Administration av UNIX lab 4

# En bild som visar text, skärmbild, Teckensnitt, meny Automatiskt genererad beskrivningEn bild som visar text, skärmbild, Teckensnitt Automatiskt genererad beskrivningEn bild som visar text, skärmbild, programvara, Multimedieprogram Automatiskt genererad beskrivning****4.1.1 Pre-installation****

Pinging a new address works.

# 4.1.2 Installation

* Discuss the advantages and disadvantages of running containers instead of installing Bind9 with apt.

Running applications within containers has some advantages, like enhanced security and reliability through isolation from other applications and the host system. Containers offer better portability, allowing you to easily move them between various Linux distributions and different operating systems, this makes them a valuable choice for cloud deployments or heterogeneous server environments. Containers are also more resource-efficient, it shares the host systems kernel and enables the operation of multiple containers on a single server which can reduce hardware costs.

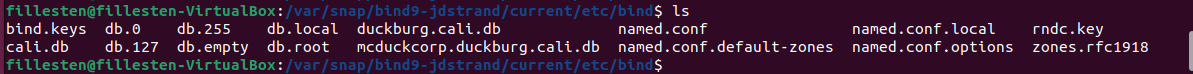
Managing containers can introduce complexity to systems as you need to handle container runtimes and images. This complexity can be mitigated with the help of container management tools like Kubernetes.

When comparing this to the traditional installation method using apt for package management, containers offer greater flexibility and isolation. apt is a package manager for the host system, while containers encapsulate the application and its dependencies, ensuring that it operates consistently regardless of the host's configuration.

* En bild som visar text, skärmbild, Teckensnitt

  Automatiskt genererad beskrivningDescribe the installation process of installing with Snap.

Current is a symbolic link to 225.



All the domains in the bind directory.

The cali.db file:  
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The duckburg.cali.db file:

En bild som visar text, skärmbild, programvara, skärm

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The mcduckcorp.duckburg.cali.db file:  
En bild som visar text, skärmbild, programvara, Multimedieprogram

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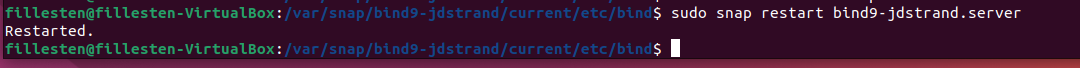
Configured the named.conf.local file:  
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Change to google DNS inside of named.conf.options file:

En bild som visar text, elektronik, skärmbild, programvara

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Restart server to apply new settings:  


En bild som visar text, skärmbild, Teckensnitt

Automatiskt genererad beskrivningEn bild som visar text, skärmbild, Teckensnitt, programvara

Automatiskt genererad beskrivningTesting with dig command on each zone:  
En bild som visar text, skärmbild, programvara

Automatiskt genererad beskrivning

Now for configuring the reverse lookup. Normal dns maps letters/names to ip. This however maps ip to letters/names.

En bild som visar text, skärmbild, programvara, Multimedieprogram

Automatiskt genererad beskrivning

Also need to update named.conf.local to add the reverse zone.:

En bild som visar text, skärmbild, Teckensnitt

Automatiskt genererad beskrivningThe file looks the same above the mcduckcorp.duckburh.cali. clause.

Testing the reverse zone with dig:  
En bild som visar text, skärmbild

Automatiskt genererad beskrivning

**To answer in my report:**

* Screenshots of my domains are in the report
* Need for GLUE-record:

GLUE records are a crucial part of the DNS system, they are used to avoid circular dependencies when resolving domain names. They are included in NS records and provide the IP addresses of authoritative name servers for delegated subdomains. Without GLUE records, DNS resolvers can have trouble finding the necessary name servers, particularly at top-level domains and complex domain hierarchies. GLUE-records stop infinite loops from occurring.

* Discuss the SOA-values that you set. What do we need to consider when deciding these values?

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From cali.db:

serial = 2023103001. The serial number can be any arbitrary number however using yyyymmddxx is somewhat standard and often seen/used.

Refresh = 3600 seconds or 1h. how often secondary / slave name servers checks the master name server for updates. Cant be too high to “miss” important updates and cant be too low to avoid creating unnecessary traffic and load to the DNS servers.

Retry = 1800 seconds or 30minutes. This value defines how long secondary DNS servers should wait before retrying a failed zone transfer request. Same here as Refresh with regards to time, to avoid traffic but do not want to wait for too long to retry the request.

Expire = 604800 seconds or 1 week. This determines the maximum time a secondary server will consider its data to be valid of it fails to refresh from the primary server. This value should be significantly greater than the refresh and retry values.

Minimum = 3600 seconds or 1h. determines the default Time to live (TTL) for resource records in the zone. It specifies how long other DNS servers and caches should consider data to be valid. A reasonable time for this is around 1h. where the same principles as refresh apply here too.

* Screenshot of named.conf.local is in report
* DIG can do successful lookups on all domains, pictures are in report
* Explain how reverse zone file works:

A reverse zone file is a component of the Domain Name System (DNS) that maps IP addresses to domain names. It is used for reverse DNS lookups and contains PTR (Pointer) records that associate IP addresses with domain names in a hierarchical, in-addr.arpa domain. When an IP address is queried, the DNS server checks the reverse zone file to provide the corresponding domain name.

* Move the mcduckcorp domain to global dns tree

I would have to change the mcduckcorp domain to be a slave or secondary server instead of a master. Additionally I need to enable allow-transfer. I add a master server to the new slave domain which can be done with the allow-transfer {x.x.x.x;}; with the public ip address of the new master dns server.