



IBM System i™

Session: 406172 / 43MC

PC5250 Display Emulation Everything You Need To Know

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System i5 Access Development

*i want stress-free IT.
i want control.
i want an i.*

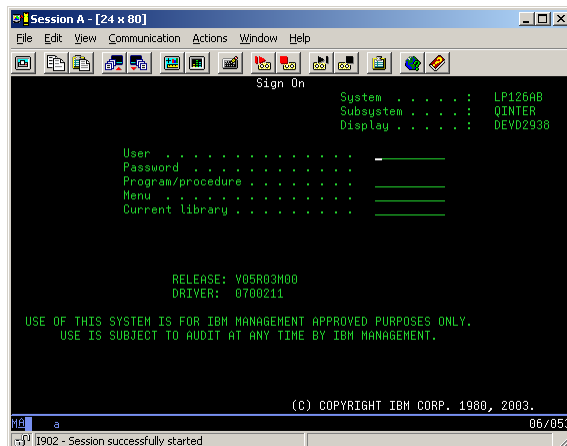
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5250 Emulation Overview

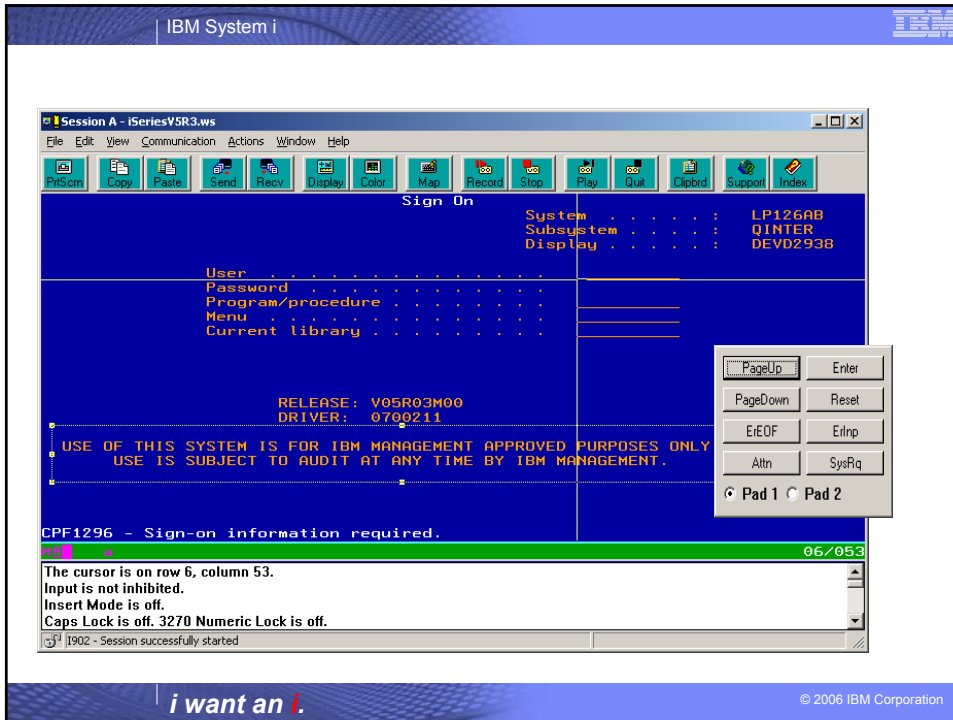
Functions

- 5250 Telnet emulation
- System i5 Print emulation
- Customizable
 - Toolbar
 - Keyboard
 - Colors
 - KeyPad
 - More!



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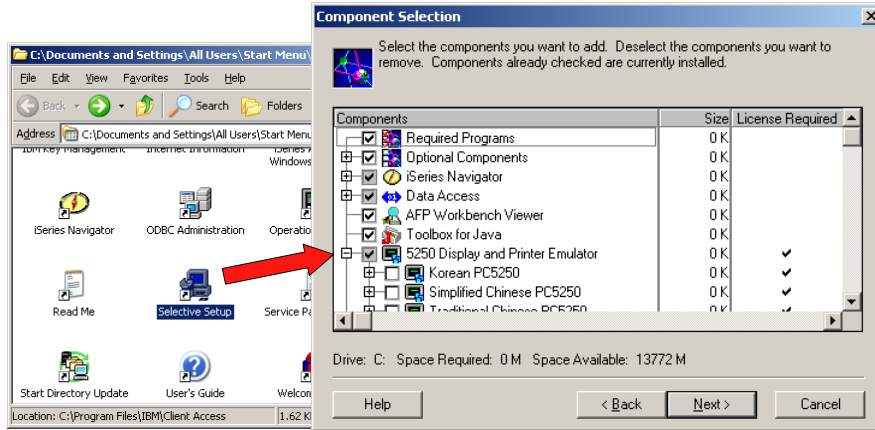


Getting Started

- Install
- Ways to start PC5250
 - Session Manager
 - iNavigator
 - Desktop Icon
 - Run pcsws.exe
 - Start *.ws

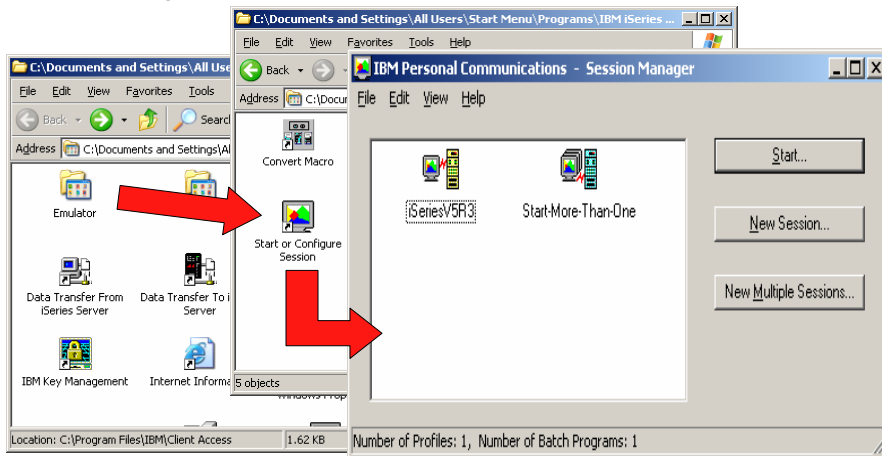
Installing PC5250

- Selective Setup



Ways to start PC5250

- Session Manager



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Ways to start PC5250

- iNavigator

The screenshot shows the iSeries Navigator interface. On the left, a Windows Explorer window displays the 'C:\Program Files\IBM\Client Access' folder, with a red arrow pointing to the 'iSeries Navigator' icon. On the right, the iSeries Navigator application is open, showing a tree view of connections. A context menu is open over the 'Iseriesv5r3' connection, with the 'Display Emulator...' option highlighted. The menu also includes options like 'Explore', 'Open', 'Customize this View', 'Run Command...', 'Send Message...', 'Users and Groups', 'Inventory', 'Fixes', and 'Collection Services'.

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Ways to start PC5250

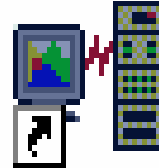
- Desktop Icons
 - New -> System i5 Desktop Icon

The screenshot shows the 'iSeries Desktop Icon' dialog box. The 'Application' section asks 'What application would you like to start?' and has a dropdown menu with 'PC5250 Emulator' selected. A red arrow points from the dropdown to a small desktop icon of a PC monitor. Below the icon, a blue box contains the text 'PC5250 Emulator icon - IseriesV5R3.A54'. The dialog box has 'Back', 'Next', 'Cancel', and 'Help' buttons.

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Ways to start PC5250

- Launch the program directly
 - Start -> Run -> PCSWS.EXE <profile and options>
- Launch a *.WS profile
 - Start ->Run ->Browse to profile-> System i5V5R3.WS
- Create your own shortcuts
 - Drag-n-Drop from Session manager
 - New -> Shortcut



SeriesV5R3

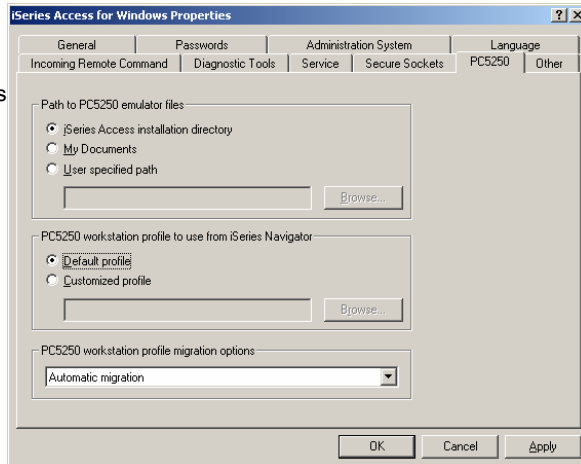
Session Profiles

- What are they?
 - Files with PC5250 configuration information:
 - Single session .WS
 - Multiple sessions .BCH
 - Other PC5250 configuration file extensions:
 - Toolbar: .BAR
 - Popup-Keypad: .PMP
 - Macro: .MAC
 - Keyboard: .KMP
 - Mouse Pad: .MPP

```
[Profile]
ID=WS
Version=7
[CT]
trace=Y
[Telnet5250]
HostName=ISERIESV5R3
Security=CA400
SSLClientAuthentication=Y
[Communication]
Link=telnet5250
Session=5250
[5250]
HostCodePage=037-U
PrinterType=IBM3812
[Keyboard]
CuaKeyboard=2
Language=United-States
IBMDefaultKeyboard=N
```

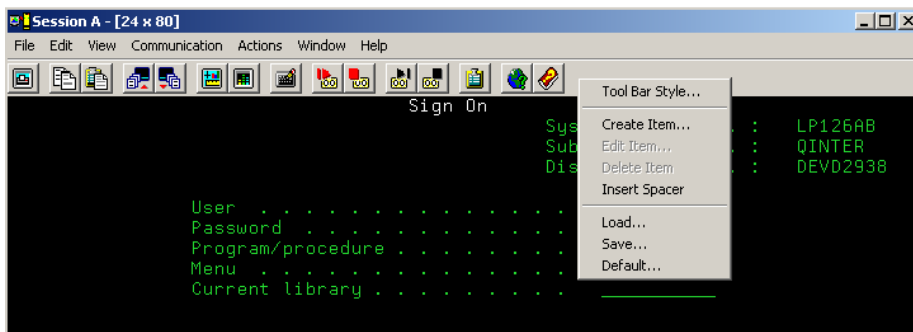
Session Profiles

- Where are they?
 - System i5 Access Properties in Control Panel
- Network paths
 - Multi-user sharing
 - Templates
- Migration
 - Default will handle most cases



Toolbars

- Right click to customize



Toolbars

- Styles

Tool Bar Styles

Layout

Show text

Pop-up Description

Show Start delay:

Dismiss delay:

Size

Autosize Width:

Height:

Effects

Font

Face Color: Custom Color

Tool bar File Name

OK Cancel Defaults Help

Toolbars

- Add item
 - Application
 - Key Action
 - Menu Action
 - Macro

Edit: Tool Bar Item

Actions Window Help

Keystroke Macro/Script Application File Edit View Communication

Application file name:

 List...

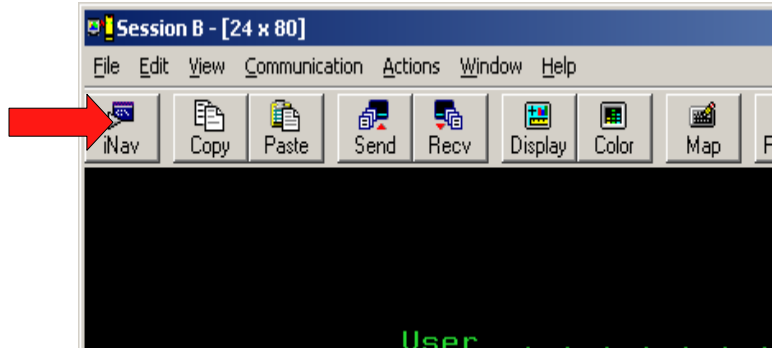
Application parameters:

Customize...

OK Cancel Help

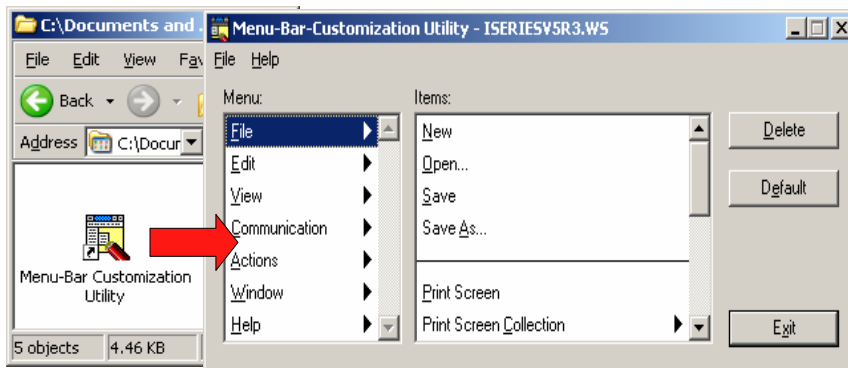
Toolbars

- Launch Application



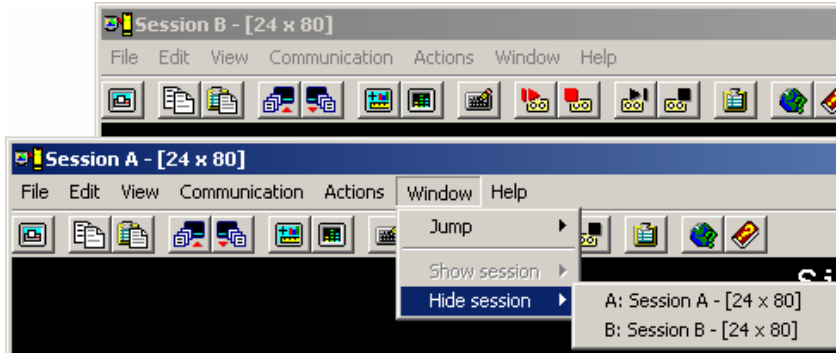
Menu Bar

- Remove unneeded menu items



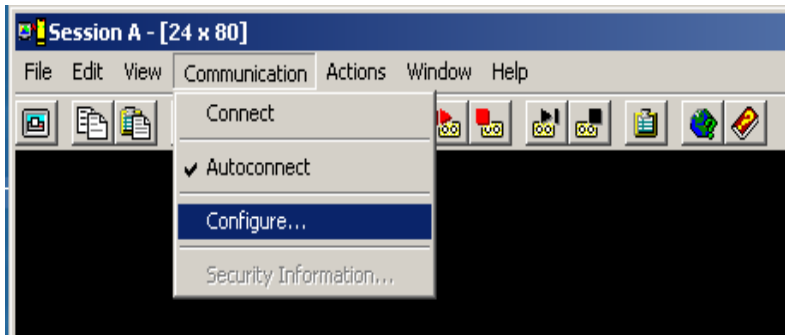
Session Control

- Session hiding/jumping



Communication Configuration

- Connection and device settings



Device ID's

- Default settings
 - Device ID QPADEVnnnn is automatically generated
 - No association between users/pc's and devices

The screenshot shows the 'Configure PC5250' dialog box. The 'System name' is set to 'ISERIESV5R3'. Under 'Workstation ID', the 'Specify workstation ID' radio button is selected. The 'Truncate' section has 'Ending characters' selected. The following checkboxes are all unchecked:

- Use Computer name
- Use Windows user name
- Add prefix to indicate printer or display
- Avoid duplicate names on this workstation
- Avoid duplicate names with other workstations

Device ID's

- Named
 - System i5 System value QAUTOVRT needs to be set

The screenshot shows the 'Configure PC5250' dialog box. The 'System name' is set to 'ISERIESV5R3'. Under 'Workstation ID', the 'Use Windows user name' radio button is selected. The 'Truncate' section has 'Ending characters' selected. The following checkboxes are checked:

- Avoid duplicate names on this workstation
- Avoid duplicate names with other workstations

Device ID's

- Named device ID benefits
 - Associate device ID with user profile, workstation, ...
 - Route to subsystems based upon device name
 - Enables disconnected job support
 - QAUTOVRT needs to be set to high enough value
- Disconnected job support
 - Requires SAME device id AND user profile
 - QDSCJOBIV when to clean up disconnected unused jobs
 - QINACTIV timeout for action on idle jobs
 - QINACTMSGQ action taken for idle jobs (*ENDJOB, *DSCJOB)
 - Disconnected jobs hold system resources, you must manage them carefully

Secure Sockets Layer (SSL)

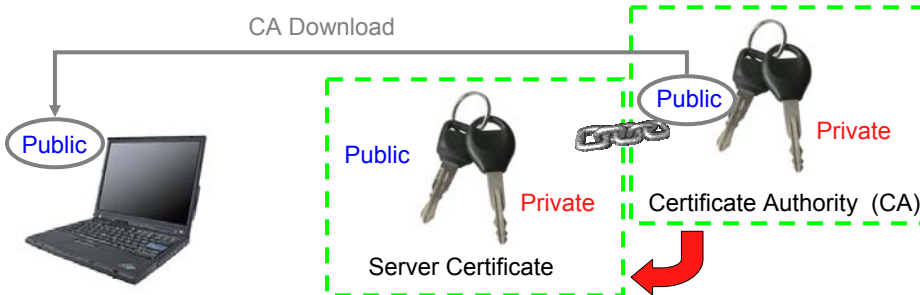
- Recommended for all Telnet/5250 sessions
 - Default is for data to flow in the clear
 - Does NOT replace authentication, provides session encryption
- Install client SSL component
- Setup System i5 SSL via Digital Certificate Manager
- Download Certificate Authority (CA) certificate
- Enable SSL
 - System configuration in iNavigator
 - Per Session configuration in PC5250

SSL = A Matter of Trust...

Secure Sockets Layer (SSL)

- **Server authentication**
- Used by default
- Setup Server DCM
- Client uses Download button
- Server certificate can be purchased

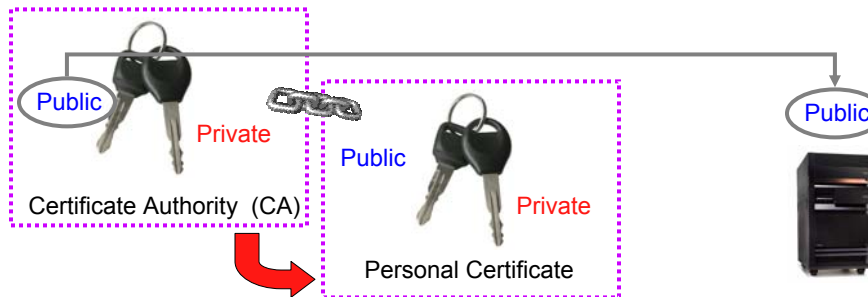
Server Digital Certificate Manager



Secure Sockets Layer (SSL)

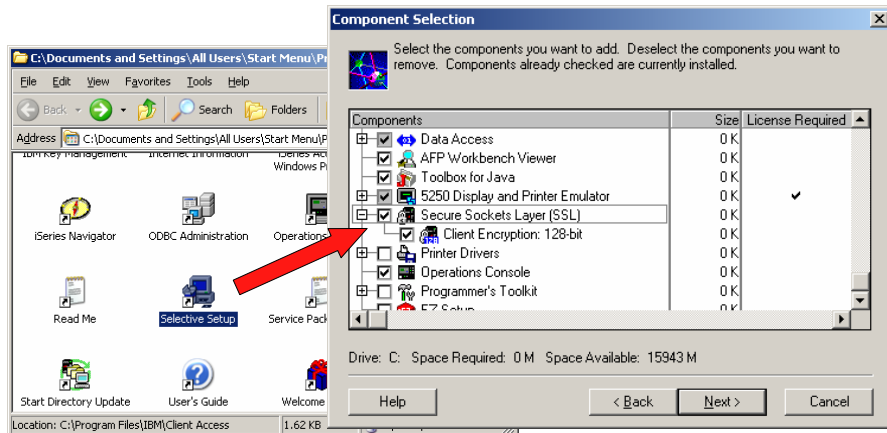
- **Client authentication**
- Requires additional client certificate
- Client certificate can be purchased
- Upload CA of personal certificate

PC IBM Key Manager



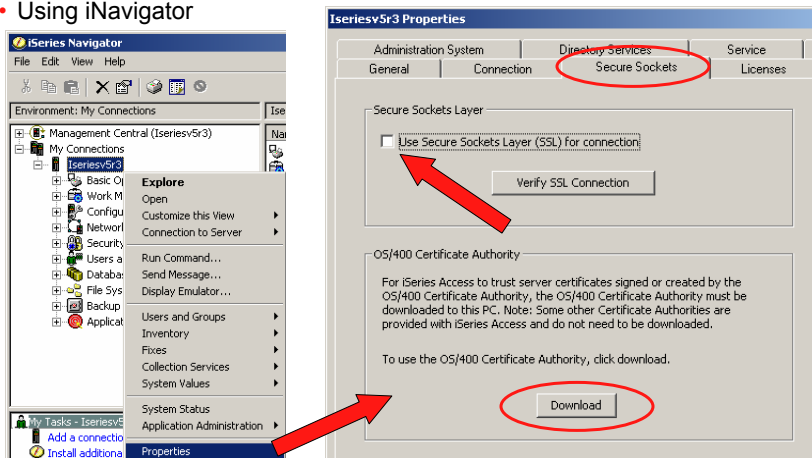
Secure Sockets Layer - Installing

- Selective Setup



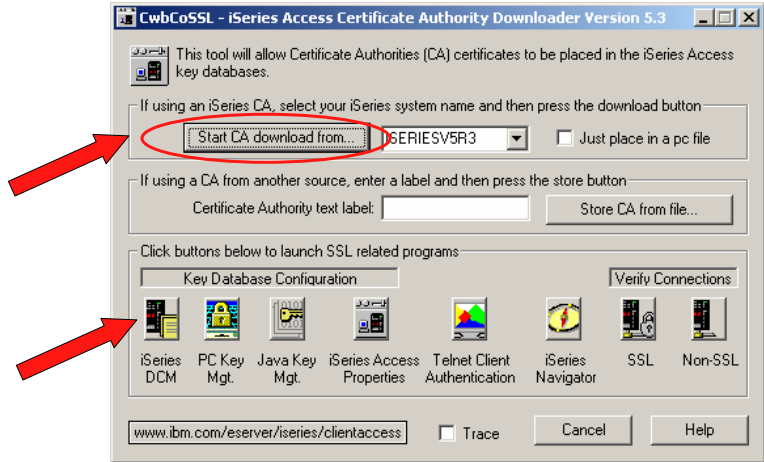
Secure Sockets Layer – Download CA and Enable

- Using iNavigator



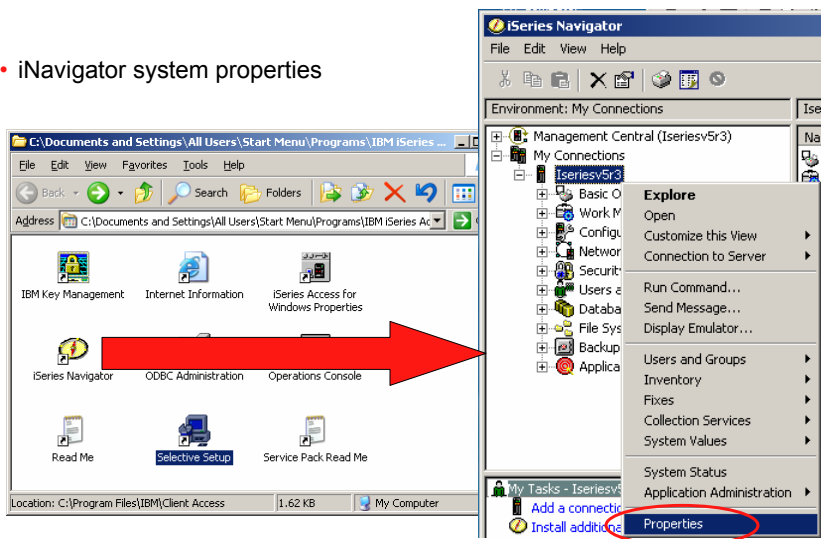
Secure Sockets Layer – CwbCoSSL utility

Your homework...



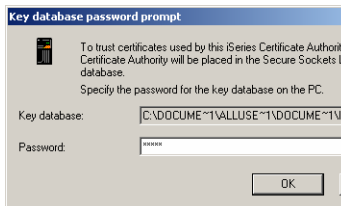
Secure Sockets Layer

- iNavigator system properties



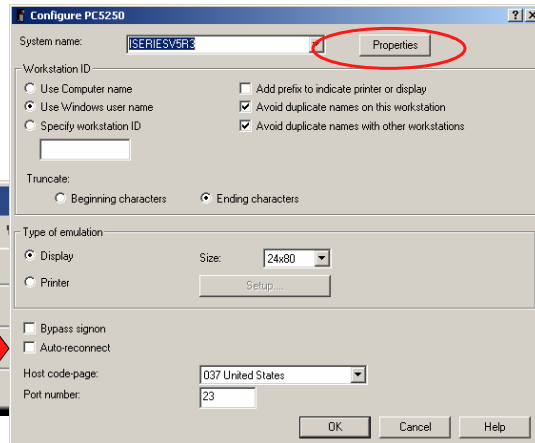
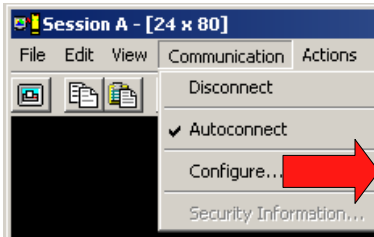
Secure Sockets Layer

- iNavigator system properties
 - Enable SSL
 - Must restart iNavigator
 - Download CA
 - Password prompt (“ca400”)



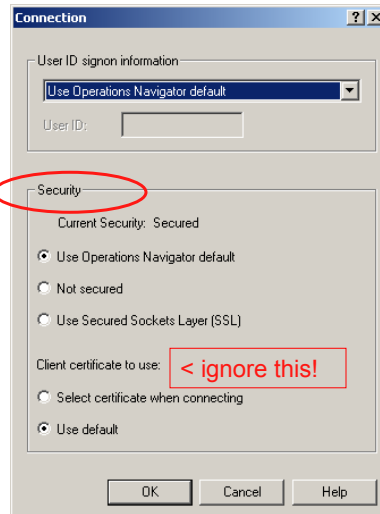
Secure Sockets Layer

- PC5250 configuration



Secure Sockets Layer

- PC5250 connection properties
 - Use iNavigator setting
 - Override setting
 - Ignore Client certificate to use
 - Port will change to 992 for SSL use



Secure Sockets Layer

- Common problems
 - PC
 - Forgot to do use the CA Download button
 - PC Key database(s) are missing or corrupt. Check location from the Control Panel.
 - Java Runtime Environment (JRE) is corrupted. Effects iKeyMan.
 - System i5 Digital Certificate Management (DCM)
 - CA certificate has been changed
 - CA certificate past expiration date. Check DCM.
 - CA certificate has been marked as “untrusted”
 - System certificate not assigned to System i5 Access servers (i.e. Telnet server)
 - System certificate past expiration date
 - Telnet server configured for SSL Client Authentication only
 - Need to create/buy and distribute client certificates
 - Telnet default SSL Port 992 changed or restricted
 - CwbCoSSL client utility very helpful in diagnostics

Macros

- How to setup and use
 - Recording
 - Reduce wait times
 - Launch app
 - Customizing
 - Playing

Macros

- Start Recording keystrokes and actions

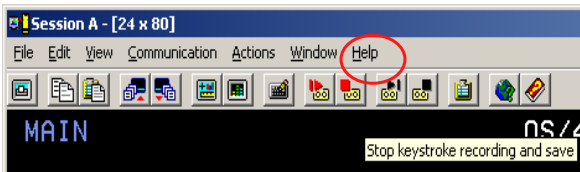
The screenshot displays the IBM System i interface. The main window is titled "Session A - [24 x 80]". The menu bar includes File, Edit, View, Communication, Actions, and Window. The "Actions" menu is open, showing options like "Send File To Host...", "Receive File From Host...", "Import/Export", "Launch", "Display Popup Keypad", "Keyboard/Macro/Script_Function...", "Start Recording Macro...", and "Start Playing Macro/Script...". A red arrow points to the "Start Recording Macro..." option. The "Record Macro/Script as" dialog box is open, showing fields for "File Name:" (aMacro.mac), "Directories:" (c:\...\emulator\private), "Record Format:" (VBScript File selected), "Record User Wait Time:" (None selected), and "List Files of Type:" (Macro/Script Files (*.me)). The "OK", "Cancel", and "Help" buttons are visible. A red circle highlights the "Start Recording Macro" icon in the taskbar, with a text box below it that says "Start keystroke recording".

Macros

- Recording...

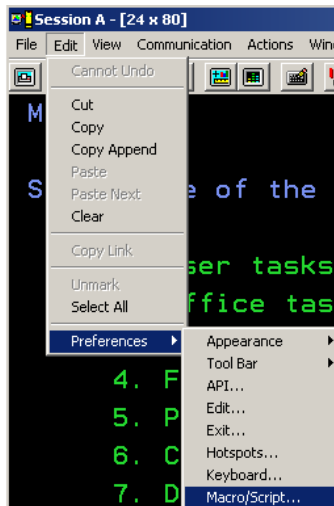


- Stop Recording and save macro



Macros

- Customize your macros...



IBM System i

Macros

- Customize your macros...

Macro/Script Setup

Auto-Start Macro/Script

Macro/Script: aMacro Description: BRING UP LINE STATUS

Macro/Script Directory:

OK Cancel **Customize...** Help

Customize Macro/Script - AMACRO.MAC

File Edit Help

Select a Key-Action:

Macro: aMacro BRING UP LINE STA Character: ! " # \$ % & ' () * + , - . / 0 1 2 3 4 5 6

Function: Function Comments

Alternate Cursor

Add

Macro Statements

```
[wait app]
[wait inp inh]
"6
[enter]
[wait inp inh]
wait 10 sec until FieldAttribute 0000 at (20,6)
wait 10 sec until cursor at (20,7)
[wait app]
[wait inp inh]
"1
[enter]
[wait inp inh]
```

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Macros

- Play your macros...

Session A - [24 x 80]

File Edit View Communication Actions Window Help

MAIN Start a macro/script OS

Play Macro/Script

Select Macro/Script

Macro/Script: aMacro BRING UP LINE STAT

MA a P

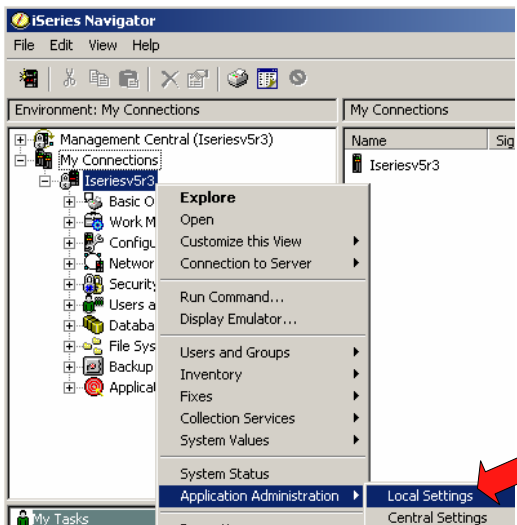
128 1902 - Session successfully started

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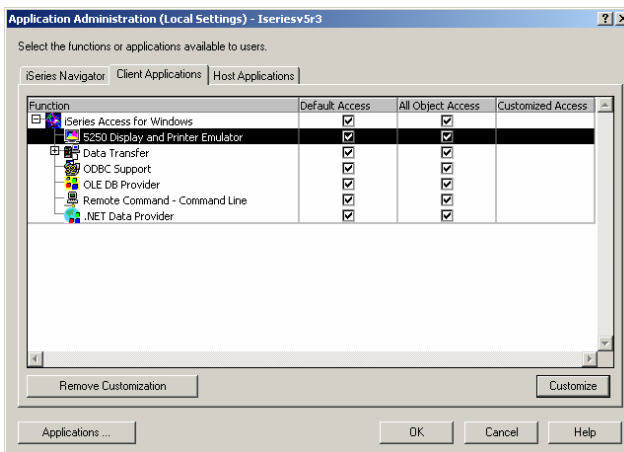
Administration

- Application Administration
 - Via iNavigator



Administration

- Settings
 - See Info Center for more ways to use this



Web References

- Running Linux on the System i5
 - <http://www.ibm.com/servers/eserver/series/linux/>
- System i5 Access home page
 - <http://www.ibm.com/servers/eserver/series/access/>
- unixODBC home page
 - <http://www.unixODBC.com/>
- Toolbox for Java
 - <http://www.ibm.com/servers/eserver/series/toolbox/>
- System i5 Access Information Center
 - http://publib.boulder.ibm.com/System_i5/v5r2/ic2924/index.htm
- IBM Redbooks
 - <http://www.redbooks.ibm.com/>
- IBM System i5 Support
 - <http://www.ibm.com/servers/eserver/series/support>
- OpenOffice
 - <http://www.openoffice.org>

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