

## Cisco Router Basic Troubleshooting Checklist

Excerpted from the book [The Accidental Administrator: Cisco Router Step-by-Step Configuration Guide](#) (Crawley, Don R., Seattle, WA, soundtraining.net, ISBN 978-0983660729)

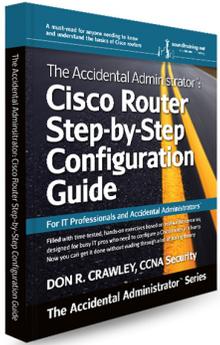
When a router isn't functioning, here are some steps to perform to eliminate basic faults as the source of trouble:

1. **Physical Layer Stuff:** Check power issues. Look for power lights, check plugs, and circuit breakers.
2. **Check the Interfaces:** Use the command *show ip interface brief* or *show ipv6 interface brief* to ensure that desired interfaces are up and configured properly.
3. **Ping the Neighbors:** Use the ping and trace commands to check for connectivity.
4. **Check the Routing Table:** Use the *show ip route* or *show ipv6 route* command to find out what the router knows. Is there either an explicit route to the remote network or a gateway of last resort?
5. **Is there a Firewall on the Computer?** If the problem involves a computer, check to ensure that its firewall is not blocking packets. I've encountered computers at client locations that had two firewalls in operation without the client's knowledge. (They had the Windows firewall enabled, plus they had installed a VPN client that included a firewall which was also enabled. The giveaway was that the computer in question could see other network devices, but none of them could see the computer in question. We disabled the Windows firewall for troubleshooting and still no love. That was when I started looking for another firewall.)
6. **Any Access Lists?** If the above steps don't resolve the issue, check for access-control lists that block traffic. As you will learn in the section on access-control lists, there is an implicit "deny any" at the end of every access-control list, so even if you don't see a statement explicitly denying traffic, it might be blocked by an implicit "deny any."
7. **Is the VPN Up?** If a VPN is part of the connection, check to ensure that it is up. Use the *show crypto* family of commands to check VPN connections. With VPN connections, each end of the connection must mirror the other. For example, even something as seemingly inconsequential as a different timeout value or a different key lifetime can prevent a connection.
8. **Do the Protocols Match?** If you are trying to gain remote access to a server, ensure that it supports the protocol you're attempting to use. For example, if the router hasn't been configured to support SSH and you use the default settings in PuTTY which call for SSH, you won't be able to connect. Also, some admins change the default port numbers, so you may expect to use port 22 with SSH, but the admin may have configured it to use a non-standard port.
9. **Check for Human Error:** User errors can also be the source of errors. Check to ensure that correct usernames and passwords are being used, that you and the admin on the other end of the connection are using the same network addresses and matching subnet masks.
10. **Verify Settings:** Do not make assumptions. Verify everything!

Often, by using the above steps, you can solve the problem. If that doesn't do it, then proceed to more advanced *show* and *debug* commands to isolate the problem.

# Books for I.T. Professionals

from author Don R. Crawley



**BRAND-NEW!**

## The Accidental Administrator™: Cisco Router Step-by-Step Configuration Guide

Is packed with interactive, hands-on exercises, loads of live screen captures, and easy-to-follow, step-by-step examples to help you master your Cisco router. Applicable to all IOS-based routers, it's the most straightforward approach to configuring and managing a Cisco router. The essentials are covered in chapters on understanding TCP/IP, IP version 6, routing access-lists, NAT (network address translation) and more. There's no time wasted on boring theory, just loads of practical, down-to-earth advice, tips, and techniques to help you master your Cisco router. Companion online videos make it even easier to understand and apply the knowledge.

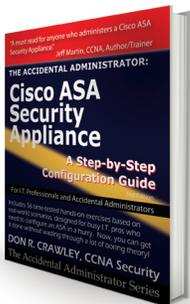
ISBN: 978-0-9836607-2-9 **\$50.00**  
(Also available in Kindle Edition)



## The Compassionate Geek: Mastering Customer Service for I.T. Professionals SECOND EDITION

Learn how to speak to the different generations at work, manage your own emotions and influence the emotions of others, say "no" without alienating the end-user, what to do when the customer (user) is wrong, how to cope with the stress of the job, and more! Written for today's overworked I.T. staff, all of the information is presented in a straightforward style that you can understand and use right away.

ISBN: 978-0-98366-070-5 **\$20.00**  
(Also available in Kindle edition)

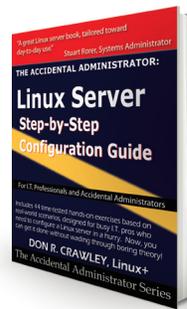


## The Accidental Administrator™: Cisco ASA Step-by-Step Configuration Guide

Filled with practical tips and secrets learned from years of teaching and consulting on the ASA, it's the most straight-forward approach to configuring the Cisco ASA Security Appliance. The essentials are covered in chapters on installing, backups and restores, remote administration, VPNs, DMZs, usernames, transparent mode, static NAT, port address translation, access lists, DHCP, password

recovery, logon banners, AAA (authentication, authorization, and accounting), filtering content, and more.

ISBN: 978-1-44959-662-0 **\$40.00**



## The Accidental Administrator™: Linux Server Step-by-Step Configuration Guide

Packed with 44 easy-to-follow hands-on exercises plus numerous command examples and screen captures, it's the most straightforward approach to learning how to configure a CentOS/Red Hat/Fedora Linux server. Chapters cover the essentials on installing, administering, user management, file systems and directory management, networking, package management, automated task scheduling,

network services, Samba, NFS, disk quotas, mail servers, Web and FTP servers, desktop sharing, printing, security, routing, performance monitoring, management tools, and more.

ISBN: 978-1-45368-992-9 **\$40.00**  
(Also available in Kindle Edition)



## Tweeting Linux: 140 Linux Configuration Commands Explained in 140 Characters or Less

Is a straight-forward approach to learning Linux commands. Each command is explained in 140 characters or less, then examples of usage are shown in screen captures, and details are given when necessary to explain command usage. You'll see the most commonly-used commands plus a few gems you might not know about!

ISBN: 978-0-98366-071-2 **\$30.00**  
(Also available in Kindle Edition)

