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# NIS+ Futures

(my opinions only)

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## NIS+ Password Update Daemon

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- Password Aging and NIS+ now works
- Can change passwords without a Credential
  - Authentication based upon knowing old password
- NIS(YP) clients can change passwords too

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## NIS+ Documentation

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- Moved most of the details to appendixes
- Using the NIS+ scripts is the default
  - This avoids many painful setup errors
- Document error messages
- Now have a NIS+ FAQ

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## Improve NIS+ Servers NIS(YP) Compat Mode

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- Fix minor (but very annoying) bugs
  - ypcat netgroups
- NIS(YP) clients can change passwords
- MAYBE add ypxfr support to the NIS+ server
  - This means a NIS+ Master can be a YP Master

# NIS+ Binding (the Clerk)

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- Currently binding is done per process
- Plus NIS+ contacts all the servers every time
  - This takes too long
  - Generates an embarrassing amount of network traffic

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## NIS+ Binding (con't)

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- A Clerk holds open a connection to a server
  - Done once per machine (unless fail over)
- Also the Clerk can do preferred server binding
  - Only to local network
  - Or to subset of the known servers
- Administrators can control how it works

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## NIS+ Performance

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- Cut current network overhead
  - Nothing done currently, lots of dumb traffic
- Make the NIS+ client code efficient
  - This has never been looked at maybe very easy
- Multi-Thread the NIS+ server

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## NIS+ Security

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- Currently NIS+ is too involved in security
  - Probably the biggest headache we have
  - Hurts performance (may be unavoidable though)
  - This is the root cause of the “server not living in it’s own domain” problem



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## NIS+ Security (con't)

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- Get the NIS+ server out of the Security business
- Use an external Certificate Authority
  - Probably RSA based (publickey)
  - Servers will no longer have to verify each other

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## NIS+ Performance and the Clerk (Phase 2)

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- Increase performance by Caching NIS+ objects
  - Currently only Directory Objects are cached
  - The cost of a Authenticated lookup is high, so big win
  - Problem is being careful about who see's what
- If Security not a concern, do not use it
  - After all EVERYONE LOVES YP!

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## NIS+ Scalability

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- A large domain (more than 10 servers)
  - Like Sun Engineering
- Need Epidemic Replication for the Servers
- Need the Clerk for Clients
- Some customers want a World-Wide Domain!