
node.importance.show=true
```

Note that any change you make to the styles and images requires you to restart Tomcat service in order for the changes to take effect.

24. Entering Vision from External Application

You may program other application to enter Vision at the dependencies page presenting the graph for the entity which your external application stated. This can be done by calling **Error! Hyperlink reference not valid.** [:8443/Vision/main.html#userID=<userID>&entityID=<entityID>\(as registered in Vision Database\)>](http://8443/Vision/main.html#userID=<userID>&entityID=<entityID>(as registered in Vision Database)>)

To receive Username for external application please contact us at support@opcat.com

25. Troubleshooting

- **Page cannot display** – when this is presented on your browser it means that either the communication to the server is lost or that the Apache Tomcat service has not been started.
- **Status Report 404** - when this is presented on your browser it means that the application is approaching a destination which is not correct. Check the address you tried to get.
- **Status Report 500** - this error means that you reached the right location, but that the parameters set or the JSP did not work.
- **Failed to get Data from remote server** – this message may be presented while browsing in Vision. This may be caused by inserting the wrong address at the *AppConfig.xml* file. Open the *AppConfig.xml* file and make sure the addresses are correct.
- **Failed to get AppConfig from remote server** – this message may be presented after login-in to Vision. In most cases this is a result of corrupted *AppConfig.xml* file. In such case open the *AppConfig.xml* file and look for XML syntax errors or changes you recently made to the file.

Vision Admin

VisionAdmin is the place to manage the security for Vision. In the future we plan to merge the conversion, indexing and Categories Console into this interface. VisionAdmin is available via any web browser at the following address **Error! Hyperlink reference not valid.**

26. Pre-requisites for VisionAdmin Installation

In order to install VisionAdmin you will need the following software components installed:

- Model Control Server
- Tomcat

27. Installing and Configuring VisionAdmin

To install and configure VisionAdmin do the following:

- Copy the directory *VisionAdmin* from your installation media into your webapps directory, usually found at *C:\Program Files\Apache Software Foundation\Tomcat 6.0\webapps*
- If your Model Control files are not installed at *C:\svn_repository*, or your OPCAT directory is not at *C:\Program Files\Opcat* then do the following:
 - Open the file *repositories.xml* at *...\Apache Software Foundation\Tomcat 6.0\webapps\VisionAdmin\data\config* and change the following parameters according to the correct path to your SVN repository

```
<auth-file>C:\svn_repository\common\conf\users</auth-file>
<access-file>C:\svn_repository\common\conf\auth</access-file>
```
 - At the same file change the path to the files where your *opcat.properties* and *opcat-log* are found:

```
<file title="OPS Configuration" >C:\Program Files\Opcat\opcat.properties</file>
<file title="OPS Log" >C:\Program Files\Opcat\opcat-log.xml</file>
```
 - Open the file *web.xml* file at *...\Apache Software Foundation\Tomcat 6.0\webapps\VisionAdmin\WEB-INF* and change `<param-value>C:\Program Files\Apache Software Foundation\Tomcat 6.0\webapps\VisionAdmin\data</param-value>` according to the right path to your VisionAdmin directory.
- If your OPCAT Server was installed before 1.1.2010, then open *auth* file at *C:\svn_repository\common\conf* or any other location you installed your Model Control files

and add the line `admin = sl1` under `[Groups]`. At default `sl1` is your admin name and `12345` is your password. You can change your administrator username and password at the `users` file found at `C:\svn_repository\common\conf`. In such case use the name you selected instead of `sl1` when changing the `auth` file as explained above. In addition change the last three rows at the `auth` file from:

```
[Systems:/]  
* =  
@users = rw
```

To:

```
[/]  
*=  
@admin=rw
```

28. Using VisionAdmin

Now you are ready to enter VisionAdmin. Use any browser to open `http://<servername>:8080/VisionAdmin`. At the login screen select the default repository and enter the administrator username and password (default =`sl1,12345`).

VisionAdmin has two main options `Navigation` – in which you can follow the directories and files in your Model Control and `Administration` which allows you to manage users, groups and their access rights to the different directories in the repository.

29. Navigation

Press on the Repository on the left pane (marked with ). You can press each directory to see its content. When the directory includes files, the files will be shown at the main screen.

29.1 Right Click options on Directories on the Left Pane

- `Properties` – shows the Revision, Author, last modified, URL and logs for this directory.
- `Download as Zip` – allows you to copy directory from the OMC. Note that the copied directory and files will not be managed by the Model Control, unless specifically added.
- `Show differences` – each time you commit your create a revision. This option show you the files that were added or deleted to this directory between two revisions
- `Show revision graph` - shows you revisions of branched directories (branching will be delivered at the Versioning Milestone).
- `Refresh` - refresh the status of current directory
- `New` – allows you to create child directory. This is the same as creating directory in OPS.

- Delete – allows you to delete a directory. We recommend deleting directories only from OPS. The *Delete* option at VisionAdmin shall be used only at extreme cases. The reason is that OPS includes several mechanisms to prevent deleting Used elements. Those mechanisms do not apply when deleting folders at VisionAdmin
- Add as shortcut – this will add a shortcut to this directory in the Left Pane under *Shortcuts*.

29.2 Right Click options on Files in the Main Window

- Download - allows you to copy the file from the OMC to your local computer. Note that the copied file will not be managed by the Model Control, unless specifically added.
- Properties – shows the Revision, Author, last modified, URL and logs for this file
- Fine History (Praise/Blame) – shows the XML of the model. Each line is marked according to the user who created/changed this line.
- Show differences – shows differences between two versions of the model's XML file.
- Show revision graph – shows you revisions of branched files (branching will be delivered at the Versioning Milestone).
- Show content – shows the XML content of the model.
- Delete – this option allows you to delete a file. We recommend deleting files only from OPS. The *Delete* option at VisionAdmin shall be used only at extreme cases. The reason is that OPS include several mechanisms to prevent deleting Used objects and processes. Those mechanisms do not apply when deleting files in VisionAdmin
- Show traceability – not implemented yet. Saved for future use
- Show URL – shows the repository URL for the specific file

30. Administration

The Administration tab is where you set your users, users groups and their privileges. The Administration tab is found at the left side of the screen. The following tabs can be found on the main area when pressing the Administration tab on the left pane.

30.1 Access Rights

- you can create access rights at a directory level for specific user or group. To do so, select at the drop-down the user or group to which you want to define access rights (if no groups are set go to the Groups tab and create groups and/or to the User tab to create users).
- Now mark for each directory which access rights this user and group will have. At default any type of access rights you provide for a directory will apply to all its sub-directories. You may change it by changing the rights for the specific sub-directory.

- The access possibilities are: RW- read/write, R- read only, X – no access (the user will not even see the directory) and def – default settings. No “save” action is needed after changing the access rights.
- The following are examples of “special cases”:
- A user does not have RW rights to a directory but he or she belongs to a group that has RW rights to this directory – in such case the user will have RW to the directory.
- A user has RW access to a directory but he or she also belongs to a group that doesn’t have such rights. In such case the user will have access to this directory.
- The group/user has no access to a directory but has RW or R to one of its subdirectories. In such case the user or group will not be able to see the sub-directory so the access rights to this sub-directory will not be applicable.

30.2 Groups

- This tab provides you five options: create new group, add users to group, add groups to group, delete a group or assign aliases.
- Create New Group – click on the *Create* button and fill in the name of the new group. You will then have to add users and designate access rights to this group as explained in this guide.
- Add existing User to existing Group – select the group on the left by one click on it and then mark the users you want to include in this group. The user will now have all the privileges of the group to which he or she were added.
- Add existing Group to existing Group – select the group at the left side of the screen and then mark the group you want to include in this group at the right side of the screen. The included group will have all the privileges of parent group, plus any other privileges it has by its own right.
- Delete Group – right click on a group and select *Delete*.
- Assign Aliases to Groups - select the group on the left and then mark the aliases you want to assign to this group at the right side of the screen. This option will appear only if you have any aliases set in your system.

30.3 Aliases

- VisionAdmin was designed to support LDAP - Lightweight Directory Access Protocol. This protocol allows interaction with external identity systems. This option requires additional configuration which is beyond the scope of this guide.

30.4 Users

- This tab allows you to create new users, modify existing users’ details, delete user and assign users to groups.

- Add new User – press the *Create* button and fill in the detailed required at the pop-up screens. Note that any user which you create has access to Vision web interface, regardless of the access rights granted to this user or its group.
- Modify User details – right click on a user and select *modify*. Now add or modify the details at the pop-up screen as needed.
- Delete User- right click on a user and select *delete*.

30.5 Update User (for administrator detail)

- This option appears on the left side when opening the administration tab. It provide you an immediate way to update the administrator details.

31. Admin Files

The Admin Files tab found within the Administration left tab was built in order to help you edit files which are relevant to the administration of Vision without the trouble of opening the actual files. The configuration of the files to be presented in this tab is done by changing the *repositories.xml*. This configuration of *repositories.xml* is explained above under *Installing and Configuring Vision Admin* section. Once the file is shown at the admin files you can edit and save your changes from the browser. You may add additional files to be shown at this tab by adding their location to *repositories.xml* as explained above.

32. Templates

Vision is designed to ensure design quality. For this purpose we created a mechanism for setting and using templates. As administrator you are requested to create a directory named “Templates” under the root directory. This can be done by right-click on the root directory at the Navigation tab and select new. This directory will be the placeholder for future organizational templates. This directory will be synchronized automatically to the Working Copy of the users working with this Server.

Categories and Classification

Categories are divided into two types: Model Categories which contain external information to be connected to OPS model elements and System Categories which contain external information to be connected to the model as a whole.

Your role as administrator is to prepare the available Model Categories to be connected by the users to model elements and later provide reports about the models connected to each Model Category. Model Categories may be added from two sources: Categories Console user interface, or external file via the Categories Console.

System Categories include is external information which is added to the model as a whole and not to elements within the model. The idea is that such information will be extracted automatically from external

systems and presented in Vision. The information is time based. The values presented at Vision are the last available values. This version of Vision includes mechanism to load System Categories in CSV files to Vision database. See above how to create reports in Vision which will show this information.

let's explain first how to use the Model Categories.

33. Add a Model Category at the Categories Console

- Press the Categories Console icon created on your desktop during OPS Admin installation
- At the *Choose Category* drop-down select *Create new category*
- Give the Category a *Name*, *Description* and *Type*
- Now fill-in the *Name*, *Description*, *ID* (which may be the same as the name), *Value* and *Color* for the first line. Note that the *Value*'s type has to match the type selected above. By pressing the color cell, a color palate will be opened enabling you to select the most appropriate color.
- Next right-click on the line you just created and select *Add Row* to add additional values.
- When done, press the *Commit* button on the right. The new category is available for any user opening OPS from now on.

34. Add a Model Category from External File

- You may create a category from external file. In such case enter the Category's a *Name*, *Description* and *Type* as explained above.
- Next select *Import* to load your selected file. The file shall be in a CSV format. The data shall be arranged in columns according to: *Name*, *Description*, *ID*, *Value* and *Color*. *Value* may be from type Integer, String, Date or Boolean. Date values shall be arranged as one number 21051970 will be twenty first of May 1970. Boolean values shall contain either TRUE or False.
- After loading the file you may commit it as explained above.

35. Updating Model Category with New Values

- Select the Category you want to update by choosing it on the *Choose Category* drop down
- Right-click on any row and select *Add Row*
- A new row will be added. Insert the data for your new Category value.
- Press *Commit*

36. Changing Model Category Values

You may change category values. For example, if you have a category of "Programmers" and one of the programmers is leaving and being replaced by another one the you may need to update the category accordingly. Note that in such case all the connections made by users between this Category value and model elements will sustain and the new value will be replacing the old one. To change Category value:

- Select the Category you want to edit by choosing it on the *Choose Category* drop down
- Select the row of the value you want to edit
- Stand on the cell you want to edit
- Write the new data
- Press Commit

We recommend that before changing any value you press the *Validate* button on the right to learn in which models this Category value is being used

37. Deleting Model Category Values

When you delete a Category value all the connections made by users between this value and model elements will be lost. Therefore this action shall be done with great care. You are strongly advised to press the *Validate* button before deleting any value. Pressing *Validate* will provide you a list of all the models in which this Category Value is used.

- Select the Category you want to edit by choosing it on the *Choose Category* drop down
- Select the row of the value you want to delete
- Review the results and decide whether to proceed.
- If proceeding, right click on the row of this value and select *Delete Row*
- Press Commit

38. Deleting Model Category

When you delete a Category all the connections made by users between the values of this Category and model elements will be lost. Therefore this action shall be done with great care. You are strongly advised to press the *Validate* button before deleting any Category. Pressing *Validate* will provide you a list of all the models in which this Category is used. To delete a Category go to the Navigation tab at VisionAdmin. Under the directory Templates> Categories you will find file for each category you created. Right click on the file and select delete.

39. System Categories

As mentioned above, System Categories can be loaded into Vision database and presented in Vision.

39.1 System Category File Format

System Category files shall be kept in CSV format. The name of the file is the name of the Category. For example if you place a file called *Owners.csv* at the Vision Category File location, you will create a category by the name of *Owners*. Vision will automatically assign an ID for this System

Category. If you already created a Category and have an ID you can place a CSV file which carries the Category ID name.

The file shall include two columns with no header. The first column includes the model name and the second includes the value for this model at this Category.

For example:

```
File Owners.csv  
  
TPFO602R, John  
ICSS51R, Mary  
.....
```

39.2 System Category File Location

The CSV files shall be saved at the location you defined at your *server.properties* file. See “[Configuring Vision Server](#)” at the *Vision Server* chapter above.

39.3 Viewing Category ID

Type **Error! Hyperlink reference not valid.** at your browser. You will now see a list of all the System Categories defined in your system. Use this information to configure new reports in Vision as explained above at “[Setting New Report or Changing a Report in Vision](#)” in *Vision Server* chapter above. If you type **Error! Hyperlink reference not valid.** you will see all the available values for all the categories. This information may be handy if you plan to adjust the Categories drop-down in Vision (see above: adjust Category Drop-Down)

39.4 Loading and Deleting Category or Category Data

To load a new System Category or new data to existing Category type **Error! Hyperlink reference not valid.** This will load all the CSV files which exists in your Category File Location. To delete a System Category type **Error! Hyperlink reference not valid.**> . If you only want to delete the data you can select *delete-category-data* instead of *delete-category*.

Loading Pre - Made Repository and Database

In some cases you would like to load a repository and database which were done at other location. The following sections describes how to easily do this. Note that:

- ***If you follow the instructions below any old files in your repository will be deleted. This action cannot be reverted. This process is not designed for merging existing and new data***

The loading steps are as follows:

- Clean Database and Model Control
- Upload Database
- Format Database
- Import Models
- Run Collect Data
- Run Indexer

Let's see each step in details:

40. Cleaning Database and Model Control

40.1 Clean Database

- Open Command Prompt and change the directory to your Data Scripts installation directory
- Type `mysql -u opcat -p -h <Server IP> {IP of your server – if installing from your server the address is 127.0.0.1} > Enter`
- Enter your password (the one set during the installation of MySQL)
- You will get the mysql prompt.
- Type `use opcat; > Enter`
- Type `source clean-expose.sql >Enter`
- Quit

40.2 Clean Model Control

- Open OPS Admin
- Open the *Repository Browser* right click on the directory you want to delete and select *Unlock*
- Open the *Repository Browser* right click on the directory you want to delete and select *Delete*.
- In some cases OPCAT may fail deleting files or directories which were checked out by users. In such case you may use VisionAdmin to delete those files. Alternatively you may leave those files or folders. This will not impair the new installation and will not be presented in Vision. Yet the leftover files will not have the right corresponding usage data and shall not be used.

41. Upload Database

- Open Command Prompt

- Your database copy will be in the form of *.sql. Change to the directory to the directory where your *.sql is located.
- Type `mysql -u root -p opcat -h <Server IP> {IP of your server – if installing from your server the address is 127.0.0.1} >` Enter
- Enter your password (the one set during the installation of MySQL)
- You will get the mysql prompt.
- Type `source <name of the data base to be copied(in our example opcat.sql) ; >`Enter
- *Quit*

42. Format Database

- Open command prompt
- Change to the Installation Directory where *dw.sql* file is found
- Type `mysql -u root -p -h <Server IP> {IP of your server – if installing from your server the address is 127.0.0.1} >` Enter
- Enter your password (the one set during the installation of MySQL)
- Type `source dw.sql >`Enter
- *Quit*

43. Import Models

- Open OPS Admin
- Go to *Repository Browser*
- Right click on your root directory and select *Import*
- Browse to the location of the files you need to import and press ok. Note that:
 - This process may take a while
 - The resulting directory structure must be identical to the one set at the original MC from where you copied these files. Otherwise it will not match the expose-usage data at the database.
 - When you *Import* the top folder is ignored. Therefore, if you import to the root a folder called D1 which includes D2 the resulting structure will be root>D2. In most cases of converted model if the structure at the original settings was root>*RPGConvertedModels* then when you import you should import from directory which includes *RPGConvertedModels* (for example *Systems>RPGConvertedModels*)
 - In some cases importing few directories together does not work. In such case create the structure at you repository manually and then import the directories one by one.

44. Collect Data

- Run *collectData.jsp* as explained [above](#)

45. Run Idexer

- Run Indexer as explained [above](#)

End-User Clients

OPS client

46. Introduction

Object Process Studio(OPS) is a comprehensive Java based model editor that features a dual graphics- and natural language-based conceptual modeling language that is intuitive yet formal, easy to understand and quick to learn. Users are using OPS in order to create, review and amend OPM models. For more details about the use of OPS please refer to *Vision User Guide*.

47. Pre-requisites

OPS requires Java JRE 1.6. If you encountered any problems in installing Java please visit http://www.java.com/en/download/help/index_installing.xml?user_os=&user_jre=6.0 for assistance.

48. Installation

OPS client shall be installed by users of the VISION. Administrators can use the same functionality which is anyway provided when installing the RPG Convertor (*OPS-admin.exe*). You as administrator shall provide users with the *OPS-Installer.exe* file and the DB Server and MC Server location/name. Users will then double click the *OPS-Installer.exe* file and follow the instructions on screen. During installation the users will be requested to type in the DB Server and MC Server names. If users work with large models they may change the amount of memory allocated to OPS. In order to allocate more memory, right click on the *OPCAT* shortcut on your desktop and *properties*. At the *Target* text box change *Xmx1024m* to the amount of internal memory you can allocate to the OPS.

49. Configuration

OPS configuration instructions are found at the file *opcat.properties*. The file is located at the directory where OPS were installed (usually C:\Program Files\Opcat). The file is created when you open OPS for the first time. Each client include configuration file. It is not recommended for users to change settings at the configuration file.

50. Trouble shooting

- **“Main Class Missing”** – you will usually get this message because Java is not installed at all, or is not installed properly. To correct this problem install Java or contact your system administrator.

- OPS is opened but nothing is showed under the Models or Repository Browser except for “*root*”. This is the status of OPS if the *gui.show* parameter in *opcat.properties* file is set to false. Evidence to this is that OPS is opened in minimized state (in Windows). To solve this open the *opcat.properties* file and change the *gui.show* to *=true*.
- OPS is opened but nothing is showed under the Models or Repository Browser. This may be the case if the user has no access rights to the root of the repository. To solve this please refer to *Access Rights* section above.

Vision client

51. Introduction

Vision client is a browser-based Flex client that enables analysis and of system dependencies and logic. Vision is accessible at **Error! Hyperlink reference not valid.**

52. Supported Browsers

Vision client is optimized to work with Microsoft Explorer. Flash Player version 10 must be installed.

53. Security

User defined at VisionAdmin can access Vision client using their username and password.

54. User Help

Vision detailed user help can be found on-line when pressing the *Help* button after entering the application.