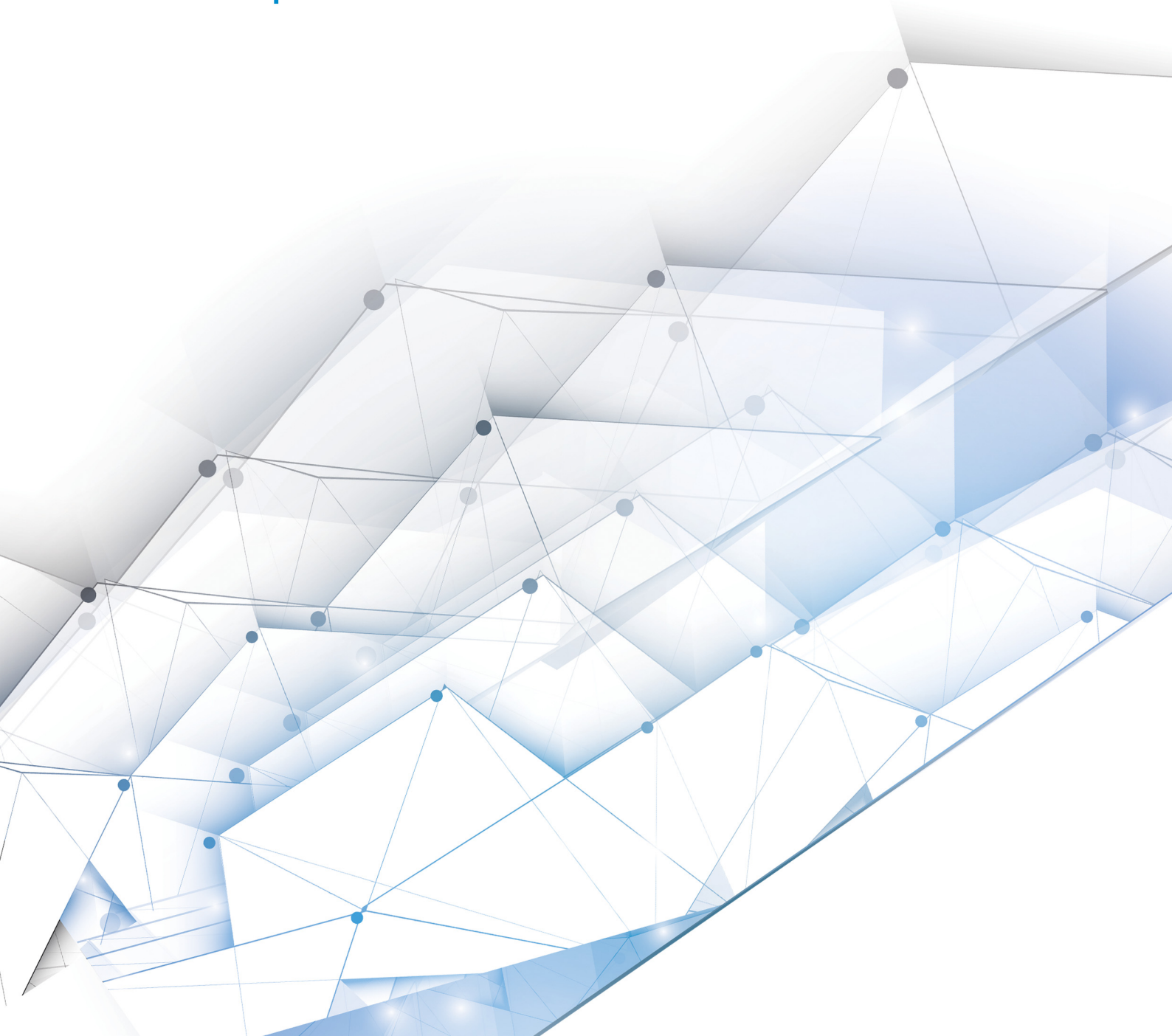


# ConnectionsExpert Setup Guide





## SETUP GUIDE

### Contact

#### panagenda Austria

(Headquarters)

panagenda GmbH  
Schreyvogelgasse 3/10  
AT 1010 Vienna (Austria)  
Phone: +43 1 89 012 89  
Fax: +43 1 89 012 89 – 15

#### panagenda Germany

panagenda GmbH  
Lahnstrasse 17  
DE 64646 Heppenheim  
(Germany)  
Phone: +49 6252 67939 – 00  
Fax: +49 6252 67939 – 16

#### panagenda USA

panagenda Inc.  
60 State Street  
Suite 700  
Boston, MA 02109 (USA)  
Phone: +1 (617) 855 5961  
Fax: +1 (617) 488 2292

E-Mail Sales: [sales@panagenda.com](mailto:sales@panagenda.com)  
E-Mail Support: [support@panagenda.com](mailto:support@panagenda.com)  
Web: [www.panagenda.com](http://www.panagenda.com)

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# SETUP GUIDE

## Welcome to panagenda ConnectionsExpert!



This guide will help you to set up panagenda ConnectionsExpert in no time. If you have any comments or suggestions, please contact us at [support@panagenda.com](mailto:support@panagenda.com).

### About ConnectionsExpert

ConnectionsExpert offers unique insights into your IBM Connections environment and provides vital information for many roles in your organization: Operative monitoring dashboards and performance analytics for administrators, as well as adoption and usage KPIs for social adoption experts and management.

ConnectionsExpert is a virtual appliance, which collects various statistical information from IBM Connections. **All data is stored on premises!**

# System Requirements

## IBM Connections

In order to run ConnectionsExpert properly, the following prerequisites must be met:

- IBM Connections 5.0 or 5.5
- IBM Connections Backend Database is based on DB2 or Oracle
- IBM Connections Metrics Application is available



***Running Cognos is not a prerequisite. The Metrics application collects data in the background to the Metrics database. ConnectionsExpert processes the data from this database.***

## Host Software

panagenda ConnectionsExpert comes as a virtual appliance including its own operating system based on the popular Ubuntu Linux distribution. No operating system needs to be prepared for the installation on virtualization software side.

The virtual image can be deployed on VMWare Player, Workstation, Server, ESX, ESXi, vSphere and Microsoft Hyper-V as host system. The underlying hardware and OS need to have VT-x support enabled (in BIOS). This is mainly relevant in scenarios where Player or Workstation act as host system. Detailed information about operating system requirements can be found on the respective product page: [www.vmware.com/products/](http://www.vmware.com/products/) & [www.microsoft.com/en-us/server-cloud/solutions/virtualization.aspx](http://www.microsoft.com/en-us/server-cloud/solutions/virtualization.aspx)

## Virtual Hardware

Minimum hardware requirements for production environment:

- a modern CPU with 2-4 processor cores
- 4 GB - 16 GB of RAM available to the virtual appliance
- min. 40 GB of free disk space for virtual appliance

If additional disk space is required for long term storage, the disk can be enlarged (see “Enlarging ConnectionsExpert Data Disk” on page 33). It is not an option to add additional disks to the system in order to provide more disk space.

## Access and Permissions

### User Accounts:

During the configuration of ConnectionsExpert's Bridgehead application, a WebSphere administrator account must be supplied (see "Configure the adminclient.props settings:" on page 16). It will be used to perform WebSphere internal operations.

In order to perform user simulations and connect to the Bridgehead application, an active Connections account (LDAP User) is required. Creating a dedicated account is recommended (see "Bridgehead Connector - User Information" on page 26).

### Network (Firewall/Ports):

Connections to and from the appliance need to be allowed for the following services:

*Outbound (originating in virtual appliance):*

- **HTTP/HTTPS** to WebSphere servers for data collection (TCP 80/443)

*Inbound (accessing virtual appliance):*

- **HTTP/HTTPS** for configuration and reports (TCP 80/443)
- **SSH** for system configuration and application tuning (TCP 22)
- **VNC** for system configuration (TCP 5901)
- Optional: PostgreSQL for data warehouse access where enabled (TCP 5432)

It is recommended that the ConnectionsExpert application owner has access to the console of the virtual machine.

Internet access for the appliance is not mandatory, but it is recommended to grant at least proxy access to panagenda.com and ubuntu.com for security and application updates.

# Client System Requirements

## Hardware, Operating System and Software Requirements:

The panagenda ConnectionsExpert web interface is based on HTML5 and therefore accessible on any **HTML5 capable device**.

- We recommend the following browsers in latest **64-bit** versions: **Chrome** and **Firefox**

## Browser Security and Network Access:

No special web browser security settings are required to run the panagenda ConnectionsExpert web interface.

To access the ConnectionsExpert web interface, you need to have access to the panagenda ConnectionsExpert appliance via TCP/IP, Port 80 (HTTP) and Port 443 (HTTPS).

# ConnectionsExpert Appliance Details

panagenda ConnectionsExpert is developed as a virtual appliance:

## The panagenda ConnectionsExpert Virtual Image

- **Ubuntu**

*12.04 LTS (Precise Pangolin)*

panagenda ConnectionsExpert is based on the very popular Ubuntu Linux distribution, which is a fork of the Debian projekt's codebase. Ubuntu 12.04 LTS was chosen because of its stability and its long time support option (LTS = Long Time Support). It uses a current kernel version (3.2.x) for virtual systems. Only security patches are configured for automatic update via the Debian update framework/APT

- **Tomcat 8 Application Server**
- **NodeJS 6 Application Server**
- **Nginx 1.10 Reverse Proxy Server**
- **Java 8 Virtual Machine**
- **PostgreSQL 9.5 Relational Database Server**

# GETTING STARTED

## Setup

In the downloads section of our website ([www.panagenda.com/downloads](http://www.panagenda.com/downloads)), the latest versions of the following files are available:

- **panagenda\_ConnectionsExpert.ova** – image file directly deployable via the VMWare vSphere client. It holds the ConnectionsExpert virtual appliance in open virtualization format (OVF)
- **panagenda\_ConnectionsExpert.exe** – self-extracting 7z archive which contains the ConnectionsExpert virtual appliance in VMWare Workstation format
- **panagenda\_ConnectionsExpert\_HyperV.exe** – self-extracting 7z archive which contains the ConnectionsExpert virtual appliance in Microsoft Hyper-V format
- **Connections Expert Setup Guide** – extended installation and configuration guide.

We recommend running ConnectionsExpert production systems in a VMWare vSphere/ESX enterprise environment. Additional options are available with images for Microsoft Hyper-V and VMWare Player/Workstation. Especially the latter is mainly targeted at temporary evaluation environments and are not supported for production use.



***Please note that a license file is required to run ConnectionsExpert. This also applies to the free Basic edition. Please contact [sales@panagenda.com](mailto:sales@panagenda.com) to request a license.***

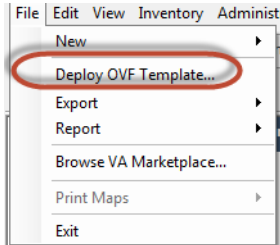
Place the license file ConnectionsExpert.lic in a folder on your local hard drive. This file will be uploaded to the virtual appliance in a later step using the panagenda ConnectionsExpert web interface.



## Starting up on the virtualization software

### Recommended: VMWare vSphere/ESX via OVA

Open VMWare ESX, ESXi or vSphere and select:

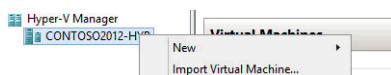


The Deploy OVF Template dialog will open:

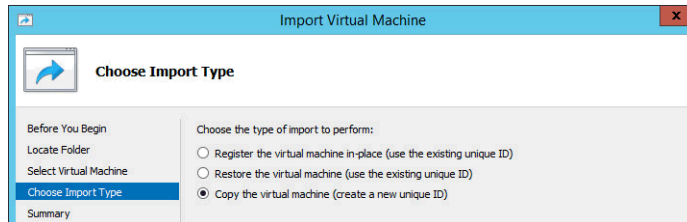
1. **Source:** Specify the location where you saved the ConnectionsExpert OVA file on your hard drive – for example: `C:/Temp/panagenda_ConnectionsExpert.ova`
2. **OVF Template Details:** In this step you can inform yourself about the ConnectionsExpert version you are about to deploy. When you are done, just click on Next
3. **Name and Location:** Is the next relevant step for deploying ConnectionsExpert. We recommend to name this template "**panagenda ConnectionsExpert**"
4. **Storage:** Then you have to select a destination storage for the virtual machine files.
5. **Disk Format:** In this step, please select the format you want to store the virtual disks. We recommend to choose "Thick Provision Eager Zeroed"
6. **Network Mapping:** Then select the network the deployed ConnectionsExpert template should use.
7. **Ready to Complete:** In the final step you are shown the options you set up. Click on Finish if you are satisfied with you setting to start the deployment task.

### Alternative: Microsoft Hyper-V

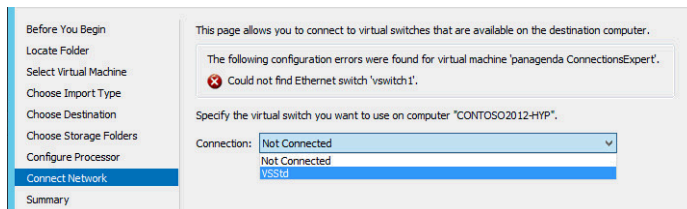
- Extract the file **panagenda\_ConnectionsExpert\_HyperV.exe**
- Start Hyper-V Manager
- Right-click on your server and select "Import Virtual Machine" from the context menu



- Click **Next** on “Before you Begin” screen
- Select the folder that contains the extracted files and click **Next**
- Select the ConnectionsExpert image
- Select “Copy the virtual machine (create a new unique ID)”



- Click **Next** in the “Choose Destination” screen, unless you want to set the folders individually
- Select the folder where you want to store the virtual hard disk
- Click **Next** in the “Configure Processor” step – please don’t change the processor settings
- Specify a network connection



- Select **Finish** on the summary screen to start the copy

## Alternative: VMWare Workstation/Player via VMX

- Extract the file **panagenda\_ConnectionsExpert.exe**
- Start VMWare Player or VMWare Server
- Open Virtual Machine
  - Navigate to the folder where the files from the ConnectionsExpert EXE are extracted
- Select the ConnectionsExpert VMX file



*If you are prompted to update the VMWare Tools during appliance update, decline the request. Appropriate VMWare Tools are already installed on the panagenda ConnectionsExpert appliance.*

## Alternative: VMWare vSphere/ESX via VMX and Converter

After extracting the file **panagenda\_ConnectionsExpert.exe**, a VMWare Workstation type virtual machine is available (ConnectionsExpert VMX file). To use this machine on a VMWare ESX Server, a free tool from VMWare named vCenter Converter Standalone ([downloads.vmware.com](https://downloads.vmware.com)) can be used to convert and upload it to your VMWare environment. Please see VMWare product documentation ([www.vmware.com/support/pubs/converter\\_pubs.html](http://www.vmware.com/support/pubs/converter_pubs.html)) on detailed installation and usage instructions.

### Converter:

To convert and install panagenda ConnectionsExpert, please follow these steps:

- Start converter
- Select **convert machine**
  - Source Type: VMWare Workstation virtual machine
  - Navigate to the folder, to where the files from panagenda\_ConnectionsExpert.exe are extracted
  - Select the ConnectionsExpert VMX file
  - Select **Next**
  - Destination Type: VMWare Infrastructure virtual machine
  - Enter your VMWare ESX Server connection details and credentials
  - Select **Next**
  - Host/Resource: No changes required
  - Select **Next**
  - Options: No changes recommended for Trial Version
  - Select **Finish** to start Upload

- Depending on your network speed the upload can take several minutes
- After the Upload is finished, start your VMWare server management tool and run the newly created virtual machine
- The first few steps of setting up the system will require access to the virtual machine console

## Starting the Virtual Appliance

### Welcome Screen and IP Address

After starting up the appliance for the first time, you should be presented with a panagenda ConnectionsExpert welcome screen. If your network has a public DHCP server available, the system might already have acquired an IP address and will display the URL. **Use the shown IP address (interface URL) in your web browser to connect to the panagenda ConnectionsExpert web interface.** If your network does not support DHCP or the panagenda ConnectionsExpert appliance did not acquire any IP address, you have to configure the panagenda ConnectionsExpert appliance network settings (see "Network Settings:" on page 14).

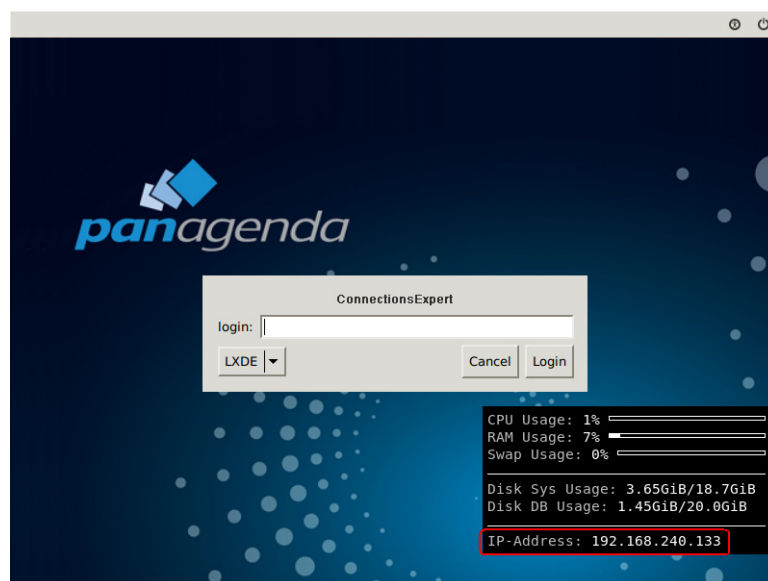


Figure 1: Welcome Screen

## Appliance Login

ConnectionsExpert provides a graphical user interface in order to configure operating system level settings like network, time and time zone settings.

### Default login information:

- user "config" with password "config"

## The Appliance Environment

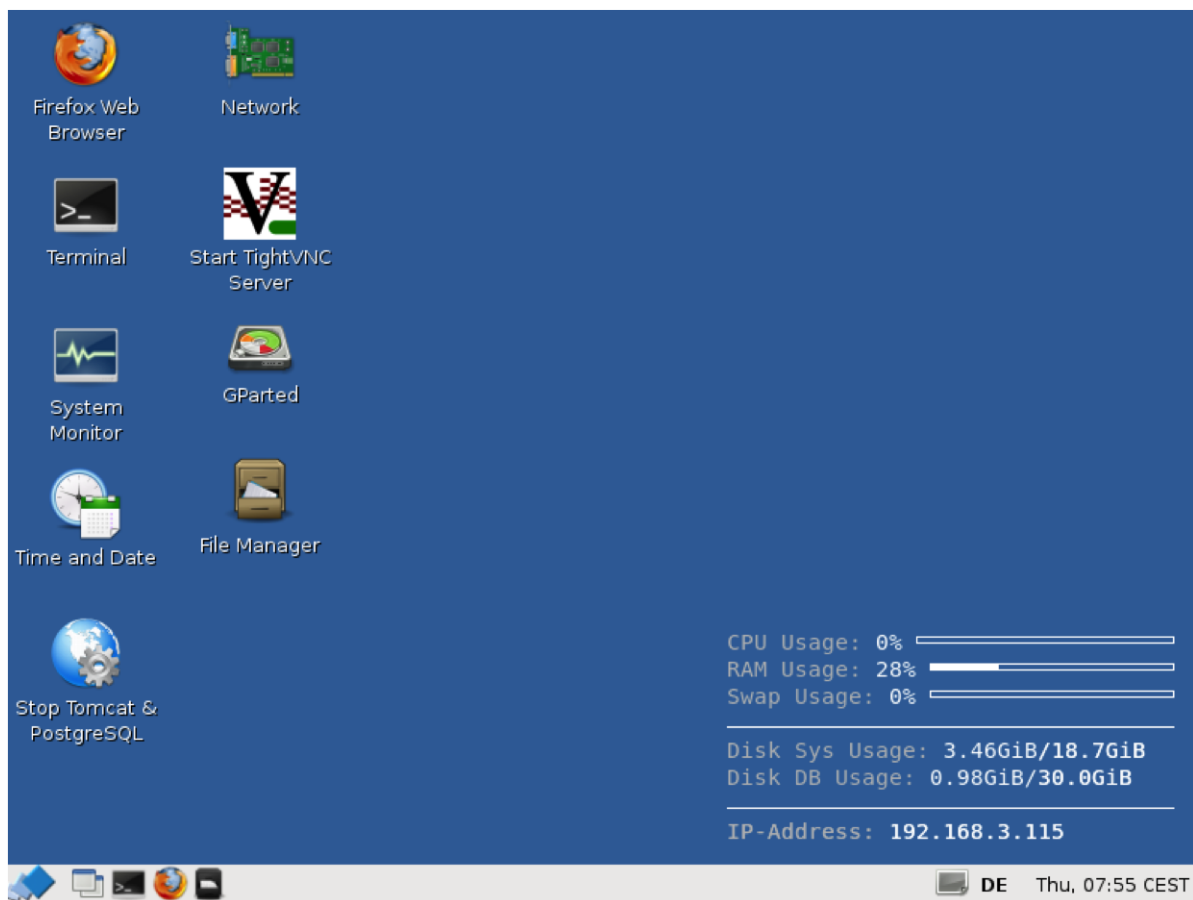


Figure 2: ConnectionsExpert Desktop

To check an established internet connection, a **web browser** (Mozilla Firefox) is available on the panagenda ConnectionsExpert appliance.

You can use the **terminal window** to check if your TCP/IP connection is established, using Linux *ping* and *ifconfig* command. For more information about *ping* and *ifconfig* commands, type *man ping* or *man ifconfig* in the terminal console window.

panagenda ConnectionsExpert log files can be found on the default Tomcat log file location (/opt/tomcat/logs). The main log file (idna.log) holds essential information about panagenda ConnectionsExpert runtime behavior. Use the **file manager** to navigate to these log files.

To check the panagenda ConnectionsExpert appliances system behavior, you can use the installed **system monitor**.

### Network Settings:

Click the **Network** icon on the desktop to configure host name, IP address and DNS. When changing the host name (default is "ConnectionsExpert") on the "General" tab, please make sure to adapt the host alias properties for 127.0.1.1 on the "Hosts" tab as well. It is recommended that both host name and full qualified domain name are entered here.

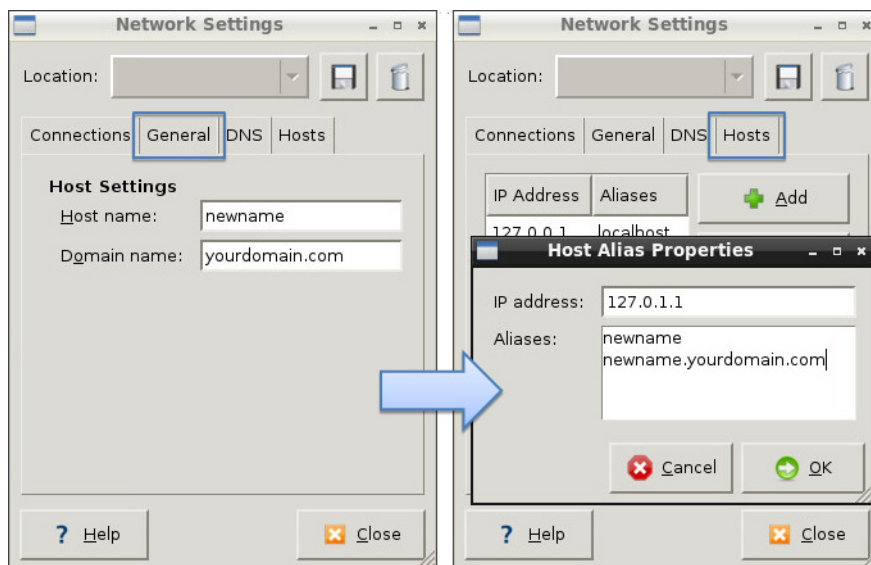


Figure 3: Network Settings



*The virtual appliance **MUST** be able to resolve its own host name. Please verify that by opening a terminal window (click "Terminal" on the desktop) and using the ping command. It is recommend that both host/common name as well full qualified domain name are pingable. See "Network (Firewall/Ports):" on page 6 for incoming and outgoing network access requirements.*

### Time Zone Settings:

Please check the time zone settings of the appliance, use the **Time and Date** shortcut to adjust.



*It is very important to adjust the appliance's time zone. Please reboot the appliance after changing the date/time settings as the web server and database system require a clean start with the new configuration.*

## Bridgehead Installation

The Bridgehead is an interface application for WebSphere that transfers IBM Connections statistics directly to ConnectionsExpert.

Follow these steps to deploy the Bridgehead application on your WebSphere server.



*In the Bridgehead installation described here, the EAR will be installed in the AppsCluster, so all scopes are set to AppsCluster. If you want to deploy the EAR to a different Cluster, please adjust the scope.*

### 1 Download and copy Files

In the ConnectionsExpert web interface, navigate to the Configuration view by clicking on the cogwheel icon (top-right corner). In the Configuration view you can download the **ConnectionsExpert\_Bridgehead.zip**. This archive includes EAR and configuration files for the installation of the so called Bridgehead:

- *bridgehead.ear*
- *pbh/*
  - *adminclient.props*
  - *jyscripts*
  - *jython-standalone-2.5.3.jar*
  - *queries*

Please copy the folder "pbh" into the Connections customization directory.

## 2 Configure the **adminclient.props** settings:

```
host=<dmgr_fqdn> (default: localhost)
port=<dmgr_soap_port> (default: 8879)
type=SOAP
securityEnabled=true
username=<username>
password=<password>
autoAcceptSignerForThisConnectionOnly=true
```



**localhost only works in non-clustered environments. Please use the hostname (FQDN) in clustered environments.**

Enter your *username* and *password* and configure the other settings according to your WebSphere environment.

You need to add a WebSphere Administrator Account here, no special Connections access roles are needed.

So you can use an already existing account (local or LDAP), or you create a local WebSphere Administrator Account.

Create a local user **Users and Groups > Manage Users > Add...** and add this user to **Users and Groups > Administrative** user roles:

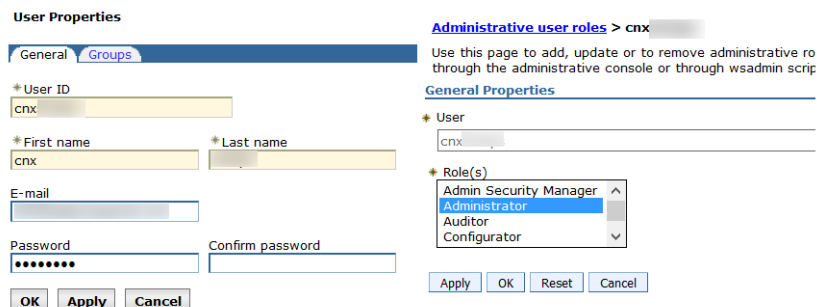


Figure 4: User Roles

Optional: To encrypt the password in the **adminclient.props** you can use the following command:

- Linux:

```
/opt/IBM/WebSphere/AppServer/bin/
PropFilePasswordEncoder.<sh|bat> /<path_to_pbh_dir>/
adminclient.props password
```

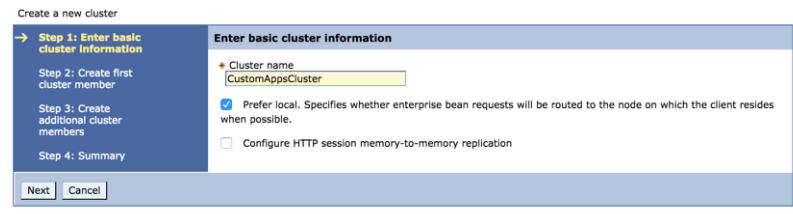
- Windows:

```
<customer-specific>\WebSphere\AppServer\bin\PropFilePassword
Encoder.<sh|bat> \<path_to_pbh_dir>\adminclient.props password
```



### 3 Create WebSphere Cluster

In the WebSphere Integrated Solution Console (ICS) go to **Clusters > WebSphere Application Clusters**. Create a cluster with one or optionally more nodes.



Create a new cluster

Step 1: Enter basic cluster information

Step 2: Create first cluster member

Step 3: Create additional cluster members

Step 4: Summary

Next Cancel

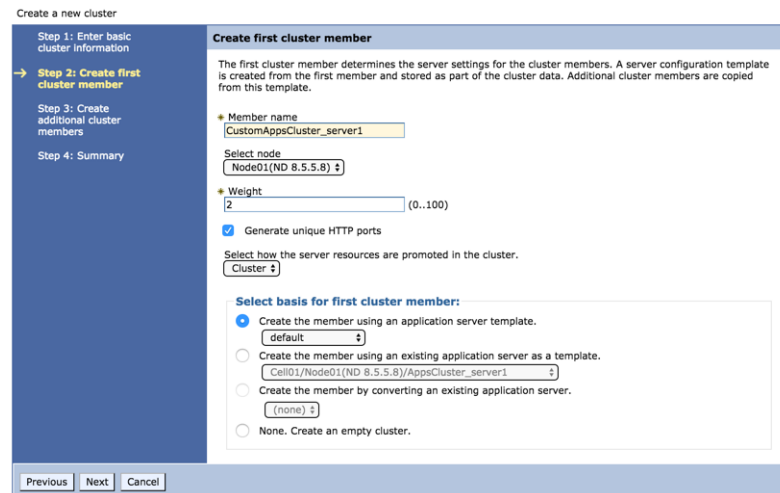
**Enter basic cluster information**

\* Cluster name  
CustomAppsCluster

☒ Prefer local. Specifies whether enterprise bean requests will be routed to the node on which the client resides when possible.

☐ Configure HTTP session memory-to-memory replication

Figure 5: Create Cluster 1



Create a new cluster

Step 1: Enter basic cluster information

Step 2: Create first cluster member

Step 3: Create additional cluster members

Step 4: Summary

Previous Next Cancel

**Create first cluster member**

The first cluster member determines the server settings for the cluster members. A server configuration template is created from the first member and stored as part of the cluster data. Additional cluster members are copied from this template.

\* Member name  
CustomAppsCluster\_server1

Select node  
Node01 (ND 8.5.5.8)

\* Weight  
2 (0..100)

☒ Generate unique HTTP ports

Select how the server resources are promoted in the cluster.  
Cluster

**Select basis for first cluster member:**

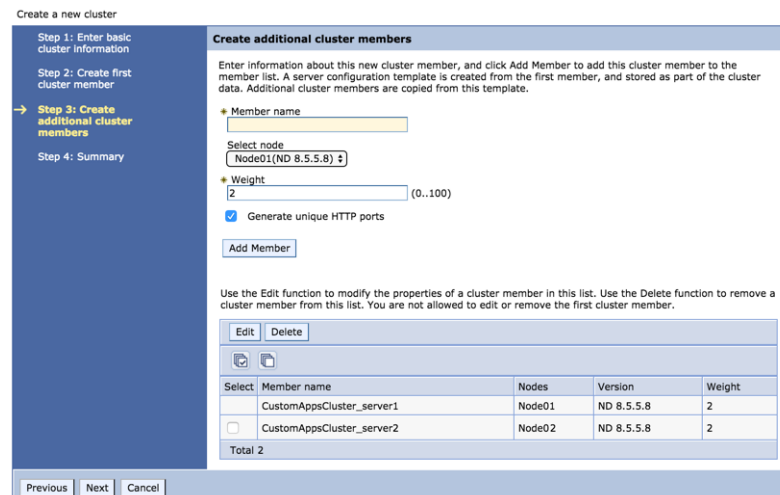
☒ Create the member using an application server template.  
default

☐ Create the member using an existing application server as a template.  
Cell01/Node01 (ND 8.5.5.8)/AppsCluster\_server1

☐ Create the member by converting an existing application server.  
(none)

☐ None. Create an empty cluster.

Figure 6: Create Cluster 2



Create a new cluster

Step 1: Enter basic cluster information

Step 2: Create first cluster member

Step 3: Create additional cluster members

Step 4: Summary

Previous Next Cancel

**Create additional cluster members**

Enter information about this new cluster member, and click Add Member to add this cluster member to the member list. A server configuration template is created from the first member, and stored as part of the cluster data. Additional cluster members are copied from this template.

\* Member name

Select node  
Node01 (ND 8.5.5.8)

\* Weight  
2 (0..100)

☒ Generate unique HTTP ports

Add Member

Use the Edit function to modify the properties of a cluster member in this list. Use the Delete function to remove a cluster member from this list. You are not allowed to edit or remove the first cluster member.

Edit Delete

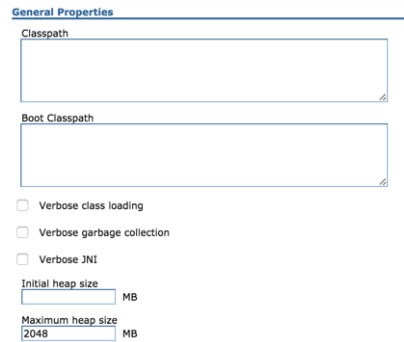
Select	Member name	Nodes	Version	Weight
<input type="checkbox"/>	CustomAppsCluster_server1	Node01	ND 8.5.5.8	2
<input type="checkbox"/>	CustomAppsCluster_server2	Node02	ND 8.5.5.8	2
Total 2				

Figure 7: Create Cluster 3



*In clustered Connections environments you can select more than one node to install the panagenda Bridgehead on.*

After creating the application servers, please change the JVM maximum heapsize setting to a value of 2048.

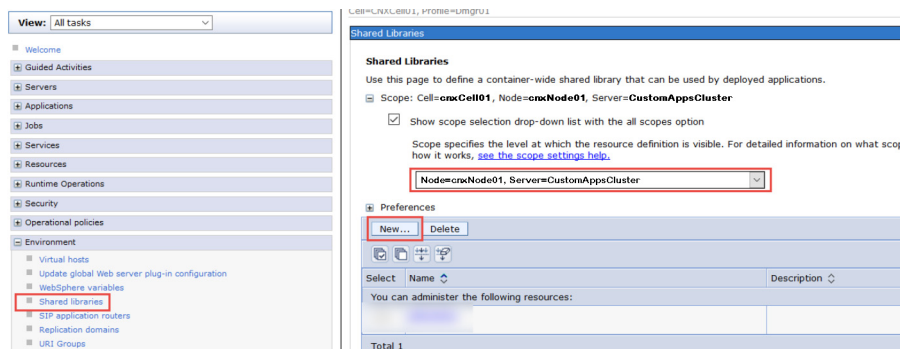


The image shows the 'General Properties' dialog box in WebSphere. It has two text input fields for 'Classpath' and 'Boot Classpath'. Below these are three checkboxes: 'Verbose class loading', 'Verbose garbage collection', and 'Verbose JNI', all of which are unchecked. At the bottom, there are two numeric input fields: 'Initial heap size' and 'Maximum heap size', both set to '2048' MB.

Figure 8: WebSphere Cluster Heapsize

## 4 Create Shared Library

Go to **Environment > Shared Libraries**, select the scope on which your Bridgehead should run (CustomAppsCluster) and click on the **New...** button:



The image shows the 'Shared Libraries' configuration page in WebSphere. On the left is a navigation tree with 'Shared Libraries' highlighted. The main panel shows the 'Shared Libraries' section with a 'Scope' dropdown set to 'Cell=cnxCell01, Node=cnxNode01, Server=CustomAppsCluster'. Below this is a 'Preferences' section with a 'New...' button highlighted. At the bottom, there is a table with columns 'Name' and 'Description'.

Figure 9: Create Shared Library 1

Enter "pbhJython" in the **Name** field and use a **Classpath** based on the Connections Customization directory, such as

`${CONNECTIONS_CUSTOMIZATION_PATH}/pbh/jython-standalone-2.5.3.jar`  
(WebSphere Variable: `CONNECTIONS_CUSTOMIZATION_PATH`.)

Click on **OK** when you are done:

**Shared Libraries > pbhJython**

Use this page to define a container-wide shared library that can be used by deployed applications.

Configuration

**General Properties**

\* Scope  
cells:Cell01:clusters:CustomAppsCluster

\* Name  
pbhJython

Description

\* Classpath  
\${CONNECTIONS\_CUSTOMIZATION\_PATH}/pbh/jython-standalone-2.5.3.jar

Native Library Path

**Class Loading**

☐ Use an isolated class loader for this shared library

Apply OK Reset Cancel

Figure 10: Create Shared Library 2

## 5 Create URL Resources

In the ICS go to **Resources > URL** select the scope on which your Bridgehead should run (CustomAppsCluster) from URLs and click on the **New...** button. Use as specification like `file:///${CONNECTIONS_CUSTOMIZATION_PATH}/pbh/...`

### panagenda Bridgehead Admin Client Properties

**Name:**

panagenda Bridgehead Admin Client Properties

**JNDI Name:**

url/bridgeheadAdminClientProps

**Specification:**

`file:///${CONNECTIONS_CUSTOMIZATION_PATH}/pbh/adminclient.props`

**URLs > panagenda Bridgehead Admin Client Properties**

Use this page to configure uniform resource locators (URLs), which point to electronically access or a document stored in a database.

Configuration

**General Properties**

\* Scope  
cells:Cell01:clusters:CustomAppsCluster

\* Provider  
Default URL Provider

\* Name  
panagenda Bridgehead Admin Client Properties

\* JNDI name  
url/bridgeheadAdminClientProps

\* Specification  
file:///\${CONNECTIONS\_CUSTOMIZATION\_PATH}/pbh/adminclient.props

Description

Category

Apply OK Reset Cancel

Figure 11: Create URL Resources - Example

## panagenda Bridgehead SQL Queries

**Name:**

panagenda Bridgehead SQL Queries

**JNDI Name:**

url/bridgeheadQueries

**Specification:**

file:///\${CONNECTIONS\_CUSTOMIZATION\_PATH}/pbh/queries

## panagenda Bridgehead jyscripts

**Name:**

panagenda Bridgehead jyscripts

**JNDI Name:**

url/bridgeheadJyScripts

**Specification:**

file:///\${CONNECTIONS\_CUSTOMIZATION\_PATH}/pbh/jyscripts

## 6 Deploy EAR

In the ICS go to **Applications > Application Types > WebSphere Enterprise Applications**, click the **Install** button and select the path to the file **bridgehead.ear**:

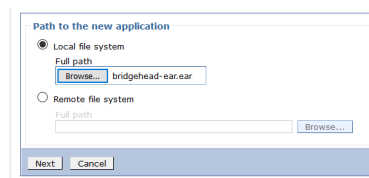


Figure 12: Deploy EAR 1

Select **Fast Path** and click **Next**.

Just click on **Next** in Step 1 (no need to adjust/change anything here).

In Step 2, select the newly created cluster and a web server.



***For licensing reasons, the Bridgehead application has to be accessible via the Connections HTTP server. If this is not possible in your environment, please contact [support@panagenda.com](mailto:support@panagenda.com).***

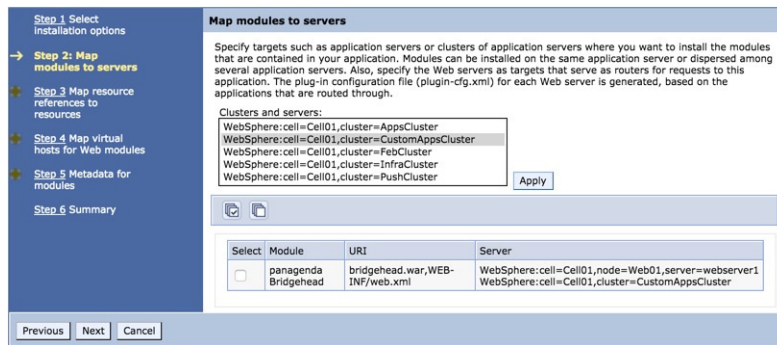


Figure 13: Deploy EAR 2

In the next step, map JNDI names for URLs and all DataSources:

Select	Module	Bean	URI	Resource Reference	Target Resource JNDI Name
<input type="checkbox"/>	panagenda Bridgehead		bridgehead.war,WEB-INF/web.xml	url/bridgeheadAdminClientProps	url/bridgeheadAdminClientPro Browse...
<input type="checkbox"/>	panagenda Bridgehead		bridgehead.war,WEB-INF/web.xml	url/bridgeheadQueries	url/bridgeheadQueries Browse...
<input type="checkbox"/>	panagenda Bridgehead		bridgehead.war,WEB-INF/web.xml	url/bridgeheadJyScripts	url/bridgeheadJyScripts Browse...

Select	Module	Bean	URI	Resource Reference	Target Resource JNDI Name	Login configuration
<input type="checkbox"/>	panagenda Bridgehead		bridgehead.war,WEB-INF/web.xml	jdbc/cnx/homepage	jdbc/homepage Browse...	Resource authorization: Container Authentication method: None

Figure 14: Deploy EAR 3

Continue the steps and click on **Finish**.

Wait until you see the message "Application panagenda Bridgehead installed successfully" and click on **Save**:

ADMA5013t: Application panagenda Bridgehead installed successfully.

Application panagenda Bridgehead installed successfully.

To start the application, first save changes to the master configuration.

Changes have been made to your local configuration. You can:

- [Save](#) directly to the master configuration.
- [Review](#) changes before saving or discarding.

To work with installed applications, click the "Manage Applications" link.

[Manage Applications](#)

Figure 15: Bridgehead Installed Successfully

## 7 Map Shared Library Reference

In the ICS go to **Applications > Application Types > WebSphere Enterprise Applications**, select **panagenda Bridgehead** and set **Shared library references** to "pbhJython"

Select the second entry and click **Reference shared libraries**

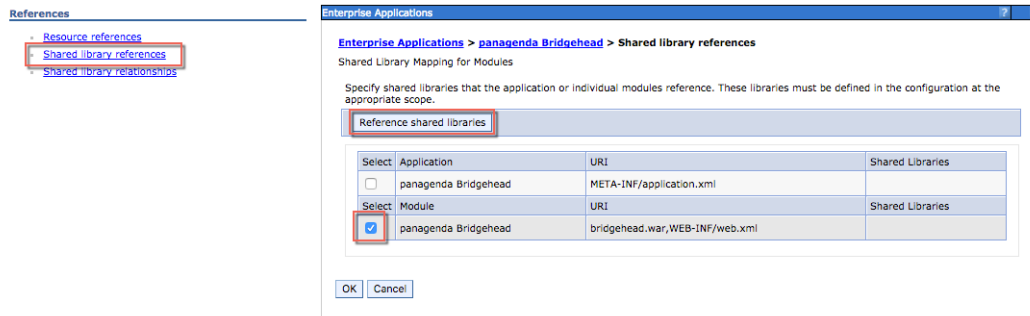


Figure 16: Map Shared Library Reference 1

Add "pbhJython" to the right box and click **OK**:

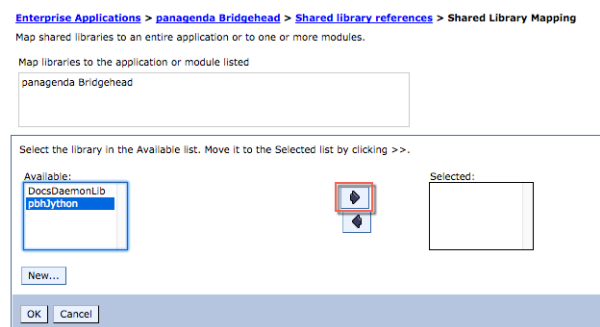


Figure 17: Map Shared Library Reference 2

Your shared library reference should look like on this screenshot:

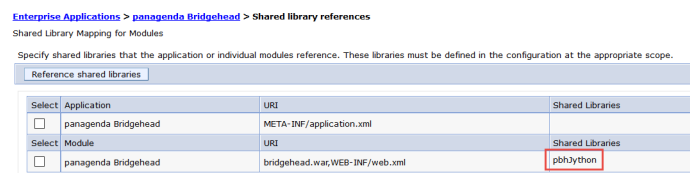


Figure 18: Map Shared Library Reference 3

Close with **OK** and save to master configuration.

## 8 Change Security Role

Please assign the **pbh\_admin** role to the user which you use on the ConnectionsExpert Configuration page (see "User Accounts:" on page 6):

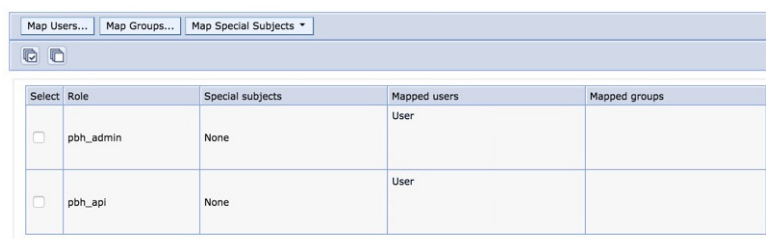


Figure 19: Security Roles

## 9 Restart Cluster

Please restart the newly created Cluster or Application Server (which is used for the Bridgehead application) in order to get everything initialized.

## 10 Populate Web Server Plugins



**For licensing reasons, the Bridgehead application has to be accessible via the Connections HTTP server. If this is not possible in your environment, please contact [support@panagenda.com](mailto:support@panagenda.com).**

In the ICS go to **Servers > Server Types > Web servers**

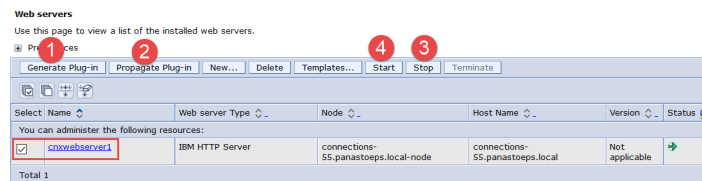


Figure 20: Populate Web Server Plugins



**If you have a firewall between your HTTP and application server, please note that the panagenda Bridgehead ports need to be opened. Otherwise your HTTP server will not be able to access the Bridgehead cluster.**

## 11 OPTIONAL: Adjust SPNEGO Configuration



**If SPNEGO is used, the panagenda Bridgehead has to be added to its exceptions!**

In the ICS go to **Security > Global Security > Web and Sip Security > SPNEGO Web Authentication:**

- Select your SPNEGO filter

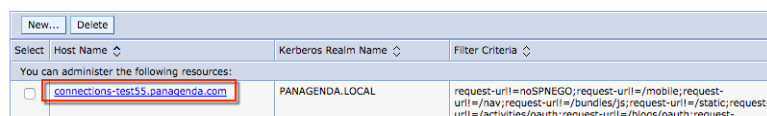


Figure 21: SPNEGO Configuration Adjustment 1

- Add  
;request-url!=/bridgehead  
to the end of the **Filter criteria**, as shown on the screenshot:

[Global security](#) > [SPNEGO web authentication](#) > [New...](#)  
Specifies the values for SPNEGO filter.

**General Properties**

\* Host name  
connections-test55.panagenda.com

Kerberos realm name  
PANAGENDA.LOCAL

Filter criteria  
library\_content\_cache;request-url!=/mobile\_content;request-url!=/wikis\_content;request-url!=/bridgehead

Filter class

SPNEGO not supported error page URL  
https://connections-test55.panagenda.com/spnego\_redirect.html

NTLM token received error page URL  
https://connections-test55.panagenda.com/spnego\_redirect.html

☒ Trim Kerberos realm from principal name

☐ Enable delegation of Kerberos credentials

Figure 22: SPNEGO Configuration Adjustment 2

- Confirm by clicking **OK**
- Store your adjustments with **Save**:

Messages

⚠ Changes have been made to your local configuration. You can:

- [Save directly to the master configuration.](#)
- [Review](#) changes before saving or discarding.

An option to synchronize the configuration across multiple nodes after saving can be enabled in [Preferences](#).

⚠ The server may need to be restarted for these changes to take effect.

Figure 23: SPNEGO Configuration Adjustment 3

- If **Dynamically update SPNEGO** is deactivated, you have restart your entire environment

**General Properties**

☒ Use the alias host name for the application server

☒ **Dynamically update SPNEGO**

☒ Enable SPNEGO

☒ Allow fall back to application authentication mechanism

\* Kerberos configuration file with full path  
/opt/sso/krb5.conf [Browse...](#)

Kerberos keytab file name with full path  
/opt/sso/keytab [Browse...](#)

Figure 24: SPNEGO Configuration Adjustment 4

## 12 Check Bridgehead Access and Version

Open <https://<your connections url>/bridgehead>. Login with the user you assigned the **pbh\_admin** role to, see step 8 "Change Security Role" on page 22.

You should see a line similar to the following:

```
{"status": "OK", "ts": 1476867238257, "version": "3.0.0"}
```

If the status is OK ("status": "OK"), the Bridgehead installation has been successful.



## Using the Web Interface

Please enter **https://<FQDN or IP>** in your browser to connect to the panagenda ConnectionsExpert web interface. For further information about your ConnectionsExpert appliance's IP address, please refer to ["Welcome Screen and IP Address" on page 12](#) and for further information about its hostname (FQDN), please refer to ["Network Settings:" on page 14](#).

panagenda ConnectionsExpert uses HTTPS for secure communication between its appliance and its web interface, so you have to accept the security certificate, to continue.

## Login

By default, a user with administrative credentials is available to access the panagenda ConnectionsExpert web interface.

### Default login information:

user "config" with password "config"

## System Configuration and License File Upload

When you start ConnectionsExpert for the first time, an install wizard will guide you through the initial system configuration. Later on, you can always navigate to the System Configuration view by clicking on the **cogwheel icon** (top-right corner).

### 1 License File Upload

To upload the panagenda ConnectionsExpert license file **ConnectionsExpert.lic**, just drag and drop it to the Upload area in the Configuration view. Clicking this area opens an upload dialog. After the upload, your license information will be displayed.



Figure 25: Install Wizard: License File Upload

## 2 Bridgehead Connector - Endpoint



**Bridgehead installation has to be completed (see "Bridgehead Installation" on page 15) before you perform this final configuration step.**

The host name of your IBM Connections server will be filled out automatically based on your license information and cannot be edited. If needs to be changed, please contact [sales@panagenda.com](mailto:sales@panagenda.com).

Please enter the **Bridgehead Application** path according to your installation:

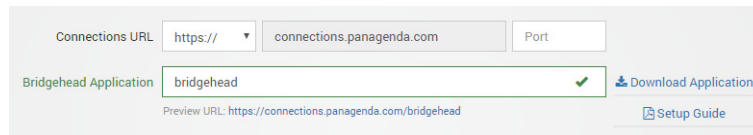


Figure 26: Install Wizard: Bridgehead Connector - Endpoint

## 3 Bridgehead Connector - User Information

This user must be able to use Connections (LDAP user), have an active profile and needs roles in Bridgehead (pbh\_admin or pbh\_api, see "Bridgehead Installation" on page 15).

Please verify the entered settings by clicking the **Test Settings** button:

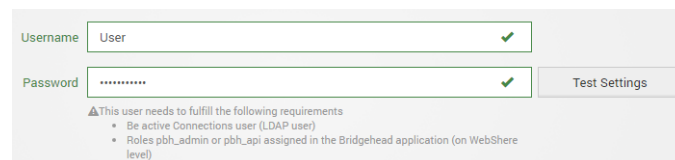


Figure 27: Install Wizard: Bridgehead Connector - User

## 4 Start Data Collection

By clicking the **Update Configuration** button the configuration is stored. After around two minutes ConnectionsExpert will have collected the first batch of data from IBM Connections:

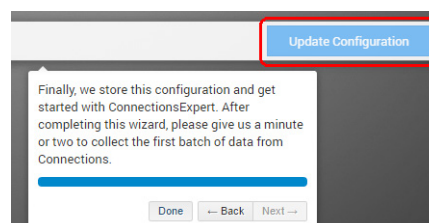
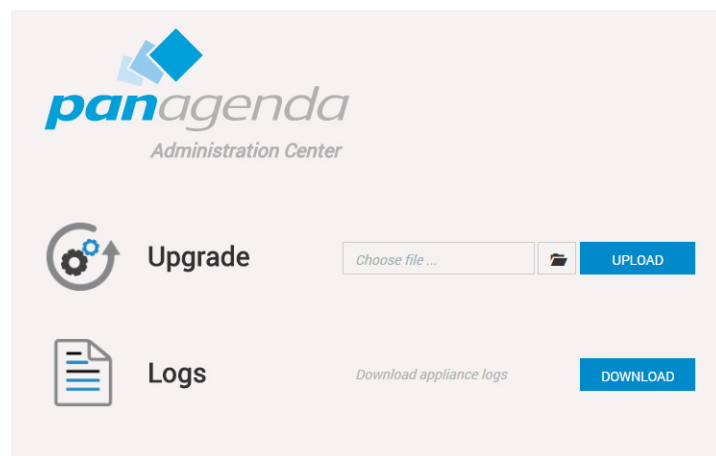


Figure 28: Install Wizard: Final Step

# ADDITIONAL INFORMATION

## Appliance Upgrade

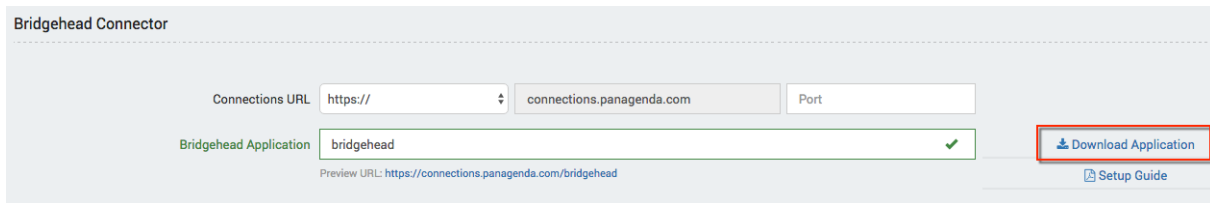
1. An ConnectionsExpert upgrade package is needed to perform an upgrade. Please contact [support@panagenda.com](mailto:support@panagenda.com) in order to obtain the respective URL and login credentials.
2. Log in to ConnectionsExpert, click on the cogwheel icon (top-right corner) and select **Install New Version...**
3. Please click in the folder icon to select the ConnectionsExpert upgrade package *ce-complete.debz* and
4. Click on the **Upload** button.



A message will appear that the upload is in progress or you will get an error message if something went wrong. When the installation is done, ConnectionsExpert will restart automatically.

# Bridgehead Upgrade

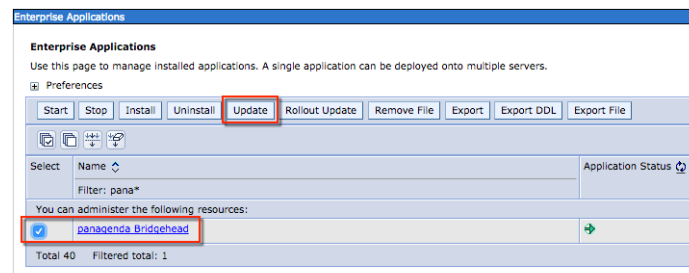
After the appliance upgrade (see “Appliance Upgrade” on page 27) you can download the current Bridgehead application from the ConnectionsExpert **System Configuration**:



The screenshot shows the 'Bridgehead Connector' configuration page. It includes fields for 'Connections URL' (https://), 'connections.panagenda.com', and 'Port'. Below these is the 'Bridgehead Application' field with 'bridgehead' entered and a green checkmark. A 'Download Application' button is highlighted with a red box. A 'Setup Guide' link is also visible.

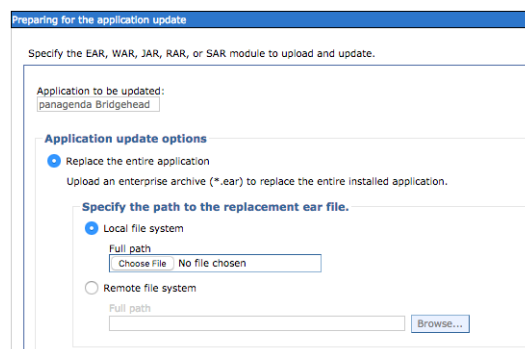
Please perform the following steps upgrade the panagenda Bridgehead application:

- 1 In the ICS go to **Applications > Application Types > WebSphere Enterprise Applications**
- 2 Select **panagenda Bridgehead** and click on **Update**:



The screenshot shows the 'Enterprise Applications' page. It has a toolbar with buttons: Start, Stop, Install, Uninstall, Update, Rollout Update, Remove File, Export, Export DDL, and Export File. The 'Update' button is highlighted with a red box. Below the toolbar is a table with columns 'Select', 'Name', and 'Application Status'. The table contains one entry: 'panagenda Bridgehead', which is selected with a checkbox. The 'Total' is 40 and 'Filtered total' is 1.

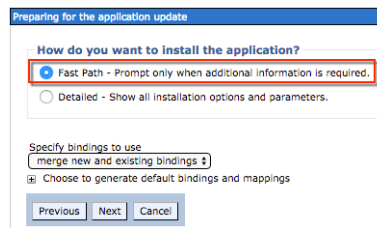
- 3 Select **Replace the entire application**. Here you can either upload the file (**Local file system**) or refer to a path on a application server (**Remote file system**):



The screenshot shows the 'Preparing for the application update' page. It has a section 'Application to be updated:' with 'panagenda Bridgehead' entered. Below is the 'Application update options' section. The 'Replace the entire application' option is selected with a radio button. Under this option, there is a section 'Specify the path to the replacement ear file.' with two sub-options: 'Local file system' (selected with a radio button) and 'Remote file system' (unselected). The 'Local file system' option has a 'Full path' field with a 'Choose File' button and the text 'No file chosen'. The 'Remote file system' option has a 'Full path' field and a 'Browse...' button.

Click **Next**

## 4 Select **Fast Path** and click **Next**



Preparing for the application update

How do you want to install the application?

☒ Fast Path - Prompt only when additional information is required.

☐ Detailed - Show all installation options and parameters.

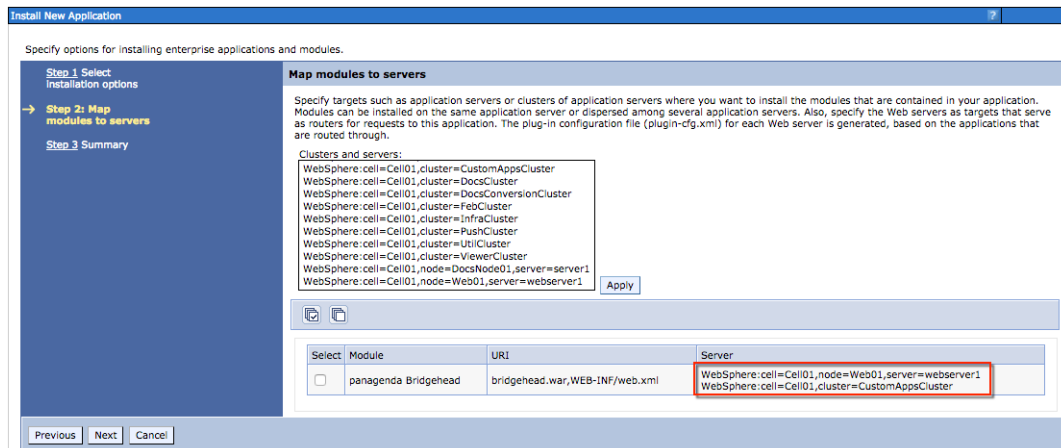
Specify bindings to use

☐ Choose to generate default bindings and mappings

Previous Next Cancel

## 5 Click **Next**

## 6 Please check the mapping in Step 2: Your applications should run on at least one application server or cluster. For licensing reasons, the Bridgehead application has to be accessible via the Connections HTTP server:



Install New Application

Specify options for installing enterprise applications and modules.

Step 1 Select installation options

→ Step 2: Map modules to servers

Step 3 Summary

Map modules to servers

Specify targets such as application servers or clusters of application servers where you want to install the modules that are contained in your application. Modules can be installed on the same application server or dispersed among several application servers. Also, specify the Web servers as targets that serve as routers for requests to this application. The plug-in configuration file (plugin-dfg.xml) for each Web server is generated, based on the applications that are routed through.

Clusters and servers:

WebSphere:cell=Cell01,cluster=CustomAppsCluster  
 WebSphere:cell=Cell01,cluster=DocsCluster  
 WebSphere:cell=Cell01,cluster=DocsConversionCluster  
 WebSphere:cell=Cell01,cluster=FebCluster  
 WebSphere:cell=Cell01,cluster=InfraCluster  
 WebSphere:cell=Cell01,cluster=PushCluster  
 WebSphere:cell=Cell01,cluster=UtilCluster  
 WebSphere:cell=Cell01,cluster=ViewerCluster  
 WebSphere:cell=Cell01,node=DocsNode01,server=server1  
 WebSphere:cell=Cell01,node=Web01,server=webserver1

Apply

Select	Module	URI	Server
<input type="checkbox"/>	panagenda Bridgehead	bridgehead.war,WEB-INF/web.xml	WebSphere:cell=Cell01,node=Web01,server=webserver1 WebSphere:cell=Cell01,cluster=CustomAppsCluster

Previous Next Cancel

Click **Next**

## 7 Click **Finish**

## 8 Select **Save** to store the changes:

Updating...

If there are enterprise beans in the application, the EJB deployment process can take several minutes. Do not save the configuration until the process completes.

Check the SystemOut.log on the deployment manager or server where the application is deployed for specific information about the EJB deployment process as it occurs.

ADMA5017: Uninstallation of panagenda Bridgehead started.

ADMA5104: The server index entry for WebSphere:cell=Cell01,node=Web01+WebSphere:cell=Cell01,node=Node02+WebSphere:cell=Cell01,node=Node01 is updated.

ADMA5102: The configuration data for panagenda Bridgehead from the configuration repository is deleted successfully.

ADMA5011: The cleanup of the temp directory for application panagenda Bridgehead is complete.

ADMA5106: Application panagenda Bridgehead uninstalled successfully.

ADMA5016: Installation of panagenda Bridgehead started.

ADMA5067: Resource validation for application panagenda Bridgehead completed successfully.

ADMA5058: Application and module versions are validated with versions of deployment targets.

ADMA5005: The application panagenda Bridgehead is configured in the WebSphere Application Server repository.

ADMA5005: The application panagenda Bridgehead is configured in the WebSphere Application Server repository.

ADMA5081: The bootstrap address for client module is configured in the WebSphere Application Server repository.

ADMA5053: The library references for the installed optional package are created.

ADMA5005: The application panagenda Bridgehead is configured in the WebSphere Application Server repository.

ADMA5001: The application binaries are saved in /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/wstemp/-1913501500/workspace/cells/Cell01/applications/panagenda.

ADMA5005: The application panagenda Bridgehead is configured in the WebSphere Application Server repository.

SECJ0400: Successfully updated the application panagenda Bridgehead with the appContextIDForSecurity information.

ADMA5005: The application panagenda Bridgehead is configured in the WebSphere Application Server repository.

ADMA5005: The application panagenda Bridgehead is configured in the WebSphere Application Server repository.

ADMA5113: Activation plan created successfully.

ADMA5011: The cleanup of the temp directory for application panagenda Bridgehead is complete.

ADMA5013: Application panagenda Bridgehead installed successfully.

Application panagenda Bridgehead installed successfully.

If you want to do a rolling update of the application on the cluster(s) on which it is installed, then click Rollout Update. A rolling update will save all changes made in this configuration.

[Rollout Update](#)

To start the application, first save changes to the master configuration.

The application might not be immediately available while being started on all servers.

Changes have been made to your local configuration. You can:

- **Save directly to the master configuration.**
- [Review](#) changes before saving or discarding.

## 9 Please restart the application cluster or server

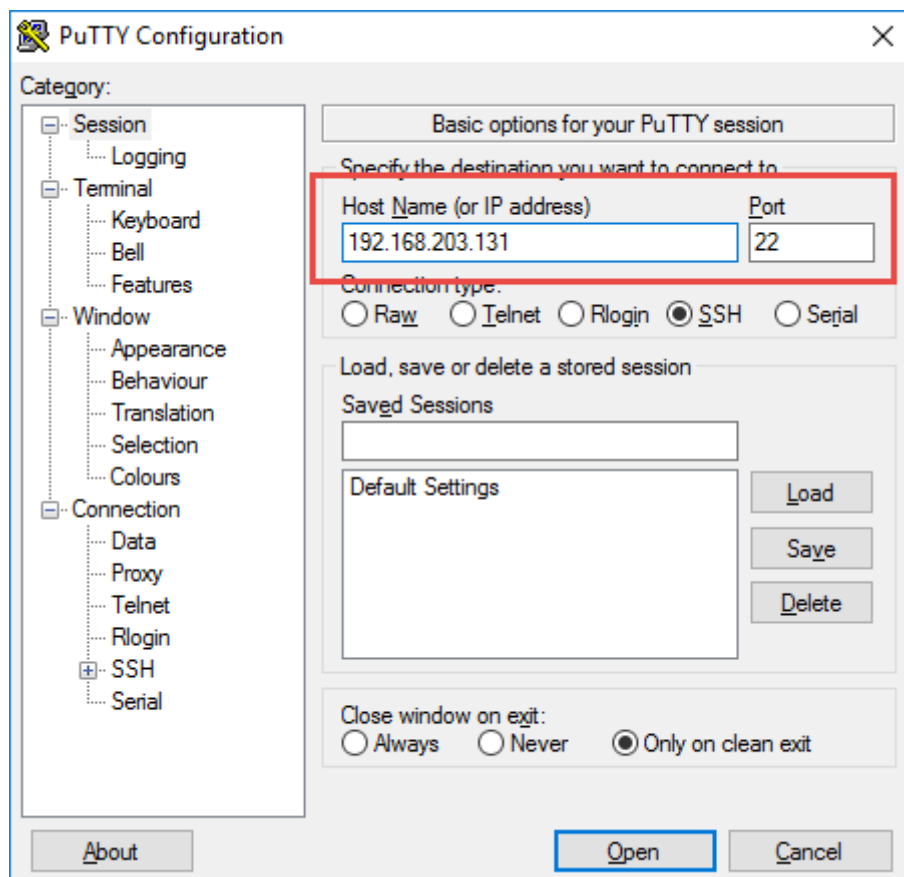
# Download Log Files

1. Log in to ConnectionsExpert, click on the cogwheel icon (top-right corner) and select **Download Logs...**
2. Please click the button Download next to "Download Appliance Logs"
3. Save the file to your computer
4. Please send this file with every support inquiry. These logs will greatly improve speed and quality of processing support tickets.

## Remote Appliance Access (VNC)

In order to enable access to the Linux GUI, a VNC server is pre-installed on the ConnectionsExpert appliance. To start the VNC server, please follow these steps:

- 1 Start a SSH connection to the ConnectionsExpert appliance. For this, a tool such as PuTTY is needed (<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>):



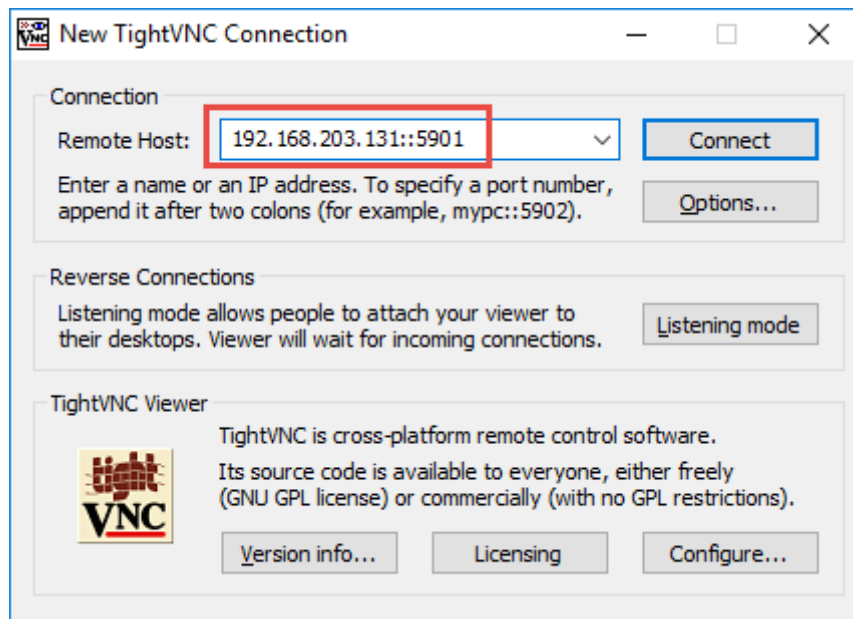
- 2 Log into the appliance with the user **config**:

```
config@ConnectionsExpert: ~  
login as: config  
config@192.168.203.131's password:  
Welcome to Ubuntu 12.04.5 LTS (GNU/Linux 3.2.0-105-virtual x86_64)  
  
Virtual appliance by panagenda (http://development.panagenda.com)  
  
Last login: Sun Jan 24 15:04:36 2016 from 192.168.111.29  
config@ConnectionsExpert:~$
```

- 3 To start the VNC server, enter the command **tightvncserver**:

```
config@ConnectionsExpert:~$ tightvncserver  
New 'X' desktop is ConnectionsExpert:1  
Starting applications specified in /home/config/.vnc/xstartup  
Log file is /home/config/.vnc/ConnectionsExpert:1.log
```

Now you can access the appliance's Linux GUI using a VNC client, such as Tight VNC Client (<http://www.tightvnc.com/download.php>):



The default connection password is **config**. It can be changed by issuing the command **vncpasswd** in PuTTY.



*The VNC server is merely a tool to help in exceptional situations where the VM console cannot be accessed otherwise. Due to security considerations it is purposely configured for manual startup only.*



## Enlarging ConnectionsExpert Data Disk

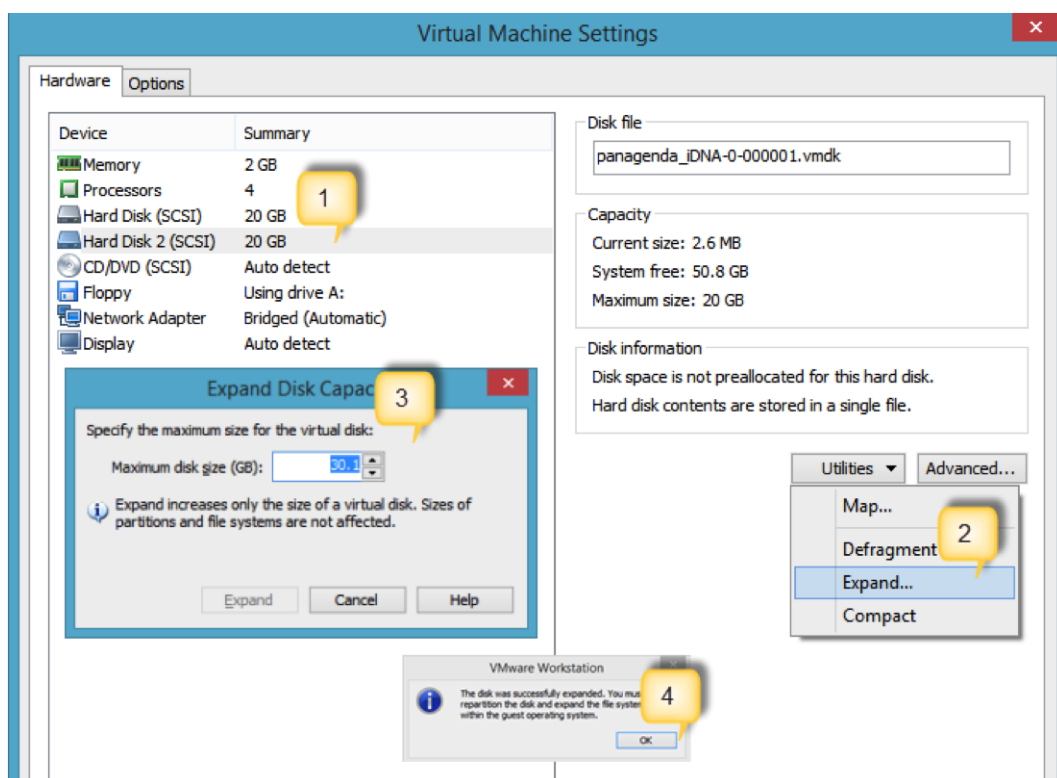
Depending on your environment you may need to enlarge the virtual disk on which ConnectionsExpert stores its data on.

In the following you will find a description on how to enlarge disks:

### Enlarging VMWare Disk

Enlarging the physical disk is done using the VMWare host application. Here are examples of how to do this in VMWare Workstation/Player (to get an impression of how this is done on vSphere clients, please have a look at the following GreenLight K-Base article:

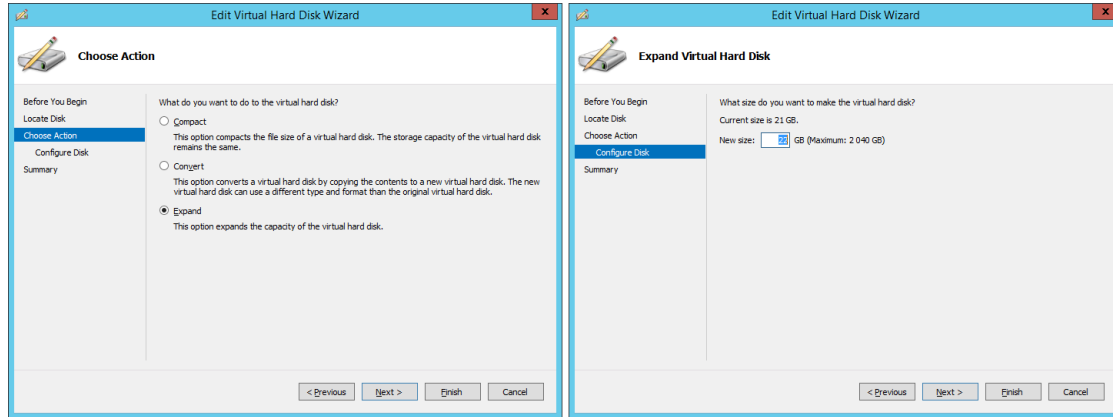
<http://kbase.panagenda.com/display/GL2KB/Enlarging+GreenLight+Disks>).



- 1 Click on "Hard Disk 2 (SCSI)"
- 2 Select "Expand..." form the *Utilities* drop down menu
- 3 Specify the new size
- 4 When the procedure is done you will get a notification

## Enlarging Hyper-V Disk

To expand the disk file, open the virtual machine properties and navigate to the disk you want to enlarge. Click **Edit** and follow the Wizard, choosing the **Expand** action to specify a new size:

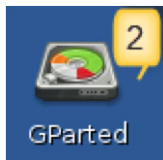


## Enlarging the Partition in the ConnectionsExpert Appliance

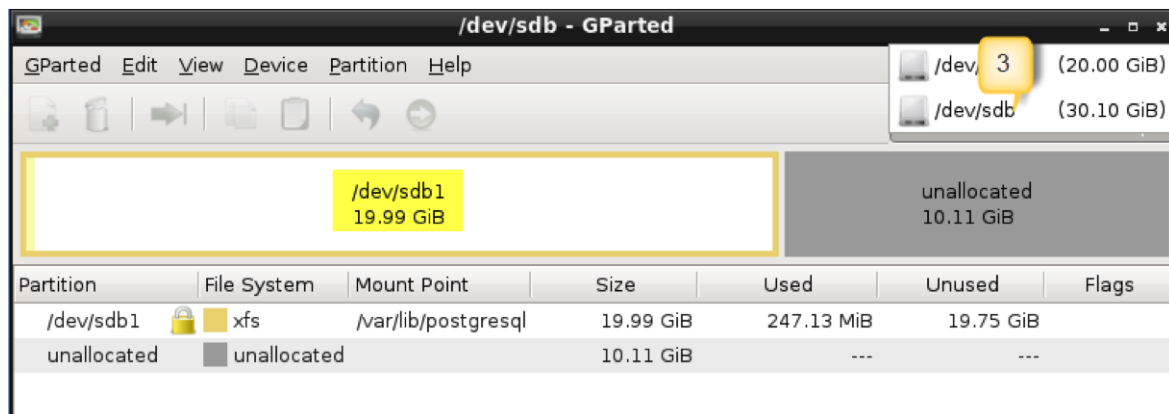
- 1 First you have to stop Tomcat and PostgreSQL. We recommend using the short cut on the desktop:



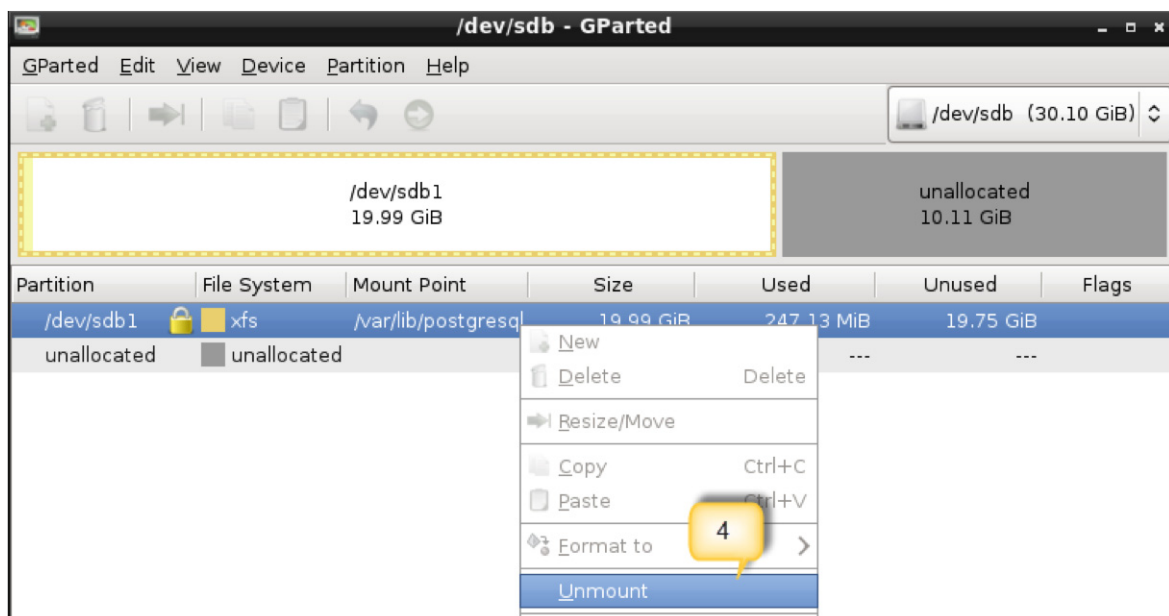
- 2 The easiest way to enlarge a partition in ConnectionsExpert is to use the installed partition manager **GParted** (you can also start GParted from the Terminal with "sudo gparted"):



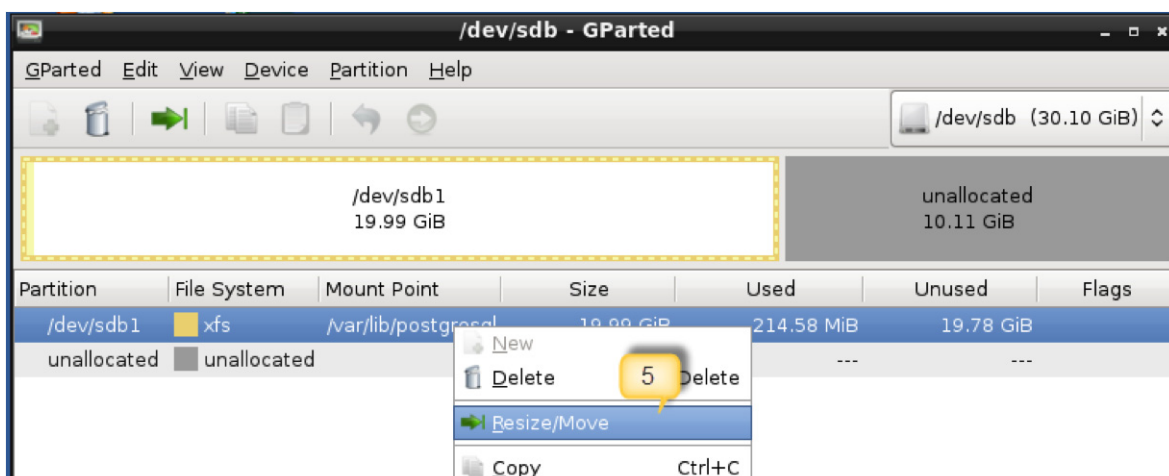
3 Select the physical disk "**sdb**" in GParted:



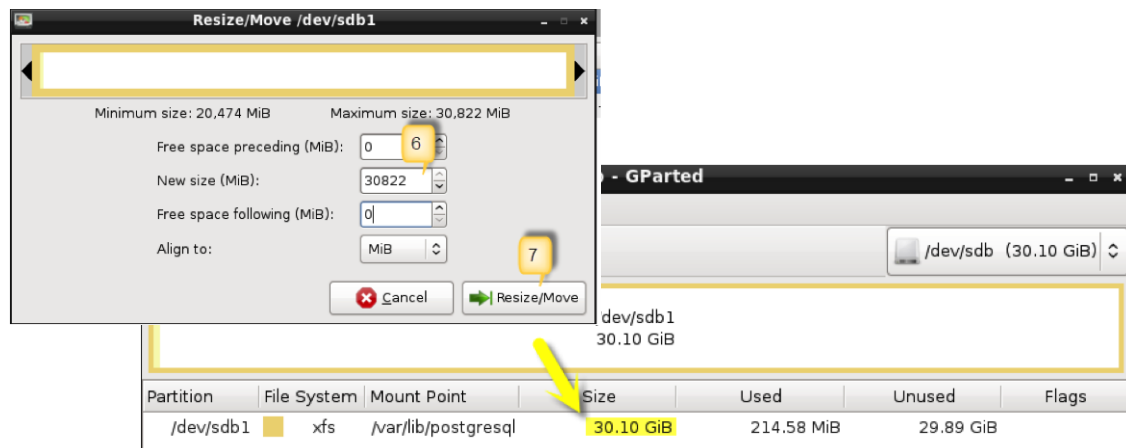
4 Click on partition **/dev/sdb1** and choose "**U**nmount" from the right click context menu:



5 After unmounting, select "**R**esize/Move" from the right click context menu:



6 Set *New size (MiB)*: to the maximum:

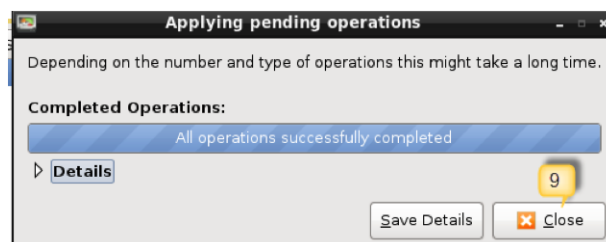


7 Click on "Resize/Move"

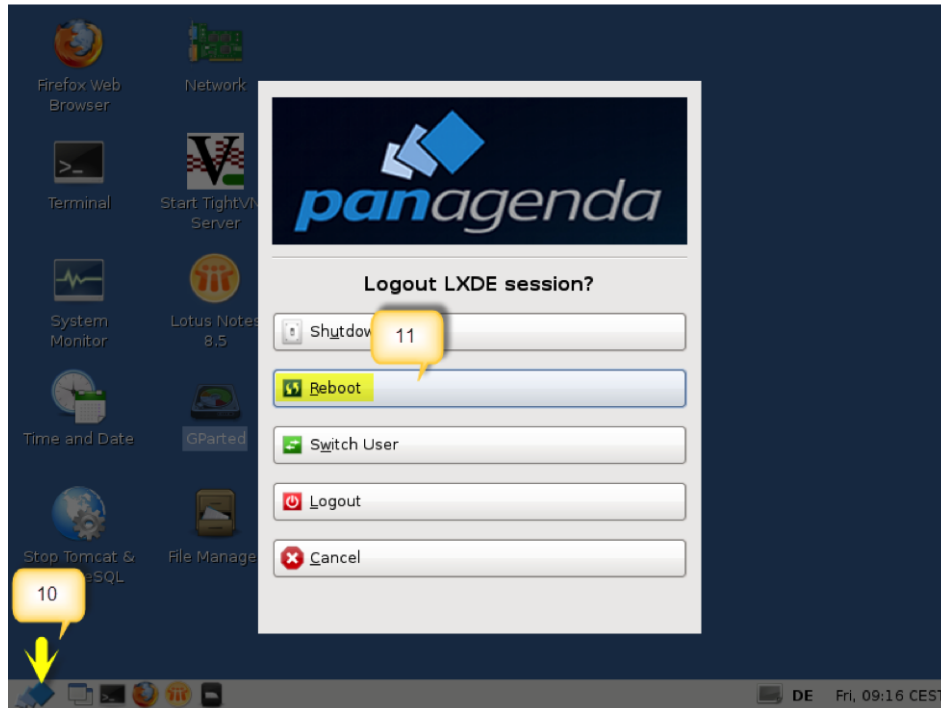
8 Your operations are not applied yet, so you have to click on the apply icon (in the GParted menu bar as well as in the notification you receive afterwards):



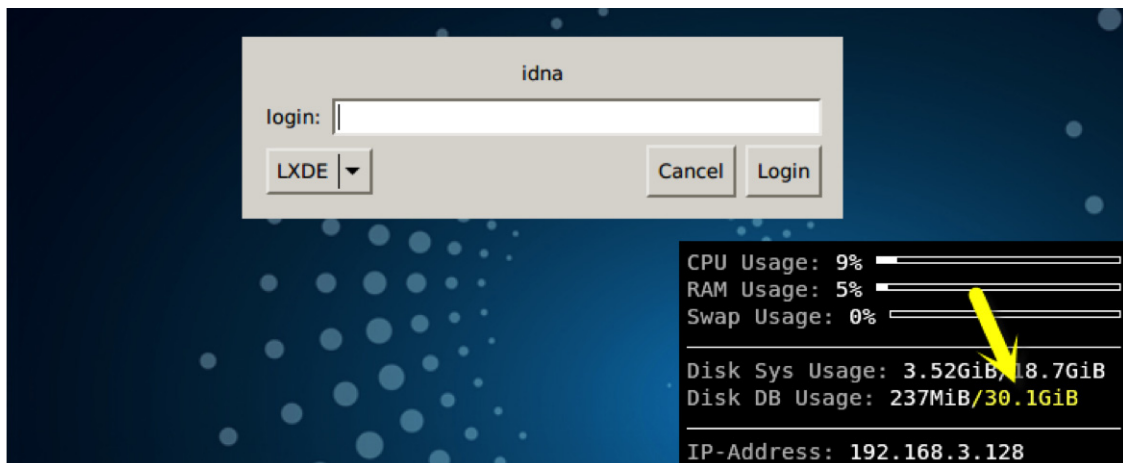
9 When all operations are done, please click on "Close" to close GParted:



Then click on the panagenda icon in the task bar:



10 and click on "Reboot"



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# NOTES