

IBM Connections 3: Installation and Configuration for Newbies

(With special mention of one-server installation
and integration with Lotus Domino)

By [Chuck Connell](#)

Connections is IBM's entry into corporate social networking – in other words, Facebook for companies. IBM is hoping for big things from this product, so much so that they recently re-branded it from Lotus Connections to IBM Connections. The message behind this rename is pretty obvious: IBM wants to sell the product broadly to all their customers, not just to Lotus fans.

Another justification for the re-branding is that Connections differs from the Lotus products in a fundamental way: it is not based on the Domino server platform. While some aspects of Connections can talk to Domino (more about that below) its underlying platform is IBM Websphere Application Server.

Connections 3 includes the following main features:

- **Home Page** to snapshot the other features
- **Profiles** of people using the system
- **Communities** of people around shared interests and projects
- **Files** for upload/download/archive
- **Blogs** for running commentary by one or more people
- **Activities** to organize and manage shared projects
- **Bookmarks** to share web links
- **Wikis** to accumulate knowledge bases
- **Forums** for ongoing discussions

I recently did a fresh installation of Connections 3.0.1, with the following goals:

1. Everything on one server, including all of the main features listed above. I planned to use the machine for development and testing in my IBM consulting business, so it would never have many users or a heavy load.

(Putting the complete Connections software on one server can also be useful to larger organizations, as a way to kick the tires and gather feedback, before deciding whether to perform a more robust installation.)

2. Integration with an existing set of users in a Domino Directory. The reason is that I have many Domino/Notes customers and wanted to see how easily I could add Connections to a Domino infrastructure.

I made use of an excellent article written by three IBM employees titled [Lotus Connections 3.0 – Small Deployment](#). Their instructions were helpful and I followed their advice, except where I had to diverge from it to meet my goals. (They used three servers and integrated with Tivoli LDAP instead of Domino.) My comments here assume you are using that article as the general outline for the installation procedure. I will elaborate on the ways I modified their instructions or ran into problems with their advice.

Connections generally runs on 64-bit platforms, but since my goal was to simplify, I took advantage of the fact that there is one 32-bit platform supported – Windows Server 2003 with SP2. I built such a virtual machine with two CPUs, 4GB RAM, 120GB disk and static IP. I had no problem with computing resources throughout my work and probably could have used a disk half that size.

Connections has three main components:

1. **An LDAP server**, which holds the list of people using the system. This is typically Tivoli Directory Server, although I used Lotus Domino instead.
2. **A database server**, to store various Connections data items. This is typically IBM DB2, which I chose, although other options are supported. The database server uses Tivoli Directory Integrator (TDI) to help with data flow among Connections sub-components.
3. **The Connections software**, which runs on top of Websphere Application Server (WAS). WAS uses the IBM HTTP Server product as its HTTP layer.

The installation instructions cited above configure these components as three distinct server machines. I installed all the software on one server, without any unusual problems. The Connections product includes the latest version of each component, so you do not have to search for each piece or purchase them separately (but Domino is not included).

I followed the installation steps outlined in the article, with these exceptions and warnings.

General

- If the name of your machine is not known to your local DNS server, then add the name to the “hosts” file on that machine and any workstations that will access Connections. On Windows, the hosts file is found at `c:\windows\system32\drivers\etc\hosts`. So on the server, I added the lines

```
127.0.0.1 connections.chc-3.local #this machine
127.0.0.1 mail.chc-3.local #to find Domino mail router
```

And on the workstation where I will use Connections, I added

```
192.168.1.149 connections.chc-3.local #local IP of test server
```

- Throughout the installation, you are often asked for the “host name” of various machines. In my case, this was always the same server, but it is important to enter the fully-qualified name, not just the common name. Enter “connections.chc-3.local”, and not “connections” or “localhost”.
- The IBM software package numbers are cryptic. So there is no easy way to tell which installer is the main WAS product, for example, and which is WAS Supplement 1 that contains IBM HTTP Server. My suggestion is to unzip each software package and look inside it, and then you can see more clearly which package is called for at each step.
- The instructions tell you to install fixpacks for several of the products, including WAS, HTTP Server, and TDI. The instructions list the officially supported fixpacks, and IBM has issued some [cautions](#) about using newer fixpacks, particularly for WAS. I did a fresh Google search for the latest available fixpacks, however, and used those with no problems. I found all of the fixpacks fairly easily and all were free.
- If you are unsure whether a particular fixpack applies to your software, take it anyway. The built-in patch utilities will only apply fixpacks that are relevant to your installed software.
- During the installation, you are asked to specify many passwords for various admin functions. For a test/development server, I suggest making all of those passwords the same, or you will have a hard time keeping track of them.

LDAP

- If you are using Domino as the LDAP server, make sure each Domino user has an Internet password defined in the Domino Directory. I also set the Domino server security option “more name variations” to make logon easier, although this is not required.
- Be sure your LDAP server (whatever it is) has some names in it before you configure LDAP for Connections. The reason is that the Connections setup process will pull names from LDAP and you want some names in the directory to make sure this works correctly.
- If you are using Domino as your LDAP server, you may notice the Domino database “schema.nsf”. Inside this database, you will see a complex mapping of Notes field names to LDAP attributes. Do not change this file. It will work correctly as is.
- If you are using Domino as your LDAP server, then during LDAP configuration, the distinguished name of your base entry is “o=<domino org name>”. The same applies for the LDAP search base when populating the Connections user list. As an example, mine was “o=chc-3”.

- When saving the LDAP configuration, I received some bad-looking error messages. There was no indication what the problem was, so it was not clear what I should do differently. Fortunately, when I repeated the same operations, they worked on the third try.

DB2

- The DB2 license file may not have the name that is stated in the instructions and may not be found in the directory stated. Mine was actually named db2ese_u.lic and was in the directory DB2.License within the Connections installation package. You may need to search your machine for db2*.lic to find yours.

TDI

- Note that Tivoli Directory Server (TDS) is a different product than Tivoli Directory Integrator (TDI). The first is an LDAP server, while the second performs various data movement functions.
- The instructions for installing the TDI fixpack were incorrect. The file you download is a ZIP file that contains another ZIP file, with the embedded ZIP being the real fixpack. You can tell the difference because the top level of the real fixpack contains a file named “.manifest”.

Websphere

- During the Websphere installation, the instructions have some confusion about whether the default name of the Websphere administrator is “wsadmin” or “wasadmin”. Either will work of course, just make sure you are consistent throughout. I used the first.
- When you are asked to “start the Deployment Manager”, you can find this at Start / All Programs / IBM Websphere / Application Server Network Deployment / Profiles / Dmgr01 / Start the Deployment Manager.

HTTP Server

- You must perform the steps for SSL setup, including the creation of a self-certified keyring if you need one. SSL is not optional, since it is used during the Websphere logon process.
- If you are using a self-certified SSL cert, you will see a warning when you use a browser to access Websphere. You may continue through this warning.

Connections

- After installation, you may need to perform some/all of the following manual steps to start the various pieces of Websphere and Connections.

1. Node agent -- c:\WebSphere\AppServer\profiles\AppSrv01\bin\startNode.bat.

2. Websphere cluster -- Websphere admin console / Servers / Clusters / Websphere Application Server Clusters. Select the available cluster, then press Start.
 3. Websphere Application Server -- Websphere admin console / Servers / Server Types / Websphere Application Server. Select all the listed items, then press Start.
 4. Connections applications (home page, blogs, etc.) -- Websphere admin console / Applications / Application Types / Websphere Enterprise Applications. Select all of the Connections applications, then press Start.
- For a test server, you can skip the steps related to tuning the heap size.

The result of this project was a single machine that contained a complete Connections installation, with Domino as the LDAP server.

And finally, I must add an editorial comment about the complexity of the Connections installation...

I understand that Connections supports many server topologies. It is not a single executable that you place on a single machine, such as Microsoft Excel or Lotus Notes. The flexible topologies allow you to scale Connections from 10 users to 100,000. So Connections probably can never have a push-button installation script for all scenarios.

Having said this, the installation process is *way too complicated*. The Connections installer should support a "basic" mode that sets everything to simple, default behavior when Connections/WAS/HTTP are on one machine. The installer should include IBM HTTP Server, so that it is not a separate installation task as it is now. The script should ask for the names of the DB2 and LDAP servers (separate or local) and configure Connections to use them. The painstaking process I went through included many manual steps that are identical for all basic installations. The installer should make these standard settings automatically.

For more information...

Small deployment for Connections 3:

www.lotus.com/ldd/lcwiki.nsf/dx/Scenario_1_Installing_Lotus_Connections_3.0-Small_Deployment

Connections product home page:

www.ibm.com/software/lotus/products/connections/

Connections wiki:

www.lotus.com/ldd/lcwiki.nsf

Connections forum:

www.lotus.com/ldd/lcforum.nsf?OpenDatabase

IBM Developer Network Connections page:

www.ibm.com/developerworks/lotus/products/connections/

IBM Support technote about fixpack levels:

www.ibm.com/support/docview.wss?uid=swg21454382

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