



490020 / 53ML

IBM System i™

Session:

Creating the System i5 Linux Desktop

A Native Linux Solution

Mark Vanderwiel

System i5 Access Development

i want stress-free IT.

i want control.

*i want an **i**.*

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Agenda

- **System i5 Linux Desktop**
 - System i5 Access for Web
 - iNavigator for Web
 - Toolbox for Java - JTOpen
 - System i5 Access for Linux
 - System i5 File and Print
 - OpenOffice
 - How to get started



System i5 Access for Web

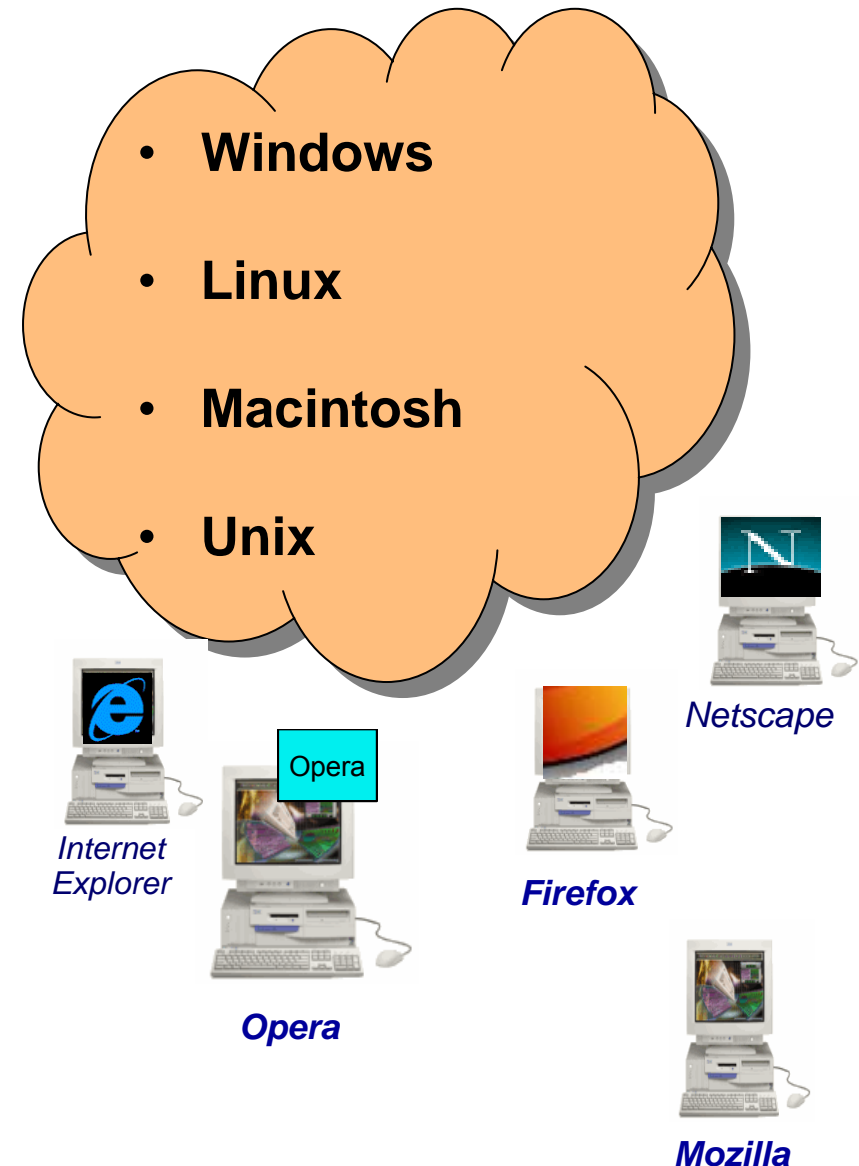
- A customizable web solution



What is System i5 Access for Web?

End users can leverage business information, applications, and resources across an enterprise by extending the System i5 resources to the client desktop through a web browser

- **Provides access to System i5 through a browser**
 - 5250 access
 - Access to database, integrated file system, printers, output queues, jobs
 - Can run batch commands and send/receive messages
- **It has the following advantages:**
 - Is server based
 - Requires only a browser on the client, no configuration required at desktop, no applets installed on desktop
 - Uses industry standard protocols - HTTP, HTTPS and HTML




System i5 Access for Web

- Home page

The screenshot shows a Microsoft Internet Explorer browser window displaying the IBM iSeries Access for Web homepage. The browser's address bar shows "RCHLAND.IBM.COM". The page features a blue header with the IBM logo and the title "iSeries Access for Web". Below the header, there is a navigation menu on the left with sections for "My Information", "My Applications", and "Related Products". The main content area includes a large graphic of a globe with binary code and server racks, with the text "IBM @server iSeries Access for Web". A welcome message reads "Welcome to iSeries Access for Web!". Below this, a paragraph describes the iSeries Client Access team's history and the new software. On the right side, there are several utility links including "Rochester Information", "Rochester Weather", "Rochester News", and "Telephone Directory".

Homepage [RCHLAND.IBM.COM] - Microsoft Internet Explorer

File Edit View Favorites Tools Help

IBM  iSeries Access for Web

warrena RCHLAND.IBM.COM

My Information

- [iSeries Access for Web](#)
- [Main Page](#)
- [Printer Output](#)
- [Messages](#)
- [Send Message](#)
- [Start 5250 Session](#)
- [Database Requests](#)
- [Preferences](#)

My Applications

You can have links to your web applications and iSeries Access for Web on your own home page! For more information about customization, see [Customizing iSeries Access for Web](#) below.

Related Products

- [WebSphere Application Server for iSeries](#)
- [WebSphere Development Studio Client for iSeries](#)

Rochester Information

- [City information](#)
- [Movies](#)
- [Mayo Clinic](#)

Rochester Weather

12:08

[SkyCam](#)

Rochester News

- [PostBulletin](#)
- [KTTC](#)

Telephone Directory

- [Find a person](#)
- [Find a business](#)

IBM @server

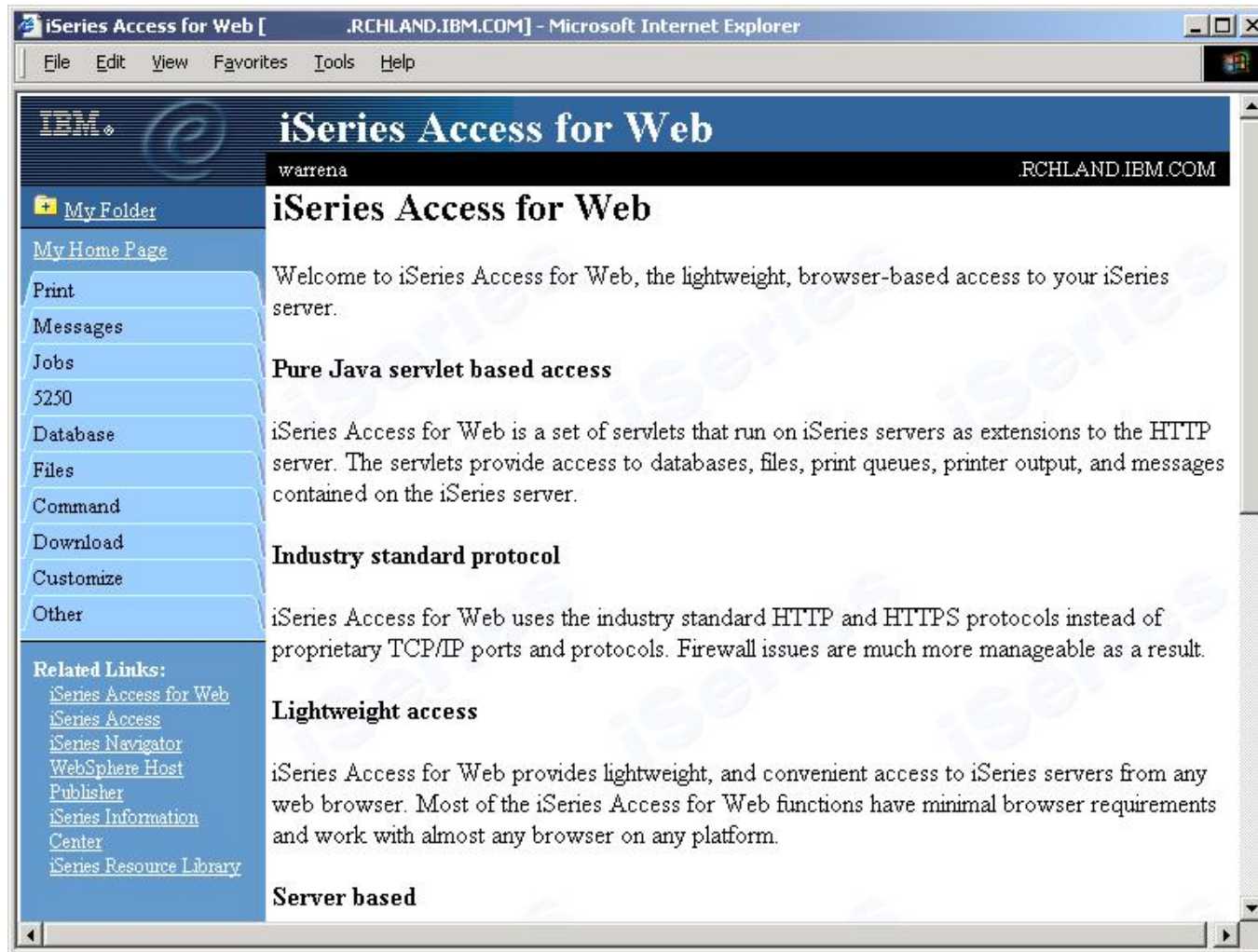
iSeries Access for Web

Welcome to iSeries Access for Web!

The iSeries Client Access team has a history of providing easy-to-use and highly functional PC-to-iSeries server connectivity solutions -- and now we are excited to provide a new generation of software that enables you to access your iSeries server information and resources through a web browser! For more information about iSeries Access for Web, see [What is iSeries Access for Web](#) below.

System i5 Access for Web

- Main page



Try out Access for Web for yourself!

Access the following web site through your browser:

– <http://System i5d.dfw.ibm.com/webaccess/iWAHome> (case sensitive)



Use the following User ID and password to sign into the **EXPERIENCED USER** page:

- **User ID of WUSER**
- **Password of DEMO2PWD**

This shows the basic look of Access for Web as we ship it. You can try various functions -- including working with printer output and the options we provide. You can click on the 5250 tab, sign onto the System i5, then start an RPG application called BOATS and run it.



Start up a different another browser session to same url address above, and use the following User ID and password to sign into the **Access for Water INEXPERIENCED USER** page:

- **User ID of BOATADMIN**
- **Password of DEMO2PWD**

This is an example of how you might design a web page for your company's 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 or HATS LE to run the application. Click on all 3 links and see the same application in different views. You will also see other links that would let a user work with spoolfile information, work with IFS, run database requests, etc..

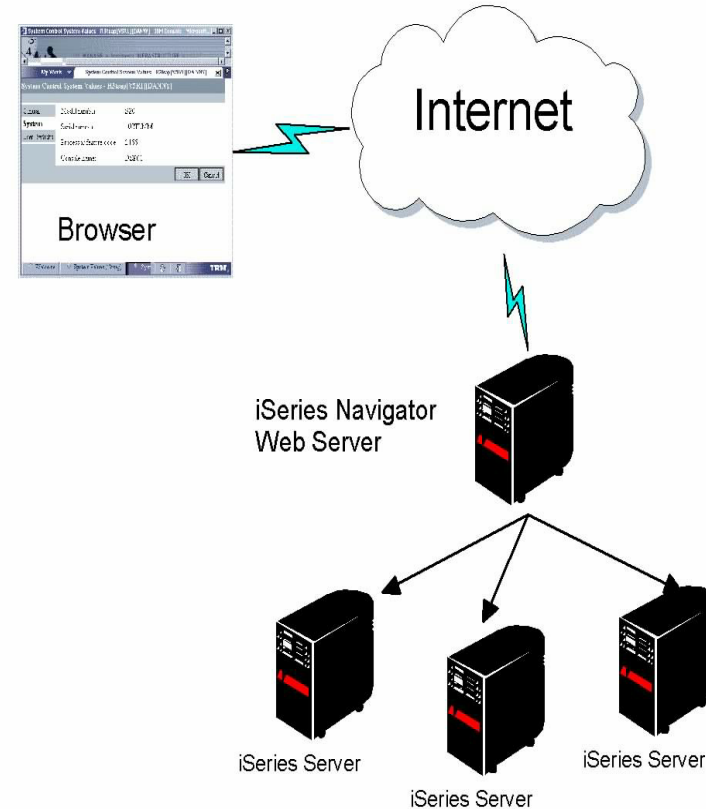
System i5 Navigator Tasks from the Web

- Access core systems management tasks from your browser



System i5 Navigator Tasks from the Web

- Access core systems management tasks from your browser
 - Printer output
 - Jobs
 - Messages
 - Work Management
 - System Values
 - Database
- Access multiple systems through one System i5 from a web browser
- Uses a Java servlet application
- Runs same binaries as System i5 Navigator
- Different rendering technology applied
- System i5 Navigator web tasks can be embedded into other Web applications



Tasks from the Web – Installation and Setup

- Zero installation!
Everything you need is installed as part of i5/OS V5R4.
- Pre-deployed in the WebSphere System Instance
- Setup via HTTP Admin GUI
- Access via :2001 port
- Optional SSL configuration
- Access controlled through Application Administration in PC client version of System i5 Navigator

IBM Web Administration for iSeries

Setup Manage Advanced Related Links

All Servers **HTTP Servers** Application Servers ASF Tomcat Servers

Running Server: ADMIN - Apache Server area: Include /QIBM/UserData/HTTPAdmin/conf/admin-cust.conf

ADMIN > General Server Configuration

General Server Configuration

General Settings Welcome Pages Configuration Includes Advanced

Autostart: Global

Start the system application server instance when the 'Admin' server is started: Yes

Stop the system application server instance when the 'Admin' server is stopped: Yes

Server root directory: /QIBM/UserData/HTTPAdmin

Configuration file: /QIBM/ProdData/HTTPAdmin/conf/admin-ibm.conf

Document root: Browse

Server name:

Fully qualified server host name:

OK Apply Cancel Preview

Local intranet

Available Tasks from the Web in V5R3

Basic Operations

- Send a message (sndmsg)
- System operator messages (sysoprmsg)
- Messages (msg)
- Printer Output (prtout)
- User Jobs (usrjob)

Work Management

- Output Queues (outq)
- Hold a job (hldjob)
- Release a job (rlsjob)
- Delete a job (dltjob)
- Display job properties (jobprop)
- Move a job (movjob)
- Display the job log for a job (joblog)
- Display the call stack for a job (callstack)
- Display the library list for a job (liblist)
- Display the locked objects for a job (lockobj)
- Display the open files for a job (openfiles)
- Display the threads for a job (threads)
- Display the performance statistics for a job (perfstats)
- Work with a job (wrkjob)
- Active Jobs (actjob)
- Server Jobs (svrjob)
- Active Subsystems (sbs)

Configuration and Service

- System Values (sysval)
- Time Management (timemgmt)

Database

- Create Alias (db.crtalias)
- Create Index (db.crtidx)
- Create Schema (db.crtschema)
- Create Sequence (db.crtseq)
- Create Table (db.crttbl)
- Create Distinct Type (db.crttyp)
- Select Schema (db.selschema)
- Aliases (db.alias)
- All Objects (db.allobj)
- Constraints (db.cst)
- Functions (db.func)
- Indexes (db.idx)
- Journals (db.jrn)
- Journal Receivers (db.jrnrcv)
- SQL Packages (db.pkg)
- SQL Procedures (db.proc)
- Sequences (db.seq)
- Tables (db.tbl)
- Triggers (db.trg)
- Distinct Types (db.typ)
- Views (db.view)

Available Tasks from the Web in V5R4

Basic Operations

- Query system message (qsysmsg)
- Display printer output (dspprtout)
- Reply printer output message (rpyprtout)
- Hold printer output (hldprtout)
- Release printer output (rlsprtout)
- Move printer output (movprtout)
- Delete printer output (dltprtout)
- Convert printer output to PDF (cnvprtout)
- Print output properties (prtoutprop)
- Printers (prt)
- Reply printer message (rpyprt)
- Hold printer (hldprt)
- Release printer (rlsprt)
- Start printer (startprt)
- Stop printer (stopprt)
- Restart printer (restartprt)
- Printer properties (prtprop)
- Make printer available (availprt)
- Make printer unavailable (unavailprt)
- Run command (runcmd)

Work Management

- Clear output queue (clroutq)
- Hold output queue (hldoutq)
- Release output queue (rlsoutq)
- All job queues (alljobq)
- Active job queues (actjobq)
- Hold job queue (hldjobq)
- Release job queue (rlsjobq)
- Clear job queue (clrjobq)
- Activate memory pools (actpool)
- Share memory pools (shrpool)
- System status (syssts)

Configuration and Service

- Disk status (dsksts)
- Display history log (dsplog)
- Change password (chgpwd)

Database

- Work with all partitions in a table (db.tblpart)
- Work with schemas in user list (db.schema)
- Work with a list of Databases (db.database)
- Work with all indexes for a table (db.tblidx)
- Work with performance monitors (db.perfmon)
- Create a new performance monitor (db.crtmon)
- Import data onto the system (db.import)
- Export data from the system (db.export)
- Work with a list of the objects that have an index advised (db.idxadv)

Toolbox for Java and JTOpen

- Java classes and utilities for accessing System i5 data and resources



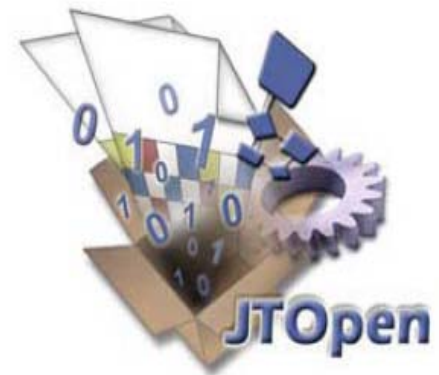
Toolbox for Java

- Server applications
 - Java application run on System i5
 - Java Virtual Machine (JVM) required
 - Performance benefits with direct local access to database
- Client applications
 - Java application run on Linux or any client with a JVM
 - Uses existing System i5 Access family servers
- Internet-based applications
 - Java applications run on System i5 web server
 - Access from any browser



Toolbox for Java and JTOpen

- Two versions available
 - Licensed program
 - Supported by IBM
 - Fixes via System i5 PTF's
 - Open source version
 - Supported by open source community and IBM service
 - Modify the source for your own use
 - Submit source fixes and improvements
 - New fixes and functions available here first!



Toolbox for Java

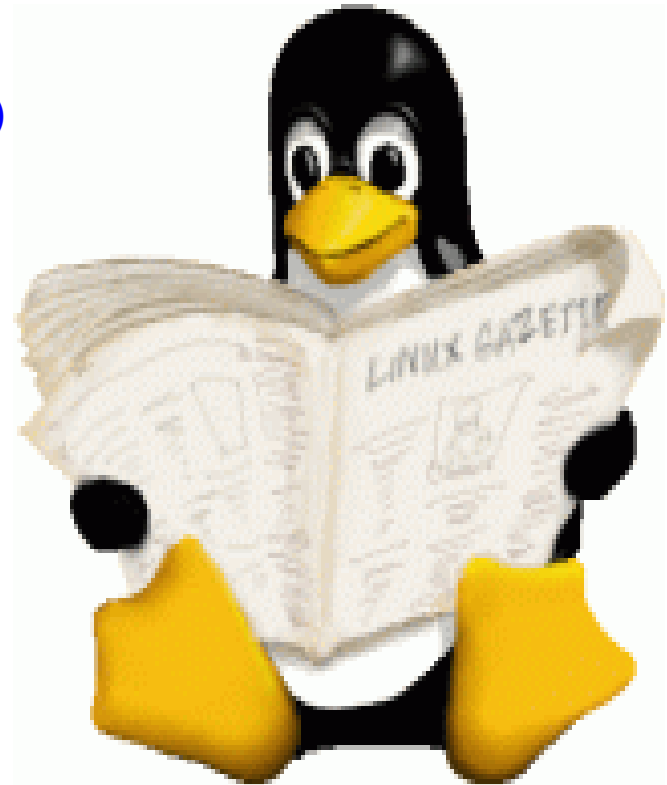
- Function examples

- Database access via JDBC
- Database access via record level I/O and DDS interface
- Command Call
- Program Call (Java and from XML)
- Data Queues
- User Spaces
- Data Areas
- Integrated File System access
- Print objects
- Data conversions
- XML based GUI builder
- Java Beans



System i5 Access for Linux

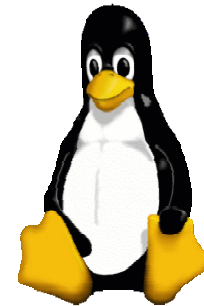
- Native Linux support
 - 5250 emulation
 - ODBC driver to access System i5 database
 - Extended Dynamic Remote SQL (EDRS) access to System i5 database
 - Single Sign-On (SSO)/Kerberos support
- 4 Linux architectures to choose from
 - 64-bit PowerPC or System i5 LPAR (New for V5R4)
 - 64-bit PC (AMD x86-64/EM64T) (New for V5R4)
 - 32-bit PowerPC or System i5 LPAR
 - 32-bit PC (i386)
- Toolkit included (New for V5R4)
 - ODBC, EDRS
 - Remote Command, Program Call
 - Security and Conversions
- Small footprint



What is System i5 Access for Linux?

- **A full-function native Linux 5250 emulator**

- Keyboard mapping
- Macro support
- Record/playback
- Pop-up/pull-down keypads
- Single Signon (SSO)/Kerberos
- Workstation/device ID
- 80 and 132 screen sizes
- Screen print
- and other capabilities



- **A full function ODBC Driver**

- Enables your Linux applications (OpenOffice, Apache/PHP, Perl, C/C++, ...) to access information in DB2 UDB on System i5

- **Extended Dynamic Remote SQL (EDRS) Driver**

- Enables custom Linux applications to access information in DB2 UDB on System i5

- **Many utilities included**

- RmtCmd, CwbRunSQL, CwbPing, ...

Designed to run natively on PC and POWERPC Linux operating systems

Linux 5250 Emulation

5250 : A

Command Edit Option Control Print Help

Sign On

System : RCHAS1DD
Subsystem : QINTER
Display : QPADEV000J

User _____
Password _____
Program/procedure _____
Menu _____
Current library _____

RELEASE: V05R01M00
DRIVER: 220603

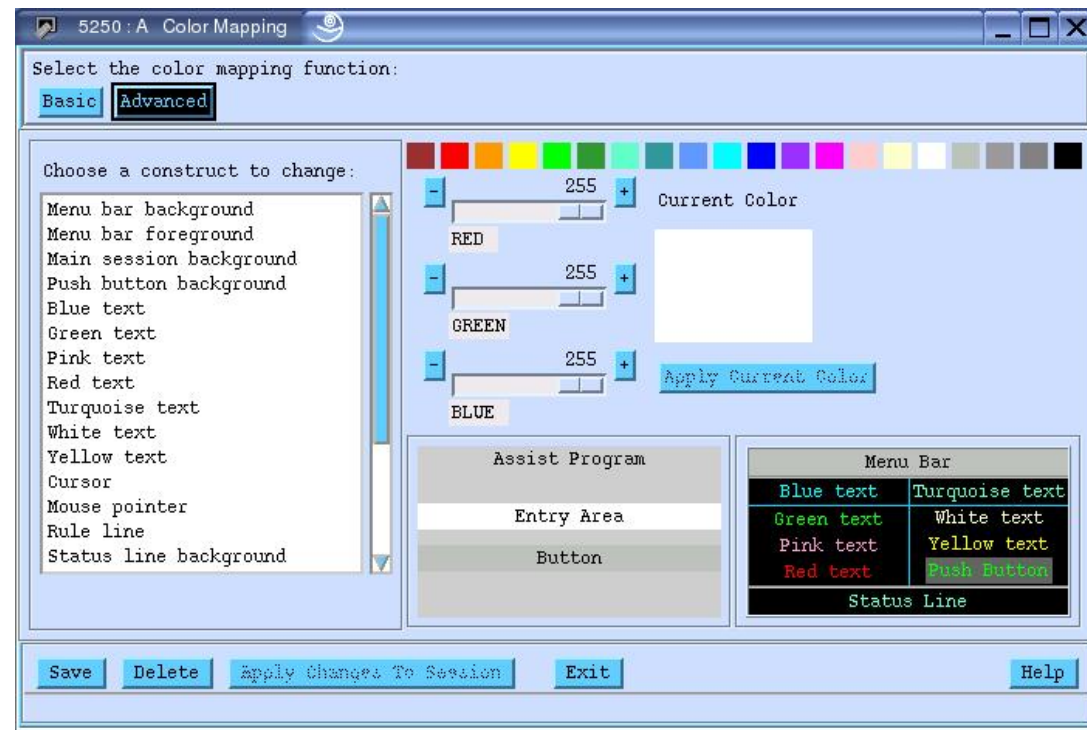
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1 rchas1dd > 🖨 6/53

Full function, native 5250 emulator

- The 5250 emulator contains a variety of functions, such as:
 - Ability to provide a workstation/device ID
 - Both 80 and 132 screen sizes
 - Keyboard/Color mapping
 - Macro support
 - Record/playback
 - Pop-up/pull-down keypads
 - Screen print
 - and other capabilities
- It can also asynchronously display server messages



ODBC Applications

- **OpenOffice**
- **Apache/PHP for Web Serving**
- **unixODBC DataManager**
 - "Explorer" type of application to manage DSNs
 - Run and view results of SQL requests
 - DataManagerII simple insert/change/delete rows
- **cwbRunSQL**
 - Command line application for executing SQL scripts
- **unixODBC isql**
 - Command line application
 - Neat way to generate simple HTML page with data tables
- **Your own applications...C++, C, Perl, Python...**



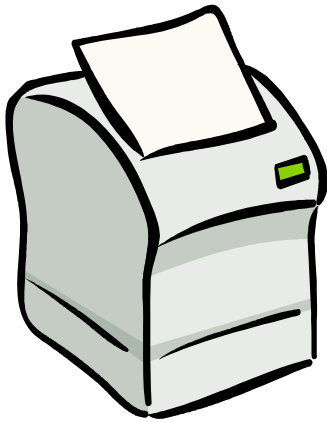
DB2 Information Management Software

A close-up image of a data table with numerical values. The table has a grid structure with blue lines. The values are positive numbers, some with decimal points. The visible values are +2.688, +5.000, +1.500, +1.125, and +1.062.

	+2.688
0	+5.000
1	+1.500
0	+1.125
0	+1.062

Linux Access to System i5 Files and Printers

- System i5 NetServer integration with Linux clients



System i5 NetServer: Supports Linux Clients



System i5
NetServer



- File and Print serving for Common Internet File System (CIFS)
 - Linux and Windows clients
 - Windows Network Neighborhood
 - Compatible with SAMBA 3.0+
 - Part of the base i5/OS
 - This function was available as a V5R1 PTF in 4Q01 and built into V5R2 and above

Configured via iNagavator

- For additional information, see:
 - <http://www.ibm.com/eserver/iseriess/netserver>



Linux
clients

This gives the System i5 administrator the ability to easily control what files or printers a Linux user can get access to.

OpenOffice

- The most **open** office productivity suite available...



OpenOffice

- **Full office suite**

- Writer ▶ Word processor
- Calc ▶ Spreadsheet
- Impress ▶ Multimedia presentations
- Draw ▶ Illustrations
- Database ▶ Full database access

- **Grown up**

- No License hassles
- Many languages
- Many platforms (Linux, Windows, Mac, ...)
- The first office suite to comply with the OASIS OpenDocument format
- Full source, nothing to hide

- **Ease of use**

- Look and feel is familiar and usable

- **Compatibility**

- Handles all major competitors' files

- **Support**

- Supported by a global community of friendly volunteers, only too happy to provide assistance to newcomers and advanced users alike



OpenOffice

GForce tests.ppt - OpenOffice.org Impress

File Edit View Insert Format Tools Slide Show Window Help

Slide Slide Design Slide Show

0.00" Black Color Blue 8

Slides

Normal Outline Notes Handout Slide Sorter

Tasks View

Master Pages

Used in This Presentation

Recently Used

Available for Use

Slide 1

Slide 2

Slide 3

Slide 4

EXTRACTION STATISTICS AFTER WASHER CYCLE

WATER POUNDS REMAINING

G-FORCE

Using 60 lb., 86% cotton terry, with 4 minute extract.

G-Force	MR (%)	Water Pounds Remaining
86 G Force	89%	53
143 G Force	73%	43
235 G Force	63%	38
300 G Force	57%	34
345 G Force	56%	33

6.87 / -1.27 0.00 x 0.00 60% Slide 1 / 11 Default

How to get started with Linux

- Live CD's/DVD's
 - Google “Live Linux” for sites
 - Recommendations
 - Knoppix, Slax, Open SuSE, Fedora
- Virtual PC
 - VMWare Workstation, Player (**free***)
 - Microsoft Virtual PC (**free***)
 - Linux Xen (**free***)
 - Virtual Box (**free***)
- Use old PC hardware
 - Use Live CD, no harddrive required
- USB key
 - Puppy Linux, Slax



* Check license agreement

Summary




- Family of solutions for Linux
 - Web based
 - System i5 Access for Web
 - iNavigator Tasks from Web
 - Toolbox box for Java
 - Native Linux
 - System i5 Access Linux
 - File and Print support
 - OpenOffice



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



Voted "Best Traditional Lab" at Spring and Fall 2005 COMMON

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 |
|------|--------|-------------------------------------|

IBM Certification Testing – Here at COMMON!!

- Where and When ?
 - Room 202A
 - 8:30 – 5:00 Tuesday thru Thursday
- What's in it for me ?
 - Portable credential
 - Proof that you can “Walk the Talk”
 - Peer and Employer recognition
 - 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

Come meet CATE!

Just arrived at COMMON

Certified Advanced Technical Expert

Do **YOU** have what it takes?



See Laura Calley in the
Certification Lab

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