

novaResourceSync™ v.4.2

Guide for Administrators

Updated May 9, 2013



Copyright, Trademarks, and Legal

Tempus Nova Inc.
1755 Blake Street
Denver, CO 80202
www.tempusnova.com

May 9, 2013

© Copyright 2013 Tempus Nova Inc. All Rights Reserved.

This software is provided "AS IS." The copyright holders disclaim all warranties, either express or implied, including but not limited to implied warranties of merchantability and fitness for a particular purpose, with respect to this code and accompanying documentation.



Table of Contents

[Introduction](#)

[What is novaResourceSync?](#)

[How does novaResourceSync Work?](#)

[Quick-Start Guide](#)

[Prerequisites](#)

[Installation](#)

[Configuration](#)

[Verify Installation and Configuration](#)

[Administering novaResourceSync](#)

[Troubleshooting](#)

[Changes Since Last Major Release](#)

[New Features and Enhancements](#)

[Features Removed](#)

[Upgrading from Previous Version](#)

[Appendix A. novaResourceSync™ Architecture Diagram](#)

1. Introduction

This document provides a guide for installing novaResourceSync v.4.2. The document is aimed at experienced Lotus Notes administrators.

a. What is novaResourceSync?

novaResourceSync is a tool that synchronizes room and resource schedule information between Google and Lotus Notes. It enables users in either Google or Lotus Notes to schedule conference rooms and resources while ensuring that they are never double booked.

b. How Does novaResourceSync work?

novaResourceSync is a native Lotus Notes application composed of an application profile document, control documents for rooms, resources, and reservations, and several scheduled agents.

The Lotus Notes administrator can configure the general settings of the tool in the application profile document. These settings include the application license key, the Lotus Notes environment parameters, the Google login parameters, and logging parameters.

After configuring the tool, the administrator may choose to import rooms and resources from Lotus Notes. The tool allows the administrator to select which Lotus Notes rooms and resources to migrate and creates corresponding documents within the novaResourceSync database. The administrator may review the imported documents and may modify the names that the resources will have in Google.

After reviewing the imported Rooms and Resources documents, the administrator may export selected documents to Google. A scheduled agent that runs every 5 minutes, provisions the selected resources in Google. Once a resource is exported, it will be ready to sync the next time the scheduled Sync agent runs.

The Sync agent runs every 5 minutes. The first time the Sync agent syncs a Lotus Notes room or resource with Google, it will push any future reservation to Google. In the same way, it will pull from Google any future resource calendar entries. Any subsequent syncs will only push to Google any Lotus Notes room or resource reservations made since the last successful sync. Similarly, it will pull from Google only those resource calendar events that have been modified since the last successful sync.

Room or resource reservations deleted in Notes are synced to Google using another scheduled agent that runs every 5 minutes. That agent compares a local copy of the reservation with each reservation in the Lotus Notes Rooms and Reservations database. When the agent finds a reservation that no longer exists in the Rooms & Reservations database, it deletes the corresponding Google resource calendar event.

2. Quick-Start Guide

The following is a quick-start guide to novaResourceSync. It is meant to walk you through the basic steps needed to install and configure the tool. It should be used together with the other sections of this document, the Frequently Asked Questions page, and other materials provided.

You should review all of this document before attempting to install novaResourceSync in a production environment.

a. Prerequisites

The Lotus Domino Server that will host novaResourceSync must meet the following requirements:

1. The novaResourceSync database must reside on a Windows 2003 SP2 or greater server.
2. The novaResourceSync database must reside on an IBM Domino Server version 6.5 or greater.
3. The Domino Server must have mail routing turned on and must have SMTP enabled and turned on.
4. The Domino Server must have access to the servers that contain the Rooms and Resources databases. You may have to add the novaResourceSync server to the *Trusted Servers* field of the server that contains the Rooms and Resources databases.
5. The *Web agents and web services timeout* field in the *Domino Web Engine* tab under the *Internet Protocols...* tab of the Server Configuration Document should be set to something other than "0" which denotes no timeout. Typically, 10 seconds will suffice.
6. Both the daytime and nighttime *Max LotusScript/Java execution time* fields in the *Agent*

Manager tab under the *Server Tasks...* tab of the Server Document must be set to at least 480 minutes.

7. The Domino Server must have IBM's unlimited jurisdiction policy files for the Java Cryptography Extension (JCE). You may download these files from:

<http://www.ibm.com/developerworks/java/jdk/security/index.html>

You will need an IBM ID and password to download these files. You will also need to restart your Domino Server to enable the new JCE policy files.

b. Installation

Once you have ensured that your Domino Server meets all prerequisites, you are ready to install novaResourceSync. You will need the Lotus Notes client and the Lotus Domino Administrator to perform the following steps:

1. Copy the provided novaResourceSync™ database to your server.
2. Configure the database ACL according to the standards of your organization.
3. Sign the database with the Notes ID of a user or server that can run restricted LotusScript/Java agents.
4. Create a Mail-In database document in the Domino Directory for the novaResourceSync database.
 - a. Open the Domino Administrator.
 - b. Click on the *Administration* menu and select *People & Groups*.
 - c. Click on *Mail-In Databases and Resources* view.
 - d. Click on the *Mail-In Database* action button.
 - e. Enter *Google Calendar* in the *Mail-in name* field.
 - f. Enter your Domino domain name in the *Domain* field.
 - g. Enter the name of the Domino server where novaResourceSync is installed in the

Server field.

- h. Enter the full path of the novaResourceSync database in the *File name* field.
- i. Click on the *Save & Close* button.

c. Configuration

Once you have installed novaResourceSync, you may proceed with its configuration.

1. Register the novaResourceSync application to enable access to Google Calendar.
 - a. Log into your domain's Google Control Panel:

<https://www.google.com/a/your-domain.com>
 - b. Click on *Advanced Tools*.
 - c. Go to the *Authentication* section and click on *Manage third party OAuth Client access*.
 - d. Enter the provided Client ID in the *Client Name* field.
 - e. Enter the following scopes in the *One or More API Scopes* field (separated by commas):

<https://apps-apis.google.com/a/feeds/calendar/resource/>,
<https://www.googleapis.com/auth/calendar>
2. Open the application profile document by clicking on *Profile* and double clicking on the AppProfile document.

novaResourceSync

On ExpioDev

*Rooms & Resources Sync to and from Lotus
Notes and Google*

→ [Profile](#)

- [Rooms and Resources](#)
- [Export Logs](#)
- [Sync Deleted Logs](#)
- [Archived Items](#)
- [Mailed In Notices](#)
- [Any Conflicts](#)

3. Click on the *Edit* button to open the application profile document in edit mode.
4. Enter the license key provided into the *License Key* field and click on the *Verify* button to validate the license. If the provided license key is invalid, please contact Tempus Nova to receive a valid license key.
5. Select the version of Microsoft XML Core Services (MSXML) that is installed on your server in the *MS XML HTTP Version* field. *Msxml2.ServerXMLHTTP.6.0* will usually work.
6. If your server needs to go through a proxy server to connect to the Internet, enter the proxy server hostname and port in the *Proxy* field. Use the following format:
hostname:port
7. Enter your Notes Internet domain name in the *Notes Internet Domain* field. If your Notes Internet email address is *jdoe@tempusnova.com*, then your Notes Internet domain name will be *tempusnova.com*.
8. Enter *Google Calendar* in the *Notes Global Calendar Owner (Mail-In Name)* field.
9. Select *Notes Global Calendar Owner* in the *Create Notes Reservations on Behalf of* field. Notes reservations will be created on behalf of the *Google Calendar* user. That user must be allowed to create reservations in all Notes rooms and resources.
10. Enter the name of a server that contains the Domino Directory (NAB) in the *Notes Server Name* field.

11. Enter the path to the Domino program directory in the *Path to Domino Program Directory* field. Usually, the path to the Domino program directory is *c:\lotus\domino*
12. Enter the name of the Domino Directory (NAB) database in the *Confirm Name/Path of NAB* field. Usually, the name of the Domino directory is *names.nsf*
13. Enter your Google Apps domain name in the *Google Apps Domain* field.
14. Enter the Google Apps Email address of a Google Apps administrator for your domain. You may want to use a dedicated generic account for this.
15. Select *Service Account* in the *Authentication Scenario* field.
16. Attach the provided (.p12) private key file in the *Private Key* field.
17. Enter the provided service account email address in the *Service Account* field.
18. If the server is configured to use a DD/MM/YYYY international date format, select *Yes* in the *Swap Month and Day from Google Date Time Strings* field.
19. Import a room or resource from Notes into novaResourceSync.
 - a. Click on *Rooms and Resources* to open the Rooms and Resources view.

novaResourceSync

On ExpioDev

*Rooms & Resources Sync to and from Lotus
Notes and Google*

- Profile
- **Rooms and Resources**
- Export Logs
- Sync Deleted Logs
- Archived Items
- Mailed In Notices
- Any Conflicts

- b. Click on the *Import from Notes* action button.





- c. A popup message will explain what the *Import from Notes* action button does and will ask you if you want to continue. Click on *Yes*.
- d. A popup window will appear showing a list of the local Notes databases. Select the server that contains the Rooms and Resources database, select the Rooms and Resources database, and click on *Open*.
- e. A popup window will ask you to select if you want to import all rooms and resources or to select some rooms or resources to migrate. Select *Select rooms or resources* and click on *OK*.
- f. A popup window will display the list of available rooms or resources. Select one and click on *OK*. A popup message will indicate that the resource has been migrated. The selected resource will appear in the Rooms and Resources view of novaResourceSync.

20. Review the name that will be used to provision the resource in Google.

- a. Double click on the room or resource to open the document.
- b. Review the *Corresponding Google Resource Name* field. This name will be used to provision the resource in Google. You may wish to rename this field before exporting the room or resource to Google.

21. Export the imported room or resource to Google.

- a. Select the room or resource in the Rooms and Resources view and click on the *Export Selected to Google* action button.

 Import from Notes  Export Selected to Google	
Notes Name ◇	Google Name ◇
✓ TESTROOM9/TEST1	TEST1 - TESTROOM9

- b. A popup message will explain what the *Export Selected to Google* action button does and will ask you if you want to continue. Click on *Yes*.
- c. A popup message will indicate that the selected room or resource will be exported to Google and that you can track the progress of the export process using the *Export Status* column of the Rooms and Resources view.

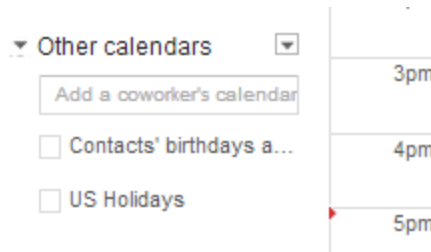
The export process will start within the next 5 minutes and will be completed shortly after.

d. Verify Installation and Configuration

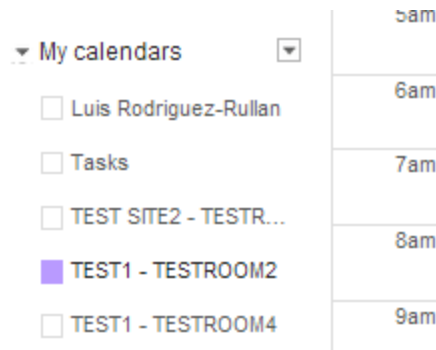
Once you have installed and configured novaResourceSync, you should verify that the sync process is working correctly.

1. Confirm that the resource has been provisioned in Google.
 - a. Log into your domain's Google Control Panel:
<https://www.google.com/a/your-domain.com>
 - b. Click on *Settings*. The Calendar settings page will be displayed.
 - c. Click on *Resources*. The list of resources will be displayed. The exported room or resource will be included in this list.
2. Confirm that Notes reservations are being pushed to Google.
 - a. Open your Lotus Notes email.
 - b. Create a new meeting in your calendar, making sure that you have selected a room or resource that has been exported to Google.
 - c. Wait for the Sync agent to run. It will run within the next 5 minutes and will finish running shortly after.
 - d. Open your Google Calendar.
 - e. Click on the arrow next to *Other Calendars* and select *Browse Interesting*

Calendars. The Interesting Calendars page will be displayed.



- f. Click on *More* and click on *Resources for yourdomain.com*. The list of resources for your domain will be displayed.
- g. Click on the *Subscribe* link that corresponds to the exported resource and click on the *Back to calendar* link.
- h. The exported resource's calendar will be displayed in the *My Calendars* list.



- i. You should see an event in the resource's calendar. The event description will include the following text: "-- Imported from Lotus Notes -- DO NOT DELETE" and will contain the Notes reservation's document universal ID.
3. Confirm that Google resource calendar events are being pushed to Notes.
 - a. Open your Google Calendar.
 - b. Create a new meeting in your calendar, making sure that you have selected a resource that has been exported to Google.
 - c. Wait for the Sync agent to run. It will run within the next 5 minutes and will finish running shortly after.

- d. Open the Lotus Notes Rooms and Resources database that contains the exported resource.
- e. You should see the corresponding Notes reservation in the *Reservations, By Resource* view. The *Requested by/extension* field will contain your Google email address and the *Reservation description* field will contain the event description you entered in Google.

3. Administering novaResourceSync

This section contains specific instructions on how to perform some common actions using novaResourceSync.

a. Importing Rooms and Resources from Lotus Notes

Follow these instructions to import rooms or resources from Notes into novaResourceSync:

1. Click on *Rooms and Resources* to open the Rooms and Resources view.

novaResourceSync

On ExpioDev

Rooms & Resources Sync to and from Lotus Notes and Google

- Profile
- **Rooms and Resources**
- Export Logs
- Sync Deleted Logs
- Archived Items
- Mailed In Notices
- Any Conflicts

2. Click on the *Import from Notes* action button.



3. A popup message will explain what the *Import from Notes* action button does and will ask

you if you want to continue. Click on Yes.

4. A popup window will appear showing a list of the local Notes databases. Select the server that contains the Rooms and Resources database, select the Rooms and Resources database, and click on *Open*.
5. A popup window will ask you to select if you want to import all rooms and resources or to select some rooms or resources to import. Make your selection and click on *OK*.
6. If you opted to select some rooms and resources to import, a popup window will display the list of available rooms or resources. Select the rooms or resources that you want to migrate and click on *OK*.
7. A popup message will indicate that the resources have been imported. The imported resources will appear in the Rooms and Resources view of novaResourceSync.

b. Exporting Rooms and Resources to Google

Follow these instructions to export rooms or resources from novaResourceSync to Google:

1. Select the rooms or resources to export in the Rooms and Resources view and click on the *Export Selected to Google* action button.

<input type="button" value="Import from Notes"/> <input type="button" value="Export Selected to Google"/>	
Notes Name ▾	Google Name ▾
✓ TESTROOM9/TEST1	TEST1 - TESTROOM9

2. A popup message will explain what the *Export Selected to Google* action button does and will ask you if you want to continue. Click on Yes.
3. A popup message will indicate that the selected rooms or resources will be exported to Google and that you can track the progress of the export process using the *Export Status* column of the Rooms and Resources view.

The export process will start within the next 5 minutes and will be completed shortly after.

The Export Logs will show more details about the export process.

novaResourceSync

On ExpioDev

*Rooms & Resources Sync to and from Lotus
Notes and Google*

- Profile
- Rooms and Resources
- **Export Logs**
- Sync Deleted Logs
- Archived Items
- Mailed In Notices
- Any Conflicts

c. Archiving Rooms and Resources

You may want to temporarily exclude a room or resource from the sync process. The *Archive Selected* button allows you to do that.

Follow these instructions to archive a room or resource:

1. Select the room or resource to archive in the Rooms and Resources view and click on the *Archive Selected* action button. novaResourceSync will move the archived room or resource to the Archived Items view.

Follow these instructions to un-archive a room or resource:

1. Select the room or resource to un-archive in the Archived Items view and click on the *Un-Archive Item* action button. novaResourceSync will move the un-archived room or resource to the Rooms and Resources view.

d. Setting a Room or Resource's Time Zone

novaResourceSync sends an email notification to the user when it is unable to sync a resource reservation to Notes. That email notification includes the start date and time of the resource reservation. In order to display the start date and time using the correct time zone, novaResourceSync allows you to assign a time zone to each resource.

Follow these instructions to assign a time zone to a room or resource:

1. Double click on the room or resource document in the Rooms and Resources view.
2. Click on the *Edit* button.
3. Select the time zone in the *Room or Resource Time Zone* field.
4. Click on the *Save* button.

novaResourceSync will send any email notifications for this resource using the selected time zone.

e. Syncing an Existing Google Resource to Notes

You may want to sync an existing Google resource with a Notes room or resource. You cannot export the novaResourceSync room or resource to Google because it would create a duplicate Google resource. In order to sync an existing Google resource to Notes you will need to update the novaResourceSync room or resource document manually to associate it with the existing Google resource calendar.

Follow these instructions to associate a novaResourceSync room or resource with an existing Google resource calendar:

1. Create the room or resource in Notes if it does not already exist.
2. Import the Notes room or resource into novaResourceSync.
3. Log into your domain's Google Control Panel:
<https://www.google.com/a/your-domain.com>
4. Click on *Settings*. The Calendar settings page will be displayed.
5. Click on *Resources*. The list of resources will be displayed.
7. Click on the resource name that you wish to associate with the newly imported Notes room or resource. The Edit Resource page will be displayed.

8. Copy the email address shown.
9. Open the room or resource document in novaResourceSync and click on the *Edit* button.
10. Paste the copied Google resource calendar email address into the *Corresponding Google Resource Calendar Email* field.
11. Click on the *Save & Close* button to save the change.

The existing Google resource will start to sync with the Notes room or resource within the next 5 minutes.

f. Performing a Full Sync

The Sync agent runs in two modes: full sync and incremental sync. When it runs in full sync mode, it syncs any reservations with a future end date. When it runs in incremental sync mode, it syncs only those reservations that have been modified since the start date of the last successful sync.

The first time the Sync agent runs for a given room or resource, it does a full sync. After that, it will always do an incremental sync.

Follow these instructions to force novaResourceSync to perform a full sync of a room or resource:

1. Open the room or resource document in novaResourceSync.
2. Click on the *Edit* button.
3. Clear the *Last Successful Sync Start* field.
4. Click on the *Save & Close* button.

If you wish to run a full sync of many rooms or resources, you may use the *Advanced, Clear Last Successful Sync Date for Selected* action button in the Rooms and Resources view.

g. Running Multiple Copies of novaResourceSync

If you have a large number of rooms and resources or if your rooms and resources are

extremely busy, you may want to create multiple copies of novaResourceSync. You may have up to 10 copies of the tool in a single Lotus Domino Server.

Follow these instructions to create an additional copy of novaResourceSync:

1. Create a copy of the existing novaResourceSync database. Make sure that you copy the application design only.
2. Copy the application profile document from the original working copy of novaResourceSync to the new copy.

You may cut any existing room or resource documents from the original copy of novaResourceSync and paste them into the new copy. Make sure that the same room or resource document does not exist in more than one novaResourceSync database. Only one mail-in database document is required for all copies of novaResourceSync; the mail-in database document may refer to the first copy.

4. Troubleshooting

This section will help you identify and correct some of the most common issues that you might encounter using novaResourceSync.

Issue	Solution
Resources have been exported to Google but they are not syncing. The <i>Most Recent Sync Log</i> fields of the Room and Resource documents contain the following text: END: Did not find a resource/reservations database. Please check the Resource control document in this database for accuracy. Thank You.	novaResourceSync cannot reach the server that contains the Rooms and Resources database. Check if the server that is running novaResourceSync can reach the server that contains the Notes Rooms and Resources database. Check connection documents and firewall rules. You can use the following command, in the Domino Console of the server that is running novaResourceSync, to verify if the server can reach the server that contains the Rooms and Resources database: <i>trace servername</i>

<p>Resources have been exported to Google but they are not syncing. The <i>Most Recent Sync Log</i> fields of the Room and Resource documents contain the following text:</p> <p>END: Sync From Google to Notes Agent: <room or resource name> Ended Abnormally.</p>	<p>novaResourceSync open the Rooms and Resources database.</p> <p>Check the Rooms and Resources database ACL to see if the signer of the novaResourceSync database has access.</p> <p>Confirm that the server that is running novaResourceSync is in the <i>Trusted Servers</i> field of the server that contains the Rooms and Resources database.</p>
<p>Some rooms or resources are not syncing. The <i>Most Recent Sync Log</i> fields of their Room and Resource documents contain the following text:</p> <p>Status 503.</p>	<p>novaResourceSync may have submitted too many requests to the Google Calendar API causing the API to reject some requests.</p> <p>The Google Calendar API will resume accepting novaResourceSync requests in a few minutes.</p>
<p>Google users are receiving email messages with “Insufficient access:” in the subject line and resource reservations are not being created in Notes for some resources.</p>	<p>The “Insufficient access:” notifications are sent by Notes resources with owner restrictions (Owner only or Specific people). These restrictions can be implemented in Google Calendar so that only authorized users can create reservations for some resources.</p> <p>You may find more information in the following page on how to implement these restrictions in Google Calendar:</p> <p>http://support.google.com/calendar/answer/143754</p>
<p>Google users are receiving email messages with “Accepted:” in the subject line.</p>	<p>The “Accepted:” notifications are sent by the Notes resources. To stop these notifications, create a server mail rule that does not deliver, and silently deletes, any messages sent by the Notes resources’ Internet addresses.</p> <p>You may find more information on how to create server mail rules in the following page:</p> <p>http://publib.boulder.ibm.com/infocenter/domh</p>

	<p>elp/v8r0/index.jsp?topic=%2Fcom.ibm.help.dominio.admin85.doc%2FH_FILTERING_OUT_UNWANTED_EMAIL_OVER.html</p> <p>This will not affect the delivery of other notifications, such as declination messages, because these are sent using the server's Internet address.</p>
<p>Resource reservations are not being created in Google. Most Recent Sync Log in Room and Resource Document shows the following message: "Status 403: Calendar usage limits exceeded."</p>	<p>Contact Tempus Nova. You will need to provide us with the Google Admin Email as configured in the App Profile document.</p>

5. Changes Since Last Major Release

This section will list all changes made to novaResourceSync since version 3.3.

a. New Features and Enhancements

The following new features and enhancements were included in version 4.2 of novaResourceSync:

1. Improved handling of rejection messages to ensure that resource is busy in Notes and that Domino server is able to find schedule record for resource.
2. Added option to create Notes reservations on behalf of Notes Global Calendar Owner. If Notes Administrator chooses to create Notes reservations on behalf of the Notes Global Calendar Owner, messages sent by the Notes resource will not reach the Google users. These messages will be received by the novaResourceSync database.
3. Added option to notify a user by email if a sync error occurs.
4. Meetings lengths will no longer be rounded to multiples of ten minutes.
5. Improved efficiency of Google to Notes sync process by using page tokens.
6. Changed "more documentation" link to point to Tempus Nova's novaResourceSync product page.

The following new features and enhancements were included in version 4.1 of novaResourceSync:

1. Corrected issue that caused some resources not to sync to Notes when a single Google event had multiple resource reservations.
2. Corrected issue that caused the sync status of some resources to be set to "Complete" when novaResourceSync did not have access to the Notes resource database.
3. Notes reservations synced from Google will now have a description with the following format: "novaResourceSync - Import from Google: <Google Description>". This will

only affect new reservations.

4. The Google reservation removed email message will now show the event start date/time in the resource's time zone instead of GMT.
5. Notes rooms or resources with "&" in room or resource name are now supported without having to modify the *Corresponding Google Resource Name* field.

The following new features and enhancements were included in version 4.0 of novaResourceSync:

1. Improved logging for Google Calendar API Google requests.
2. Simplified user interface. Removed embedded views from application profile.
3. Improved Sync agent. It now syncs changes since last successful sync date of the room or resource. If syncing a room or resource for the first time, the Sync agent will sync all reservations with a future end date.
4. Added *Import from Notes* action button to Rooms and Resources view. This button allows the user to import a room or resource from Notes into novaResourceSync.
5. Added *Export Selected to Google* action button to Rooms and Resources view. This button allows the user to provision in Google selected rooms or resources from novaResourceSync. *Export Selected to Google* functionality runs on the server so that the Administrator's Notes Client will not be busy during export process.
6. Created a separate scheduled agent to sync deleted Notes room or resource reservations to Google.
7. Added support for disabled Lotus Notes resources.
8. Added support for Lotus Notes rooms or resources with limited advance reservation.

b. Features Removed

The following features were removed in version 4.0 of novaResourceSync:

1. Removed Admin Migrate functionality and merged it with the Sync agent.
2. Removed embedded views from application profile.
3. Removed *Sync Resource Database* button from application profile and moved functionality to *Import from Notes* and *Export Selected to Google* action buttons in Rooms and Resources view.
4. Removed *Clear Notes Entries in Selected*, *Clear Google Entries in Selected* and *Clear All Entries in Selected* action buttons in Rooms and Resources view.

6. Upgrading from Previous Version

Follow these instructions to upgrade your novaResourceSync database with the current version:

1. Replace the design of your novaResourceSync database with the provided novaResourceSync 4.2 template file.
2. Sign your novaResourceSync database with the Notes ID of a user or server that can run restricted LotusScript/Java agents.
3. Open the application profile document of your novaResourceSync database.
4. Click on the *Edit* button of the application profile document.
5. Select *Notes Global Calendar Owner* in the *Create Notes Reservations on Behalf of* field.
6. Click on the *Save & Close* button of the application profile document.

Appendix A. novaResourceSync™ Architecture Diagram

