



406172 / 43MC

IBM System i™

Session:

PC5250 Display Emulation Everything You Need To Know

Mark Vanderwiel
System i5 Access Development

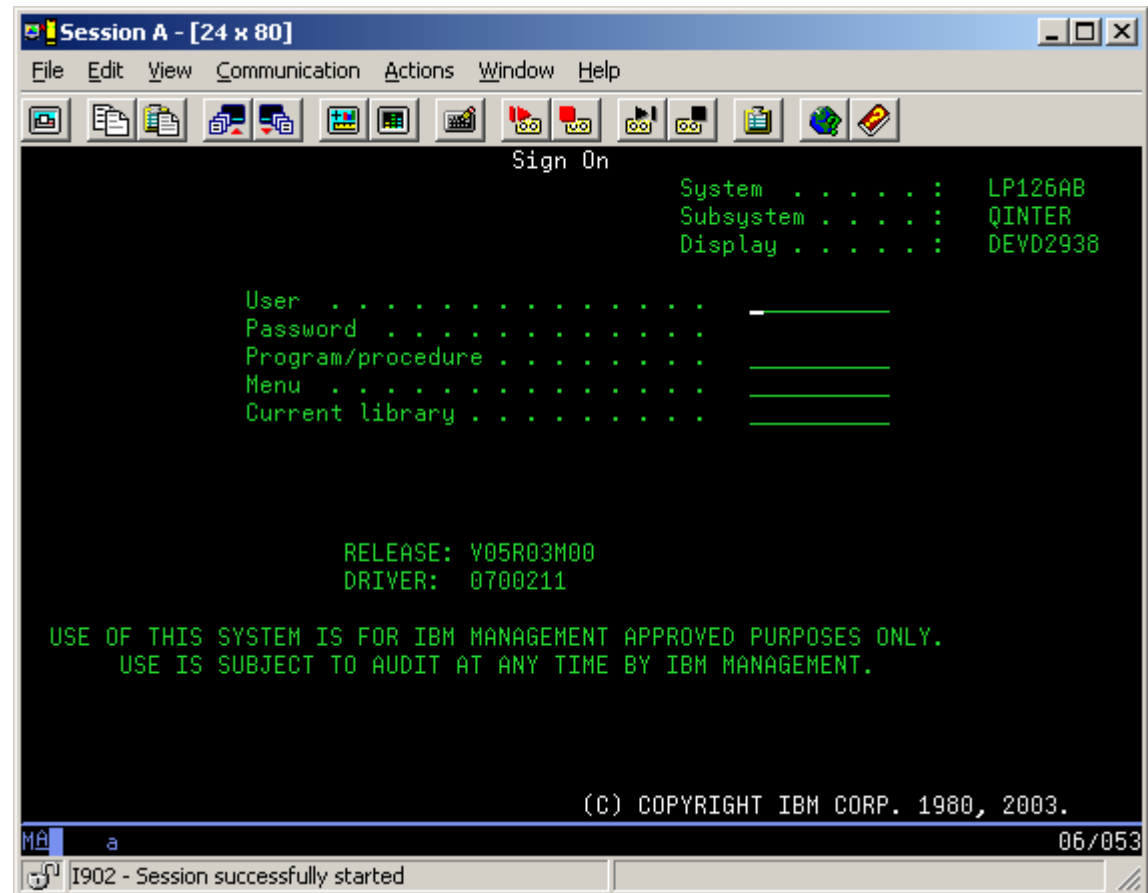
i want stress-free IT.
i want control.
*i want an **i**.*

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5250 Emulation Overview

Functions

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



Session A - iSeriesV5R3.ws

File Edit View Communication Actions Window Help

PrtScrn Copy Paste Send Recv Display Color Map Record Stop Play Quit Clipbrd Support Index

Sign On

System	:	LP126AB
Subsystem	:	QINTER
Display	:	DEVD2938

User

Password

Program/procedure

Menu

Current library

RELEASE: V05R03M00
DRIVER: 0700211

USE OF THIS SYSTEM IS FOR IBM MANAGEMENT APPROVED PURPOSES ONLY
USE IS SUBJECT TO AUDIT AT ANY TIME BY IBM MANAGEMENT.

CPF1296 - Sign-on information required.

MA a 06/053

The cursor is on row 6, column 53.
Input is not inhibited.
Insert Mode is off.
Caps Lock is off. 3270 Numeric Lock is off.

I902 - Session successfully started

PageUp Enter

PageDown Reset

ErEOF Erlnp

Attn SysRq

Pad 1 Pad 2

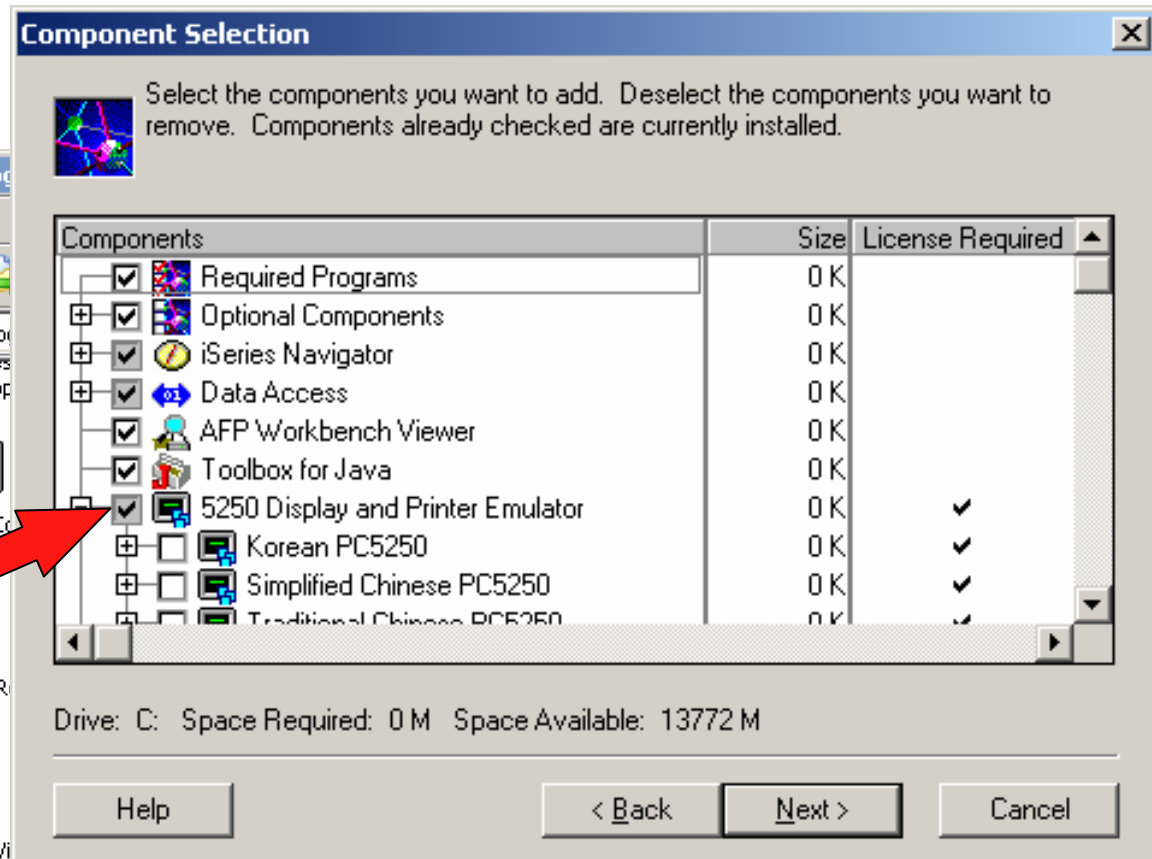
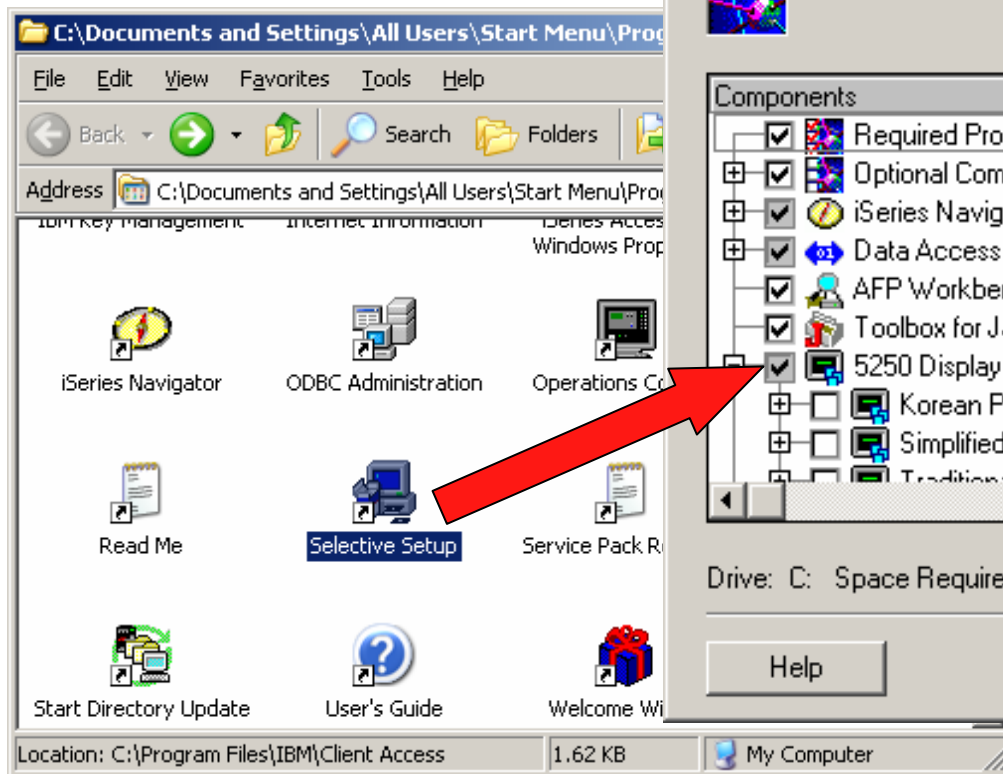
Getting Started

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



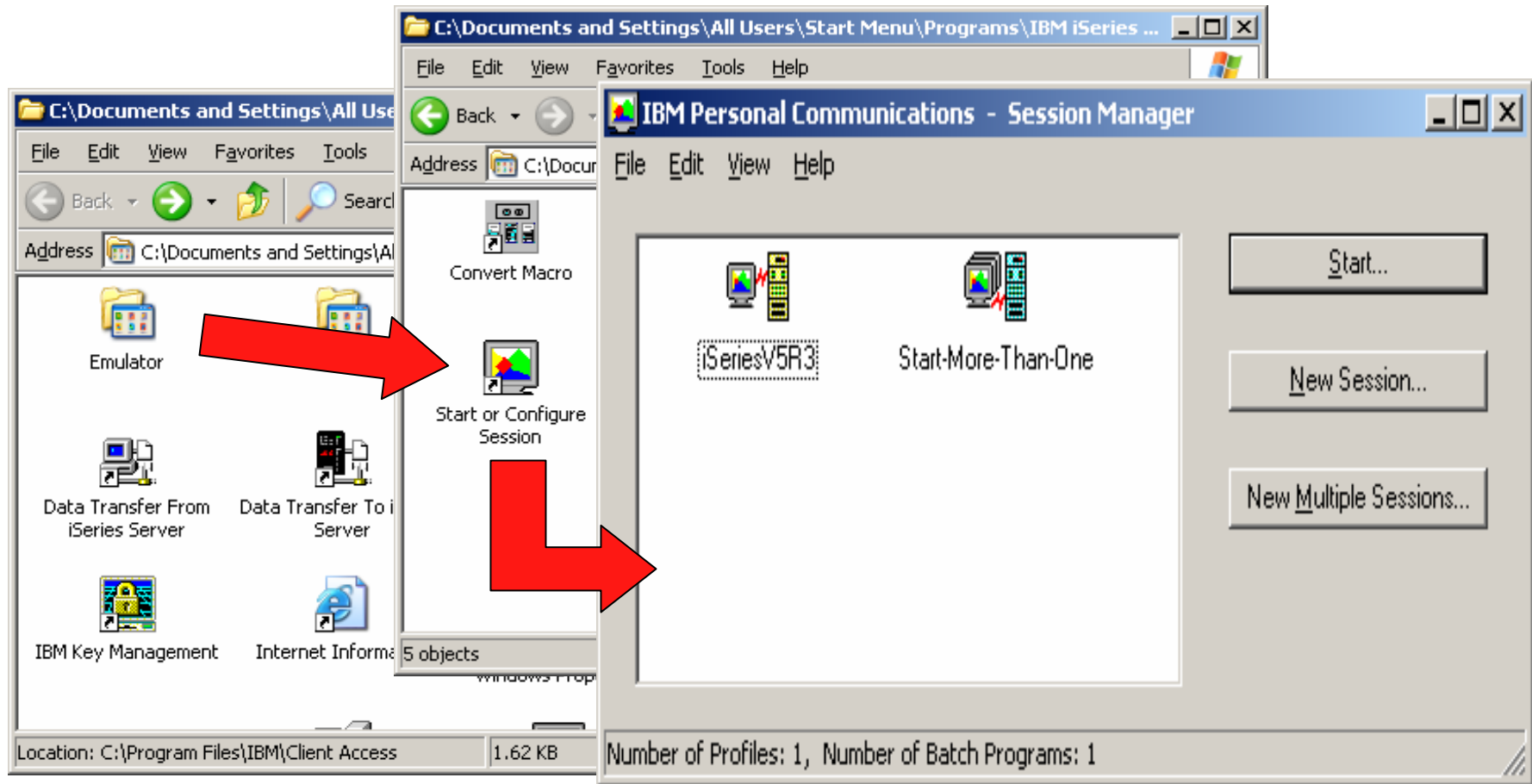
Installing PC5250

- Selective Setup
 - Options for fonts and printers
- Fresh Install
 - PC5250 User
 - Custom with 5250



Ways to start PC5250

- Session Manager



Ways to start PC5250

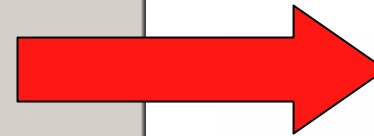
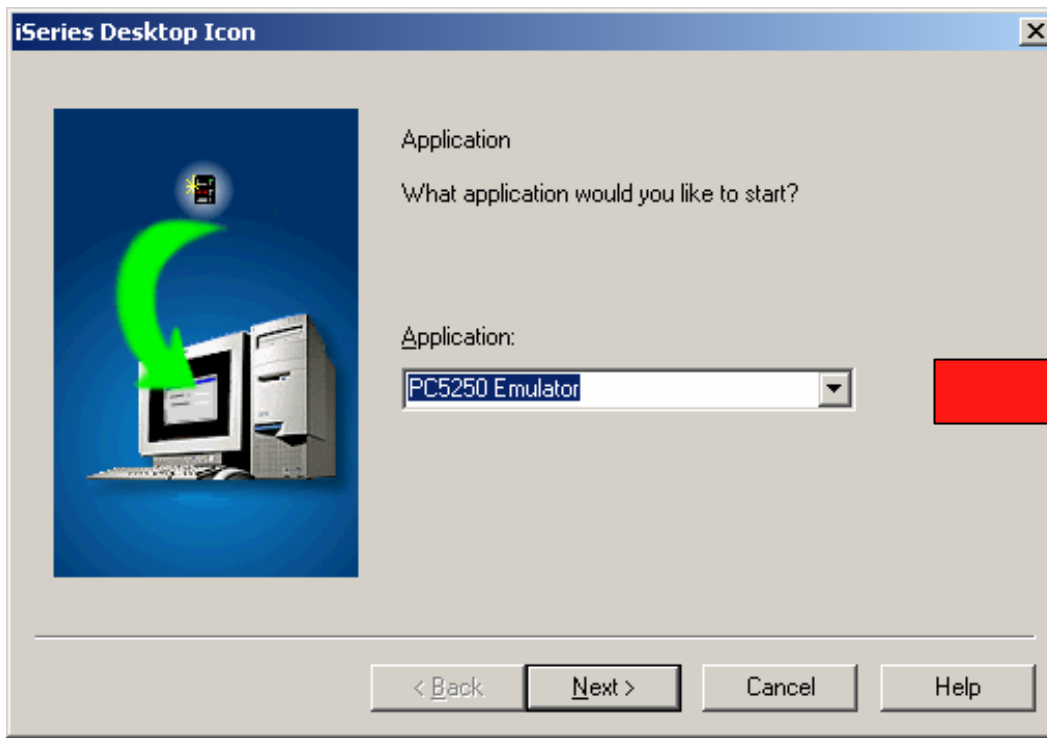
- iNavigator

The image shows a Windows XP desktop environment. In the foreground, a File Explorer window is open to the path `C:\Documents and Settings\All Users\Start Menu\Programs\IBM iSeries`. It displays several icons: IBM Key Management, Internet Information, iSeries Access for Windows Properties, iSeries Navigator, ODBC Administration, Operations Console, Read Me, Selective Setup, and Service Pack Read Me. A large red arrow points from the iSeries Navigator icon in the File Explorer to the iSeries Navigator application window in the background.

The iSeries Navigator application window is titled "iSeries Navigator" and has a menu bar with "File", "Edit", "View", and "Help". Below the menu bar is a toolbar with icons for Cut, Copy, Paste, Close, Print, Refresh, and Stop. The main area is divided into two panes. The left pane shows a tree view of the environment: "Environment: My Connections" contains "Management Central (Iseriesv5r3)", which contains "My Connections", which contains "Iseriesv5r3". The right pane shows a list of components for "Iseriesv5r3" with a "Name" column. A context menu is open over the "Iseriesv5r3" node in the tree view, with the "Display Emulator..." option highlighted. The context menu options are: Explore, Open, Customize this View, Connection to Server, Run Command..., Send Message..., Display Emulator..., Users and Groups, Inventory, Fixes, and Collection Services. The right pane list includes: Basic Operations, Work Management, Configuration and Network, Security, Users and Groups, Databases, File Systems, Backup, and Application Development.

Ways to start PC5250

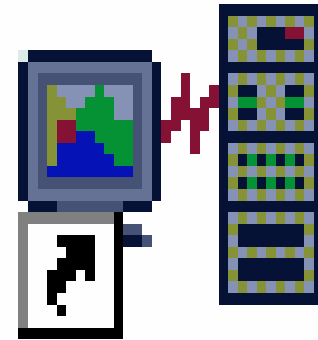
- Desktop Icons
 - New -> System i5 Desktop Icon



PC5250 Emulator icon -
ISeriesV5R3.A54

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



iSeries V5R3

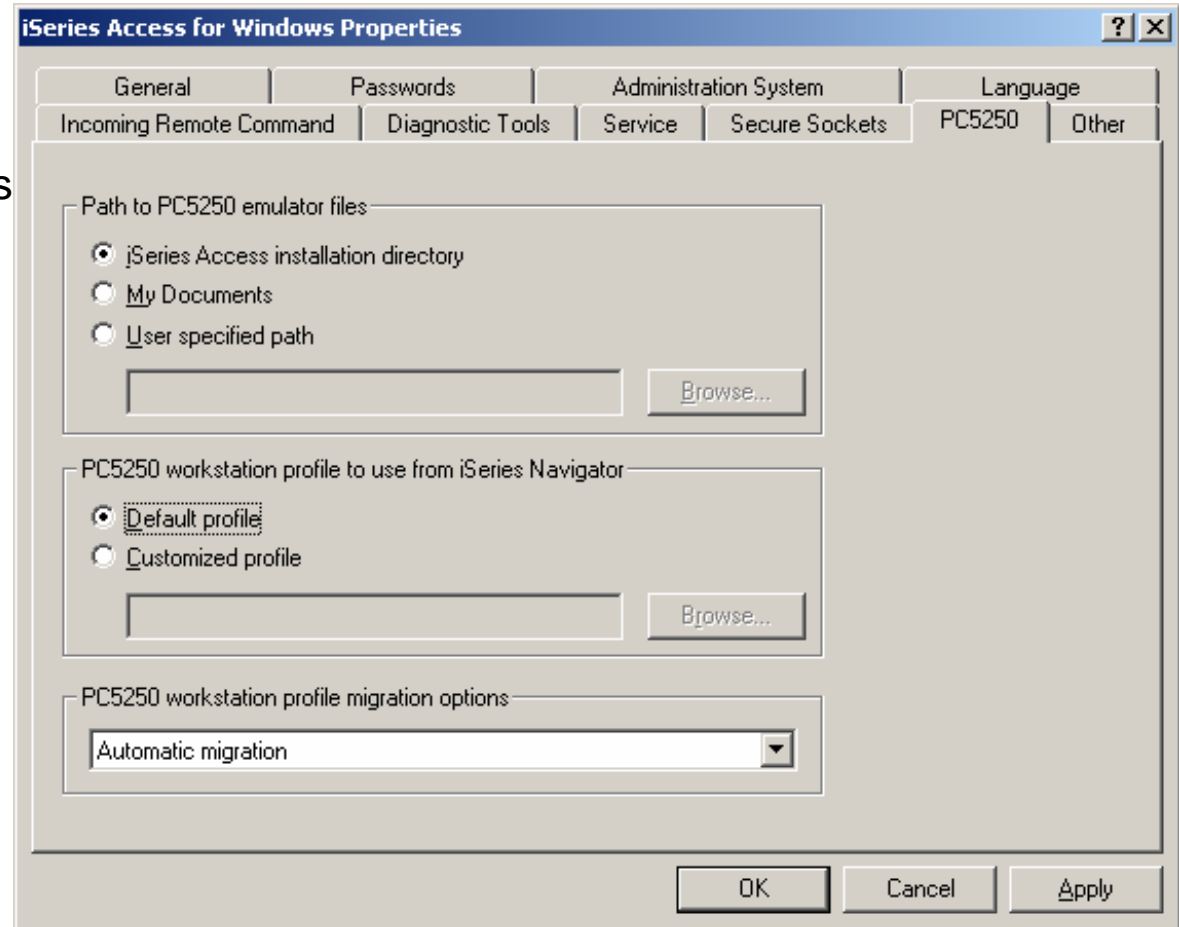
Session Profiles

- 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
```

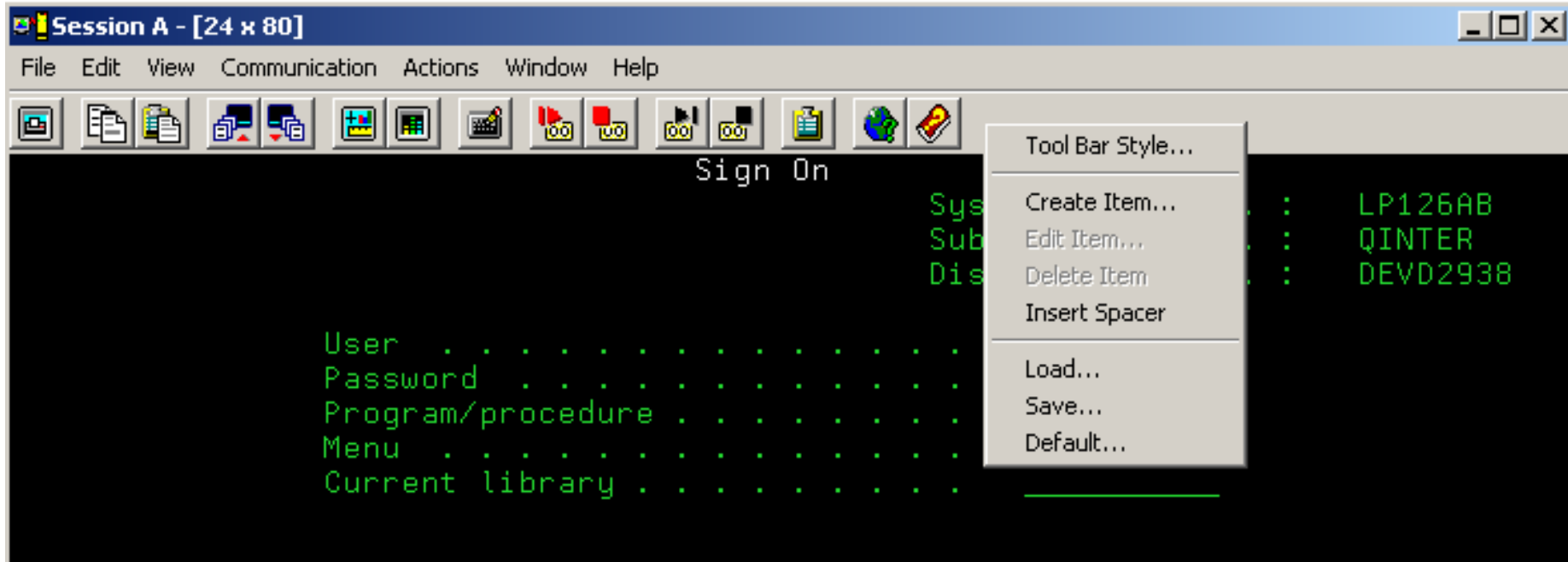
Session Profiles

- 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

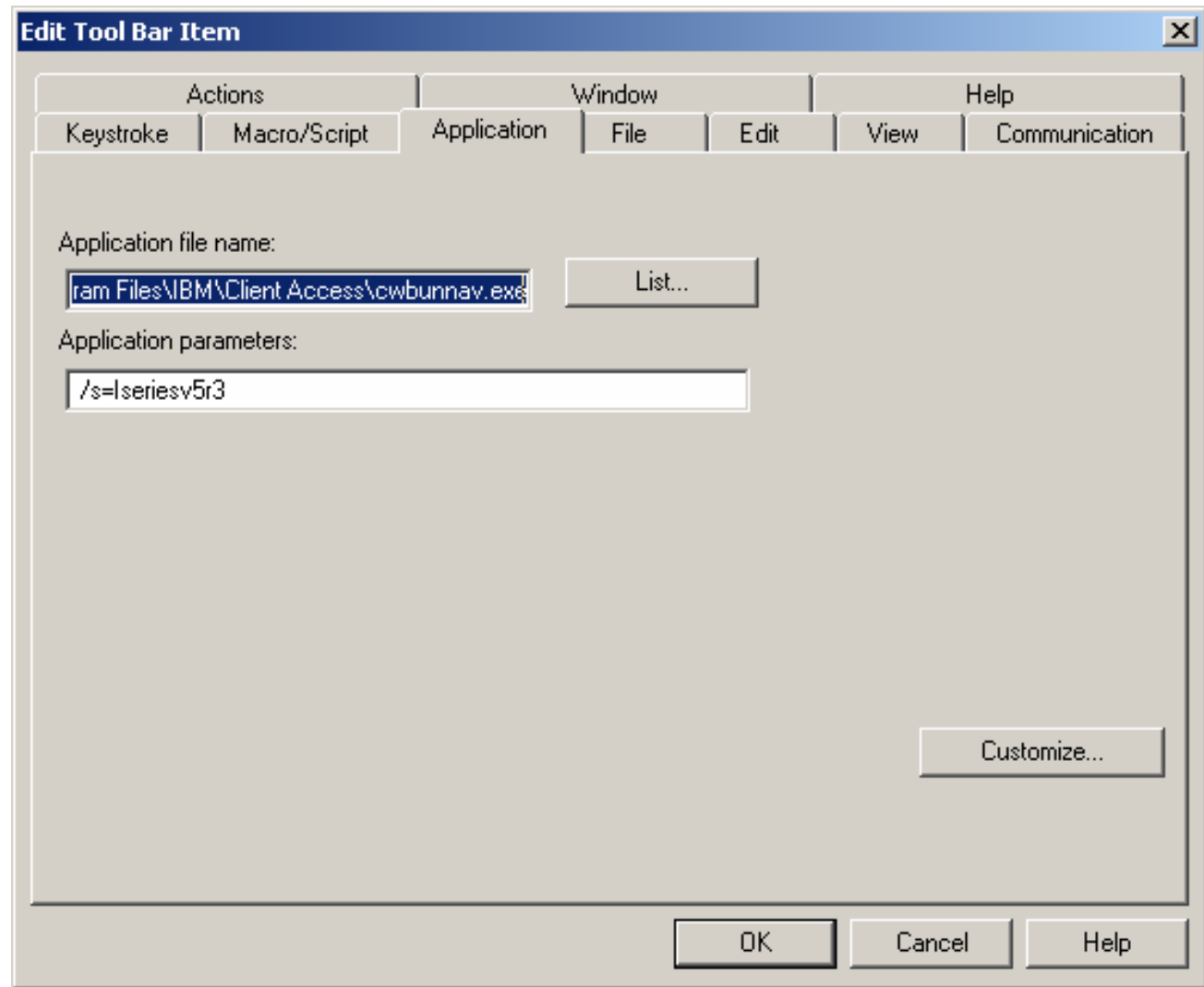
Face Color: 

Tool bar File Name

OK Cancel Defaults Help

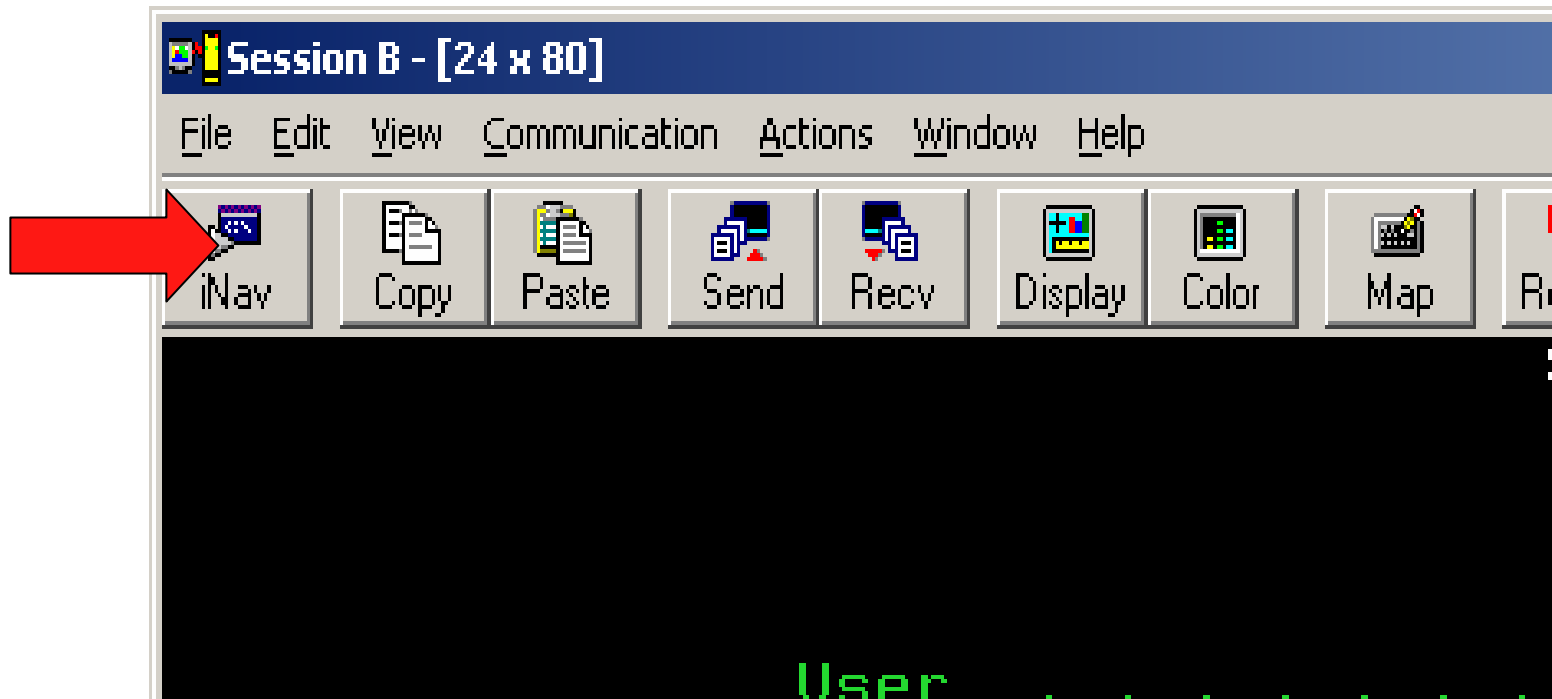
Toolbars

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



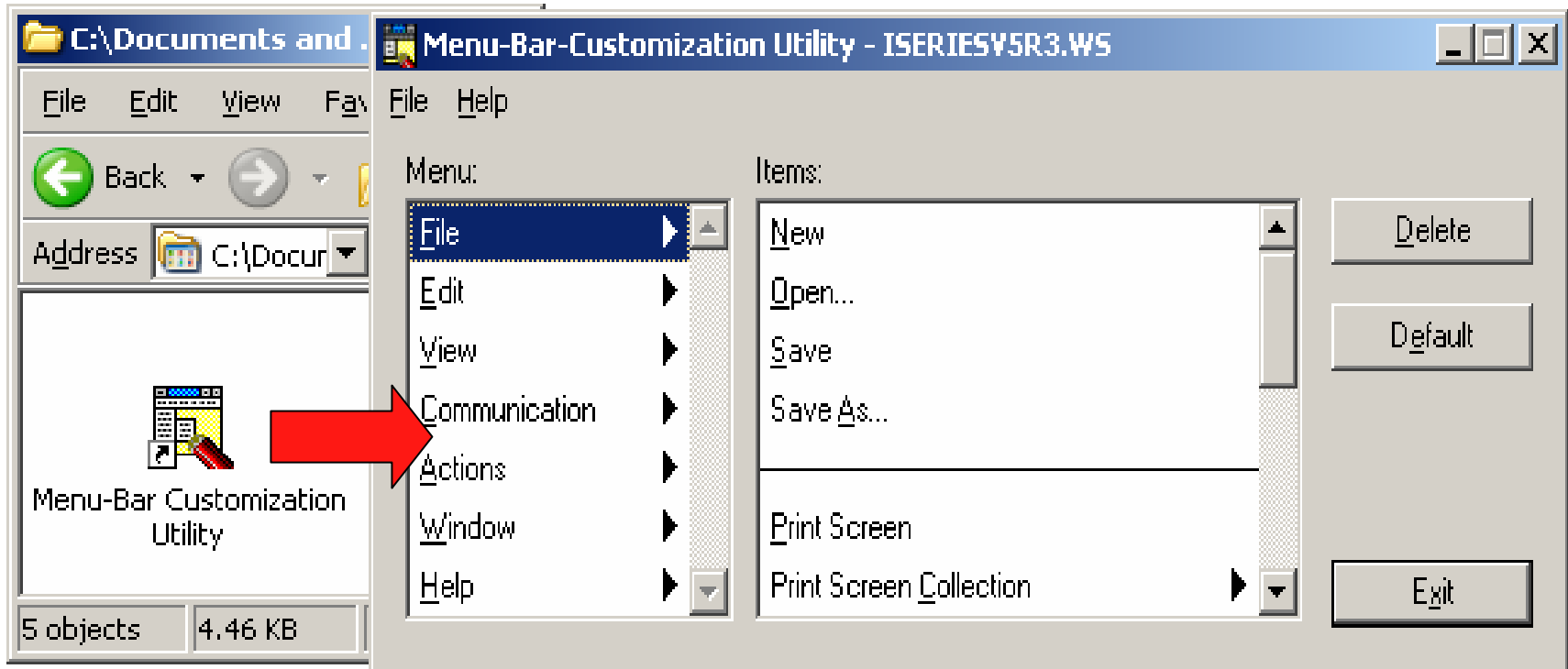
Toolbars

- Launch Application



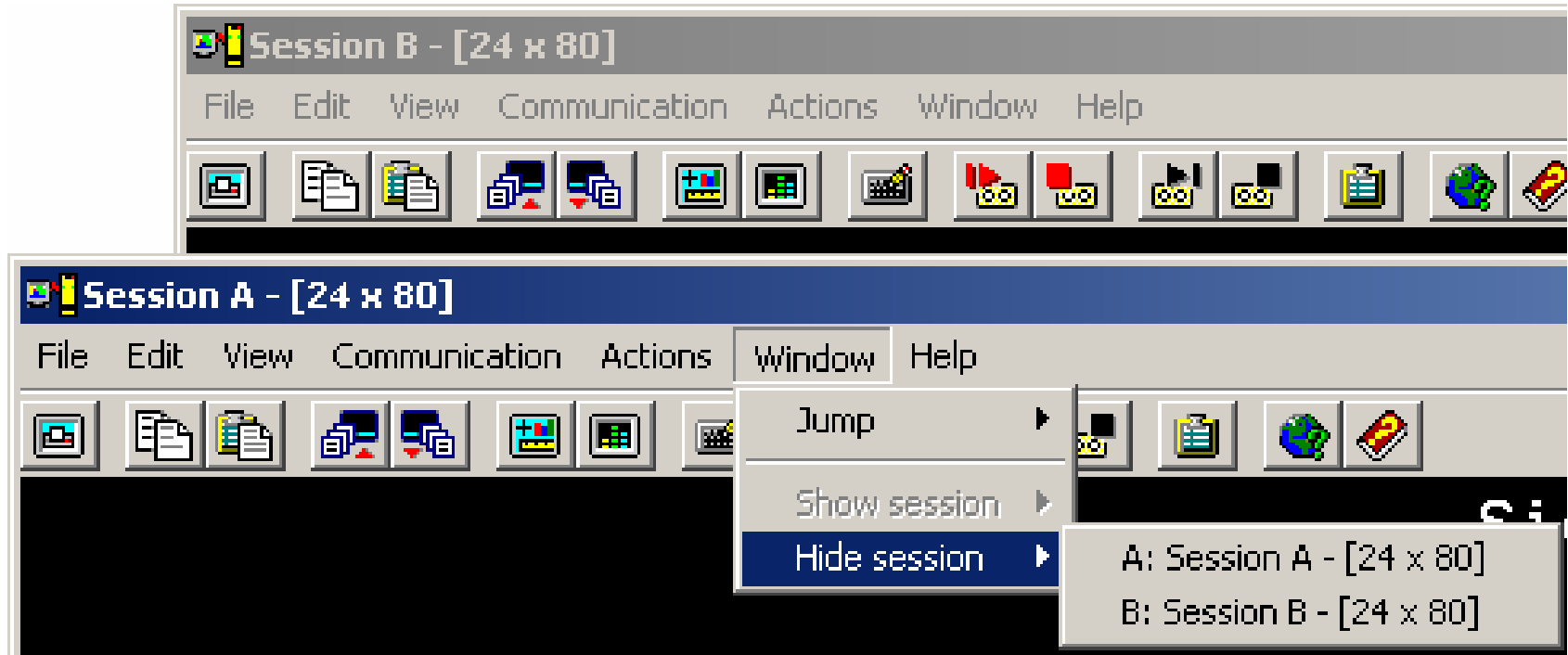
Menu Bar

- Remove unneeded menu items



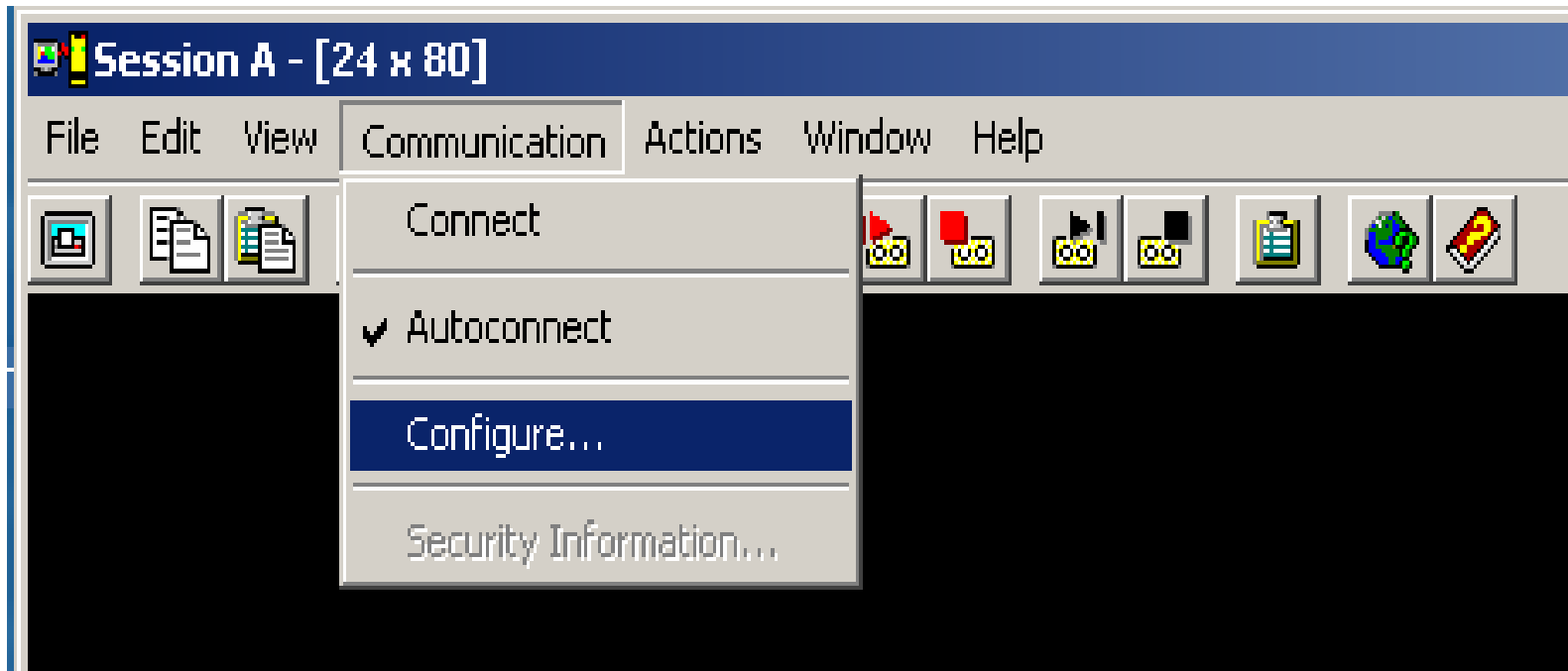
Session Control

- Session hiding/jumping



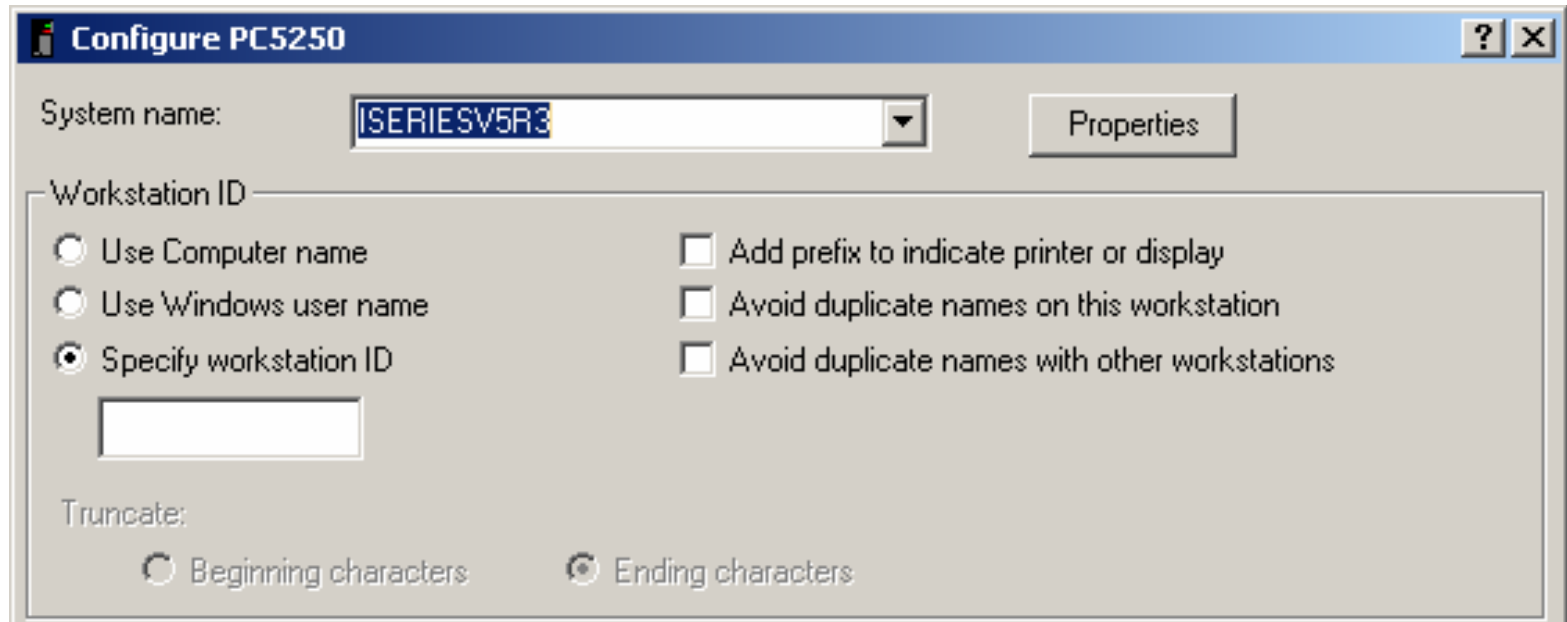
Communication Configuraion

- Connection and device settings



Device ID's

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



Device ID's

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

The screenshot shows a Windows-style dialog box titled "Configure PC5250". At the top, there is a "System name:" label followed by a text box containing "ISERIESV5R3" and a dropdown arrow. To the right of this is a "Properties" button. Below this is a section titled "Workstation ID" which contains three radio button options: "Use Computer name", "Use Windows user name" (which is selected), and "Specify workstation ID". To the right of these are two checkboxes: "Add prefix to indicate printer or display" (unchecked), "Avoid duplicate names on this workstation" (checked), and "Avoid duplicate names with other workstations" (checked). Below the radio buttons is an empty text box. At the bottom, there is a "Truncate:" label followed by two radio button options: "Beginning characters" (unchecked) and "Ending characters" (selected).

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
 - QDSCJOBTV when to clean up disconnected unused jobs
 - QINACTITV 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)

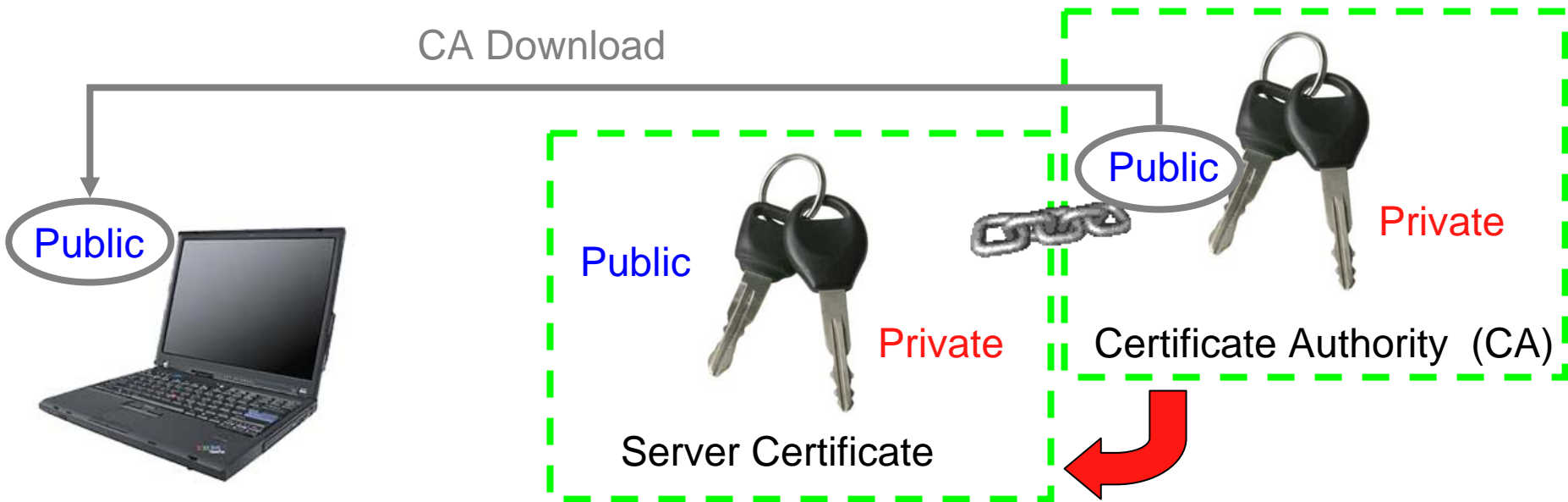
- Recommended for all Telnet/5250 sessions
 - Default is for data to flow in the clear
 - Does NOT replace authentication, provides session encryption
- Install client SSL component
- Setup System i5 SSL via Digital Certificate Manager
- Download Certificate Authority (CA) certificate
- Enable SSL
 -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

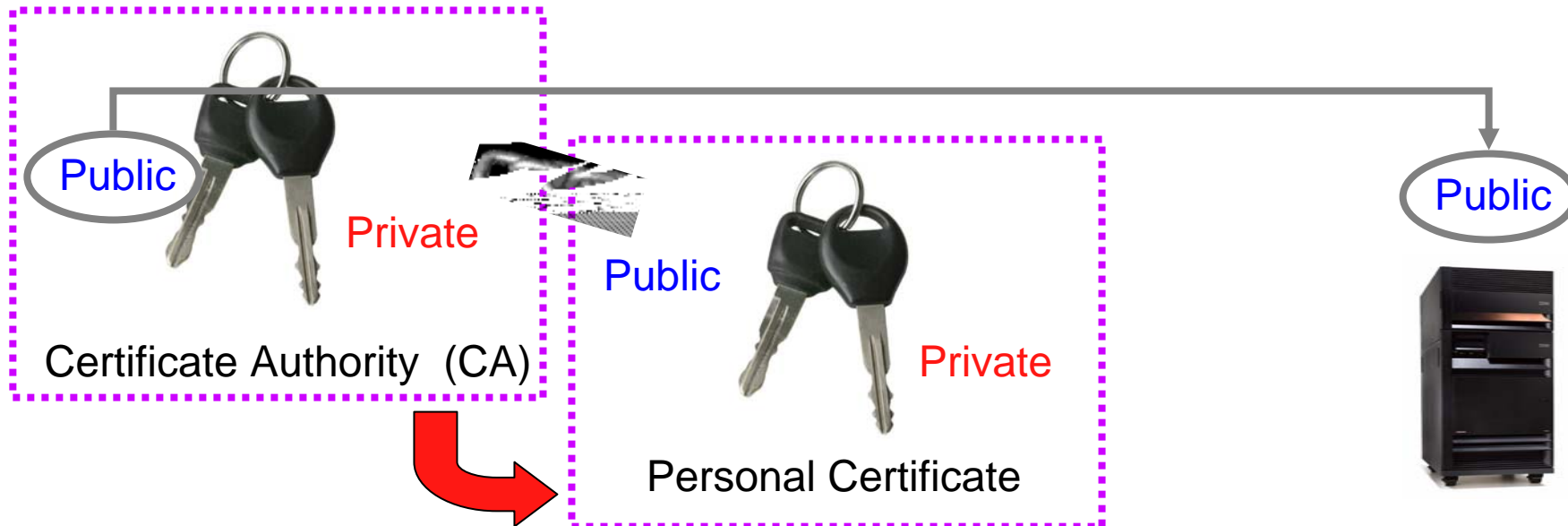
Server Digital Certificate Manager



Secure Sockets Layer (SSL)

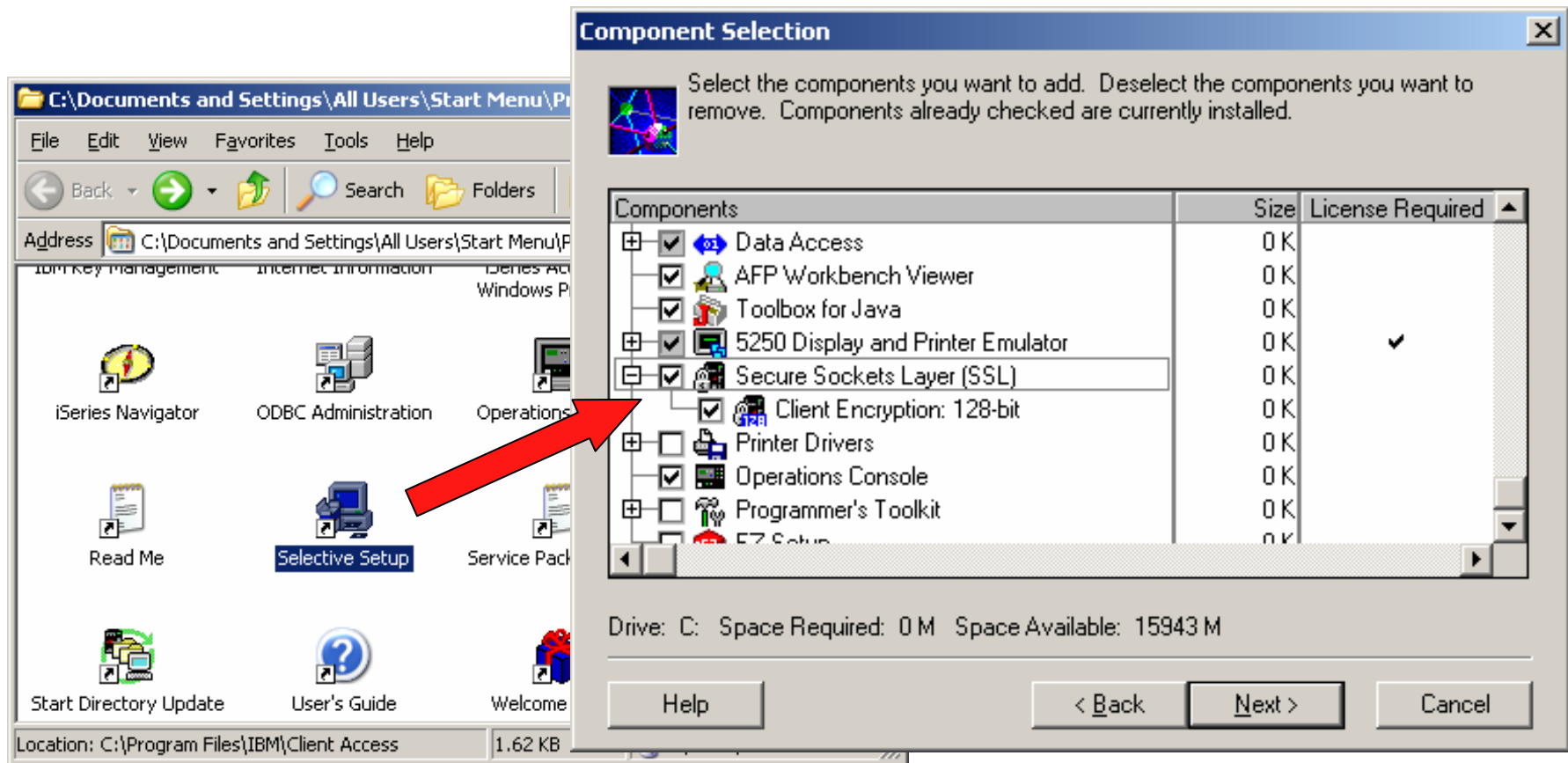
- Client authentication 
 - Requires additional client certificate
 - Client certificate can be purchased
 - Upload CA of personal certificate

PC IBM Key Manager



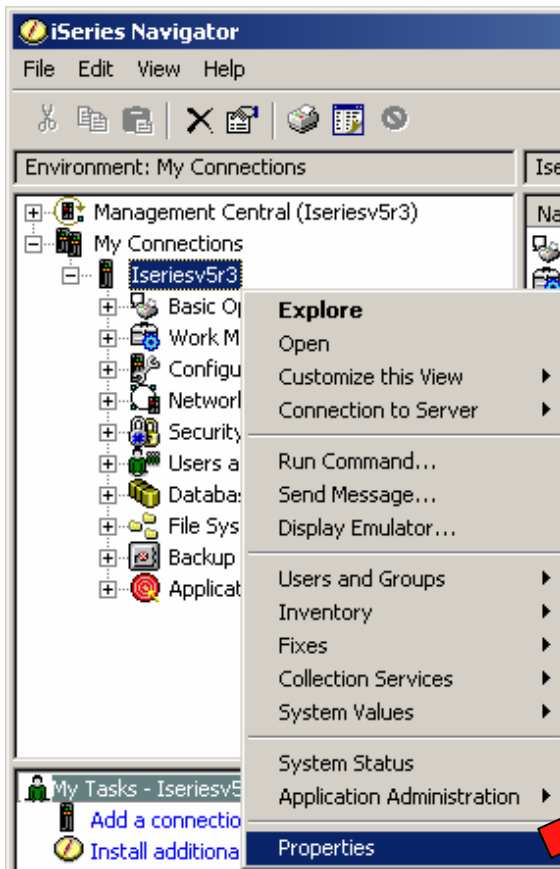
Secure Sockets Layer - Installing

- Selective Setup



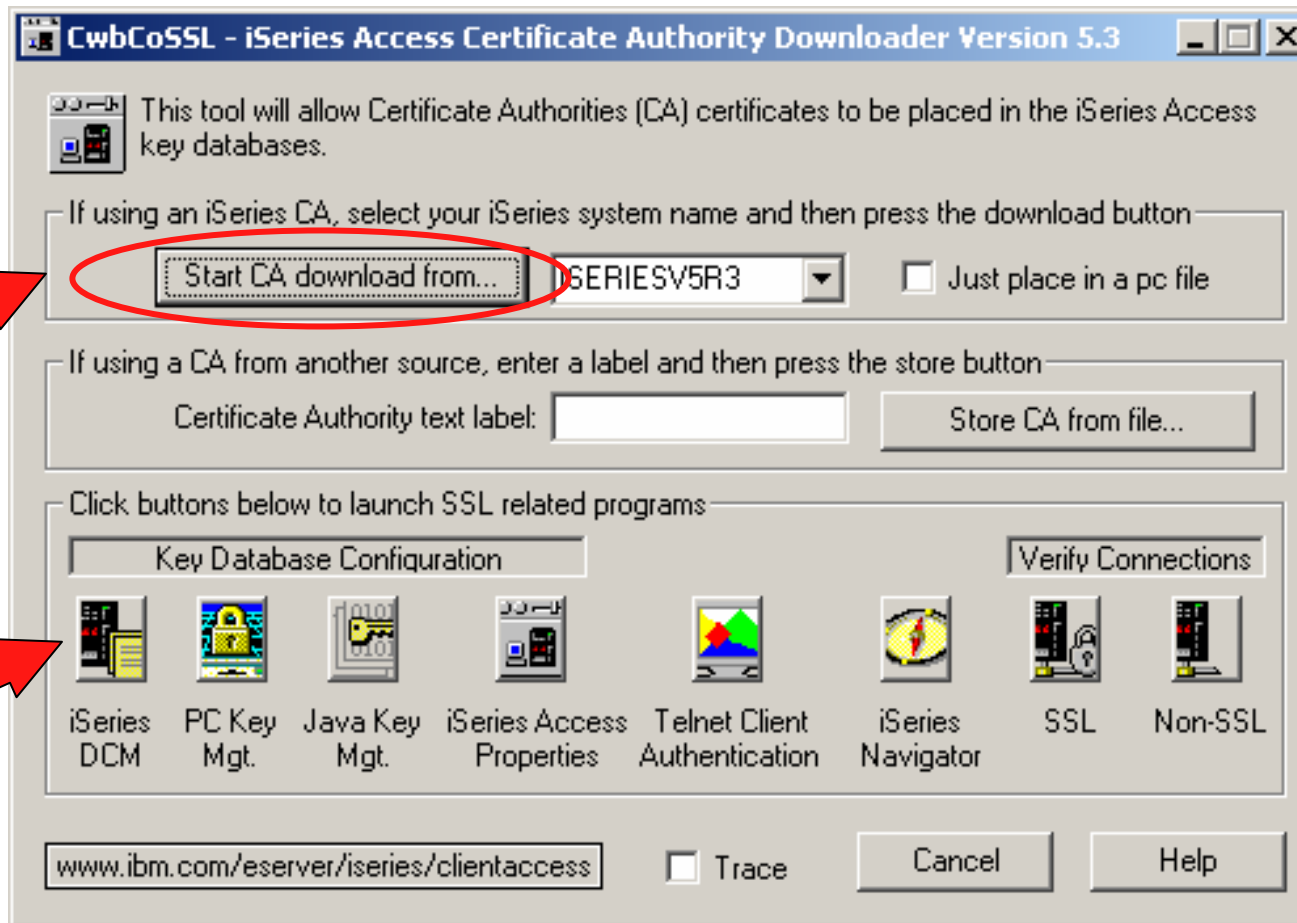
Secure Sockets Layer – Download CA and Enable

- Using iNavigator



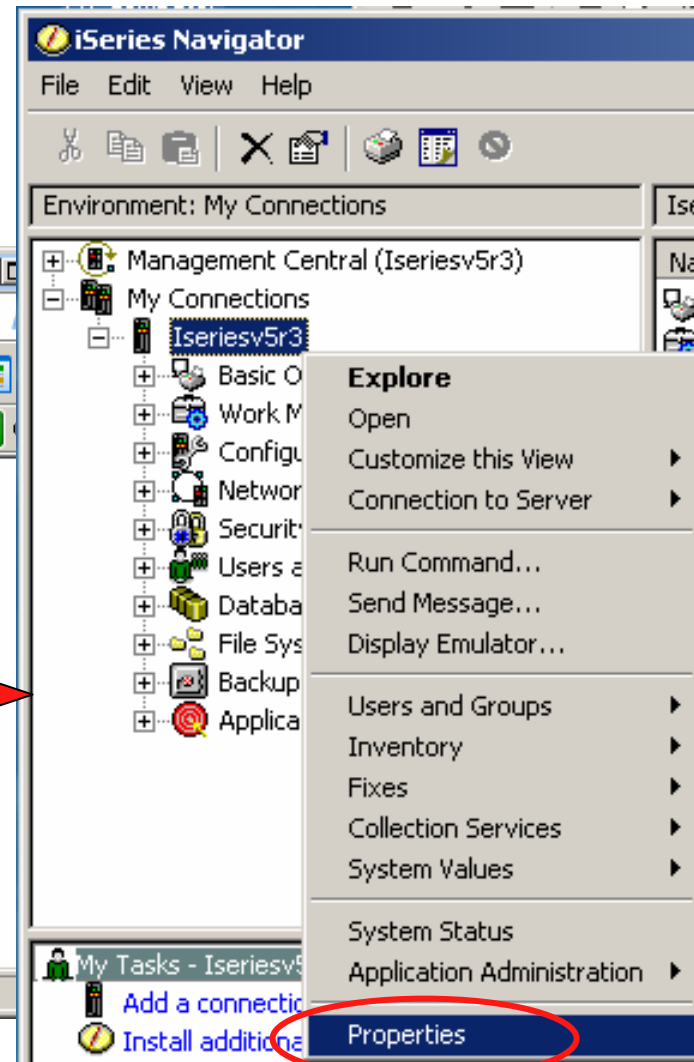
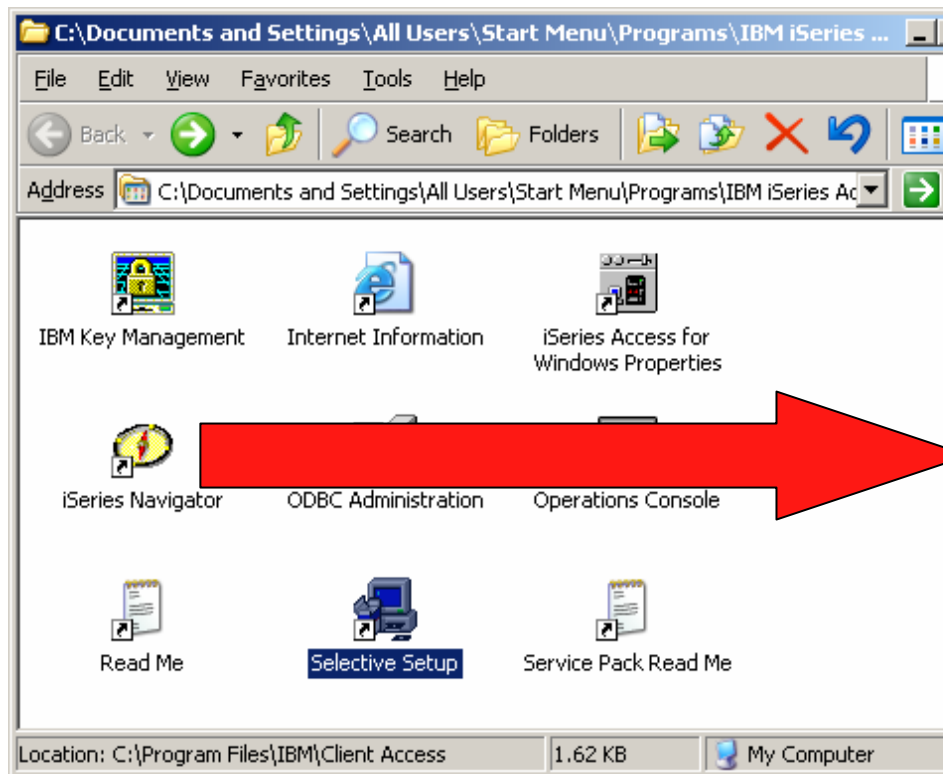
Secure Sockets Layer – CwbCoSSL utility

Your homework...



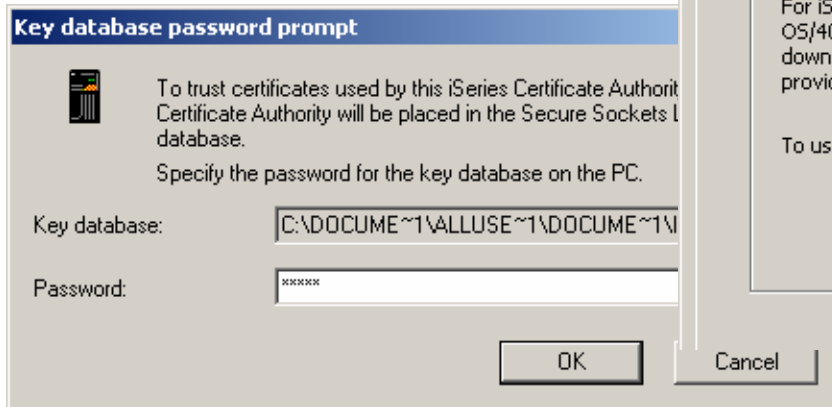
Secure Sockets Layer

- iNavigator system properties



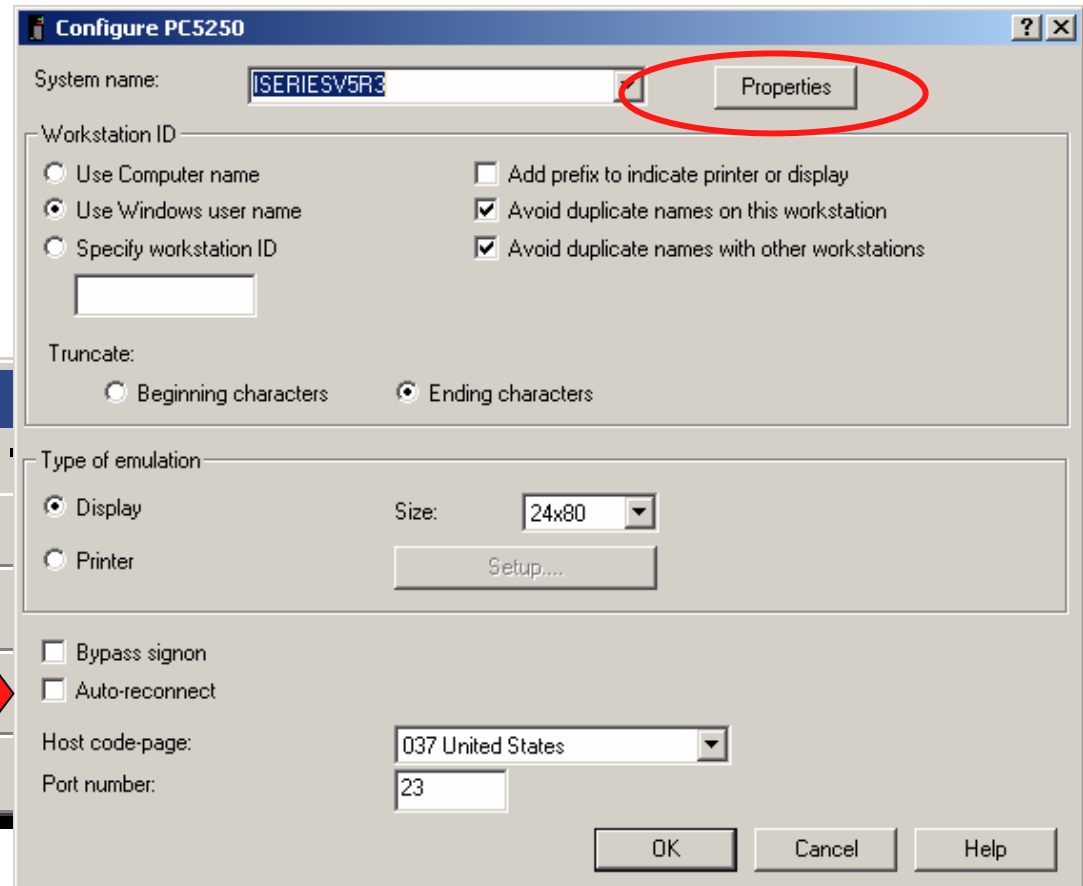
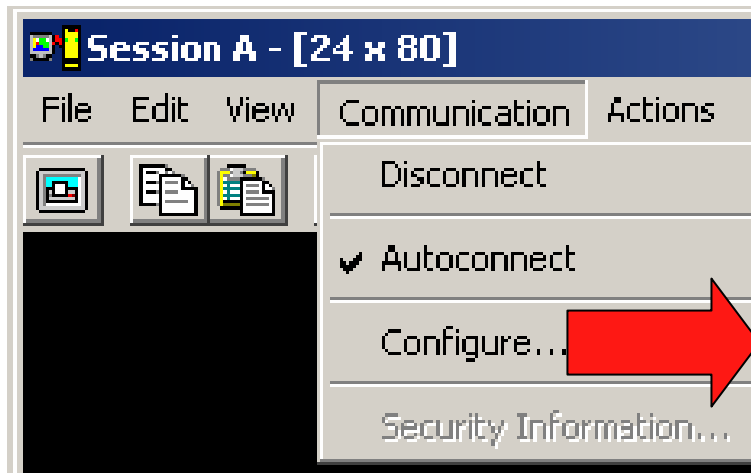
Secure Sockets Layer

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



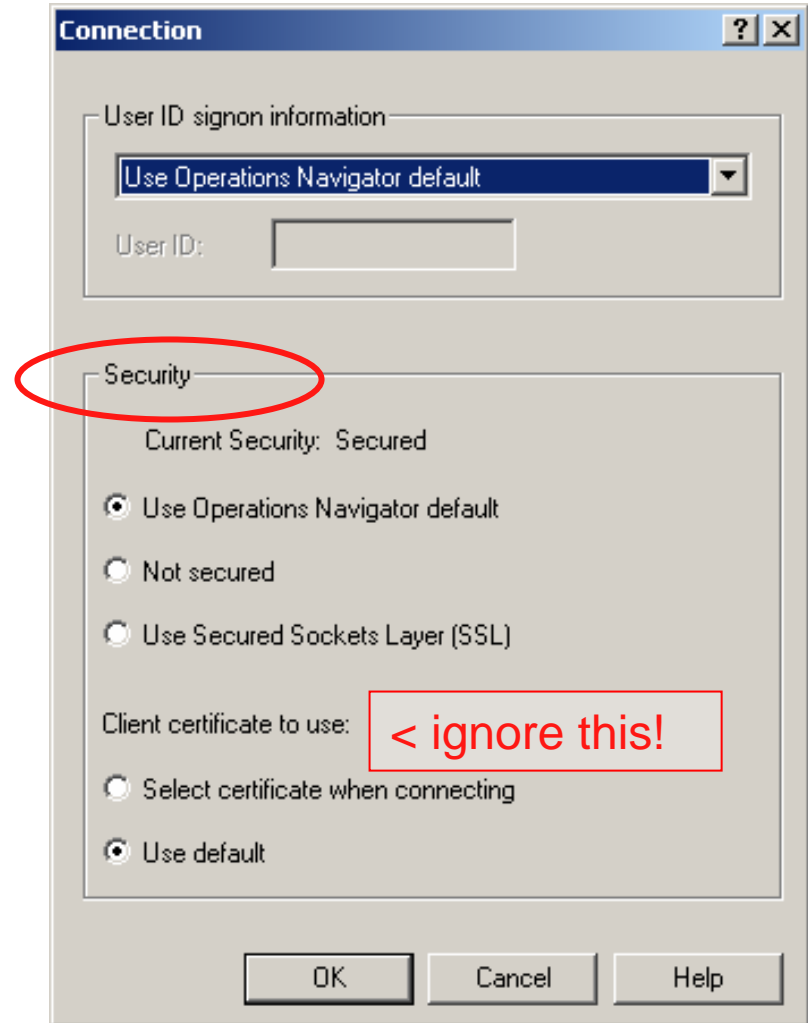
Secure Sockets Layer

- 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

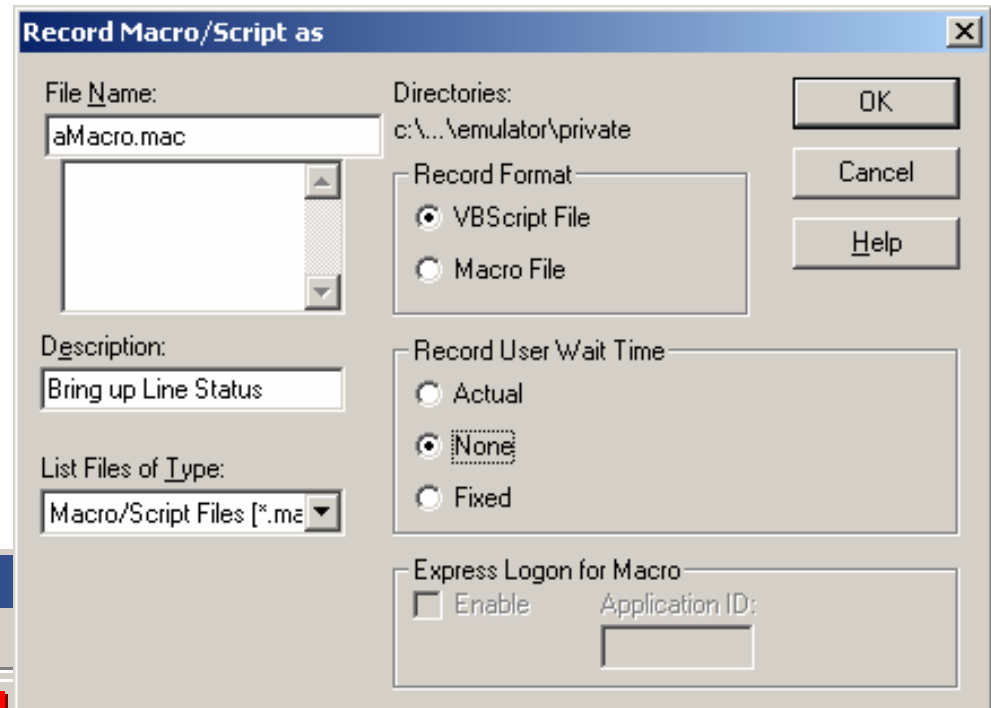
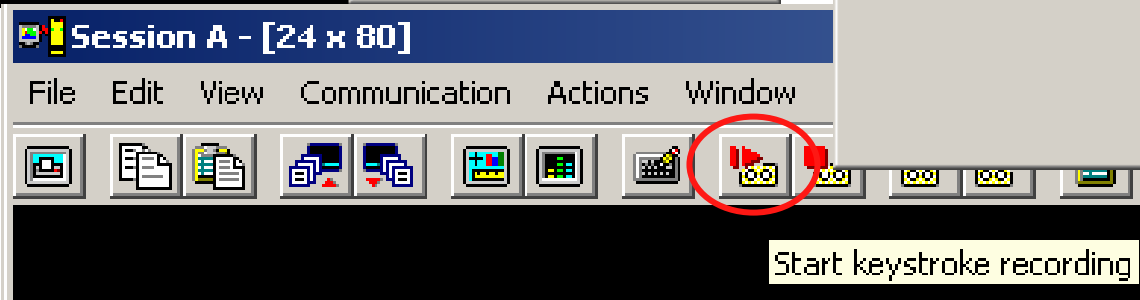
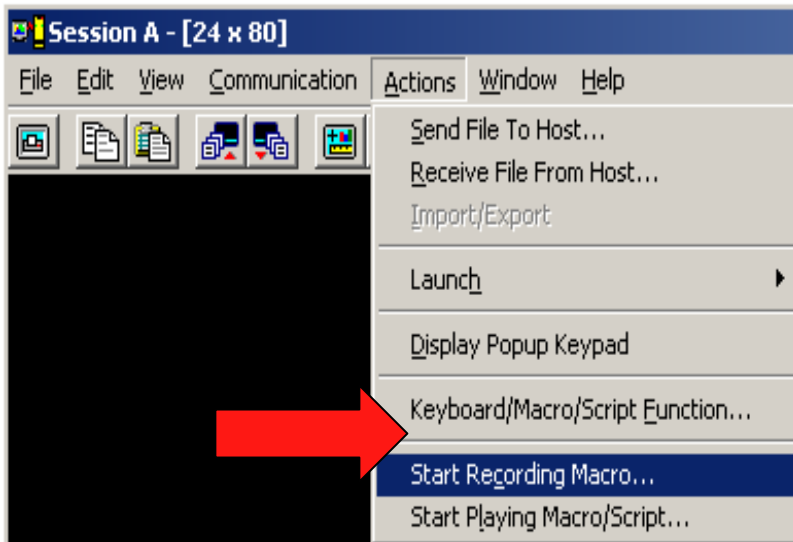
- Common problems
 - PC
 - Forgot do use the CA Download button
 - PC Key database(s) are missing or corrupt. Check location from the Control Panel.
 - Java Runtime Environment (JRE) is corrupted. Effects iKeyMan.
 - System i5 Digital Certificate Management (DCM)
 - CA certificate has been changed
 - 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
 - Customizing
 - Reduce wait times
 - Launch app
 - Playing

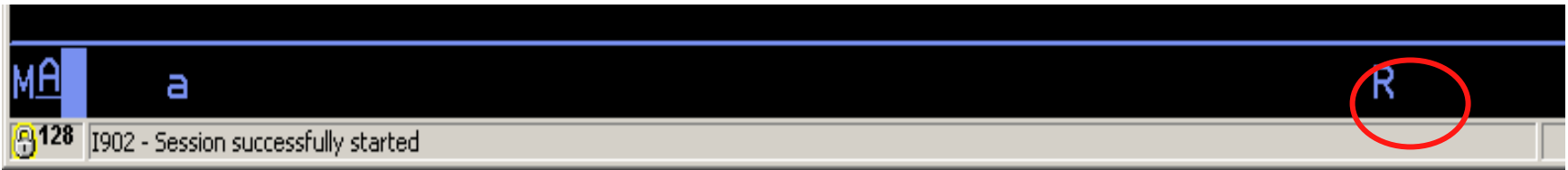
Macros

- Start Recording keystrokes and actions

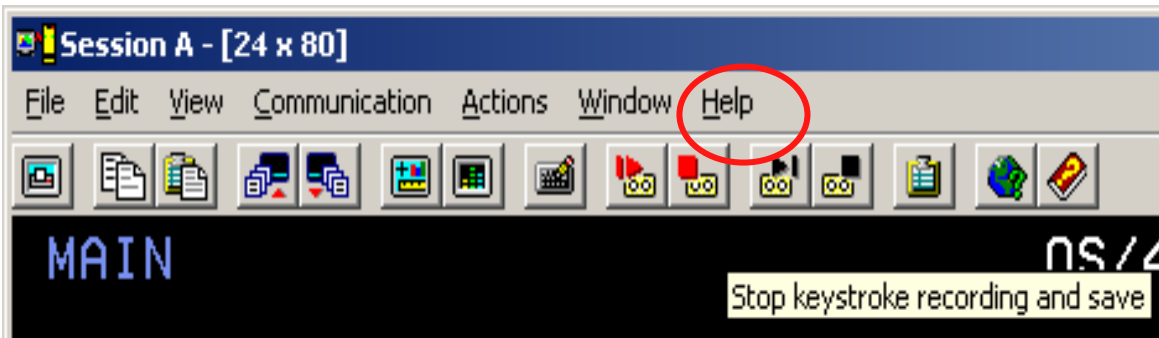


Macros

- Recording...

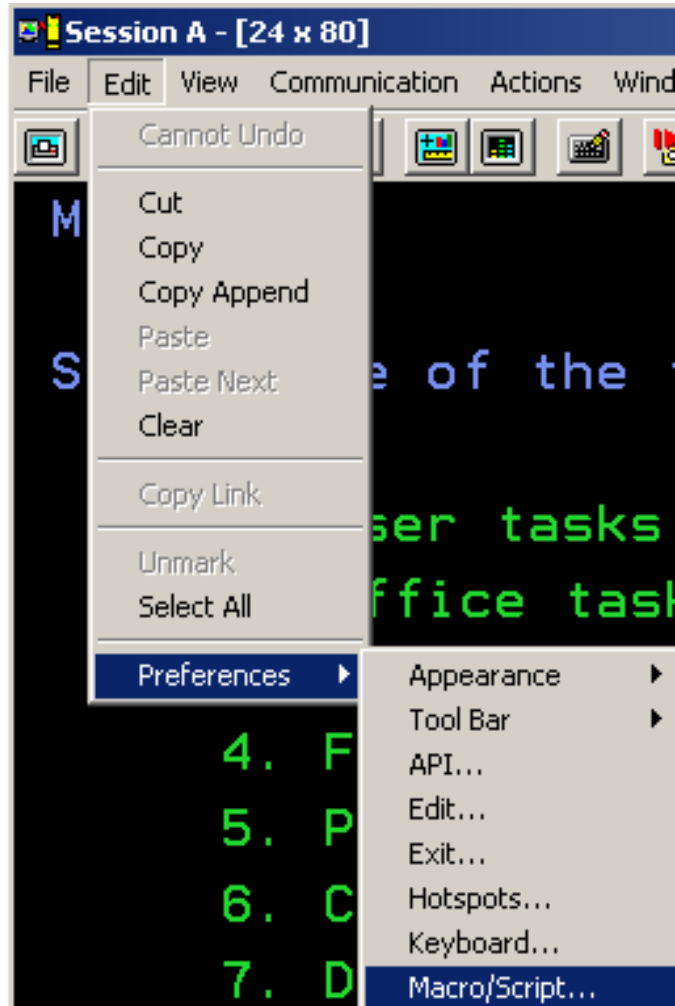


- Stop Recording and save macro



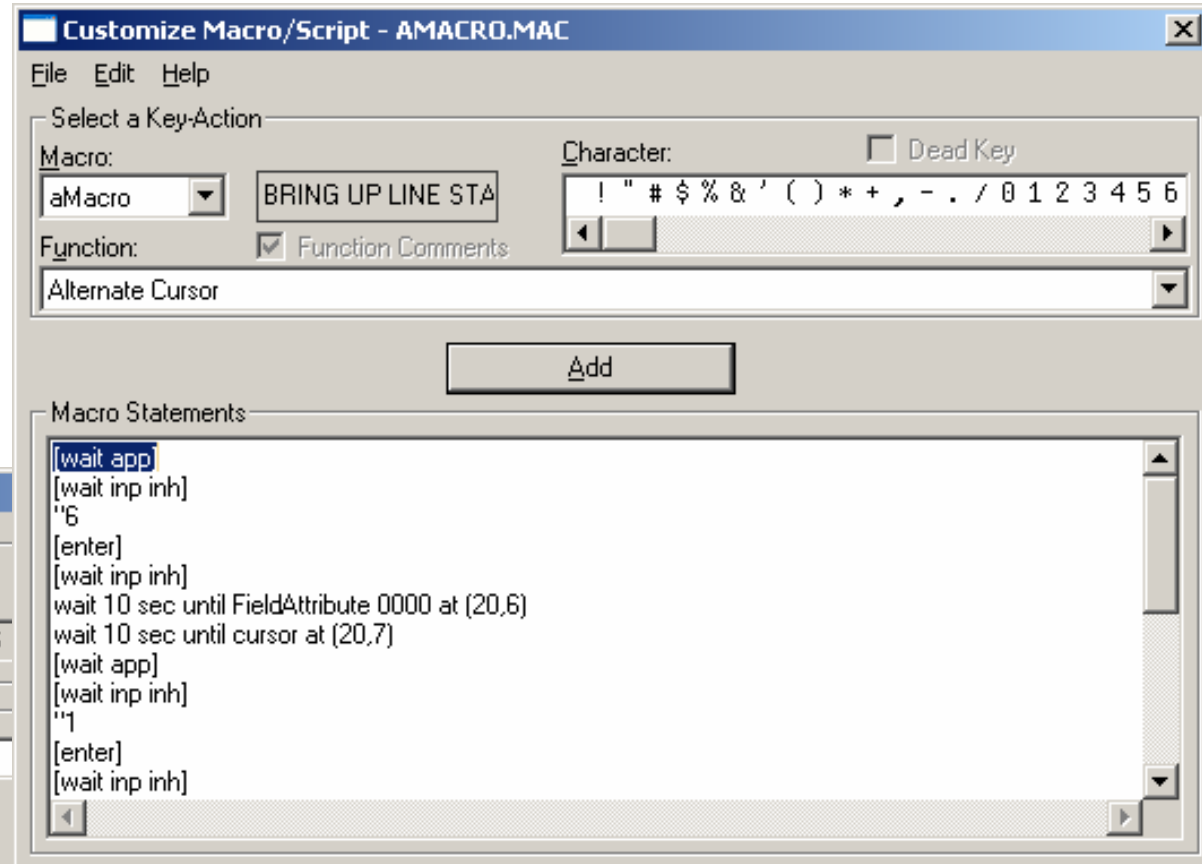
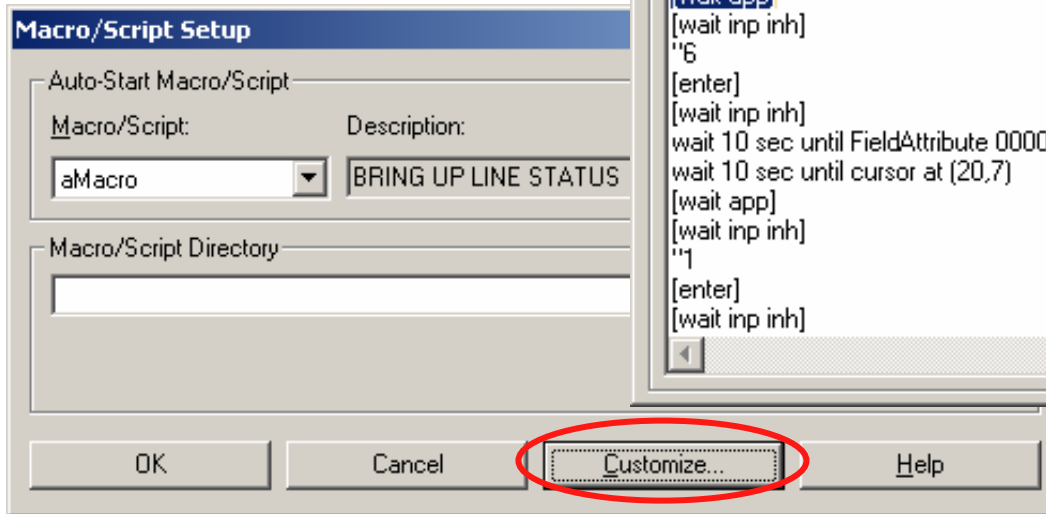
Macros

- Customize your macros...



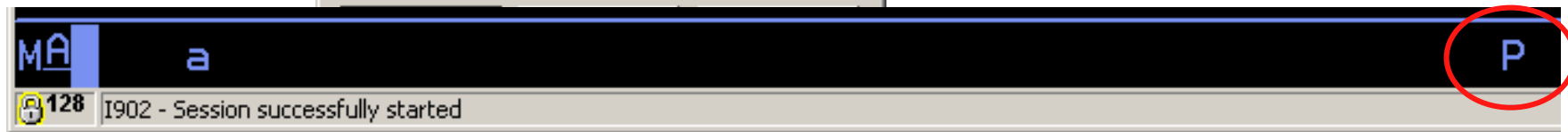
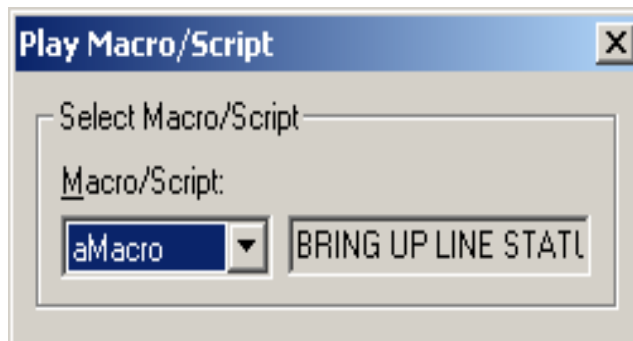
Macros

- Customize your macros...



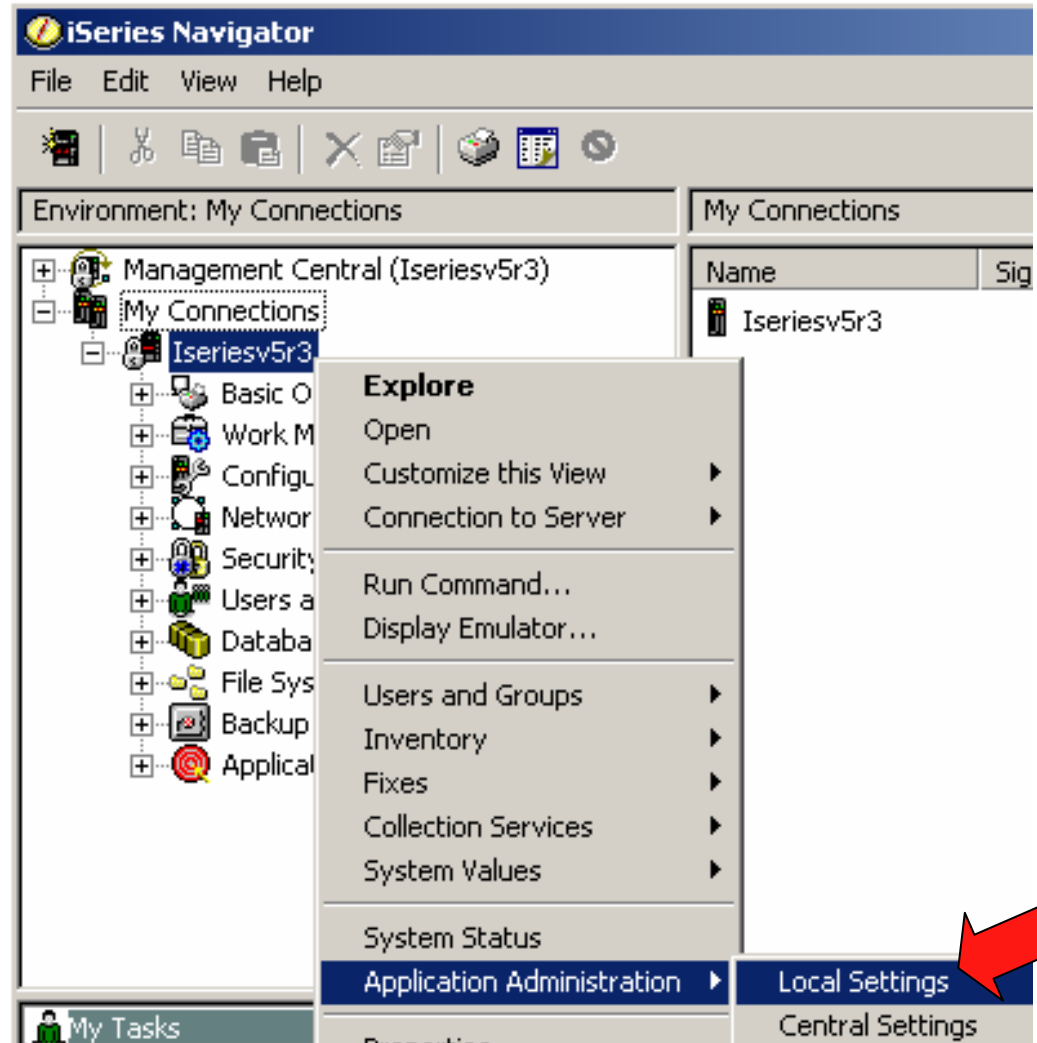
Macros

- Play your macros...



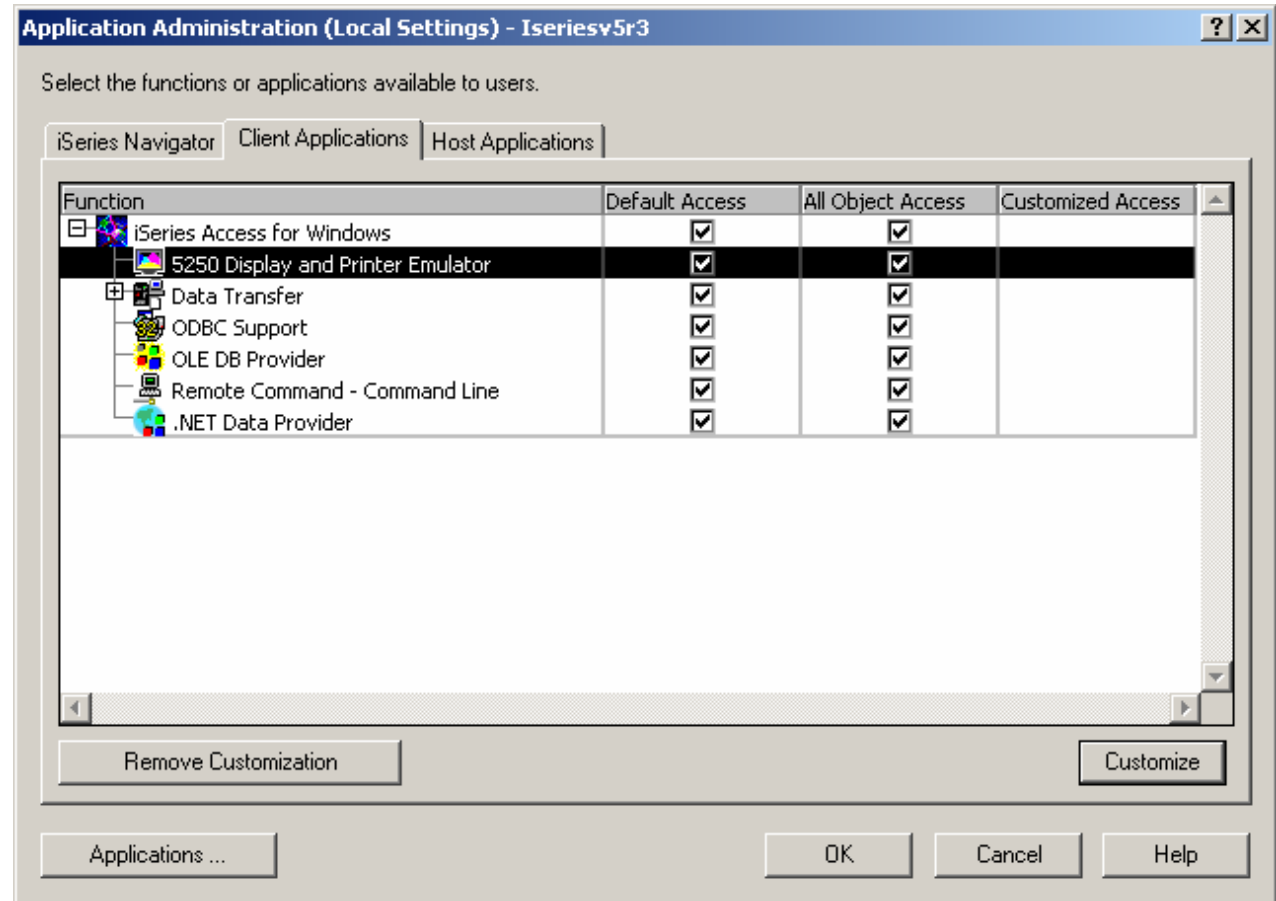
Administration

- 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/infocenter/series/v5r4/index.jsp>
- IBM Redbooks
 - <http://www.redbooks.ibm.com/>
- IBM System i5 Support
 - <http://www.ibm.com/servers/eserver/series/support>
- OpenOffice
 - <http://www.openoffice.org>

System i Access for Web Sessions/LABs

22CC	409136		Get to the Web Fast with System i Access for Web
25LA	520027		LAB: Getting Started with System i Access for Web
32MI	409160		Database Access with System i Access for Web
33MI	500121		System i Access for Web – Security Considerations
35MI	410068		System i Access for Web – Setup and Configuration
36MF	440281		Run 5250 through a Browser using System i Access for Web
41LA	450047		LAB: System i Access for Web: Installation and Configuration
42LA	450047		LAB: System i Access for Web: Installation and Configuration
44MN	420016		Build a Home Page to i5/OS using System i Access for Web
45MN	420015		Tips and Techniques for System i Access for Web
53LA	420063		LAB: Test Drive System i Access for Web
55MM	470021		System i Access for Web runs in a Portal
56MM	480144		Programming with System i Access for Web



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Try out Access for Web for yourself!

Start your browser and connect to the following web site:

<http://iseriesd.dfw.ibm.com/webaccess/iWAHome> (case sensitive)

User ID = WUSER Password = DEMO2PWD	This shows the basic look of Access for Web as we ship it. You can try various functions -- including working with printer output, creating database requests, etc. Click on the 5250 tab, sign onto the iSeries, then start an RPG application called BOATS and run it.
User ID = BOATADMIN Password = DEMO2PWD	This is an example of how a customer might design a web page for their use. You will see that an end user could start the same BOATS application by clicking on the 5250 session -- or they could have used WebFacing to run the application. You will also see other links that would let a user work with spoolfile information, work with IFS, run database requests, etc..

System i Access for Windows sessions:

21CA	420017	System i Access for Windows: What's New in V5R4
22CA	409159	System i Access for Windows Data Transfer: Tips & Techniques
26CC	403971	System i Access for Windows: Security & Communications Tips
31CA	406172	PC5250 Emulation: Everything You Need To Know
32CA	401918	Performance Tune System i Access ODBC
33CA	420219	System i Access in the .NET World
35LA/ 36LA	410160	OPEN LAB: System i Access for Windows with the Experts
52CB	402066	Administration of System i Access for Windows

System i Access for Linux session:

25CA	480144	Creating the System i Linux Desktop
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- What's in it for me ?
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 - Proof that you can “Walk the Talk”
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 - Industry recognition
- How much does it cost ?
 - **NOT** \$190 that you pay at external testing centers
 - **Special Discounted price of \$95 !!**
- What tests are available?
 - System i (of course)
 - All “other” System Group platforms
 - Software

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Certified Advanced Technical Expert

Do **YOU** have what it takes?



See Laura Calley in the
Certification Lab

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