R/Evolution

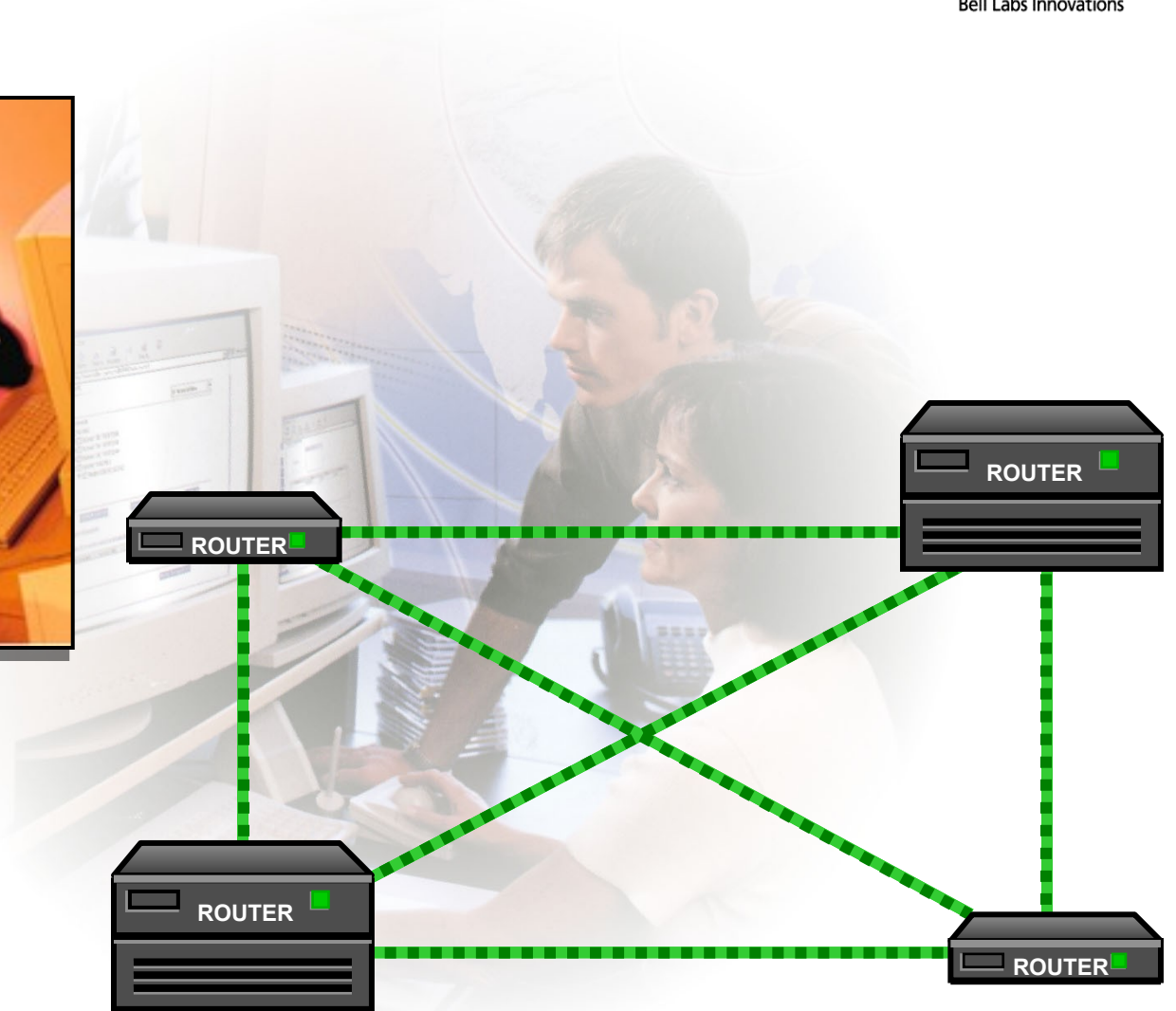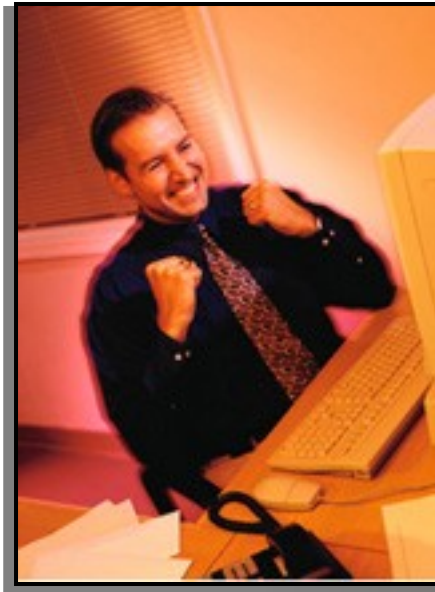# *IP Network Configurator*

Kenan Systems
Communications Software Group
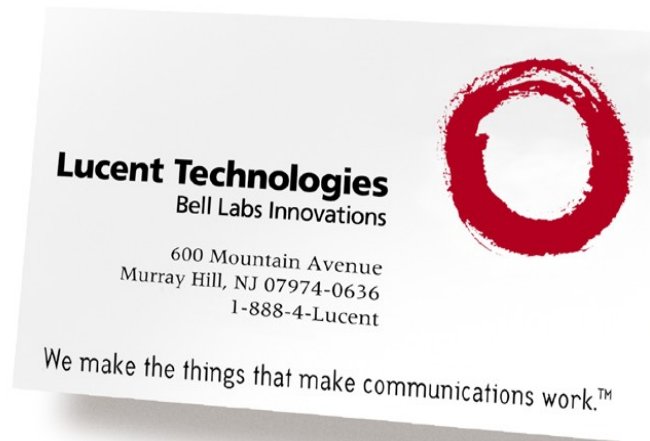
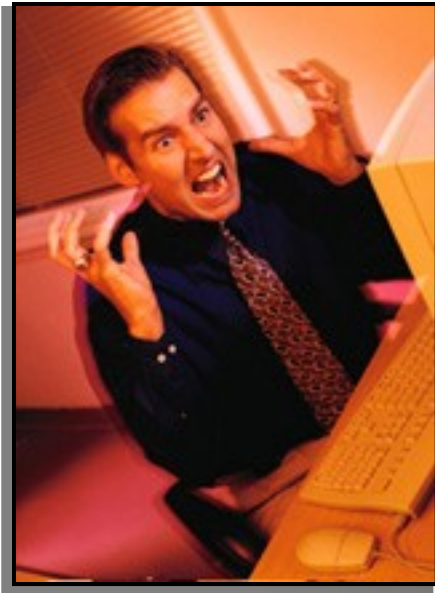# *Establishing Your Network*

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Bell Labs Innovations

ROUTER

ROUTER

ROUTER

ROUTER

Establishing Your Network
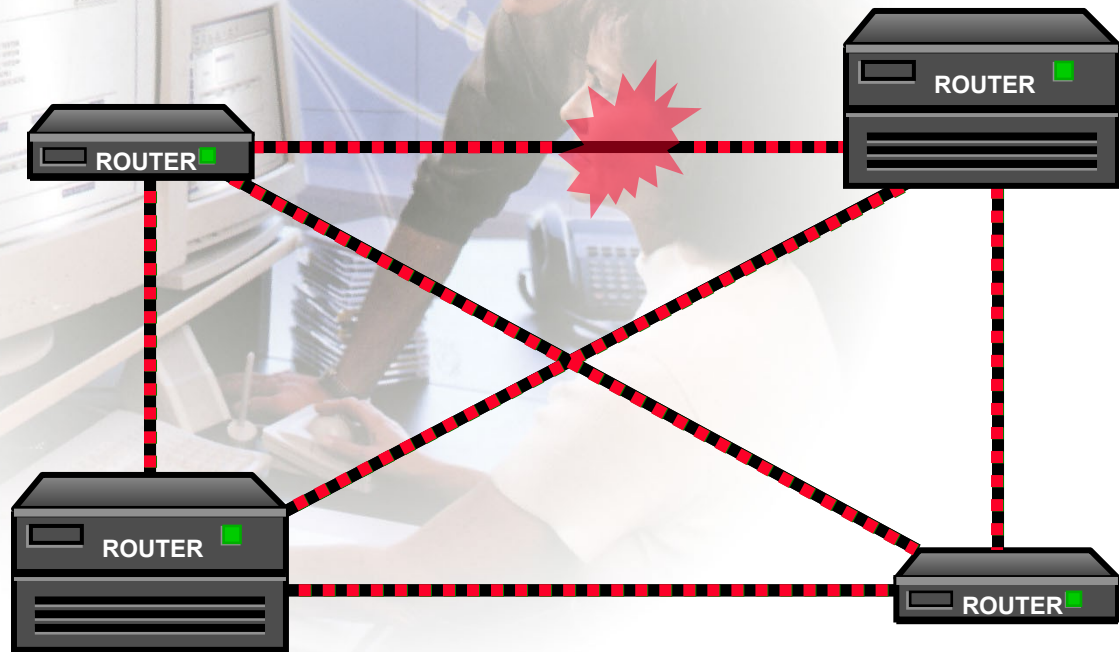
Challenges of IP Network Router Management

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- Preventing network outages

- Adding routers and upgrading networks

  - Changing network topologies by changing and updating interfaces

- Achieving accuracy and reliability when enabling routing protocols

  - Ensuring dependencies on other elements are recognized

  - Checking routing protocol parameter consistency

- Enabling version management of network configuration parameters and recovering from mistakes

- Managing IP network configuration operations centrally

Overview of the IP Network Configurator (IPNC)

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IP Network

ROUTER
ROUTER
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ROUTER
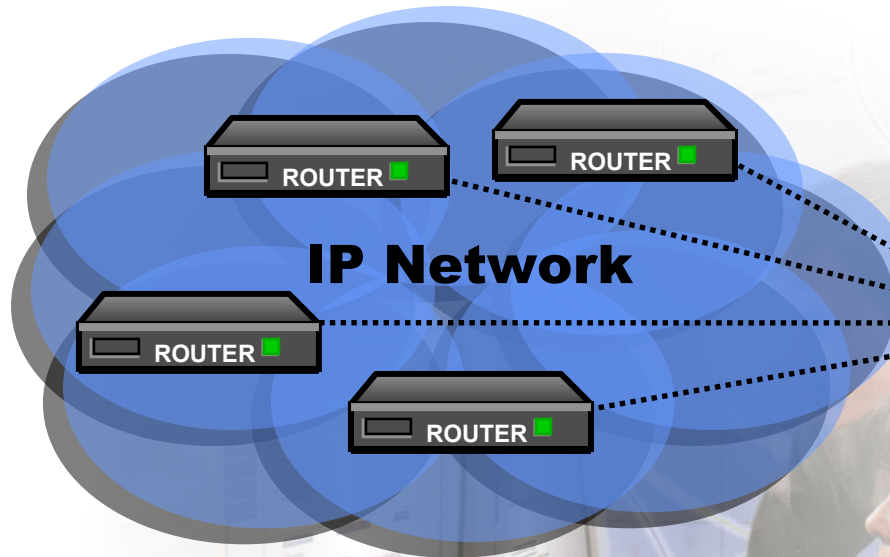
IP Network Configurator

- **Works at the network level to...**
  - automate protocol configuration of new routers by employing
    - existing routing topology and configuration
    - location of the new router
  - update protocol configuration of existing routers
  - aid IP network disaster recovery
  - enable centralized IP network administration
- **Runs on Sun UltraSPARC® servers requiring:**
  - 150 MB of RAM
  - 200 MB of disk capacity

Protocol Configuration

Manual Configuration

Protocol Configuration

Automated Configuration with IPNC

Tasks   **Processes**

Provision & Configure

- **Administer/configure routing protocols:**
  - **Account for interfaces on new/existing routers**
  - **Test for protocol consistency**
  - **Update router startup sequence**

Maintain

- **Update routing protocol parameters**
- **Recover from errors**

IP Network Configurator

IP Network Configuration with IPNC

- **Allows assignment of IP addresses to newly added router(s)**

- **Enables accurate, automated routing protocol configuration on all interfaces of:**
  - **Newly added router(s)**
  - **Existing neighboring routers**

- **Verifies routing protocol parameter consistency**

- **Retains routing protocol configurations for backup and recovery**

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IP Network Configurator Features

IP Network Configurator

IP Network — Routers — Network Snapshots — Router Snapshots — Sub-Network Snapshots
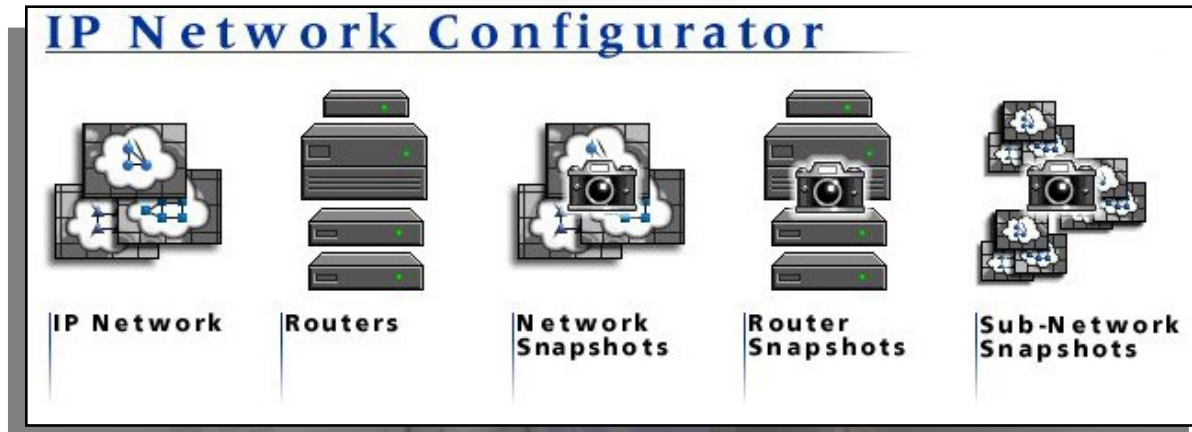
- **Supports routers running the Open Shortest Path First (OSPF) routing protocol**

- **Interfaces to HP Openview's® auto-discovery mechanism**

- **Presents multiple views of an IP network**

- **Provides web-based, Java®-based GUI**

- **Enables policy-based configuration control**

IPNC Benefits and Value Proposition

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- **Reduces data network outage problems due to improper configuration**

- **Streamlines routing protocol configuration process**

- **Works at the network level versus the router interface level**

- **Automates rollback to previous configurations**

- **Installs easily**

Thank You