Call Center Management Information System
Release Notes

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Call Center Management Information System
Release Notes

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Revision history

**June 2005**  
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**January 2003**  
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**October 2002**  
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Chapter 1

How to get Help

This section explains how to get help for Nortel products and services.

Getting Help from the Nortel Web site

The best way to get technical support for Nortel products is from the Nortel Technical Support Web site:

http://www.nortel.com/support

This site provides quick access to software, documentation, bulletins, and tools to address issues with Nortel products. More specifically, the site enables you to:

- download software, documentation, and product bulletins
- search the Technical Support Web site and the Nortel Knowledge Base for answers to technical issues
- sign up for automatic notification of new software and documentation for Nortel equipment
- open and manage technical support cases

Getting Help over the phone from a Nortel Solutions Center

If you don’t find the information you require on the Nortel Technical Support Web site, and have a Nortel support contract, you can also get help over the phone from a Nortel Solutions Center.

In North America, call 1-800-4NORTEL (1-800-466-7865).
Outside North America, go to the following Web site to obtain the phone number for your region:

http://www.nortel.com/callus

**Getting Help from a specialist by using an Express Routing Code**

To access some Nortel Technical Solutions Centers, you can use an Express Routing Code (ERC) to quickly route your call to a specialist in your Nortel product or service. To locate the ERC for your product or service, go to:

http://www.nortel.com/erc

**Getting Help through a Nortel distributor or reseller**

If you purchased a service contract for your Nortel product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller.
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About this document

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Subject

This Nortel Technical Publication (NTP) serves as the Release Notes for CC MIS Release 6.0. This document should be used in conjunction with other NTPs issued in support of CC MIS.

Applicable systems

This document applies to systems running the CC MIS server and client software.

Intended audience

This NTP is intended for individuals who are interested in the features and capabilities of the Call Center MIS application.
Conventions

How to use this book
This NTP provides descriptive information about CC MIS. It contains the following information:

- Chapter 2, “About this document” — Provides an overview of this book and lists the documentation related to the product.
- Chapter 4, “Software release history” — Provides a description of the features that were added or changed throughout the software releases.
- Chapter 5, “Installation overview” — Provides a brief overview for the installation of the CC MIS server and client software.
- Chapter 6, “Fixes” — Provides a list of solved Change Requests (CRs).
- Chapter 7, “Known problems” — Presents any known problems within the software release.

Related information

NTPs
For more information on CC MIS, refer to the following NTPs which contain additional information to supplement this document.

- CC MIS System Description (297-2671-150)
- CC MIS Getting Started Guide (297-2671-175)
- CC MIS Installation and Maintenance (297-2671-545)

Online
To access Nortel documentation online, click the Technical Documentation link under Support on the Nortel home page:

http://www.nortel.com/

CD-ROM
To obtain Nortel documentation on CD-ROM, contact your Nortel customer representative.
Chapter 3

Introduction

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Type of release

CC MIS Release 6.0 ports the CC MIS software to the Linux operating system. In Release 6.0, CC MIS is a software solution in which CC MIS Release 6.0 software operates on hardware that is supplied (and maintained) by the customer. This hardware is also known as platform vendor independent (PVI) hardware.

CC MIS server

The CC MIS server must be running Red Hat Enterprise Linux Version 3. At this time, only the English version of the operating system is supported.

Nortel ensures that the CC MIS application is compatible with the latest Red Hat Enterprise Linux operating system updates.

CC MIS clients

Each CC MIS client must run one of the following operating systems:

- Windows XP Professional
- Windows 2000 Professional
- Windows NT

**ATTENTION**

Nortel recommends the use of the Windows XP Professional or Windows 2000 Professional operating systems.
The CC MIS Software CD-ROM for Release 6.0 includes the following:

- CC MIS server application software
- CC MIS client application software
- CC MIS NTPs
- Preinstallation script (for server installation)
- Adobe Acrobat Reader 5.0.5 (for viewing NTPs)

Note: Adobe Acrobat Reader is required to view the NTPs on the CC MIS Software CD-ROM. Version 5.0.5 of the Acrobat Reader software is included on the CD-ROM.
Optional CC MIS features

The following features are optional purchases. This document or related CC MIS documents address these features. Verify with the distributor that your system is equipped with one or all of the features.

- Multiple Partitions
- Multiple Data Links
- Language Options (French and Spanish)
- Link Redundancy
- Terminal Capacity
- Networking
- SNMP
Chapter 4
Software release history

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Introduction

This chapter describes the software changes that have occurred from Release 3.0 to Release 6.0. It includes the changes made or features added in the indicated release.
Release 3.0

The following features were added and enhancements were made in Release 3.0.

- Multiple Tenant Partitions (This is a purchasable item.)
- Changes in Configuration Control screens
- Configuration Updates moved to the Maintenance Interface
- Permanent Agent Detail Window
- Enhanced Agent Status Window
- Supplemental DN Pegging
- Avg Not Rdy Formula changed
- Support for 2 GB hard drive
- Maintenance printer can use the parallel port
- Disk Mirroring (Implemented using a RAID hardware.)
- Posns Waiting and Agents Available
- User documentation enhancements

The following features were added in Release 3.0 and are standard with Release 4.0.

- Automatic Position Reassignment (APR)
- BCS35 Support
- enhanced agent and group status
- shift and 24 hour real-time statistics
- increased report definitions (up to 500)
- Windows based Configuration Control screens
- One Partition
Release 3.1

The following changes were made and enhancements were added in the CC MIS Release 3.1.

- Employee ID — The Employee ID field has been added to the Agent Definition screen. This field allows you to enter up to a 14 character employee ID for each agent. This employee ID can then be used as a key in custom tabular and graphical reports. The Employee ID field also appears in the Agent Database Report.

- Group Ordering — This feature allows supervisors to set a preference for the order in which Automatic Call Distribution (ACD*) Groups are presented in reports and real-time (Queue Statistics and Agent Status) displays.

- Flexible DN Formatting — This feature allows the DN formatting to be determined by a customer-defined template. Leading zeros are no longer removed from the DNs that are less than 10 digits.

- Real-time Display Refresh Enhancements — Real-time displays (24-hour and Shift) are no longer initialized to zero when CC MIS is shutdown. These statistics are restored immediately following system start-up. (This only applies to controlled shutdowns.)

- Updates to statistics names and headings.
Release 3.2

The following features were added and enhancements were made in Release 3.2.

- Simple Network Management Protocol (SNMP) feature — The SNMP feature was added to the Supervisor and Maintenance Interfaces. This feature allows managers to view information about network components. This is a purchasable option.

  **Note:** Due to the technical nature of the SNMP capability, a background in network management and the SNMP protocol is recommended for administrators and users of this feature.

  The SNMP feature is accessed in the Maintenance Interface from the Configuration menu. In the Supervisor Interface, the feature is enabled in the Privilege Level Definition window and is accessed by the supervisor using the Displays / Alarms option from the CC MIS Main menu.

  This is the starting point for all SNMP-related activities at the partition level, including the following:

  - alarm definition and maintenance
  - SNMP community setup and maintenance
  - SNMP MIB file transfer

- Forced Agent Timers — Agent timers were added for agents in a forced state in the Agent Status screen.

- Modified Admin screens

- Enhanced user documentation

- Enhancement to Spectrum Data — Prior to Release 3.2, spectrum data was normalized and did not always add correctly. Starting in Release 3.2, the spectrum data is no longer normalized.

- Two New System Reports — Alarm Definition and Schedule Definition database system reports.
- Enhancement in display of ACD Group Names in screens and reports
- New ACD-DN key fields (AGT ID and AGT NAME)
- Network Time Protocol — Support has been added to allow administrators to specify reliable time servers for the CC MIS system.
Release 3.3

The following features were added and enhancements were made in Release 3.3.

- Support for French
- Enhancement to Walkaway Code Treatment
- Fixes for reported problems
Release 4.0

The following changes were made and enhancements were added to CC MIS in Software Release 4.0:

- Corrections for problems reported in CC MIS Releases 3.1 and 3.2.

Notes:

1. Text Interface has been removed and is no longer supported.
2. Graphic reports must be sent to PC-attached

Maintenance Interface

General changes to the Maintenance Interface include:

- Physical Node Status — The Physical Node Status has been added in View System Monitor to assist the user in diagnosing CC MIS networking problems.
- System Identification — Maintenance menus now include the system name in the title, to make system identification easier.
- Login Support — The new Physical Network Login screen provides access for logging into other nodes in the CC MIS physical network.
- Backup and Restore — The Backup and Restore functions were modified to reflect the change in the name of the System Database to the Definitions Database.

The changes made to Configuration section of Maintenance include:

- Networked CC MIS Configuration — Two new customer options were added to the install tape to indicate whether or not a physical node is a Network Node and the maximum number of Network Access Partitions (NAPs) that may be configured on the node.
- Network Name — This field was added to System Configuration for defining the network and to provide network security.
New Configuration Commands — The Configuration screen was updated to include the Physical Network Configuration command.

Physical Network Definition — The nodes that comprise a CC MIS physical network are defined using the new Physical Network Configuration screen.

Switch Link Configuration — The maximum number of X.25 links was increased to four links. The Connection to Switch parameter was added to the link definition to indicate whether a live link uses modems or direct connection to connect to the switch. This parameter does not apply to simulator links. A new field was added to allow you to synchronize CC MIS system time to the DMS* switch time. A time zone adjustment field was also added to make necessary adjustments for time zone differences.

Network Access Partitions (NAP) — The Partition Configuration supports Network Access Partition (NAP) configuration. The NAP must be defined on a network node. The number of NAPs allowed is controlled by the value entered in the Maximum NAPs field. NAPs are used to access local partitions in a CC MIS network.

Note: Network Access (NAP) partitions can only be set to Precut and Product modes.

Virtual Network Configuration — The Virtual Network Configuration screen was added to define the partitions/nodes that comprise a virtual network associated with a NAP.

Master Privilege Definition — Supervisor privileges may be restricted on a per partition basis using the new Master Privilege screen and a master supervisor privilege definition.

Configuration Reports — Several configuration reports were added and existing ones updated to reflect the changes to the Configuration section. The new or modified reports include:

New:
- Master Privilege Definition
- Master Privilege Override
- Virtual Network Configuration
- Physical Network Configuration
Modified:
- Partition Options
- Partition Configuration
- Port Allocation
- System Configuration
- Switch Link Configuration
- Storage Calculator

**Supervisor Interface**

Changes to the Supervisor Interface include:

- **Networked CC MIS Real-Time Statistics** — Changes to load management and real-time statistics and screens to allow for the separate or consolidated viewing of data from all partitions in a CC MIS network. This enhancement also allows network supervisors to perform the same load management functions as local supervisors. The Configuration Control screens display a Node field and the Insert windows allow for selection of a node, then the insertion of groups on that node.

- **Networked CC MIS Historical Statistics** — Reporting capability has been enhanced to allow the generation of reports that contain data from multiple CC MIS nodes. This network enhancement is available to supervisors who are logged in to a NAP.

- **Windows completion** — All screens (remaining emulation mode windows) in the CC MIS Supervisor Interface have been updated into Windows-based screens.

- **Enhanced Wallboard support** — The wallboard interface has been enhanced to support multi-line messages, multi-color characters, multi-threshold variables within messages, and visual and audible alarms. The ability to set audible alarms was also added to the wallboard interface. These enhancements can be used on the new Spectrum Wallboards available for Release 4.0. Three wallboard models supported in Release 4.0 are: Nortel (Spectrum), Daktronics, and Generic. Nortel wallboards may also be attached to an available serial port on a supervisor PC.
Enhanced capabilities for Daktronics wallboards — The following enhancements were made for the Daktronics wallboards:

- new presentation modes
- increased message lengths
- messages that are too long will wrap and then scroll onto the wallboard display.

Generic Interface — A generic interface has been provided for wallboards other than Daktronics or Nortel. This interface allows other wallboard vendors to obtain real-time information for display on their equipment. This is configured through the Maintenance Interface as a “generic” wallboard. This interface formats the output in a VT220 compatible style using a minimal set of terminal escape sequences.

Agent location by Login ID — Provides a Find command in the agent status display to locate an agent or position in the display.

Multiple DN key support — CC MIS now correctly reports on positions with up to two simultaneous secondary DN calls active.

Additional Shift and 24-hour statistics — Several new Shift and 24-hour statistics were added to the CC MIS product. The new statistics are:

- MAX TOF DELAY
- MAX ANS DELAY
- MAX ABD DELAY
- TOT TOF DELAY

Walkaway Statistics by Agent or ACD group — The walkaway statistic has been enhanced to allow walkaway statistics to be stored by agent or by ACD group. This enhancement also effects Walkaway reporting by allowing you to specify an agent or agent(s) to be included in the Walkaway report. (The new settings are available on the Storage Calculator screen.)

Walkaway Code Treatment — A new field was added to the Walkaway Code Definition window that allows you to specify how the code is pegged and reported. Options on the menu are: Not Ready and Walkaway.
Flexible Interval Definition — The configurable intervals feature allows the changing of interval length for each hour of the day on a per partition basis. Interval lengths available are: 5, 10, 15, 30, and 60 minutes. Data collection can be turned off for any hour of the day by entering an interval length of 0 minutes.

Report Services — The Reporting feature in CC MIS has been enhanced to allow reports to be sent to electronic mail addresses or to be faxed. These enhanced options are in addition to printing to a file, or directing the report to a printer. (Note: The e-mail and fax capabilities require Microsoft Exchange™.) A Report Status Logs window was added to allow you to view the status of all requested reports and to allow cancellation of pending reports.

Printing of Graphic Reports — Graphic reports can only be printed to PC-attached printers.

Text Interface — The Text Interface is no longer supported.

Increased Maximum Capacities — The maximum number of groups was increased to 512 and the maximum number of agents was increased to 5,000. The maximum number of ACD-DNs is 8,704 and the number of agent definitions is 9,999.

Increased Call Rates — Call rates (BHCA) for different processors in Release 4.0 are: 100,000 for 50 MHz, 48,000 for 33 MHz, and 35,000 for 25 MHz.

Automated upgrades for supervisor PCs — PCs running the 3.2 or higher can be upgraded by downloading the upgrade from their VME host. This upgrade is automated in that no diskette is required and the system prompts you with the choice to upgrade to the new version.

Removal of Network Time Protocol — The Network Time Protocol was removed and the ability to keep CC MIS synchronized with the switch was added.

Color Customization — On systems that support more than 256 colors, the Color Maps in the Color Selection dialogs for both printers and displays will allow customization of the colors. The Color dialog is accessed by clicking on the Customize button that will be displayed on the Color Selection window.
The following interface has been removed in Release 4.0:
- Text Interface — The Text Interface is no longer supported.

**Key features added in Release 4.0**

Below are some key features found in the Supervisor Interface that were added in Release 4.0 and are present in CC MIS Release 5.0.

Starting in Release 4.0, you can locate and agent or position using the View > Find command on from the Agent Status window. The Find Agent-Position dialog is shown in Figure 1.

**Figure 1: Find Agent-Position dialog**

The status of two DN keys can be viewed. This option is activated using the Preferences > Dual DN Status option. When activated, a second timer for the second DN is displayed (see Figure 2).

**Figure 2: Dual DN**

<table>
<thead>
<tr>
<th>ACD GROUP</th>
<th>POSN</th>
<th>STATUS</th>
<th>DURATION</th>
<th>LC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Service</td>
<td>1178</td>
<td>WAITING</td>
<td>01:39</td>
<td>11:14:21 Pi</td>
</tr>
<tr>
<td></td>
<td>1179</td>
<td>ACDH / DNIH</td>
<td>02:08 / 00:27 / 00:22</td>
<td>11:14:21 Pi</td>
</tr>
<tr>
<td>Investments</td>
<td>1180</td>
<td>WAITING</td>
<td>02:53</td>
<td>11:14:21 Pi</td>
</tr>
</tbody>
</table>
After a report is requested, the status of the report can be viewed or the pending report cancelled using the Report Status Logs window (see Figure 3). This window is accessed from the Reports menu on the CC MIS Main window.

Figure 3: Report Status Logs

<table>
<thead>
<tr>
<th>Request Time</th>
<th>Status</th>
<th>Type</th>
<th>Report Name</th>
<th>Destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>03/24/97 6:35:35 AM</td>
<td>Complete</td>
<td>Print</td>
<td>Julie_walk</td>
<td>Desk-Ja...</td>
</tr>
<tr>
<td>03/24/97 9:49:53 AM</td>
<td>Complete</td>
<td>Print</td>
<td>PreviewReport</td>
<td>Desk-Ja...</td>
</tr>
<tr>
<td>03/24/97 3:35:43 AM</td>
<td>Complete</td>
<td>Print</td>
<td>PreviewReport</td>
<td>Desk-Ja...</td>
</tr>
<tr>
<td>03/21/97 7:15:37 PM</td>
<td>Generating</td>
<td>Print</td>
<td>TABULAR FORMAT DATABASE REPORT</td>
<td>HP Les...</td>
</tr>
<tr>
<td>03/21/97 7:15:22 PM</td>
<td>Complete</td>
<td>Print</td>
<td>INTERVAL CONFIGURATION DATABASE REPORT</td>
<td>HP Les...</td>
</tr>
<tr>
<td>03/21/97 3:42:28 PM</td>
<td>Complete</td>
<td>Print</td>
<td>ACD Group by Line of Business Code Report</td>
<td>Desk-Ja...</td>
</tr>
<tr>
<td>03/21/97 3:32:20 PM</td>
<td>Complete</td>
<td>Print</td>
<td>INTERVAL CONFIGURATION DATABASE REPORT</td>
<td>HP Les...</td>
</tr>
<tr>
<td>03/21/97 3:27:46 PM</td>
<td>Complete</td>
<td>Print</td>
<td>INTERVAL CONFIGURATION DATABASE REPORT</td>
<td>HP Les...</td>
</tr>
</tbody>
</table>
Interval Configuration allows intervals for each hour of the day to be configured in the Maintenance Interface. The intervals used by your partition can be viewed while in the Report Parameters Definition window by selecting the Reports > Intervals command.

The Interval Configuration dialog is displayed (see Figure 4). Intervals that are allowed in Release 4.0 are: 5, 10, 15, 30, and 60 minutes.

**Figure 4: Interval Configuration**

<table>
<thead>
<tr>
<th>Interval Configuration</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0:00 - 30</td>
<td>12:00 - 30</td>
</tr>
<tr>
<td>1:00 - 30</td>
<td>13:00 - 30</td>
</tr>
<tr>
<td>2:00 - 30</td>
<td>14:00 - 30</td>
</tr>
<tr>
<td>3:00 - 30</td>
<td>15:00 - 30</td>
</tr>
<tr>
<td>4:00 - 30</td>
<td>16:00 - 30</td>
</tr>
<tr>
<td>5:00 - 30</td>
<td>17:00 - 30</td>
</tr>
<tr>
<td>6:00 - 30</td>
<td>18:00 - 30</td>
</tr>
<tr>
<td>7:00 - 30</td>
<td>19:00 - 30</td>
</tr>
<tr>
<td>8:00 - 30</td>
<td>20:00 - 30</td>
</tr>
<tr>
<td>9:00 - 30</td>
<td>21:00 - 30</td>
</tr>
<tr>
<td>10:00 - 30</td>
<td>22:00 - 30</td>
</tr>
<tr>
<td>11:00 - 30</td>
<td>23:00 - 30</td>
</tr>
</tbody>
</table>

Wallboards can now be attached to the Supervisor’s PC (known as PC-attached wallboards). Wallboards supported in Release 4 include: Nortel, Daktronics, and generic.

**Note:** Only Nortel wallboards can be connected as PC-attached wallboards.

Use the Session > Setup > Wallboards command to access the Wallboard Setup window (see Figure 5).
Figure 5: Wallboard Setup

Select the port on this computer to which the wallboard(s) are attached:

- (None)
- COM1
- COM2
Release 4.1

The following changes were made in Release 4.1.

- Support for the PowerPC (AIX) platform was added.
- The Switch Code field was added to Switch Link Configuration to handle duplicate DNs that are datafilled on multiple switches in a private network when using the CC MIS Networking feature.
- Added support for PVC (Permanent Virtual Circuit) X.25 connections to the switch for increased link throughput. These changes allow CC MIS to connect to the switch by means of the new IOM-based high speed X.25 interface. (The following port parameters were added for X.25 links: Line Type, Clock, and Virtual Circuit Type. These changes provide enhanced support for direct X.25 connections to the switch and to the IOM-based high speed (512 KBps) X.25 switch interface.)
- An Analyze Configuration function was added to the storage calculator. Pressing this function key allows the storage calculator to analyze some of the values for your system based on data received from the switch and your system configuration.
- Enhanced the direct switch connection capability to allow a clock rate to be specified. Note that on the PowerPC, the DTE/DCE setup for a port is determined from the hardware and cannot be changed in the Switch Link Configuration screen as it can on the 88K platform.
Release 5.0

The following changes were made in Release 5.0.

- Enhanced handling of ACD Re-Enqueued Calls adds the following statistics to the formulas list in the Report Formula Definition window. These statistics will appear in the appropriate statistics group formulas list:
  - Abd After RENQ
  - Num RENQ Routed
  - RENQ Via Force Out
  - RENQ Via Not Ready
  - Num RENQ Rerouted

These formulas are available under the appropriate statistics groups in the Report Formula definition window (see Figure 6).

Figure 6: Report Formulas window
- RENQ fields were added to the Configuration Control - Special Routing window and to the Configuration Control - Change Orders > Special Routing window. These fields are described below:
  - Re-Enqueue Time — The maximum amount of time in seconds a re-enqueued call remains queued before being re-routed to the re-enqueue route (Range: 0 - 1800).
  - Re-Enqueue Route — This is the re-enqueue route that consists of table (Values: “OFRT”, “IBNRTE”) and index (Range: 0 - 1023).
  - Re-Enqueue Audio Table — Audio group used to provide re-enqueue announcement to callers prior to re-routing the call to the re-enqueue route (Range: 1 - 512).

- The BCS 43 switch protocol version is now supported and is required to use the above listed features.

- The Num ACD Hold Acts statistic was added to the Report Formula Report Formula Definition window and is displayed in the formulas list under the appropriate statistics group. This new statistic is now used in the “Average time spent on hold” standard formula instead of number of calls answered. Thus any report using this standard formula could show lower average hold times.

- Access to additional OFRT tables (OFR2, OFR3, and OFR4) using the Config > View > OFRT Tables sub-menu (see Figure 7).

**Figure 7: Config > View > OFRT Tables sub-menu**
- Access to additional IBNRTE tables (IBNRT2, IBNRT3, and IBNRT4) using the Config > View > IBNRTE Tables sub-menu (see Figure 8).

**Figure 8: Config > View > IBNRTE Tables sub-menu**

- The capability of changing route entries to the new tables was added to the Groups > Time Overflow, Groups > Overflow Targets, and Groups > Special Routing windows in Configuration Control.

- Entries for the new IBNRTE and OFRT tables can be included in the System Report > Configuration Report.

- Addition of the DHCP function which allows CC MIS to be connected to a LAN without the requirement of entering an IP Address. This feature makes use of the Session > Setup > Communications command. This screen allows you to define several connection profiles and allows you to start a new session of CC MIS with the profile of your choice. (Multiple sessions connected to different partitions are permitted). When defining a profile, the connection type is selected, the Host IP address is specified, and the partition name and password are entered. See Figure 9.
Figure 9: CC MIS Communication Setup

CC MIS allows LAN connections to the specified host and partition without the IP address of the Supervisor’s machine being defined. Available connections can be selected from the Connection Type drop-down menu. Specify the type of connection, then the associated fields displayed for the connection selected.

- Enhancements to the Session > Setup > Communication screen.
- CC MIS Main window was enhanced to display defined clients (see Figure 10).

Figure 10: Defined clients
Agent Trace option was added to the Admin > Agent Definition screen (see Figure 11).

**Figure 11: Agent Definition**

![Agent Definition](image)

- Agent Trace field
- An Agent Trace Event Log Report is now available from the Report parameters window (see Figure 12).

**Figure 12: Agent Trace Report**

<table>
<thead>
<tr>
<th>Agent Trace Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily Report</td>
</tr>
</tbody>
</table>

**Training 2**

| Days: All |

<table>
<thead>
<tr>
<th>Agent</th>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGENT</td>
<td>TIME</td>
<td>ACTIVITY</td>
</tr>
</tbody>
</table>

**Day: 07/10/00**

<table>
<thead>
<tr>
<th>1001</th>
<th>Group 555-011-0000 Subgroup 1100 Position 1101</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:58:04</td>
<td>ACD Call Hold</td>
</tr>
<tr>
<td>14:58:05</td>
<td>ACD Call Resume</td>
</tr>
<tr>
<td>14:58:05</td>
<td>ACD Call Release</td>
</tr>
<tr>
<td>14:58:14</td>
<td>ACD Call Answer</td>
</tr>
<tr>
<td>14:58:41</td>
<td>ACD Call Hold</td>
</tr>
<tr>
<td>14:59:01</td>
<td>Transfer In SDN to Agent</td>
</tr>
<tr>
<td>14:59:01</td>
<td>From Group 555-001-0000 Position 1000</td>
</tr>
<tr>
<td>14:59:01</td>
<td>DNI In ANSWER</td>
</tr>
<tr>
<td>14:59:01</td>
<td>DNI In Release</td>
</tr>
<tr>
<td>14:59:01</td>
<td>ACD Call Resume</td>
</tr>
<tr>
<td>14:59:01</td>
<td>ACD Call Release</td>
</tr>
</tbody>
</table>
- Client Management was added to the Admin menu. Selecting Admin Client Management displays the Client Management screen (see Figure 13).

**Figure 13: Admin > Client Management**

Enhancements made to the CC MIS Client Services tab window (Session > Setup > Client Services). Selecting the clients under the
June 2005 Software release history

Services tab causes the clients to be displaying on the CC MIS Main Window (see Figure 14).

**Figure 14: CC MIS Client Services Setup**

![CC MIS Client Services Setup](image)

- Wallboard “Quick Messages” can now be sent from the Wallboard Message Definition and Wallboard Run Table windows (see Figure 15).

**Figure 15: Wallboard Quick Message fields**

![Wallboard Quick Message fields](image)
- Canadian French and Latin American Spanish languages are now supported in addition to English in Release 5.0 (see Figure 16).

**Figure 16: Language Options**

- Keycodes are now used to activate optional system features. A prompt to enter a keycode will appear whenever a system is upgraded from 3.x or 4.x to 5.x, or when 5.x is installed on a new system.

- A method for connecting Windows client PCs to the system over a LAN allows PCs configured to use DHCP to access the CC MIS host. This same feature allows multiple concurrent Windows sessions to be used to access different partitions on the same CC MIS host.

- An Agent Detail Trace report has been added, allowing detailed agent activity to be captured for selected agents.
Maintenance Interface

The following changes were made to the Maintenance Interface in Release 5.0:

- Two additional fields were added to the Storage Calculator (Agent Trace Data and Disk Space for Agent Trace) in the CC MIS Maintenance Interface.
- Terminology change on the Partition Configuration screen in the Maintenance Interface (LAN Terminals changed to Static LAN Terminals).
- The Key Code feature was added to allow customer software to be upgraded remotely using a key code.
Release 5.1

The following changes were made and enhancements were added in CC MIS Release 5.1. (Release 5 features require BCS43.)

Note: In CC MIS 5.x a supervisor terminal can run multiple sessions of CC MIS, with each session being connected to a different partition. This is accomplished by changing the IP address in the Communications Setup window prior to starting a new session.

Supervisor Interface

The following changes were made to the Supervisor Interface in Release 5.1:

- A feature was added that allows reports to span across midnight (for both interval and shift). Shifts can be defined to span across midnight. The Shift Definition screen allows shifts to be specified across midnight and the Report Definition screen allows interval and shift ranges to be specified which span midnight.

- A DN masking option was added to allow masking of DN in Real-time and reports. This is entered in the Customer Options screen.

- A Subgroup Detail screen was added to Agent Status. This screen is displayed from the Agent Status screen by right clicking a subgroup in the Navigator window.
A search feature was added that allows the finding of an agent by name or ID. A complete name must be used. This feature is implemented on the Find dialog.

The Wallboard Run Table was modified. The new screen is shown in Figure 18.

Figure 18: Wallboard Run Table

A Drag and Drop load management was added to the Agent Status screen. This allows you to quickly reposition agents to different subgroups in the Navigator pane. This feature is on the Agent Status screen.

Note: Position Reassignment privileges are required to use this feature.
LAN wallboard support was added to allow the use of wallboard connected to the LAN (no terminal server required). This feature requires new LAN-enabled wallboards. The supervisor privilege level must include both the Wallboards and the Client Management privilege options. The feature is implemented on the Wallboard Management screen (see Figure 19 on page 46) that is displayed when the Wallboard Management option is selected from the Displays menu on the CC MIS Main window.

**Figure 19: Wallboard Management**

![Wallboard Management](image)

An Agent List feature was added to allow supervisors on local partitions to create lists of agents for use in Reports. This feature is entered on the List Definition screen.
The Navigator Pane was added to the Agent Status screen. The new Agent Status screen with the Navigator Pane is shown in Figure 20.

**Figure 20: Agent Status screen – Navigator pane**

An enhancement was made to the Agent screens that allows the supervisor to Hide Spare positions (that is, to choose whether spare positions are displayed). This option is selected from the Agent Status screen.

**Maintenance Interface**

The following changes were made to the Maintenance Interface in Release 5.1:

- Enhancements were made to allow multiple time zones per CC MIS node.
  
  **Note:** Time zones are entered on the Partition Options screen.

- A TCP/IP switch link connection was added for LAN connection from the switch to CC MIS. This link is specified on the Switch Link Configuration screen.
Release 5.2

The following changes and enhancements were made to CC MIS in Release 5.2:

- A data access option group was added to privilege level definition along with two options that can be used to control supervisor access to agent identities and agent performance information.

- The ability to create agent lists was extended to be supported from Network Access Partitions (NAPs).

- The list definition capability was extended to allow creation of lists of walkaway codes, line of business (LOB) codes, and subgroups for use in reports parameters. These lists can be used when defining report parameters which contain the key fields which reference these items.

- The ability to define agents through Network Access Partitions (NAPs) was added; the actual agent definitions remain in the local partitions associated with the NAP. In order for NAP supervisors to have access the agent definition, they will need to have the agent definition option enabled in their associated privilege definition. The capability allows a NAP supervisor to manage the agent definitions which reside on each of the associated local partitions.

- The capability to specify how lists affect sorting of reports was added. The report information can be produced in the same order as the list, or the report information can be produced in natural order.

- Administrative modes are no longer limited to one supervisor at a time. Any number of supervisors can be editing public definitions at any given time.

- Tooltips have been added that provide ACD group name or number when the cursor is “hovered” over an ACD group in the real-time display modes. (This feature does not apply to the Navigator window in the Agent Status Display.)

- Tooltips have been added to the Queue Statistics Display and Agent Status Display such that when the mouse is “hovered” over ACD groups,
the ACD Group name or Primary DN is displayed (whichever is not currently being displayed on the screen).

- The capability to create “data only” reports was added. This option creates reports with no total lines and complements the previously available capability to create a “totals only” report.

- The ability for supervisors to send short one-line messages to other logged-in supervisors has been added. In order to send messages, a supervisor must have the messaging option (a new supervisor option in privilege level definition) enabled. Supervisors without this option enabled may still receive messages from other supervisors and reply to those messages.

- The Agent Status Display screen has been enhanced such that when an agent enters a walkaway code (that has been defined in the Walkaway Definition screen to be treated as a Not Ready state), the descriptor for this code can be displayed as part of the status field. This capability is controlled by a new Display Not Ready Codes command on the Preferences menu.
Agent data access control to allow or not allow supervisors to access detail information for agents can be controlled through two new data access options in Privilege Level Definition: Agent Identity and Agent Performance (see Figure 21). These access options affect access to agent information by supervisors through Agent Status, reports, and configuration control. Supervisors can be limited from accessing agent names or IDs by disabling the Agent Identity option or agent performance information (real time or historical) by disabling the Agent Performance option.

Figure 21: Privilege Level Definition
In CC MIS Release 5.1, the Agent List feature was added for local partitions to create lists of agents for reports. In CC MIS Release 5.2, the list definition capability has been extended to allow the creation of lists of walkaway codes, line of business (LOB) codes, and subgroups. Additionally, this feature is extended to Network Access Partitions (NAPs) to create lists of agents in the network. The List Definition window has been improved to be more user friendly (see Figure 22).

**Figure 22: List Definition**

![List Definition Window](image-url)
The ability to control whether or not the report will be generated in list order has been added by displaying check boxes when lists are specified in Report Parameter Definition (see Figure 23).

Figure 23: Report Parameter Definition
Release 6.0

Support for the PowerPC and RISC platforms have been discontinued in CC MIS Release 6.0.

Maintenance Interface

CC MIS Release 6.0 provides the following changes and enhancements:

- Direct X.25 connection to the switch is not supported. Links to the switch must be made using a Nortel Advanced Remote Node (ARN) configured to provide an IP to X.25 bridge. X.25 switch link cannot be configured on Linux systems. Instead, Live TCP/IP switch links and simulator links can be defined.

- Backup to a tape drive is not supported. Instead, a user-specified directory is used to back up CC MIS. The directory can be configured by the user to point to any device that can be mounted as a Linux file system, including an additional hard disk, a Network File System (NFS)-mounted file system, or any other network storage device that can be configured as a file system.

- Printers configured on the CC MIS server will not be used by CC MIS for printing reports generated within a customer partition. The Microsoft Windows printer interface provides a standard interface for printing CC MIS reports. Printing functionality in the CC MIS Maintenance and Administration Interface is directed to the system default printer. The current set of Configuration Reports available within the CC MIS configuration utility can be printed to any client-attached printer, sent to an e-mail address (if sendmail is configured), or saved as a text file on disk.

- With some exceptions, CC MIS allows host names to be entered anywhere an IP address can be entered. The use of host names requires that a name resolution protocol be configured on the server (DNS or NIS).
For more information about the detailed interface changes, refer to
*CC MIS Installation and Maintenance* (297-2671-545).

**Supervisor Interface**

The following changes and enhancements are added to the CC MIS Supervisor Interface in Release 6.0.

- Individual walkaway code thresholds — The Walkaway Code Definition screen is expanded to include an optional code-specific threshold field, allowing different thresholds to be assigned to each walkaway code. This change affects the time at which a position in the walkaway state is highlighted on the agent status display. In previous releases, positions in walkaway state were highlighted based on the single walkaway threshold value associated with the position’s ACD group. This functionality remains as the default in Release 6.0, but provides some flexibility on when a position in the walkaway state enters a highlighted state.

- System Reports to e-mail or file destinations — CC MIS system reports (reports that provide a listing of various CC MIS database tables) can be sent to files on disk or as e-mail messages in the same manner currently used for historical reports.

- Report delimiters for reports saved as files — The Client Services Filing tab allows the specification of a text file to be pre-pended to each report saved to disk. This text in this pre-pended file can serve as a delimiter that can be used for parsing purposes if the report is sent to an external system for processing.

- Use of Windows Installer for CC MIS Client Setup program — The CC MIS Client Setup program no longer uses the InstallShield installation program. Instead, the Microsoft Windows Installer program is used. The operation and use of the setup program remains largely the same; however, the user interface presented in the installation program is slightly different.
- Sending reports as e-mail messages from the server — This feature allows the generation of reports as e-mail messages directly from the CC MIS server without requiring the report to be sent from an e-mail account accessible to one or more CC MIS clients. This feature increases security and also eliminates the need to have a selected CC MIS client running at all times.

**Note:** This feature requires that the Linux Sendmail program be properly configured on the server. This capability is provided to partitions on a partition-by-partition basis through a new setting in the Partition Options screen of the CC MIS Configuration utility.

- Security Banner — The Customer Options screen is changed to add an option for enabling or disabling a security banner dialog box to be displayed either upon successful connection to the server or upon each successful supervisor login. Default text for the security notice is provided, which can then be modified by the customer through the Customer Options screen. The default security banner text is as follows:

```
WARNING! This computer system and network is PRIVATE and PROPRIETARY and may only be accessed by authorized users. Unauthorized use of this computer system or network is strictly prohibited and may be subject to criminal prosecution, employee discipline up to and including discharge, or the termination of vendor/service contracts. The owner, or its agents, may monitor any activity or communication on the computer system or network. The owner, or its agents, may retrieve any information stored within the computer system or network. By accessing and using this computer system or network, you are consenting to such monitoring and information retrieval for law enforcement and other purposes. Users should have no expectation of privacy as to any communication on or information stored within the computer system or network, including information stored locally or remotely on a hard drive or other media in use with this computer system or network.
```
The Security Banner window has OK and Cancel buttons to dismiss the dialog box. Pressing the Cancel button results in the connection or login action being cancelled.

**Note:** A security notice can be provided on the Maintenance Interface by creating a text file named `/etc/motd`. This file, if it exists, is displayed immediately following login of a Linux user but before starting the shell.
Chapter 5

Installation overview

In this chapter

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Installation of the CC MIS client software ......................... 61
Introduction

This chapter briefly describes the installation of the CC MIS Release 6.0 CC MIS server and client software.
Installation of the CC MIS server software

The installation and configuration of the CC MIS server software is fully documented in *CC MIS Installation and Maintenance* (297-2671-545). Refer to this NTP for complete details regarding installation and configuration of the CC MIS server software.

Preinstallation verification

Prior to installation of the CC MIS server software, the target server platform can be checked for suitability by running the “preinstall” script located in the “lnx” directory on the CC MIS Software CD-ROM. The preinstall script is non-invasive; that is, it makes no changes to the target system. The script checks that the target server has all required software packages installed and that appropriate disk partitions are available for CC MIS. If any configuration errors or warnings are detected, the script provides guidance on how to correct the problems. Once any problems are corrected, the preinstall script can be run again to verify that the changes made satisfy the CC MIS installation requirements.

**Note:** It is important to ensure that the preinstallation script completes without any errors. The preinstall script is invoked a second time during installation and causes the installation to abort if any errors are detected.

The preinstall script also provides the system serial number, which is derived from the last 4 bytes of the MAC address of the first network interface card (NIC) in the system. This system serial number is required to generate the unique CC MIS keycode that unlocks the feature set that was purchased for this system.

Refer to *CC MIS Installation and Maintenance* (297-2671-545) for complete details on the requirements for the CC MIS server, preinstallation requirements, and the use of the preinstall script.
Installing the CC MIS application on a server for the first time

Installation of the CC MIS application on a new Linux server must be performed when logged into the server as the “root” user. The installation requires the careful use of several Linux commands to extract the application software from the CD-ROM and execute the supplied installation script. The installation procedure is documented in *CC MIS Installation and Maintenance* (297-2671-545).

A CC MIS keycode is required to complete the installation of the CC MIS software. If the keycode is not available at the time of installation, the CC MIS software is disabled until a valid keycode is installed in the system through the CC MIS Maintenance Interface (using the “Install License Keycode” command on the “System Upgrade Utilities” menu).

Upgrading a server already running CC MIS

An upgrade of the CC MIS server software must only be performed using the “Load New Software Version” command on the “System Upgrade Utilities” menu. Failure to perform the upgrade using this method will result in a corrupted system.

A new keycode is not required for software upgrades unless the major release version of the new software release is higher than the existing software.

Migrating data from older CC MIS systems

It is possible to migrate CC MIS databases from the older CC MIS platforms (PowerPC and RISC) using the Import function on the “Backup and Restore Utilities” menu of the CC MIS Maintenance Interface. This function is new to CC MIS Release 6.0 and requires the source system (the CC MIS machine containing the data to be imported) to be running CC MIS Release 5.2 or later. Refer to *CC MIS Installation and Maintenance* (297-2671-545) for details on importing data.
Installation of the CC MIS client software

Microsoft Windows support

The CC MIS 6.0 client software is supported on the following versions of Microsoft Windows:

Table 1: Supported Versions of Microsoft Windows

<table>
<thead>
<tr>
<th>Windows Version</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows 2000</td>
<td>The professional versions of Windows 2000 and Windows XP are recommended</td>
</tr>
<tr>
<td>Windows XP</td>
<td></td>
</tr>
<tr>
<td>Windows NT 4.0</td>
<td>Service Pack 6a is required.</td>
</tr>
</tbody>
</table>

Types of CC MIS client software installations

The CC MIS client software can be installed on a supervisor terminal (client PC) in one of two ways: per-machine installation or per-user installation.

- When the CC MIS installation program is run by an administrative user, either of these installation types can be performed by selecting either the “Everyone” or “Just me” option buttons that appear in the “Select Installation Folder” window of the installation program.

- When the installation is performed by a user without administrative access rights, only the per-user installation can be performed and no options are displayed in the “Select Installation Folder” window of the installation program.

For more information on the types of CC MIS client software installations, refer to CC MIS Installation and Maintenance (297-2671-545) for details.
Installing from CD-ROM

To install the CC MIS Release 6.0 client software on a Windows PC, simply insert the CC MIS Software CD-ROM in the CD-ROM drive and the installation program should automatically start. If the installation program does not, there are two ways to manually start the installation:

1. Use the Windows Explorer program to open the Win folder on the CD-ROM, then double-click the setup.exe program found in that folder.

2. Select Run... from the Windows Start menu, enter D:\win\setup.exe in the Open box (substitute the correct CD drive letter for “D”), then press OK.

Once the installation program has started, simply follow the prompts to install the CC MIS client software.

Refer to CC MIS Installation and Maintenance (297-2671-545) for detailed information on the software installation. The installation provides additional information regarding the per-machine and per-user types of installations.

Upgrading from CC MIS 3.2 and greater

The installation media is not required for PCs already running Release 3.2 or greater of the Windows-based CC MIS client software. After CC MIS Release 6.0 is installed and configured on the CC MIS server, these PCs can start their current version of the CC MIS client and will be prompted to download and automatically install the upgrade once a connection to the CC MIS 6.0 server has been established.
Chapter 6

Fixes

In this chapter

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Fixes in Software Release 6.0

This chapter contains a list of fixes for CC MIS Release 6.0. Table 2 includes the Change Request (CR) number, and CR title and explanation for issues that have been fixed in Release 6.0.

Table 2: Software Fixes in Release 6.0 (Part 1 of 3)

<table>
<thead>
<tr>
<th>CR Number</th>
<th>CR Title and Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q01077871</td>
<td>Real-time stats updated for wrong group if posn handles call from previous group</td>
</tr>
</tbody>
</table>

If a position is moved to another group while a call is either presented or active on it, the real-time statistics for the position's current group are updated instead of the statistics for the actual group in which the call was received. This can result in incorrect calls in queue and service level statistics for the ACD group for which the call is being handled.

Changes have been made to internal data structures and messaging to allow the system to peg statistics against the ACD group from which the position answered the call rather than against the group to which the position is currently assigned. This may mean that the real-time displays could show a position in ACD state for a call that came into an ACD group that is different from the position's current ACD group. However, this situation lasts only for the duration of the call that was received by the position at the time the position was reassigned to the new group.
Q01107868  Enhanced walkaway does not reset Agent Status Display duration timers

The ACD Enhanced Walkaway feature allows an ACD agent to change the walkaway reason without coming out of the Not Ready state. The Enhanced Walkaway feature builds on the Walkaway feature. The Walkaway feature allows you to use a three-digit code to describe the reason for not being ready.

To change the walkaway reason, perform the following tasks:

1. Dial an access code from a secondary directory number (DN).
2. Indicate the reason for not being ready using a three-digit code.

The agent status duration timers do not reset when the screen updates to a new walkaway code using this feature. The duration time continues to increase when the status indicates that a new walkaway code has been entered.

The software has been updated to reset the duration counters whenever a new walkaway code is entered, even if the position is already in the walkaway state.
Scope filtering of Agent Event Log reports shows misleading information

When agents are moved among subgroups and the event log reports are run with a restricted scope, misleading information can be displayed in the reports due to the fact that events occur while the agent is outside the scope of the report and these events are not accounted for in the report statistics. For instance, if an agent moves from subgroup 1000 to subgroup 1001 and then back again a short time later, then any report run with a scope that is restricted to subgroup 1000 appears to show complete information; however, the report is missing the details for the agent while in subgroup 1001.

Additional records are created in the agent event log database file that provide information about agent moves between subgroups. These records appear in the agent event log reports when an agent moves out of or moves in to the scope of the report as follows:

- A “MOVE OUT” record indicates that the agent moved out of scope at the time shown in the “END TIME” column. If the agent was active on a walkaway at the time, the walkaway code is displayed.
- A “MOVE IN” record indicates that the agent moved into scope at the time shown in the “START TIME” column. If the agent was active on a walkaway at the time, the walkaway code is displayed.

These new MOVE IN/MOVEOUT records do not appear on the report if the agent stays within the scope of the report.

**Note:** The solution to this problem is only effective when the reports are run on data that was collected following the application of the fix.
Chapter 7

Known problems

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Third-party interaction problems ......................... 69
CC MIS problems

There are no reported problems that have not been fixed in CC MIS Release 6.0.

ACD MIS datastream problems

Table 3 contains a list of reported problems with the ACD MIS datastream.

<table>
<thead>
<tr>
<th>Number (see Note)</th>
<th>Description</th>
</tr>
</thead>
</table>
| BI22175           | Ans & Transferred statistic.  
Protocol issue prevents pegging of answer/abandon messages by source/destination pairs. |
| Q00319972 UT1P710 | CC MIS: Overflow reports are not correct according to the customer. |

Note: The internal problem tracking system was changed during the development of Release 5.2. For problems found externally, both the internal (Clarify) and the external (CSDS) numbers are listed for reference.
Third-party interaction problems

This section describes problems related to the way in which CC MIS interacts with other third-party software. Problems described in this section are outside the control of the CC MIS application.

Microsoft Outlook E-mail Security Update

This section provides information about the interaction of the CC MIS application with Microsoft Outlook software and the Outlook E-mail Security Update; specifically, the manual approval of CC MIS reports generated with the output device configured as an e-mail address.

This information was obtained from Microsoft Corporation. Related web site URL addresses on this issue are listed in the information.

The Outlook E-mail Security Update provides additional levels of protection against malicious e-mail messages. The update changes the way that attachments are handled by Outlook, and the way that Outlook can be controlled programmatically.

For more information about the update and how it may affect the functionality of Outlook, this article includes links to a known-issues list, information for developers, information for administrators, and other information to consider before you apply the update.
History of the Outlook Security Updates
This Outlook E-mail Security Update is the second attachment-handling update for Outlook.

The first security attachment update, the Outlook E-mail Attachment Security Update, requires that you save certain file types to a disk. For additional information about the first security attachment update, view the following Microsoft Knowledge Base article:

Outlook E-mail Attachment Security Update
http://support.microsoft.com/default.aspx?scid=kb;EN-US;235309

The Microsoft Outlook E-mail Security Update changes and extends attachment handling. For general information about this update, and to download the update, view the following Microsoft Office Download Center article:

Outlook 98 Update: E-mail Security

Customizing the behavior of the Security Update
If you are not running Outlook in an Exchange Server environment, or your mail is delivered to a local Personal Folders file (.pst), you cannot configure the settings for the update and you must use the full feature set of the update.

If you run Outlook in a Microsoft Exchange Server environment and your e-mail messages are delivered to a server-based mailbox, your administrator can control specific features that are included with the update. However, if your mail is delivered to a Personal Folders file (.pst), then you cannot configure the settings for the update.

New programmability behavior
When you install the update, programmatic access to Outlook is restricted. If other applications (such as CC MIS) try to use Outlook on your behalf, you receive a warning message and you are prompted to confirm what the other application is doing. You receive warning messages when another application tries to do anything in the following list:
- Send mail on your behalf
- Access your address book
- Access e-mail names from your messages
- Access e-mail information from your contacts or other types of items
- Save your messages to the file system
- Search your messages for content
- Use Simple Messaging Application Programming Interface (Simple MAPI) to send messages without your consent

Additional information can be obtained from the Microsoft Help and Support web site: http://support.microsoft.com/

**Impact of the Security Update on CC MIS**

The new programmatic access restrictions introduced by this security update limit the usefulness of the CC MIS e-mail report generation capabilities by requiring each report to be manually approved on the client PC to which it was directed.