

The background of the slide is a solid green color. Overlaid on this are several concentric circles and a series of dashed white lines that intersect the circles, creating a grid-like pattern. The circles are centered towards the right side of the slide.

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Domain Name Service

CCDC

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How DNS works

- Browser
- OS
 - Checks Cache
- ROOT
- Top Level Domain (TLD)
- Authoritative Name Server (ANS)
- Domain Name Server

What does a local DNS Server do?

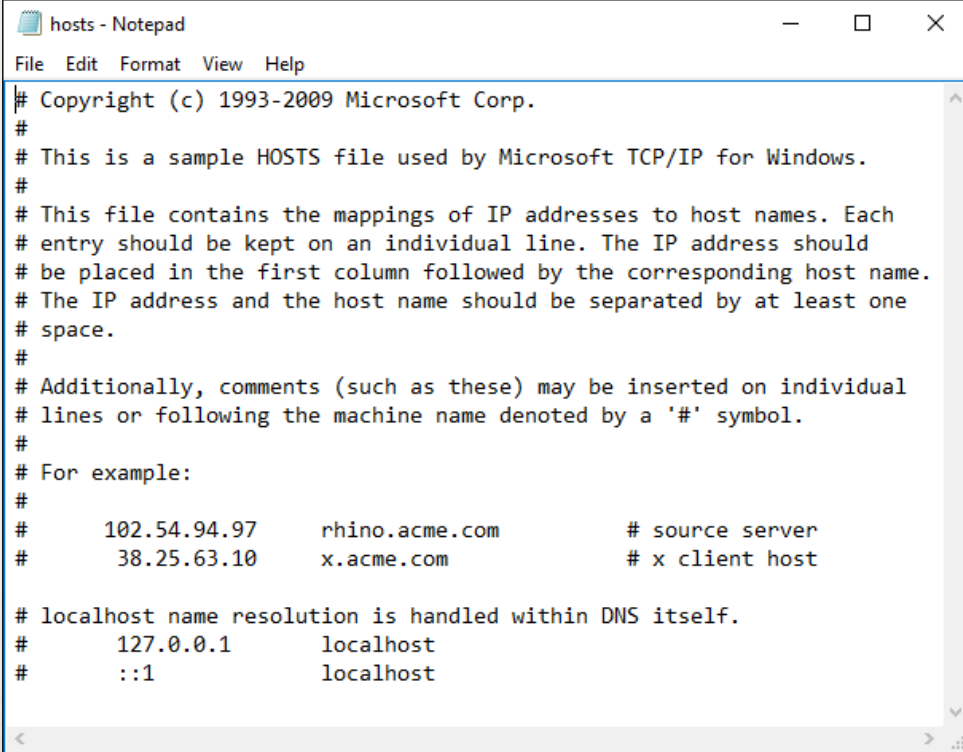
- Local DNS server queries ROOT, TLD, and ANS for the local machine
 - Reduces local network traffic
 - Reduces workload of local machine
- Dynamic DHCP will write local IPs to the local DNS
 - Allows local machines to look each other up.
- Reverse DNS looks up an IP's domain name

Threats

- Hosts File
- DNS Spoofing
- Cache Poisoning

Hosts File

- C:\Windows\System32\drivers\etc
- Hosts is Local Cache



```
hosts - Notepad
File Edit Format View Help
# Copyright (c) 1993-2009 Microsoft Corp.
#
# This is a sample HOSTS file used by Microsoft TCP/IP for Windows.
#
# This file contains the mappings of IP addresses to host names. Each
# entry should be kept on an individual line. The IP address should
# be placed in the first column followed by the corresponding host name.
# The IP address and the host name should be separated by at least one
# space.
#
# Additionally, comments (such as these) may be inserted on individual
# lines or following the machine name denoted by a '#' symbol.
#
# For example:
#
#       102.54.94.97       rhino.acme.com           # source server
#       38.25.63.10       x.acme.com               # x client host
#
# localhost name resolution is handled within DNS itself.
#       127.0.0.1         localhost
#       ::1               localhost
```

Advanced Topics

- BIND
- MX Records

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Questions?

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References

- <https://www.youtube.com/watch?v=72snZctFFtA>
- <https://www.youtube.com/watch?v=GIZC4Jwf3xQ>
- <https://www.youtube.com/watch?v=2ZUxoi7YNgs>
- <https://www.youtube.com/watch?v=VwpP8PUzgLw>
- <https://www.youtube.com/watch?v=zRysni9ND2w>
- <https://www.youtube.com/watch?v=O5JZTG5xPXw>
- <https://www.youtube.com/watch?v=6c3mwjir3AQ>

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