

# **Guide to Configure Kerberos**

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**From the basics to the advanced.**

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You can view the latest DocBook 5 XML source to this guide under version control on the web at <http://github.com/tbielawa/Virtual-Disk-Guide> and an HTML compiled version under <http://lnx.cx/docs/vdg/>.

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## **Introduction**

I wanted to write this because in my search for information on the subject of Kerberos, I was probably as confused as you.

## Chapter 1

# Kerberos Configuration

### 1.1 Introduction

This chapter will cover basic descriptions and configurations for a Kerberos server and its respective clients for various services.

### 1.2 Installing and Configuring a Kerberos Server

This chapter is going to provide basic descriptions and installation instructions for setting up a Kerberos server on Ubuntu Linux. You will need to be able to run **sudo apt-get install** to install the required packages.

The following are a list of packages that will be required when setting up a Kerberos server.

1. krb5-kdc
2. krb5-admin-server
3. rng-tools

Now, install

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**Example 1.1** Querying an Image

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```
tbielawa@deepfryer:/srv/images$ ls -lhs
total 136K
136K -rw-r-----. 1 tbielawa tbielawa 256K May  8 18:00 image-qcow.qcow2
    0 -rw-r-----. 1 tbielawa tbielawa  10G May  8 18:00 image-raw.raw

tbielawa@deepfryer:/srv/images$ file image-qcow.qcow2 image-raw.raw
image-qcow.qcow2: Qemu Image, Format: Qcow , Version: 2
image-raw.raw:    data

tbielawa@deepfryer:/srv/images$ qemu-img info image-qcow.qcow2
image: image-qcow.qcow2
file format: qcow2
virtual size: 10G (10737418240 bytes)
disk size: 136K
cluster_size: 65536

tbielawa@deepfryer:/srv/images$ qemu-img info image-raw.raw
image: image-raw.raw
file format: raw
virtual size: 10G (10737418240 bytes)
disk size: 0
```

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**Note**

These images are freshly created and don't have any information on them yet. Both were created to be 10G images.

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The interesting information we can get from using **ls -lhs** is how the files are actually sized. `image-raw.raw` appears to be 10G but doesn't have any actual blocks allocated to it yet. It is literally an empty file. What's good about these RAW disks is that you don't need any special kind of tools to know how large the disk is internally. The RAW image should always match its reported file size on the host OS.

Our QCOW, on the other hand, is being deceptive and concealing its true size. QCOWs will grow to their maximum size over time. What makes it different from our RAW image in this case is that it already has blocks allocated to it (that information is in the left-most column and comes from the `-s` flag to **ls**). The allocated space is overhead from the meta-data associated with the QCOW image format.

The **file** command tells us immediately what it thinks each file is. This is another simple to perform query that you can run from any system without special tools. Here we see it correctly reports `image-qcow.qcow2`'s type. Unfortunately, without any content, all it can tell us about `image-raw.raw` is that it's 'data'.

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**Note**

Its worth mentioning that RAW image types will be reported by **file** as "x86 boot sector, code offset 0xb8" once given a filesystem label and a partition table.

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Using the **qemu-img** command we can get more detailed information about the disk images in a clearly presented format.

With **qemu-img** it's clear that `image-qcow.qcow2` is a QCOW2 type image and is only 136K on disk and internally (the 'virtual size' field) is a 10G disk image. If the QCOW had a backing image the path to that file would be shown here as an additional field.

For the RAW image there is no new information here that we didn't already get from the **ls**.

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