



## **novaConnect™ v.4.7**

### **Guide for Administrators**

Updated November 12, 2013

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Tempus Nova Inc.  
1755 Blake Street  
Denver, CO 80202  
[www.tempusnova.com](http://www.tempusnova.com)

November 12, 2013

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## 1. Introduction

This document provides a guide for installing novaConnect v.4.7. The document is aimed at experienced Lotus Notes administrators.

### a. What is novaConnect?

novaConnect is a tool that synchronizes Free/Busy information between Google and Lotus Notes. It enables Free/Busy lookups between Lotus Notes users and Google Apps users.

### b. How Does novaConnect Work?

novaConnect is a native Lotus Notes application basically composed of an application profile document, control documents for users, and several 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 import Person documents from the Lotus Domino Directory. The tool allows the administrator to select which Person documents to import and creates corresponding Person documents within the novaConnect database. The administrator may select the Person documents manually or using a CSV file.

Once a user's Person document is imported to novaConnect, it will be ready to sync the next time the scheduled Outgoing agent runs.

The Outgoing agent runs every 5 minutes. The first time it syncs a Person document, it will pull any future calendar entries from Google into the user's Notes calendar. Any subsequent syncs will only pull from Google any calendar entries created or modified since the last successful sync.

novaConnect does not push Notes calendar entries to Google. It sends Notes free time information to Google using the Incoming agent. The Incoming agent does not interact directly with Google. When a Google Calendar user is creating a calendar event and checks another

user's availability, the user's Web browser sends the invitee's email address and event start and end times to the Incoming agent via HTTP or HTTPS. The Incoming agent looks up the invitee's free time information in Lotus Notes and returns an HTML form with the invitee's availability to the user's Web browser. The user's Web browser then posts this HTML form with the invitee's availability information to Google.

## **2. Quick-Start Guide**

The following is a quick-start guide to novaConnect. 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 novaConnect in a production environment.

### **a. Prerequisites**

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

1. The novaConnect database must reside on a Windows 2003 SP2 or greater server with a minimum of 4GB RAM and 50GB of disk space. Virtual machines are supported.
2. The Windows server must have outbound access to the Internet on the standard HTTP (80) and HTTPS (443) ports. It must also be accessible from the intranet or Internet on the standard HTTP (80) port or, if required, on the standard HTTPS (443) port.
3. The novaConnect database must reside on an IBM Domino Server 6.5 or greater.
4. Server must have Microsoft XML Core Services 6.0. For instructions on how to download and install Microsoft XML Core Services 6.0 visit:

<http://support.microsoft.com/kb/324460>

5. The Domino Server must have IBM's unlimited jurisdiction policy files for the Java Cryptography Extension (JCE). For instructions on how to download and install these files visit:

<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.

6. HTTP proxies are supported. Proxies requiring credentials are not supported.
7. Domino server must be set up as a Web server. If you require encryption on all inbound connections, you will need to set up SSL on the Domino server.
8. Domino server must have anonymous Web access for Internet/intranet clients enabled in the Server document or Internet Site document.
9. Timeout period in server document, under Internet protocols/Domino Web Engine/Web agents and web services section, must be set to something other than "0" which denotes no timeout. Typically 10 seconds will suffice.
10. 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.
11. Free/Busy interactions in your current Notes environment must be functional. The Domino Server must have the Calendar Connector and Schedule Manager tasks running. This will allow it to get free/busy time from the servers that host the user mail files.
12. If novaConnect resides in a different domain than your mail servers, you must create an Adjacent Domain Document (Admin Configuration/Messaging/Domains) on the server where novaConnect resides. Then add the domain that contains the mail servers you are trying to reach. Also from the Calendar tab, enter the name of a hub mail server that resides within the mail domain you are trying to reach.
13. The Domino server where novaConnect resides must have access to all mail servers. Server connection documents may be needed depending on your architecture. The server must be listed as a trusted server in all mail server Server documents. (Server Document, Security, Trusted Servers).

14. If forwarding mail, make sure you are using a mail rule and not entering a forwarding address in Person documents. In Notes, if you add a Forwarding address in the person document all busy time updates stop (this is a Notes function not a function of the tool).
15. The Windows server must be automatically rebooted every night to clear any inbound HTTP connections that may have remained.

## **b. Installation**

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

1. Copy the provided novaConnect™ 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.

## **c. Configuration**

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

1. Register the novaConnect 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 *Security*.
  - c. Click on *Advanced settings*.

- d. Go to the *Authentication* section and click on *Manage third party OAuth Client access*.
- e. Enter the provided Client ID in the *Client Name* field.
- f. Enter the following scope in the *One or More API Scopes* field:

<https://www.googleapis.com/auth/calendar>

3. Set up the free/busy service.

- a. Log into your domain's Google Control Panel:

<https://www.google.com/a/your-domain.com>

- b. Click on *Settings*.
- c. Click on *Calendar*.
- d. Click on *General*.
- e. Click on *Set up Calendar to use your free/busy service*.
- f. Select *I am using a free/busy service at this URI*:
- g. Enter the URL to the Incoming agent in the field provided. The URL to the Incoming agent should be similar to:

<http://your-domain.com/novaConnect.nsf/Incoming>

- h. Click on *Save changes*.

4. Open the application profile document by clicking on *Profile* and double clicking on the AppProfile document.

# novaConnect

## ***On ExpioDev***

*Bi-Directional Free/Busy Lookups  
between Lotus Notes and Google Apps*

- Profile
- **Person Documents**
- Import Logs
- Archived Items
- Diagnostics
- Time Zones
- Any Conflicts

3. 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.
4. 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.
5. 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
6. Select the applicable time zone in the *This Server's Time Zone* field.
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 the name of a server that contains the Domino Directory (NAB) in the *Notes Server Name* field.
9. 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*

10. 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*
11. Enter the name of the Person document field that contains the Google Internet address in the *Enter the Field Name containing the Internet Address in Notes Person Document* field.
12. Enter your Google Apps domain name in the *Google Domain* field.
13. Select the appropriate protocol in the *Does your Free/Busy URL begin with HTTP or HTTPs* field.
14. Enter the Google Apps Email address of a Google Apps administrator for your domain in the *Google Admin Email* field. 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 Person document from Notes into novaConnect.
  - a. Click on *Person Documents* to open the *Person Documents* view.

# novaConnect

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- 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 Domino Directory database, select the Domino Directory database, and click on *Open*.
- e. A popup window will display the list of users in the selected Domino Directory database. Select one and click on *OK*. A popup message will indicate that the selected user's Person document has been imported. The imported Person document will appear in the Person Documents view of novaConnect.

The imported Person document will start to sync within the next 5 minutes.

## **d. Verify Installation and Configuration**

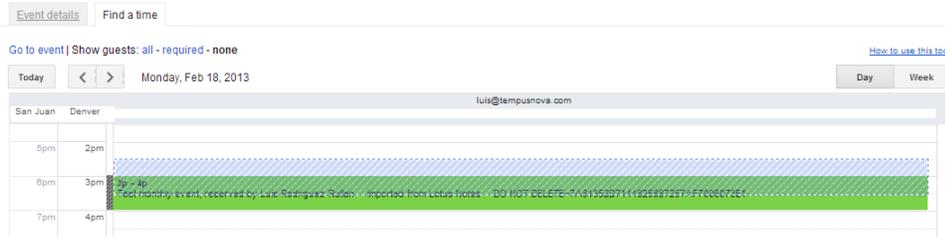
Once you have installed and configured novaConnect, you should verify that the free/busy

service URL and the sync process are working correctly.

1. Confirm that Notes free/busy time is available in Google Calendar.
  - a. Open your Lotus Notes email.
  - b. Create a new meeting in a Notes user's calendar.
  - c. Log into a **non** admin Google Apps Account.
  - d. Open Google Calendar.
  - e. Create a new calendar entry.
  - f. Invite a guest with a Lotus Notes email address.
  - g. Click on the *Find a time* tab.

The screenshot shows the Google Calendar event creation interface. At the top, there is a navigation bar with buttons for '←', 'SAVE' (in red), 'Discard changes', 'Delete', and a 'More Actions' dropdown menu. Below this is a form for creating an event. The event title is 'Test Event'. The date is set to '2/18/2013' and the time is '2:30pm to 3:30pm'. There is a 'Time zone' dropdown menu. Below the date and time fields, there are checkboxes for 'All day' and 'Repeat...'. At the bottom of the form, there are two tabs: 'Event details' and 'Find a time', with 'Find a time' being the active tab.

- h. The availability box will appear. The selected user's Notes Free/Busy details will be listed in the box. The time displayed in light blue correspond to your requested time. The time displayed in white is considered free time. The time displayed in the user's colors (in this example, green) is considered busy.



2. Confirm that Google resource calendar events are being pushed to Notes.
  - a. Open your Google Calendar.
  - b. Create a new entry in your calendar.
  - c. Wait for the Outgoing agent to run. It will run within the next 5 minutes and will finish running shortly after.
  - d. Open your Lotus Notes calendar. You should see the corresponding Notes event in your calendar.

### 3. Administering novaConnect

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

#### a. Importing Person Documents from Lotus Notes

Follow these instructions to import Person documents from Notes into novaConnect:

1. Click on *Person Documents* to open the *Person Documents* view.

# novaConnect

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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 Domino Directory database, select the Domino Directory database, and click on *Open*.
5. A popup window will display the list of users in the selected Domino Directory database. Select one and click on *OK*. A popup message will indicate that the selected user's Person document has been imported. The imported Person document will appear in the Person Documents view of novaConnect.
6. Click on *Import Logs* to view the Import Log documents. Any import errors will be documented in these documents.

## **b. Importing Person Documents from Notes Using CSV file**

Follow these instructions to import Person documents from Notes using a CSV file:

1. Create a text file with the list of users to import from the Domino Directory. The text file must have a single column with the abbreviated Notes address of each user to import into novaConnect.
2. Click on *Person Documents* to open the *Person Documents* view.

## novaConnect

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3. Click on the *Import from CSV* action button.



4. A popup message will explain what the *Import from CSV* action button does and will ask you if you want to continue. Click on *Yes*.
5. A popup window will appear showing a list of the local files. Select the comma separated value text file with the list of users to import and click on *Open*.
6. A popup message will indicate that the CSV file import process has completed. The imported Person documents will appear in the Person Documents view of novaConnect.

7. Click on *Import Logs* to view the Import Log documents. Any import errors will be documented in these documents.

### **c. Archiving Person Documents**

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

Follow these instructions to archive a Person document:

1. Select the document to archive in the Person Documents view and click on the *Archive Selected* action button. novaConnect will move the archived document to the Archived Items view.

Follow these instructions to un-archive a Person document:

1. Select the document to un-archive in the Archived Items view and click on the *Un-Archive Item* action button. novaConnect will move the un-archived document to the Person Documents view.

### **d. Running Multiple Copies of novaConnect**

If you have a large number of users or if your user calendars are extremely busy, you may want to create multiple copies of novaConnect. 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 novaConnect:

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

- Copy all documents in the *Time Zones* view of the original working copy of novaConnect to the new copy.

You may cut any existing Person documents from the original copy of novaConnect and paste them into the new copy. Make sure that the same Person document does not exist in more than one novaConnect database.

## 4. Troubleshooting

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

Issue	Solution
<p>Some Person documents are not syncing. The <i>Most Recent Sync Log</i> fields of their Person documents contain the following text:</p> <p>Status 503.</p>	<p>novaConnect 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 novaConnect requests in a few minutes.</p>
<p>Most Recent Sync Log in Person 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>
<p>Users are unable to use Google "Find a time" feature to find available time of Notes users.</p>	<p>Make sure that the HTTP task is running on the novaConnect server and that the server is available from the user's computers. If the HTTP task is running, but unresponsive, restart the server. The Windows server must be restarted nightly to clear any hanging inbound HTTP connections that may accumulate during the day.</p>

## 5. Changes Since Last Major Release

This section will list all changes made to novaConnect since version 4.3.

### a. New Features and Enhancements

The following new features and enhancements were included in version 4.7 of novaConnect:

1. Added an option to the application profile that enables the administrator to swap the Google domain name with the Notes domain name when searching for a Notes user's free time via the Incoming agent. This allows the novaConnect tool to support clients that have different Notes and Google domain names.
2. Optimized the Incoming agent. It will not attempt to perform the free time search for users not in the Notes domain.

The following new features and enhancements were included in version 4.6 of novaConnect:

1. Improved wording of authentication scenario options in application profile.
2. Improved diagnostics form. Diagnostics form checks MS XML Client, HTTP connection to Google servers, JCE Policy files, OAuth 2.0 authentication, and user free time search.
3. Corrected authentication issue that occurred with syncs that ran for more than one hour.
4. Improved error handling when a user mail file has exceeded its mail quota.

The following new features and enhancements were included in version 4.5 of novaConnect:

1. Added *Most Recent Sync Start* and *Most Recent Sync End* fields to Person documents.
2. Simplified user interface. Removed embedded views from application profile.

3. Improved Outgoing agent. It now syncs changes since last successful sync date of the Person document. If syncing a Person document for the first time, the Sync agent will sync all Google events with a future end date.
4. Added *Import from Notes* action button to Person Documents view.
5. Added *Import from CSV* action button to Person Documents view.
6. Improved handling of date changes in Google Calendar entries that have already been synced to Notes. The date of the Notes entry will be updated without leaving the original Notes entry.

The following new features and enhancements were included in version 4.4 of novaConnect:

1. Improved handling of Google Calendar entries that have been marked as “Available”. These calendar entries will not be synced to Notes.

## **b. Features Removed**

No features were removed since version 4.4 of novaConnect.

## **6. Upgrading from Previous Version**

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

1. Replace the design of your novaConnect database with the provided novaConnect 4.7 template file.
2. Sign your novaConnect database with with the Notes ID of a user or server that can run restricted LotusScript/Java agents.
3. Open the application profile document of your novaConnect database.
4. Click on the *Edit* button of the application profile document.
5. Click on the Save & Close button of the application profile document.



## Appendix A. novaConnect™ Architecture Diagram

