

Vanguard Managed Solutions

**Vanguard Applications Ware
Serial Feature Protocols Manual**

Notice

©2004 Vanguard Managed Solutions, LLC
575 West Street
Mansfield, Massachusetts 02048
(508) 261-4000
All rights reserved
Printed in U.S.A.

Restricted Rights Notification for U.S. Government Users

The software (including firmware) addressed in this manual is provided to the U.S. Government under agreement which grants the government the minimum “restricted rights” in the software, as defined in the Federal Acquisition Regulation (FAR) or the Defense Federal Acquisition Regulation Supplement (DFARS), whichever is applicable.

If the software is procured for use by the Department of Defense, the following legend applies:

Restricted Rights Legend

Use, duplication, or disclosure by the Government
is subject to restrictions as set forth in
subparagraph (c)(1)(ii) of the
Rights in Technical Data and Computer Software
clause at DFARS 252.227-7013.

If the software is procured for use by any U.S. Government entity other than the Department of Defense, the following notice applies:

Notice

Notwithstanding any other lease or license agreement that may pertain to, or accompany the delivery of, this computer software, the rights of the Government regarding its use, reproduction, and disclosure are as set forth in FAR 52.227-19(C).

Unpublished - rights reserved under the copyright laws of the United States.

Notice (continued)

Proprietary Material

Information and software in this document are proprietary to Vanguard Managed Solutions, LLC (or its Suppliers) and without the express prior permission of an officer, may not be copied, reproduced, disclosed to others, published, or used, in whole or in part, for any purpose other than that for which it is being made available. Use of software described in this document is subject to the terms and conditions of the Software License Agreement.

This document is for information purposes only and is subject to change without notice.

Part No. T0102, Rev K
Publication Code DS
First Printing June 1998

Manual is current for Release 6.4 of Vanguard Applications Ware.

To comment on this manual, please send e-mail to LGEN031@vanguardms.com

Contents

About The Vanguard Applications Ware Serial Feature Protocols Manual

Special Notices and Translations

Customer Information

Customer Response Card

Glossary

About The Vanguard Applications Ware Serial Feature Protocols Manual

Overview

Introduction

The *Serial Feature Protocols Manual* contains user manuals that describe the options and protocols found in the Vanguard Serial Applications Ware.

Audience

This binder is intended for use by those users of Vanguard products who are authorized to use the Vanguard Serial Applications Ware.

Software Revision Level

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

Trademark

These are trademarks or registered trademarks of their respective companies or organizations:

Crosstalk / Digital Communications Associates, Inc.

Hewlett-Packard and HP / Hewlett-Packard Company

MS-DOS, Windows 95, Windows NT/ Microsoft Corporation

Vanguide, Vanguard, Vanguard Applications Ware/ Vanguard Managed Solutions

Procomm / Datastorm Technologies, Inc.

Proteon / Proteon Inc.

Telenet / Telenet Communications Corporation

Tymnet / British Telecommunication Public Limited Company

IBM / International Business Machines Corporation

What's In This Manual

Introduction

This manual contains detailed documentation covering all software features, options, and protocols that are supported by the Vanguard Serial Applications Ware license.

Burroughs Standard (BSTD) Poll/Select Protocol

This manual describes the Burroughs Standard Poll/Select protocol, and including:

- configuration parameters
- operation and administration
- statistical information

The BSTD protocol provides access to X.25 networks for hosts and terminals in a BSTD multipoint environment.

NCR Binary Synchronous Communications (BSC) Protocol

This manual describes the NCR BSC protocol, including:

- detailed configuration examples
 - descriptions of configuration parameters and statistics
 - detailed description of how BSC operates with Vanguard products.
-

Transparent Bit Oriented Protocol (TBOP)

This manual describes the TBOP protocol including: how to configure this protocol on Vanguard products, basic instructions on configuring TBOP for your nodes, and statistics.

Network Control Channel Protocol (NCCP)

This manual describes the NCCP Protocol Option, a network management software option for Vanguard PADs, switches, and branch nodes. NCCP optimizes management support for remote transmission devices while minimizing cross-network management traffic. This manual includes a general theory of operation, configuration, statistics, and typical configuration examples.

Air Line Control (ALC) Protocol

This manual describes the ALC protocol, including, example applications, configuration, and statistics.

Transparent Character Oriented Protocol (TCOP)

This manual describes the TCOP protocol and how it is used in Vanguard products.

Seimens HDLC (SHDLC) Protocol

This manual describes both the balanced (BAC) and unbalanced (UNC) variations of the SHDLC protocol including, example applications, configuration of BAC and UNC links, and statistics.

T3POS

This manual describes the T3POS transaction processing protocol for POS (Point of Service) devices. It includes detailed descriptions of T3POS support and the configuration of a typical T3POS application.

3201 Async

This manual describes the 3201 Asynchronous Polling Protocol and how it allows 3201 PADs to communicate with devices at a remote end of an X.25 connection.

| | |
|---|---|
| X.42 | This manual describes the X.42-based protocols and their implementation in Vanguard Applications Ware. |
| Telelocator Network Paging Protocol (TNPP) | This manual describes the TNPP routing protocol, it's configuration, and description of statistics. |
| Transaction Protocol Data Unit (TPDU) | This manual describes the TPDU router and protocol adapter, provides detailed configuration parameter descriptions and theory of operation. |
| Smart Line Controller (SLC) Premise Protocol (SPP) | This manual describes the SPP PAD protocol, its application, port configuration, and statistics. |
| AC100 Protocol | This manual describes the AC100 protocol, its operation, configuration and statistics. |
| Glossary | The final manual in the Serial Feature Protocols binder is a technical glossary that explains many 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
 - Multi-Service Feature Protocols
 - Multimedia Feature Protocols
 - Basics Protocols
-

IP and LAN Feature Protocols

The IP and LAN Feature Protocols (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 Protocol (BGP-4)
 - G.SHDSL
 - Traffic Monitor
-

SNA Feature Protocols

The SNA Feature Protocols Manual (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
- TN3270 Remote Server

**Multi-Service
Feature Protocol**

The Multi-Service Feature Protocols Manual (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 (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.

**Vanguard
Applications Ware
Basic Protocols**

The Vanguard Applications Ware Basic Protocols Manual (Part Number T0106) contains the following options and protocol documentation which describe the underlying functionality of the Vanguard Applications Ware:

- Vanguard Basic Configuration
 - X.25 Basics
 - APAD/ATPAD
 - Bandwidth Management
 - Frame Relay
 - Trans Polled Async
 - SNMP
 - ASYNC BYPASS
 - SLIP
 - TELNET
 - PPP
 - CLI
-

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 Serial Feature Binder

Ease of Configuration does not currently support all port types and their associated parameters. These are the protocols in the *Vanguard Serial Feature Protocol* binder (Part Number T0102) that are currently supported by Ease of Configuration:

TBOP

For information about using Ease of Configuration with TBOP ports, refer to the "TBOP Port" section on page xix. For detailed information about TBOP, refer to the *Transparent Bit Oriented (TBOP) Protocol Manual* (Part Number T0102-04).

TCOP

For information about using Ease of Configuration with TCOP ports, refer to the "TCOP Port" section on page xx. For detailed information about TCOP, refer to the *Transparent Character-Oriented (TCOP) Protocol Manual* (Part Number T0102-06).

Protocol Support SNA Feature Binder

These are the protocols in the *Vanguard SNA Feature Protocol* binder (Part Number T0101) that are currently supported by Ease of Configuration:

SDLC

For information about using Ease of Configuration with SDLC ports, refer to *Vanguard SNA Feature Protocol* binder (Part Number T0101). For detailed information about SDLC, refer to the *SDLC Feature Protocol Manual* (Part Number T0101-05).

XDLC

For information about using Ease of Configuration with XDLC ports, refer to *Vanguard SNA Feature Protocol* binder (Part Number T0101). For information about XDLC ports, refer to the *XDLC Feature Protocol Manual* (Part Number T0101-06).

BSC 3270

Ease of Configuration does not fully support BSC 3270. However, there is a way to reduce the need to boot the node when adding devices to existing BSC 3270 ports. For information, refer to *Vanguard SNA Feature Protocol* binder (Part Number T0101). For information about BSC 3270 ports, refer to the *BSC 3270 Feature Protocol Manual* (Part Number T0101-03).

BSC 2780/3780

For information about using Ease of Configuration with BSC 2780/3780, refer to *Vanguard SNA Feature Protocol* binder (Part Number T0101). For information about BSC 3270 ports, refer to the *BSC 2780/3780 Feature Protocol Manual* (Part Number T0101-02).

■ Note

Ease of Configuration also supports the NULL Port Type. For more information, refer to the *Configuring With PAD/ATPAD Manual* (Part Number T0110).

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.

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

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 configuration changes) 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, 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.

TBOP 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 TBOP protocol.

PVC Support

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

■ Note

As it is currently implemented, to use Ease of Configuration with PVCs, you need to make a change to the TBOP Port record. The easiest way is to change the parameter Number of Controllers, but any other parameter in the above list is appropriate.

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

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

TCOP 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 TCOP protocol.

PVC Support

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

■ **Note**

As it is currently implemented, to use Ease of Configuration with PVCs, you need to make a change to the TCOP Port record. The easiest way is to change the parameter Number of Controllers, but any other parameter in the above list is appropriate.

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

| Step | Action |
|-------------|--|
| 1 | Modify the PVC Table Entry. |
| 2 | Boot the Table and Node Record. |
| 3 | Modify the TCOP Port parameter and boot the port. |
| 4 | Modify the TCOP 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.

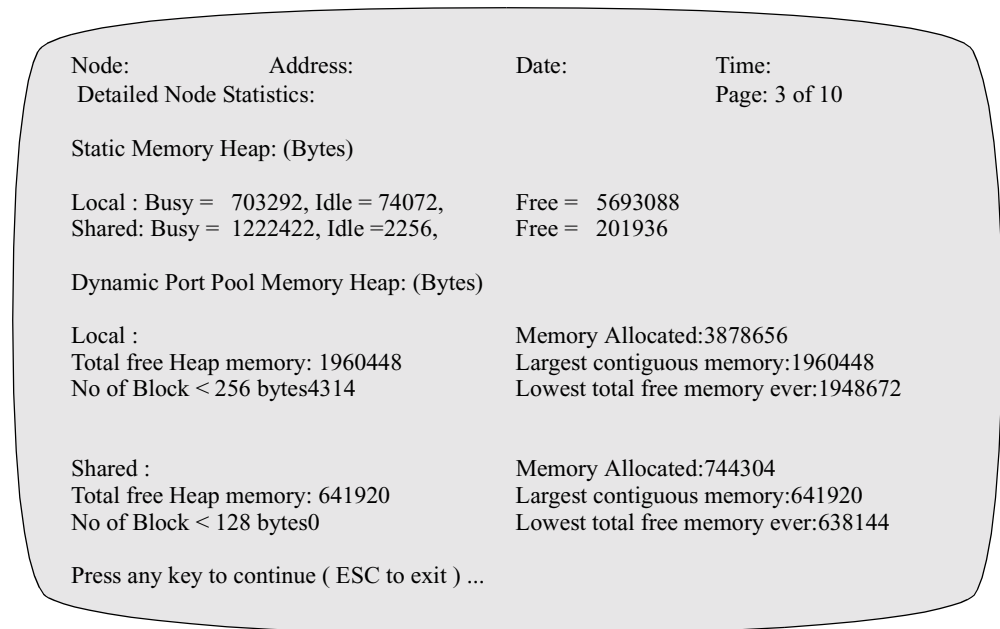


Figure 1. Memory Heap Statistics

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.

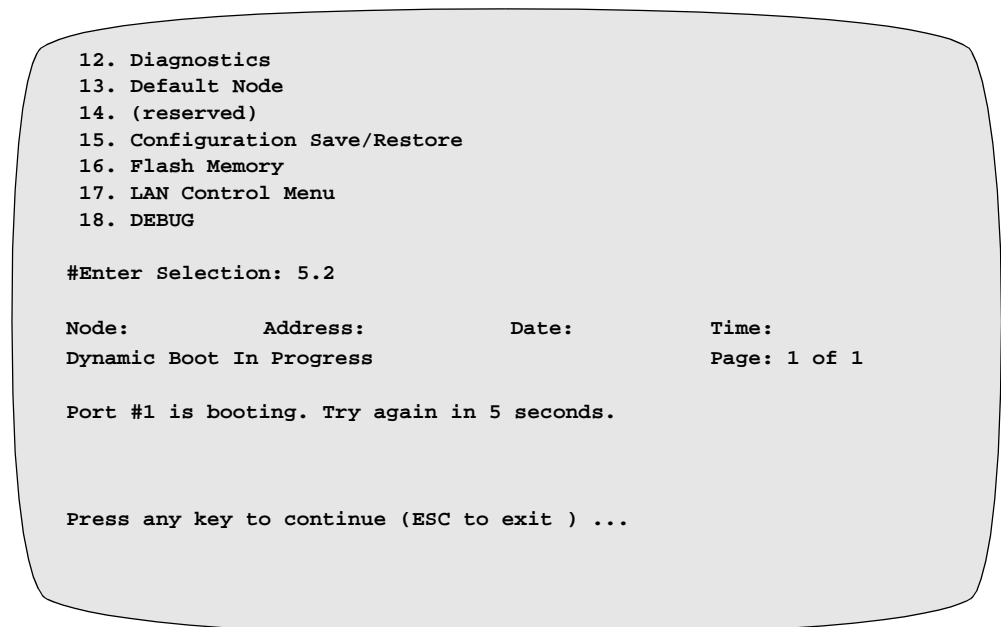


Figure 2. Dynamic Boot Screen

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

Særlige overskrifter

Følgende overskrifter fremhæver nogle af oplysningerne i vejledningen. De tjener hvert et specifikt formål og vises i følgende format:

■Bemærk

Bemærk anvendes til at fremhæve vigtig information.



Forsigtig

Forsigtig understreger oplysninger, som, hvis de ikke bliver fulgt, kan føre 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 tärkeitä tietoja.



Vaara

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



Varoitus

Varoitus on kaikkein vakavin ilmoitus ja se kertoo mahdollisesta loukkaantumiseriskistä.

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 sérieux, 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, daß Nichtbefolgung zu Software-, Hardware- oder Datenschäden führen kann.



Warnung

Eine Warnung weist Sie darauf hin, daß ernsthafte Körperverletzungsgefahr besteht.

Italian

Simboli speciali

I seguenti simboli, ciascuno con una speciale funzione, evidenziano determinate informazioni all'interno del manuale. Il formato è 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 più 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 håndboken. Hver merknadstype har en spesiell hensikt og vises på følgende format:

■Merk

Merk brukes for å fremheve viktig informasjon.



Forsiktig

Forsiktig gir deg informasjon om situasjoner som kan føre til skade på 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 objectivo especial e é visualizado no formato apresentado:

■Nota

Nota é utilizado para realçar qualquer informação importante.



Atenção

Atenção facultalhe 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 är 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>

Comments About This Manual

To help us improve our product documentation, please complete the comment card included with this manual and return it by fax to (508) 339-9592. If you prefer, provide your name, company, and telephone number, and someone in the documentation group will contact you to discuss your comments.

Customer Response Card

Vanguard Managed Solutions would like your help in improving its product documentation. Please complete and return this card by fax to (508) 339-9592; Attention: Product Documentaton, to provide your feedback.

To discuss comments with a member of the documentation group, provide telephone information at the bottom of this page. **Thank you** for your help.

Name _____

Company Name _____

Address _____

Document Title: Vanguard Applications Ware Serial Feature Protocols Manual

Part Number: T0102, Revision K

Please rate this document for usability:

Excellent Good Average Below Average Poor

What did you like about the document? _____

What information, if any, is missing from the document? _____

Please identify any sections/concepts that are unclear or explained inadequately.

Additional comments/suggestions. _____

Telephone _____ Ext. _____ Best time to call _____



