

# AlliedWare™ OS

## Overview of | VPN Solutions in How To Notes

### Introduction

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Allied Telesis offers How To Notes with a wide range of VPN solutions, from quick and simple solutions for connecting home and remote offices, to advanced multi-feature setups. The Notes also describe how to create a VPN between an Allied Telesis router and equipment from a number of other vendors.

This overview lists all the VPN How To Notes, with a brief summary of each Note. Its purpose is to make you aware of all the available solutions and to help you choose the appropriate solution for your network.

### What information will you find in this overview?

The solutions are divided into the following groups:

- [Basic solutions on page 3](#)
- [Interoperation with other vendors on page 4](#)
- [Advanced solutions on page 6](#)
- [Troubleshooting on page 6](#)

Some How To Notes appear in multiple sections because they include multiple solutions (for example, both basic and advanced solutions).

## Do you need a NAT traversal solution?

NAT traversal (NAT-T) lets VPNs operate even if there is a separate NAT gateway device in the path of the VPN. The NAT gateway could be an ADSL or cable modem or another router.

Many of the solutions come in a version that includes NAT-T and a version that does not. You need the NAT-T version if any of the following apply:

- the peer at the other end of the connection is connected through a separate NAT gateway.
- your Allied Telesis router is connected to the Internet through a separate NAT gateway. You don't need NAT-T if your router is operating as a NAT gateway as well as an IPsec router, unless the peers are behind a separate NAT gateway.
- you want to let travelling staff connect to your office from such places as hotel rooms, which are very likely to use a NAT gateway.

If you are unsure, or think you may need NAT-T in the future, use the NAT-T solution. This does no harm, because NAT-T automatically drops back to non-NAT-T behaviour when it detects no NAT gateways in the path. However, you may need the non-NAT-T solution if you are running legacy router or client software.

## Which products do the solutions apply to?

Almost all AlliedWare VPN solutions use IPsec, and all solutions include a firewall. These features are available on all software versions that support the following products:

- AR415S, AR440S, AR441S and AR442S routers
- AR750S, AR750S-DP and AR770S routers
- Rapier 16fi and Rapier 24i switches
- AT-8824 and AT-8848 switches
- older routers such as AR720, AR740, AR745, AR725, AR300 series, AR450S, and AR410 series
- older switches such as earlier Rapier series switches

Some features are only available on certain products or more recent software versions. If a How To Note does not apply to all of the above products, its entry in this overview lists the products and releases that it does apply to.

## Basic solutions

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### How To Use the Allied Telesis GUI Wizard to Create a Site-to-Site VPN through a NAT Gateway Device

This Note describes the easiest way to configure a VPN between two Allied Telesis routers: the VPN wizard.

Applies to AR415S and AR44xS routers running 2.9.1 or later.

This version of the solution includes NAT-T.

### How To Use the Allied Telesis GUI Wizard to Create a Site-to-Site VPN

This Note describes the easiest way to configure a VPN between two Allied Telesis routers: the VPN wizard.

Applies to AR415S and AR44xS routers running 2.9.1 or later.

This version of the solution does not include NAT-T.

### How To Configure VPNs in a Corporate Network, with Optional Prioritisation of VoIP

This Note describes command line configuration of VPNs between a headquarters office and a remote office, and between travelling clients and either office. This Note includes detailed explanations of each step of the configuration.

### How To Configure Some Basic Firewall and VPN Scenarios

This Note describes command line configuration of common router scenarios including basic Ethernet and PPPoE configurations, and the following VPN configurations:

- Internal L2TP Network Server (LNS)
- IPsec Tunnel
- PPTP server on a LAN behind the router
- DMZ with private addresses.

## Interoperation with other vendors

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### How To Create Concurrent VPNs with Remote Routers, Microsoft Windows Vista Clients and XP Clients, over NAT-T

This Note describes concurrent VPNs between a head office and:

Requires version 291-08 or later.

- travelling Vista clients
- travelling XP clients
- Allied Telesis routers at remote offices

It includes command line scripts for the head and remote office routers, step-by-step configuration of the Vista client, and a lot of debug output.

### How To Create a VPN between an Allied Telesis Router and a Microsoft Windows XP Client, over NAT-T

This Note describes VPNs between a head office and a Windows XP client, over NAT-T.

Requires version 2.6.4 or later.

It has step-by-step configuration of the head office router (command line), and of the XP client.

### How To Create a VPN between an Allied Telesis Router and a Microsoft XP Client, without using NAT-T

This Note describes VPNs between a head office and a Windows XP client. It has step-by-step configuration of the head office router (command line), and of the XP client.

It does not use NAT-T, so is suitable (for example) if you have staff who work from home, provided those staff do not access the Internet through a NAT gateway.

### How To Create a VPN between an Allied Telesis Router and a Microsoft Windows 2000 Client, over NAT-T

This Note describes VPNs between a head office and a Windows 2000 client, over NAT-T.

Requires version 2.6.4 or later.

It has step-by-step configuration of the head office router (command line), and of the Windows 2000 client.

## How To Create a VPN between an Allied Telesis Router and a Microsoft Windows 2000 Client, without using NAT-T

This Note describes VPNs between a head office and a Windows 2000 client. It has step-by-step configuration of the head office router (command line), and of the Windows 2000 client.

It does not use NAT-T, so is suitable (for example) if you have staff who work from home, provided those staff do not access the Internet through a NAT gateway.

## How To Configure Some Advanced Features on your ADSL Router

This Note describes includes a script to use on an ADSL router when configuring a VPN between the router and a Microsoft Windows XP or 2000 client.

Applies to AR44xS routers.

It is basically the same configuration as the Windows XP and 2000 Notes, but ADSL-specific.

## How To Configure a VPN between Microsoft ISA Server 2004 and an Allied Telesis Router Client

This Note describes a VPN in which an Allied Telesis router is the private office access gateway and is connected to a Microsoft ISA Server as the access concentrator.

It has step-by-step configuration of the router (command line) and the Microsoft ISA server.

## How To Create a VPN between an Allied Telesis and a SonicWALL Router, with NAT-T

This Note describes VPNs between an Allied Telesis router and a remote SonicWALL router. It includes:

The wizard is available with version 2.9.1 or later.

- step-by step configuration of the Allied Telesis router (using the GUI wizard). If your router does not support the wizard, you can still use this Note to see the required settings
- step-by-step configuration of the Netscreen router
- variations for if you do not need NAT-T.

## How To Create a VPN between an Allied Telesis and a NetScreen Router

This Note describes VPNs between an Allied Telesis router and a remote NetScreen router. It includes:

The wizard is available with version 2.9.1 or later.

- step-by step configuration of the Allied Telesis router (using the GUI wizard)
- step-by-step configuration of the Netscreen router
- a command line script to use if your router does not support the wizard.

## Advanced solutions

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### How To Configure VPNs in a Corporate Network, with Optional Prioritisation of VoIP

This Note includes command line configuration for using software QoS to prioritise voice (VoIP) traffic over the VPNs.

Prioritising voice traffic requires version 2.7.1 or later.

### How To Configure VoIP and Data over a Meshed IPsec VPN

This Note describes command line configuration for multiple remote offices requiring a secure VPN connection to a Head Office. The solution also allows:

Requires version 2.7.1 or later.

- secure data transfer from one remote office to another
- secure voice (VoIP) calls between remote offices and the Head Office, and also between remote offices.

## Troubleshooting

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### How To Troubleshoot a Virtual Private Network (VPN)

This Note describes steps for testing and troubleshooting an IPsec configuration, using the CLI and the GUI.

### How To Create Concurrent VPNs with Remote Routers, Microsoft Windows Vista Clients and XP Clients, over NAT-T

This Note includes command line debug output for functional VPNs, and the debug that results when you disconnect a Vista or XP client . The output for a functioning VPN may be a useful reference if you encounter problems initiating VPNs.

### How To Configure Some Advanced Features on your ADSL Router

This Note includes troubleshooting steps for checking the ADSL, ATM, PPP and IP configuration on your router. If your VPN does not work, these steps show how to confirm that these underlying layers are working correctly.

Applies to AR415S and AR44xS routers.