# Cool things in Navigator for IBM i to be a Rock Star Administrator



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iTech Solutions because IBM i (AS/400s) don't come with System Administrators

Solutions Group, LLC

### In this session

We are going to go over how to use IBM Director Navigator for i, by first making sure we have all the components required. Then what needs to be started, and then look at the features and functions in the product that you can use.

### What we will cover

- Getting Started
- Task Categories
  - System: System Status, Messages, disk status
  - Database: Performance monitors and Index Advisor
  - Basic Operations: View Messages, Out Queues, Printers, Jobs.
  - Configuration: Manage hardware, software, and system values.
  - Network: TCP/IP
  - Integrated Server Admin: Hosted servers & disk
  - Security: Authorization lists, Object authority, and Intrusion Detection.
  - Users & Groups: Manage profiles & groups.
  - Journal Management: Journals and receivers
  - Performance: Tools & Graphs to Analyze performance
  - Files: Manage objects and IFS
  - Internet Configurations: HTTP Server, Digital Certificates

### **Director Navigator for i**

- Introduced with 6.1, Director Navigator for i is a web-based console that provides a single, easy-to-use view of your system.
- There is nothing required to purchase.
- Many Systems Management and Operations functions.
- Confusing name.
- Merger of System i Navigator into a web tool
- Portlet based Refreshes better.
- New release via PTFs

### System i Navigator (What you were used to)

- Windows based application that runs on a PC
- Contains Management Central to manage multiple systems
- Requires loading IBM i Access (Client Access iSeries Access) on your PC
- Has limited graphical interface
- A Client/Server application.

### **Director Navigator for i**

- Uses a web browser
- Nothing additional to load
- Integrated into IBM i base operating system (57xx-SS1 option 3)
- Has over 300 tasks
- URL addressable
- What it does not have
  - Management Central
  - Visual Explain
  - Database Navigator
  - Disk Management graphics

### **Required Software**

- 57xx-SS1 Option 1 Extended Base Support
- 57xx-SS1 Option 3 Extended Base Directory Support
- 57xx-SS1 Option 12 Host Servers
- 57xx-SS1 Option 30 Qshell
- 57xx-SS1 Option 33 Portable Application Solutions Environment (PASE)
- 57xx-DG1 IBM i HTTP Server
- 57yy-JV1 IBM Developer Kit for Java (6.1 only)
- 57yy-JV1 Install default JVM for release
- xx = 61 for IBM i 6.1, 70 for IBM i 7.1, 7.2, & 7.3
- yy = 61 for IBM i 6.1 & 7.1, 70 for IBM i 7.2 & 7.3

### **Required PTFs**

New functionality is delivered via HTTP DG1 Group PTF

- IBM I 7.3 SF99722
- IBM I 7.2 SF99713 Level 6 or higher
- IBM I 7.1 SF99368 Level 16 or higher
- IBM I 6.1 SF99115 Level 28 or higher
- WRKPTFGRP

### Check to make sure this is active

- Start TCP
- Start TCP Servers: STRTCPSVR SERVER(\*HTTP) HTTPSVR(\*ADMIN)
- You need the ADMIN Server under QHTTPSVR subsystem running

Host: 172.29.6		i bi bi bi ci i i i i i i i i i i i i i	Workstation ID:		Di	sconnect			
			Worl	k with	Active	Jobs		ITECH07	
							04/20/15	21:04:49	
	CPU	%: 2.1	Elapsed time Current	: 00	:00:29	Active jobs	: 236		
	Opt	Subsystem/Job	User	Type	CPU %	Function	Status		
		QHTTPSVR	QSYS	SBS	. 0		DEQW		
		ADMIN	QTMHHTTP	всн	. 0	PGM-QZHBMAIN	SIGW		
	_	ADMIN	QTMHHTTP	BCI	. 0	PGM-QZSRLOG	SIGW		
	_	ADMIN	QTMHHTTP	BCI	. 0	PGM-QZSRHTTP	SIGW		
		ADMIN	ITECHSOL	BCI	. 0	PGM-QZSRCGI	TIMW		
	_	ADMIN1	QLWISVR	BCI	. 0	JVM-/qibm/prod	THDW		
	_	ADMIN2	QLWISVR	BCI	. 0	JVM-com.ibm.lw	THDW		
		ADMIN3	QLWISVR	BCI	. 0	JVM-com.ibm.lw	THDW		
	_	ADMIN4	QWEBADMIN	BCI	. 0	JVM-/qibm/prod	THDW		
		ADMIN5	QLWISVR	BCI	. 4	JVM-/qibm/prod	THDW		
		APACHEDFT	QTMHHTTP	BCH	. 0	PGM-QZHBMAIN	SIGW		
	_	APACHEDFT	QTMHHTTP	BCI	. 0	PGM-QZSRLOG	SIGW		
		APACHEDFT	QTMHHTTP	BCI	. 0	PGM-QZSRHTTP	SIGW		
		INTAPPSVR	QLWISVR	BCI	. 0	JVM-com.ibm.lw	THDW		
	_	INTAPPSVR	QTMHHTTP	всн	. 0	PGM-QZHBMAIN	SIGW		
	<b>—</b> ,							More	
	===>	and the second	- +						
	F21=	Display instru	ctions/keys						
A		мы					06/002		
- Session successfull	v started	тw					00/002		

### **Optional Plug-ins available**

- Backup Recovery Media Services (BRMS) 57xx-BR1
- IBM i High Availability Solutions Manager 57xx-HAS
- IBM Performance Tools for IBM i Disk Watcher 57xx-PT1 Opt1
- IBM i Job Watcher 57xx-PT1 Opt 3

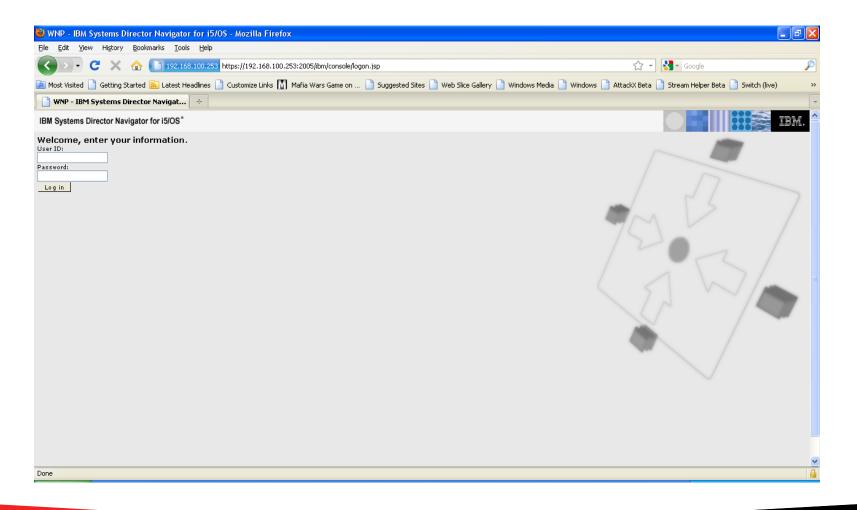
# How to Connect – URL - http://<systemname>:2001

🕹 Untrusted Connection - Mozilla Firefox			PX
<u>File E</u> dit <u>V</u> iew Hi <u>s</u> tory <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp			
C × ☆ □ http://192.168.100.253:2001		→ ▼ Google	P
滷 Most Visited 🗋 Getting Started <u>ର</u> Latest Headlines 🗋 Customize Links 🚺	Mafia Wars Game on 🗋 Suggested Sites 📄 Web Slice Gallery 🗋 Windows Media 🗋 Windows 🗋	AttackX Beta 📋 Stream Helper Beta 📄 Switch (live)	»
🔥 Untrusted Connection 🛛 🕂			-
	<ul> <li>Disconnection is Untrusted</li> <li>You have asked Firefox to connect securely to 192.168.100.253:2005, but we can't confirm that your connection is secure.</li> <li>Wormally, when you try to connect securely, sites will present trusted identification to prove that you are going to the right place. However, this site's identity can't be verified.</li> <li>What Should I Do?</li> <li>If you usually connect to this site without problems, this error could mean that someone is trying to impersonate the site, and you shouldn't continue.</li> <li>Get me out of here!</li> <li>Icchnical Details</li> <li>I Understand the Risks</li> </ul>		

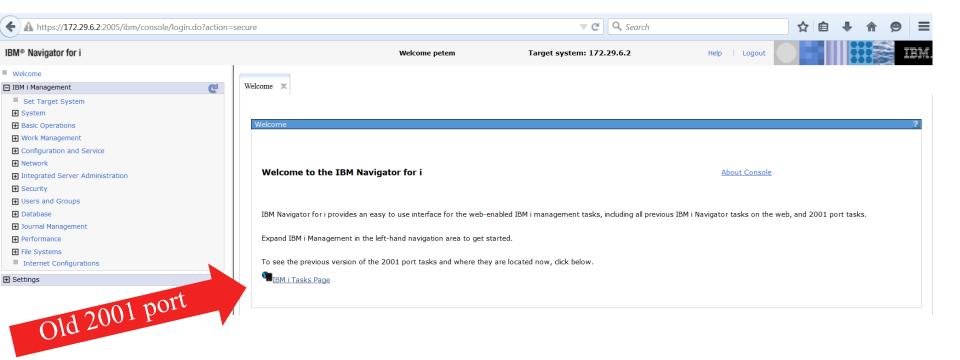
# This is your sign-on screen – regular User ID & Password

🕲 ITECH07 - IBM Navigator for i - Mozilla Firefox		
Ele Edit <u>V</u> iew History <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp		
ITECH07 - IBM Navigator for i × ITech Solutions Group, LLC × If my IBM i (AS/400) could talk it × +		
Example 1 https://172.29.6.2:2005/bm/console/logon.jsp	🏫 ⊽ 🤁 🔀 マ Google	۶
IBM. Navigator for i User ID: Password: Log in		

### **Without PTFs**



### **Main Screen**



## Old 2001 Port screen – IBM i Tasks from Main menu

A https://172.29.6.2:2005/ibm/console/navigation.do?pageID=com.ibm.i5OS.webnav.navigationElement.TasksPagePortlet&mod

#### IBM i Tasks - Itech07.itechsol.com

IBM i Tasks allows you to access the tasks that were previously displayed on the IBM i Tasks web page.



IBM Web Administration for i

Allows you to manage and configure HTTP servers and application servers (Located in Internet Configurations)



Digital Certificate Manager

Allows you to create, distribute, and manage Digital Certificates (Located in Internet Configurations)



IBM Tivoli Directory Server Web Administration Tool

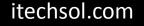
Allows you to administer the IBM Tivoli Directory Server for i (Located in Network)



IBM IPP Server for i

Allows you to configure the IBM IPP Server (Located in Internet Configurations)





#### Dashboard



## **Director Navigator for i Main Menu**

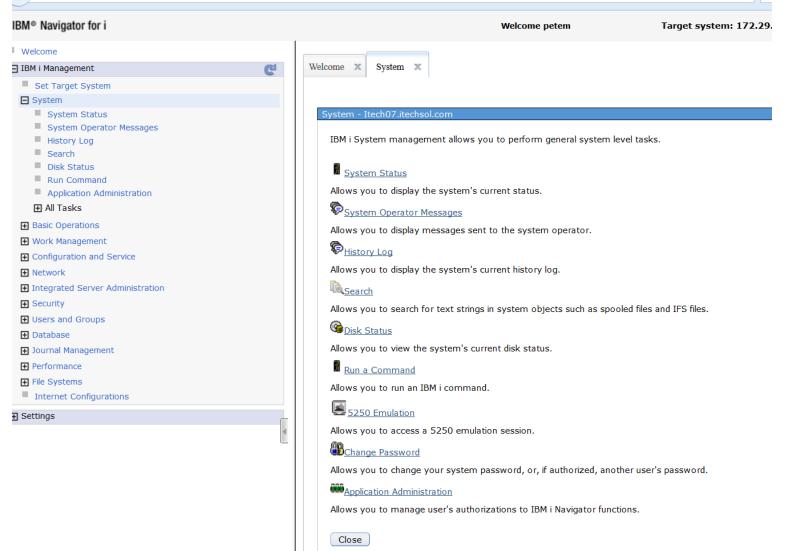
https://172.29.6.2:2005/ibm/console/login.do?action=	secure	⊽ C
IBM® Navigator for i	Welcome petem	Target system: 17
Welcome		
🖃 IBM i Management 🛛 🦿 🥙	Welcome X	
Set Target System		
Basic Operations	Welcome	
Work Management		
Network		
	Welcome to the IBM Navigator for i	
Security		
Users and Groups		
Database	IBM Navigator for i provides an easy to use interface for the web-	-enabled IBM i management task
🛨 Journal Management		
Performance	Expand IBM i Management in the left-hand navigation area to get	started.
Internet Configurations	To see the previous version of the 2001 port tasks and where the	ey are located now, click below.
Settings	HIBM i Tasks Page	

### **Task Categories**

- System: System Status, Messages, disk status
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# System Tasks

VCUV



### **General information on System, Tasks**

The secure https://1/2.29.6.2:2005/Ibm/console/login.do?action=secure

🔍 😋 📉 Search

IBM® Navigator for i			Welcome petem	Target system: 172.29.6.2	
Welcome					
🖃 IBM i Management 🛛 🔅 🖸	Welcom	ie 🗶 System	X System Status X		
<ul> <li>Set Target System</li> <li>System</li> <li>System Status</li> <li>System Operator Messages</li> <li>History Log</li> <li>Search</li> <li>Disk Status</li> </ul>	Sys	tem Status - ITEC 1st refresh: <u>General</u>	4/20/15 9:20:03 PM		Elapsed tim
<ul> <li>Run Command</li> <li>Application Administration</li> <li>All Tasks</li> <li>Basic Operations</li> <li>Work Management</li> </ul>		Jobs Processors Memory Disk Space	Total: 5,858 Active: 236 Addresses used Permanent: 0.009 % Temporary: 0.151 %		
<ul> <li>Configuration and Service</li> <li>Network</li> <li>Integrated Server Administration</li> <li>Security</li> <li>Users and Groups</li> <li>Database</li> <li>Journal Management</li> <li>Performance</li> <li>File Systems</li> <li>Internet Configurations</li> </ul>		Addresses	Total disk space: 1,702.77 GB <b>System disk pool</b> Capacity: 1,702.77 GB Usage: 58.146 % System Resources Health Indicators		
E Settings	•			Refresh Now Reset Statistics	)

### Information on CPU Usage & Processors

Welcome X System 🗶 System Status 🛛 🗶 System Status - ITECH07.itechsol.com Last refresh: 4/20/15 9:20:03 PM Elapsed time: 0.0 % CPU usage (elapsed): General Type of processors: Shared - uncapped Jobs 0.20 processing units Processing power: Processors Virtual processors: 2 Memory Interactive performance: 0 % Disk Space 0.0 % Shared processor pool usage (elapsed): Addresses Uncapped CPU capacity pool usage (elapsed): 0.0 % CPU Health Indicators Refresh Now Reset Statistics



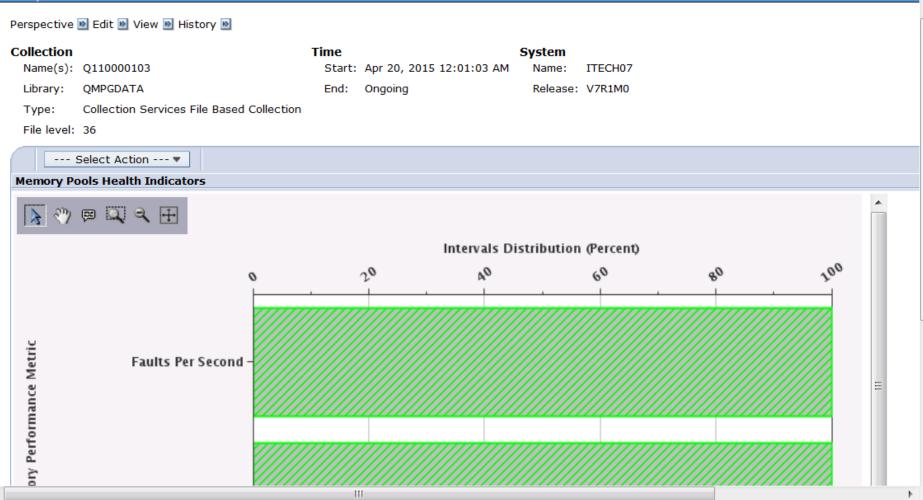
Welco	me 🗴 System	X System Status X					
Sy	System Status - 172.29.6.2						
	Last refresh:	4/20/15 9:28:33 PM	Elapsed time:	00:00:00			
	General	Total memory: 8,184.00 MB					
	Jobs	Active Memory Pools					
	Processors	Memory Pools Health Indicators					
	Memory						
	Disk Space						
	Addresses						

### Memory Pools: Subset of WRKSYSSTS

ome 🛛	System X System Status >	[					
ctive Mer	nory Pools - Itech07						
Refresh Elapsed time: 00:00:25							
2	📑 🔻 🧱 Actions 🔻	,			Filter		
Pc	lool	Description	Curro (MB)		Current Fhreads	Maximum Eligible Threads	
⇒)	No filter applied						х
	Machine	Used by internal machine functions	597.	46 9	91	0	
	Base	Default system pool	7,11	5.98 9	942	234	
	Interactive	Used for interactive work	409.	2 1	L	77	
	Spool	Used for printing	61.3	6 2	2	5	

### **Memory Pools: Health Indicators**

Memory Pools Health Indicators



### **Disk Capacity Information**

IBM	i Navigator 🗙 S	ystem 🗙 System Status 🗙					
S	System Status - 172.29.6.2						
	Last refresh:	4/20/15	9:28:33 PM	Elapsed time:	00:00:00		
	General	Total disk space:	1,702.77 GB				
	Jobs	System disk pool Capacity: 1,702.77	CR				
	Processors	Usage: 58.148 %					
	Memory	Temporary storage us	ed				
	Disk Space	Current:	5,798 MB				
	Addresses	Maximum since last s	system restart: 8,600 MB				
		Disk S	tatus				
		Storage Sys	stem Values				
		Disk Health	Indicators				

## **Disk Information - WRKDSKSTS**

IBM i	Navigator 🗙	System X System Status X					
D	isk Status - Ite	ch07					
	Refresh Elaps	sed time: 00:00:19					
	🔁   🔛 🕇	Actions 🔻				Filter	- <b>1</b> -1 + +
	Unit	Туре	Size (MB)	% Used	% Busy	I/O Requests	Request Size (KB
	😒 🛛 No filt	ter applied					(X)
	📃 🚱 1	19A1	243,253	58.1	0	2.1	5.8
	📃 🚱 3	19A1	243,253	58.1	0	0.5	5.3
	G 4	19A1	243,253	58.1	0	1.1	10.3
	G 3 5	19A1	243,253	58.1	0	1.2	8.4
	6 🚱 💿	19A1	243,253	58.1	0	1.8	11.9
	G     G     G     7	19A1	243,253	58.1	0	0.5	9.8
	8 🚱 📃	19A1	243,253	58.1	0	0.6	6.2

### What to do when maximum Disk space is reached

IBM	i Navigator 🗶 Sy	ystem 🗶 System Status 🗶
2	Storage System Va	lues - Localhost
	* <u>General</u>	*Maximum system disk pool usage: 90 %
		When maximum usage is reached:
		Send message to system operator and system message queue
		Send message to service users
		Run registered exit programs
		End system to restricted state
		Immediately power down and restart system
		Automatically clean up unused printer output storage
		* Retention period (0-366): 8 days

## System Operator messages: like DSPMSG QSYSOPR

#### System Operator Messages - 172.29.6.2

#### User: System operator

2 🖙 🖷	Actions 🔻	Filter
From User	Туре	Message
🔝 No filter applied		
📃 🖗 Qsrvagt	Information	Service Agent is analyzing your system product activity log entries.
📃 🗭 Qsys	Information	Journal receivers AUDRCV0138 and *N detached.
📃 🖗 Qsys	Information	Job not submitted for job schedule entry QEZBKTMMON number 000016 because the
📃 🗭 Qsys	Information	Journal receivers AUDRCV0137 and *N detached.
📃 🖻 Qsys	Information	Log version QHST15110G in QSYS closed and should be saved.
📃 🖗 Qsys	Information	Log version QHST15110F in QSYS closed and should be saved.
📃 🗭 Qsys	Information	Log version QHST15110E in QSYS closed and should be saved.
📃 🗭 Qsys	Information	Log version QHST15110D in QSYS closed and should be saved.
Qsys	Information	Log version QHST15110C in QSYS closed and should be saved.
📃 🗭 Qsys	Information	Journal receivers AUDRCV0136 and *N detached.

## **History Log**

IBM i Navigator X System X System Status X System Operator Messages X History Log X

listory Log - 172.29.6.2			
Start: (Current date Previous	hour )		
🤁   📴 🔻 🎆 Acti	ions 🔻		Filter
Message ID	Severity	Туре	Message
🔝 No filter applied			
CPIAD09	0	Info	User PETEM from client ITECH07.itechsol.com connected to jo
CPIAD09	0	Info	User PETEM from client ITECH07.itechsol.com connected to jo
P CPF1124	0	Info	Job 616678/QUSER/QZDASOINIT started on 04/20/15 at 21
P CPF1124	0	Info	Job 616679/QUSER/QZDASOINIT started on 04/20/15 at 21
CPIAD09	0	Info	User PETEM from client 127.0.0.1 connected to job 485252/0
CPIAD0B	0	Info	*SIGNON server job 593832/QUSER/QZSOSIGN processing
P CPF1124	0	Info	Job 616673/QUSER/QZRCSRVS started on 04/20/15 at 21:2
P CPF1124	0	Info	Job 616672/QUSER/QZRCSRVS started on 04/20/15 at 21:2
CPIAD09	0	Info	User PETEM from client ITECH07.itechsol.com connected to jo
CPIAD0B	0	Info	*SIGNON server job 593832/QUSER/QZSOSIGN processing
•	Ш		4
1 - 28 of 28 items		5   10   25   50   <b>100</b>   All	i4 <b>4 1</b> ⊨ ⊨i

### **Run an IBM i Command**

i Navigator 🗙	System 🗙	System Status	x Sys	tem Operator Messages	х	History Log	х	Run Command	х
_		-							
un Command									
C									
Command to r	un:								
l									
IBM i Op	tions	Prompt	t	Previous Com	nand	ls			

### **Application Administration**

- Control what users have access to FTP & what they can do.
- Control what FTP commands users can perform
  - Change Directory
  - Receive files
  - Send files
  - CL Commands
- Control what users can upload and download data using IBM i Access, and ODBC.
- Everyone can do until one person is entered.
- This and Index Advisor worth price of entire conference.





# **Application Control**

Welcome						
IBM i Management	BM i Navigator X Application	Administrat	ion 🗙			
<ul> <li>Set Target System</li> <li>➡ System</li> </ul>						
System Status System Operator Messages History Log Search	Application Administration ( Select the functions or		57			
Disk Status	<u>System i Navigator</u>	Select	Function	Default Access	All Object Access	Customized Acces
Run Command	Client Applications	0	▼ Ølocalhost in My Connections			
Application Administration     All Tasks	Host Applications	0	Basic Operations			
Basic Operations		0	🕨 🛱 Work Management 🖻	<b>V</b>	<b>V</b>	
Work Management		0	▶ 🖗 Configuration and Service 🖻			
Configuration and Service  Network		0	🕨 🎑 Network 🖻	<b>v</b>		
Integrated Server Administration		0	Administration			
<ul> <li>Security</li> <li>Users and Groups</li> </ul>		0	🕨 🏭 Security 🖻	$\checkmark$		
■ Database		0	users and Groups			
Journal Management		0	🕨 🏠 Databases 🖻	<b>V</b>	<ul> <li>Image: A start of the start of</li></ul>	
Performance     File Systems		0	🕨 🚔 File Systems 🖻	$\checkmark$		
Internet Configurations		0	Multimedia (Pre-V5R1M0 clients only)			
E Settings		0	Backup			
		0	Application Development	<b>V</b>	<b>V</b>	
		0	🖺 AFP Manager 🖻			
		0	Application Administration	✓	$\checkmark$	

## **Application Control FTP**

Application Administration X IBM i Navigator 🛛 🗶

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#### Application Administration (Local Settings) - localhost

Select the functions or applications available to users.

System i Navigator	Select	Function	Default Access	All Object Access	Customized Access				
Client Applications	0	▶ 💽 CIMOM Server 💌		$\checkmark$					
Host Applications	0	Digital Certificate Manager (DCM)		$\checkmark$	$\checkmark$				
	0	▶ 💽 IBM i⊠							
	0	▶ 💽iSeries Navigator Tasks on the Web 🖻		<b>V</b>					
	0	▶ 💽 Management Central 🖻							
	0	► 🛃 QIBM_EJB_PRODUCT 🕑							
	۲	▼ 💽 TCP/IP Utilities for iSeries 🖻							
	0	▼ File Transfer Protocol (FTP)							
	0	► FTP Client							
	0	FTP Server							
	Page 1 of 1IGoRowsI0 $\stackrel{\bigtriangleup}{\bigtriangledown}$ Total: 10Selected: 1								
				_					
		F	emove Customization		Customiz				

## **Application Control - FTP Server - Logon Server**

IBM i Navigator 🗶 Application Administration 🗶

#### Customize Access (Local Settings) - localhost

Function:	Logon Server						
Product:	TCP/IP Utilities for iSeries						
Function Description:	Permission to logon to the FTP Server. Must be allowed to use other server operations.						
Access:							
✓ Default access							
🔲 Users with all object system privilege	3						
Customized access for users and g	roups						
Users and groups:	Access Allowed:						
■-□	Add -> Go						
	Remove <-						
	Access denied:						
	Add -> Go						
	Remove <-						

### **Control FTP Commands**

IBM i Navigator 🗶 Application Administration 🗶

		-		Marca and Annual A					
HOST Appl	<u>Host Applications</u>	0	▶ 💽 Digital Certificate Manager (DCM) 🖻						
		0	▶ 🛃IBM i⊠						
		0	▶ 🛃iSeries Navigator Tasks on the Web 🖻						
		0	▶ 🛃 Management Central 🖻						
		0	▶ 🛃 QIBM_EJB_PRODUCT 🖻						
		0	▼ ➡TCP/IP Utilities for iSeries						
		0	▼ File Transfer Protocol (FTP) 🖻						
		0	FTP Client						
		0	▼ FTP Server						
		0	Cogon Server						
		۲	<ul> <li>Specific Operations </li> </ul>						
		0	Change Directory 🔊						
		0	CL Commands 🖻						
		0	Create Directory/Library	<b>V</b>					
		0	Delete Directory/Library						
		0	Delete Files	$\checkmark$					
		0	🚰 List Files 🖻	<b>V</b>					
		Page 1 of 2   I   Go   Rows   I8   C   Total: 22   Selected: 1							

### **Task Categories**

- System: System Status, Messages, disk status
- Database: Performance monitors and Index Advisor
- Basic Operations: View Messages, Out Queues, Printers, Jobs.
- Configuration: Manage hardware, software, and system values.
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- Internet Configurations: HTTP Server, Digital Certificates

## Database

- Index Advisor Show what indexes are required
  - Easy to use
  - Great way of getting performance
  - Resolve long running jobs that create AP
  - Second best feature of DN.
- SQL Plan cache
- Create SQL Statements
- SQL Packages
- Performance monitors



## Database Main menu

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Welcome

### IBM i Management

- Set Target System
- System
  - System Status
  - System Operator Messages
  - History Log
  - Search
  - Disk Status
  - Run Command
  - Application Administration

#### 🗄 All Tasks

- Basic Operations
- 🛨 Work Management
- Configuration and Service
- Hetwork
- Integrated Server Administration
- Security
- 🗄 Users and Groups
- Database
  - Databases
    - S108e6be
      - 🛨 Schemas
      - Database Maintenance
      - SQL Performance Monitors
      - SQL Plan Cache
      - Transactions

🕀 All Tasks

Ŧ Journal Management

#### Databases - Itech07.itechsol.com

IBM i Databases allows you to manage your databases.

Current database: S108e6be Current schema: Qusrsys

### Databases

Displays a list of the databases on the system from which you can perform all database tasks.

### All Objects

Allows you to work with all database objects for a specific database and schema.

#### Tables

Allows you to work with the database tables for a specific database and schema.

8 Views

Allows you to work with database views for a specific database and schema.

### A Indexes

Allows you to work with database indexes for a specific database and schema.

### Performance Monitors

Allows you to monitor the performance of a specific database.

### Health Center

Allows you to monitor the current health of a specific database.

Set Database / Schema to Use with Database Tasks

# Index Advisor: An AMAZING Tool

IBM® Navigator for i	Welcome petern	Target system: 172.29.6.2	Help   Logout
BM® Navigator for i  Welcome  IBM i Management System Basic Operations Work Management Configuration and Service Network Integrated Server Administration Security Users and Groups Database Journal Management Performance File Systems Internet Configurations Settings	IBM i Navigator × System × Database × Databases × Detabbases - 172.29.6.2	Type Status  Local Available Prune Advised Indexes Condense Advised Indexes Clear All Advised Indexes Index Advisor   Promation in QSYS2/SYS Kes for those which can	Filter     Text     Total     IXADV. Can also be fulfilled by other
	i de la companya de l	recommendations.	be fulfilled by other

# Times no Index was found and the time to build

3		Actions 🔻			Filter	4.4
·   •	Table for Which Index was Advised	Keys Advised	Advised Index Type	Last Advised for Query Use	Times Advised for Query Use	Estimated Inc Time
	) No filter applied	.d				
	💦 BCW1403	W1PAL#	Binary Radix	4/20/15 4:16:19 PM	4,564,760	00:00:01
	💦 BCW1403	W1CO#, W1FWHS, W1FLOC, W1PRD, W1PAL#	Binary Radix	4/20/15 4:16:19 PM	2,943,922	00:00:05
	h FFDFILE	WHNAME, WHFLDI	Binary Radix	4/20/15 7:03:13 PM	2,637,084	00:00:01
	💦 WBPPKOD	HDCO#, HDLOT	Binary Radix	4/18/15 6:29:57 PM	2,102,233	00:00:02
	💦 INPIDBS	SBCO#, SBDTTP, SBDVAR, SBDSIZ	Binary Radix	4/20/15 5:45:24 PM	935,515	00:00:01
	💦 BCW1403	W1CO#, W1FWHS, W1FLOC, W1PRD	Binary Radix	4/20/15 7:09:51 AM	876,904	00:00:01
	💦 GAPBNT	BTCO, BTTTYP, BTLOT, BTSTAT	Binary Radix	4/20/15 6:52:32 PM	665,297	00:00:16
	💦 SAPORD	ODCO#, ODCUSH, ODCUS, ODPRD, ODCMD	Binary Radix	4/20/15 4:08:45 AM	644,080	00:00:41
	💦 SAPORD	ODCO#, ODCUSH, ODCUS, ODPRD, ODSTKT, ODOF	Binary Radix	4/20/15 4:08:45 AM	644,080	00:00:47
	💦 SAPORD	ODCO#, ODCUSH, ODCUS, ODPRD, ODDTSH	Binary Radix	4/20/15 4:08:45 AM	644,080	00:00:40
	💦 ARPCUS	CUFCUS, CUCO#, CUCUSH, CUCUS	Binary Radix	4/20/15 4:08:45 AM	644,080	00:00:01
	💦 GAPBNT	BTCO, BTBOWN, BTTTYP, BTLOAD, BTBIN, BTLOT,	Binary Radix	4/20/15 6:48:27 PM	539,907	00:00:24
	💦 GAPBNT	BTCO, BTBOWN, BTTTYP, BTLOAD, BTBIN, BTLOT,	Binary Radix	4/20/15 6:48:27 PM	539,907	00:00:23
	💦 GAPALC	LCCO#, LCSUPS, LCSUPL, LCPOOL, LCLOT, LCCCHC	Binary Radix	4/20/15 2:38:28 AM	525,759	00:00:04
-	💦 GAPALC	LCCO#, LCCCHG, LCSUPS, LCSUPL, LCPOOL, LCLO1	Binary Radix	4/20/15 2:38:28 AM	525,759	00:00:04
	💦 WBPGLR	GLCO#, GLLOT	Binary Radix	4/20/15 2:38:06 AM	507,428	00:00:26
		WILLOT	Rinary Dadiy	1/20/15 2:38:06 AM	/0/ 109	00.00.01

# **Click Actions then Columns to customize**

Index Advisor - Columns	
Available Columns: Filter name	Current Columns:
Title	Title
Schema	Table for Which Index was Advised
System Schema	Keys Advised
System Name	Add > Advised Index Type
Partition	< Remove Last Advised for Query Use
Leading Keys Order Independent	Times Advised for Query Use
	Add All >> Estimated Index Creation Time
	Move Up
	Logical Page Size Advised (KB)
	Move Down Most Expensive Query Estimate
	Average of Query Estimates
	Rows in Table when Advised
	NLSS Table Advised

# Sorted by Index creation time

		Welcome p	etem Tar	get system: <b>192.168.10</b>	0.253	Help   Logo	it is a second se	
Velcome								
BM i Management	C Welcome X Da	tabases 🗙						
■ Set Target System • System								
Basic Operations	Index Adviso	er - Wnp						
Work Management	Database	S1019fea Advised Indexes for S1019fe	_					
Configuration and Service	Database;	STOTALES WOARED TUDEXES FOR STOTALE	a					
Network Integrated Server Administration	2   5	🚁 🛛 🙀 Actions 🔻				Filt	er	
Security		. —						
Users and Groups	eys Advise	d	Leading Keys Order Independent	Advised Index Type	Last Advised for Query Use	Times Advised for	Estimatec <del>.</del> Index	Reason Advise
Database						Query Use	Creation Time	
	₩ N	o filter applied						
] Journal Management	3SMNO, SE	LOC, SBCMP	SBSMNO, SBLOC, SBCMP	Binary Radix	4/26/12 10:40:46 AM	12	02:18:09	Row selection
Performance	PRVN		IFPRVN	Binary Radix	5/2/12 10:47:10 AM	36	01:54:17	Row selection
File Systems	SVND		IGVND	Binary Radix	4/29/11 10:31:40 AM	32	00:53:51	Row selection
Internet Configurations	ALOC, SAC	MP, SAINDT, SACUST	SALOC, SACMP	Binary Radix	10/15/12 1:58:11 PM	4	00:09:02	Row selection
Settings	3CMP, PBVI	ND, PBDEL	PBCMP	Binary Radix	7/31/12 10:14:59 AM	2	00:07:53	Row selection
	ALOC, SAC	MP, SAINDT	SALOC, SACMP	Binary Radix	2/8/12 9:13:46 AM	5	00:05:20	Row selection
	DCMP, PDL	DC, PDRQTY	PDCMP, PDLOC	Binary Radix	3/29/10 1:21:12 PM	1	00:03:59	Row selection
	GTYPE, TG	CMP, TGPPRD, TGSMNO, TGTRDT, TGCL	IS	Binary Radix	4/1/13 1:06:10 PM	60	00:03:34	Row selection
	3FOLO, TG	TYPE, TGCMP, TGCUST, TGSTAT, TGCNT	Y,	Binary Radix	3/15/13 3:06:33 PM	128	00:03:32	Row selection
	3DEL, TGC	MP, TGPPRD		Binary Radix	3/29/13 10:43:11 PM	40	00:03:15	Row selection
	ACMP, SAL	DC, SAINDT	SACMP, SALOC	Binary Radix	2/8/12 9:11:03 AM	4	00:02:48	Row selection
	PO, IJCMP,	IJTYPE, IJVEND, IJITEM, IJDATE	IJPO, IJCMP, IJTYPE	Binary Radix	10/15/12 12:04:51 PM	34	00:02:40	Row selection
	BITEM		SBITEM	Binary Radix	2/13/13 3:07:44 PM	16	00:02:28	Row selection
	<b>APHYP</b>		SAPHYP	Binary Radix	3/3/10 4:19:04 PM	4	00:02:28	Row selection
	3CMP, PBV	ND	PBCMP	Binary Radix	6/22/12 11:17:30 AM	2	00:02:08	Row selection
		TE, IJCMP, IJVEND, IJPO	IJTYPE, IJDATE, IJCMP	Binary Radix	4/2/13 5:11:27 PM	1,413	00:01:41	Row selection
	3PPRD, TG		TGPPRD, TGAMT	Binary Radix	10/25/11 1:02:20 PM	1	00:01:39	Row selection
	SPPRD		TGPPRD	Binary Radix	10/25/11 1:02:40 PM	1	00:01:39	Row selection
	-TCDE, RFF	SBA	RFTCDE	Binary Radix	4/1/13 11:01:00 PM	889	00:01:26	Row selection
		P, IJVEND, IJPO	IJTYPE, IJCMP	Binary Radix	1/16/12 5:38:05 PM	2	00:01:26	Row selection
	ASHDT		SBSHDT	Binary Radix	10/7/11 10:26:16 AM	1	00:01:26	Row selection
	<	ш						>
	1 - 100 o	f 1002 items	5   10   25   50	100   All		H <b>1</b> 2 3 4	5 6 7 8	9 10 🕨 M

# **Create a Permanent Index**

TECH07 - IBM Navigator for i 🗙 ITE	CH07 - IBM N	Navigator for i × ISERIES	- IBM Navigator for i 🛛 🗙	+		
A https://192.168.1.6:2005/ibm/console	e/login.do?ac	ction=secure			☆ 自 🕹 🏠	1 🖸 💀 😕
Most Visited 🗍 Getting Started 脑 COM	IMON Power	News 📓 Salesforce.com Syste	2			
BM® Navigator for i			Welcome itechsol	Target system: 192.168.1.6 Heir	Logout	
/elcome	<b>^</b>	Welcome x S064972r x In	ndev Advisor			
earch Task	٩	Welconic A 50049721 A				
] IBM i Management	e	Index Advisor - Iseries				
■ Target Systems and Groups	6	2 .	Actions 🔻		Filter	
Favorites				1	T IICGI	
System		Table for Which I	Create Index	Keys Advised	Advised Index Type	Last Advise
Monitors			Remove from List			
Basic Operations		( >> ) No filter applied	Show SQL			X
Work Management		BCW1403	Show Statements	W1PAL#	Binary Radix	4/20/15 4
<ul> <li>Configuration and Service</li> </ul>		BCW1403	Triagor	W1CO#, W1FWHS, W1FLOC, W1PRD, W1PAL#	Binary Radix	4/20/15 4
■ Network		FFDFILE	Trigger	WHNAME, WHFLDI	Binary Radix	4/20/15
<ul> <li>Integrated Server Administration</li> </ul>	Ξ	WBPPKOD	New	HDCO#, HDLOT	Binary Radix	4/18/15 (
Security		INPIDBS	Index Advisor	SBCO#, SBDTTP, SBDVAR, SBDSIZ	Binary Radix	4/20/15 5
Users and Groups	E I	BCW1403	Data	W1CO#, W1FWHS, W1FLOC, W1PRD	Binary Radix	4/20/15
Database	4	GAPBNT	Table	BTCO, BTTTYP, BTLOT, BTSTAT	Binary Radix	4/20/15 (
Databases	_	🔽 📩 SAPORD	radie	ODCO#, ODCUSH, ODCUS, ODPRD, ODCMD	Binary Radix	4/20/15 4
■ S064972r		SAPORD	List Actions	ODCO#, ODCUSH, ODCUS, ODPRD, ODSTKT, ODC	OF Binary Radix	4/20/15 4
Schemas		SAPORD	Save List Contents	ODCO#, ODCUSH, ODCUS, ODPRD, ODDTSH	Binary Radix	4/20/15 4
Database Maintenance		ARPCUS		CUFCUS, CUCO#, CUCUSH, CUCUS	Binary Radix	4/20/15 4
SQL Performance Monitors		GAPBNT	Sort	BTCO, BTBOWN, BTTTYP, BTLOAD, BTBIN, BTLOT		4/20/15 (
<ul> <li>SQL Plan Cache</li> </ul>		GAPBNT	Include	BTCO, BTBOWN, BTTTYP, BTLOAD, BTBIN, BTLOT		4/20/15 (
Transactions		GAPALC	Columns	LCCO#, LCSUPS, LCSUPL, LCPOOL, LCLOT, LCCCH		4/20/15 2
		GAPALC		LCCO#, LCCCHG, LCSUPS, LCSUPL, LCPOOL, LCLC		4/20/15 2
□ All Tasks		B NBPGLR	Save as Favorite	GLCO#, GLLOT	Binary Radix	4/20/15 2
Objects			🔁 Refresh	WILOT	Rinary Dadiy	//20/15 * ►
Actions     Health and Performance		1 - 100 of 250 items	Advanced Filter	5   10   25   50   <b>100</b>   All	н н т	123 × H +
Journal Management		List is incomplete. Total	Export	yet.		
	Ψ.		Configure Options			

# Build our logical file that was "missing"

New Index -	Localhost(S064972r)		
Index	Name:		
Кеу	Schema:	@_GSDB	
WHERE c	ause System name:	System-generated	
Options			
	Table schema:	@_GSDB ▼	
	Table name:	SAPORD	
	Index type:	Not unique 🔻	
	Preferred st	orage media is solid-state drive	
	Keep in men	nory	
	Text:		

# Show SQL: Easy way to learn SQL

#### Show SQL

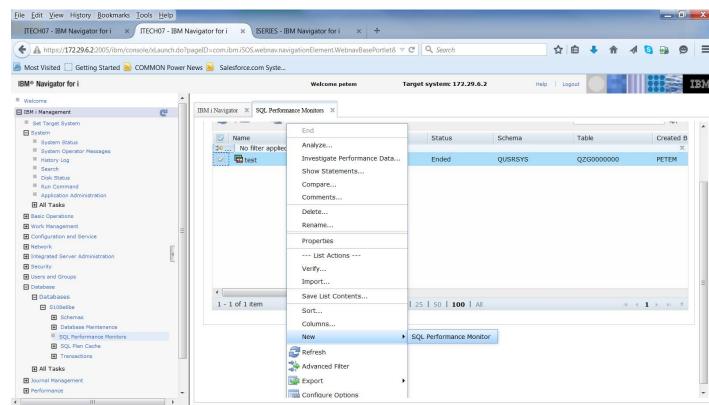
#### SQL statements:

/\* Creating index @\_GSDB.IATEST01 When creating this index the database connection should have a sort sequence of \*HEX. \*/ CREATE INDEX @\_GSDB.IATEST01 ON @\_GSDB.SAPORD (ODCO# ASC, ODCUSH ASC, ODCUS ASC, ODPRD ASC, ODCMD ASC) UNIT SSD ;

> You can generate SQL for most database objects regardless if created by SQL or DDS. If you generate SQL for file that has triggers or constraints, the SQL for those are also generated.

# **SQL Performance Monitor**

- Great tool
- Can generate lots of data Don't forget you started it.
- Find performance problems.
- Be specific when you can
- CPU & Disk Intensive
- Cleanup collection
- Wizard



# **Specify collection criteria**

#### SQL Performance Monitor Wizard - Localhost(S108e6be)

SQL	To limit the amount of data coll specified filter values will be cap	ected, specify which filters to use. When filters are provided, only statements that ptured.					
	If you would like to limit the amount of data collected specify which filters to use:						
	Initial number of records:	0					
	Minimum estimated query runtime:	0					
	Minimum estimated temporary storage:	0					
	🔲 Job name:	QZDASOINIT					
	Job user:	QUSER					
0010 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1 m 1	Current user or group profile:	PETEM					
	Client location:						
	Local port:	Use entry from below					
	Query Governor limits:	Always collect information when exceeded 🔹					
	Statement result or SQL code:	Error or warning					
	Client registers						
	Accounting string:						
	Application name:						

# **SQL Performance monitor started**

SQL Performance Monitors - 172.29.6.2					2
Database: S108e6be					
🥃   🔄 ▼ 🕎 Actions ▼				Filter	
Name	Туре	Status	Schema	Table	Created B
🔝 No filter applied					x
test	Detailed	Ended	QUSRSYS	QZG000000	PETEM
test72	Detailed	Started	QUSRSYS	QZG000007	PETEM

# **Overview of Collected information: Full presentation**

IBM® Navigator for i		Welcome petem		Target system:	192.168.100.253	Help   Logout
Welcome						
🗆 IBM i Management 🥂 🥰	Welcome X	Databases 🗶 SQL Performance Monitors 🗶				
Set Target System	SQL Perfor	rmance Data Analysis - test - Localhost(S1019fea)				?-D 🔨
System						
Basic Operations		actions 🖻 Help 🖻				
<ul> <li>₩ Work Management</li> <li>Configuration and Service</li> </ul>		Select Action 🔻				
Configuration and Service     Network	Select		Value	Summary Available	Statements Available	
Integrated Server Administration	0	▼ 234/2/13 8:13:35 PM to Present				
	0	<ul> <li>Overview</li> </ul>				
	0	SQL Statements		1 🖌	<ul> <li>Image: A set of the set of the</li></ul>	
🗖 Database	0	Users		1 🖌		
Databases	0	Jobs		1 🖌		
	0	Threads		1		
All Tasks	0	Average Table Rows		0		Pseudo Opens better than Full Opens.
Objects     Object     O	0	Average Rows Returned		0		
	0	Average Runtime				than Full Onana
SQL Performance Monitors	0	Average Parallel Degree Used		0		linan Full Opens.
Create SQL Performance Monitor	0	Maximum Parallel Degree				
Health Center	0	SQE		0 🖌	1	
Index Advisor	0	CQE		0 🖌	1	
E Journal Management	0	System Naming		0 🖌		
Performance	0	SQL Naming		1		
File Systems     Internet Configurations	0					
		Unique Open Statements		0 🖌	4	Summary
	0	Full Opens		0 🗸		Statements
	0	Pseudo Opens		0 🖌		
	0	Table Scans		0 🖌	<ul> <li>Image: A set of the set of the</li></ul>	
	0	Average MQTs Used		0 🖌	1	
	0	Average Indexes Used		0 🖌	<b>√</b>	
	0	Full Indexes Created		0 🖌	1	
	0	Sparse Indexes Created		0 🖌	1	
	0	Index From Index Created		0 🖌		
	0	Index Creates Advised		0 🖌	1	
	0	Advised Statistics		0 🖌	1	
	0	Temporary Tables		0 🖌	1	
	0	Sorts		0 🖌		
	0	Access Plans Rebuilt		0		
	0					
		Sort Sequence		0 🗸		
	0	Call Statements		1 🗸		
	0	Error		0 🖌	<b>V</b>	·

# **SQL Plan Cache**

IBM <sup>®</sup> Navigator for i		Welcome petem		Target system: 192.168.100.253	Help   Logout	I III III IIII IIII
= Welcome						
🖃 IBM i Management	Welcome X Datab	ases 🛪 SQL Performance Monitors 🛪 S1019	9fea X			
Set Target System						
	Debelara de					
Basic Operations	Databases - 19	2.168.100.253				? - 🗆
Work Management	Detabases of	01.06				
⊕ Configuration and Service	Database: S1	U19fea				
Network	2   🔤	▼ Actions ▼			Filter	*
Integrated Server Administration						-\$T*
Gecurity	Nam	Open	Desc	ription		
	(≱•) No f	ohann Otataanaata	505	a puon		Y
🗖 Database				with ppg four indicate		<u>^</u>
Databases			-	with DB2 for i objects.		
		atabase M List Actions	Mana	ange database maintenance activities		
🖃 All Tasks		atabase N Change Query Attributes	Work	with Database Navigator maps.		
⊕ Objects		QL Perforr Health Center	Worl	with SQL performance monitors.		
Actions     ■						
🖃 Health and Performance		QL Plan C. Index Advisor 🕨	Work	with SQL plan cache snapshots and event monitors.		
SQL Performance Monitors		ransaction SQL Plan Cache 🔹 🕨	<ul> <li>Properties</li> </ul>	with transactions.		
<ul> <li>Create SQL Performance Monitor</li> <li>Health Center</li> </ul>		New	Show Statements			
<ul> <li>Health Center</li> <li>Index Advisor</li> </ul>				1		
		Properties				
Journal Management		2 Refresh				
Performance		Advanced Filter				
File Systems						
Internet Configurations		Export 🕨	•			
Bettings     Settings     Settings     Setting     Settin		Configure Options				

The plan cache is a repository that contains access plans for queries that were optimized by SQE. SQL Plan Cache is always available. Can go back in time, but can't look back at SQL Performance monitor if it wasn't started.

1 - 6 of 6 items 5 | 10 | 25 | 50 | **100** | All

# **SQL Plan Cache**

IBM® Navigator for i	Welcome petern	Target system: 192.16	8.100.253 Help   Logout	
Welcome IBM i Management Set Target System Set Varget System	Welcome X Databases X SQL Performance Monitors X S1019fee	x		
<ul> <li>System</li> <li>Basic Operations</li> <li>Work Management</li> <li>Configuration and Service</li> <li>Network</li> <li>Integrated Server Administration</li> <li>Security</li> <li>Users and Groups</li> <li>Databases</li> <li>S1019fea</li> <li>All Tasks</li> <li>Objects</li> <li>Actions</li> <li>Health and Performance</li> <li>SQL Performance Monitors</li> <li>Create SQL Performance Monitor</li> <li>Health Center</li> <li>Index Advisor</li> <li>Journal Management</li> <li>Performance</li> </ul>	SQL Plan Cache Properties - Localhost(S1019fea)         Image: SQL Plan Cache Properties - Localhost(S1019fea)         Image: SQL Plan Cache Properties         Description         Image: SQL Plan Cache Properties         Image: SQL Plan Cache Plans	Value 2013-04-02-20.18.37.97517 31 31 7027 2512 413 18 MB 512 MB 608 1904		Filter
Internet Configurations E Settings	I Total Plans Pruned     Plan Cache Maintenance Summary	0		
	<ul> <li>Plan Cache Creation Time</li> <li>1 - 14 of 14 items</li> <li>Refresh Close</li> </ul>	2013-03-31-01,48.54.06120 5   10   25   50   <b>100</b>   All		4 <b>4 1</b> > >
				>

# **SQL Plan Cache Statements**

	Welcome petem	Target syst	em: <b>192.1</b>	68.100.253		Help   Logout	
When Y Dahme Y S10105							
Welcome X Databases X 51019fe	a ×						
SQL Plan Cache Statements	Localhost(S1019fea)						
-11							
	l 🔤 🗶 🔜 Actions 💌					Filter	<b>*</b>
<u>Statements</u>			1				-\$r
	Last Time Run	nt			Statement		
	Save to New						
	No filter applied Show Longest Runs			11110 (500)			х
	Show Active Jobs			0.0447	SELECT RMCMP, RMC	UST, RMNAME, RMCITY, R	MSTAT, RMM 🔨
	Show User History				· · ·		
	Blac	•					
	Work with SOL Stateme	nt and Variables					
	C Bofrach						
				0.0434	SELECT DATASIZE, B	LOB(DATA) FROM QMGTC	.QAYIVDTA
	4/2/13 8:15 - Advanced Filter			0.0012	SELECT RMCMP, RMC	UST, RMNAME, RMCITY, R	MSTAT, RMM
	4/1/13 8:49 📟 Export	•		0.3037	DELETE FROM QMGT	C.QAYIVRIG WHERE SYST	EM = ? AND
	4/2/13 6:45 Configure Options			0.0055	SELECT ACCMP, ACV	END, ACNAME, ACCITY, A	CSTAT, ACM
_		1.2629 2	1	0.1314	SELECT SYSTEM, RIG	S ID, LENGTH, BLOB(ST	REAM) FROM
		2460 342					
	4/2/13 6:00:49 PM 0.0098	.2220 37		0.0060	SELECT RMCMP, RMC	UST, RMNAME, RMCITY, R	MSTAT, RMM
		).2110 6		0.0351	SELECT RMCMP, RMC	UST, RMNAME, RMCITY, R	MSTAT, RMM
<	4/2/10 00 00 DV 0.0110	2007 200		0.0007	CELECT DMCMD DMC	UCT DMNAME DMOTTA D	
1 -	100 of 283 items	5   10   25	50   1	00   All		H ( 1 2	3 <b>) ) †</b>
	Status: Complete					Columns) Save Res	ults Refresh
Close							
	SQL Plan Cache Statements	Statements       Actions ▼         Last Time Run       Save to New         Show Longest Runs       Show Active Jobs         4/2/13 6:5       Show Active Jobs         4/2/13 6:5       Show User History         4/2/13 8:56       4/2/13 8:56         4/2/13 8:56       Advanced Filter         4/2/13 8:49:37 AM       0.2123         4/2/13 6:44       Configure Options         4/2/13 6:42       Configure Options         4/2/13 6:42       Configure Options         4/2/13 6:00:49 PM       0.0098       0         4/2/13 7:40:18 AM       0.1720       0         4/2/13 7:40:18 AM       0.1720       0         1 - 100 of 283 items       Status:       Complete	SQL Plan Cache Statements - Localhost(S1019fea)         Filters         Statements         Last Time Run         Swm. No filter applie         4/2/13 6:55         4/2/13 6:55         4/2/13 6:55         4/2/13 8:55         4/2/13 8:55         4/1/13 8:55         4/2/13 8:15         4/2/13 8:15         4/2/13 8:45         4/2/13 8:45         4/2/13 8:45         4/2/13 8:45         4/2/13 8:45         4/2/13 8:45         4/2/13 8:45         4/2/13 8:45         4/2/13 8:45         4/2/13 8:49:37 AM         0.2123       0.2629         4/2/13 8:49:37 AM       0.2123       0.2629         4/2/13 8:49:37 AM       0.2123       0.2629       2         4/2/13 8:49:37 AM       0.2123       0.2629       2         4/2/13 6:00:49 PM       0.0098       0.2220       37         4/2/13 6:00:49 PM       0.0098       0.2220       37         4/2/13 7:40:18 AM       0.1720       0.2110       6         1 - 100 of 283 items       5       10       25         Status:       Complete       10       25	SQL Plan Cache Statements - Localhost(S1019fea)         Filters         Statements         Last Time Run         Work with SQL Statement         Show Longest Runs         Show Active Jobs         Show Active Jobs         Show Active Jobs         Show Werk with SQL Statement and Variables         4/2/13 6:5         4/2/13 8:5         4/2/13 8:5         4/2/13 8:5         4/2/13 8:5         4/2/13 8:5         4/2/13 8:5         4/2/13 8:5         4/2/13 8:5         4/2/13 8:5         4/2/13 8:6         Plan         Work with SQL Statement and Variables         4/2/13 8:6         4/2/13 8:6         4/2/13 8:6         4/2/13 8:10         4/2/13 8:49:37 AM         0.2123       0.2629         4/2/13 8:49:37 AM       0.2123         0.4/2/13 8:49:37 AM       0.2220         1/2/13 8:49:37 AM	SQL Plan Cache Statements - Localhost(S1019fea)         Filters         Statements         Statements         Work with SQL Statement         Save to New         Save to New         Sow Longest Runs         Show Longest Runs         Show Longest Runs         Attions =         Work with SQL Statement and Variables         Attions =         Attions =         Work with SQL Statement and Variables         Attions =         Work with SQL Statement and Variables         Attions =         Attions =         Work with SQL Statement and Variables         Attions =         Attions =         Attions =         Attion colspan="2">Time (sec)         Attions =         Attins attions = <td< td=""><td>SQL Plan Cache Statements - Localhost(S1019fea)         Filters         Statements         Last Time Run         Sown No filter applie         4/2/13 6:55         Show Longest Runs         Show User History         Plan         Work with SQL Statement and Variables         0.6292       DELETE FROM WEBTE         0.4/2/13 8:15         Advanced Filter         0.0444       SELECT DATASIZE, B         0.0012       SELECT ACMP, RMC         0.0013       SELECT TASIZE, B         0.0014       SELECT TAMORP, RMC         0.0012       SELECT TASIZE, B         0.0013       SELECT TASIZE, B         0.0014       SELECT TAMORP, RMC         0.0012       SELECT TAMORP, RMC         0.0013       SELECT TAMORP, RMC         0.4/2/13 8:49:37 AM       0.2123       0.2629       0.1314         0.4/2/13 8:49:37 AM       0.2123       0.2629       0.1314         0.4/2/13 8:49:37 AM       0.2</td><td>SQL Plan Cache Statements       Filter         Filter         Statements       Filter         Statements       Filter         Statements       Filter         Statement       Filter         Statement       Filter         Statement       Statement         Statement       Statement         Statement</td></td<>	SQL Plan Cache Statements - Localhost(S1019fea)         Filters         Statements         Last Time Run         Sown No filter applie         4/2/13 6:55         Show Longest Runs         Show User History         Plan         Work with SQL Statement and Variables         0.6292       DELETE FROM WEBTE         0.4/2/13 8:15         Advanced Filter         0.0444       SELECT DATASIZE, B         0.0012       SELECT ACMP, RMC         0.0013       SELECT TASIZE, B         0.0014       SELECT TAMORP, RMC         0.0012       SELECT TASIZE, B         0.0013       SELECT TASIZE, B         0.0014       SELECT TAMORP, RMC         0.0012       SELECT TAMORP, RMC         0.0013       SELECT TAMORP, RMC         0.4/2/13 8:49:37 AM       0.2123       0.2629       0.1314         0.4/2/13 8:49:37 AM       0.2123       0.2629       0.1314         0.4/2/13 8:49:37 AM       0.2	SQL Plan Cache Statements       Filter         Filter         Statements       Filter         Statements       Filter         Statements       Filter         Statement       Filter         Statement       Filter         Statement       Statement         Statement       Statement         Statement

# **Health Center**

>

IBM® Navigator for i		Welcome petem	Target system: 192.168.100.253	Help   Logout
Welcome IBM i Management Set Target System	Welcome X Databases X S1019fea X Health Cent	ier X		
<ul> <li>Set Target System</li> <li>System</li> <li>Basic Operations</li> <li>Work Management</li> <li>Configuration and Service</li> <li>Network</li> <li>Integrated Server Administration</li> <li>Security</li> <li>Users and Groups</li> <li>Database</li> <li>Databases</li> </ul>	Health Center - Localhost(\$1019fea)         Overview         Environmental Limits         Activity         Size Limits         Design Limits         Tables	.ES Change 6:36 PM		
Stollafea All Tasks Objects Actions Health and Performance Monitors SQL Performance Monitors Create SQL Performance Monitor Health Center Index Advisor Journal Management Performance File Systems Internet Configurations Settings	⊞Physical Source fi ▶ ∰9views ▼ a∿ Indexes a∿ Binary ra	ad tables 0 zed query tables 0 files 653 les 1		
	Close	History) Save	Total: 18	
	The heal	th center provid	des an overview o	of your system

databases, and the information within the database.

## **Task Categories**

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- Journal Management: Journals and receivers
- Performance: Tools & Graphs to Analyze performance
- Files: Manage objects and IFS
- Internet Configurations: HTTP Server, Digital Certificates

# **Basic Operations**

### Basic Operations - Itech07.itechsol.com

IBM i Basic Operations allows you to manage messages, printer output, printers, and your own jobs.



Allows you to send a message to other users or message queues.

©<u>Messages</u>

Allows you to manage your messages.

Printer Output

Allows you to manage printer output.

Add a Printer

Allows you to add and configure a new printer for IBM i.

## Printers

Allows you to manage printers.



Allows you to manage your jobs.

Close

# Printer Output: PDF Output made E-A-S-Y

ITECH07 - IBM Navigator for i   ITECH07 - IBM Navigator for i I https://172.29.6.2.2005/ibm/console/xLaunch.do?pageID=com.Jbm.J5OS.webnav.navigationElement.WebnavBasePortLet& TC C Search I https://172.29.6.2.2005/ibm/console/xLaunch.do?pageID=com.Jbm.J5OS.webnav.navigationElement.WebnavBasePortLet& TC C Search I work Visited C Getting Started C COMMON Power News Salesfore.com System. I BM® Navigator for i Welcome I BM i Navigator X SQL Performance Monitors X Basic Operations X Printer Output X I BM i Navigator X SQL Performance Monitors X Basic Operations X Printer Output X I BM i Navigator X SQL Performance Monitors X Basic Operations X Printer Output X I BM i Navigator X SQL Performance Monitors X Basic Operations X Printer Output X I BM i Navigator X SQL Performance Monitors X Basic Operations X Printer Output X I BM i Navigator X SQL Performance Monitors X Basic Operations X Printer Output X I BM i Navigator X SQL Performance Monitors X Basic Operations X Printer Output X I BM i Navigator X SQL Performance Monitors X Basic Operations X Printer Output X I BM i Navigator X SQL Performance Monitors X Basic Operations X Printer Output X I Basic Commadia I System Operator Messages I Operator Messa
Most Visited  Getting Started  Common Command System Command Application Administration Applicati
IBM® Navigator for i       welcome petem       Target system: 172.29.6.2       Help       Logout         • Welcome       • Welcome <t< td=""></t<>
<ul> <li>Welcome</li> <li>IBM i Management</li> <li>Set Target System</li> <li>System Status</li> <li>System Operator Messages</li> <li>History Log</li> <li>Search</li> <li>Disk Status</li> <li>Application Administration</li> <li>Application Administration</li> <li>File Name</li> <li>View as PDF</li> <li>Status</li> <li>Open</li> <li>User Status</li> <li>Open</li> <li>View as PDF</li> <li>Status</li> <li>Oute</li> <li>Messages</li> <li>Messages</li> </ul>
IBM i Management       IBM i Navigator X       SQL Performance Monitors X       Basic Operations X       Printer Output X         System       System Status       System Operator Messages       User: Petem       Image: Command Actions Im
Set Target System         System         System Operator Messages         History Log         Search         Disk Status         Run Command         Application Administration         History Log         Basic Operations         Messages         Messages
System   System Status   System Operator Messages   History Log   Search   Disk Status   Disk Status   Application Administration   H All Tasks   Basic Operations   Messages     Messages     Printer Output - 172.29.6.2     Printer Output - 172.29.6.2     User: Petem     User: Petem     Pille Name   View as PDF   User   Status   Output   Yiew as PDF   Petem   Ready to print     Petem     Ready to print
System Status       Printer Output - 172.29.6.2         System Operator Messages       History Log         History Log       User: Petem         Disk Status       Actions ▼         Run Command       Application Administration         H All Tasks       Open         Basic Operations       View as PDF         Messages       Reply         Peterm       Ready to print
System Operator Messages History Log Search Disk Status Run Command Application Administration H All Tasks Basic Operations Messages Messages H Messages H M Messages H M Messages H Messages H M M Messages H M M Messages H M M M M M M Messages H M M M M M M M M M M M M M M M M M M M
<ul> <li>History Log</li> <li>Search</li> <li>Disk Status</li> <li>Application Administration</li> <li>Application Administration</li> <li>Application Administration</li> <li>Application Administration</li> <li>Basic Operations</li> <li>Messages</li> </ul>
<ul> <li>Disk Status</li> <li>Run Command</li> <li>Application Administration</li> <li>Application Administration</li> <li>File Name</li> <li>File Name</li> <li>View as PDF</li> <li>No filter applied</li> <li>Depsecusr</li> <li>Reply</li> <li>Petem</li> <li>Ready to print</li> <li>Ready to print</li> </ul>
Run Command       Open       User       Status       Out         Application Administration       File Name       View as PDF       View as PDF       Image: Command in the status       Out         Basic Operations       D Opsecusr       Reply       Petern       Ready to print       Opr
Application Administration   All Tasks   Basic Operations   Messages     Open   User   Status   Out   View as PDF     View as PDF     Petem   Ready to print     Petem     Ready to print
All Tasks                Basic Operations                Messages               Qpsecusr               Reply               Petem               Ready to print               Qpr
Basic Operations     Image: Comparison of the applied     Image: Comparison of the applied       Image: Messages     Image: Comparison of the applied     Image: Comparison of the applied
Messages Peter Ready to print Qpr
Hold Data Hold
Printer Output D Qpsecusr Hold Petem Ready to print Qpr
Printers Release Peter Ready to print Qpr
User Jobs Print Next Peter Pede to print Opr
Tasks Cond Control Con
Configuration and Service Move Move Peter Ready to print Qpr
Delete Delete Peter Ready to print Qpr
Integrated Server Administration     D Qpsavobj     PDF using Transform Services     to client file system     em     Ready to print     Qpr
Users and Groups     PDF using Infoprint Server     Peter     Ready to print     Qpr
Databases Peter Ready to print Qpr
Advanced
Schemas     1 - 49 of 49 items     Install AFP Viewer     1 ≥ 5 50 100 All     K < 1 > M + 1
Database Maintenance Properties
SQL Performance Monitors
III     ►

## **PDF** output

- Doesn't get easier than this
- Can set up PDF printer
- Can email these printouts

Opening QPSECUSR	.pdf	×					
You have chosen to o	pen:						
🔁 QPSECUSR .pd	🔁 QPSECUSR .pdf						
which is a: Adobe Acrobat Document (3.5 KB) from: https://172.29.6.2:2005							
What should Firefox (	What should Firefox do with this file?						
Open with Ac	Open with Adobe Reader (default)						
Save File							
Do this <u>a</u> utomatically for files like this from now on.							
	OK Cancel						

# **Printer Configuration Wizard**

### Printer Configuration Wizard

	Welcome to the i5/OS Add Printer Wizard for TCP/IP network-attached printers.
	This wizard will help you configure and then add a printer to <b>i5/05.</b>
	Click Next to continue.
< Back	Next > Finish Cancel

# **Printer Configuration Wizard**

#### Printer Configuration Wizard

A144

#### Location of the printer

You must indicate the location of the printer by specifying its DNS name, its TCP/IP address or its IPP URL. If your printer is not directly connected to the network but is attached to a print server, specify the address of the print server and check the "Printer is connected to a print server" checkbox.

ONS name of printer or print server:

Example: OFFICE

TCP/IP address of printer or print server:
Example: 9.5.0.100
O URL of internet printer:
http:// Example: http://server/ipp/printers/office
Example: http://server/ipp/printers/office
Printer is connected to a print server

Details...

## **Task Categories**

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- Internet Configurations: HTTP Server, Digital Certificates

# Configuration

### Configuration and Service - Itech07.itechsol.com

IBM i Configuration and Service allows you to perform system configuration.

### System Values

Allows you to change the system values that determine how your system operates.

Time Management

Allows you to manage time on your system.



Allows you to manage disk units on your system.

ODisk Pools

Allows you to manage disk pools on your system.

Add Disk Unit

Allows you to add a disk unit to your system.



Allows you to create a disk pool on your system.



# **Configuration: System Values**

🛃   🔄 🔻 🎆 Actions 🔻	Filter
Category	Description
🗞 🛛 No filter applied	
Auditing	Changes auditing values
Date and Time	Changes date, time, and time zone information
Devices	Changes device auto-configuration and recovery values
International	Changes locale settings and format of numbers, currency, dates, and time
Jobs	Changes system level job limits and default job properties
Library Lists	Changes the default library lists
Messages and Service	Changes message, logging, and service information
Password	Changes password expiration and validation
Performance	Changes performance values for processing, memory pools, communications, and data
Power Control	Changes power supply values

# **Configuration: System Values: Performance**

Pe	Performance System Values - Localhost						
	General	V Dynamically adjust job priorities of interactive jobs					
	Memory Pools	Dynamically adjust job priorities within priority bands					
	Communications						
	Database						
	Library Lists						
	Affinity						

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# **Network**

### Network - Itech07.itechsol.com

IBM i Network Management allows you to manage TCP/IP and internet support.

P<u>Create IPv4 Object</u>

Allows you to create IP version 4 objects.

P<u>Create IPv6 Object</u>

Allows you to create IP version 6 objects.

P<u>Lines</u>

Allows you to manage and configure physical lines.

TCP/IP Servers

Allows you to manage and configure TCP/IP servers.

DNS Servers

Allows you to manage and configure Domain Name System (DNS) servers.

BIBM Tivoli Directory Server Web Administration Tool

Allows you to administer the Tivoli Directory Server for i.

Close

# Manage TCP Servers

TCP/IP Servers - Itech07.itechsol.com								
2 I Sections ▼ Filter								
Name	Status	Description						
BootP	Stopped	BootP Server						
BootP DHCP Relay Agent	Stopped	BootP DHCP Relay Agent						
DDM	Started	DRDA DDM Server TCP/IP						
	Stopped	Dynamic Host Configuration Protocol						
C The DLFM	Stopped	Datalink File Manager						
EDRSQL	Stopped	Extended Dynamic Remote SQL						
📃 📅 ЕТР	Started	File Transfer Protocol						
HTTP Administration	Started	HTTP Server						
	Started	Integrated Web Application Server						
🖸 📅 IBM i NetServer	Started	IBM i Support for Windows Network Neighb	orhood					
📃 📅 IBM Tivoli Directory Server for IBM i	Started	IBM Tivoli Directory Server for IBM i (LDAP)						
1 - 32 of 32 items	5   10   25   5	50   <b>100</b>   All	H H					

# **Properties on each TCP/IP Server selected**

### IBM i NetServer Properties - Itech07.itechsol.com

Subsystems	IBM i Support for Windows Network Neighborhood			
<u>General</u>	Start when TCP/IP is started:	Yes		
Advanced	Server name:	ITECH07		
Security	Allow IBM i NetServer access using the system name:	No		
WINS Configuration	Domain name:	ITECHSOL.COM		
	Description:	OS/400		
	Logon server role:	None		
	Next Start			



Lines - 172.29.6.2							
Z   E ▼ Actions ▼	,			Filter			
Line Name	Status	Line Type	IPv6		MAC Address		
🔝 No filter applied					X		
ETHBRIDGE	Unknown (0)	Ethernet	No				
ETHLINE1	Active	Ethernet	No		E4:1F:13:06:23:61		
Loopback	Active	None	No		00:00:00:00:00:00		

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# **Integrated Server Administration**

#### Integrated Server Administration - Itech07.itechsol.com

Use Integrated Server Administration to manage servers that are hosted by IBM i.

### B Servers

Manage integrated and virtual servers. Also manage IBM i user and group enrollment to Windows servers.

#### <u>Create Server</u>

Create a new iSCSI attached server.

### Storage <u>All Virtual Storage</u>

Manage virtual storage that IBM i provides to integrated and virtual servers.

### New Virtual Storage

Create new virtual storage and assign it to a server.

### Network Server Host Adapters

Manage IBM i network server host adapter (NWSH) configuration objects for IBM i iSCSI target adapters.

### New Network Server Host Adapter

Create a new network server host adapter (NWSH) configuration.

### Remote Systems

Manage IBM i remote system configuration objects for iSCSI attached servers.

### Mew Remote System Configuration

Create a new remote system configuration for iSCSI attached servers.

### Service Processors

Manage IBM i service processor configuration objects for iSCSI attached servers.

### Mew Service Processor Configuration

# **Network Server Descriptions**

Sei	Servers - Itech07.itechsol.com											
	~											
	2	Actions 🔻										
			1		1							
		Server	NWSD Name	Status	Domain	Description						
	⇔	No filter applied										
		🖻 Gaf	Gaf	Started		GAF Seelig						
		📝 Itechv72	Itechv72	Started		iTech V7R2 test						
		📝 Mrdyn61	Mrdyn61	Started		MidRange Dynamics V6R1						
		📝 Mrdyn71	Mrdyn71	Started		MidRange Dynamics V7R1						
		📝 Telewire	Telewire	Started		Telewire						
		🖻 V6r1m1	V6r1m1	Started		V6R1M1 Partition						

These are some Virtual IBM i hosted partitions, which this partition is actually hosting. How to build Virtual IBM i partitions can be found in my other session.

You can manage Blade, IXA, IXS, Linux, and hosted partitions.

# **Management of Servers**

File Edit View Higtory Bookmarks Tools Help												
ITECH07 - IBM Navigator for i 🗙 ITECH07 - IBM Navigator for i 🗙 ISERIES - IBM Navigator for i 🗙 +												
• A https://172.29.6.2:2005/ibm/console/x	Launch.do?p	ageID=con	n.ibm.i5OS.webnav.na	wigationElement.WebnavBasePortle		☆ 自 🖣	<b>^</b>	1 🕄 🗄	ð 9	≡		
🔊 Most Visited 🛄 Getting Started 脑 COMM	ION Power N	ews 📐 S	alesforce.com Syste									
IBM® Navigator for i				Welcome petem	Target system: 172.29.6.2	Help	D Logout				TBM.	
<ul> <li>Printer Output</li> <li>Printers</li> <li>User Jobs</li> <li>All Tasks</li> </ul>	*	<ul> <li>Initors</li> </ul>	X Basic Operations	X Printer Output X Network X	TCP/IP Servers X IPv4 Connection	s X Lines X	Integrated Server A	dministration	x Ser	vers x	•	
Work Management Configuration and Service System Values Time Management			ers - Itech07.itechso	l.com					00:00:0			
<ul> <li>Disk Units</li> <li>Disk Pools</li> <li>Software</li> </ul>			Server	Actions  Open Chut Deure	Domain	Description	Filter			400-		
			No filter applied	Shut Down Shut Down and Restart Linked Virtual Storage		GAF Seelig iTech V7R2 test	•			x		
IPv4  IPv6  Lines	≡		Mrdyn61	New Virtual Storage Add Link		MidRange Dyna MidRange Dyna	mics V6R1					
<ul> <li>☑ Servers</li> <li>☑ Remote Access Servers</li> </ul>	Ľ		Telewire	Properties		Telewire V6R1M1 Partitio					Ξ	
<ul> <li></li></ul>				Start All								
Servers Create Server All Virtual Disks				Create Server Columns								
New Disk Network Server Host Adapters New Network Server Host Adapter Remote Systems		1	- 6 of 6 items	Refresh	10   25   50   <b>100</b>   Ali			14	←1→	H +		
New Remote System Configuration     Service Processors     New Service Processor Configuration	-			Export Configure Options							<b>•</b>	

### **Network Server Disks**

All Virtual Storage - 172.29.6.2

2		Actions 🔻				Filter
	Storage	GB	% Used	Server	Description	
(⇔	. No filter applied					
	🖓 Gaf01	34.2	0%	Gaf	GAF Seelig Virtual Disk 01	
	🖓 Gaf02	17.1	0%	Gaf	GAF Seelig Virtual Disk 02	
	🖓 Gaf03	17.1	0%	Gaf	GAF Seelig Virtual Disk 03	
	🖓 Gaf04	17.1	0%	Gaf	GAF Seelig Virtual Disk 04	
	Gaf05	17.1	0%	Gaf	GAF Seelig Virtual Disk 05	
	🖓 Gaf06	17.1	0%	Gaf	GAF Seelig Virtual Disk 06	
		77.2	0%	Itechv72	ITECH72LS	
	𝖓 Mrdyn6101	34.2	0%	Mrdyn61	MidRange Dynamics V6R1 Disk 1	
	Mrdyn6102	34.2	0%	Mrdyn61	MidRange Dynamics V6R1 Disk 2	
	𝖓 Mrdyn7101	34.2	0%	Mrdyn71	Midrange Dynamics Disk 1	
	Mrdyn7102	34.2	0%	Mrdyn71	MidRange Dynamics Disk 2	
1 -	23 of 23 items			5   10   25   5	0   <b>100  </b> All	

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## **Security**

#### Security - Itech07.itechsol.com

IBM i Security allows you to configure and manage security settings for your system.

#### Authorization Lists

Allows you to manage authorization lists.

#### Create an Authorization List

Allows you to group objects with similar security requirements and associate the group with a list of users and user authorities.

#### BChange Object Permissions

Allows you to change permissions for an IBM i object.

#### Application Administration

Allows you to manage user's authorizations to IBM i Navigator functions.

**@** 

#### Cryptographic Services Key Management

Allows you to store and manage master keys and keystores.

Cryptographic Coprocessor

Allows you to configure the cryptographic coprocessor.

#### Intrusion Detection

Allows you to set up and manage policies that notify you of any intrusions detected against your server.

Close

## Intrusion Detection: Could be 3<sup>rd</sup> Coolest thing

#### Intrusion Detection Management - localhost

Intrusion detection allows you to set up policies to notify you of any network intrusions that are detected against your system. The different types of polices can also notify you of possible intrusions or areas of concern that may need further review. As an example, if you're scanning for the number of connections through a certain port and the threshold is reached, you may need to verify that the threshold was set correctly for the application or environment.

Intrusion detection notification status: Stopped Start

Create and manage intrusion detection polices for your system.

Note: Applies to all enabled policies



Intrusion detection system setup.

Manage intrusion detection system properties such as your e-mail addresses and message queue for notification.

Display intrusion detection events

Manage intrusion detection policies

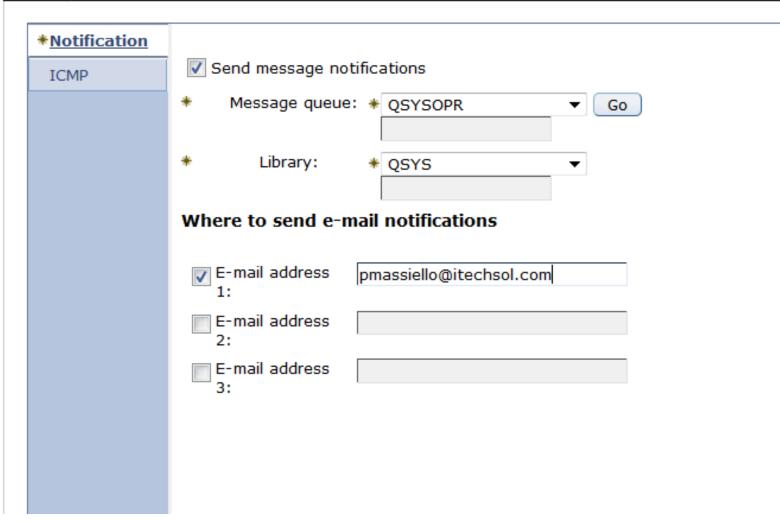
Display the list of intrusion detection events that have been sent based on your intrusion detection policies.

Close

Intrusion detection and prevention system notifies you of attempts to hack into or disrupt your system. ID also monitors if someone is using your system to launch attacks. This uses policies to monitor your system. A must for any company with their machine on the Internet.

### **Intrusion Detection: Setup Notifications**

#### IDS Properties - localhost



## **Intrusion Detection: Setup Wizard**



#### Intrusion Detection Policies - localhost

Once all the policy changes have been made in the table, click the OK button to apply the changes.

Ŧ

Intrusion Detection Notification:	Started
View:	All policies

Intrusion Detection Policies

Actions 🔻

	Name	Policy Type	Stat us	Local IP Addresses	Local Ports	Remote IP Addresses	Remote Ports	Description	
(⇒	No filter ap	plied							
	QIBM_Ad	Attack (Address Poi:	Enable	All	All	All	All	IBM-supplied default addr	
	QIBM_Flc	Attack (Flood)	Enable	All	All	All	All	IBM-supplied default floor	
	QIBM_Fra	Attack (Fraggle)	Enable	All	All	All	All	IBM-supplied default Frag	
	QIBM_ICI	Attack (ICMP Redire	Enable	All	All	All	All	IBM-supplied default ICMF	
	QIBM_IP_	Attack (IP Fragment	Enable	All	All	All	All	IBM-supplied default IP fr	
	QIBM_Ma	Attack (Malformed P	Enable	All	All	All	All	IBM-supplied default malf	
	QIBM_Ou	Attack (Outbound R	Enable	All	All	All	All	IBM-supplied default out	
	QIBM_Per	Attack (Perpetual Ec	Enable	All	All	All	All	IBM-supplied default perp	
	QIBM_Pin	Attack (Ping of Deat	Enable	All	All	All	All	IBM-supplied default ping	
	QIBM_Re	Attack (Restricted If	Enable	All	All	All	All	IBM-supplied default rest	

## **Intrusion Detection: All setup and working**

#### Intrusion Detection Management - localhost

Intrusion detection allows you to set up policies to notify you of any network intrusions that are detected against your system. The different types of polices can also notify you of possible intrusions or areas of concern that may need further review. As an example, if you're scanning for the number of connections through a certain port and the threshold is reached, you may need to verify that the threshold was set correctly for the application or environment.

Intrusion detection notification status: Started

Note: Applies to all enabled policies



Intrusion detection system setup.

Manage intrusion detection system properties such as your e-mail addresses and message queue for notification.

Stop



Manage intrusion detection policies

Create and manage intrusion detection polices for your system.



Display intrusion detection events

Display the list of intrusion detection events that have been sent based on your intrusion detection policies.

Close

## Manage Authority Lists

IBM® Navigator for i	Welcome petem Target system: 192.168.100.253	Help   Logout	IBM.
Welcome			
🖃 IBM i Management 🛛 🛃 🖤	lcome 🗶 Intrusion Detection 🗶 Authorization Lists 🗶		
Set Target System			
E System	Authorization Lists - 192.168.100.253		2 - 0
Basic Operations     Work Management	Adion 2007 1721200100120		0
Work Management     Configuration and Service			
Network	🔁   🖼 🔻 🧱 Actions 👻	Filter	*
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E Security	Name Permissions		
Authorization Lists	39 No filter applied		x
<ul> <li>Create Authorization List</li> <li>Change Object Permissions</li> </ul>	Qiwsadm Properties Administrators		
<ul> <li>Change Object Permissions</li> <li>Application Administration</li> </ul>	🖸 glwisvr List Actions		
Cryptographic Services Key Management	New Automatical Line		
Intrusion Detection	Image: Second		
All Tasks	Advanced Filter		
<ul> <li></li></ul>			
	Qpwfserver Export		
Performance	🔄 🛃 Qsylmtjava 🧱 Configure Options		
E File Systems	Quseadpaut		
Internet Configurations	B Qwebqry IBM DB2 WEB QUERY FOR SYSTEM I BASEAPP		
🕀 Settings			
U			
	1 - 10 of 10 items 5   10   25   50   100   All	H	→ <b>1</b> → H +
<			

### **Task Categories**

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- Files: Manage objects and IFS
- Internet Configurations: HTTP Server, Digital Certificates

### Manage your Users from here

#### Users and Groups - Itech07.itechsol.com

IBM i User Management allows you to manage your users and groups.



Allows you to manage the users on your server. You can also view the list of user objects for the user.

👏 Users not in a Group

Allows you to manage any existing users that are not currently in a group.

Create User

Allows you to create a new user.

Lhange User

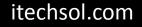
Allows you to change the properties of an existing user.



Allows you to manage any existing groups or create new ones.

Create Group

Allows you to create a new group.



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## **Journal Management**

Journal Management - Itech07.itechsol.com

IBM i Journal Management allows you to manage your journals and journal receivers.

Current database: S108e6be

Current library: Qusrsys



Allows you to manage all journals.

Create a journal

Allows you to create a new journal.

Set Database / Library to Use with Journal Tasks

Close

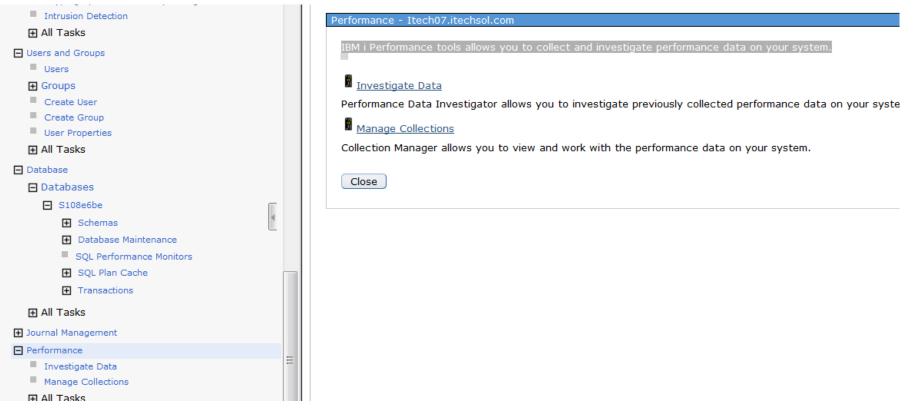
## Manage all your journals

https://172.29.6.2:2005/ibm/console/xLa	unch.do?pag	eID=com.ibm.i5OS.webnav.nav	igationElement.WebnavBasePortlet&	3 ⊽ C Q Search	☆ 自 🖡 ⋒ 🛷	S 😼 😕
Most Visited 🗍 Getting Started 😹 COMMO	N Power New	vs 😹 Salesforce.com Syste				
M <sup>®</sup> Navigator for i			Welcome petem	Target system: 172.29.6.2	Help   Logout	****
All Tasks     Security     Authorization Lists		• yns x Printer Output x N	Tetwork X Intrusion Detection X In	ntrusion Detection X Authorization Lists X Use	ers and Groups 🗙 Journal Management 🗙	Journals 🗙 🕨
Create Authorization List Change Object Permissions Application Administration Cryptographic Services Key Management Intrusion Detection		Journals list - Itech07.itech	nsol.com atabase: S108E6BE Library: QUSF	RSYS		?
🗄 All Tasks			Actions 🔻		Filter	
Users and Groups		Name	Delete	Text		
Users Groups		No filter applied	View Entries	TEXL		x
Create User		QAOSDIAJRN	Permissions	Journal for DIA files		
Create Group			Add Remote Journal	JOURNAL FOR SOCKS CONFIGU	IRATION FILE	
User Properties			Change Receivers			
All Tasks	4	QCQJMJRN	Properties	JOURNAL FOR MANAGED SYST	EM LOG	
Database		🔽 🖸 QDSNX		JOURNAL FOR DSNX LOG		
Databases     S108e6be		QLZALOG	Journal Receivers	Journal for license management		
Schemas		📃 🗹 QMAJRN	Show Journaled Objects	JOURNAL FOR ORDER DATABA	SE	
Database Maintenance		QPMCCCAJRN	Remote Journals			
SQL Performance Monitors			List Actions	Journal for SNADS files		
SQL Plan Cache			Columns	JOURNAL FOR PROBLEM DATA	BASE	
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		•	-01			
⊥ All Tasks		•	Advanced Filter	10   25   50   <b>100</b>   All	H H	<b>1</b> > + +

### **Task Categories**

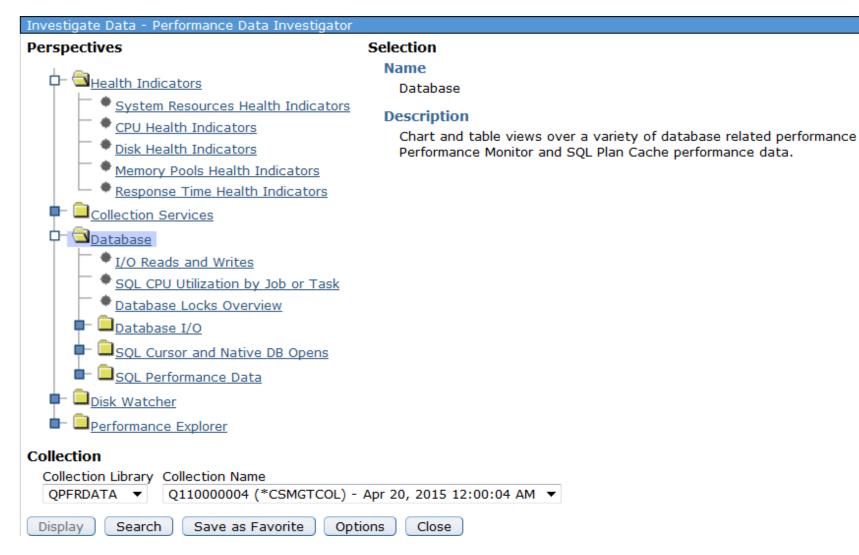
- System: System Status, Messages, disk status
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## Performance

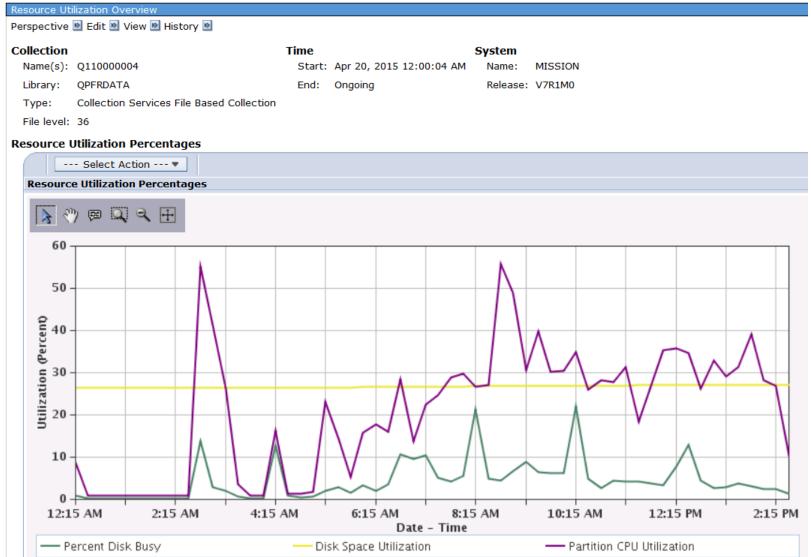


This is the tool to find out what is happening on your machine. We will view just a few of the many graphs available, but you will see the power of the graphs, which is based upon the data of Collection Services.

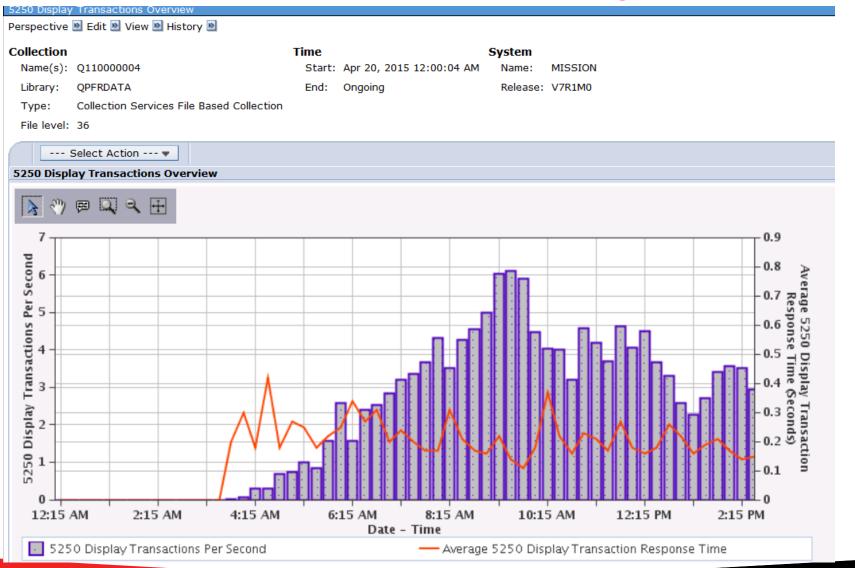
### **Performance: Collections: Investigate**



### **Resource Utilization**



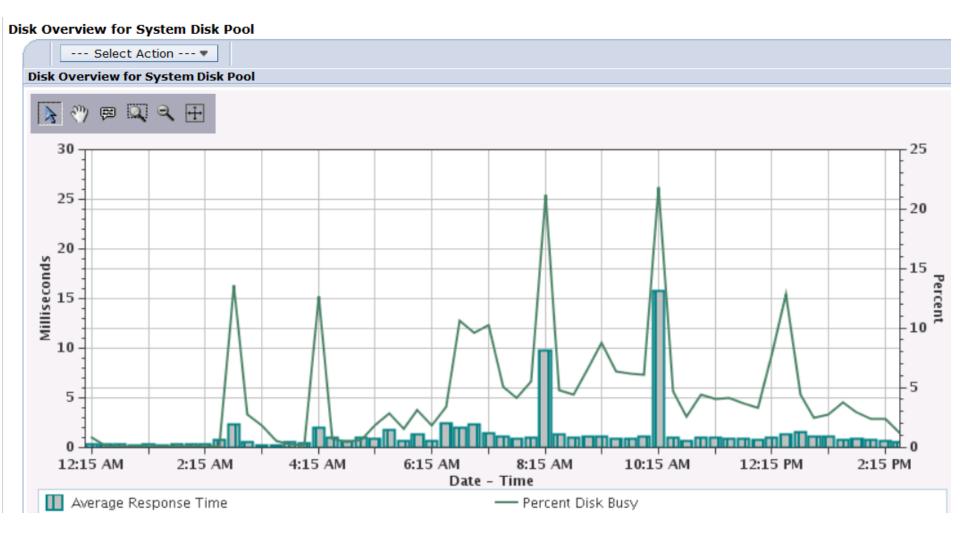
### 5250 Transactions per second & Average Response time



## **Performance Graphs**



## Average Disk Response time & Percent busy



## **I/O Adapter Utilization**

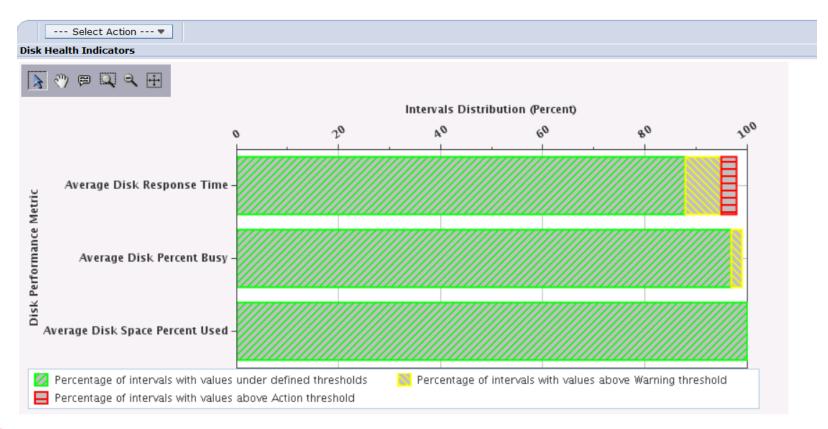


### **Virtual I/O device Performance**

IBM® Navigator for i		Welcome petem	Target system: 172.29.6.2	Help   Logout	IBM.
■ Welcome IBM i Management	IBM i Navigator 🗶 Investigate Data 🗶				
<ul> <li>Set Target System</li> <li>System</li> </ul>	Virtual I/O Overview			5 I-1	
Basic Operations     Work Management	Perspective 🖻 Edit 🖻 View 🖻 History 🖻	Time System	n		
Configuration and Service     Network	Name(s): Q092000104 Library: QMPGDATA		e: ITECH07 ase: V7R1M0		
<ul> <li>Integrated Server Administration</li> <li>Security</li> <li>Users and Groups</li> </ul>	Type: Collection Services File Based Colle File level: 36	ction			
Database     Journal Management	Select Action  Virtual I/O Overview				
<ul> <li>Performance</li> <li>Investigate Data</li> </ul>					
■ Manage Collections ① All Tasks	100-				
<ul> <li>File Systems</li> <li>Internet Configurations</li> </ul>					
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	Page 1 of 1 Go	Rows 1	Total: 1		
	Done Options Save As				>

### **Disk Health**

This chart shows Disk health indicators by analyzing all collection time intervals according to the defined thresholds for disk. Use this chart to determine the proportion of intervals where Disk health indicators exceeded the defined thresholds.



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### **File Systems**

#### File Systems - Iseries.missionpro.com

IBM i File Systems allows you to manage the file system.

#### Integrated File System

Allows you to manage the file system contents, IBM i NetServer file shares, and permissions.

B<u>File Shares</u>

Allows you to manage IBM i NetServer file shares.

Create File Share

Allows you to create an IBM i NetServer file share.

Close

# Working with the IFS

Navigator for i		Welcome petem	Targ	jet system: <b>172.29.6.2</b>	Help   Logout	***
ome						
i Management 🥑	IBM i Navigator 🗶 File Systems 🗶 Integrated File System	m X				
Set Target System System						
Basic Operations	Root - 172.29.6.2					? -
Work Management						
Configuration and Service	Path: /					
Network Integrated Server Administration	🔁 📴 🔻 🎆 Actions 🔻				Filter	*
Security	Open					
Users and Groups	Name New Folder	Size	Туре	Changed	Accessed	
Database	No filter appliet		File Folder	Dec 4, 2012 11:22:04 AM	May 21, 2012 5,00,51 AM	×
Journal Management Performance				Dec 4, 2012 11:33:04 AM	Mar 31, 2013 5:09:51 AM	
File Systems			File Folder	Oct 29, 2012 3:41:44 PM	Mar 31, 2013 5:08:34 AM	
Integrated File System	- afrank		File Folder	Oct 26, 2012 1:56:57 PM	Mar 31, 2013 5:09:29 AM	
Create Integrated File System Folder	an61 Mouro		File Folder	Jan 8, 2013 1:35:29 PM	Mar 31, 2013 5:09:49 AM	
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⊞ All Tasks	asf99541		File Folder	Mar 21, 2013 9:17:19 AM	Mar 31, 2013 5:08:35 AM	
Internet Configurations	Check Out		File Folder	Mar 22, 2013 9:03:54 AM	Mar 31, 2013 5:09:11 AM	
tings	Check In		File Folder	Mar 21, 2013 9:18:53 AM	Mar 31, 2013 5:09:06 AM	
<b></b>	Folder Attribute In	formation 🕨	File Folder	Mar 29, 2013 10:29:10 AM	Mar 31, 2013 5:09:49 AM	
4	NFS Export	•	File Folder	Mar 21, 2013 9:40:41 AM	Mar 31, 2013 5:09:23 AM	
	NFS Mount	•	File Folder	Aug 27, 2012 3:17:01 PM	Mar 31, 2013 5:09:11 AM	_
	Sharing	•	File Folder	Apr 26, 2012 2:06:48 PM	Mar 31, 2013 5:09:26 AM	
	Journaling		File Folder	Aug 31, 2012 10:45:43 AM	Mar 31, 2013 5:09:28 AM	
	Permissions		File Folder	Jan 4, 2013 12:33:50 PM	Mar 31, 2013 5:09:11 AM	
	Properties					
	and List Actions and		File Folder	Feb 15, 2013 2:26:14 PM	Mar 31, 2013 5:09:14 AM	
	New Folder		File Folder	Mar 22, 2012 11:25:39 AM	Mar 31, 2013 5:09:11 AM	
	ulter redening upload		File Folder	Feb 14, 2013 10:39:30 AM	Mar 31, 2013 5:09:20 AM	
	avispecial     Check Out		File Folder	Oct 10, 2012 3:59:43 PM	Mar 31, 2013 5:09:25 AM	
	Deck In		File Folder	Dec 19, 2006 12:34:32 PM	Apr 2, 2013 9:18:30 PM	
	cce_core.lo     Folder Attribute In	5KB	Text Document	Apr 2, 2013 1:46:16 PM	Apr 10, 2011 10:28:28 PM	
	🔜 dev	ionnadoll -	File Folder	Aug 30, 2010 4:13:55 PM	Mar 31, 2013 5:00:03 AM	
	The second		File Folder	Mar 29, 2013 3:56:20 PM	Mar 31, 2013 5:00:13 AM	*
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	Permissions	5.1	10   25   50   <b>100</b>   All		II. I. 1	ь н т
	Columns	51				
	Close Include					
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### **Internet Configuration**

Internet Configurations - 192.168.1.6

IBM i Internet Configurations allows you to perform internet configuration tasks.

IBM Web Administration for i

Allows you to manage and configure HTTP servers and application servers.

Digital Certificate Manager

Allows you to create, distribute, and manage Digital Certificates.

#### IBM IPP Server for i

Allows you to configure the IBM IPP Server.

Internet Setup Wizard

Allows you to use the internet setup wizard to configure your internet environment.

Close

## **Optional BRMS Plug-in**

🥹 ITECH07 - IBM Systems Director Naviga	itor for i - Mozilla Firefox	
<u>Eile E</u> dit <u>V</u> iew Hi <u>s</u> tory <u>B</u> ookmarks <u>T</u> ools	Help	
🔇 💽 - C 🗙 🏠 🗋 192.168.0.25 h	ttps://192.168.0.25:2005/ibm/console/xLaunch.do?pageID=com.ibm.i50S.webnav.nav	vigationElement.W 🏠 🕤 🚼 - Google 🖉
📋 WNP - IBM Systems Director 🖂 📋 ITEC	H07 - IBM Systems D 🔯 🛛 🗧	-
IBM® Systems Director Navigator for i	Welcome petem	Help   Logout
View: All tasks 💌	Backup, Rec X	🚽 Select Action 🕑
<ul><li>Welcome</li><li>My Startup Pages</li></ul>	Backup, Recovery and Media Services	
🖃 IBM i Management	BRMS - 192.168.0.25	? – 🗆
<ul> <li>Set Target System</li> <li>System</li> <li>Basic Operations</li> <li>Work Management</li> <li>Configuration and Service</li> <li>Network</li> <li>Integrated Server Administration</li> <li>Security</li> <li>Users and Groups</li> <li>Databases</li> <li>Journal Management</li> <li>Performance</li> <li>File Systems</li> <li>Internet Configurations</li> <li>Backup, Recovery and Media Services</li> </ul>	Welcome to Backup, Recovery, and Media Services for IBM i. Backup, Recovery, and Media Services helps you implement a disciplined approach to managing your backups farlware failure. Do not show welcome	

## 7 Key Points to take home

- This is free and ready to use on 6.1, 7.1, 7.2, & 7.3
- Only need \*ADMIN HTTP server running to access it.
- Use your machines IP address and the 2001 port
- Look at Performance graphs first get some bench marks.
- Use Index Advisor to find logical files you can create to improve performance.
- If machine is on the Internet make sure you setup Intrusion Detection.
- Create quick and easy PDFs using the Basic Operations and Output Queues.

### Your Turn!





#### **Questions?**

How to contact me:

**Pete Massiello** 

Email: pmassiello@itechsol.com

**Twitter: petem59**