



ASIGRA BACKUP PLUG-IN FOR TRUENAS CORE

Quick Start Guide

[Abstract](#)

This document provides a quick start guide for deploying the Asigra Backup Plug-in on your TrueNAS Core system, formerly known as FreeNAS.

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Quick Start Guide for Deploying Asigra Backup Plug-in on TrueNAS

This document will guide TrueNAS Core (formerly TrueNAS Core) and TrueNAS* users to enable, setup and utilize the Asigra's Plug-in to run natively on their TrueNAS device/s.

*Please note:

Asigra has completely recompiled its backup software to run natively on FreeBSD operating your TrueNAS Core. However, to enable the Asigra Plug-In on your supported TrueNAS, you will be required to request it to be enabled by iXsystems/TrueNAS support. Please also note that the Asigra Plug-In is a free service offered by Asigra for users to experience the reliably and enterprise grade features of Asigra Backup, but it is not supported by Asigra premium support. The solution is community supported, and users can get help through the [Asigra Users](#) group on LinkedIn.

Prerequisite

Jail Storage must be configured before the Asigra plug-in is available on TrueNAS Core®. This means having a suitable [pool](#) created to store plug-ins. See the TrueNAS Core documentation for the version of TrueNAS Core you are using for information about [Jail Storage](#).

The information provided in this quick start guide is based on the assumption that you have already installed and configured your TrueNAS Core server and that you have access to its web interface. It is also based on the new TrueNAS Core GUI.


About the Asigra Backup Plug-in

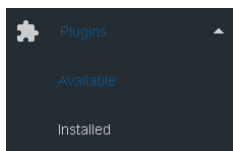
The Asigra Backup plug-in enables you to use your TrueNAS Core storage to deploy an Asigra backup vault. When you install this plug-in, it will deploy an isolated jail which contains the Asigra DS-System service and its database. The DS-System service will use the pool provided to store backup data it receives from each data collector (a.k.a. DS-Client) that is registered with it.

Note: You will require Asigra License in order to use the DS-System service after it has been deployed.

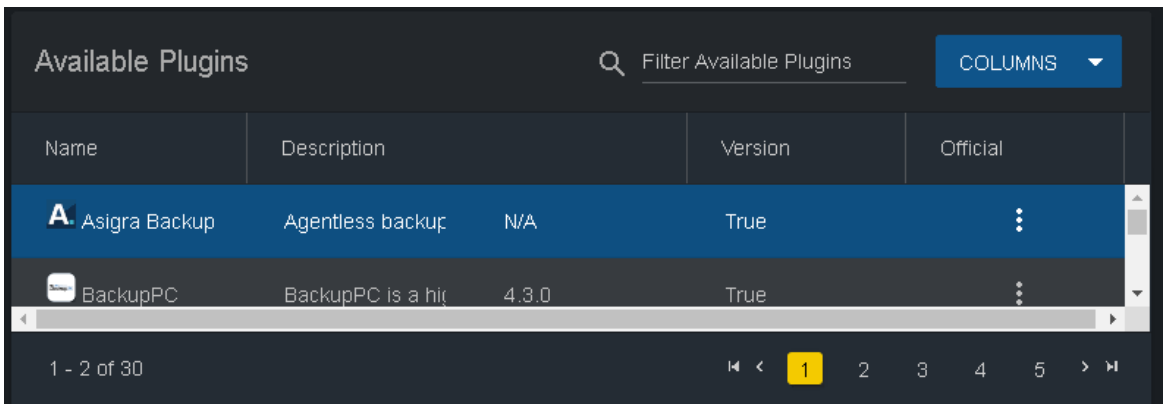
Installing the Asigra Backup Plug-in

The following are the steps for installing the Asigra Backup plug-in:

- 1) Login into the TrueNAS Core server via the web interface, then click on 
- 2) You will get the drop down submenu as shown below, click on "available"

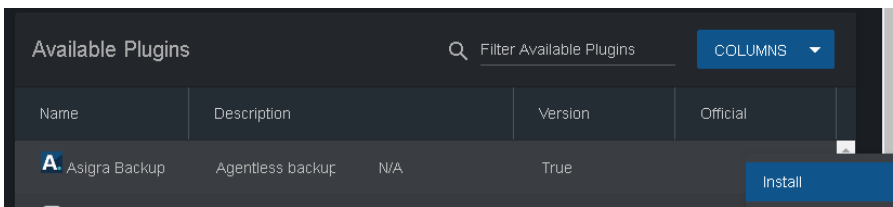



- 3) Search for the Asigra Backup plug-in in the list of available plug-ins

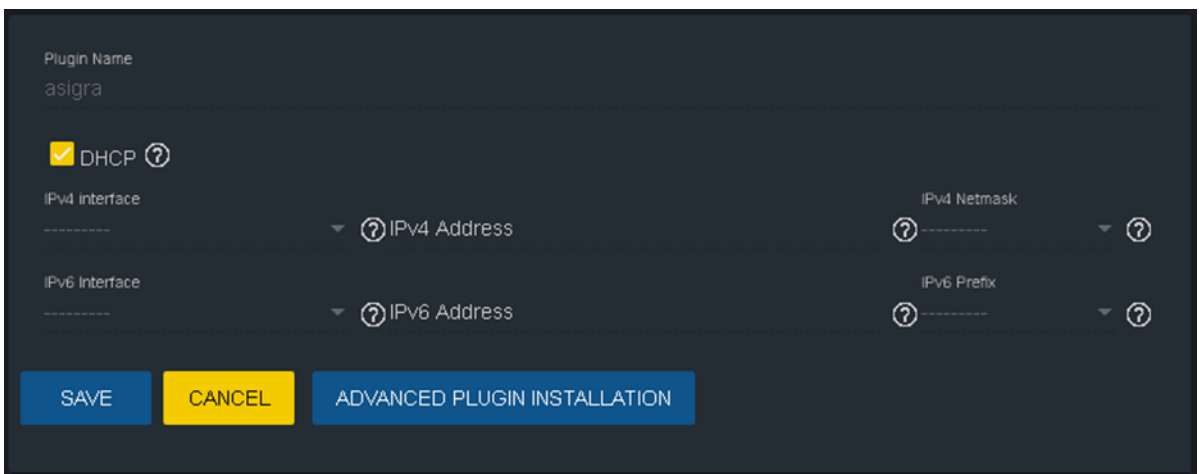


Note: If the list of available plug-ins is not displayed, open [Shell](#) and verify that the TrueNAS Core® system can **ping** an address on the Internet. If it cannot, add a default gateway address and/or DNS server address in Network → Global Configuration.

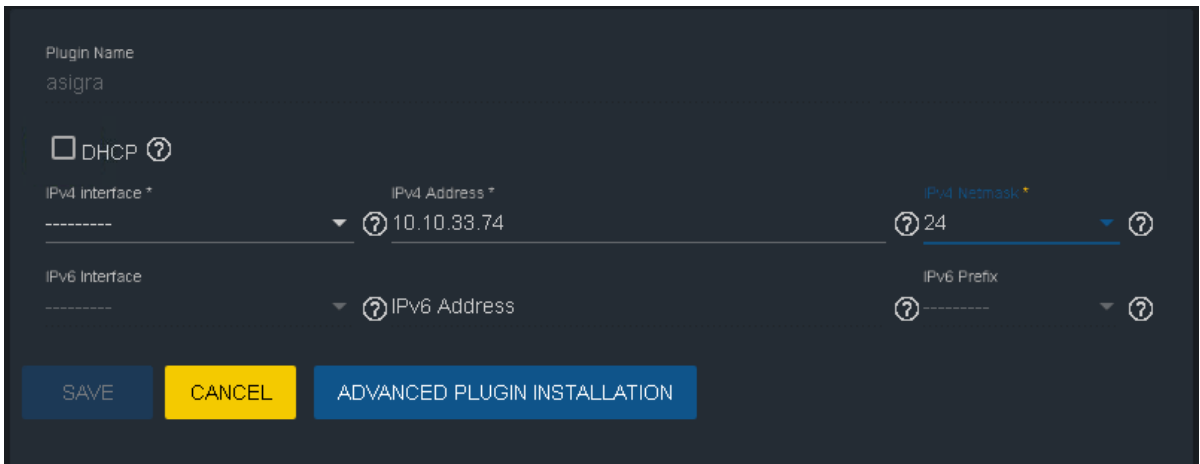
- 4) Next click on  for this plug-in



- 5) Click  and the plug-in jail configuration page opens as shown below

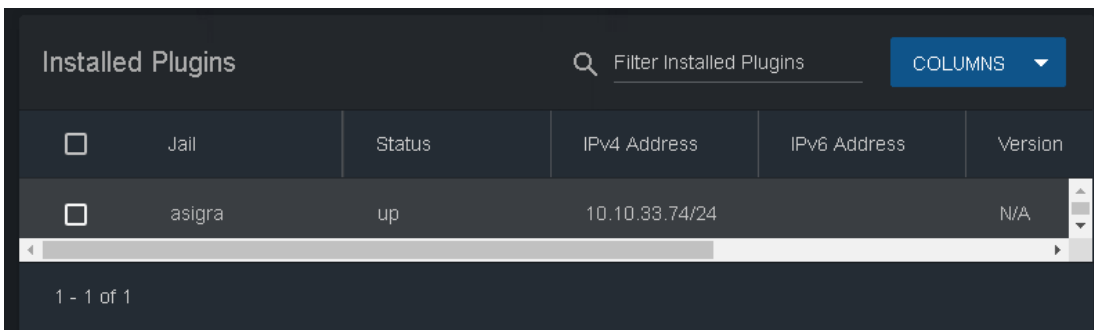


- 6) Set DHCP to manually enter an IPv4 address. The IP address you specify here will be used for connecting to the Ds-System service. See an example configuration below:



Note: There is no need to Click ADVANCED PLUG-IN INSTALLATION the basic configuration is sufficient.

- 7) Click SAVE when finished configuring the plug-in's jail.
The installation takes a few minutes because the system downloads and configures a jail to store the plug-in application. A confirmation message displays at the bottom of the screen after successfully installing a plug-in. When applicable, post-install notes are displayed after a successful install.
- 8) The Installed Asigra Backup plug-in should now appear in the Plug-ins → Installed page as shown in screen clip below



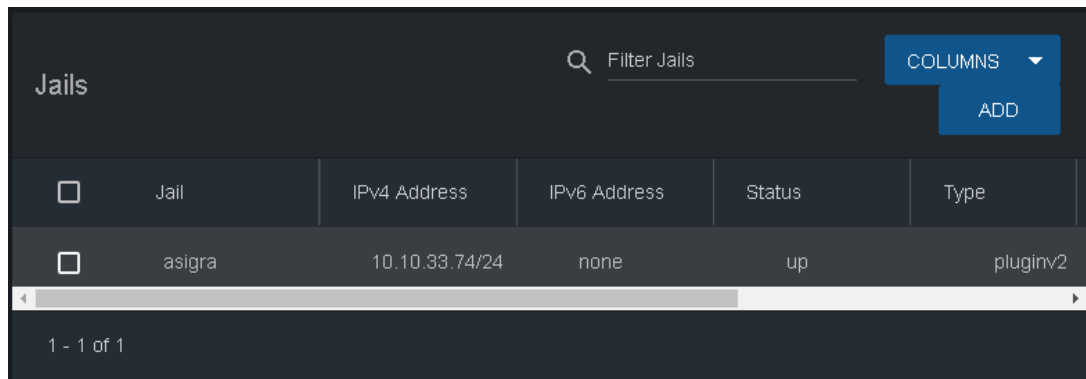
Integrating the Asigra Backup Plug-in Jail with the DS-System GUI (DS-Operator)

The DS-System GUI uses the jail for authenticating users. You will therefore need to add at least one regular user to the Asigra Backup Plug-in jail. This user will be used as your DS-System service administrator. For security reason this user must not be a Super Admin user and does not need a login shell. You will also need to set the password of the root user for the jail. The root user is by default the only user that initially has any DS-System GUI access. As a result, you will first access the DS-Operator with the root user and then assign the appropriate DS-System role access privileges the regular user you created. Note that for security reasons the Plug-in jail root user does not have full DS-System role access and can only be used to assign these roles to other users.

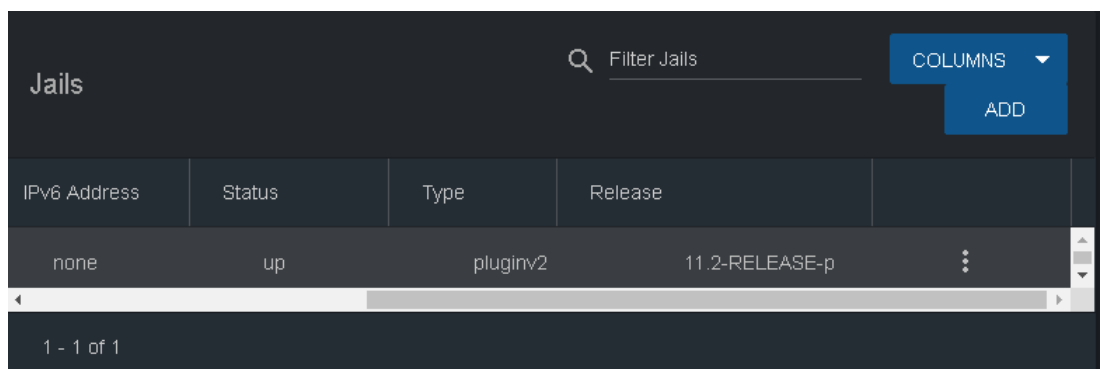
Access the shell of Asigra Backup Plug-in Jail


Creating the regular user and setting the root user password are tasks that are completed via the jails' Shell interface. Below are the steps to access the shell:

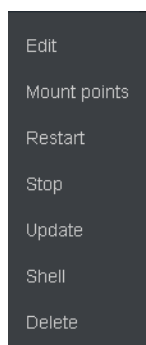
- 1) Log into the TrueNAS Core web interface and click Jails. You should see the Asigra Backup jail in the list of jails.



- 2) Use the slide bar and scroll all the way to the left as shown below



- 3) Click on  beside the Asigra Backup plug-in jail. A list of jail task options should appear as shown in the screen clip below.



- 4) **Click Shell.** A shell to the jail should now open in the page. An example is shown in the screen clip below.

```
Shell

Documents installed with the system are in the /usr/local/share/doc/freebsd/
directory, or can be installed later with: pkg install en-freebsd-doc
For other languages, replace "en" with a language code like de or fr.

Show the version of FreeBSD installed: freebsd-version ; uname -a
Please include that output and any error messages when posting questions.
Introduction to manual pages: man man
FreeBSD directory layout:      man hier

Edit /etc/motd to change this login announcement.
root@asigra:~ #
```

Set Root User Password of Asigra Backup Plug-in Jail

To set the root user password for the jail run the `passwd` command and enter the new password when prompted to do so. Example:

```
#passwd
root@asigra:~ # passwd
Changing local password for root
New Password:
Retype New Password:
root@asigra:~ #
```

Add a Regular User to the Asigra Backup Plug-in Jail

The user required to login to the DS-Operator must be added to the jail. The following commands can be used to add the user. Note that the user in this example is assigned “nologin” as its shell:

```
#pw useradd <username> -s /usr/sbin/nologin
#passwd <username>
```

Replace **<username>** with a string representing the username you have chosen for this user.

Example:

```
#pw useradd backupadmin -s /usr/sbin/nologin
#passwd backupadmin
```

Note: You will need to safely store this user credential since you will need it to access the DS-System GUI.

Initializing the DS-System Service

After you have successfully installed the Asigra Backup plug-in you will need to initialize the DS-System service before you can start doing backups. This includes:

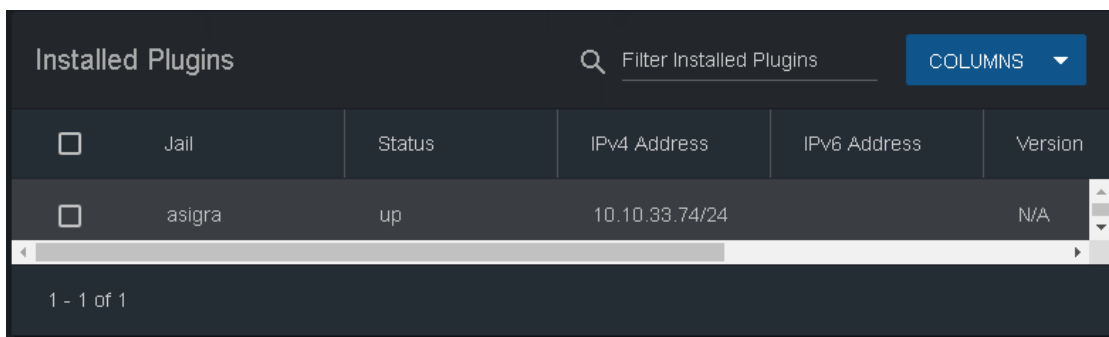
- Assigning DS-System admin roles to at least one regular shell user. Refer to section [“Integrating the Asigra Backup Plug-in Jail with the DS-System GUI \(DS-Operator\)”](#) for steps to add regular users. Also refer to the section [Assigning DS-System Admin Roles to Users](#).

- Configuring the DS-System with a valid license server. See section [Configuring the DS-System Service with a License Server](#)
Note that the URL for the license server to be used for this configuration would have been provided by Asigra after you registered for the service. If you are an Asigra Partner with your own license server you can also use your license server to configure your TrueNAS Core system.
- Setting your DS-System's provider information. See section [Configuring the Service Provider Information](#)

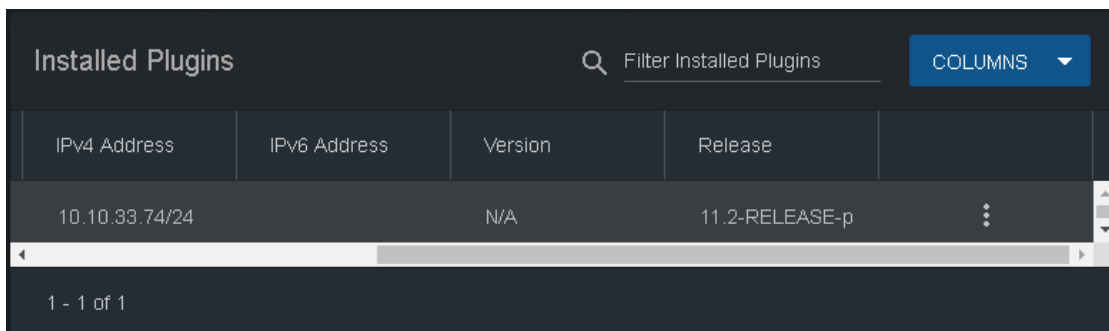
Accessing the DS-System GUI (DS-Operator)


The DS-Operator can be launched from the TrueNAS Core GUI. To launch it do the following

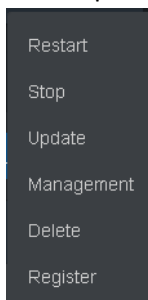
- 1) Log into the TrueNAS Core web interface and click Plug-in -> Installed



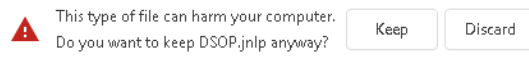
- 2) Use the slide bar and scroll all the way to the left as shown below



- 3) Click on  beside the Asigra Backup Plug-in. A menu list of Plug-in tasks will pop up as shown in example below:



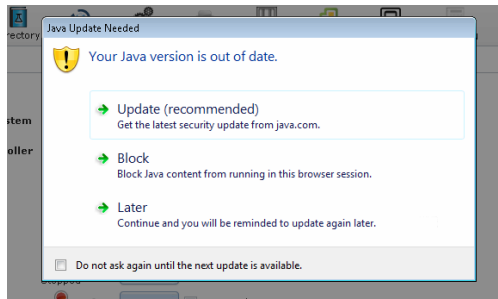
- 4) Click “Management”. This will download a DSOP.jnlp file to the machine from which you are accessing the TrueNAS Core GUI. You may get the warning message shown in the screen clip below. This is normal, click “Keep” to save the file on your machine.



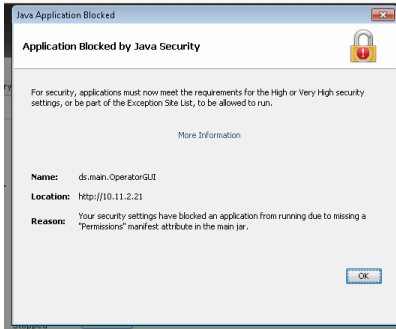
- 5) Browse the folder where the file has been saved and double click it. Use the default settings to open the file with Java Web Launcher

Note:

- You may receive the following java message, either update Java and then try launching the file again or choose the option to update java later.



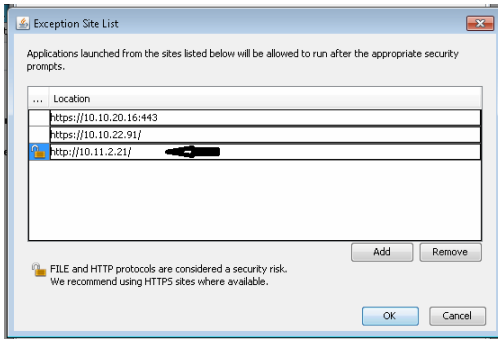
- 6) Next you may get the following Java security alert



To resolve this you will need to add a Java security exception for the URL <http://<IP address of the Asigra Backup Plug-in jail>>. Note you must substitute <IP address of the Asigra Backup Plug-in jail> with the IP address you have assigned to the Plug-in jail.

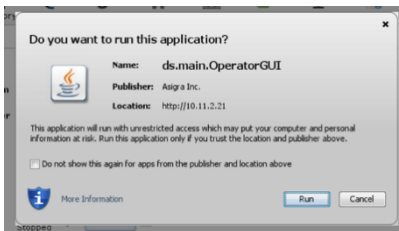
For information on about how to add Java security exception for a URL go to https://java.com/en/download/faq/exception_sitelist.xml

Once you have added the Java security exception to your computers Exception Site List you should have a configuration similar to the example below:



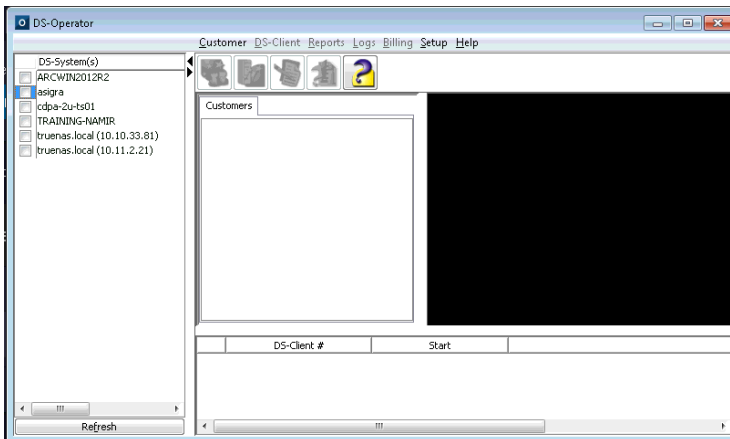
Click OK and then try launching the DS-Operator again by repeating step 5.

- 7) Once the Java security exception is in place you will get the following after completing steps 5 to 7.

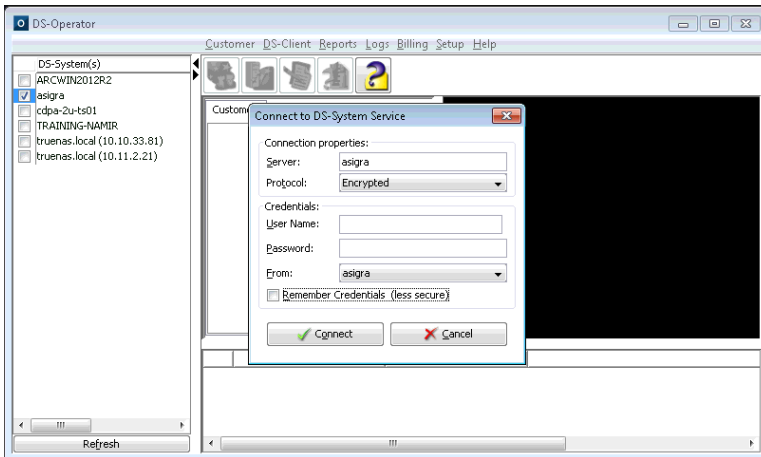


- 8) Click 

- 9) The DS-Operator GUI should now start and you should see GUI as shown in the example below




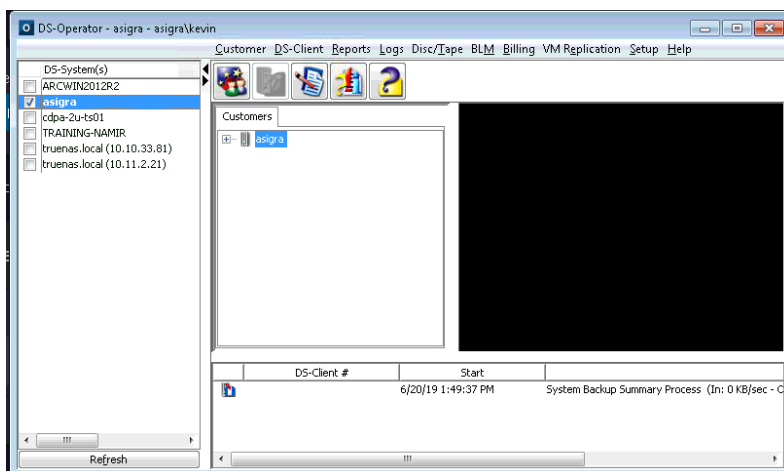
10) To connect to the DS-System service, click the check box beside the required DS-System listed in the “DS-System(s)” frame of the DS-Operator. The credentials interface will pop up, see example below.



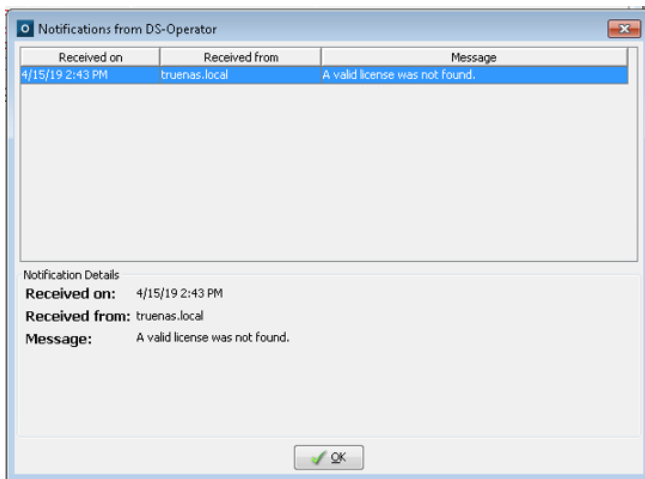
11) Enter the user name and password of the user you wish to connect with. Note that this user must exist in the Asigra Backup Plug-in jail.





12) Click . If your username and password is valid then you should be logged in successfully and your GUI should look similar to the screen clip below



Note: If you are connecting to the DS-System for the first time you may get the following notification



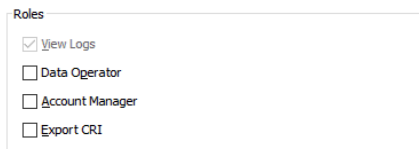
This is shown because you have not configured the DS-System with a valid Asigra License server.

To continue, either click  to acknowledge the message or click  to close the notification window.

Assigning DS-System Admin Roles to Users

In order for a user to be able to manage the DS-System service via the DS-System GUI the user must be assign the relevant admin roles. Assigning DS-System roles is done via the DS-System GUI and only the root user of the plug-in jail can perform role assignments.

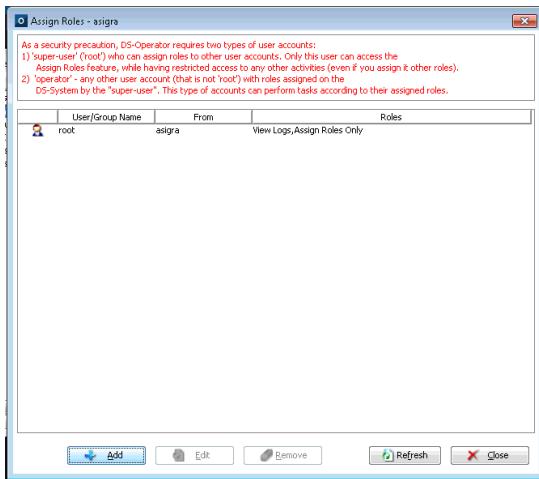
DS-System roles that be assigned to a user can be any combination of the following roles shown in the screen clip below.




You will need at least one user with all of these roles. This user will serve as your DS-System admin user. More information on these roles can be found in the DS-System User guide.

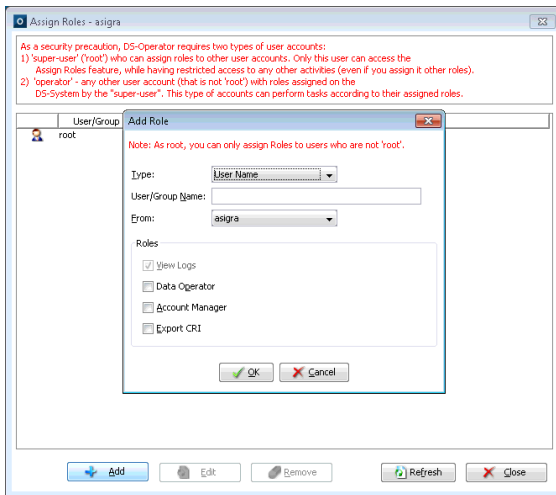
To assign DS-System roles do the following:

- 1) Log into the DS-System via the DS-Operator using the root user credentials. The "Assign Roles" window should automatically pop up as shown in the screen clip below



Note: To open the “Assign Roles” window on demand in the DS-Operator click Setup -> Roles

- 2) In the “Assign Roles” window click the  button
- 3) The “Add Role” window pops up as shown in screen clip below.



- 4) The role type “User Name” is default selection of the “Type” field. Leave this in place
- 5) In the “User/Group Name” field enter the user name for the user to which you want to assign DS-System roles. In our example here the user “backupadmin” we created earlier is used.

Type:

User/Group Name:

- 6) In the “Roles” field select the check box beside each DS-System role you want to assign to the user. By default “View Logs” is auto selected and cannot be changed.

Roles

View Logs

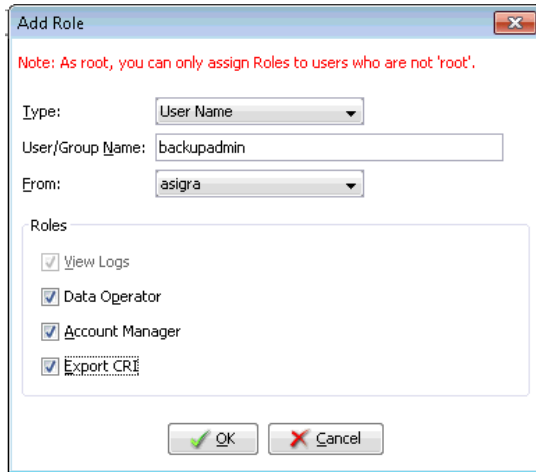
Data Operator

Account Manager

Export CRI

Note: Select all roles for any user you will be using as a DS-System administrator. A DS-System administrator will have rights to complete all DS-System maintenance tasks.

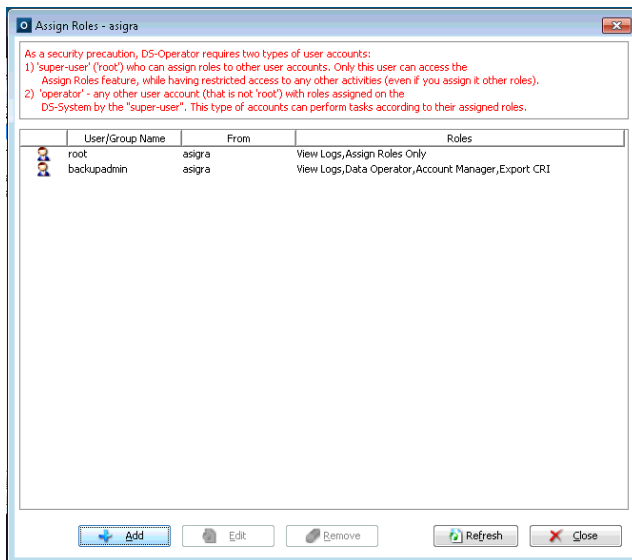
7) Once you selected the DS-System Roles click 



The 'Add Role' dialog box contains the following fields and options:

- Note:** As root, you can only assign Roles to users who are not 'root'.
- Type:** User Name (dropdown menu)
- User/Group Name:** backupadmin (text input field)
- From:** asigra (dropdown menu)
- Roles:** A list of roles with checkboxes:
 - View Logs
 - Data Operator
 - Account Manager
 - Export CRI
- Buttons:** OK and Cancel


8) If successful the user you specified will now show in the list as shown in example below



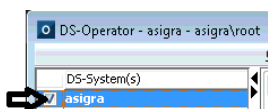
The 'Assign Roles - asigra' dialog box displays a table of assigned roles:

User/Group Name	From	Roles
root	asigra	View Logs, Assign Roles Only
backupadmin	asigra	View Logs, Data Operator, Account Manager, Export CRI

Below the table are buttons: Add, Edit, Remove, Refresh, and Close.

Repeat steps 2 – 7 to add as many users as you wish. When you are finish adding users click .

To be able to now log in as the user we just added log out of the DS-Operator and log backup in again as the other user, i.e. “backupadmin” in our example. To log out of the DS-Operator click the check box beside the related DS-System in the DS-System(s) list. See screen click below.



Then click the check box again to log back in.

Configuring the DS-System Service with a License Server

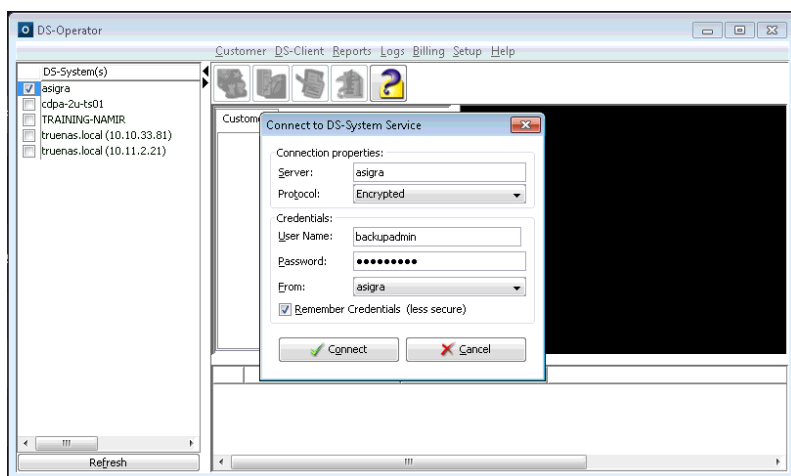
Before configuring the DS-System with a DS-License server you must:

- 1) Obtain the IP address or URL of the license server. The DS-License server can be a server that is internal to your network/company or a server that is external to your network/company. An external DS-License server can be either another service provider's license server or Asigra's own License server. Your Asigra service contract will dictate the license server type you will be using. Contact your service provider or Asigra for information about your Asigra Service contract.
- 2) Configure the DS-License server with the IP address of your DS-System (i.e. IP address of the appliance) and assign relevant license to it, example DS-System Online capacity. If DS-License server is external to your network/company then you will need to provide the service provider with a static internet routable IP address from which your DS-System will be connecting.
- 3) Make any applicable firewall policy changes to allow the DS-System to connect to the DS-License server. The DS-System uses Asigra proprietary TCP port 4417 to connect to the DS-License server. Only outbound connectivity from the DS-System to the DS-License server via port 4417 is required.

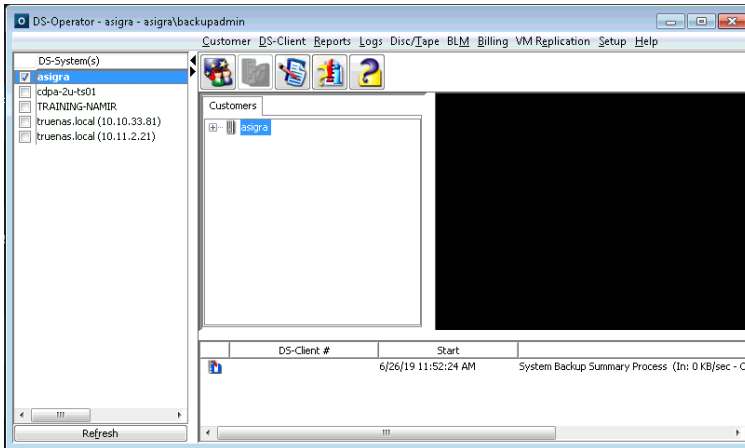
Note that you will also need to complete 1 and 3 above if you have an Emergency DS-License server in place. Use of an Emergency DS-License server is optional.

Once the DS-License server prerequisites are in place you can proceed to configure the DS-System service with the DS-License server. The steps to perform this task is provide below:

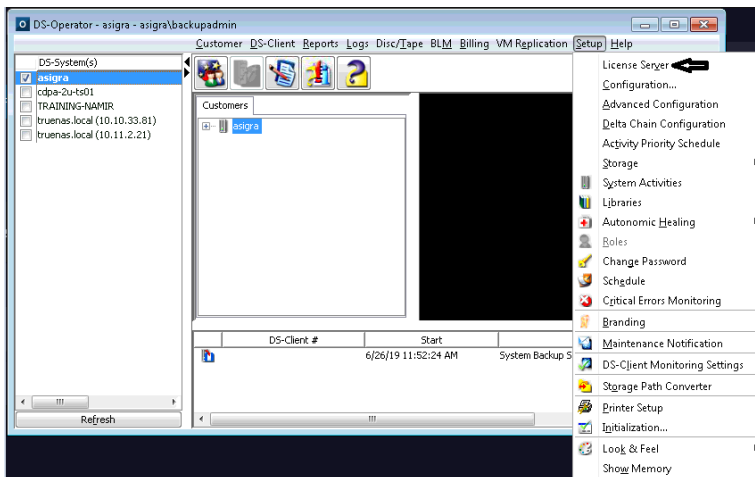
- 1) Launch the DS-System GUI (DS-Operator). See section [Accessing the DS-System GUI \(DS-Operator\)](#) in this document.
- 2) Log into the DS-Operator using the DS-System admin user account you created earlier. See section [Add a Regular User to the Asigra Backup Plug-in Jail](#)



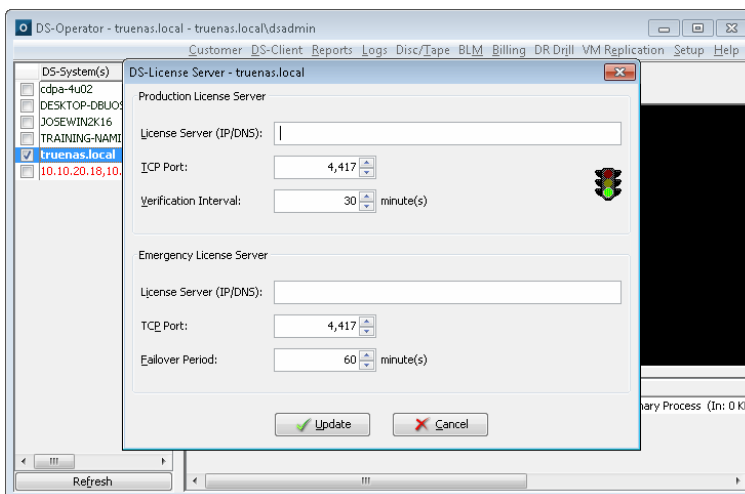
3) Once successfully logged in you will get GUI display similar to the screen clip below



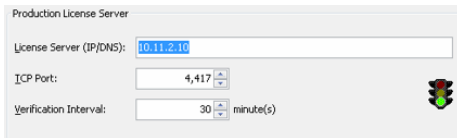
4) In the GUI menu click Setup -> License Server



5) The DS-License configuration window pops up as shown below



- 6) Under “Production License Server” in the “License Server (IP/DNS)” field enter IP address or URL of your DS-License server



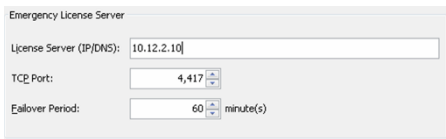
Production License Server

License Server (IP/DNS): 10.11.2.10

TCP Port: 4,417

Verification Interval: 30 minute(s)

- 7) If you also have an Emergency DS-License server, enter its IP address or URL in the “License Server (IP/DNS)” field under “Emergency License Server”. This configuration is optional.




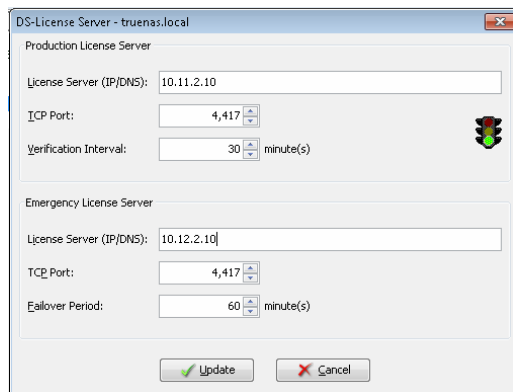
Emergency License Server

License Server (IP/DNS): 10.12.2.10

TCP Port: 4,417

Fallover Period: 60 minute(s)

- 8) Once your license server configurations have been entered. Click the  button



DS-License Server - truenas.local

Production License Server

License Server (IP/DNS): 10.11.2.10

TCP Port: 4,417



Verification Interval: 30 minute(s)

Emergency License Server

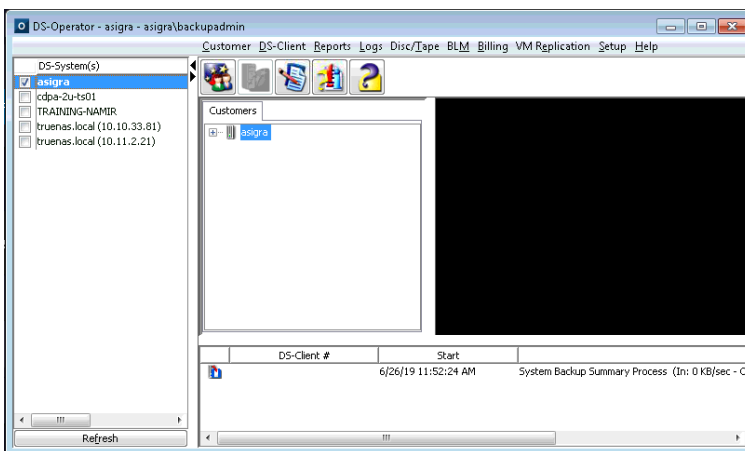
License Server (IP/DNS): 10.12.2.10

TCP Port: 4,417

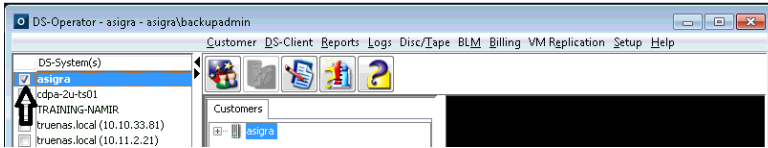
Fallover Period: 60 minute(s)

- 9) The DS-License server configuration window closes automatically



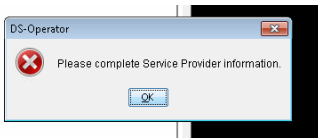
- 10) Before proceeding to do any additional configuration, disconnect from the DS-System by unchecking the check box beside the DS-System, see screen clip example below




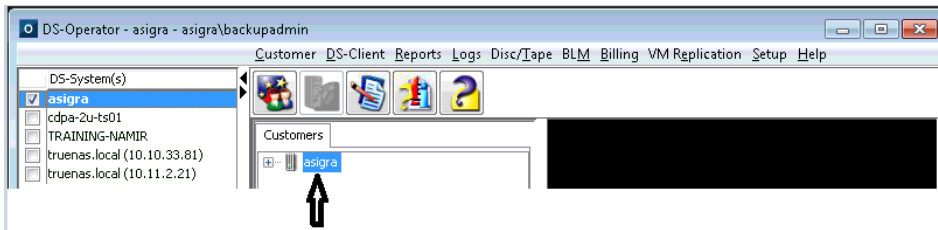
Then re-login by checking the check box again.

Configuring the Service Provider Information

Before you can start creating Customer Accounts and DS-Clients on the DS-System you must first configure it with your company information. As a result of this when you connect to the DS-System via the DS-System GUI and attempt to create a customer account for the first time you will automatically be presented with the Service Provider Information configuration window. You may also see the following popup message.

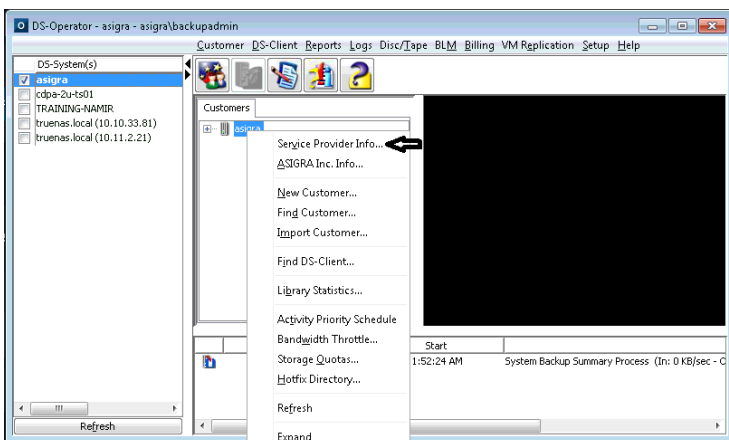


If you click the  button the “Service Provider Info..” window will automatically open. This window allows you to enter your Company (Service Provider) information. You can also open the “Service Provider Info..” window on demand by right clicking on the DS-System in the DS-Operator, see screen clip below.

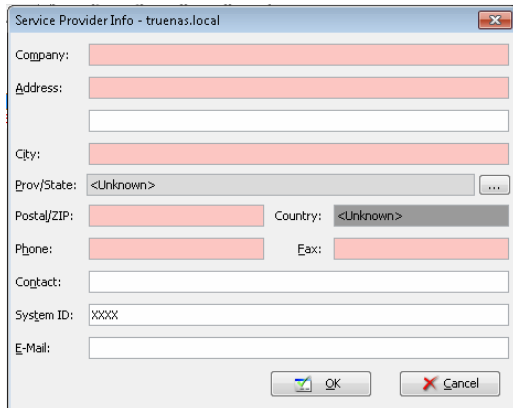


Note: In this example the DS-System name is “truenas.local”. Therefore this name may be different for your appliance.

In the configuration menu list that pops up, click on the menu option “Service Provider Info...”. See screen clip below



The “Service Provider Info..” window will pop up as shown in the screen clip below



You will notice that the “Service Provider Info..” window is a form. Complete the form by entering the relevant information for your company.

Company Field

In the “Company field:” enter the formal name of your company. Completing this field is mandatory.



Address Field

In the “Address:” fields enter the relevant building number, street name, etc. Completing the first address field is mandatory.





City Field

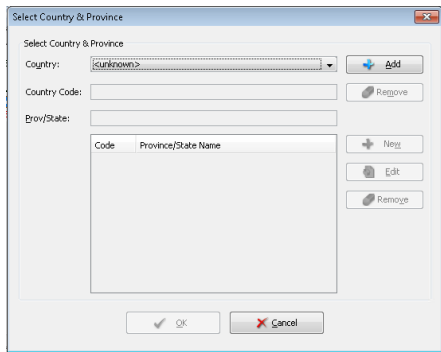
In the “City:” field enter the name of the city or town. Completing this field is mandatory.



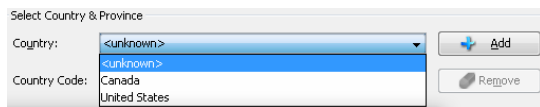
Country and Prov/State Fields

The Country field and the Prov/State field are populated together. However, whereas providing a value in the Country field is mandatory, providing a value in the Prov/State field is optional.

In the “Prov/State:” field specify the province or state. This is done by clicking  and selecting from the list of available cities. When you click  the “Select Country & Province” wizard pops up. See example below.

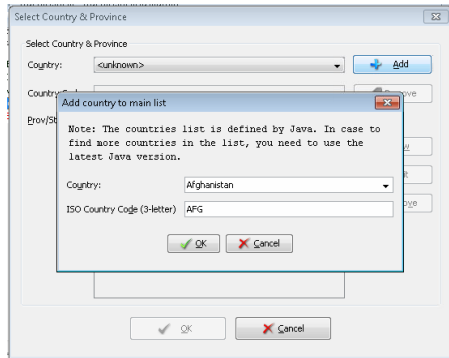



In the “Country” field click  to select your country from the drop down list.

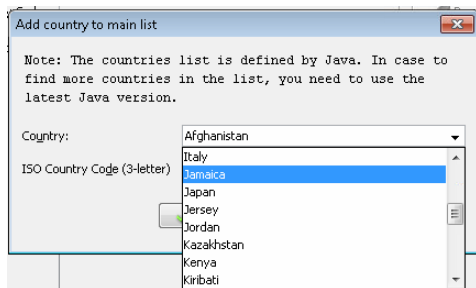


If your country is not in the drop down list click the  button beside .

The “Add country to main list” window pops up.



In the country field click  to select from list of available countries.

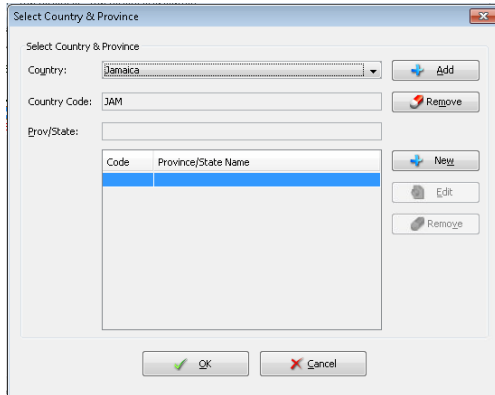


Use the scroll bar to scroll to the list and then click on the country you want.

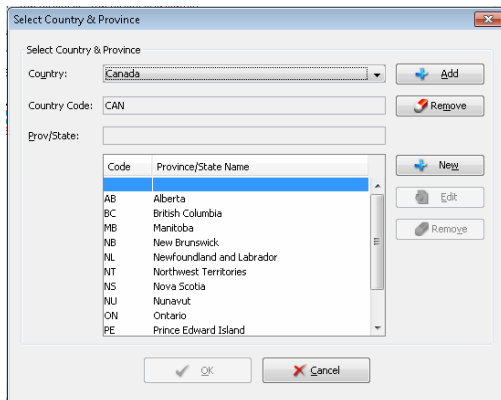



Click 

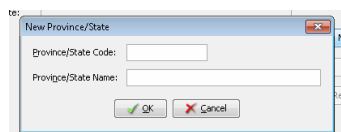
In the "Select Country & Province" window you should now see the country you have selected.



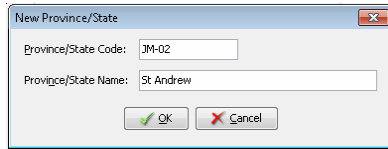
A list of provinces or states for the selected country should also be automatically populated in the "Prov/State:" field as shown in the example screen clip below.




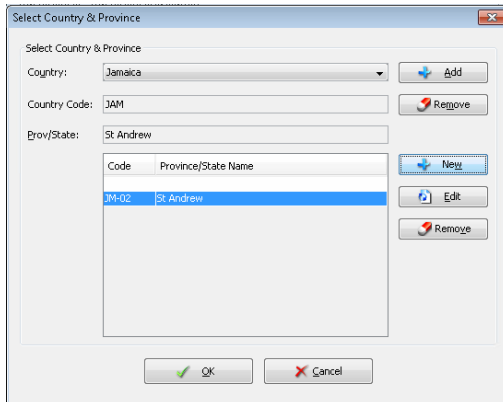
However, if after selecting a country the "Prov/State:" field is not auto populated with a list of provinces/states or you do not see the province/state you want in the list, then you can add it by clicking the  button. This opens the "New Province/State" window.




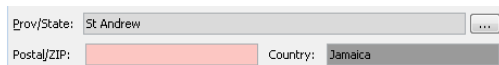
Enter a “Code” for the province or State in the “Province/State Code:” field. This can be any code you wish, however it is recommended that you use a valid ISO code if one is available. Also enter the name of the province or state in the “Province/State Name:” field. See example below.



Next click . The province or state you added should now show in the “Prov/State:” list. See example in screen clip below.



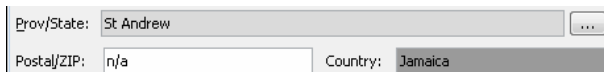
Once you have identified or added your province or state in the “Select Country & Province” window select it and click . This window closes and you are brought back to the “Service Provider Info” window. In this window the Country and Prov/State fields should now be populated with the country and province/state you had selected.



Note that if your country does not use a province or state then you can select the country only and leave the Prov/State field empty.

Postal/ZIP Field

In the “Postal/ZIP:” enter a valid postal or zip code. If your address does not use a postal code or a zip code then enter “N/A”.



Phone and Fax Fields

In the “Phone:” and “Fax:” fields enter our company’s contact number and fax number.

At this point you can leave all other default values if you wish. However if you would like to update the other fields you can do so.

Contact Field

In the “Contact:” field enter the full name of a person within you company who will be a point of contact to your customers.

System ID Field

The “System ID:” by default contains a four (4) character string “XXXX”.



System ID: XXXX

This string is used to form part of a unique ID (a.k.a. DS-Client Number) that is generated by the DS-System each time a new DS-Client is created on it. Example *DSCXXXX00001* or *DSCXXXX00349*. In these two examples each string represents the unique ID (DS-Client number) assigned to the 1st and the 349th DS-Client respectively when they were created.

You can keep this default if you wish or you can replace it with your own four character string.

Note: If you have or plan to have multiple DS-Systems in your company then you can use this field as an identifier for each DS-System so that the DS-System to which a DS-Client belongs can be easily identified from the DS-Client Number. *An example, consider that your company has two production DS-Systems, one located in New York (NY) and another in California (CA). Then the System ID for the DS-System in NY could be set to “NY01” and the one in CA set to “CA01”. By doing this, when the first DS-Client is created on each DS-System their DS-Client number will be DSCNY0100001 and DSCCA0100001 respectively. This makes the DS-System for the DS-Client easily identifiable.*

Changing this field is optional, however if you wish to adjust the “System ID:” then enter your preferred four-character string.




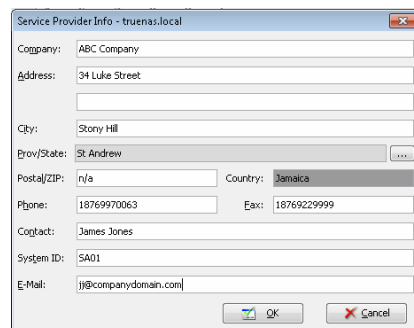
System ID: SA01

E-mail Field

Enter a valid email address for the contact person. Completing this field is optional.

Submitting the Completed Form

Once you have finished completing the Service Provider Info form with your company information click the  button. See example screen clip below.



Service Provider Info - truenas.local

Company: ABC Company

Address: 34 Luke Street

City: Stony Hill

Prov/State: St. Andrew

Postal/ZIP: n/a Country: Jamaica


Phone: 18769970063 Fax: 18769229999

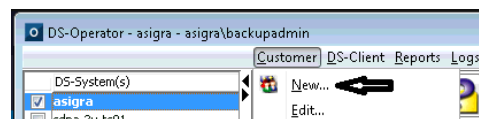
Contact: James Jones

System ID: SA01

E-Mail: jj@companydomain.com

OK Cancel

If the submission is successful then the “Service Provider Info” window should close automatically. The initialization process is now completed and you can now proceed to create customer accounts and then create DS-Clients. To create a customer account click on the new Customer icon . This will start the customer account creation wizard. Another way to start the wizard is to click Customer -> New



DS-Operator - asigra - asigra\backupadmin

Customer DS-Client Reports Logs

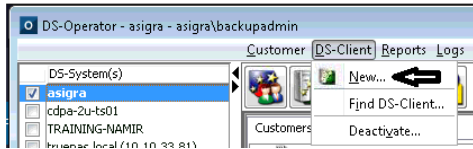
DS-System(s)

asigra

lcdpa-2u-ts01

New... Edit...

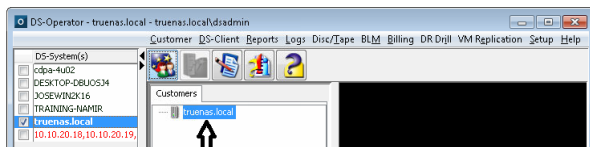
Once the Account is created you can create one or more DS-Clients under that account. To Create the DS-Client under the account, first select the account and then click the new DS-Client icon. This will start the DS-Client creation wizard. Another way to start the DS-Client creation wizard is to click DS-Client -> New



For more information on creating customer accounts and DS-Clients refer to the DS-System user guide.

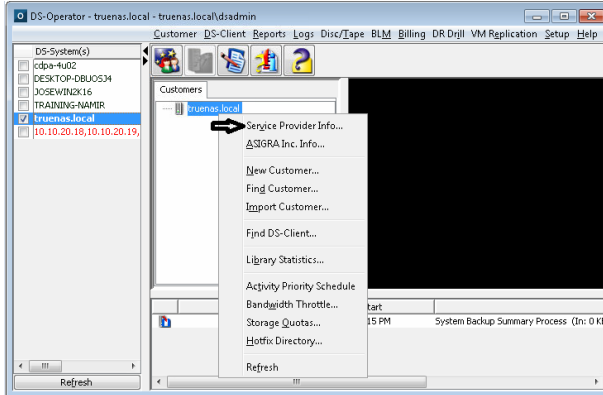
Post Initialization View of Service Provider Information

After initializing the DS-System you can view the service provider information at any time. To do this connect to the DS-System via the DS-Operator. Then right click on the DS-System in the DS-Operator, see screen clip below.



Note: In this example the DS-System name is “asigra”. Therefore this name may be different for your TrueNAS Core system.

In the configuration menu list that pops up, click on the menu option “Service Provider Info...”. See screen clip below



The “Service Provider Info..” window will pop up as shown in the screen clip below

Service Provider Info - truenas.local

Company: ABC Company

Address: 34 Luke Street

City: Stony Hill

Prov/State: St Andrew

Postal/ZIP: n/a Country: Jamaica

Phone: 18769970063 Fax: 18769229999

Contact: James Jones

System ID: SA01

E-Mail: jj@companydomain.com

OK Cancel

To exit without making any changes simply click . Otherwise click .

Asigra License and the TrueNAS Core System

Before you can start using the Asigra DS-System service on your TrueNAS Core system for backup and recovery services, the DS-System service must be configured with a valid Asigra DS-License server. In addition, the Asigra DS-License server must be configured with the IP address or URL of your Asigra Backup Plug-in jail. The Asigra DS-License server configuration must also have the relevant Asigra license assigned to your DS-System service. One Asigra license that you must have assigned to your DS-System service before you can start backing up to it is DS-System Online capacity. Consult with your service provider or Asigra Client Services for more information on Asigra Licenses. You can also refer to the Asigra DS-License Server documentation for more information about installing and configuring an Asigra DS-License server as well as information on Asigra license.