SUMMARY
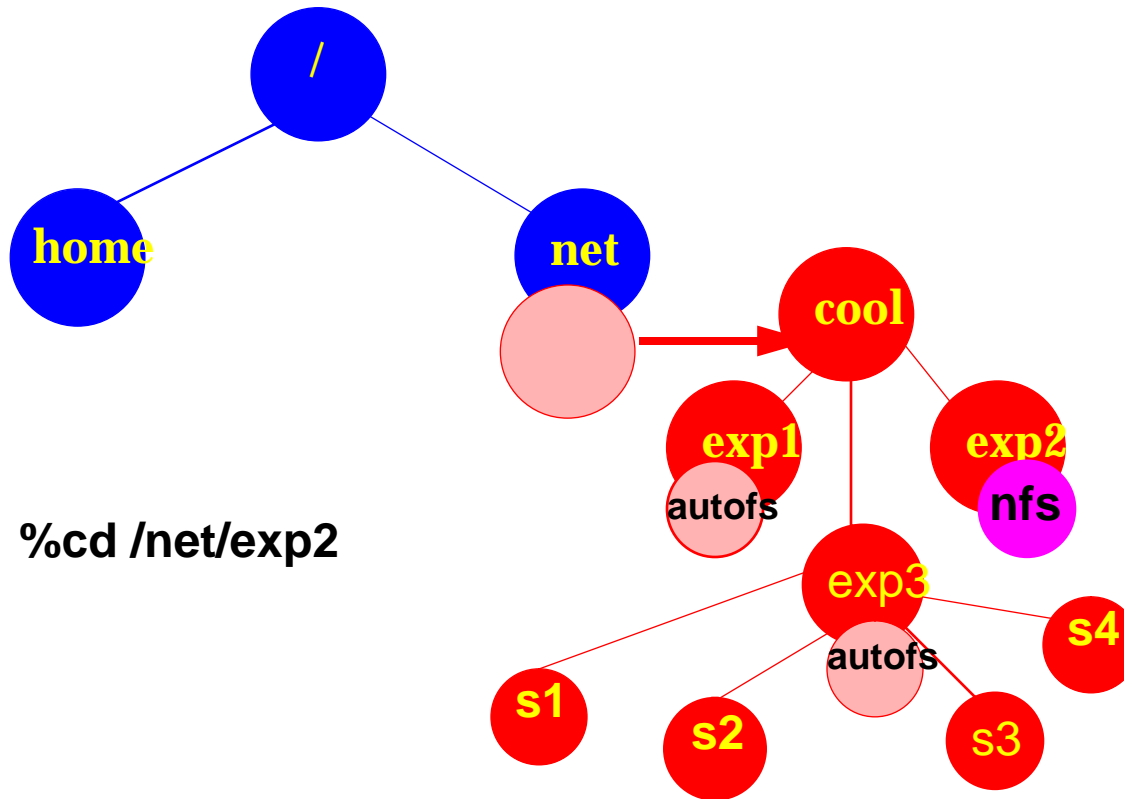
* Fully multithreaded automount daemon

* Improved on-demand hiearchical mounting

* Targetted for Solaris 2.6

* Browsability is another neat feature .....

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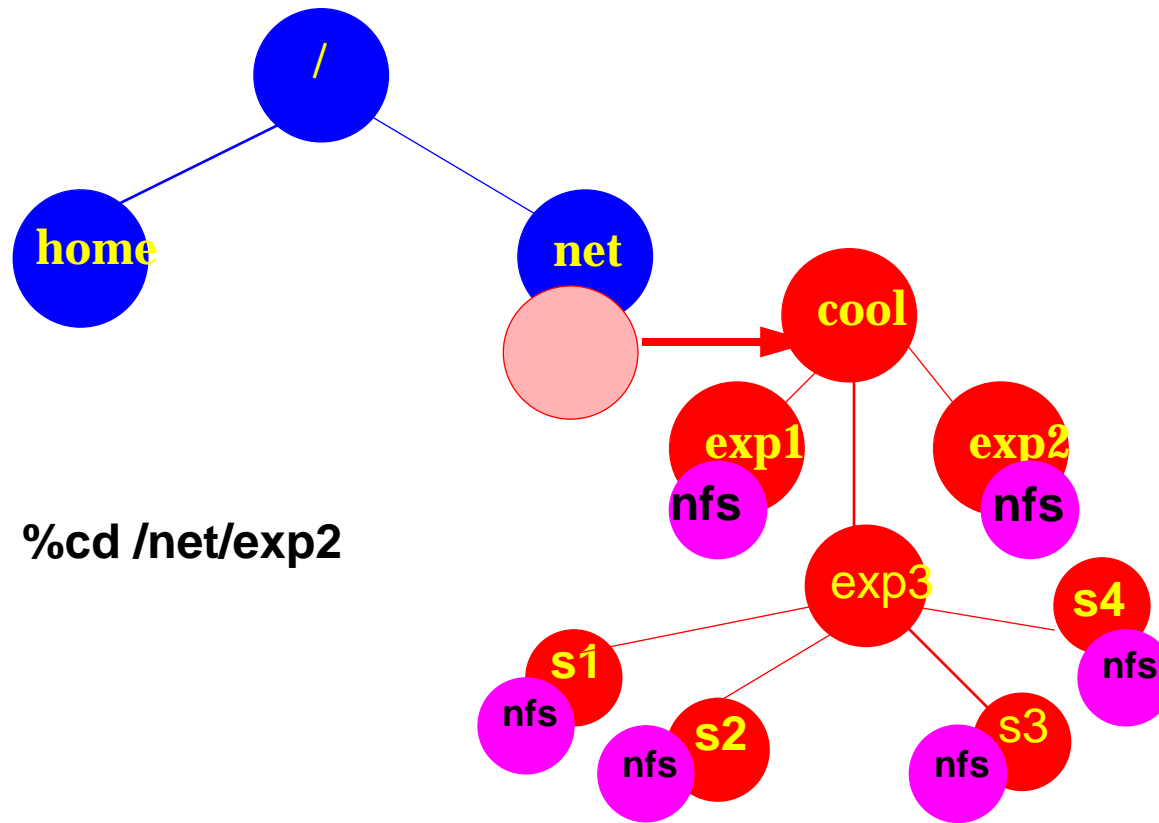*A Sun Microsystems Company*
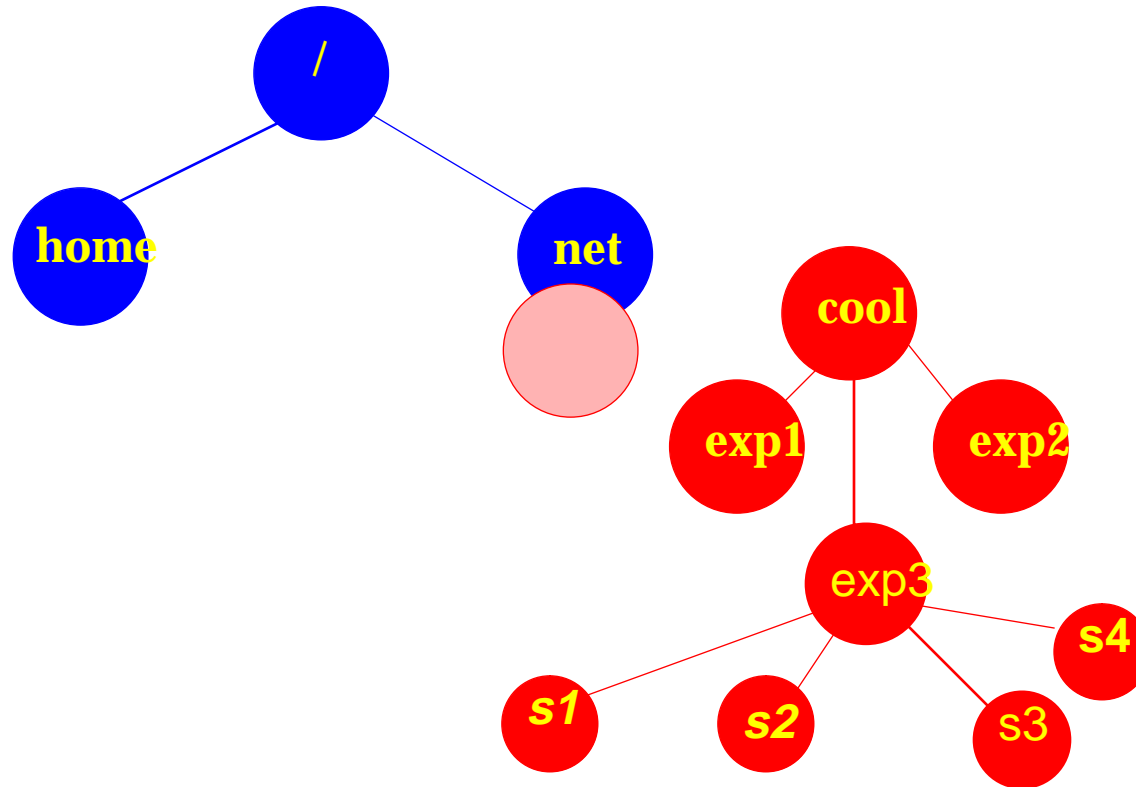
Hierarchical Automounts

%cd /net/exp2

Hierarchical Automounts
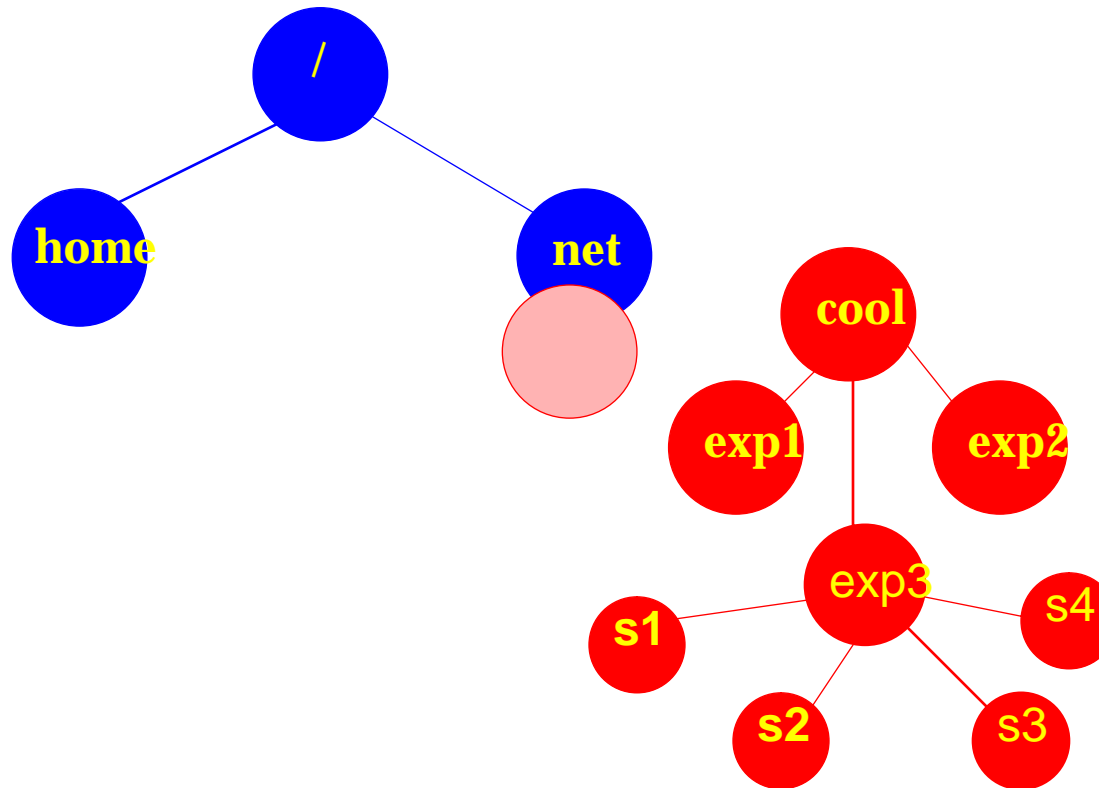

%cd /net/exp2

Hierarchical Automounts

Objective

- **Development of a fully multithreaded automount daemon**
- **Improved on-demand hieararchical mounting of filesystems**

MT Automountd Design

- **Isolate major bottlenecks to MT automountd (giant locks)**
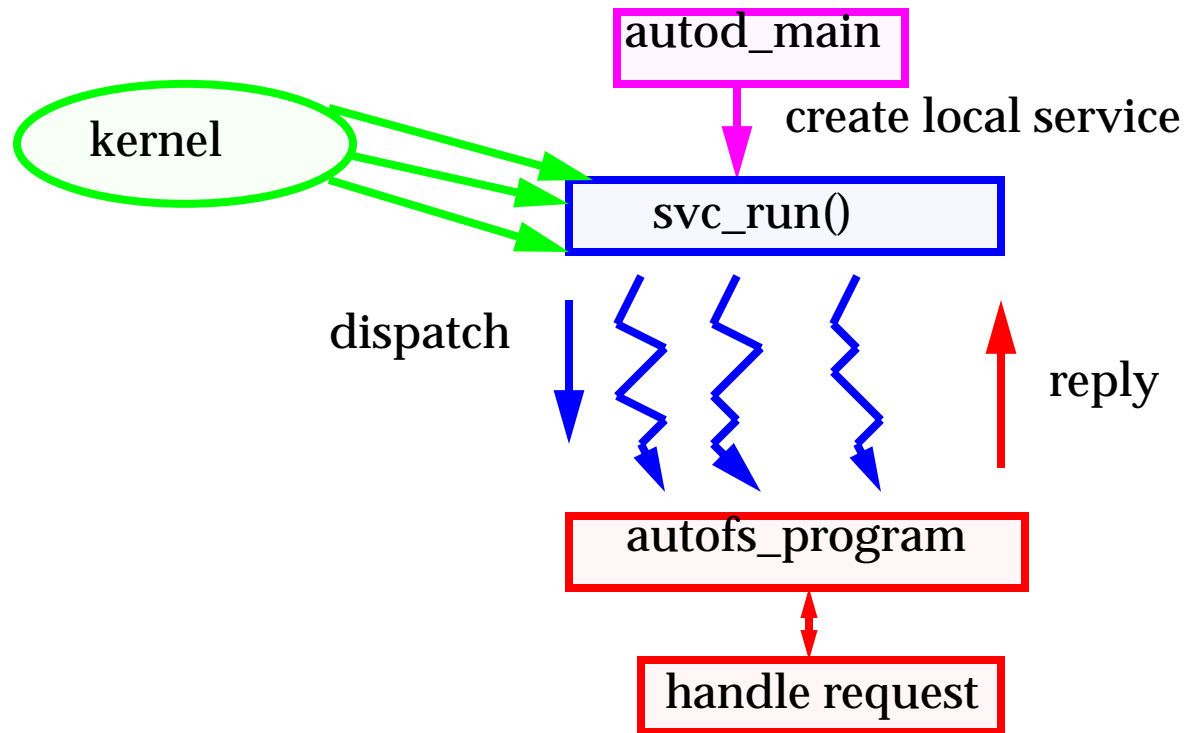
- **Design to deal with the bottleneck**
  - **eliminate the bottleneck?**
  - **reduce the granularity of locking?**
  - **other design optimizations**
  - **library interfaces are MT-safe**
  - **existing supposedly MT-safe code**

- **Rigorous code review**

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Hierarchical Automounts

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MT DAEMON MODEL

autod_main

create local service

kernel

svc_run()

dispatch

reply

autofs_program

handle request

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Automounter Issues

- **Hierarchical Mounting of Filesystems**

  - **Server exporting a hierarchy of filesystems can cause mount storms**
    Example: server x exports 26 filesystems a-z
    client % cd /net/x/a

  - **daemon forces all mounts to take place up front!**

  - **unnecessary mount storms**

  - **Performance**

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Automounter Issues

- **Multithreading Issue**

    - **Daemon is not completely threaded**

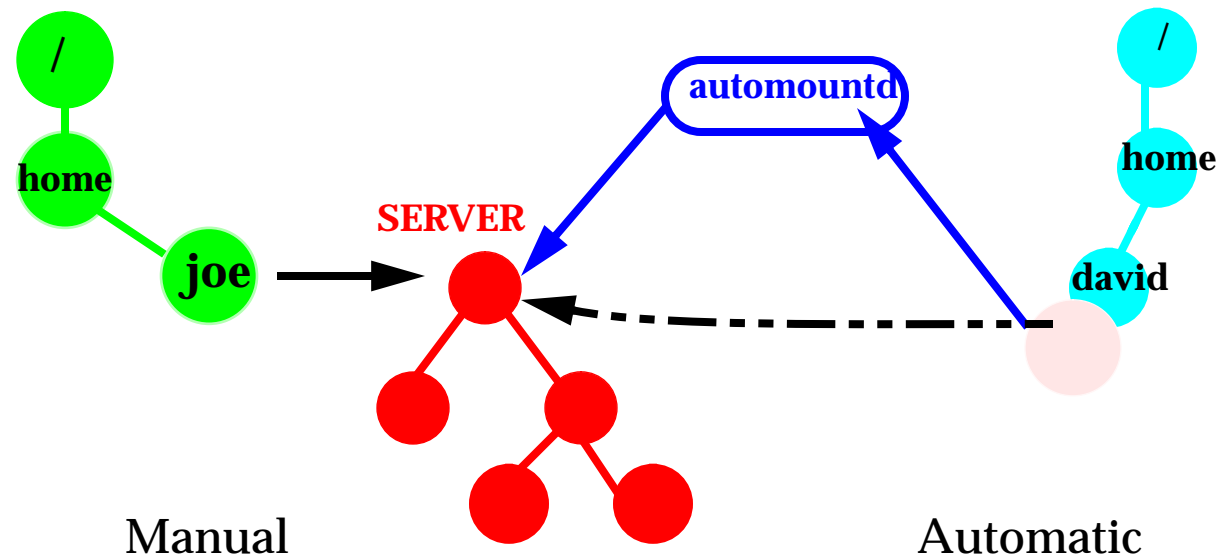   - **daemon hangs => system hangs**
      example: - mounting from dead server may =>daemon hang
                - recursive calls to daemon => daemon hang

    - **Performance**

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Solaris Autofs Automounter

- automatic, on-demand mounting and unmounting of filesystems
-

Manual

Automatic

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SCOPE

- **Overview, Motivation**
- **Design Issues**
- **Examples**
- **Summary**

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Objective

- **Development of a fully multithreaded automount daemon**

- **Improved on-demand hieararchical mounting of filesystem**

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MT Automounter

Ashok Advani

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