



AS/400 HARDWARE MONITORING AND REPORTING

NYCO Ltd

NEMS/400 - SYSTEM OVERVIEW

Problem Management Centre

- Designed to monitor an AS/400 or iSeries and report problem log faults.
- Automatically receive and redirect messages to field engineers via e-mail, text or SMS.
- The PMC (Problem Management Centre) logs and archives all calls.
- The PMC is installed on a “central site” AS/400 or iSeries.
- Connection is via IP using FTP or an asynchronous modem attached to a V24 port.
- Detailed “archived” problem message logs allow report production based on machine, client, date, history, number of problems etc.

NEMS/400 - SYSTEM OVERVIEW

Client Control System

- Client System is installed at the clients' site.
- Messages are transmitted back to the PMC via IP or an asynchronous modem.
- Unwanted messages are filtered out using advanced filtering parameters.
- Received messages are stored in a message log file.
- Two jobs run in a dedicated subsystem on the client machine, a data queue monitor and transmission monitor.
- All NEMS/400 messages are sent via IP or dial up to the PMC.

NEMS/400 - INFORMATION FLOW

Client AS/400 Problem Created



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NNV061                                NEMS/400                                23/04/02
                                      NEMS Problem Management Centre          09:30:46

View Problem Messages

View: Hide Heartbeats

1=Client Details Enquiry 2=Machine Details Enquiry 5=Display 6=Print

Client      System
Opt Id      Name      Date      Message
- NYCOLTD   NYCOC      22APR02   This machine has not yet been polled
- NYCOLTD   NYCOC      22APR02   No contact since 16/04/02 at 16:37:02
- NYCOLTD   NYCOC      16APR02   PB NO:0206358855 DSR signal connection failed
- NYCOLTD   NYCOC      16APR02   PB NO:0206357859 Line failed. Probable local
- NYCOLTD   NYCOC      16APR02   PB NO:0206358856 Line failed. Probable local
- NYCOLTD   NYCOC      16APR02   PB NO:0206357860 DSR signal connection failed
- NYCOLTD   NYCOC      16APR02   PB NO:0206056568 DSR signal connection failed
- NYCOLTD   NYCOC      16APR02   PB NO:0206056567 Line failed. Probable local
- NYCOLTD   NYCOC      16APR02   PB NO:0206055362 Line failed. Probable local
- NYCOLTD   NYCOC      16APR02   PB NO:0206055361 DSR signal connection failed
- NYCOLTD   NYCOC      16APR02   PB NO:0205839189 Line failed. Probable local
- NYCOLTD   NYCOC      16APR02   PB NO:0205837334 Line failed. Probable local
- NYCOLTD   NYCOC      16APR02   PB NO:0205837333 DSR signal connection fai +

Key: Blue=Not Active Red=Unknown <=Client >=Machine +=Both
F3=Exit F5=Refresh F12=Cancel F14=Change View F15=Current Status F17=Filter
```



Reports Available From Problem Management Centre



Machine Detail



Problem Detail



Rack Configuration

All the generated reports can be sent out as an E-Mail, Text or SMS Message. The engineer can then evaluate and take the required action.

PROBLEM MANAGEMENT CENTRE

The main purpose of the Problem Management Centre is to receive system generated problem log messages and “heartbeats”, from associated AS/400s or iSeries, and to have those e-mailed to the hardware engineers to assess the nature and cause of that particular problem. Client details are logged onto this system along with machine information. Detailed on the following screen is some of the system information that we can receive: -

SYSTEM INFORMATION RETRIEVED BY NEMS/400

- .A system generated problem number.
- .A message ID.
- .The current rack configuration.
- .The problem function.
- .System Reference Code.
- .Machine Serial Number.
- .Date and Time of the problem.
- .First level text.
- .Problem log details.
- .Pertinent hardware and software details.

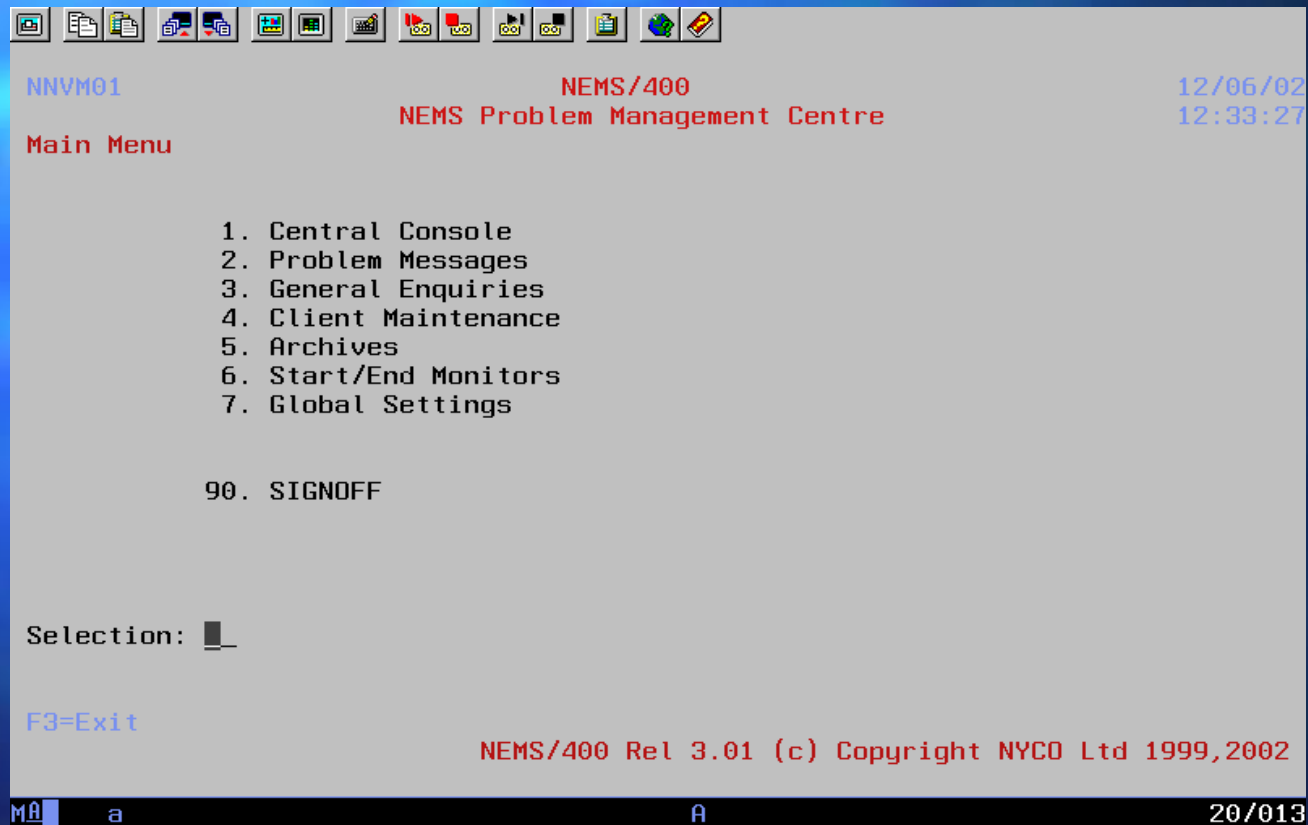
NEMS/400 - CLIENT SOFTWARE

The Client software is as the name suggests installed on the client's AS/400 or iSeries. It is from here that the intervals for the "heartbeat" to be produced and the time intervals that are needed for the monitors to check the data queues and logs are actioned. You will also notice that we have a heading called System Type H/N. NEMS/400 Client software is delivered in 2 "flavours", Hub and Network. The difference between the two is in the sending of the problem message to the main control point. The Client Hub system "dials up" the PMC directly. The Client Network system dials the PMC via the client Hub. This feature is of benefit where the client has multiple machines that are required to be monitored and those machines are linked together.

NEMS/400

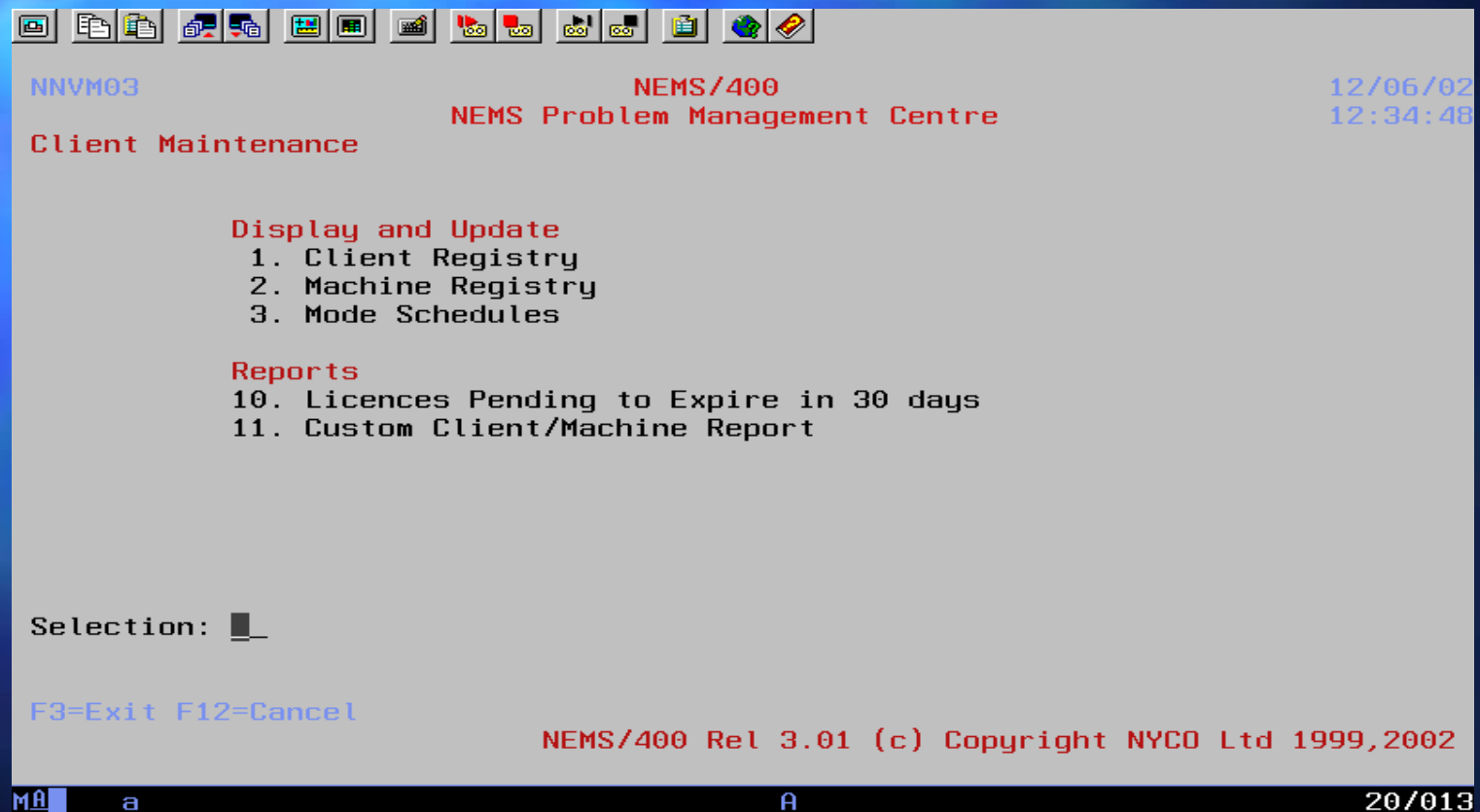
In the following few screens we will show you how to add a client and their machine details to the PMC, and the transmission of a problem message from that client.

NEMS/400 - PMC Main Menu



We select option 4 to begin the client set up.

NEMS/400 - CLIENT MAINTENANCE



To register the client details we select option 1. To register the machine details we select option 2.

NEMS/400 - CLIENT REGISTRY

NNV002 NEMS/400 12/06/02
NEMS Problem Management Centre 12:36:34

Client Registry

2=Work with Client Details 5=Machine Registry

Opt	Client Id	Client Name	Status	Machines
			A or N	Act Not
-	NYCOC	NYCO Ltd	A Active	2 0
-	NYCOD	nyco	A Active	1 0

F3=Exit F6=Add New Client F12=Cancel F13=Machine Registry
NEMS/400 Rel 3.01 (c) Copyright NYCO Ltd 1999,2002

MA a A 08/006

To add a new client, select F6.

NEMS/400 - CLIENT DETAILS

Client details entry screen for NEMS/400.

Top bar: NNV0021 NEMS/400 12/06/02
NEMS Problem Management Centre 12:42:08

Work with Client Details

Client Id.....: 100001
Client Name.....: FRED SMITH & CO.
Client status...: A Active

Street.....: LYON ROAD
Town.....: HARROW
City, County...: MIDDLESEX
Postcode.....: HA1 4WE
Fax Number.....: 020 8834 5678
E-Mail.....: FRED@SMITH.CO.UK

Contact 1 + Tel:	FRED SMITH	020 8834 2345
Contact 2 + Tel:	JOE SMITH	020 8834 2345

Comments.....: CLOSED ALL DAY ON SUNDAY

F3=Exit F10=Update F12=Cancel
NEMS/400 Rel 3.01 (c) Copyright NYCO Ltd 1999,2002

MA a A 06/019

Once all the client details are entered press F10 to update the record.

NEMS/400 - CLIENT MACHINE DETAILS

NNV0031 NEMS/400 13/06/02
NEMS Problem Management Centre 10:21:36

Work with Machine Details

Client Id.....: 100001
Serial number.....: 4441264
System name.....: NYCOC
Machine licence date.....: 12/11/03 Machine status: A Active
Description.....: BIG BLACK BOX
Location.....: COMPUTER ROOM
Comments.....

Last contact.....: 13/06/02 at 9:49 Poll interval (mins): 15

OS/400 Product Code.....: 5716SS1 Processor Model Number....: 150
OS/400 Version-Release Mod: 030700 Processor Feature.....:
Interactive Card Feature.:
Cumulative PTF Level.....: TC97056 Cage Number.....: 9401
Cumulative PTF Status.....: Temporarily applied

F3=Exit F7=Update Licence F10=Update F12=Cancel F15=Display Rack F16=Prt Rack
NEMS/400 Rel 3.01 (c) Copyright NYCOC Ltd 1999,2002

MA b 07/062

Enter all the relevant details about the client's machine. F10 to update the record.
Note that the lower section of the screen will be updated by the system automatically.

NEMS/400

We have now set up our client and the machine that we will be monitoring on the PMC. We should now look at how we set up the software on the client's machine. The next screen will show us the NEMS/400 Client Hub configuration screen. It is from here that the time intervals for the “heartbeat” and data queue monitors are set up. To reach the screen you need to select option 1 from the NEMS/400 Client Hub Main Menu.

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Open	Close	Copy	Paste	Print	About	Dup	Clear	Erase	Attn	Sysreq	Help	Hex
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NNV500 The ITM Group Limited 12/06/02
 NEMS Client Hub 10:43:01

Configure NEMS

Client Id.....: NYCOC Client Name...: NYCO Ltd

Serial Number....: 4441264 Install Date..: 3/01/02

System Name.....: NYCOC Subsystem....: NEMSIITM

System Type (H/N): H Client Hub Data Queue...: NEMS1

Monitor Values

Data Queue Monitoring Frequency.....: 02 (mins)

NEMS Log Monitoring Frequency.....: 02 (mins)

Heartbeat Values

Heartbeat Frequency.....: 001:00 (hhhh:mm)

Heartbeat Start Date.....: 6/03/02 (dd/mm/yy)

Heartbeat Start Time.....: 12:10:00 (hh:mm:ss)

Next Heartbeat

Next Heartbeat Date.....: 0/00/00 (dd/mm/yy)

Next Heartbeat Time.....: 0:00:00 (hh:mm:ss)

F3=Exit F5=Refresh F10=Update F12=Cancel

NEMS/400 Rel 3.01 (c) Copyright NYCO Ltd 1999,2002

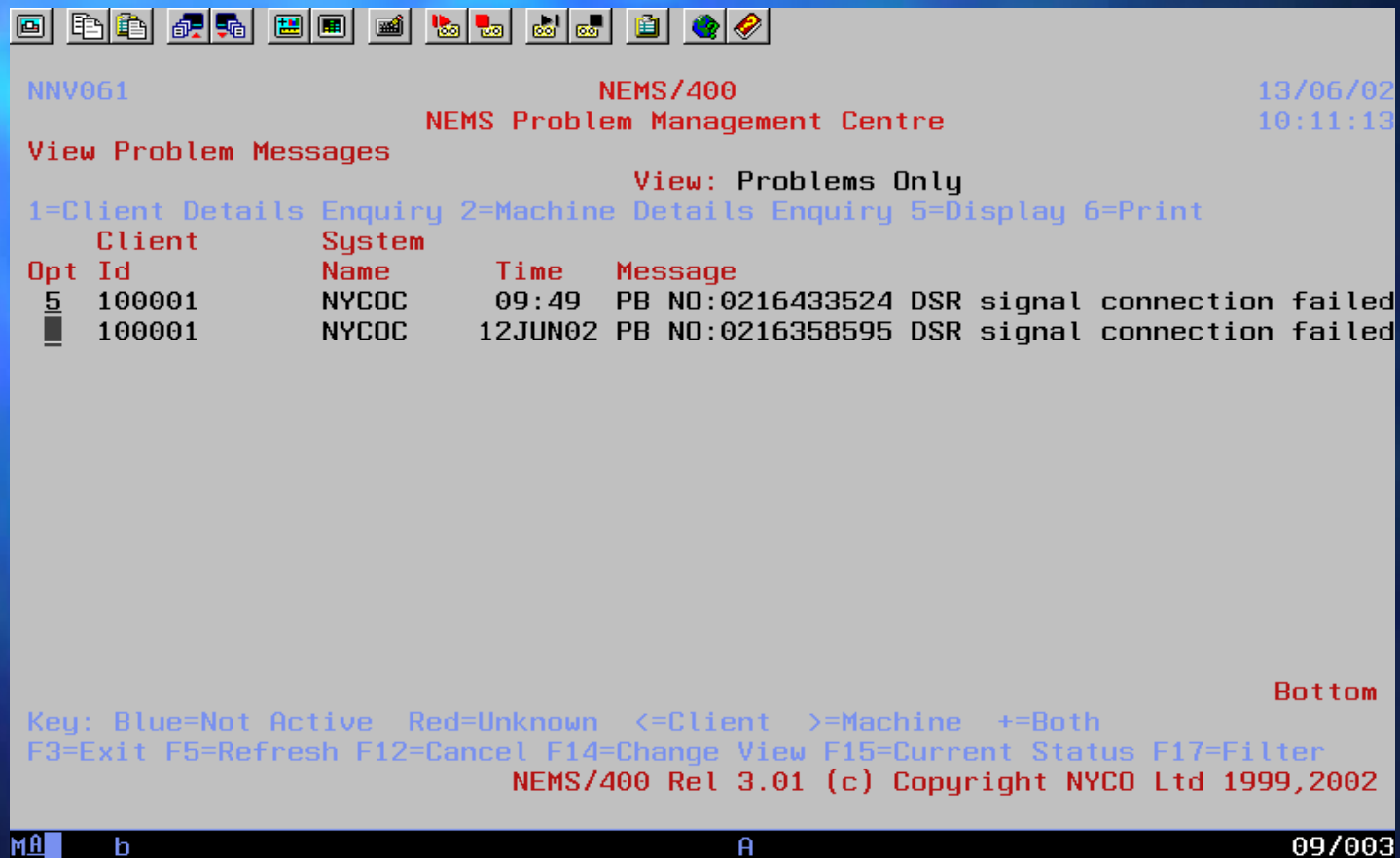
Our client machine configuration screen allows us to create the time scales used for heartbeat messages and the monitoring of the relevant data queues and logs.

NEMS/400

Having completed the set up of both “ends” of NEMS/400, it is now a case of waiting for a problem message to be generated. Obviously from the client’s point of view they hope they will be very few and far between.

Over the next few screens you will be able to see the detailed information that is stored on the PMC relating to the problem message and its machine

NEMS/400 - VIEW PROBLEM MESSAGES



NNV061 NEMS/400 13/06/02
NEMS Problem Management Centre 10:11:13

View Problem Messages View: Problems Only

1=Client Details Enquiry 2=Machine Details Enquiry 5=Display 6=Print

Opt	Client Id	System Name	Time	Message
5	100001	NYCOC	09:49	PB NO:0216433524 DSR signal connection failed
	100001	NYCOC	12JUN02	PB NO:0216358595 DSR signal connection failed

Key: Blue=Not Active Red=Unknown <=Client >=Machine +=Both
F3=Exit F5=Refresh F12=Cancel F14=Change View F15=Current Status F17=Filter

NEMS/400 Rel 3.01 (c) Copyright NYCO Ltd 1999,2002

Bottom

MA b A 09/003

Option 5 will obtain a full detailed description of the problem.

NEMS/400 - PROBLEM MESSAGE DETAILS

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=====
                                Display Report
                                Report width . . . . . : 132
                                Shift to column . . . . . :
Line .....1.....2.....3.....4.....5.....6.....7.....8.....9.....10.....11.....12....
NN00007013
=====
000020 =====
000021 Problem Details                                     Hardware Details
000022 -----
000023 Date: 13/06/02   Problem number.....: 0216433524   Hardware device:
000024 Time: 9:48:12   Problem Function.....: 1           Model.....: 001
000025                               System Reference Code: 5A58B003   Frame ID.....: 1
000026                               Sequence Number.....: 01         Card Position..: 1B
000027                               Reporting Device Type: 27
000028 Message Details
000029 -----
000030 CPF ID... CPI8FC1           First Level: PB NO:0216433524 DSR signal connection failed.
000031 Second...: &N Cause . . . . . : One of the following may have caused the problem: &P -- The local modem may have failed to
000032 Level      te the data-set-ready signal indicating that a connection had been established. &P -- The external cable to the m
000033 y not be working correctly, with the data-set-ready signal being open or shorted to an inactive state. &P -- The
000034 cations adapter card may not be working correctly. &N Recovery . . . . . : Press F14 to run problem analysis. &N T
000035 l description . . . . . : The locally attached modem failed to indicate by activating the data-set-ready
000036 nterface signal that a connection was established with the remote computer equipment. &P &P - Problem Log ID ....
000037 &P - Error Log ID .....: &P - Processor Resource .....: &P - Adapter Resource .....: &P - Port Resource .
000038 ..
F3=Exit      F12=Cancel      F19=Left      F20=Right      F21=Split      F22=Width 80      More...
=====
```

First and second level text is displayed together with further system details.

NEMS/400 - VIEW PROBLEM MESSAGES

The screenshot displays the NEMS/400 'Display Report' interface. At the top, a toolbar contains various icons for file operations and system functions. The main window is titled 'Display Report' and shows a report for problem NN00007013. The report is organized into two columns: 'Customer Details' on the left and 'Machine Details' on the right. The 'Customer Details' section includes fields for Number (100001), Name (FRED SMITH & CO), Comments (CLOSED ALL DAY ON SUNDAY), Address (LYON ROAD, HARROW, MIDDLESEX, HA1 4WE), Fax (020 8834 5678), and E-Mail (FRED@SMITH.CO.UK). The 'Machine Details' section includes fields for System Name (NYCOC), Cage Number (9401), Processor Model Number (150), Processor Feature, Interactive Card Feature, OS/400 Product Code (5716SS1), OS/400 Version-release-mod (030700), Cumulative PTF Level (TC97056), and Cumulative PTF Status (Temporarily applied). Contact information for Fred Smith and Joe Smith is also listed. The bottom of the screen shows function key shortcuts (F3=Exit, F12=Cancel, F19=Left, F20=Right, F21=Split, F22=Width 80) and a 'More...' link. The status bar at the bottom left shows 'MA b' and the bottom right shows '03/032'.

Position to line

Line1.....2.....3.....4.....5.....6.....7.....8.....9.....10.....11.....12.....

000001 NN00007013

000002 NNR030

000003 Customer Details

000004 -----

000005 Number..: 100001

000006 Name.....: FRED SMITH & CO

000007 Comments: CLOSED ALL DAY ON SUNDAY

000008

000009

000010

000011

000012

000013 Address..: LYON ROAD

000014 : HARROW

000015 : MIDDLESEX

000016 : HA1 4WE

000017 Fax.....: 020 8834 5678

000018 E-Mail...: FRED@SMITH.CO.UK

000019

NEMS/400

NEMS Problem Management Centre

Machine Details

System Name.....: NYCOC

Cage Number.....: 9401

Processor Model Number....: 150

Processor Feature.....

Interactive Card Feature..

OS/400 Product Code.....: 5716SS1

OS/400 Version-release-mod: 030700

Cumulative PTF Level.....: TC97056

Cumulative PTF Status....: Temporarily applied

Contact 1: FRED SMITH

Telephone: 020 8834 2345

Contact 2: JOE SMITH

Telephone: 020 8834 2345

Date: 13

Time: 9

Serial: 444126

F3=Exit F12=Cancel F19=Left F20=Right F21=Split F22=Width 80

More...

MA b 03/032

Client and machine details available from the “problem” machine.

NEMS/400 - VIEW RACK CONFIGURATION

Display Report

Position to line █

Report width : 132
Shift to column

Line 1 2 3 4 5 6 7 8 9 10 11 12

NN@0007013

Local Work Station Resources List

Resource	Configuration Description	Bus	Board	Card	Chl	I/O bus	Adpt	Port	Dev	Session
CMB01		1	0	1						
CTL01	CTL01	1	0	1		14	9			
CTL01	QCTL	1	0	1		14	9			

Display Hardware Resources

5716SS1 V3R7M0 961108

NYCOC 12/06/02 10

Storage Resources List

Resource	Type-Model	Serial Number	Part Number	Frame ID	EIA	Card Pos	Device Pos	Text
CMB01	6756-001	53-7978010	0000045H2391	1		1		Combined function IOP
DC01	6607-050	68-0BC7966	86G9125	1			1	Disk Storage Controller
DD001	6607-050	68-0BC7966	86G9125	1			1	Disk Unit
DC02	6321-002	00-00000		1			6	Optical Controller
OPT01	6321-002	00-00000		1			6	Optical Storage Unit
DC03	63A0-001	00-4268024		1			5	Tape Controller

More...

F3=Exit F12=Cancel F19=Left F20=Right F21=Split F22=Width 80

MA b 03/032

The rack configuration details from the “problem” machine.

NEMS/400

The information that we have seen from the last four screens is all stored by the PMC. Upon receipt of that information the PMC can relay the details automatically using an e-mail, text or SMS message via a mobile phone or pager to the designated engineer or service centre of your choice.

Speed of reaction, clarity of reaction and above all else reduction in client “downtime”, resulting from higher service standards, are the key issues that face the computer maintenance industry today. NEMS/400 is the solution to help you achieve these goals.

NEMS/400 MANUFACTURER DETAILS

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NEMS/400

Thank you for viewing this presentation of

NEMS/400 from NYCO Ltd