Lab 3 - Express Runtime Console

The lab walks you through setting up the console to monitor the application you distributed with Express Runtime. After the set up is complete you will create an error condition and see how the Console can help keep your applications running smoothly.

Part 1: Configuring the Express Runtime Console for your solution

- 1. Click on **Start -> Internet Explorer** to bring up a web browser window.
- 2. Enter the URL http://localhost:1180/ibm/console/

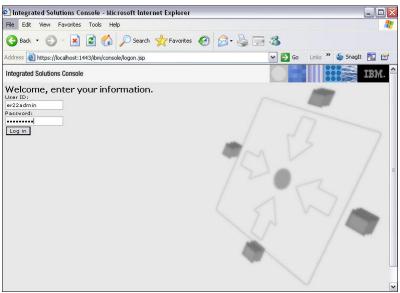


Figure 3-1 Express Runtime Console login

- 3. Enter er22admin in the User ID field and er22admin in the Password and click on Log In.
- 4. Depending on the classroom security, you may be presented with security warnings, ignore them for this exercise and continue.
- 5. You will be presented with the Welcome screen for the Express Runtime Console (Figure 3-2).

Welcome	
Console Settings	About Express Runtime ? -
Application Dashboard Define an Application Check for Updates	IBM Express Runtime provides a foundation of middleware resources upon which business applications can run. The Express Runtime console provides a single, Web-based utility for performing basic administrative tasks on the business applications and all of the resources that support it.
	 To review the health and availability of your applications, view the <u>Dashboard</u>. For help and reference information for the console, view the information center.
	 For help and reference information for the console, view the <u>information center</u>. To get assistance or search for information on problems, view <u>Product Support</u>.
	About Express Runtime Management The Express Runtime management code version is 2,2.0.0.
	The versions of the Express Runtime management extensions on each host computer are as follows.
	Hosts Management Extension Version
	ondemand.dfw.ibm.com 2.2.0.0
	Build and version information for the console framework is available at About the Console.

Figure 3-2 Console Welcome

Lab 3 - Express Runtime Console

6. Click on **Define an Application**.

Define an Application 7	
Dashboard > Define an Application	
Application providers can create application definition files; they reside on the l computers where the application is deployed. If you know that an application has been deployed, but is not shown on the dashboard, use the following task to fin the application definition files on each of the host computers.	as
W Find Application Definitions	
If there is no application definition file, then define a new application with the following task.	
Define a New Application	
Cancel	

Figure 3-3 Define an Application

7. Click on **Define a New Application**.

ashboard > Define a	
Provide Application Pr	perties
he console for identifying t	and description. The name will be used throughout ne application.
*Application Name:	
Runtime Document Management	
Description:	
* Required field	

Figure 3-4 Provide Application Properties

8. Enter Runtime Document Management in the Application Name. Click Next.

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9. You should see your **Application Server**, **Database**, and **Web Server** – select all 3 and click **Next**.

Note: If you don't see the Database (DOCMGTD), perform the following steps:

Click on Find Resources.

Leave the Host Name as is, enter **er22admin** as the userid and password and click **OK**. Accept the SSL certificate.

If you have to locate the resources, you may see duplicate entries in the resource list for the Application and Web servers (see Figure 3-5). You only need to select one of each.

Add Resources to the Ap	plication		
Select the resources that ar	e to be part of the application.		
Té unu da ant con vacanvers	that are a part of this application	tion was the following :	tack to find these versions
IT you do not see resources	that are a part of this applica	tion, use the following :	task to find those resources,
Find Resources			
- Ind Resources			
Include in Application	Hosts	Resource Type	Resources
Include in Application	Hosts ondemand.dfw.ibm.com		Resources AppSrv01/server1
Include in Application		Application Server	
Include in Application	ondemand, dfw.ibm.com	Application Server Application Server	AppSrv01/server1
Include in Application	ondemand, dfw. ibm. com ondemand, dfw. ibm. com	Application Server Application Server Database	AppSrv01/server1 AppSrv01/server1
Include in Application	ondemand.dfw.ibm.com ondemand.dfw.ibm.com ondemand.dfw.ibm.com	Application Server Application Server Database Web Server	AppSrv01/server1 AppSrv01/server1 DOCMGTD7

Figure 3-5 Add Resources

10. You will be prompted to enter an administrator user ID and password (Figure 3-6).

rovide an administrativ	e user ID and password	for each resource.		
losts	Password Type	Resources	User 📝 ID	Password
ndemand, dfw, ibm, com	Application Server	🚰 AppSrv01/server1	er22admin	•••••
ndemand, dfw. ibm. com	Database	DOCMGTD7	er22admin	•••••
ndemand, dfw. ibm. com	Local OS	ondemand.dfw.ibm.com ONDEMAND.dfw.ibm.com:80	er22admin	********

Figure 3-6 Provide user Ids and passwords

- 11. Enter er22admin for the User ID and Password for each of these resources. Click Next.
- 12. You will see a list of all the resources that are going to be associated with your application, click **Finish**.

13. Click on **Application Dashboard** to see the Application perspective.

ashboard			? _ C
Dashboard			
🖺 Runtime Docur	nent Management		
Availability:	No URL has been provided for determining application availability.	View Runtime Document Management Properties	
Scheduled Backups:	No backup scheduled.	Schedule Application Backup	
Open Problems:	Problem monitoring is off.	Problem Monitoring and Notification	
	If a user reported a problem, select "Investigate User-reported Application Problems"	W Investigate User-reported Application Problems	

Figure 3-7 Dashboard

14. Now that you have defined the servers that are needed for this application to function properly, you can set up the Console to keep watch for problems with your application. Click on Specify Availability URL – this should point to a welcome screen or log-in screen, the Console will connect to this location as an indicator that the application is up and running.

Specify	Availability URI	
whether t	RL that can be use the application is a n or welcome page.	vailable, such
	for welcome page.	
URL:	RuntimeDocumentMgmt	Test URL

Figure 3-8 Specify URL

Note: The URL information can also be specified in the Console definition XML file.

- 15. Enter http://localhost:9080/RuntimeDocumentMgmt and click on Test URL to verify that the Console can connect to this location.
- 16. When the URL test is successful, click **OK**.

Lab 3 - Express Runtime Console

17. Now we will set up the Console to automatically back up our application. Click on **Schedule Application Backup**. The first screen you see describes the 2 backup options (Figure 3-9). Click **Next**.

)ashboard > 1anagement	Runtime Document Management > Schedule Application Backup for Runtime Docume
backups, as w	rategy available for the application (Runtime Document Management) includes frequent incremen ell as periodic full backups.
Full Backup	
restore the a	saves a complete set of configuration and data from the application resources, and can be used t oplication to a previous working state, if there are severe problems. Full backups are performed because they generally save large amounts of data.
Incrementa	l Backup
only that which	al backup saves only a subset of configuration and data from the application resources, generally h has changed since the last full backup. Incremental backups are performed frequently, because int of data is collected.
smaller amou	

Figure 3-9 Backup options

18. You see the options for the Full Backup (Figure 3-10). Specify a Start Date, Start Time, and the Day(s) of the week to perform a full backup. Click **Next**.

e c		000 tan	20.5	20.5 X		Charles V	
ble							backup during a time period when the application is not needed, because no user will be during that time.
St	art D	ate:					_
		1.1.1	200	1.11.11.1		*	
5	M	י ד	1arc W	n T	F	5	
25	26	27	28	-	2	3	
4	5	6	7	8	9	10	
11	12	13	14		16	17	
18	19	20	21	22	23	24	
25	26	27	28	29	30	31	
ay St	that	you ime:	woul				be done on the start date, so it is recommended that you select a start date that is on a ant a full backup to occur.
	ys:						

Figure 3-10 Full backup options

19. Specify the location you want to use to back up the data. Click Next.

chedule Backup	? - 🗆
<u>Dashboard</u> > <u>Runtime Document Management</u> > Schedule Application Backup for Runtime Document Management	
Full Backup	
The data will be backed up to a location on each host machine in the solution,	
🗐 ondemand.dfw.ibm.com	
Select the Backup Method to Use Directory or Tape	
*Location: ::\acme\full_backup	
* Required field	
Previous Next Cancel	

Figure 3-11 Full backup location

20. Optionally, you can set up days to perform incremental backups. Click Next.

Schedule Backup	- 0
<u>Dashboard</u> > <u>Runtime Document Management</u> > Schedule Application Backup for Runtime Document Management	
Incremental Backup	
Schedule the incremental backup during a time period of relative inactivity, because system performance is likely to be impacted by the backup. Start Time: O3:00 AM EDT	
Days:	
🗌 Sunday 🗹 Monday 🗌 Tuesday 🗹 Wednesday 🗌 Thursday 🗹 Friday 🗌 Saturday	
Previous Next Cancel	

Figure 3-12 Incremental backup schedule

21. Specify the location you want to use to back up the data. Click Next.

edule Backup	? -
Dashboard > Runtime Document Management > Schedule Application Backup for Runtime	Document
Management	
Incremental Backup	
The data will be backed up to a location on each host machine in the solution.	
ondemand.dfw.ibm.com	
Select the Backup Method to Use Directory or Tape	
*Location: c:\acme\inc_backup	
* Required field	
Previous Next Cancel	

Figure 3-13 Incremental backup location

22. You will be presented with a summary of the backups that are going to be performed by week (Figure 3-14). . Click **OK**.

Current Backup Schedu The following backup scheo	63848	he full and incr	emental backu	in settings that have be	en saved. If necessary, voi
can cancel a backup that is				n (20	
< Previous Week	Time	Day	Date	Backup Type	Next Week >
		Sunday	March 18, 2007		
	3:00:00 AM EST	Monday	March 19, 2007	Incremental	
	1922	Tuesday	March 20, 2007	45854	
	3:00:00 AM EST	Wednesday	March 21, 2007	Incremental	
		Thursday	March 22, 2007	Land)	
	3:00:00 AM EST	Friday	March 23, 2007	Incremental	
	4:00:00 AM EST	Saturday	March 24, 2007	Füll	

Figure 3-14 Backup summary

Lab 3 - Express Runtime Console

23. The final step in defining the application is to activate the monitoring. Click on **Problem Monitoring and Notification**.

blem Monitoring and Notificat	ion 2 -
ashboard > Problem Me	onitoring and Notification
Then problem monitoring is en efinitions specified in your syn erson responsible for working	nabled, the console actively monitors your solutions for the set of problem mptom catalogs. If a problem occurs, then notifications can be sent to the on the problem.
Enable problem monitoring	for Runtime Document Management
How often the console	should check for problems:
*Minute Intervals	
Mail Server Setting Server Name:	IS
Port:	
25	
N. 65	
Nofification Setting	js
Send Test E-mail	Add a Row
E-mail Address	Language Preference
	English •
	English 💌

Figure 3-15 Problem Monitoring and Notification

- 24. Click on **Enable problem monitoring for Runtime Document Management**. You could set up the console to notify via e-mail, but for this exercise we will stick to alerts on the Console. Click **OK**.
- 25. You will get a warning about not specify and e-mail, click OK.

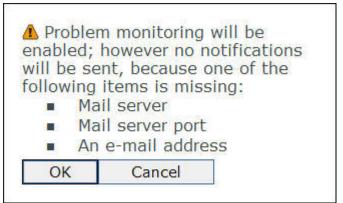


Figure 3-16 Monitoring warning

Lab 3 - Express Runtime Console

26. The Console is now checking for problems with this application and the screen should look like this:

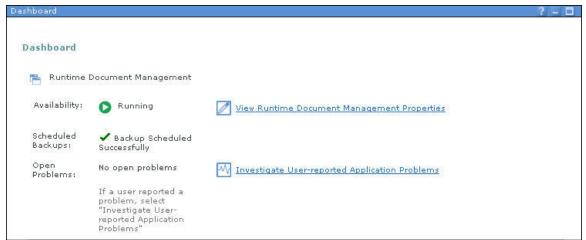


Figure 3-17 Dashboard for Runtime Document Management

27. Now that Monitoring is turned on, we will simulate a problem with one of the resources in your solution.

Lab 3 - Express Runtime Console

Part 2: Problem Determination

- 1. Start -> Internet Explorer to bring up another web browser window.
- 2. Enter <u>http://localhost:9080/RuntimeDocumentMgmt/</u> to start the sample application.

Doc Dist Sample - Microsoft In	ernet Explorer			_ 0
File Edit View Favorites Tools				
🌀 Back 🔹 🐑 · 💌 🛃 (🏠 🔎 Search 🤺 Favorites 🚱 🙆 - 🌺 🚍 🚺	3		
idress 🕘 http://localhost:9080/Runtin	eDocumentMgmt/			💌 🔁
iks 👸 IBM Business Transformation He	mepage 🛛 IBM Internal Help Homepage 📓 IBM Standard Softw	are Installer	🥌 SnagIt 🗮 🛃	
Express Runtime Publish	ing			
	Welcome To The Document Man	agement Sample Application		
Design Documentation		ve access to. Publishers add documer	nd gain read-only access to a number of docur nts to the system and categorize the document: s.	
	You must log in to begin using this sample. click on one of the actions shown on the left	nitially you can use the administrator ic side of the screen to create additional	Admin with password admin. Once you are lo users, categories, and documents.	gged in you can
		Username:		
		Password:		
		Login		

Figure 3-18 Runtime Document Management application

3. Enter Admin for the userid and admin for the password and click on Login.

Lab 3 - Express Runtime Console

 Back on the Console Dashboard, click on View Runtime Document Management Properties. You will see the status of each of the resources defined for this solution (Figure 3-19).

Description:					
Availability:	🜔 Running		🔝 Restart Runtime Docu	ument Manager	ment
			Stop Runtime Docum	ent Manageme	nt
			Specify Availability UF	<u>tL</u>	
cheduled Backups:	✓ Backup Scheduled	Successfully	-		
Scheduled Backups: 🛛 🗸 Backup Scheduled		ouccessiony	Scheduled Backup Se	ttings	
			Back up Now		
)pen Problems:	No open problems		Investigate Problems		
			Update Problem Defin		
untime Document M	anagement resourc	es		î.	
Web Servers		Applicat	ion Servers	Databas	es
The second se	ND.dfw.ibm.com:80	Name:	AppSrv01/server1	Name:	DOCMGTD7
	and.dfw.ibm.com	Host: Availability:	ondemand.dfw.ibm.com	Host: Availability:	ondemand.dfw.ibm.com
•	5.e		• • • • •		•
Open No oper Problems:	n problems	Open Problems:	No open problems	Open Problems:	No open problems

Figure 3-19 Runtime Document Management Properties

5. Click on the Database: DOCMGTD7 to view the options for the database server.

ashboard >	Runtime Document Management > D0CMGTD7			
Database Name:	DOCMGTD7	Change Password		
Host Name:	ondemand, dfw. ibm. com			
Availability:	Running	Restart Database	Stop Database	
Database Backup:	Last database backup completed successfully at 3/8/07 4:33:24 PM EST.	🛐 Back up Database Now		
Open Problems:	No open problems	Investigate Problems		

Figure 3-20 Database server options

Lab 3 - Express Runtime Console

- 6. Click on Stop Database.
- 7. You will get a warning message (Figure 3-23), but select **Disconnect all users and applications** and click **OK**.



Figure 3-21 Database warning message

8. The database has been stopped and this status is reflected in the Database properties.

atabase Properties		2 - C
-	ntime Document Management > DOCMGTD7	
Database Name:	DOCMGTD7	Change Password
Host Name:	ondemand.dfw.ibm.com	
Availability:	Ounavailable	Start Database
Database Backup:	Last database backup completed successfully at 3/8/07 4:33:24 PM EST.	Back up Database Now
Open Problems:	No open problems	Investigate Problems

Figure 3-22 Database properties

Lab 3 - Express Runtime Console

9. Bring up the other Internet Explorer window that is running the Runtime Document Management application and click on **Administer users**. You will get an error from the application.

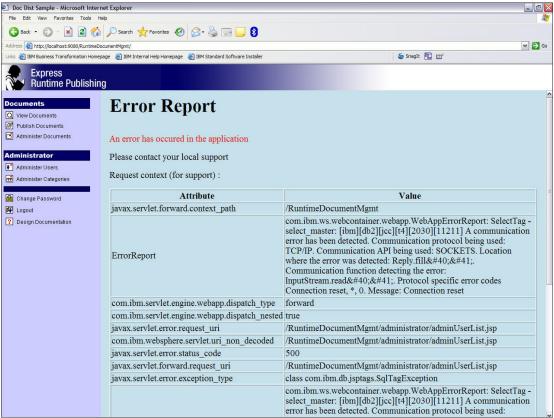


Figure 3-23 Runtime Document Management Failure

Lab 3 - Express Runtime Console

10. Switch back to the Express Runtime Console. At the top of the panel are the navigational "bread crumbs" (*Dashboard -> Runtime Document Management -> DOCMGTD7*). Click on **Runtime Document Management** to return to the application properties panel (Figure 3-24).

Description:			
Availability:			
wanabinty:	Stopped	Start Runtime Document Management	
		Specify Availability URL	
cheduled Backups:	✔ Backup Scheduled Successfu	Y Scheduled Backup Settings	
		Back up Now	
		Mack op now	
)pen Problems:	🚫 1 Alarm(s)	Investigate Problems	
		Update Problem Definitions	
		Update Problem Definitions	
		Update Problem Definitions	
untime Document M	lanagement resources	Update Problem Definitions	
untime Document M	1000	Update Problem Definitions	
💮 Web Servers	Appli	ation Servers	700
Web Servers Name: ONDE	1000	ation Servers AppSrv01/server1 Name: DOCMGTD	Z I. dfw. ibm. com
Web Servers Name: ONDE Host: onde	MAND.dfw.ibm.com:80 Name:	ation Servers AppSrv01/server1 ondemand.dfw.ibm.com DocMGTD Host: Ondemand	l. dfw. ibm. com
Web Servers Name: ONDE Host: onde Availability: O	MAND.dfw.ibm.com:80 mand.dfw.ibm.com Host:	ation Servers AppSrv01/server1 ondemand.dfw.ibm.com y: Running Availability: Unav. Open No open p	l. dfw. ibm. com ailable

Figure 3-24 Runtime Document Management Properties

Note an alarm has been triggered and the database is unavailable.

Lab 3 - Express Runtime Console

11. Click on **Investigate Problems**. You will be presented with a list of problems that have been identified.

he following	list is of the open probler		
	AND A DESCRIPTION OF A	ns for application Runtime Do	cument Management.
		, select the problem and click	Close to remove it from the open
roblems list.	1 100 100 100 100 100 100 100 100 100 1		
Close Clos	se All		
elect	Time	Problem Description	Affected Resources
	9:49:22 PM CST, February 23, 2007	Oatabase stopped unexpectedly	AppSrv01/server1
/hat Else (Can I Do?		
mat cise v	Jan I DO:		
	m reported, but not showr	n in the table? Use the followin	ng task to investigate user-reported
roblems.			
	er-reported Application Problems		
Investigate Use			
Investigate Use			
Investigate Use			

Figure 3-25 Open Problems

Lab 3 - Express Runtime Console

12. Click on **Database stopped unexpectedly** to see the details about the problem you want to resolve.

Dashboard > <u>Runtime Document Management</u> > <u>Investigate Problems</u> > Database stopped unexpectedly Problem Details				
Description:	8 The database stopped while the application server was accessing it.			
Affected Applications:	Runtime Document Management			
Affected Resources:	AppSrv01/server1			
Time:	February 23, 2007, 9:49:22 PM CST			
Repear Count.	This problem has been identified 1 time(s) since 9.49.77 PM (S). February 73			
	This problem has been identified 1 time(s) since 9:49:22 PM CST, February 23, 2007			
Repeat Count: Fixing the Problem There are recommende In Help me fix this problem What Else Can I Do	2007 d actions to resolve the problem. Use the following task to perform those actions			
Fixing the Problem There are recommende In Help me fix this problem What Else Can I Do	2007 d actions to resolve the problem. Use the following task to perform those actions ? transfer analysis of the problem to product support. Use the following task to			
Fixing the Problem There are recommende Help me fix this problem What Else Can I Do Alternatively, you may	2007 d actions to resolve the problem. Use the following task to perform those actions ? transfer analysis of the problem to product support. Use the following task to relevant data.			

Figure 3-26 Problem Details

13. This is a problem that the Console recognizes from the *Symptoms catalog,* so there are suggested actions to take to correct the problem. Click on **Help me fix this problem**. You will see a list of actions that should be taken to attempt to resolve this error.

	cument Management > Inv	estigate Problems	> Database stop	ped unexpectedly > Database
topped unexpectedly				
ne following recommended	action plan provides a full set	of actions that sho	uld be completed in	the order presented to fix the proble
ecommended Actions				
Perform all Actions				<u>.</u>
Perform all Actions				
Action Description	Host Computers	Resources	Status	
	🗐 ondemand.dfw.ibm.com	DOCMGTD7	53	
Stop the database server.		DOCMGTD7	50	
Stop the database server. Start the database server.	🗐 ondemand.dfw.ibm.com	Docurator.		
	ondemand.dfw.ibm.com	Docingion		
	ondemand, dfw.ibm.com	Docingitor		-

Figure 3-27 Recommended Actions

Lab 3 - Express Runtime Console

- 14. Click on **Perform All Actions** to try the suggested corrective action. The Console will process the recommended steps.
- 15. After the tasks are completed, click Next.
- 16. You will see a summary of all the actions that have been taken to resolve this problem (Figure 3-28). In this case, the corrective action was successful.

elp Me Fix This
<u>Dashboard</u> > <u>Runtime Document Management</u> > <u>Investigate Problems</u> > <u>Database stopped</u> <u>unexpectedly</u> > Database stopped unexpectedly
Investigation Summary
The problem was fixed by the recommended actions, so no further action is required. What Was the Problem?
February 23, 2007, 9:49:22 PM CST Database stopped unexpectedly The database stopped while the application server was accessing it. How Was It Fixed?
The console guided you through taking these recommended action to fix the problem:
 Stop the database server. Start the database server.
What Else Can I Do?
If this problem seems to occur frequently, you can report it to product support to let them know. Use the following task to package and send the relevant data.
Send Problem to Product Support
<u></u>
Previous Finish Cancel

Figure 3-28 Problem Summary

17. Click Finish.

Lab 3 - Express Runtime Console

18. Click on the **Runtime Document Management** "breadcrumb" to refresh the status of the application and all the associated resources.

escription:					
Availability:	🜔 Running		Restart Runtime Doc	ument Manager	ment
			Stop Runtime Docum	ent Manageme	int
			M Specify Availability UF	RL	
cheduled Backups:	🗸 Backup Scheduled	Successfully	🛗 Scheduled Backup Se	ttings	
			Back up Now		
Open Problems:	No open problems		Investigate Problems	E)	
			🗾 Update Problem Defi	nitions	
untime Document	Management resourc	es			
Web Servers		Applicat	ion Servers	📔 Databas	es
Name: ONDE	MAND.dfw.ibm.com:80	Name:	AppSrv01/server1	Name:	DOCMGTD7
	nand.dfw.ibm.com	Host:	ondemand.dfw.ibm.com	Host:	ondemand.dfw.ibm.com
	lunning	Availability:	Running	Availability:	Running
Availability: 🜔 F			No open problems	Open	No open problems

Figure 3-29 Runtime Document Management Properties

- 19. As you can see, your application is back up and running. You can verify this by re-running the Runtime Document Management application in another Internet Explorer window.
- 20. Click on **Logout** to close the Express Runtime Console.

Congratulations! You have successfully used the Express Runtime Console to discover a problem and resolve it. This could have been your customer's environment you were monitoring across the network.