

The Little NIC That Could

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Usually the creation and operation of a Network Information Center (NIC) is a costly endeavor requiring vast personnel and equipment resources. This can be a difficult task, especially in a large, politically charged environment undertaking cost cutting measures.

The Little NIC That Could

Using another model, however, a NIC can be created and run in an efficient manner using only a modest amount of new hardware and software resources, and without additional personnel resources.

The Need

Any organization with a fairly large enterprise network understands the need for a technical help desk, a Network Information Center that:

- Serves the Information Services staff and the general Help Desk
- Knows the current status of network and system resources at all times

The Need

- Coordinates with IS staff in the field
- Assigns network addresses
- Assigns network hostnames
- An array of other tasks

The Problem

Politics run rampant in a large organization and it is hard to create new projects requiring personnel resources, let alone create a new staffed position.

In the IS market today, it is a difficult and a time consuming process to fill a position.

The Problem

Budgets in today's "leaner and meaner" companies are tight and do not have room for new projects requiring new personnel.

Your supervisor might think you are a heretic for even *mentioning* such an endeavor!

The Solution

Employ a project staffing model to find the necessary personnel to staff the NIC.

Utilize a middle manager to run the NIC.

Fill the NIC with a modest amount of hardware and software resources: a PC, a UNIX workstation and some network management software.

The Purpose of the NIC

The NIC serves the Information Services department as a first point of contact for enterprise-wide network proper and network service related issues.

The NIC is available to the Help Desk for information.

The NIC receives, creates and runs triage on trouble tickets.

Department Position Summary

All positions are in the Network Department:

- The NIC Analyst
- The NIC Manager
- The On Call Analyst
- The On Call Manager

Duties of the NIC Analyst

- Monitor the health of the network
- Be available to answer the telephone during all times of the shift
- Log all calls or walk-bys, creating trouble tickets when necessary

Duties of the NIC Analyst

- From the NIC, assist other network analysts in project work and troubleshooting network or service problems
- Be able to answer all queries or know where to find the answer

The Help Desk

- The Help Desk is the first point of contact for all users
- Not part of the Network Department
- Works closely with the Network Department

Interfacing with the Help Desk

- The Help Desk reports possible problems to the NIC
- The NIC reports outages and service restorations to the Help Desk

Interfacing with On Call Analysts

- When trouble tickets are opened, they are assigned then reported to the On Call Analyst
- The On Call Analyst and other analysts “in the field” work to solve the problems and coordinate with the NIC Analyst

Interfacing with Management

- The On Call Manager is notified of outages and resolutions
- Daily trouble tickets and call logs are made available to the NIC Manager through a database and automated reports
- In the politically charged environment, this is a must

Policies and Procedures

For the NIC to run smoothly, a few policies and procedures must be created, documented and communicated with all of the analysts.

It is a good idea to have the policies and procedures made available in the NIC for reference.

Procedures

Examples of procedures:

- How to assign IP addresses and domain names
- Outage notification
- Troubleshooting coordination

Procedures

- Trouble ticket software use
- Trouble ticket escalation
- Monitoring health of network
- Shift changes

Policies

- Shift changes
- Tardiness, missing shifts, *et cetera*
- Enforcement of policies

Staffing the NIC

The NIC schedule is filled using a project staffing model.

Staffing the NIC

Project staffing model: A euphemism for raiding the staff already in the department!

NIC Schedules

- Two four-hour shifts per day
- Take input from staff when creating the monthly schedule and match the schedule with training, projects and personal conflicts
- Coordinate with schedule creator for the On Call Analyst and On Call Manager so there is no overlap

Weekly Status Meeting

Have *one* meeting per week on Monday mornings. Hold the meeting in the NIC and make it a stand-up meeting.

Attendance is mandatory for the NIC manager, the On Call Analyst and On Call Manager from the previous and current weeks.

The NIC Analyst will also be present.

Weekly Status Meeting

The agenda:

- Recap the problems of the previous week
- Recap of any scheduled system or network changes, and results
- Preview of any scheduled changes to occur in the upcoming week

NIC Shift Turnover

At the end of a NIC shift, several things must be done to prepare for the next:

- Brief the NIC Analyst of any problems during the previous shift
- Reassign all open trouble tickets to the next shift's NIC Analyst

NIC Shift Turnover

If an afternoon shift is ending:

- The telephone is forwarded to voice mail
- Any updates are performed by e-mail

NIC Resources

It is important to have hardware and software in the NIC that are common to the enterprise. For example:

- UNIX workstation
- PC with MS Windows 98 with modem
- Networked printer

NIC Resources

Also important to the operations of the NIC:

- A multi-line phone
- Voice mail with paging capability
- Manuals for network infrastructure, computer systems and common software
- Accessibility to common network services

NIC Resources

- Network maps with address information
- Knowledge base of reports from On Call Analysts
- WAN circuit information and service provider data

NIC Resources

Just as it is important to know the answer to a question, it is also important to know where to find the answer if not already known. To that end, keep a department personnel book available with name, telephone extension, pager number, strengths, *et cetera*.

Training

To have a NIC that operates well, it is important to train the staff.

I found that a good time to hold class in on Friday mornings for two hours. Folks are usually more relaxed then and I would rather have them relaxed and attentive on my teaching than worried about some project.

Training

Communicate to the staff that the training is optional and if they do attend and pay attention, it will be reflected in their personnel files.

One individual will miss out on training, the person who is in the NIC. Try to schedule the classes accordingly.

Training

Cover a variety of topics.

- Operating systems: UNIX, NetWare, NT
- Network protocols: IP, TCP, UDP, ICMP, Ethernet and whatever else is appropriate
- Network infrastructure: hubs, switches, routers, cabling, fiber, *et cetera*

Training

- How to edit and troubleshoot DNS name tables
- Sniffers and network troubleshooting

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