

KnapSac Windows Server User's Guide

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KnapSac Server for Windows

Introduction

KnapSac utilizes a client-server architecture where the client software resides on a VMS computer and the server software resides on a Windows or Linux computer. The client and server communicate using TCP/IP.

The KnapSac Server Control program is used to manage the KnapSac server configuration file and also to control the running of associated Windows services. To run it, you simply double click on the entry in Program Files\KnapSac.

The KnapSac Configuration file, kns.config, is located in the windows\system32 folder. It is created with and maintained by the Server Control program



Windows Server

The KnapSac server for Windows is called knsServer.exe. It resides in the Program Files\KnapSac directory but cannot be run directly. It is built to run as a Windows service only. It will actually be run from the windows\system32 directly once it is registered with Windows. Use the knsControl.exe program to setup the KnapSac Configuration file and register and run the Windows service. You may run multiple services and each service can handle multiple ports.



License File

License File System ID

The Windows KnapSac Server requires a license to run. The initial temporary license installed with a download is good for 30 days. The Welcome dialog that is displayed when this programs first runs tells you when the license will expire.

In order to obtain a permanent license, you will need provide Compact Data Works with your **system ID**. This is obtained by selecting 'License File System ID ' from the Help menu. A small dialog will appear giving the system ID information.



License File Options

The KnapSac license file contains information that may limit the number of KnapSac services you may run and also whether those services may have multiple ports. These options may be viewed using the 'License Options' item from the Help Menu.



Server Configuration File

Client Name

The client name is the display name to be used for this KnapSac service. This name will be used in the KnapSac Server Control program display and also the Windows Services GUI display. In the latter case, it appears as the service description. This name refers to the VMS host that will connect to this service. It may be anything meaningful.



Port Number

A KnapSac service can process multiple TCP ports at the same time. You may want to have multiple jobs running at the same time or you may simply want to distribute the generated pacsets to different directories on Windows. This provides that capability while limiting Windows overhead.

The Port Number indicates the starting TCP port number for this service. The starting TCP port number must be unique for each KnapSac service and must not overlap the TCP port range covered by a different KnapSac service. The starting TCP port number is the primary item used to identify a service.

The main port number for a Client is stored in the Client License file. An alternate port number may be specified using the port qualifier on the KnapSac Client command line.

The port number should be between 7000 and 7499.



Path

The path is the drive letter and top level folder to be used for storing pacsets created by this KnapSac service. The KnapSac service will prefix this path to the path specified on the KnapSac Client command line. For example, if the Path is set to c:\storage\ and the client command looks like

```
$ knapsac *.dat server: "dat\datfiles.pac"
```

the KnapSac server will store the pacset containing the .dat files from VMS (datfiles.pac) in the directory c:\storage\dat.

If the desired path is a network drive rather than a local drive, use the format

```
\\nasserver\sharename
```

to specify the path. You will also need to change the KnapSac service logon account to the Administrator account or another account with privileges to access the network drive. To do this, select the Settings menu and then Account;



Serial Number

The serial number is a number unique to each KnapSac client, and is embedded within the client license file on the client system. A given client serial number may be associated with more than one TCP port number to allow multiple concurrent KnapSac jobs to be run from a single Client computer, or from multiple Client computers at the same client site.

A pacset created by a KnapSac client using one serial number cannot be read by a KnapSac client using a different serial number. This number is assigned by Compact Data Works.

A client cannot connect to a Knapsac service unless the serial number from the client license file matches that in the KnapSac Configuration file.



Number of Ports

This item indicates how many ports this service will handle, beginning with the starting TCP port number. If the starting TCP port number is 7000 and the number of ports is 10, then this KnapSac service will process TCP ports 7000 through 7009.

Each service must have at least 1 port and can have no more than 10.




Getting Started

Evaluation Configuration

After the KnapSac Service is installed on Windows, the configuration file must be populated with at least one entry.

An example entry for evaluating KnapSac would be:

| | |
|-----------------|----------------|
| Port Number | 7000 |
| Display Name | Evaluation |
| Path | C:\vmspacesets |
| Number of ports | 2 |
| Serial Number | 000000 |

Use the Add Service icon  to add the entry to the KnapSac configuration.

After the entry is added and started, you may connect to the KnapSac Service from a VMS computer which is running the KnapSac VMS Client.



Service Account

A KnapSac service must run under a valid account. The account is set when the service is created. The default account is the Local System account;

The account may be changed by select 'Account' from the 'Settings' menu. The KnapSac Service Account dialog provides for entering an account name and password. Normally the account name should be entered preceded by a .\ . For example to enter the account Administrator, enter


.Administrator in this dialog. Once the account name is entered, it will remain in effect. Each service which is subsequently created and started, will be created using this account.

The main reason for changing the account is when the KnapSac service must access network storage devices to store or retrieve files. In this case, set the account to the Administrator account or another account with sufficient privilege to access the network storage. Make sure the desired account has the "Log on as a service" right. Set this right for an account using Control Panel -> Administrative tools -> Local Security settings -> Local Policies -> User rights assignment -> Logon as a service.

When a service is created, the account specified in the Settings will be used. If no account is specified, the Local System Account will be used.



Display

Click on the  and drop it on any text or box or icon to get help on that item. If you drop the icon on a header field in the table, you will see info about each of the table entries.

The main display is a tree of entries from the Configuration file. Each line represents a port number. If that service has multiple ports assigned to it, the remaining ports are sub-items of the main port. These ports do not have a separate service name (they are handled by the service of the main port) but they do have separate log files. The items displayed are:

Client Name - The name of the VMS client.

Port Number - The TCP/IP port number used for connection to the client.

Service Name - The name of the associated Windows service.

Status - The status of the associated Windows service.

Path - The root path for this client where pacsets and log files are stored.

Log File - The name of the current log file.


Ports - The number of ports serviced by this KnapSac Windows service.

Serial Number - The serial number from the associated VMS client KnapSac license file.

Backup Path - The path for copying log files when clearing them.





Refresh

Refresh updates the display with current information from the Configuration file and the current status of each service. Click on the  icon or select Refresh from the Action menu.

Auto-Refresh

The KnapSac Service Control program can be used to monitor the status of the services by refreshing the display automatically. Use the Settings -> Auto-Refresh menu item to enable auto-refresh and to set the refresh time interval.

Auto-Refresh can be toggled on and off by using the  and  icons. Red means Auto-Refresh is off. Green means it is on.



Settings

There are 3 items in the 'Settings' menu that are used infrequently:

KnapSac Service Account

This is used to set up an account for use when starting KnapSac services. Its main use is for using a network device as the Path for a service to store and retrieve pacsets.

Auto-Refresh

By default, Auto-Refresh is on. This brings up a dialog that lets you turn on/off the Auto-Refresh feature and also select the time between refreshes.

Backup Log Files

There are times when you may want to clear a log file. If you also want a copy of the current log file, you may select this menu option. It brings up a dialog that allows you to select Auto-Backup for log files. You may then clear a log file without losing any prior information.



Managing the Services

Adding a Service

To add a new service, click on the  icon. Click on the  and drop it on any text or box to get help on that item.

You will need to add the following fields:

Port Number:

A KnapSac service can process multiple TCP ports at the same time. This item is the starting TCP port number for this service. It must be unique for each service and must not overlap the port range covered by a different KnapSac service. The starting port number is the primary item used to identify a service.

This port number is also located in the VMS KnapSac license file for this client.

The port number can be changed on VMS to avoid a conflict with another application. The VMS client will then need use /PORT=nnnn (where nnnn matches this number) on the command line.

Up to 10 port numbers may be assigned to a given service. These are consecutive. It is recommended to use port numbers in multiple of 10s to allow for these extra port numbers.

The port number must be in the range 7000-7499.

Client Name:

This name is used to identify the VMS client which will connect to this service.

It may be anything meaningful.

Path:

This is the path on Windows (drive letter and top level folder) where Knapsac will put pacsets created using this service. The KnapSac service will prefix this path to that specified on the VMS KnapSac command line. The VMS client can specify a sub directory for pacsets.

This is also where the service will create its log files. If you are using a network drive, you will need use the form

\\netserver\sharename

to specify the path. You will also need to change the KnapSac service logon account to be the Administrator account or another with privileges to access the network drive. Select Account under the Settings menu to do this before starting the service.

Number of Ports:

This is the number of ports allowed for this service. The default is 1. The maximum is 10.


The ports are assigned consecutively starting with the TCP port number above. For example, if the starting port number is 7000 and the number of ports is 10, then this service will handle ports 7000-7009.

Serial Number:

This is the serial number from the KnapSac VMS license file. It **must** match for a connection to take place.


Start Service:

If this box is checked, the service will be registered with Windows and then started .

The service may be started later using the Start Service command from the Services menu or the  icon. You want to start the service later if you are using a network path and have not yet entered the account name.



Start a Service

To start a service, select a service and click on the  icon. The service will be registered with Windows and started. The service name will appear in the Service Name column and the status will be updated.





Stop a Service

To stop a service, select a service and click on the  icon. The service will be stopped but will still be registered with Windows. The status will be updated.




Removing a Service

To remove a service, select a service and click on the  icon. The service will be stopped if it is running and then removed from Windows. The service name will be removed from the display and the status will be marked INACTIVE. The service is still in the KnapSac Configuration file and may

be started again using the start service icon .





Deleting a Service

To delete a service, select a service and click on the  icon. This will stop the service if it is running, remove it from Windows as a registered service and delete it from the KnapSac Configuration file. The service will no longer appear in the display.



Modifying a Service

To modify a service, select a service and click on the  icon. The Modify Dialog will appear. Click on the  and drop it on any text or box to get help on that item. Only the Port Number cannot be modified. To do this, you would need first Delete the service from the KnapSac Configuration file and then re-enter it using the Add Service dialog. You will be able to change the following fields:

Client Name:

This name is used to identify the VMS client which will connect to this service.

It may be anything meaningful.

Path:

This is the path on Windows (drive letter and top level folder) where KnapSac will put pacsets created using this service. The KnapSac service will prefix this path to that specified on the VMS KnapSac command line. The VMS client can specify a sub directory for pacsets.

This is also where the service will create its log files. If you are using a network drive, you will need use the form

\\netserver\sharename

to specify the path. You will also need to change the KnapSac service logon account to be the Administrator account or another with privileges to access the network drive. Select Account under the Settings menu to do this before starting the service.

Number of Ports:

This is the number of ports allowed for this service. The default is 1. The maximum is 10.


The ports are assigned consecutively starting with the TCP port number above. For example, if the starting port number is 7000 and the number of ports is 10, then this service will handle ports 7000-7009.

Serial Number:

This is the serial number from the KnapSac VMS license file. It **must** match for a connection to take place.


Start Service:

If this box is checked, the service will be registered with Windows and then started .

The service may be started later using the Start Service command from the Services menu or the  icon. You want to start the service later if you are using a network path and have not yet entered the account name.




Start All Services

To start all the services, click on the  icon on the left of the toolbar or select 'Start All Services' from the Services menu. The KnapSac Service Control program will process each entry in the KnapSac Configuration file. Each service will be registered with Windows and started. The service name will appear in the Service Name column and the status will be updated.




Stopping All Services

To stop all the services, click on the  icon on the left of the toolbar or select 'Stop All Services' from the Services menu. The KnapSac Service Control program will process each entry in the KnapSac Configuration file. Each service will be stopped. The service is still registered with Windows so the service name will still appear in the Service Name column. The status will be updated.



Removing All Services




To remove all the services, click on the  icon on the left of the toolbar or select 'Remove All Services' from the Services menu. The KnapSac Service Control program will process each entry in the KnapSac Configuration file. Each service will be removed as a Windows service. The service name will no longer appear in the Service Name column. The status will be marked INACTIVE.




Log Files

Viewing a Log File

To view a log file, select an entry in the display and click on the  icon. The KnapSac Server Control program will open a new window running Notepad and displaying the contents on the selected log file.



Clearing a Log File

To clear a log file, select an entry in the display and click on the  . The KnapSac Server Control program will erase the contents of the selected log file.

If you have auto-backup selected, the selected log file will first be copied to the Backup path. Each backup log file will have ~n appended to its name where n starts at 1 and increments for each backup of the same log file.



Backing Up Log Files

You may backup log files 2 ways. You may 'View a Log File' and use Notepad to copy the file elsewhere. Or you may select Auto-backup from the Settings menu. Then each time you 'Clear a Log File', the KnapSac Server Control program will automatically back up the log file before clearing it. The default destination for these backups is a sub-directory called Backup under the Path for this service. You may select an alternate destination.

If Auto-backup is selected, the backup path will appear in the display. Otherwise that field will be empty.



Startup Log Files

As each service is starting up, it writes to a startup log file before it can create the port specific log files. The startup log file only contains messages indicating that it is starting and any errors that may occur at this time. It is useful to view if a particular service does not start up. To view the startup log file, select 'View Startup Log' from the Log file menu.



