

MagicInfo Premium DataLink User Guide

DataLink Server is a web-based application that collects external data periodically and transfers data to the MagicInfo Player allowing you to play dynamic content.



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Terminology

- Module
- Service
- Starting / stopping services
- Data View
- User columns

Licenses

- LGPL software
- License_Openssl
- License_BSD
- License_Apache2.0
- License_Oracle JDBC
- Eclipse Public License, Version 1.0 (EPL-1.0)

Before getting started

Rules used in this user guide

Product information in this user guide is based on the following rules.

Menu commands

Instruction to open a menu is shown as follows.

Select the **Data** tab > **Data Source** > **Add**.

→ To clarify, go to the **Data** tab and click **Add** from **Data Source**.

Software names

The software names featured in this manual are abbreviated as follows.

- MagicInfo Premium DataLink → DataLink, DataLink Server
- MagicInfo Premium Server → MagicInfo Server
- MaginInfo Premium i Player → MaginInfo i Player
- MaginInfo Premium S Player → MaginInfo S Player
- MagicInfo Premium Author → MagicInfo Author
- MagicInfo VideoWall → VideoWall
- MagicInfo VideoWall Console → VideoWall Console
- MagicInfo VideoWall i Player → VideoWall i Player
- MagicInfo VideoWall Author → VideoWall Author
- MagicInfo Player collectively refers to MagicInfo i Player and MagicInfo S Player.

Key features of DataLink Server

DataLink Server is a web-based application that collects external data periodically and transfers data to the MaginInfo Player allowing you to play dynamic content.

Using DataLink Server, collect and manage data after adding modules and services to interface with an external legacy system.

Collecting and publishing data

- Default modules are provided to collect DB, Excel, Weather, XML, Google Calendar, Outlook Calendar, and MS Exchange server data.

Data collection service management

- Configure options for each service: Service Name and Collection Cycle.
- Edit or delete created services.
- Start or stop collecting data from created services.
- View collected data in table format.

Processing and managing collected data using a number of methods

- Create a data view by sorting or organizing collected data using SQL statements. Distribute data using the data view.
- Manually add data by adding a user column to collected data.
- When adding data to a user column, various formats such as Boolean, Combo and Text are supported.

Provision of collected data through OpenAPI

- Publish collected data through OpenAPI.

Management of custom plug-in for legacy system data

- If data collection is needed from a legacy system where the default modules cannot be used, implement a new module using the additional module development plug-in provided.

Security and scalability

- Forward data through SSL.
- Through clustering, increase the number of LFDs to connect to.

System requirements

Hardware

- CPU : Dual Core 2.5 GHz or greater recommended
- RAM: 2 GB or greater
- HDD : 200 GB or greater

Software

- Internet Explorer 8.0 or later

System

- Windows 7 Professional or later
- Windows Server 2008 or later

Program restrictions

Module

- When adding a module, selecting the module file displays the module name automatically.
- Modules refer to OSGi-format jar files developed according to the module writing guide provided by DataLink Server.
- Editing a module may cause services that were created using the module previously to be unavailable.
- Deleting a module will delete all the services and data views that were created using the module previously.

Data service

Adding services

- Duplicate service names are not allowed. This applies to all services regardless of the module used to create the services.
- Service names cannot include special characters (&, \, ", ').

Editing a service

- Before editing a service, make sure the service is stopped.

Deleting a service

- Deleting a service will delete all the data collected from the service.

DB module service

- The following input fields cannot be left blank: service name, service collection cycle, database type, database address, database user ID, and database user password.

Excel module service

- The following input fields cannot be left blank: service name, service collection cycle, document format, network IP address, and file location.
- After entering a file location, click **Confirm** to confirm that the file exists.

Weather module service

- The following input fields cannot be left blank: service name, service collection cycle, display format, and area.
- Eight locations are provided by default: Seoul, New York, San Francisco, Los Angeles, Tokyo, Beijing, Shanghai, and Harbin. To add a new location, use the format "location code;1234567" when entering a location name.
- A previously added location cannot be added again.

XML module service

- The following input fields cannot be left blank: service name, service collection cycle, network IP address, and XML file location.
- Enter the file location of the service to add and press **Confirm**. A page will appear showing XML elements and property names. Select elements or properties you want to collect from a service. The selected elements or properties can be found in **Target Element**.

Google Calendar module service

- The following input fields cannot be left blank: service name, service collection cycle, and login ID/password.
- The login ID and password are used to log in to Google Calendar.
- Make sure the entered ID includes @gmail.com.

Outlook Calendar module service

- The following input fields cannot be left blank: service name, service collection cycle, and network IP address.
- Before starting the Outlook Calendar module, install Outlook Agent on the computer where Outlook is installed.

MS Exchange server module service

- The following input fields cannot be left blank: service name, service collection cycle, and network IP address.
- Install MS Exchange server Agent on the computer where MS Exchange server is installed before starting the MS Exchange server module.

Data view

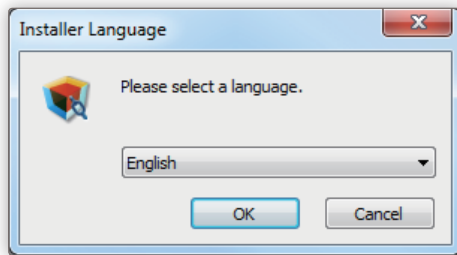
- A duplicate view name (View Name) is not allowed when a data view is created.
- When creating a data view, ensure you enter the data table name in the [service name.table name] format in SQL.

User columns

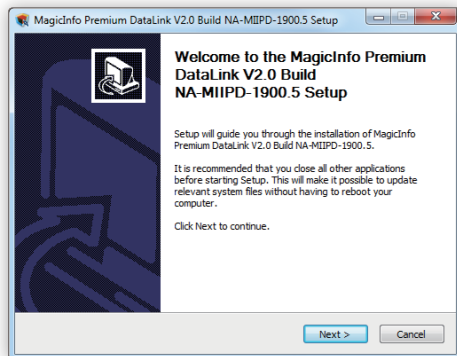
- When adding a user column, the Column Name cannot start with a number.
- User columns in the Text and Boolean formats cannot be edited.
- Make sure to click **Save** to apply data, entered or selected from the user column, to the database.

Installing/uninstalling the program

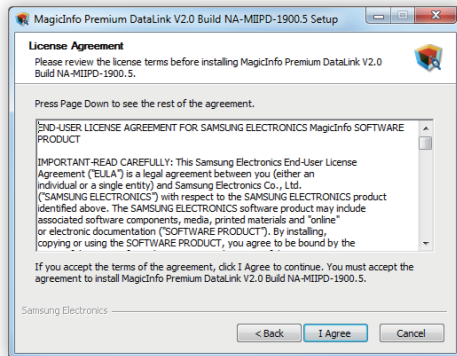
Installing the program



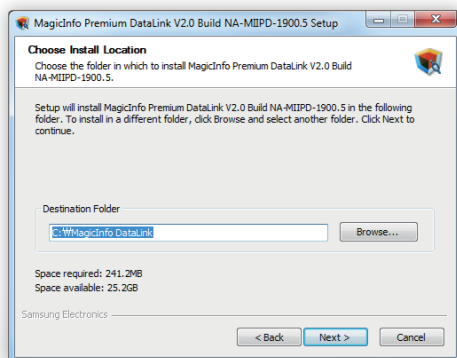
- 1 Specify the program installation language and click **OK**.



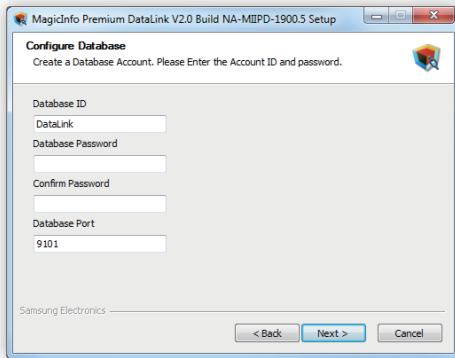
- 2 Click **Next** to proceed.



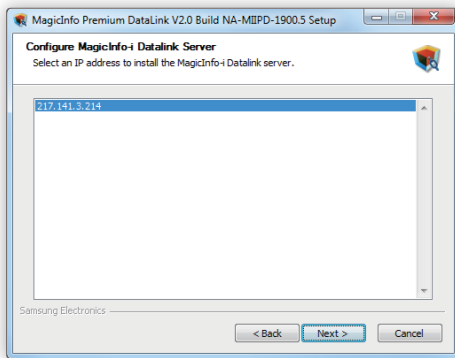
- 3 Read the license agreement thoroughly and click **I Agree**.



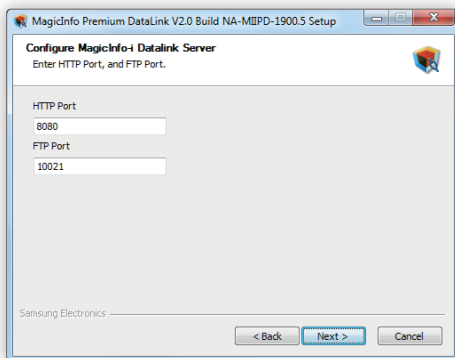
- 4 Specify the program installation path. Then, click **Next** to proceed.



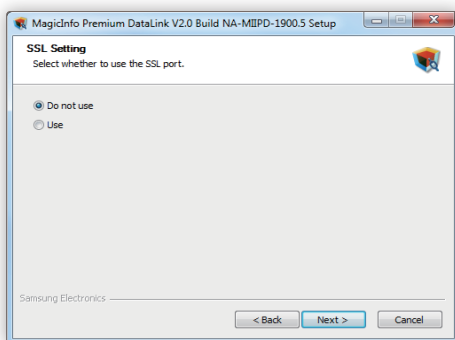
- 5 Enter the ID, password and port to use for the database account. Click **Next** to proceed.
A password can be 8 - 50 characters long.



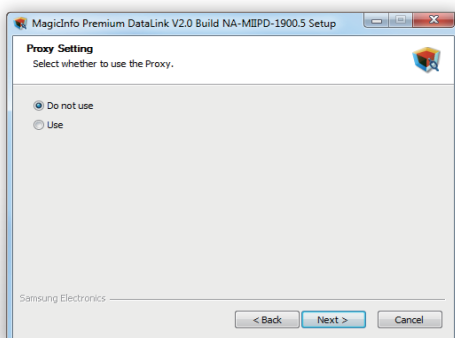
- 6 Select an IP to use for DataLink Server. Then, click **Next** to proceed.



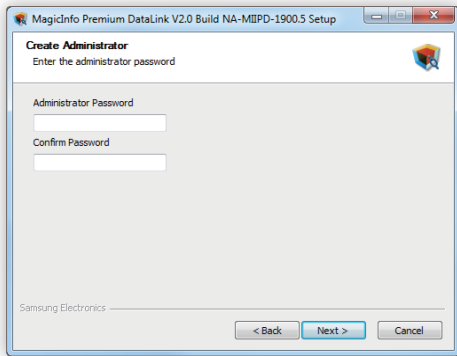
- 7 Enter the HTTP and FTP ports used on DataLink Server.



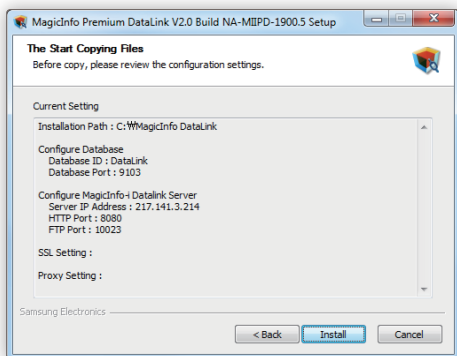
- 8 Enable or disable SSL.
Selecting **Do not Use** displays a page to select whether to use a proxy.
Selecting **Use** displays a page to configure the SSL port.



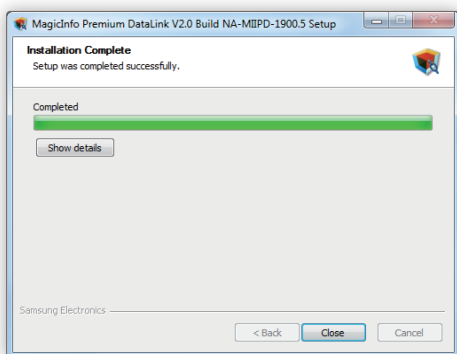
- 9 Select whether to use a proxy.
Selecting **Do not Use** displays a page to proceed with installation.
Selecting **Use** displays a page to configure the proxy port.



- 10 Set the administrator password.
A password can be a combination of 8-50 alphanumeric characters. The same number or letter cannot be repeated three times or more consecutively.



- 11 Read the installation information thoroughly and click **Install**.
Program installation will start.



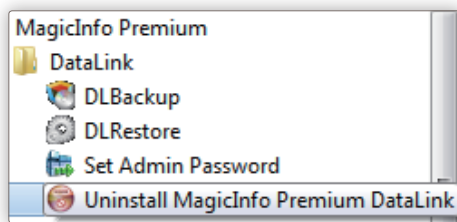
- 12 After the program installation is complete, click **Close**.

Configuring the browser settings after installation

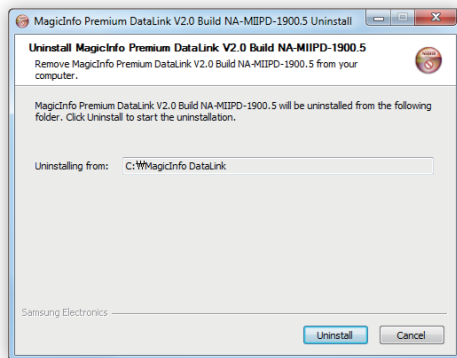
From Microsoft Internet Explorer 8.0, click **Tools > Internet options**.

- Go to **Browsing history > Settings > Temporary Internet Files** and select **Every time I visit the webpage**.
- Go to **Advanced > International** and select the **> Send UTF-8 URLs** checkbox.

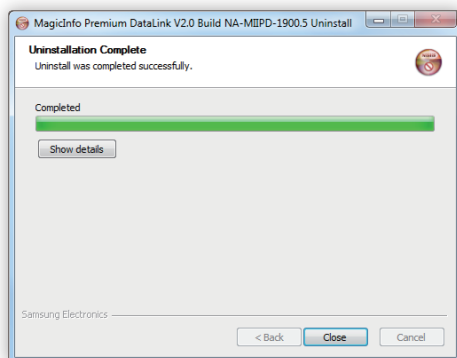
Uninstalling the program



- 1 Select **Start > All Programs > MagicInfo Premium > DataLink > Uninstall MagicInfo Premium DataLink**.



- 2 Select **Uninstall**.



- 3 Click **Close**.

Note

The program can also be uninstalled in **Control Panel > Programs and Features**.

DataLink Server backup and restore

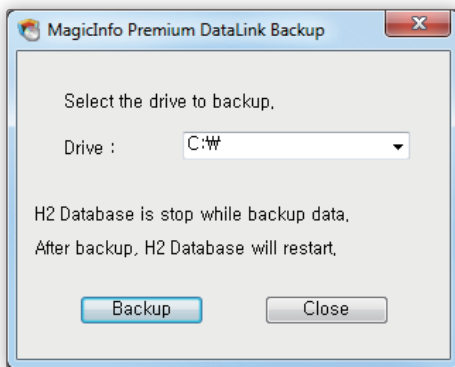
DataLink Server provides backup and restore features.

To back up or restore on Windows, select **Start > All Programs > MagicInfo Premium > DataLink**. Next, click the backup or restore icon.

You may need to save the current settings and data before uninstalling DataLink Server. The backup and restore features provided in the DataLink Server allow you to back up and save the settings and data when uninstalling the program.

	Backup(Backup)	Back up the current settings and data in the DataLink Server.
	Restore(Restore)	Restore the previous settings and data before a backup in the DataLink Server.

Backup



- 1 Select a drive to back up and click **Backup**. Back up the current settings and data in the DataLink Server.

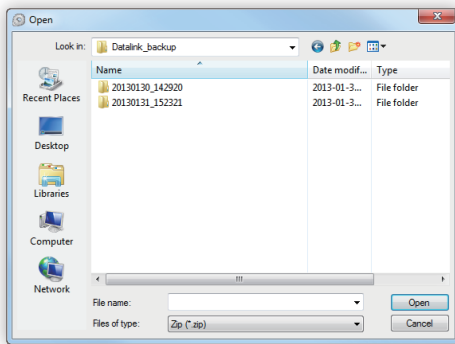
Backed up data is saved in the Datalink_backup folder under the specified drive according to date and time.

Periodic backup using the Windows task scheduler feature

Perform regular backups using the task scheduler feature from Windows.

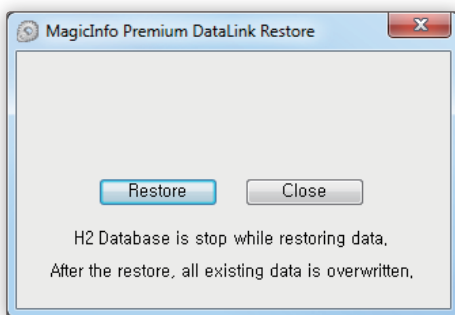
Refer to MS Windows Help or the user guide for further details on how to use the task scheduler function.

Restore



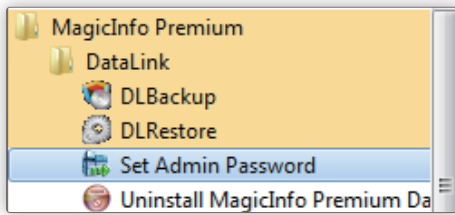
1 Select the backup data folder of the time to restore.
Backup data is saved in folders according to backup date and time under the **Datalink_backup** folder of the specified drive.

2 Click **OK**.



3 Click **Restore**.
The DataLink Server settings and data are restored.

Changing the DataLink Server administrator password



- 1 Select **Start > All Programs > MagicInfo Premium > DataLink > Set Admin Password**.

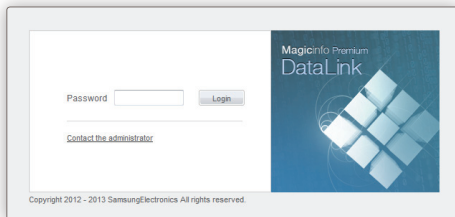


- 2 Your web browser is automatically opens the page where the administrator password can be changed. Enter the password to change and click **Edit**.



Note

The page to change a password can also be accessed by entering **http://(DataLink Server IP):(DataLink Server Port)/DataLink/password_change.jsp** in the web browser URL input field.

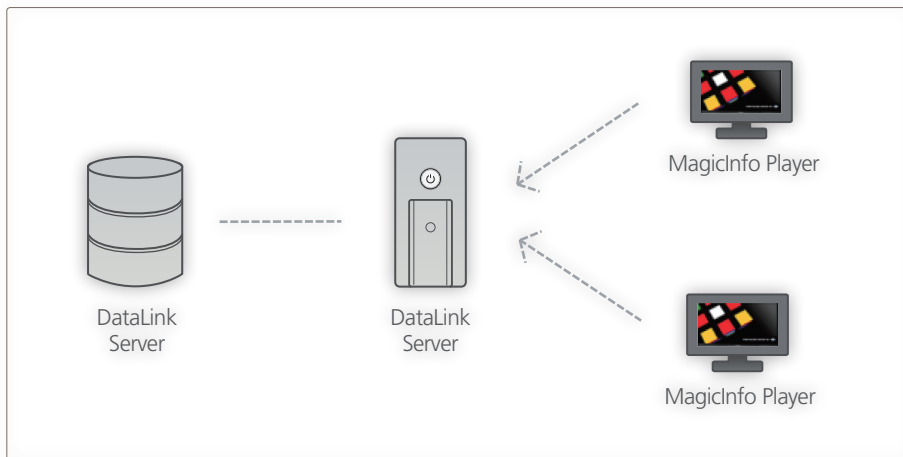


- 3 A confirmation window appears after the password is changed. Click **Close** to open the DataLink Server login page.

Clustering

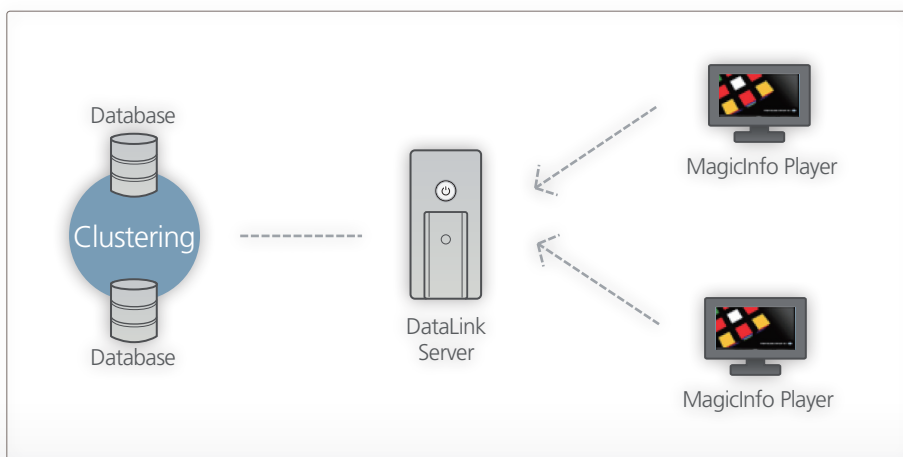
Configuration using a single DataLink Server and a single database

The default DataLink Server configuration installs DataLink Server on a deployment where a single DataLink Server and single database are used by default.



Configuration using a single DataLink Server and multiple databases

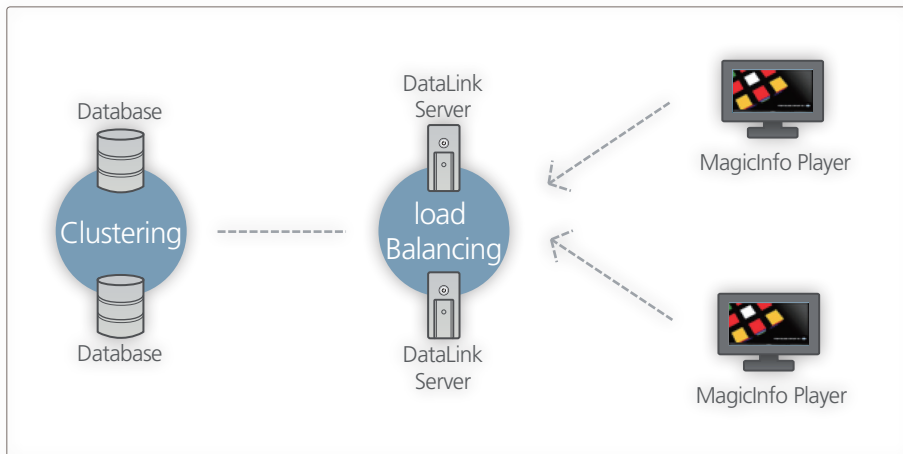
Configure the system by connecting multiple databases to a single DataLink Server. This configuration saves data by syncing multiple databases and allows the service to operate continuously when a database stops. To perform database clustering, ensure you change the default database access settings configured after DataLink Server installation to the addresses of database servers used for clustering.



Configuration using multiple DataLink Server and multiple databases

Configure the system by connecting multiple databases to multiple DataLink Server.

In this configuration, data is synced and saved in the same manner as the configuration with <a single DataLink Server and multiple databases>. Once a request is received from an LFD, one of the multiple DataLink Server is selected to perform the request based on the load-balancing methodology. Load-balancing prevents requests from LFDs from putting too much load on a particular DataLink Server and allows processing of requests to be shared. To configure multiple DataLink Server through load-balancing, configure load-balancing settings for each DataLink Server.



Login and screen layout

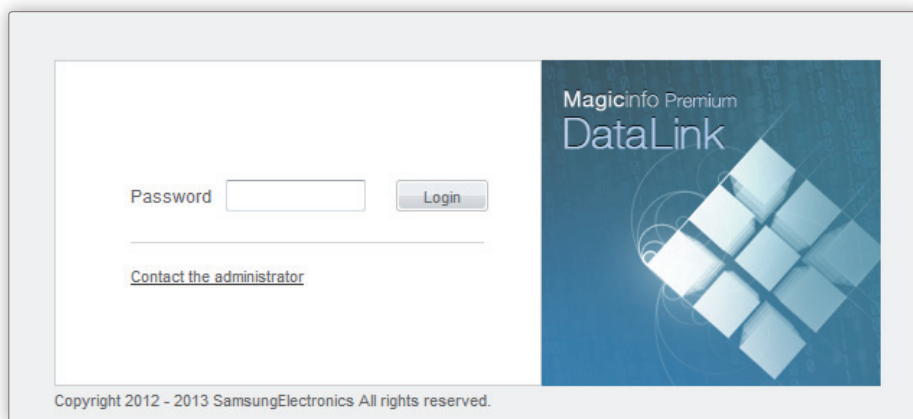
Accessing a server

Enter **http://(DataLink Server IP):(DataLink Server Port)/DataLink** in the web browser URL input field to open the DataLink login page.

Enter the administrator password and click **Login** to go to the main page.

 **Note**

- The last "**DataLink**" in the address is case-sensitive.
- Refer to "Changing the DataLink Server administrator password" for details on changing an administrator password.



Screen Layout

Logging in displays the main page. From the main page, click a tab to access the corresponding functions page.

The screenshot displays the Maginfo Premium DataLink web interface. The top navigation bar includes tabs for Data, Monitoring, and Setting, along with a user profile for 'administrator' and a Logout button. The left sidebar shows a 'Data Source' menu with options like 'View All', 'Default DB Module', 'Default Excel Module', 'Default Weather Module', 'Default XML Module', 'Default Exchange Module', 'Default Outlook Module', and 'Default Google Module'. The main content area is titled 'Service List > View All' and contains a table with the following data:

No.	Module Name	Service Name	Status	Period	Last Modified Date
4	Default Weather Module	Weather Module sample	■	00:01:00	2013-01-27 19:03:54
3	Default Weather Module	Weather Test 3	■	00:01:00	2013-01-27 18:46:22
2	Default Weather Module	Weather Test 2	■	00:01:00	2013-01-30 16:43:16
1	Default Weather Module	Weather Test 1	■	06:07:24	2013-02-03 11:07:09

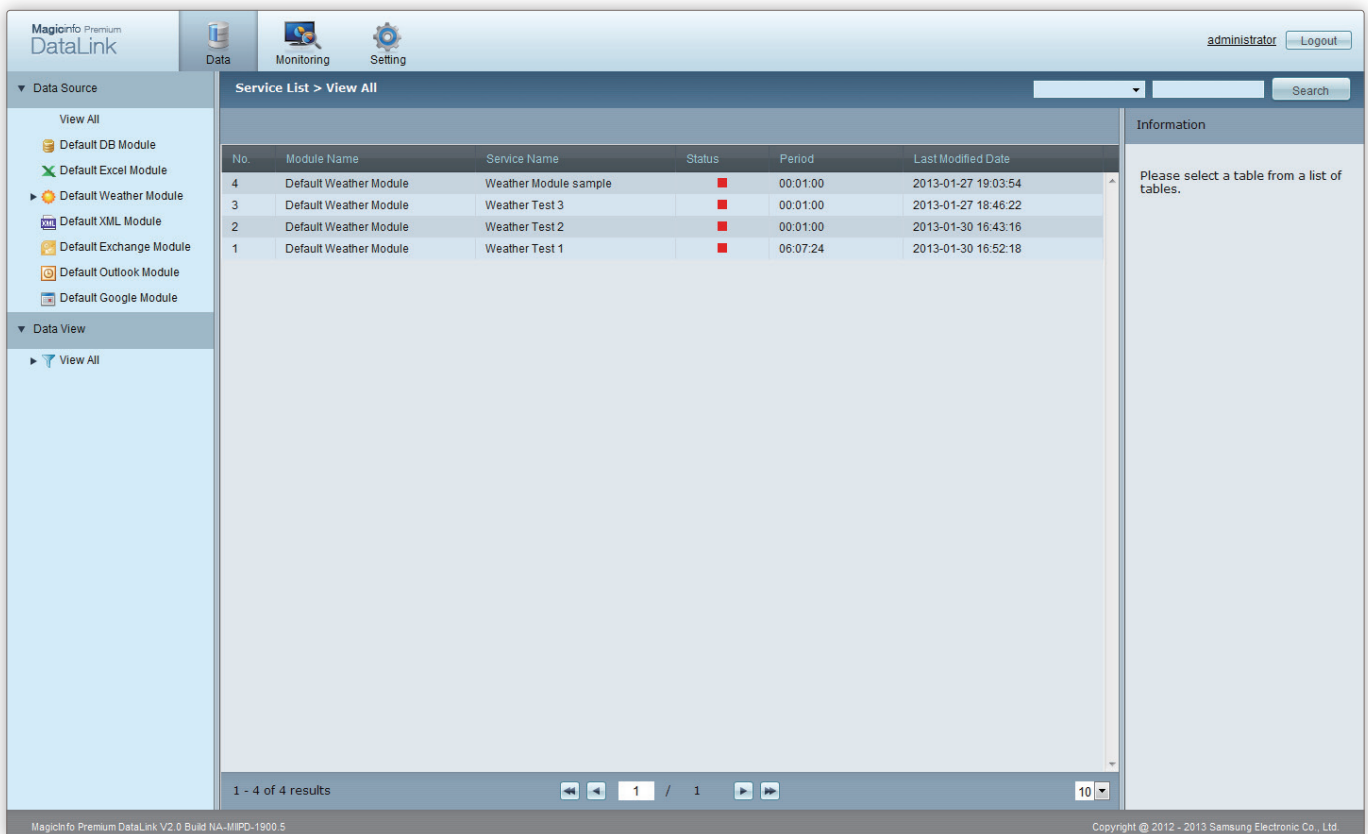
Below the table, it shows '1 - 4 of 4 results' and pagination controls. On the right side, there is an 'Information' panel with the text: 'Please select a table from a list of tables.' The footer contains the version information 'Maginfo Premium DataLink V2.0 Build NA-MIPD-1900.5' and the copyright notice 'Copyright © 2012 - 2013 Samsung Electronic Co., Ltd.'.

Main tabs

DataLink Server consists of the following main tabs. Clicking each tab displays the corresponding functions page.

Data	Add and manage services. Using SQL statements, create data views using data collected in added services.
Monitoring	View the current status of services created in the Data menu.
Setting	Add and manage service modules.

Data management



Data Source

Add, view, edit and delete services to collect data. Add a user column and use the column along with collected data. In the DataLink Server system, services can collect any type of data using the plug-in format. DB, Excel, Weather, XML, Google Calendar, Outlook Calendar, and MS Exchange server modules are provided by default.

From the DataLink Server main page, select the **Data** tab > **Data Source**.

Adding services

Adding services to Default DB Module

- 1 From the Default DB Module list, click **Add**. Add services as desired.
Fields with * cannot be left blank.

Service Name	Enter a DB service name to add.
Collection Cycle	Specify the cycle to collect data for the DB service to add.
Service Description	Enter a basic description of the DB service to add.
Database Type	Select a database type for the DB service to add from MySQL, Oracle, and MS-SQL Server.
Database URL	Enter the database URL for the DB service to add.
Database Username	Enter the database user name for the DB service to add.
Database Password	Enter the database user password for the DB service to add.

- 2 Enter information of the service to add and click **Next**. The data preview page appears.
- 3 Select a column and data type to collect. Next, click **Finish**. The service has been added.

Column types

Supported column types include File and Text. The Text type collects legacy data in the text format. The File type identifies legacy data as a file location and downloads files to DataLink Server.

Adding services to Default Excel Module

- 1 From the Default Excel Module list, click **Add**. Add services as desired.
Fields with * cannot be left blank.

The screenshot shows a web form titled "Service Registration > Default Excel Module". At the top left are "Next" and "Cancel" buttons. The form fields are as follows:

- * Service Name**: A text input field.
- * Collection Cycle**: Three dropdown menus for hours, minutes, and seconds, with a colon separator. Below it is the text "ex) HH:MM:SS".
- Service Description**: A text area with a vertical scrollbar.
- * Document Format**: A dropdown menu with "Excel" selected.
- * Network IP Address**: A text input field.
- Login ID**: A text input field.
- Login Password**: A text input field.
- * File Location**: A text input field. Below it is the text "ex) foldername/filename, Shared/Sheet1.xls, Shared/xls/Sheet1.xls".

A "Confirm" button is located at the bottom right of the form.

Service Name	Enter an Excel service name to add.
Collection Cycle	Specify the cycle to collect data for the Excel service to add.
Service Description	Enter a basic description of the Excel service to add.
Document Format	Select a document format for the Excel service to add from Excel and CSV.
Network IP Address	Enter the IP address of the network where files are saved.
Login ID	Enter the ID to use to log in to the network.
Login Password	Enter the login password.
File Location	Enter the path where files are saved in the [Folder name/File name] format. E.g.: Data/Shared/Sheet1.xls

- 2 Enter the file location of the service to add and click **Confirm**. Confirm that files saved on the entered network IP address can be added as a service.
- 3 If the files can be added as a service, click **Next**. The data preview page appears.
- 4 Select a column and data type to collect. Next, click **Finish**. The service has been added.

Column types

Supported column types include File and Text. The Text type collects legacy data in the text format. The File type identifies legacy data as a file location and downloads files to DataLink Server.

Adding services to Default Weather Module

- 1 From the Default Weather Module list, click **Add** to add services.
Fields with * cannot be left blank.

The screenshot shows a web form titled "Service Registration > Weather module". At the top left, there are "Next" and "Cancel" buttons. The form contains the following fields:

- * Service Name**: A text input field.
- * Service Period**: Three dropdown menus for hours, minutes, and seconds, with a colon separator. Below it is the example "ex) HH:MM:SS".
- Service Description**: A text area with a vertical scrollbar.
- * Display Format**: A dropdown menu currently set to "Celsius/km".
- * Location**: An "Add" button above a yellow highlighted area.

Service Name	Enter a weather service name to add.
Collection Cycle	Specify the cycle to collect data for the weather service to add.
Service Description	Enter a basic description of the weather service to add.
Display Format	Select a display format for the weather service to add from Celsius/km and Fahrenheit/mile.
Location	Add a new location and collect weather service data for the location. To add a new location in addition to the default locations, the location name in English and the location code are required.

- 2 Enter information of the service to add and click **Next**. The data preview page appears.
- 3 Select a column and data type to collect. Next, click **Finish**. The service has been added.

Column types

Supported column types include File and Text. The Text type collects legacy data in the text format. The File type identifies legacy data as a file location and downloads files to DataLink Server.

Adding services to Default XML Module

- 1 From the Default XML Module list, click **Add**. Add services as desired. Fields with * cannot be left blank.

Service Name	Enter an XML service name to add.
Collection Cycle	Specify the cycle to collect data for the XML service to add.
Service Description	Enter a basic description of the XML service to add.
Network IP Address	Enter the IP address of the network where files are saved.
Login ID	Enter the ID to use to log in to the network.
Login Password	Enter the login password.
XML File Location	Enter the path where files are saved in the [Folder name/File name] format. E.g.: Shared/Sheet1.xml
Target Element	View the elements or properties to be collected by the DataLink service.

- 2 Enter the file location of the service to add and click **Confirm**. A page appears showing the names of elements and properties of the XML file.
- 3 Select elements or properties to collect from a service. The selected elements or properties can be found under **Target Element**.
- 4 If the files can be added as a service, click **Next**.
- 5 Select a column and data type to collect. Next, click **Finish**. The service has been added.

Adding services to MS Exchange server

- 1 From the Default MS Exchange server list, click **Add**. Add services as desired.
Fields with * cannot be left blank.

Service Name	Enter the name of the MS Exchange server service to add.
Collection Cycle	Specify the data collection cycle of the MS Exchange server service to add.
Service Description	Enter a basic description of the MS Exchange server service to add.
Network IP Address	Enter the IP address of the network where files are saved.

- 2 Enter information of the service to add and click **Next**. The data preview page appears.
- 3 Select a column and data type to collect. Next, click **Finish**. The service has been added.

Adding services to Outlook Calendar

- 1 From the Default Outlook Calendar list, click **Add**. Add services as desired.
Fields with * cannot be left blank.

Service Name	Enter the name of the Outlook Calendar service to add.
Collection Cycle	Specify the data collection cycle of the Outlook Calendar service to add.
Service Description	Enter a basic description of the Outlook Calendar service to add.
Network IP Address	Enter the IP address of the network where files are saved.

- 2 Enter information of the service to add and click **Next**. The data preview page appears.
- 3 Select a column and data type to collect. Next, click **Finish**. The service has been added.

Note

Before starting the Outlook Calendar module, install Outlook Agent on the computer where Outlook is installed.

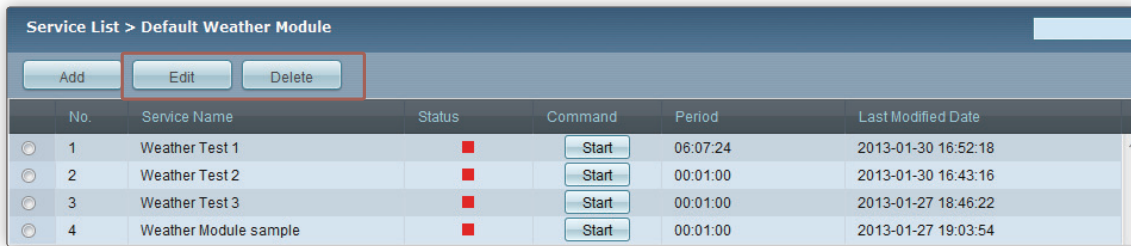
Adding services to Google Calendar

- 1 From the Default Google Calendar list, click **Add**. Add services as desired.
Fields with * cannot be left blank.

Service Name	Enter the name of the Google Calendar service to add.
Collection Cycle	Specify the data collection cycle of the Google Calendar service to add.
Service Description	Enter a basic description of the Google Calendar service to add.
Login ID	Enter the ID used to log in to Google Calendar. Make sure the entered ID includes @gmail.com.
Login Password	Enter the login password.

- 2 Enter information of the service to add and click **Next**. The data preview page appears.
- 3 Select a column and data type to collect. Next, click **Finish**. The service has been added.

Editing / deleting services



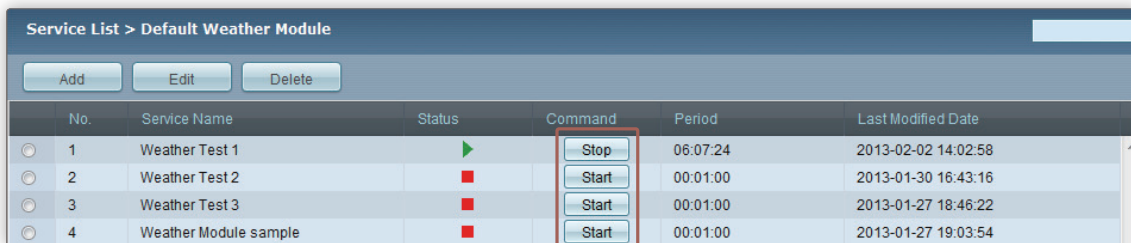
Service List > Default Weather Module

No.	Service Name	Status	Command	Period	Last Modified Date
1	Weather Test 1	■	Start	06:07:24	2013-01-30 16:52:18
2	Weather Test 2	■	Start	00:01:00	2013-01-30 16:43:16
3	Weather Test 3	■	Start	00:01:00	2013-01-27 18:46:22
4	Weather Module sample	■	Start	00:01:00	2013-01-27 19:03:54

- Select a service to edit from the service list and click **Edit**. The corresponding service edit window appears. Edit the service using the same method as adding services. Make sure to stop the service before editing it.
- Select a service to delete from the service list and click **Delete**. The service is deleted.

Starting / stopping services

Click **Start** or **Stop** for the desired service item. The service item is started or closed.

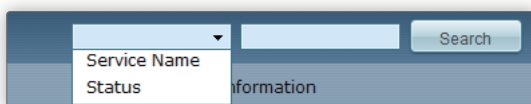


Service List > Default Weather Module

No.	Service Name	Status	Command	Period	Last Modified Date
1	Weather Test 1	▶	Stop	06:07:24	2013-02-02 14:02:58
2	Weather Test 2	■	Start	00:01:00	2013-01-30 16:43:16
3	Weather Test 3	■	Start	00:01:00	2013-01-27 18:46:22
4	Weather Module sample	■	Start	00:01:00	2013-01-27 19:03:54

Searching services

Search for a particular service by specifying the search criteria (Service Name or Status) and entering a keyword.

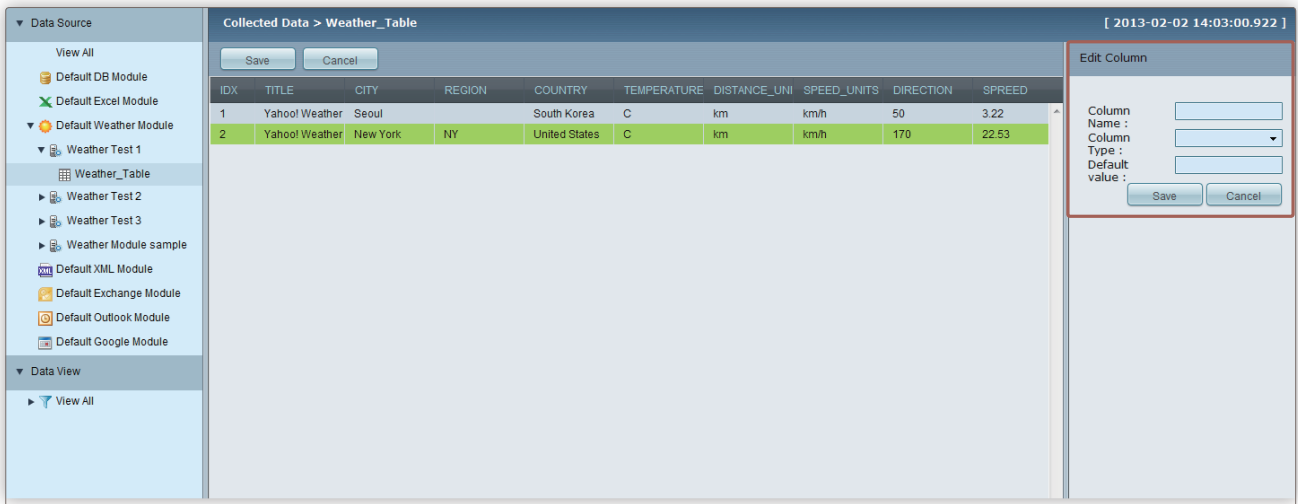


Service Name
Status information

Adding user columns

Manually add data by adding a user column to collected data.

- 1 From the data service list, select a service to add a column to.
- 2 Click **Add**. Enter information of the column to add.



Column Name	Enter a column name to add.
Column Type	Specify the type of the column to add. <ul style="list-style-type: none"> ▪ Text: Add a column by entering a predefined data value. ▪ Boolean: Add a column with a value of true or false for the data value. ▪ Combo: Add a column that can select a data value from added items.
Default value	Enter the default data value for the column to add.

- 3 After configuring the required settings, click **Save**.

Data view

Create a data view by sorting collected data for each service item using SQL statements or by organizing multiple data tables into a single data table.

From the DataLink Server main page, select the **Data** tab > **Data View**.

Adding data views

- 1 Click **Add** from the data view list. Add data views as desired.
Fields with * cannot be left blank.

View Name	Enter a data view name to add.
SQL	Add a data view by sorting or organizing data after manually entering an SQL statement.

- 2 Enter information of the data view to add and click **Preview**. Import and preview data information using the SQL statement entered.
- 3 Click **Save**. The data view is saved.

Editing data views

- 1 Select a data view from the data view list and click **Edit**. The view edit window appears.
- 2 After editing the details, click **Save**. The changes are saved.
Fields with * cannot be left blank.

Data View > View Modification

Save Cancel

* View Name

* SQL

```
select * from [Weather Test 1.Weather_Table];
```

Example) select [columnName] from [service_name.table_name],
select DL_columnName from [service_name.table_name]

Preview

IDX	CANCEL_FLG	DL_TITLE	DL_CITY	DL_REGION	DL_COUNTRY	DL_TEMPERATURE	DL_DISTANCE_UN	DL_SPEED_UNITS	DL_DIRECTION
1	0	Yahoo! Weather - St	Seoul		South Korea	C	km	km/h	50
2	0	Yahoo! Weather - Ni	New York	NY	United States	C	km	km/h	170

Note

It is possible to view SQL details from the information window on the right side by clicking a data view from the data view list.

Monitoring

Service Information

Using the data menu, view the current status of created services. View the status of data collection.

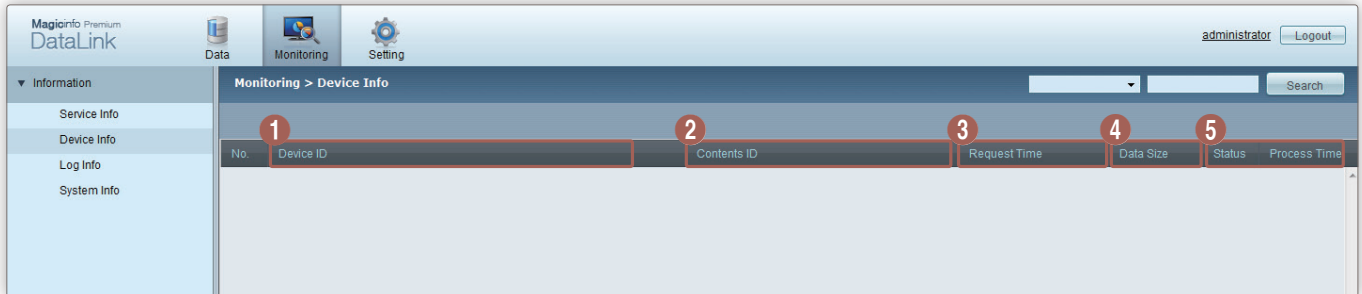
From the DataLink Server main page, select the **Monitoring** tab > **Information** > **Service Info**.

No.	Service ID	Service Name	Status	Last Collected Time	Last Collected Data Siz	Avg. Time	Total Counts	Success	Failure	Final Status
4	SRVC_1301270	Weather Module sample	Stop	2013-01-27 18:54:32.535	773 Bytes	0 ms	1	1	0	Failure
3	SRVC_1301270	Weather Test 3	Stop	2013-01-27 18:46:22.38	0 Bytes	0 ms	0	0	0	-
2	SRVC_1301270	Weather Test 2	Stop	2013-01-27 18:45:55.418	0 Bytes	0 ms	0	0	0	-
1	SRVC_1301270	Weather Test 1	Start	2013-02-02 14:03:00.922	1,067 Bytes	2,603 ms	7	7	0	Success

- 1 View the ID of a service created from data.
- 2 View the name of a service created from data.
- 3 View the current running status of a service created from data.
- 4 View the last collection time of a service and the amount of collected data.
- 5 View the average time it took to collect data.
- 6 View the total number of times data was collected from a service and the frequency of successful/failed data collections.
It is also possible to view the status (success or fail) of the most recent data collection.

Device Information

View the history of data requests from an LFD device to DataLink Server. View information on data provided by DataLink Server. From the DataLink Server main page, select the **Monitoring** tab > **Information** > **Device Info**.



- 1 View the ID of a device that made a data request to DataLink Server.
- 2 View the ID assigned to a content file distributed to an LFD device from MagicInfo Server.
- 3 View the time a device sent a data request to DataLink Server.
- 4 View the amount of data sent from DataLink Server to a device.
- 5 View the data transfer status (success or fail) and the processing time.

Log Information

View details for logs saved in DataLink Server. The log level only displays INFO or ERROR.

From the DataLink Server main page, select the **Monitoring** tab > **Information** > **Log Info**.

Click **Tomcat Log** and **DataLink Log** to download a log file as a zip file (*.zip).

The screenshot shows the 'Monitoring > Log Info' page in the DataLink Server interface. The page has a navigation menu on the left with 'Log Info' selected. The main content area displays a table of log entries. The table has the following columns: No., Log Date, Log Level, Method, and Log Message. The log entries are as follows:

No.	Log Date	Log Level	Method	Log Message
23	2013-02-02 14:02:58.486	INFO	SchedulerController#schedulerProc(HttpServlet...	SERVICE_STATUS of the [SRVC_1301270001] was STARTED.
22	2013-02-02 14:02:55.131	INFO	SchedulerController#schedulerProc(HttpServlet...	SERVICE_STATUS of the [SRVC_1301270001] was STOPPED.
21	2013-02-02 14:02:53.572	INFO	SchedulerController#schedulerProc(HttpServlet...	SERVICE_STATUS of the [SRVC_1301270001] was STARTED.
20	2013-02-02 13:55:27.96	INFO	SimpleLoginController#login()	Login success(IP=217.141.3.214)
19	2013-01-30 16:52:18.998	INFO	SchedulerController#schedulerProc(HttpServlet...	SERVICE_STATUS of the [SRVC_1301270001] was STOPPED.
18	2013-01-30 16:43:16.722	INFO	DataServiceController#modService(String,String,...	Service was modified. Service id is [SRVC_1301270002].
17	2013-01-30 16:26:30.298	INFO	SimpleLoginController#login()	Login success(IP=217.141.3.214)
16	2013-01-30 16:26:25.196	INFO	SimpleLoginController#login()	Login failure(IP=217.141.3.214)
15	2013-01-30 16:26:17.741	INFO	SimpleLoginController#login()	Login failure(IP=217.141.3.214)
14	2013-01-30 16:26:17.527	INFO	SimpleLoginController#login()	Login failure(IP=217.141.3.214)

System Information

View the DataLink Server system settings.

From the DataLink Server main page, select the **Monitoring** tab > **Information** > **System Info**.

The screenshot shows the 'Monitoring > System Info' page in the DataLink Server interface. The page displays system information in three sections: System Info, OS Info, and JVM Info, each with a table of key metrics.

System Info

WAS Info	Apache Tomcat/6.0.35	OS Name	Windows 7
OS Image Version	6.1	OS Architecture	x86
Disk Size (Megabytes)	(C:\) 16.52 GB Free of 59.99 GB		

OS Info

Physical Memory	2046.49 MB	Available Memory	357.14 MB
Total Page File Size	4092.98 MB	Free Page File Size	1501.47 MB

JVM Info

JVM Version	1.6.0_34-b04	JVM Vendor	Sun Microsystems Inc.
Free Memory Size	188.66 MB	Total Free Memory	247.62 MB
Max Free Memory	494.93 MB	Virtual Memory	333.42 MB
CPU Usage	0 %		

System Info

WAS Info	View the Web Application Server (WAS) information.
OS Name	View the OS name.
OS Image Version	View the OS version
OS Architecture	View the OS architecture.
Disk Size (Megabytes)	View the capacity of the hard disk drive on the computer where the server is installed.

OS Info

Physical Memory	View the total memory capacity.
Available Memory	View the amount of remaining memory available.
Total Page File Size	View the file size of all pages.
Free Page File Size	View the file size of remaining pages.

JVM Info

JVM Version	View the Java Virtual Machine (JVM) version.
JVM Vendor	View information on the JVM provider.
Free Memory Size	View the remaining memory available on JVM.
Total Free Memory	View the total amount of memory available on JVM.
Max Free Memory	View the maximum amount of memory available on JVM.
Virtual Memory	View the amount of virtual memory available on JVM.
CPU Usage	View the CPU usage of JVM.

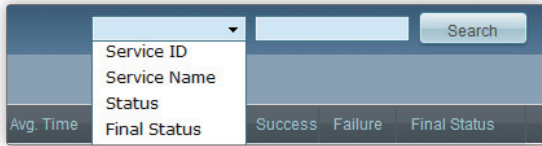
 Note

- JVM is an abbreviation for Java Virtual Machine.
- WAS, abbreviation for Web Application Server, refers to a middleware (software engine) that runs applications online via HTTP on a computer or device.

Information search

Search required services from the **Service Info**, **Device Info**, or **Log Info** list.

Enter a keyword to search for a service. Displayed search criteria can vary for each information list.



Configuring modules

Add, delete, edit, and search external modules that will collect data.

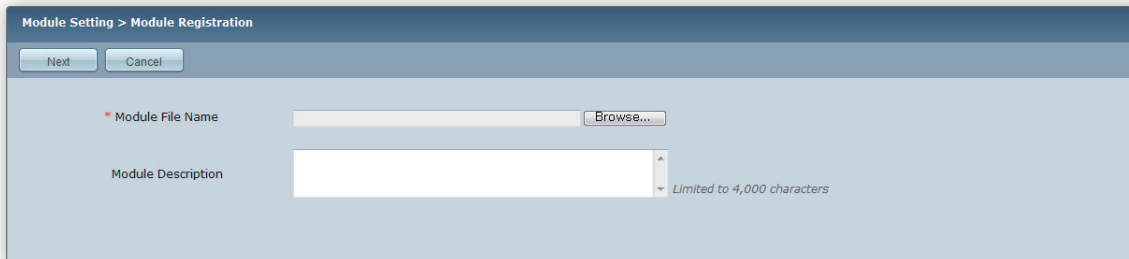
From the DataLink Server main page, select the **Setting** tab > **Module Setting**.

The screenshot shows the 'Module Setting > Module List' page in the MagicInfo Premium DataLink web application. The interface includes a navigation bar with 'Data', 'Monitoring', and 'Setting' tabs, and a user profile for 'administrator' with a 'Logout' button. The main content area features a table of installed modules, each with a radio button for selection. The table columns are: Module Name, Module File Name, Version, Number of Service, and Last Modified Date. The footer of the page shows '1 - 7 of 7 results' and a pagination control.

Module Name	Module File Name	Version	Number of Service	Last Modified Date
<input type="radio"/> Default DB Module	com.samsung.magicinfo.datalink.db.module_1.0.0.jar	1.0.0	0	
<input type="radio"/> Default Excel Module	com.samsung.magicinfo.datalink.excel.module_1.0.0.jar	1.0.0	0	
<input type="radio"/> Default Weather Module	com.samsung.magicinfo.datalink.weather.module_1.0.0.jar	1.0.0	4	
<input type="radio"/> Default XML Module	com.samsung.magicinfo.datalink.xml.module_1.0.0.jar	1.0.0	0	
<input type="radio"/> Default Exchange Module	com.samsung.magicinfo.datalink.exchange.module_1.0.3.jar	1.0.0	0	
<input type="radio"/> Default Outlook Module	com.samsung.magicinfo.datalink.outlook.module_1.0.2.jar	1.0.0	0	
<input type="radio"/> Default Google Module	com.samsung.magicinfo.datalink.googlecalendar.module_1.0.0.jar	1.0.0	0	

Adding modules

- 1 Click **Add** from the module list. Add modules as desired.
Fields with * cannot be left blank.



The screenshot shows a dialog box titled "Module Setting > Module Registration". At the top left, there are two buttons: "Next" and "Cancel". Below these, there are two input fields. The first is labeled "Module File Name" with a red asterisk, followed by a text input field and a "Browse..." button. The second is labeled "Module Description" with a red asterisk, followed by a text input field and a small downward arrow icon. To the right of the description field, there is a note: "Limited to 4,000 characters".

Module File Name	Select a module file to add by clicking Browser .
Module Description	Enter a basic description of the module to add. A maximum of 4000 characters can be entered.

- 2 Enter information of the service to add and click **Next**. Detailed information of the module to add appears.
- 3 Confirm the detailed information and click **Finish**. The module has been added.

Modifying modules

- 1 Select a module from the module list and click **Edit**. The module edit window appears. Fields with * cannot be left blank.

Module File Name	Change the module name.
Module Description	Edit the basic description of the module. A maximum of 4000 characters can be entered.
Module Version	View the module version.
Modification Date of Module	View the date the module was last modified.
Module File Name	View the module file name. It is possible to change a module file by clicking Browser .

⚠ Caution

Changing a module file can cause data services that were created using the module file before the change to be unavailable. Ensure you check the services registered first before changing a module file.

Deleting modules

Select a module from the module list and click **Delete**. The module is deleted.

⚠ Caution

Note that deleting a module deletes all the services registered using the module.

Terminology

Module

In DataLink Server, module refers to a standalone plug-in format program used to collect data from the existing data source (database, Excel, XML, etc.) saved in the system.

The module collects data from the user data source and saves the data to the database in the DataLink Server. DataLink Server provides DB, Excel, Weather, Google Calendar, Outlook Calendar, and MS Exchange server modules by default. Each of the default modules can collect data from the user's data source at a specified cycle. Users and third-party developers can develop new modules using the additional module development plug-in provided in DataLink Server. Add and use your new module in the DataLink Server.

Service

To collect data using a module in the DataLink Server, data information is required such as location, access information, and collection cycle. Services contain information to access these data sources.

When a service is created in the DataLink Server, information (location and login ID) to access the location where the source data is saved is entered. Then, only the data required by the user is selected and collected from the data source. In DataLink Server, multiple services can be added using a single module. Each service collects data separately. All data collected from different services that were created using modules are saved and used in the same method in the DataLink Server. Collected data cannot be edited or deleted by a user.

Starting / stopping services

Change Status to Start for services created using a module. The module will start collecting data using the settings configured for each service. The settings configured for each service include the data collection cycle. Each service accesses data sources to collect data according to the specified collection cycle, and then saves data to the DataLink Server. If the collected data already exists in the DataLink Server, the data is not saved to the DataLink Server again. Changing Status to Stop will stop the module from collecting data from the information configured for services.

Data View

Using the Data View feature, DataLink Server organizes a new data table using data collected from data sources. Create a data table by extracting necessary information from collected data. Alternatively, make a single data table by organizing data from several data tables. A data view is a group of data created based on the data collected using settings configured for a service. As a result, deleting or editing data collected by a service can affect data views. It is not possible to delete or edit data contained in a data view.

User columns

DataLink Server users can add a column (now referred to as "user column") to data collected from a data source. For a custom column, select the Text, Boolean or Combo mode.

The Text format allows you to save general text data. The Boolean format allows you to save data that can be selected as true or false. The Combo format allows you to save data by selecting an item from a list of items added. It is possible to edit or delete user columns that have been added. User columns are saved in a separate database from the original data and do not affect the original data. Note that editing or deleting services belonging to the original data will delete user columns.

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Version 2.1, February 1999

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