

# ZoneRanger Installation and Configuration Guide



Tavve Software Company

[www.tavve.com](http://www.tavve.com)

## Copyright

Copyright © 1999–2015 Tavve Software Company

All rights reserved

Printed in USA.

Document Version 5.6 2015

## Restricted rights legend

Software and the accompanying documentation are provided to the U.S. Government in a transaction subject to the Federal Acquisition Regulations with Restricted Rights.

Use, reproduction, or disclosure is subject to restrictions set forth in the commercial license terms and conditions between Tavve Software Company and the Customer.

## Trademarks

ZoneRanger is a trademark of Tavve Software Company.

## Copyright Reference

Copyright © 1999-2003 Intalio Inc. All Rights Reserved.

Copyright ©1999-2013 The Apache Software Foundation. All Rights reserved.

Copyright © 2003-2012 Sun Microsystems, Inc. All Rights Reserved.

V1.2.x enhancements, (c) 2005, Multiplan Consultants Ltd.

Copyright © 2000 Just Objects B.V. <just@justobjects.nl>

Copyright © 2000-2004, XDoclet Team. All rights reserved.

Copyright © 1996-2008, The PostgreSQL Global Development Group

Copyright © 1994, The Regents of the University of California

Copyright (C) 1991, 1999 Free Software Foundation, Inc.

Copyright (c) 2000 - 2012 The Legion Of The Bouncy Castle

Copyright (c) 2005-2008 Sam Stephenson

Copyright (c) 2002-2008 Atsuhiko Yamanaka, Jcraft, Inc. All rights reserved.

Copyright (c) 2002-2006, A. Abram White. All rights reserved.

Copyright (c) 2002,2003, Stefan Haustein, Oberhausen, Rhld., Germany.

Copyright (c) 2000, 2009 OSGi Alliance.

Third-party software from the following may be included with your product and is subject to the software license agreement:

Copyright 1998 Carnegie Mellon University. All rights reserved. The name of the University may not be used to endorse or promote products derived from this software without specific prior written permission.

# Preface

## About ZoneRanger

The ZoneRanger appliance provides enterprises with a mechanism for extending the reach of management applications into firewall-protected networks. ZoneRanger, working together with the Ranger Gateway software component, serves as a proxy firewall for management traffic, simultaneously enabling the flow of management traffic between applications and devices, and inspecting/filtering the traffic in order to mitigate security risks.

ZoneRanger has been designed for demilitarized zones (DMZs), which are the most common form of firewall-protected network, but can also be used in any situation where firewalls prevent the normal flow of management protocol traffic.

## About this Guide

This guide provides detailed information intended to help users successfully deploy and initially configure ZoneRangers within their networks.

## Audience

This guide is intended for persons with a good understanding of networks and hardware deployment.

## Technical Support

Technical assistance is available when you purchase a support contract.

Support covers the ZoneRanger device, the Ranger Gateway software, and the technical documentation. Please have the ZoneRanger serial number located on the back of the device ready before calling Tavve technical support.

You can contact Tavve technical support at:

- E-mail: [support@tavve.com](mailto:support@tavve.com)
- Telephone: +1 919-654-1235
- Fax: +1 919-380-7147

# Chapter 1: ZoneRanger Pre-Configuration

This chapter details the hardware and information needs required for the successful installation and configuration of a ZoneRanger.

## Customer Hardware

ZoneRanger hardware deployment requires the following:

- Keyboard and monitor or laptop with terminal emulation
- 10/100/1000 Mb CAT5 Ethernet cable

## Customer Information

Customer-specific information for each ZoneRanger deployment includes:

- Hostname
- IP address
- Netmask
- Passcode
- IP address of the default route (optional)
- IP address of the primary DNS server (optional)
- VLAN ID (optional)

## ZoneRanger Hardware Connectivity

To properly connect the ZoneRanger:

1. Connect two power cords, one for each removable power supply.
2. Connect the CAT5 Ethernet cable to NIC 1.
3. If applicable, connect a keyboard and mouse. The ZoneRanger only accepts PS2 keyboards. Use the provided USB to PS2 adapter to connect a USB keyboard.
4. If applicable, connect a null-modem cable to the serial port. ZoneRanger expects terminal emulation software to use 9600 Baud, 8 Data Bits, No Parity, 1 Stop Bit.

By default, ZoneRanger NIC 1 Ethernet port is configured with IP address 192.168.1.1. If the ZoneRanger is connected to this port, a telnet application may be used to connect to this interface in order to configure ZoneRanger.

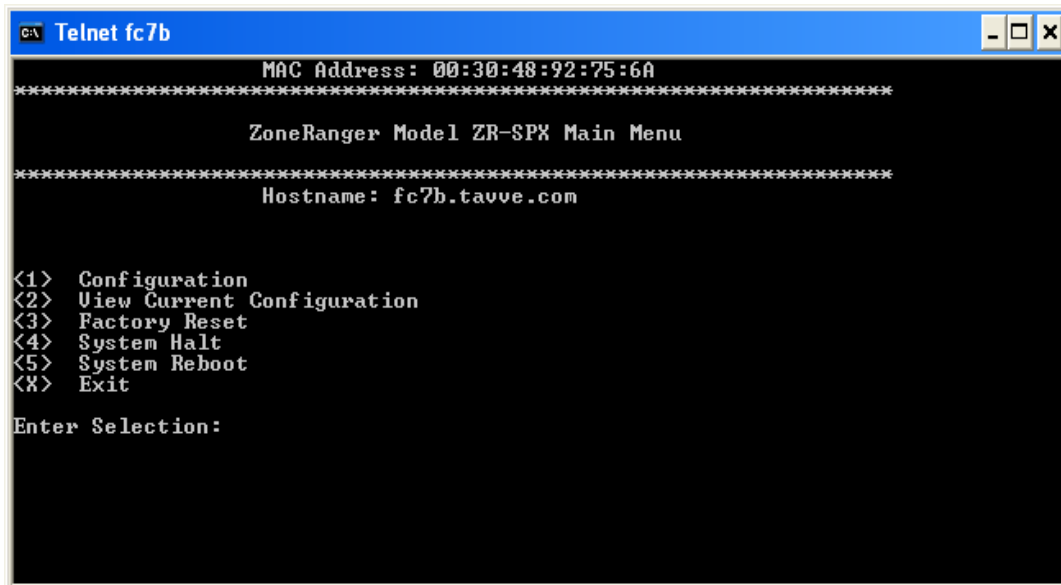
## Chapter 2: ZoneRanger Software Configuration

Once the ZoneRanger is started, the initial configuration interface may be accessed via the connected keyboard and monitor, via the serially connected terminal emulation software, or via a telnet application to the 192.168.1.1 IP address. Once the initial configuration is complete, additional configuration may be accomplished via the ZoneRanger's Web or Text Interfaces.

During the initial configuration, ZoneRanger prompts for information such as date, time, IP address, hostname, subnet mask, etc.

Follow the steps below to complete the initial configuration of the ZoneRanger:

1. Login to the ZoneRanger using *id setup* and *password setup*. This id and password may be changed on the ZoneRanger web interface on the **Configuration > Access Control** page **Passwords** tab.
2. The following Main Menu will appear:

A screenshot of a Telnet window titled "Telnet fc7b". The window shows the ZoneRanger Main Menu with the following text: "MAC Address: 00:30:48:92:75:6A", "ZoneRanger Model ZR-SPX Main Menu", "Hostname: fc7b.tavve.com", and a list of options: "<1> Configuration", "<2> View Current Configuration", "<3> Factory Reset", "<4> System Halt", "<5> System Reboot", and "<X> Exit". The prompt "Enter Selection:" is visible at the bottom of the menu.

```
MAC Address: 00:30:48:92:75:6A
*****
ZoneRanger Model ZR-SPX Main Menu
*****
Hostname: fc7b.tavve.com

<1> Configuration
<2> View Current Configuration
<3> Factory Reset
<4> System Halt
<5> System Reboot
<X> Exit

Enter Selection:
```

The Main Menu consists of the following options:

- <1> Configuration – Configure the ZoneRanger
- <2> View Current Configuration – View the current configuration
- <3> Factory Reset – Restore the ZoneRanger to the original settings as when shipped from the factory.
- <4> System Halt – Shut down the ZoneRanger.
- <5> System Reboot – Power down and restart ZoneRanger.
- <X> Exit – Terminate the current session and return to the login prompt.

3. Type **1** for configuration and press **Enter**.
4. Enter the date and time as prompted. Type **y** and press **Enter** to save date and time.

```

C:\ Telnet fc7b
MAC Address: 00:30:48:92:75:6A
*****
ZoneRanger Model ZR-SPX Main Menu
*****
Hostname: fc7b.tavve.com

Enter Month <1=January...12=December>
5
Enter Day <1-31>
27
Enter Year
2009
Enter Hour <0-23>
13
Enter Minute <0-59>
58

Wed May 27 13:58:00 EDT 2009

Is this correct? <y/n>

```

5. Type **y** and press **Enter** if the ZoneRanger will be configured for 802.1q VLAN trunking. If not, go to step 7.

VLAN trunking enables ZoneRanger to communicate across multiple VLANs that cannot communicate directly with each other.

During the initial configuration of ZoneRanger, the primary VLAN may be specified on which ZoneRanger is connected. The ZoneRanger web interface may be used to add additional VLAN interfaces on the **Configuration > System** page **IP** tab.

6. Type the ID of the primary VLAN to which the ZoneRanger will be connected and press **Enter**. If ZoneRanger will be connected to the native VLAN, enter **0**.
7. Type the fully qualified hostname in the format of *host.domain.com*, and press **Enter**.
8. Type the IP address and press **Enter**.
9. Type the netmask and press **Enter**.
10. Type the IP address of the default route, if available, and press **Enter**. If the default route is not necessary, leave blank and press **Enter**.
11. Type the IP address of the primary DNS server, if available, and press **Enter**. If a primary DNS server is not available, leave blank and press **Enter**.
12. Type the ZoneRanger group name and press **Enter**.

The group name identifies two or more ZoneRangers that monitor a common set of devices. Group names are most often used when configuring ZoneRangers to be redundant.

When each ZoneRanger in a group manages the same set of devices, each ZoneRanger can receive the same information from each managed device. Each ZoneRanger in the group in could forward the same information to a Ranger Gateway. Because the ZoneRangers are the same group, the Ranger Gateway filters out the duplicate information.

A group name can be any arbitrary alphanumeric string of characters. By default, the group name is the ZoneRanger hostname.

13. Type the ZoneRanger passcode and press **Enter**.

The passcode ensures that a ZoneRanger can communicate only with intended Ranger Gateways. To communicate, a ZoneRanger and a Ranger Gateway must be configured with identical passcodes.

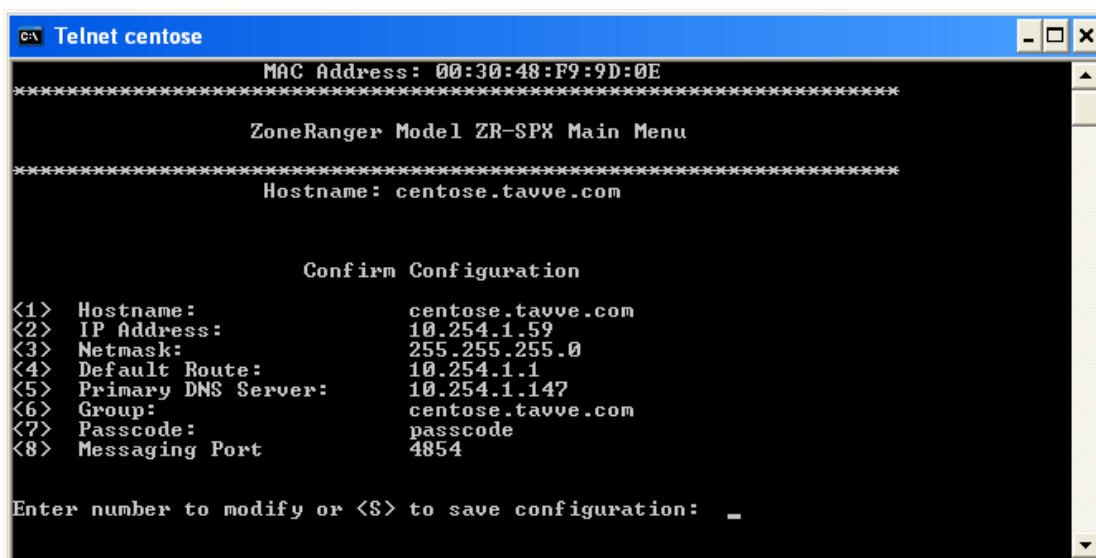
A passcode can be any arbitrary alphanumeric string of characters.

14. Type the ZoneRanger messaging port and press **Enter**.

The messaging port is the TCP port used for communications between the ZoneRanger and joined Ranger Gateways. If this port is changed, the messaging ports on all joined Ranger Gateways must be updated as well.

The default messaging port is 4854.

A screen displays the previously submitted configuration information. Any previous value can be modified by entering the number next to the value.



```

c:\ Telnet centose
MAC Address: 00:30:48:F9:9D:0E
*****
ZoneRanger Model ZR-SPX Main Menu
*****
Hostname: centose.tavve.com

Confirm Configuration
<1> Hostname: centose.tavve.com
<2> IP Address: 10.254.1.59
<3> Netmask: 255.255.255.0
<4> Default Route: 10.254.1.1
<5> Primary DNS Server: 10.254.1.147
<6> Group: centose.tavve.com
<7> Passcode: passcode
<8> Messaging Port 4854

Enter number to modify or <$> to save configuration: _

```

15. Once the configuration information is correct, type **s** and press **Enter** to save the configuration.
16. If this ZoneRanger will be redundant to another ZoneRanger, type **y** and press **Enter**. The configuration is finished. If this ZoneRanger will not be redundant to another ZoneRanger, type **n** and press **Enter**.

Redundant ZoneRangers provide a means to reduce the probability of losing manageability if one ZoneRanger becomes unavailable. Redundant ZoneRangers are configured virtually identically and manage the same nodes.

To configure redundancy, one ZoneRanger is configured and subsequent ZoneRangers are configured to be redundant with it. When a ZoneRanger is configured to be redundant with another ZoneRanger, the ZoneRanger's configuration is copied to the redundant ZoneRanger. Any future configuration changes are mirrored between redundant ZoneRangers. To configure redundancy, go to the ZoneRanger web interface **Configuration > Peers** page **Redundancy** tab.

17. If the ZoneRanger should start network discovery immediately, type **y** and press **Enter**. If not, type **n** and press **Enter**. ZoneRanger will populate its database by discovering devices on its subnet. ZoneRanger discovery can be configured on the **Configuration > Discovery** page on the ZoneRanger web interface and started on the **Administration > Discovery** page.

ZoneRanger initial configuration is complete. Press **Enter** to start the networking subsystem. Once the networking subsystem is operational, the ZoneRanger login prompt will be displayed.

The ZoneRanger web interface can be used for additional configuration. Refer to the *ZoneRanger User's Guide* for detailed information. The *ZoneRanger User's Guide* is also available on the **View > User's Guide** menu on the ZoneRanger web interface.