

---

---

# Innovatint version 3 Workgroup Server

Date: 01-03-2017



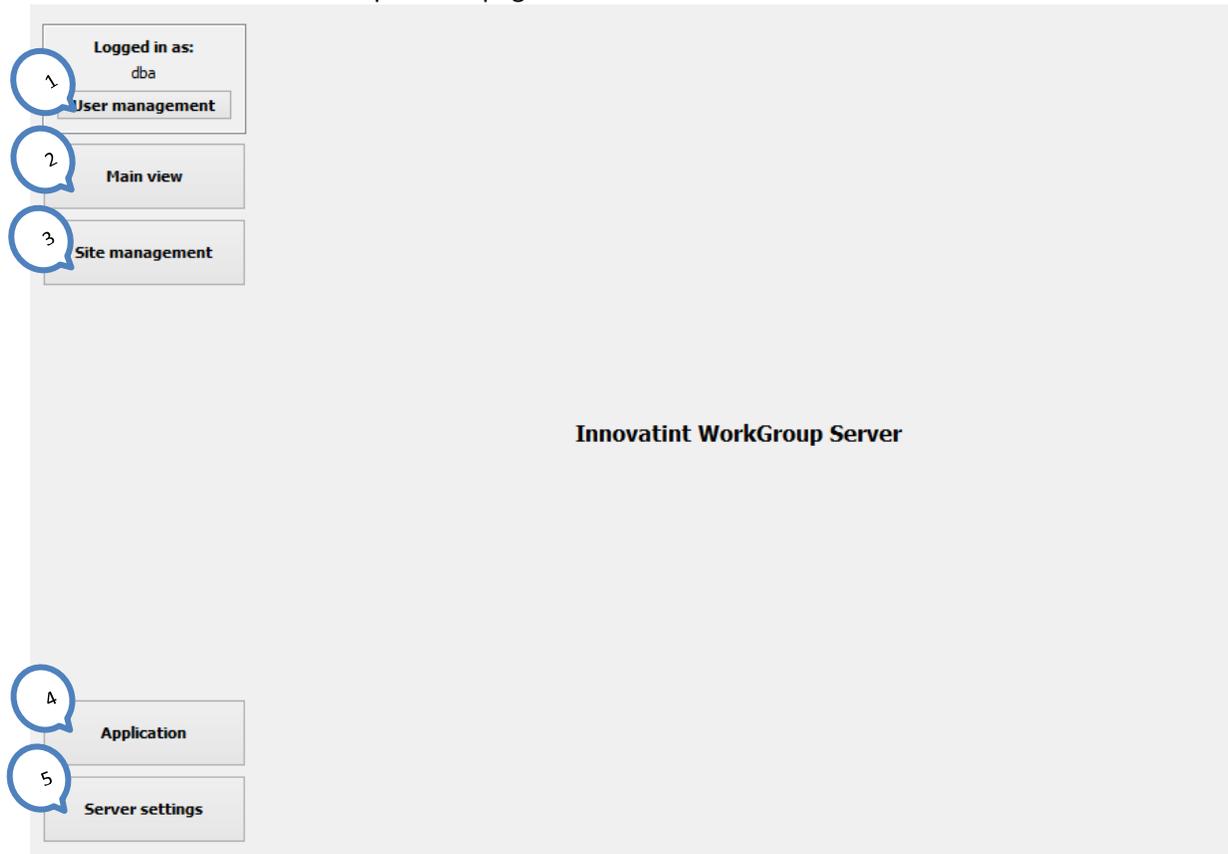
## Table of contents

1.	Left side menu	2
2.	Main view	3
3.	Site management	4
	3.1 Detailed info about selected site	5
	3.2 Replication settings	6
	3.3 Creating site	7
	3.4 Re-export site(s)	8
4.	Application	10
	4.1 Database management	10
	4.2 Application settings	11
	4.3 Activation	12
5.	Server settings	13
	5.1 Replication	13
	5.2 Logs	15
	5.3 Email reporting	16
	5.4 Backup	17
	5.5 Recover	19
6.	User management	20
7.	Best practices / Tips	21
8.	Common problems	22



## 1. Left side menu

From this menu the desired operation page can be chosen:



- 1. User management:** in this view user access rights can be defined.
- 2. Main view:** In this view general view of replication system and site statuses can be checked. Also sites can be shown in map here if WGS has access to google maps.
- 3. Site management:** In this section sites are managed.
- 4. Application:** This section allows user to manage installed databases, change application specific settings, check for updates and handle program activation.
- 5. Server settings:** This section allows user to manage replication settings, view log files, Enable email error reporting, set backup settings and do a recovery from a backup.



## 2. Main view

In this main view user should get an overview of replication status. Also map of the sites is displayed if network access for WGS is allowed and also if the coordinates are saved into the database.

The screenshot shows the main view interface with the following components:

- Logged in as:** dba
- User management** button
- Main view** button (highlighted)
- Site management** button
- Replication status**: A pie chart showing the status of 4 sites: Ok (1), Paused (1), Delayed (1), and Problems (1).
- Numerical data**:
  - Send data: 3.9KIB
  - Received data: 0.0B
  - Replicated orders: 0
  - Replicated changes: 0
  - Database size: 18.4MIB
- Table of sites** (highlighted with a blue circle '2'):

Sitename	Replication type
(1) - Site1	Shop
(2) - Site2	Shop
(3) - Site3	
(4) - Site4	Shop
- Map** (highlighted with a blue circle '1') showing site locations in Europe. A legend indicates:
  - Green pin: Replication ok
  - Red pin: Problem with replication
  - Blue pin: Replication paused
- Application** button
- Server settings** button

1. **Enable dragging:** This allows user to drag the sites in the map into correct locations.
2. **List of sites:** Allows user to focus the map on any of the sites making it easier to drag them into correct positions.

Icon explanations:

- Site is delayed. For some reason site is receiving and sending changes, but it's behind in replication
- Site has not replicated. Check site details for further explanations. also means generally some issue please check.
- Site is paused so no replication messages are received or send for that site.
- Site is working correctly



### 3. Site management

In this section user is able to create, re-export and modify sites

The screenshot shows a web interface for site management. On the left, there is a sidebar with navigation buttons: 'User management', 'Main view', 'Site management' (highlighted in blue), 'Application', and 'Server settings'. The main area displays a table of sites with columns: Site name, Site id, Replication type, Zone / Group, Last send, Last received, and Schedule. The table lists Site4, Site3, Site2, and Site1. At the top, there are controls: 'Logged in as: dba', a 'Refresh' button (callout 1), a 'Filter by site name' input field (callout 4), a 'Re-export site(s)' button (callout 2), and a 'Create site(s)' button (callout 3). A callout 5 points to the table header.

Site name	Site id	Replication type	Zone / Group	Last send	Last received	Schedule
Site4	4	Shop		22.8.2016 13:44:17		Continuous
Site3	3					
Site2	2	Shop		22.8.2016 13:48:26	2.8.2016 2:47:18	Continuous
Site1	1	Shop		22.8.2016 13:44:16	22.8.2016 13:44:57	Continuous

1. **Refresh:** Reloads the data in the view.
2. **Re-exports site(s):** Allows user to re-export one or multiple selected sites from the sites tree (5)
3. **Create site(s):** Allows user to create complete new sites into replication system.
4. Filters the sites tree (5) based on typed filter.
5. **Sites tree:** Lists all the sites defined into this database. Selecting one site gives detailed information about the site



### 3.1 Detailed info about selected site

Site name	Site id	Replication type	Zone / Group	Last send	Last received	Schedule
Site4	4	Shop		22.8.2016 13:44:17		Continuous
Site3	3					
Site2	2	Shop		22.8.2016 13:48:26	2.8.2016 2:47:18	Continuous
Site1	1	Shop		22.8.2016 13:44:16	22.8.2016 13:44:57	Continuous

Site details:

Contact details | Replication settings | Replication info

Site name: Site2

Site description:

Company name:

Phone number:

Email:

Website:

Address:

Address 2nd line:

Zip code: Country:

1 Save changes

5 Remove site

8 Pause replication

12 Full sync of master data

- 1. Save changes:** Will be enabled when something is changed and saving is required for change to take place
- 5. Remove site:** Removes the site entirely from the database.
- 8. Pause replication:** Pauses replication for this site. Pausing means that messages for this site are not recieved or send.
- 12. Full sync of master data:** This will resend all the formulas etc information related to them (products, product images, colors, color cards, color names etc..) to the site. Operation happens during next replication loop and it will take some time also from the site to apply the changes. When to use this instead of re-export see manual section **3.4 re-export site(s)**.

**Note:** There will be a cap in shop side when no formulas can be fetched from the database.

Rest of the fields ( ) is for displaying and changing the site information.



### 3.2 Replication settings

Site name	Site id	Replication type	Zone / Group	Last send	Last received	Schedule
Site4	4	Shop		22.8.2016 13:44:17		Continuous
Site3	3					
Site2	2	Shop		22.8.2016 13:48:26	2.8.2016 2:47:18	Continuous
Site1	1	Shop		22.8.2016 13:44:16	22.8.2016 13:44:57	Continuous

Site details:

Replication interval:

- 1 Continuous replication
- 2 Run every hour
- 3 Daily
- 4 Weekly
- 5 Every month (not recommended)

Buttons: Save changes, Remove site, Pause replication, Full sync of master data

- 1. Continuous replication:** In this replication setting site will check new messages once per 2 minutes.
- 2. Run every hour:** In this replication setting the site will check new messages once per hour
- 3. Daily:** In this replication checks the messages once per day.
- 4. Weekly:** In this replication checks the messages once per week.
- 5. Every month:** In this replication checks the messages once per mont. This option is not recommendable as this will cause huge number of messages for this to pile up in the FTP server and also if some change is needed it will take a month before it's visible on shop.



### 3.3 Creating new site

Start site creation by clicking “create site(s)” on site management.

	Site name	Database name	Replication type	Zone	Sales data sharing
1	Site 5	innovatint	POS	Customer Zone	<No data sharing>
2	Site 6	database2	POS	Default Zone	<No sale data replication>
3	Site 7	innovatint	POS	Customer Zone	GRP
4	Site 8	innovatint	POS	Customer Zone	GRP
5	LABO	innovatint	LAB	Default Zone	<No sale data replication>

Buttons: Add row, Remove row, Zone groups, Add replication group

Replication interval options: Continuous replication, Run every hour, Daily, Weekly, Every month (not recommended)

Fields: Custom FTP address, host

Buttons: Cancel, Start

1. **Site tables:** Here all the sites which are supposed to be created are listed. Columns explanation:
  - a. Sitename: Name which will be used for the site
  - b. Database name: name of the database which the site installation package will create. Note: in one computer the names has to be unique!
  - c. Replication type: This one defines if the site is going to be a LAB site (full database) or POS (limited database). Tip: in local area network LAB sites are not needed as LAB can connect directly into network database. (see section user management)
  - d. Zone: This defines in POS replication what data will be available on the shop. (See LAB manual how to setup zones)
  - e. Sales data sharing: This defines how the data is shared between the sites. There are three different options in here.
    - i. <no data sharing> which means that sales data is replicated only from shop back to the consolidated database and not in anywhere else



- ii. <no sale data replication> which means that no sales data is replicated back from the site
  - iii. Group which shares the same data (groups can be added by pressing (5) add replication group). Sites with in this group should have the same sales data available for all of them. Use case for this is that customer could go into shop and get a can of paint and in next day go into different shop and see the order from first shop.
2. **Add row:** This adds new site definition row.
3. **Remove row:** removes selected row.
4. **Zone groups:** Allows definition of multiple zones which should be available on site. (advanced feature)
5. **Add replication group:** Adds a replication group for sale data sharing between the sites.
- 6-10. Replication interval. See previous page for details
11. If custom FTP server address should be used or not. Use this for cases when different address of the FTP server is needed for site to be able to connect into it.
12. FTP server address
13. **Cancel:** Cancels the process
14. **Start:** Starts the site exportation.

**NOTE: Site installation packages are for one time use only. So site can only be installed once from the installation package. If by some reason second installation is tried please refer section 3.4 Re-exporting sites.**

### *3.4 Re-export site(s)*

Re-exporting the sites is no different that creating a new site. See previous section for how to do it. Re-exportation of the site might be needed in following cases:

1. Site database has been badly corrupted and is out of sync
2. Site is installed into wrong computer and new site installation package is needed

Full sync of master data can be used instead of re-exporting when replication is working, but something is not correct on shop side, missing formulas, products or colors even though when replication claims to be up to date. The main difference between re-exportation and “full sync of master data” is that re-exportation will also contain a copy of the sales data and of course re-export package needs to be manually installed into the site as the full sync package goes over the replication automatically.

Example cases when to use full sync:

- Replication is otherwise fine, just some problem with missing data.
- Replication is delayed because of some issue with syncing, but the messages are send and received

Example cases when to use re-export:

- Replication is not working at all
- Site computer has failed and new computer is set to replace it.



- Zone or replication group of the site is changed.

Tip: Multiple rows can be selected from site management site tree for extraction at once. This speeds up the site export process if the sites are on same zone.



## 4. Application

### 4.1 Database management

In this section user is able to manage existing database in the database server.

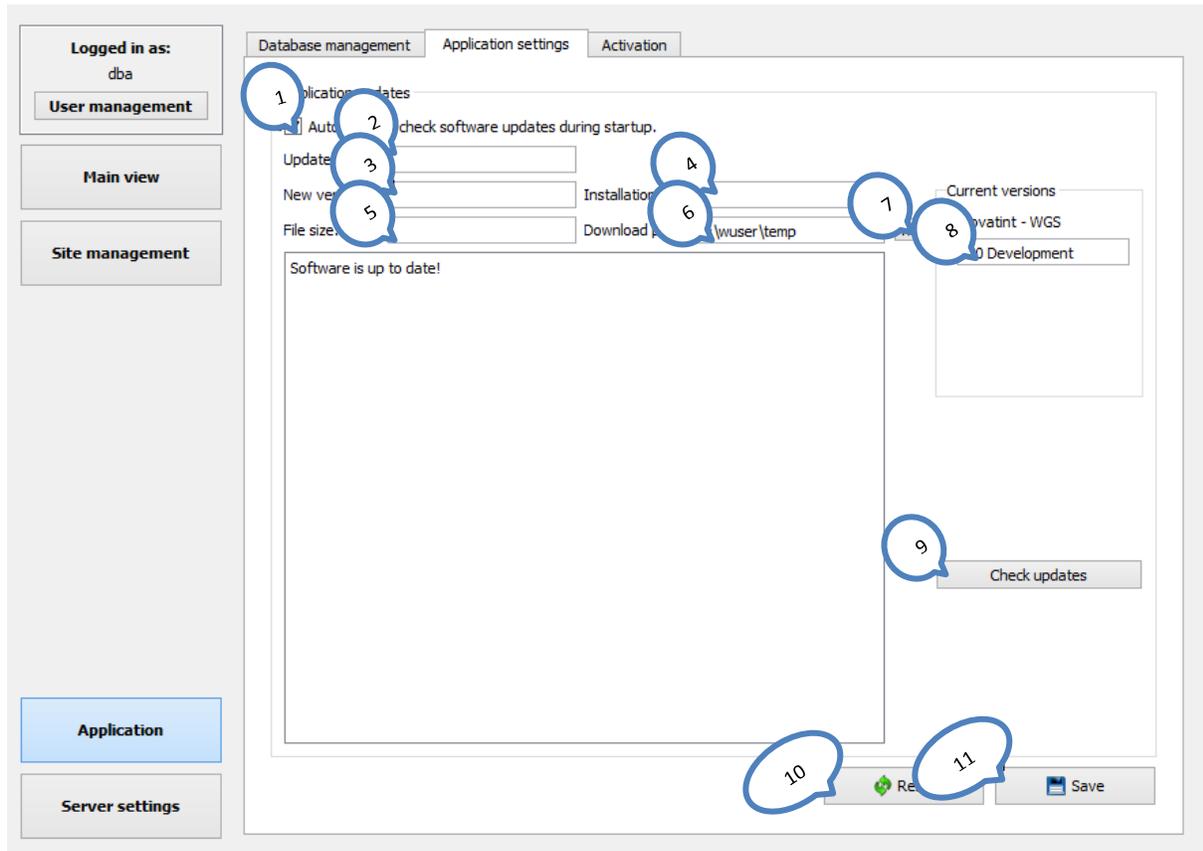
The screenshot shows a web interface for database management. On the left, there is a sidebar with navigation options: 'User management', 'Main view', 'Site management', 'Application' (highlighted in blue), and 'Server settings'. The main area is titled 'Database management' and has tabs for 'Application settings' and 'Activation'. A list of databases is displayed, including 'colorant', 'colorant\_modified', 'colorant\_old', 'colorant\_old2', 'colorant\_old22', 'colorant\_old23', 'demodb', 'demosite1', 'master', 'reptestlab', 'reptestshop', 'simple', 'teknos', 'teknos3', 'tikkurila', 'unikalo', 'unikalobak', 'walmart', 'walmartstore0001', 'walmartstore0013', 'walmartstore0017', 'walmartstore0020', 'walmartstore0026', 'walmartstore0034', 'walmartstore0039', 'walmartstore0042', and 'walmartstore0048'. To the right of the list, there are several action buttons: 'Connect with WGS', 'Create desktop shortcut', 'Optimize database', 'Add database', and 'Drop database'. Six numbered callouts (1-6) point to specific elements: 1 points to the database list, 2 to 'Connect with WGS', 3 to 'Create desktop shortcut', 4 to 'Optimize database', 5 to 'Add database', and 6 to 'Drop database'.

1. List of database on the server
2. Connect to selected database
3. Create desktop shortcut. This shortcut also includes username and password so simply clicking on it will allow user to access the database.
4. Runs MariaDB database optimization procedure. See MariaDB optimization for more detailed information.
5. Add database: Adds new database into server
6. Drop database: Removes database from the server.



## 4.2 Application settings

In this section user is able check database updates and change update checking options.



- 1. Automatically check software updates during startup:** When this is checked WGS tries to connect update server during program startup to check updates
- 2. Update group:** This is group which limits the updates by default left empty to get the latest version of WGS.
- 3. New version:** If update has been found from the server new version number will be displayed here.
- 4. Installation file:** Update installation file name will be displayed here.
- 5. File size:** Size of the installation file will be visible here
- 6. Download path:** This is the path on local computer where the installation file will be downloaded.
- 7. Tool button:** Allows user to select the download path.
- 8. Current versions:** Shows current version of the program in use.
- 9. Check updates:** Checks updates from the update server on request.
- 10. Reset:** Resets the changes made
- 11. Save:** Saves the changes made



The changes log is displayed in the text editor when update has been found. If no update is available text *"Software is up to date!"* will be shown here.

#### *4.3 Activation*

For activation please check LAB manual.



## 5. Server settings

In this section all required settings for the server are given. Here you can find the FTP server address settings, logs, email and error reporting as well as backup and recovery sections.

The screenshot shows the 'Server settings' page for the 'Replication' section. The page is titled 'Replication' and has tabs for 'Logs', 'Email reporting', 'Backup', and 'Recover'. The main content area is divided into sections: 'FTP replication message system', 'Replication service settings', and 'Replication schedule'. The 'FTP replication message system' section includes fields for 'Host (internal)', 'Host (external)', 'User', 'Password', 'Root directory', and 'Port'. The 'Replication service settings' section includes 'Version number' and 'Path to store replication messages'. The 'Replication schedule' section includes a 'Replication interval' dropdown menu. At the bottom, there are buttons for 'Remove replication', 'Stop service', 'Start service', and 'Apply settings'. Numbered callouts (1-20) are placed over various elements in the interface to highlight specific settings and actions.

### 5.1 Replication

- 1. Host (Internal):** This is the address which the local replication service uses for connecting the ftp server. For address use computer IP or name but preferable use address without protocol definition (ftp://my.server.com → my.server.com)
- 2. Host (external):** This is the address which sites replication services are using for connecting the FTP server. if this is empty the internal address will be used.
- 3. User:** ftp server username
- 4. Password:** password for the user
- 5. Root directory:** A directory on the ftp server which should be used for saving the replication messages. NOTE: Directory must exist.
- 7. Port:** Port of the FTP server
- 8. Check FTP connection:** Checks and verifies the connection parameters are correct. Also checks that user rights for the user are correct (full permissions into that folder are required).



9. **Version number:** Version number of the replication service
10. **Path to store messages:** path where replication messages are stored in local computer. For best performance this should be in drive where there is not a lot other processes writing or reading.
11. Choose path
- 12 – 16. Choosing replication schedule for sites.
17. **Remove replication:** This will remove the entire replication system
18. **Stop service:** This will stop the replication service running on background. NOTE: requires admin rights
19. **Start service:** This will start the replication service. NOTE: requires admin rights
20. **Apply settings:** Saves the changes into replication settings. NOTE: requires admin rights



## 5.2 Logs

The screenshot shows a web-based interface for managing replication logs. On the left, a sidebar contains navigation buttons: 'User management' (with 'Logged in as: dba' above it), 'Main view', 'Site management', 'Application', and 'Server settings'. The main content area has tabs for 'Replication', 'Logs', 'Email reporting', 'Backup', and 'Recover'. The 'Logs' tab is active, showing a list of log entries for 'Formulas' replication. The entries include timestamps, user names, and status messages such as 'NEW LOOP', 'Loading messages', 'Writing messages', and 'No need to process the changes as nothing has changed'. A search bar and a 'Refresh' button are located at the top right of the log list.

In this section user is able to browse replication log files. (can also be found from c:\wuser\log\replication)

- **Refresh:** Reloads the selected log file from disk into text editor.



### 5.3 Email reporting

In this section user defines the WGS emailing settings. Monitoring service automatically sends an email

Logged in as: dba  
User management

Main view

Site management

Application

Server settings

Replication Logs **Email reporting** Backup Recover

Monitoring service automatically sends an email when site has not replicated or site inventory items go same or below as the warning level.

Service setup

SMTP Server:

Sender email address:

Receiver(s) email address:

Use ssl

SMTP server username:

SMTP server password:

Port:  (Default 25 or 465 for ssl)

Service status:

Service started: Service not started

Service log file:

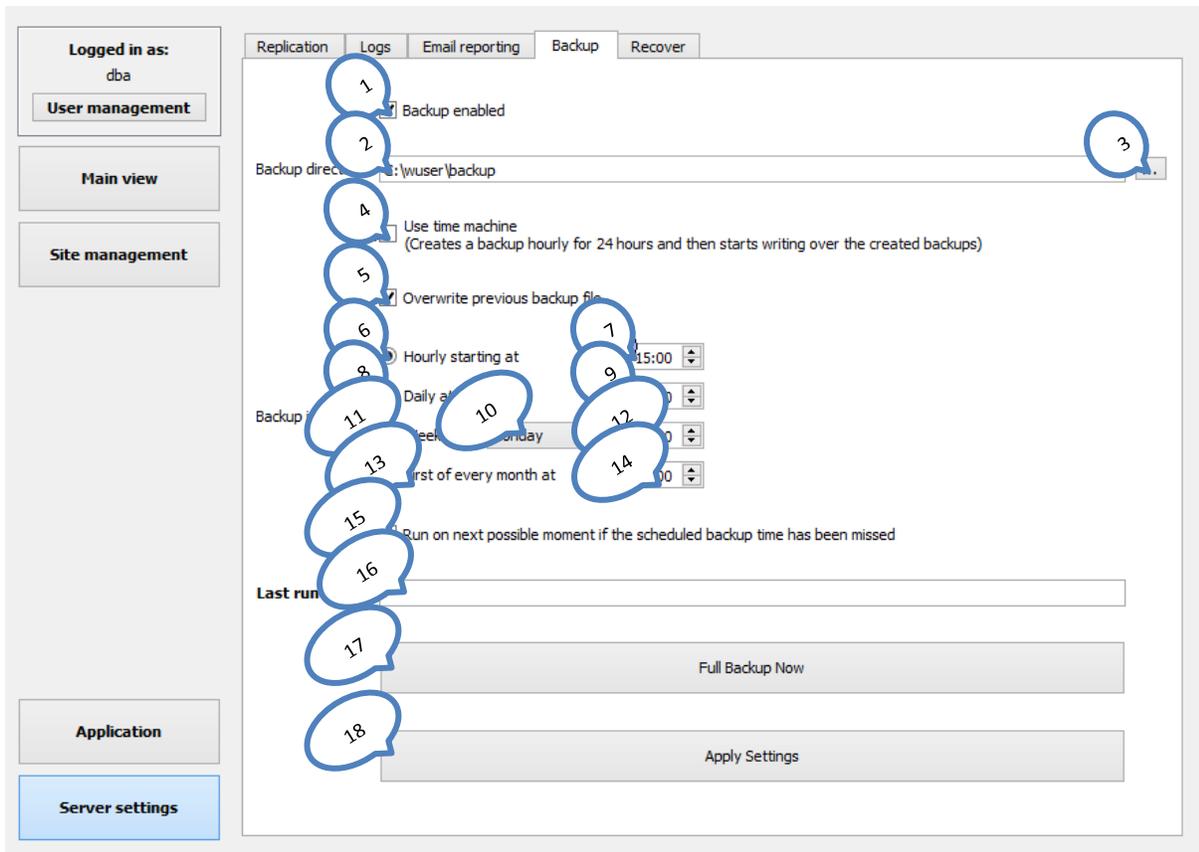
when site has not been replicated for a long time or site inventory items go same or below as the warning level set on each item.

1. **SMTP server:** Address of the email server
2. **Sender email address:** Address of mail sender
3. **Receiver(s) email address:** Type in receivers email addresses separated by ;
4. **SMTP server username:** type in server username
5. **Use ssl:** Defines if ssl is required by the smtp server
6. **SMTP server user password**
7. **Send test mail:** Send a mail using the saved settings to test them. If you didn't receive the test mail please recheck the settings and check the server log (refresh by pressing (12))
9. **SMTP server port**
10. **Save settings:** Saves these settings for the service to use
11. **Start service:** Starts monitoring service NOTE: admin rights required
12. **Refresh log file:** Loads the service log file from disk.



### 5.4 Backup

In this section automatic backup settings can be made. Backup is saved as windows task and it requires admin rights for applying settings.



- 1. Backup enabled:** Enables or disables the backup
- 2. Backup directory:** Select the location of the backup files. Files will be automatically saved under different names to prevent overriding the existing files.
- 3. Tool button:** This allows user to browse and select backup directory
- 4. Use time machine:** This option sets the backup so that it runs once for hour and keeps last 24 backups. After running for 24 hours it will start to override the previous backup files in order to save disk space.
- 5. Override previous backup file:** This option changes the backup so that it will only keep one backup file + possible “time machine” backups.
- 6 -14. Are backup interval setups**
- 15. Run on next possible moment:** When this option is selected the backup is executed on next possible moment if the originally set backup interval has been missed.



- 16. Last run time:** This shows the last run time of the backup
- 17. Full Backup Now:** By clicking this full backup of the database can be made. Program asks directory where to save the backup file.
- 18. Apply settings:** This saves the changes on backup settings. The settings are saved into database and windows scheduled tasks are created for handling the backup calls. NOTE: Administrator rights are needed for this to work.

Example of automatic file naming: Backup\_innovatint\_20160812\_092032.bak

- Backup\_**innovatint**\_20160812\_092032.bak: Innovatint here is the database name
- Backup\_innovatint\_**20160812**\_092032.bak: 20160812 is date (Year,Month,date) 2016-08-12
- Backup\_innovatint\_20160812\_**092032**.bak: 092032 is time (hour, minute, seconds) 09:20:32



### 5.5 Recover

In this section user is able to browse the backups and recover items from the backup.

Logged in as: dba

User management

Main view

Site management

Application

Server settings

Replication | Logs | Email reporting | Backup | Recover

Back up directory: C:\user\backup

Analyze folder

elokuu, 2016

12.8.2016 9:20:32

Item	Count	Selected
Barcode actions	5	<input type="checkbox"/>
Can shapes	0	<input type="checkbox"/>
Can sizes	28	<input type="checkbox"/>
Characterization sets	1	<input type="checkbox"/>
Color card collections	2	<input type="checkbox"/>
Color cards	3	<input type="checkbox"/>
Colorants	102	<input type="checkbox"/>
Formulas	938	<input type="checkbox"/>
Matching limits	5	<input type="checkbox"/>
Matching settings	2	<input type="checkbox"/>
MFormulas	877	<input type="checkbox"/>
Prices	1	<input type="checkbox"/>
Product collections	1	<input type="checkbox"/>
Product images	3	<input type="checkbox"/>
Product rules	2	<input type="checkbox"/>
Products	2	<input type="checkbox"/>
Substances	2	<input type="checkbox"/>

Analyze selected backup

Recover selected items

NOTE: For replication system it is required to use recovery based on items instead of just replacing the database with backup. Replacing database with backup will cause replication to be out of sync with sites and re-exportation of all the sites is then needed in order to get the replication



## 6. User management

In this section user is able to create and manage other user permissions.

Section	Read	Write
Configuration		
Colorants	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cansizes	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Substrates	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Units	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Products	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Colour managem...	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Zones		
Management & Analysis		
Formula manage...	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Color difference	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pricing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Barcodes	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Export and Import	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Statistics	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Site inventory	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dispense queue	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Options		

1. **List of users:** Select user which permission you wish to modify.
2. Grant administrator rights for selected user
3. Tree view of individual permissions on LAB which user has access rights.
4. Add user
5. delete user
6. Password for selected user
7. Writing and reading permissions for sales data
8. reading permissions for sales data
9. Retype password for selected user
10. No permissions at all for local database
11. **Change password:** Changes selected user password.
12. Save permission changes.

TIP: It's required to have at least one user defined here if network access to this database is wanted.



## 7. Best practices / Tips

- LAB site installation packages should be avoided if possible. As Innovatint runs on MariaDB which by default supports network access via TCP/IP protocol it's highly recommended that it's used instead of replication.
- Multiple POS sites on same zone should be exported at once as the data is limited for each site based on zone and this data filtering needs to be done only once for all the sites in the same zone. Performance benefit is significant in larger databases.
- MariaDB uses by default port 3306 which should allow incoming and outgoing TCP/IP connections in order to be able to access the database from remote computers.



## 8. Common problems

- **Not able to check updates:**
  - Solution: verify that no firewall is blocking the update checking from address: <http://my.innovatint.com/update/download/>
- **Map is not showing on WGS main view:**
  - Solution: As map is based on google maps WGS has to be able to access the google maps on google servers. The traffic is standard HTTP protocol
- **WGS is starting slowly:**
  - WGS is checking license from license service and that one checks it from my.nalpeiron.com.
- **FTP server issues (unable to download or upload files):**
  - Please setup the FTP server as any standard FTP server with passive file transfer support. (I think you already have this set up correctly, at least seems to work from the server) For ports port 21 + some defined port range (up to you to choose which one to use.. Some explanation about passive FTP file transfer method: <http://slacksite.com/other/ftp.html> ).
- **Network issues on shop:**
  - service "Innovatint replication" (it\_replicate\_service.exe) has to be able to connect into the FTP server (port 21 + the defined port range for file transfer)
  - C:\wuser\Innovatint\paster-service.exe and it\_replicate\_service.exe should be able to connect our software update server (<http://my.innovatint.com/update/download/> port 80)
  - All the connections from shop are out going so no need to allow any in coming connections.
- **Network issues on WGS:**
  - service "Innovatint replication" (it\_replicate\_service.exe) has to be able to connect into the FTP server (port 21 + the defined port range for file transfer)
  - InnovatintWGS.exe and it\_replicate\_service.exe should be able to connect our software update server (<http://my.innovatint.com/update/download/> port 80)
- **Network issues on LAB:**
  - InnovatintLAB.exe should be able to connect our software update server (<http://my.innovatint.com/update/download/> port 80)