Errors

Review

General Troubleshooting Strategies

- Do things work as expected?
  - If so, move on.
  - If not, how can I find out what went wrong?
  - Is there something in the system logs?
  - Are there any application specific logs?
  - If there are no logs, are there any commands that I can do to narrow down the error scope?
  - Could there be other problems that would affect this (i.e. disk full, other system issues)(firewall?)

General Troubleshooting Strategies

- Other avenues of support?
  - GOOGLE!
  - forums, discussions,
  - peers, colleagues

DNS Troubleshooting Strategies

- Dig, dig, dig.
  - Start at root
  - Travel down the hierarchy
  - Test from localhosts, remote hosts
  - inside network, outside network
  - test master and slave

DNS Troubleshooting Strategies

- What do the logs say about it?
- Was the zone transferred successfully?
  - Does it say something about a failure on `any` line?
- If digs against slave aren't working, your transfer probably didn't complete!

DNS Common Problems

- Typos in zone or named.conf.local
  - Dots?? (after NS records, at end of ptr record, end of SOA lines)
  - Semicolons
  - OTher syntax errors
- I can't `wget`
- My slave isn't working
  - Misconfigured `named.conf.local`
- TTL set too high, you have to wait a long time for new refresh.
- A record pointed to wrong host.

DNS Common Problems

- Conceptual understanding
  - What does delegate mean?
  - Are you blindly following slides or do you try to understand what they are saying?
  - For the exam, it will be VERY difficult to rely on slides to tell you what to do, though it is open note.

Database Troubleshooting Strategies

- Can you login from localhost?
    - See the database?
- Can you login from remote host?
    - by ip vs fqdn?
    - See the database?
- What does the mysql.error log have to say?

Database Common Problems

- System level users vs Database users
    - They are not the same!
- Most problems boil down to:
    - Did you create the database
    - Did you execute the correct GRANT statement on the database
    - Did we allow remote connections?
- Examples:
    - `GRANT ALL PRIVILEGES ON 'foo'.'*' to 'bob'@'144.38.195.%' IDENTIFIED BY 'secret';`
    - `GRANT ALL PRIVILEGES ON 'foo'.'*' to 'bob'@'144.38.196.%' IDENTIFIED BY 'cows';`
    - `GRANT ALL PRIVILEGES ON 'foo'.'*' to 'bob'@'localhost' IDENTIFIED BY 'cows';`

Email Troubleshooting Strategies

- Can you send an email to someone in the domain?
- Send out to world?
- Send from world back to domain?
- MX record found? (If not, fall back to A record)
    - You CAN do a dig test to see if it is working.
- Listening on ports (do a `netstat -natp`) (This is good for looking at ANY service)
- Logs?(Paniclog, mainlog?)

Email Common Problems

- Your DNS isn't working
- You don't have a user created

HTTP Troubleshooting Strategies

- Can you visit the website?
- Can you dig the FQDN and get an IP?
- If it shows a different page than what you were expecting:
    - DId you enable the virtual host?
    - DId you create the correct document root?
    - Is there content?

Filesystem Troubleshooting Strategies

- See the filesystem slides
- Remember the basic steps
    - partition
    - format
    - mount
    - create file

Other random problems

Most common source of errors in this class are typos in the SUBMISSION file!

Other common errors are permission issues: * when mounting/creating files * web applications/ web pages * user no have perms to db

Fix by issuing new permissions or ownership commands: * chmod * chown * grant (for mysql)

Other random problems (System related)

Sometimes different system settings are affecting our programs:

- incorrect IP, subnet mask, default gateway
- umask, UID, GID
- hostnames
    - `/etc/hosts` [here](#)
    - Does this have to match what is in DNS?
    - They absolutely SHOULD!
    - `/etc/hostname`
    - Does this need to match DNS?
        - Not really

Make sure your system is solid FIRST!