

Vanguard Managed Solutions

**Vanguard Applications Ware
Basic Protocols Manual**

Notice

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Mansfield, Massachusetts 02048
(508) 261-4000
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To comment on this manual, please send e-mail to LGEN031@vanguardms.com

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About The Vanguard Applications Ware Basic Protocols Manual

Overview

Introduction

The *Vanguard Applications Ware Basic Protocols Manual* contains user manuals that describe the options and protocols generally found in the all Applications Ware licenses.

Audience

This binder is intended for use by all users of Vanguard products and the corresponding Applications Ware. This manual should be used in conjunction with the Feature Protocols Manual appropriate for the authorized Applications Ware software license in use.

Software Revision Level

This manual is current for Release 6.4 of Vanguard Applications Ware.

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What's In This Manual

Introduction

This manual contains detailed documentation covering the software features, options, and protocols that are supported in the all Applications Ware Software. Additionally, it contains a series of four 'Basics Guides' to explain in simple terms, what Vanguard products do and how to use them to their fullest.

Vanguard Basics Guides

The four basics Guides are:

- **Vanguard Configuration Basics Manual** - You should read this manual before attempting a first-time software install or configuration on any Vanguard product. This manual is written in a tutorial fashion, that explains clearly, and in some detail, what you can configure, and how to configure it, on your Vanguard product. Additionally, this manual describes methods of overcoming some problems you may encounter if this is the first time you have worked with Vanguard products.
 - **X.25 Configuration Basics Guide** - This manual explains the basics of configuring the X.25 protocol on Vanguard products. It includes a detailed configuration example that will allow you to create similar configurations tailored to your own requirements.
 - **Configuration for APAD/ATPAD** - This manual explains the configuration process for APAD and ATPAD ports of Vanguard products.
 - **Bandwidth Management Basics Guide** - This manual explains bandwidth management techniques for Vanguard Applications Ware.
-

Frame Relay

This manual describes Frame Relay Interface and Access (FRI and FRA) as supported by Vanguard products, and includes a detailed explanation of Frame Relay, configuration examples, and worksheets necessary to record your Frame Relay configuration parameters.

Trans Polled Async

This manual describes the Trans Polled Async feature which supports asynchronous protocols operating in a polled environment. This manual includes detailed descriptions of configuration, administration, statistics, and provides worksheets on which you can record application specific parameters.

Simple Network Management Protocol (SNMP)

This manual describes the SNMP and Management Information Database implemented in Vanguard products. It includes a detailed explanation of how SNMP works, configuration, statistics, and worksheets necessary to record your Frame Relay configuration parameters.

Async Bypass Mode

This manual describes the TBOP/TCOP/Async Bypass Mode for Vanguard products and includes a detailed overview of this feature, configuration, and statistics.

Serial Line IP (SLIP)

This manual describes typical SLIP applications and configuration sequences, and provides you with statistical information.

TCP/TELNET

This manual describes communication between remote Vanguard nodes over IP using the CTP port. This manual includes configuration and statistics information.

Point-to-Point Protocol (PPP)

This manual describes PPP and Multilink PPP (MLPPP) support on Vanguard products. It includes detailed configuration, administration, theory of operation, and statistics information.

Command Line Interface (CLI)

This manual identifies how to configure Vanguard products using the CLI scripting function.

Glossary

The final manual in the Vanguard Applications Ware Basic Protocols Manual is a technical glossary that explains technical terminologies and acronyms used in this, and all Vanguard documentation.

Related Documentation

Introduction

It may become necessary to refer to other documents in order to obtain all of the technical information that you may require. This section identifies all of the related Vanguard products documentation including:

- “Vanguard Installation Manuals” on page xi
 - “Software License Feature Documentation” on page xii
 - “Software Coldloading/Installation and Alarms and Reports Manuals” on page xiv
-

Vanguard Installation Manuals

Introduction

Installation manuals describe the installation and set up of specific Vanguard equipment. Installation Manuals provide information that may assist you in locating ports, cabling, and modifying DTE/DCE settings.

Available Installation Manuals

This table identifies the installation manuals available:

Part Number	Title
T0126	Vanguard 6520/6560 Installation Manual
T0002	Vanguard 6500 ^{PLUS} Installation Manual
T0015	Vanguard 100 Installation Manual
T0016	Vanguard 100PC Installation Manual
T0017	Vanguard 200 Installation Manual
T0021	650 Operator's Guide
T0047	Vanguard 305 Installation Manual
T0019	Vanguard 310 Series Installation Manual
T0032	Vanguard 320 Installation Manual
T0178	Vanguard 340 and 340 Enhanced Installation Manual
T0257	Vanguard 342 Installation Manual
T0031	Vanguard 6400 Series Installation Manual
T0142	Vanguard 6425 Installation Manual
T0166	Vanguard 6435/6455 Installation Manual
T0185	Vanguard 7300 Series Installation Manual

Documentation Website

Documentation is located on our website:

<http://www.vanguardms.com/support/documentation>

Software License Feature Documentation

Introduction

Use of the Vanguard Applications Ware software is controlled via software licenses purchased. Each license is supported by a suite of protocol documentation to provide you with the information required to fully understand the ways in which you can use your Applications Ware license.

In addition to this Serial Feature Protocols Manual, these additional documentation suites are available:

- IP and LAN Feature Protocols
 - SNA Feature Protocols
 - Serial Feature Protocols
 - Multi-Service Feature Protocols
 - Multimedia Feature Protocols
-

IP and LAN Feature Protocol

The IP and LAN Feature Protocol (Part Number T0100) contains the following options and protocol documentation which describe the IP and LAN functionality of the Vanguard Applications Ware:

- Vanguard Router Basics
 - Ethernet Basics
 - Token Ring
 - Bridging
 - IP Routing
 - OSPF
 - SLIM IP
 - SoTCP
 - IPX
 - AppleTalk
 - Protocol Priority
 - Quality of Service
 - Asynchronous Transfer Mode
 - T3 ATM
 - Border Gateway Protocols (BGP-4)
 - G.SHDSL
 - Traffic Monitor
-

SNA Feature Protocols

The SNA Feature Protocols Manual (Part Number T0101) contains the following options and protocol documentation which describe the underlying SNA functionality of the Vanguard Applications Ware:

- BSC 2780/3780
- BSC 3270
- IBM 2260
- SDLC
- XDLC
- AS/400 Communication Server
- BSC 3270-to-SNA Conversion

- BSC 2780/3780-to-SNA/LU0 Conversion
- TN 3270 Remote Server

Serial Feature Protocols

The Serial Feature Protocols Manual (Part Number T0102) contains the following options and protocol documentation which describe the underlying serial protocol functionality in the Vanguard Applications Ware:

- Burroughs Polled Select
- NCR BSC
- TBOP
- NCCP
- TCOP
- SHDLC
- T3POS
- 3201 ASYNC
- X.42
- TNPP
- TPDU
- SPP
- AC100
- ALC

Multi-Service Feature Protocol

The Multi-Service Feature Protocols Manual (Part Number T0103) contains the following options and protocol documentation which describe the underlying multi-service functionality in the Vanguard Applications Ware:

- Internal DSD
- Multipoint X.25
- Frame Data Compressor
- DataScope
- SMDS
- Vanguard ISDN Protocol Guide
- Vanguard 6520/6560 ISDN Protocol Guide
- Data Encryption
- Virtual Private Network

Multimedia Feature Protocols

The Multimedia Feature Protocols Manual (Part Number T0104) contains the following documentation for multimedia features of the Vanguard Applications Ware:

- Voice Technology
- Vanguard Voice

■ **Note**

The Multimedia Applications Ware license currently supports only the voice feature. The RemoteVU Operator's Manual (Part Number T0054) is now available on the web only. The RemoteVU Manual explains the support offered for the RemoteVU Host Video Workstation application.

Software Coldloading/Installation and Alarms and Reports Manuals

Introduction

These manuals offer direction on installing and coldloading software into Vanguard nodes, and explanations of the alarms and report messages that may be displayed on your terminal screen.

Software Coldloading and Installation Manual

This manual describes the different methods of installing software in Vanguard products. It describes software installation by:

- the Vanguide Software Loader
 - downloading software from a Macintosh or PC using Communication Software such as Procomm Plus
 - Ping software from a LAN
-

Alarms and Reports Manual

This manual lists the Vanguard products operating software alarms and reports. Descriptions, corrective actions, trap numbers, and clearing events are also included.

The alarms and traps database is also available on the web:

- 1) Access the web site: **<http://www.vanguardms.com/support/>**
Select Alarm Search.
-

Ease of Configuration

Introduction

Ease of Configuration is a system enhancement that allows you to implement specific changes to your configuration without the need to reboot the node.

Previously, you had to boot the node to implement changes to certain parameters (those with an asterisk in their name). For example, changes to the Port Record parameter Port Type would only take effect after the node was booted. This disrupted data until the node came back up. However, with Ease of Configuration you only have to boot that port. Data continues to pass through the node's other ports without disruption.

Ease of Configuration is supported on the Vanguard 340, 342, 64xx, 6520, and 6560.

■ Note

With the Vanguard 7300 Series the Ease of Configuration is always on.

Protocol Support

Ease of Configuration does not currently support all port types and their associated parameters. These protocols/port type manuals can be found in the *Vanguard Basic Protocols* binder (Part Number T0106).

PAD/ATPAD

For information about using Ease of Configuration with PAD and ATPAD ports, refer to “PAD, ATPAD and NULL Port” section on page xix. For detailed information about PAD and ATPAD protocols, refer to the *Configuring for PAD/ATPAD Manual* (Part Number T0110).

Frame Relay

For information about using Ease of Configuration with Frame Relay ports, refer to “Frame Relay Port” section on page xxi. For detailed information about Frame Relay protocol, refer to the *Frame Relay Feature Protocol Manual* (Part Number T0106-02).

X.25

For information about using Ease of Configuration with X.25 ports, refer to “X.25 Port” section on page xxiii. For detailed information about X.25, refer to the *X.25 Configuration Basics Manual* (Part Number T0107).

NULL

For information about using Ease of Configuration with Null ports, refer to “PAD, ATPAD and NULL Port” section on page xix. For more information about Null ports, refer to the *Configuring for PAD/ATPAD Manual* (Part Number T0110).

■ Note

Ease of Configuration supports other protocols described in other Vanguard Protocol binders.

Alarms

When using Ease of Configuration, make sure to enable high alarms level (in the Node Record). This allows you to monitor the progress and status of the port boots. Two high severity alarms are generated:

- One indicates the start of the boot process.
- The other indicates either the completion or failure of the boot process.

Ease of Configuration

If insufficient resources are available, or if a port type is not supported, the boot fails and a unique alarm is generated.

For a detailed description of the Ease of Configuration alarms, refer to the *Alarms and Reports Manual* (Part Number T0005).

When to Use Ease of Configuration

You should use Ease of Configuration when it is important not to disrupt existing applications each time a port is reconfigured.

With memory intensive applications and protocols such as Voice and IP, you may need to install additional RAM in the node.

Boot Time

With Ease of Configuration, the time it takes to boot a port (and implement the new configuration) varies depending on how heavily the device is being used.

- If the node is handling minimal traffic, the boot process occurs quickly (a few seconds).
 - If the node is handling a considerable amount of traffic, the boot process could take longer (several minutes).
-

Enable Ease of Configuration

Introduction This section explains how to configure and set up your Vanguard device for Ease of Configuration.

Device Memory Ease of Configuration is a memory intensive function. Therefore, before you use Ease of Configuration, be sure that your node has the maximum amount of RAM it can handle. For information about memory capacity, refer to the installation guide that came with your device.

Parameters To enable Ease of Configuration, you need to configure two Node Record parameters and then boot the node.
For Ease of Configuration, these parameters should be set to their maximum value. The parameters are described below:

■ **Note**

These parameters are also described in the Configure the Node chapter of the *Vanguard Basic Configuration Manual* (Part Number T0113).

***Shared Dynamic Port Creation Heap Size**

Range:	0 to 16000000
Default:	0
Description:	<p>This specifies the size of the special shared memory pool dedicated for Ease of Configuration.</p> <ul style="list-style-type: none"> • To disable this parameter set to zero (0). • To enable Ease of Configuration, set this parameter to the maximum value. <p>■ Note A change to this parameter requires a Node boot to take effect.</p>

***Local Dynamic Port Creation Heap Size**

Range:	0 to 16000000
Default:	0
Description:	<p>This specifies the size of the special local memory pool dedicated for Ease of Configuration.</p> <ul style="list-style-type: none"> • To disable this parameter set to zero (0). • To enable Ease of Configuration, set this parameter to the maximum value. <p>■ Note A change to this parameter requires a Node boot to take effect.</p>

Configuring the Parameters

This table explains how to configure the two parameters:

Step	Action
1	From the Main menu, select Configure .
2	From the Configure menu, select Node .
3	Press ENTER until the parameter *SHARED Dynamic Port Creation Heap Size appears. Enter the maximum value (16000000).
4	Press ENTER again. The parameter *LOCAL Dynamic Port Creation Heap Size appears. Type the maximum value (16000000).
5	Press ; (semi-colon) and then press ENTER .
6	Perform a Node Boot (Warm). The node reboots and the Ease of Configuration function is enabled.

■ Note

After you complete this procedure, review the alarm log for disabled ports. If necessary, reduce the resource requirements allocated to the other ports and stations and repeat the above procedure.

PAD, ATPAD and NULL Port

Introduction

Ease of Configuration is available as soon as you make the appropriate changes to the Node Record parameters *SHARED Dynamic Port Creation Heap Size and *LOCAL Dynamic Port Creation Heap Size and reboot the node.

This section explains how the Ease of Configuration function is used with the PAD, ATPAD, and Null ports.

ATPAD Port Parameter

There is only one ATPAD Port parameter supported by Ease of Configuration:

*Port Type

Once Ease of Configuration is enabled, a change to this parameter is implemented by simply booting the port.

■ Note

Afterwards, review the alarm log and port statistics to ensure that the configuration changes have been made.

PAD Port Parameters

There are two PAD Port parameters supported by Ease of Configuration:

*Port Type

*Protection Level

Once Ease of Configuration is enabled, changes to these parameters are implemented by simply booting the port.

■ Note

Afterwards, review the alarm log and port statistics to ensure that the configuration changes have been made.

Null Port

The Null port type is supported by Ease of Configuration. Once Ease of Configuration is enabled, simply set the Port Record parameter Port Type to Null and then boot the port. The port becomes a Null port

■ Note

Afterwards, review the alarm log and port statistics to ensure that the port has become a Null port.

PVC Support

Using Ease of Configuration with a PAD PVC is slightly more complicated than with just the PAD port.

■ Note

As it is currently implemented, to use Ease of Configuration with PVCs, you need to make a change to the PAD Port record. The easiest would be to change the parameter *Protection Level.

Ease of Configuration

To use Ease of Configuration with a PVC, perform this procedure for the side that supports Ease of Configuration:

Step	Action
1	Configure the PVC Table Entry.
2	Boot the Table and Node Record.
3	Copy the PAD port to an unused virtual port, for example, port 100.
4	Set the PAD port to Null.
5	Boot the Port.
6	Copy the virtual PAD port back to the Null port.
7	Delete the Virtual port.
8	Boot the port.

Frame Relay Port

Introduction

Ease of Configuration is available as soon as you make the appropriate changes to the Node Record parameters *SHARED Dynamic Port Creation Heap Size and *LOCAL Dynamic Port Creation Heap Size and reboot the node.

This section explains how the Ease of Configuration function is used with the Frame Relay protocol.

FRA Port Parameter

There is only one Frame Relay Access (FRA) Port parameter supported by Ease of Configuration:

*Port Type

There are three Frame Relay Interface (FRI) Port parameters supported by Ease of Configuration:

*Port Type

*Port Subtype

*Protection Level

Once Ease of Configuration is enabled, a change to these parameters is implemented by simply booting the port.

■ Note

Afterwards, be sure to review the alarm log to ensure that the configuration changes have been made.

Adding or Removing Stations

You can use the FRI/FRA Port Station Count Update to change the number of operating stations on a functioning port (instead of booting the port or node). The FRI/FRA Port Station Count Update functions allows you to:

- Update the station count for an operating port
- Avoid disrupting PVC management flow (except to allow the issuing of N- and/or D-bit as appropriate).
- Add new stations or delete stations that have no CMEM record from the operating port
- Avoid updating other operating parameters for the port or other stations.

The update is limited to the port to which it is applied and does not propagate to adjacent stations or ports. The update can involve multiple station additions and deletions, and is a single command applied to the port. A station cannot, within the same update, be deleted and made new (or visa versa).

To reestablish the connections, perform this procedure:

Step	Action
1	Configure the PVC Table Entry.
2	Boot the Table and Node Record.
3	Boot the port or station as required.

Adding a New Station

If some stations are left out of the PVC connections, the PVC Table should be updated and booted into memory. You can then boot the unconnected station to interconnect it to its adjacent station. To do this perform this procedure:

Step	Action
1	From the Main menu, select Configure .
2	From the Configure menu, select FRI Stations or FRA Stations .
3	At the prompt, enter number of the port on which you want to configure stations. Then press ENTER .
4	At the prompt, enter number of the station you want to configure. Then press ENTER .
5	Configure the PVC CMEM records and the station CMEM records.
6	Boot the PVC connections with the Boot Table and Node Record command.
7	From the Main Menu select Port/Station/Channel Control .
8	Place the stations into operating mode by selecting FRI Port Station Count Update or FRA Port Station Count Update . If the Update command is made before the PVC table connections are booted into memory, the operating stations will not be interconnected.
9	Enter the port number on which the added station resides.

Limitations

PVCs may be difficult to dynamically configure based on architecture. Utilize PVC and port statistics to confirm that PVC have been connected.

X.25 Port

Introduction

Ease of Configuration is available as soon as you make the appropriate changes to the Node Record parameters *SHARED Dynamic Port Creation Heap Size and *LOCAL Dynamic Port Creation Heap Size and reboot the node.

This section explains how the Ease of Configuration function is used with the X.25 protocol.

XDLC Parameters

These are the XDLC parameters supported by Ease of Configuration:

- *Port Type
- *Number of PVC Channels
- *Starting PVC Channel Number
- *Number of Two Way SVC Channels
- *Starting Two Way SVC Channel Number
- *Number of One Way Incoming Channels
- *Starting One Way Incoming Channel Number
- *Number of One Way Outgoing Channels
- *Starting One Way Outgoing Channel Number
- *Protection Level

Once Ease of Configuration is enabled, changes to these parameters are implemented by simply booting the port.

■ Note

Afterwards, be sure to review the alarm log to ensure that the configuration changes have been made.

PVC Support

Using Ease of Configuration with an X.25 PVC is slightly more complicated than with just the X.25 port.

■ Note

As it is currently implemented, to use Ease of Configuration with PVCs, you need to make a change to the X.25 Port record. Simply change one of the parameter in the above list.

To use Ease of Configuration with a PVC, perform this procedure for both ends of PVC:

Step	Action
1	Modify the PVC Table Entry.
2	Boot the Table and Node Record.
3	Modify the X.25 Port and boot the port.
4	Modify the X.25 port back to its original setting and boot the port.

Node and Port Statistics

Introduction

This section describes the Ease of Configuration information within the Node Statistics screens.

During the Ease of Configuration port boot, node and port related statistics are not accessible until the port boot has completed.

Dynamic Heap

The Dynamic Heap is split into two pools: Shared and Local.

- Shared Dynamic Heap: This tends to be a one time, fixed allocation for the port level. After the ports are configured, additional adjustments do not consume additional resources.
- Local Dynamic Heap: The dynamic local heap allocates structures for port, stations/devices and channels. It tends to be much larger in size than the dynamic shared heap. The local heap is more susceptible to fragmentation as a result of multiple Dynamic Port Boots.

Heap Memory Statistics

The detailed Dynamic and Static Memory Heap information appears on page 3 of the Node statistics screens. See Figure 1.

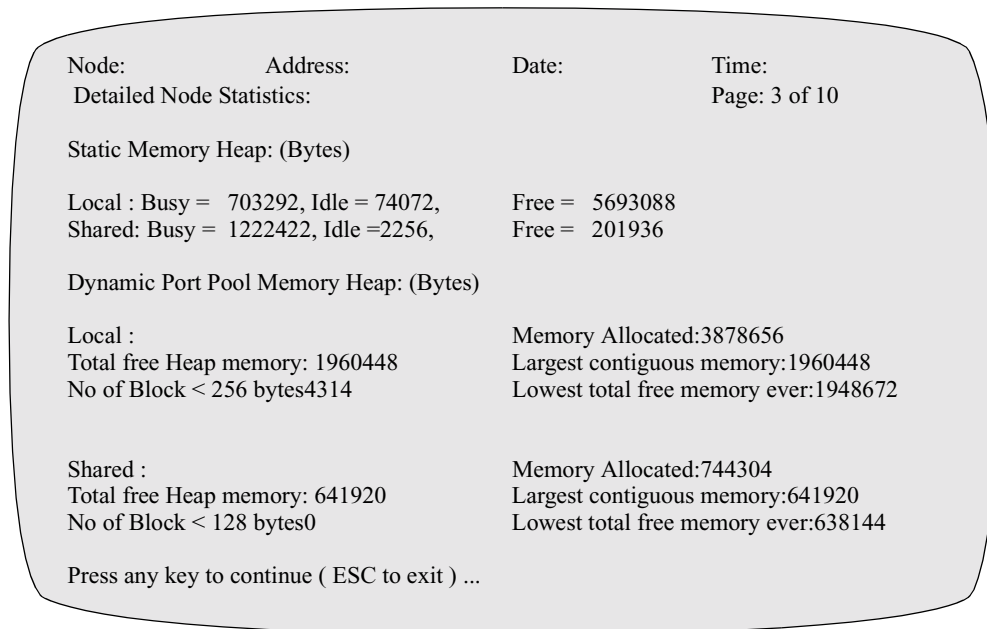


Figure 1. Memory Heap Statistics

Memory Statistics Screen Terms

This table describes the Memory Statistics screen terms shown in Figure 1.

Terms	Description
Memory allocated	The amount of memory available for Ease of Configuration.
Total free Heap memory	The remaining amount of memory available. This could be fragmented.
Largest contiguous memory	The largest free chunk of memory. As the port boot occurs, memory can be given back to the pool from the resource being shut down. This may or may not facilitate recombination into a larger available memory.
No. of blocks	Indicates the number of small blocks of memory available and may be fragmented.
Lowest total free memory ever	The lowest amount of free memory since the last reset. This provides a history so you can adjust the dynamic heap values in the node record or add additional heap memory.

Statistics Screen During Dynamic Boot

The Port and Link Statistics display is not available during port boot. It becomes available after Dynamic Port Boot is completed, as shown in Figure 2.

```

12. Diagnostics
13. Default Node
14. (reserved)
15. Configuration Save/Restore
16. Flash Memory
17. LAN Control Menu
18. DEBUG

#Enter Selection: 5.2

Node:           Address:           Date:           Time:
Dynamic Boot In Progress                               Page: 1 of 1

Port #1 is booting. Try again in 5 seconds.

Press any key to continue (ESC to exit ) ...

```

Figure 2. Dynamic Boot Screen

Special Notices and Translations

Special Notices

The following notices emphasize certain information in the guide. Each serves a special purpose and is displayed in the format shown:

■Note

Note is used to emphasize any significant information.



Caution

Caution provides you with information that, if not followed, can result in damage to software, hardware, or data.



Warning

Warning is the most serious notice, indicating that you can be physically hurt.

Simplified Chinese

特别通告

以下通告强调指南中的某些信息。
每条信息均有一个特殊的目的并以如下格式显示:

■注解

注解用于强调任何重要的信息。



切记

切记提供您这类信息，如果不遵照信息的要求，可能导致软件、硬件或数据的损坏。



警告

警告是最严重的通告，表明您的身体可能被伤害。

Danish

S³rlige overskrifter

F³lgende overskrifter fremh³ver nogle af oplysningerne i vejledningen. De tjener hvert et specifikt form³l og vises i f³lgende format:

■Bem³rk

Bem³rk anvendes til at fremh³ve vigtig information.



Forsigtig

Forsigtig understreger oplysninger, som, hvis de ikke bliver fulgt, kan f³re til beskadigelse af software, hardware eller data.



Advarsel

Advarsel er den mest alvorlige overskrift, og tilkendegiver mulig personskaade.

Dutch

Bijzondere vermeldingen

De volgende vermeldingen besteden extra aandacht aan bepaalde informatie in de handleiding. Elke vermelding heeft een eigen nut en wordt in de volgende opmaak weergegeven:

■Opmerking

Een opmerking wordt gebruikt om belangrijke informatie te benadrukken.



Let op

Dit kopje geeft aan dat u de beschreven instructies moet volgen om schade aan de software, hardware of gegevens te vermijden.



Waarschuwing

Een waarschuwing is de belangrijkste vermelding. Indien u deze niet volgt, kan dit tot lichamelijke verwondingen leiden.

Finnish

Eritysilmoitukset

Seuraavat ilmoitukset korostavat tiettyjä oppaan tietoja. Kullakin on oma erikoistarkoituksensa ja ne esitetään seuraavassa muodossa:

■Huomaa

Huomautusta käytetään korostamaan tärkeää tietoa.



Vaara

Vaarailmoitus antaa tietoa, jonka huomiotta jättäminen voi johtaa ohjelmiston, laitteiston tai tietojen vahingoittumiseen.



Varoitus

Varoitus on kaikkein vakavin ilmoitus ja se kertoo mahdollisesta loukkaantumisriskistä.

French

Messages spéciaux

Les messages suivants mettent en valeur certaines informations dans le guide. Chacun d'eux remplit une fonction spéciale et est affiché dans le format indiqué :

■Important

Important est utilisé pour souligner des informations critiques au sujet d'une procédure.



Mise en Garde

Une mise en garde vous fournit des informations qui, si elles ne sont pas observées, peuvent se traduire par des dommages pour le logiciel, le matériel ou les données.



Avertissement

Un avertissement constitue le message le plus sŽrieux, indiquant que vous pouvez subir des blessures corporelles.

German

Besondere Hinweise

Durch die folgenden Hinweise werden bestimmte Informationen in diesem Handbuch hervorgehoben. Jeder Hinweis dient einem bestimmten Zweck und wird im dargestellten Format angezeigt:

■Wichtig

WICHTIG wird zur Betonung signifikanter Angaben zu Vorgehensweisen verwendet.



Vorsicht

Ein Vorsichtshinweis macht Sie darauf aufmerksam, daŝ Nichtbefolgung zu Software-, Hardware- oder DatenschŠden fŸhren kann.



Warnung

Eine Warnung weist Sie darauf hin, daŝ ernsthafte Kšrperverletzungsgefahr besteht.

Italian

Simboli speciali

I seguenti simboli, ciascuno con una speciale funzione, evidenziano determinate informazioni all'intero del manuale. Il formato quello riportato qui di seguito.

■Nota

Questo tipo di avvertimento viene utilizzato per evidenziare tutte le informazioni significative relative ad una procedura.



Attenzione

Questo tipo di avvertimento fornisce informazioni che, se non vengono seguite, possono provocare danni al software, all'hardware o ai dati.



Avvertenza

Questo tipo di avvertimento indica la presenza di condizioni di rischio che possono causare lesioni fisiche. Si tratta del simbolo pi importante al quale prestare attenzione.

Japanese

特別表記

ガイド内では、以下の表記を使って特に注意する必要がある情報が提供されます。各表記にはそれぞれ目的があり、次の形式で表示されます。

■重要

重要な情報が記述されています。



注意

記述されている内容に従わない場合、ソフトウェア、ハードウェア、またはデータが壊れる可能性があります。

警告

最も重要な情報が記述されています。身体的な障害を被る可能性があります。

Korean

일러두기

이 설명서에는 사용자에게 특정한 내용을 강조하기 위해서 다음 내용이 포함되어 있습니다.

■참고

중요한 정보를 강조하는데 사용합니다.



주의

소프트웨어나 하드웨어, 또는 데이터를 손상시킬 수 있으므로 주의가 필요한 상황을 알립니다.



경고

사용자의 안전에 위험을 알리는 가장 심각한 수준의 경고입니다.

Norwegian

Spesielle merknader

Merknadstypene nedenfor representerer en bestemt type informasjon i h ndboken. Hver merknadstype har en spesiell hensikt og vises p  f lgende format:

■Merk

Merk brukes for   fremheve viktig informasjon.



Forsiktig

Forsiktig gir deg informasjon om situasjoner som kan f re til skade p  programvare, datamaskin eller data dersom den blir fulgt.



Advarsel

Advarsel er den mest alvorlige merknaden og indikerer at du kan bli fysisk skadet.

Portuguese/ Portugal

Avisos Especiais Os avisos que se seguem realçam certas informações neste guia. Cada um deles serve um objetivo especial e é visualizado no formato apresentado:

■ **Nota**

Nota é utilizado para realçar qualquer informação importante.



Atenção

Atenção facultas informações que, se não forem cumpridas, poderão provocar danos no software, hardware ou nos dados.



Cuidado

Cuidado constitui o aviso mais grave, o qual indica que poderá ficar fisicamente ferido.

Spanish/Spain

Notificaciones especiales Las siguientes notificaciones ponen énfasis sobre determinada información de la guía. Todas tienen un propósito especial y se muestran con el formato siguiente:

■ **Nota**

Las notas se utilizan para destacar determinada información de importancia.



Advertencia

Las advertencias le proporcionan información que debe seguirse, si no desea que el software, el hardware o los datos puedan verse dañados.



Aviso

Los avisos son las notificaciones de carácter más importante e indican la posibilidad de daños físicos para el usuario.

Swedish

Speciella beteckningar Följande beteckningar betonar viss information i handboken. Var och en har ett speciellt syfte och visas i formatet nedan:

■ **OBS!**

OBS! används för att betona viktig information.



Viktigt

Viktigt ger dig information som, om den inte följs, kan resultera i skada i programvara, maskinvara eller data.



Varning

Varning Šr den mest allvarliga beteckningen och den indikerar att du kan skadas fysiskt.

Customer Information

Customer Questions

Customers who have questions about Vanguard Managed Solutions products or services should contact your VanguardMS representative or visit this website for product, sales, support, documentation, or training information:

<http://www.vanguardms.com>

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Part Number: T0106, Revision K

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