

## A GUIDE TO USING A NETWORKER'S JOURNAL

### What Is a Networker's Journal?

The *Merriam-Webster Online Dictionary* (<http://www.m-w.com/>) defines a journal as “an account of day-to-day events” and “a record of experiences, ideas, or reflections kept regularly for private use.” The idea of a networker's journal is to provide a permanent record of past experiences that can be easily referenced to assist in the resolution of problems.

One should be careful to differentiate a journal from a log. A log is usually a record of events that have occurred or procedures that have been followed, while a journal is a concise written record of a problem-solving process from its discovery to its solution. While a journal may contain some information that is contained in a log, this is not its main purpose. In addition, a journal is a personal document that is kept by the networker, but a log is associated with a position and usually remains in the possession of the company.

*A journal is a very valuable tool when troubleshooting problems on systems. Intermittent or difficult problems can have you going in circles. A journal will keep you on track with your troubleshooting and can be used for reference in the future. I use journals when I work on system problems and it has saved me hours of frustration. Without a journal, I would be repeating steps that I have already done. —Adhin Sukhu , AGS Computer Consulting*

### Electronic Journals

A journal can take on many forms. A number of organizations have recently implemented an electronic format for their technical staff in order to encourage the ready exchange of information and facilitate record keeping. Although this may work well in some environments, it cannot replace the individual hand-written journal for numerous reasons.

The concept of a journal is to provide a personal record of facts, methodologies, and problem resolutions in a manner that is highly customized and conforms to an individual's own problem-solving methodology. An electronic journal is usually designed to force individuals to conform to a predetermined style that may not be conducive to the way in which they approach a problem. This problem is further exaggerated by the fact that sharing information in an electronic format may actually discourage individuals from recording information that they may feel is not required or that they do not wish to share.

You can derive much more value from a journal by recording the information you need to solve a particular problem rather than recording what you think others may need. This can limit a journal's value as a problem-solving tool. One additional problem with an electronic journal is that it is tethered to a technology that may itself have problems which prevent it from being accessed.

## Paper Journals

For the reasons outlined above, most networkers still rely on a personal hand-written journal to assist them in their careers. A good quality hardcover book should be used for the creation of a journal to aid in the archival process. This book should have consecutively numbered pages to allow for the creation of an index and to ascertain if any pages have been removed or added in case of a technical forensic investigation.

A journal should also contain space for the owner's name and the period that it covers. It must be understood that a properly constructed journal contains a wealth of information that will prove invaluable in the future. As a networker's career develops, it is not uncommon for his or her journal to span multiple volumes.

*As the manager of technical services for SciTech, I strongly encourage all of our staff to maintain a personal journal. This has proven to save the company an enormous amount of time and money by greatly reducing the repetition of unproductive troubleshooting strategies. —Dougal Reid, SciTech*

## Getting the Most Out of Using Your Journal

Regardless of the physical format of the journal, each individual entry must be clear and concise and must be able to stand alone on the information it contains. It must describe the symptoms of the problem at hand and the steps taken to help find a solution to the problem. The journal should contain the thought process that went into discovering a solution for a particular problem.

The journal should also document the implementation of the proposed solution and the results of that implementation. It is important to document all actions taken to solve the problem, even if these do not actually result in a viable solution. This information could prove invaluable at a later date. The documentation must be complete to the extent that the solution can be easily reproduced, leaving nothing to memory or chance.

## Your Journal Entries

Even though a journal is usually a personal record and is customized to the thought process and problem-solving strategy of the networker, each individual entry must be organized in a manner that makes sense to others should it become necessary for them to rely on your past experiences to assist them in solving a problem. A journal entry can be organized in many different formats but an effort should be made to be consistent. Whatever your chosen organization strategy, the content should contain the following points:

- a. Identify the problem.
- b. List the symptoms.
- c. Formulate a plan (the steps you plan to take to resolve the problem).

- d. Test the plan (if possible).
- e. Implement the plan (check mark the steps done).
- f. Record any troubleshooting steps taken to resolve the problem and the results.

A sample journal entry is illustrated in Figure 1.

Figure 1: Sample Journal Entry

<p>Date: Monday November 22, 2004</p> <p>Problem: Netlab #2 - Router one on Basic Router Pod fails to respond to commands. This problem has occurred on all router pods.</p> <p>Problem Verification: Report is accurate. Logs indicate CCNA4 Bridge SBA last successfully completed lab on all router pods. All routers running IOS c1700-sy-mz.122-11.T10.bin.</p> <p>Additional Information: Direct console into router indicates that IOS loads and decompresses three times; then router stops responding. Problem is reproducible.</p> <p>Troubleshooting Process: 1. Entered rommon mode and confirmed register settings. Register values correct. 2. Suspected IOS image corrupt. Reloaded IOS via rommon. Problem still encountered. 3. Suspected BOOT variable setting. Unset and reset variable. Router boots normally.</p> <p>Detailed Solution: 1. Boot router into rommon mode. 2. rommon1&gt;unset BOOT 3. rommon2&gt;sync 4. rommon3&gt;reset</p> <p>Notes: The CCNA4 Bridge SBA turns R1 into a Frame-Relay switch. It appears that either something in the preconfigs or the actual SBA corrupts the BOOT variable.</p> <p>Follow-up: Contact Cisco Academy and/or NDG to report problem and possible resolution.</p>
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**Exercise 1:** Create a journal entry for a problem recently encountered and solved. Once created, exchange this entry with a colleague and ask if the colleague understands the problem, the steps taken to solve the problem, and the solution to the problem.

## Organizing Your Journal

If it is to be of any use, a journal must be organized in a manner that provides for the rapid location of information. It should be set up so that others may locate information should the need arise. The organization of a journal is as important as the information it contains. Having an extremely detailed and informative journal is of no use if you cannot readily locate the required information.

In its simplest form, a journal may be merely a chronological record of important events and information. While this may be the easiest to maintain, it is also the hardest to use to locate information. One must remember the approximate date the information is recorded or spend a great deal of time searching for it. The value of this type of journal can be greatly enhanced by creating a proper index or even multiple indexes (this can also be referred to as a table of contents) to the information. This index should be placed in a convenient location (usually the front of the journal itself).

The creation of a valid index or table of contents can be based upon any number of keys. Perhaps the most common and beneficial is one based on the problem encountered. Other keys may include the technology (e.g., Linux, Microsoft Office, router) or the location of the problem (e.g., Toronto LAN, Denver ISDN Backup). Even more beneficial is a combination of keys.

The choice of a key is based upon the thought processes of the owner of the journal. For example, a border router located in the Vancouver office that has a flapping serial interface can be filed under Vancouver, router, or flapping interface. Seeing that the problem is tied to the technology and not the physical location, the best indexing uses the router as the primary key and then flapping interface as a secondary key. Figure 2 provides a sample index entry for the journal entry in Figure 1 above.

Figure 2: Sample Index Entry

Netlab		
Basic Router Pod	R1 fails to respond to remote console	page 72

In this entry, the primary key is Netlab (the device experiencing the problem), followed by a secondary key of the specific configuration, and finally a brief description of the problem encountered. This provides enough information for the networker to turn to page 72 and read the entry to ascertain if it would be of help in solving a similar problem.

**Exercise 2:** Provide an index entry for the problem you journalized in Exercise 1. Ask a colleague for comments on your selected key.

- Exercise 3:** Provide an appropriate index entry for the following problems:
- a. DHCP server in Toronto hands out the wrong gateway address.
  - b. EIGRP updates not moving between London and Paris both in AS 112.
  - c. RIPv2 updates being ignored by Chicago router.
  - d. ACL not filtering out ICMP echo requests.
  - e. VTP server not updating a newly installed switch.

### When to Record Items in Your Journal

A journal entry should be created as soon as possible after the incident while the information is still fresh. In fact, it is better to compose the record while troubleshooting and then finalize it afterwards by adding any missing information. Waiting until the end of the shift, day, or week to update a journal often results in incomplete entries that do not contain sufficient detail to be of help in the future. It should also not be assumed that any important information will be remembered in the future, so a journal entry must contain all relevant information no matter how small.

*I have a very good memory. Unfortunately, it is very short. Therefore, I have to write things down.* —Adhin Sukhu, AGS Computer Consulting

### Other Uses for Your Journal

In addition to the problem-solving methodology, many networkers devote a section (usually in the back of the journal) to often needed but easily forgotten facts. This could be something as simple as a listing of common TCP/UDP ports or command syntax. The provision of this information in a readily accessible place can save much time and frustration.

*Keeping and reviewing my journals has increased my familiarity with new products and saved countless hours of researching configuration steps that I have not yet committed to memory.* —Joshua Burstyn, Burstyn Software

### Using Your Journal in the Classroom

In the Cisco Networking Academy Program it is imperative that students be encouraged to keep a journal from day one. Not only does this aid them in their studies and provide a valuable tool for future problem solving, but it also encourages them to keep a journal later on in their professional careers.

Within the Cisco Networking Academy Program the opportunity exists to develop the written communication skills necessary to enhance the effectiveness of the journal. Entries in a journal must be clearly written to convey factual data and procedures and do not need to be long dissertations. This is a skill that requires development and one that will be extremely beneficial to any networker in his or her career.

The enhancement of writing skills can often be tied together with the more academic areas of the student's curriculum to help them understand the practical benefits of some of their more academic subjects.

The content of a journal maintained by a Cisco Networking Academy student will be different than that kept by a professional networker, but will still prove to be a valuable asset. The Academy student will have more configurations and facts than actual problem-solving methodology. This will develop into a clear, concise reference that can be used to augment other resources available to the student.

Since this will be a personal reflection, a well-constructed journal will continue to be of value throughout the networker's career. In addition, by carefully recording this information the student will reinforce the concepts and procedures required to perform some complex tasks and develop the skills and discipline necessary to effectively use a journal throughout his or her professional career.

### **Your Best Practices**

We invite you to share with Cisco Press your best practices in how you use your journal—in the classroom or on the job. Please contact us through e-mail at [feedback@ciscopress.com](mailto:feedback@ciscopress.com).

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<b>Feature</b>	<b>Benefit</b>
Hardcover	For durability and archiving. This notebook is not prone to rip, wrinkle, and fall apart.
Paginated	Easy to create your table of contents and find information.
190 pages	Ample room for notes over a period of time.
Date area to be filled in	You keep track of the date of your entries.
Lightly lined sheets	Allows for note taking and configuration sketches.
Table of Contents page	Fill in your own index for easy section access.
Self-adhesive labels	Print the date ranges of this journal content and stick the labels on the cover and spine of this book for easy identification once shelved.
Self-adhesive tabs	Numerous tabs to divide your journal into logical sections. The tabs can be placed where you want them off the edge of any of the pages for easy access to that section. Cross-reference the tabs to your index.
Slim, wide trim size	Easy to carry along, but plenty of writing space for notes.
OSI Model/TCP/IP Encapsulation diagram	A simple everyday reference for networkers.
Business Card die-cut inside front cover	Insert your own card for identification if misplaced or shared with others.