Revision	Description
6/14/2011	Original
9/5/2011	Updates based on changes in portal

SQL-Hero Web Portal

Introduction

The SQL-Hero web portal is installed as part of SQL-Hero web components (it now co-exists in the same location with the exposed SOA/WCF API for SQL-Hero). During installation, you'll see a link which takes you to the site:

SQL-Hero Installation (0.9.8.131)	
Installation Complete.	
Updating SQL-Hero Client	[
Finalizing Client Installation	
Complete	
Installing SQL-Hero Web Components Note: Your SQL-Hero site is located at - <u>http://CODEX07V-EXP64:46837/sqlheroserverservices</u>	
Note: Your SQL-Hero application server that you would specify for client machines is: http://CODEX07V-EXP64:46837 Complete	

The site serves important functions, for both reporting and tracking changes. Any developer on your team can access the portal, so long as they are registered in the SQL-Hero repository. Users are automatically registered if they make changes in tracked databases (using Windows Authentication), or they can be added explicitly using the Manage -> Manage Users menu option:



If you are using IIS 7.0+, have HTTP redirection enabled, and have installed SQL-Hero as a *site* (not just an application underneath an existing site), you will be able to reference the portal using just the server name and port number – for example, "http://myhost:46837". The typical way to create a new site is to use a port number that's not assigned to an existing site. The default port SQL-Hero uses is 46837 although this can be altered during installation, if desired.

If you have Windows authentication installed, when you connect to the portal, it will try to log you in using your Windows credentials – only if this fails will you be asked to log in using a login page.

We've added two additional ways to reach the web portal: from SQL-Hero itself, and when using Visual Studio integration. From SQL-Hero, the Portal tab is effectively an embedded browser that uses your current application server setting to determine the portal location. (If you don't have server components installed, you get some additional details about what server components are and the overall SQL-Hero architecture.) In Visual Studio, the Portal is available as a tool window accessible from the main menu:

SQL-	Hero Window Help					
	SQL-Hero SQL Editor	Alt+Q, Alt+E				
W	SQL-Hero Settings	Alt+Q, Alt+S				
۵.	SQL-Hero History Search	Alt+Q, Alt+H				
8	SQL-Hero Testing and Performance	Alt+Q, Alt+F				
	SQL-Hero Tracing	Alt+Q, Alt+T				
0	SQL-Hero Monitoring	Alt+Q, Alt+M				
	SQL-Hero Notifications	Alt+Q, Alt+N				
-	SQL-Hero Schema Compare	Alt+Q, Alt+C				
	SQL-Hero Data Compare	Alt+Q, Alt+D				
9	SQL-Hero Policy Checking	Alt+Q, Alt+R				
	SQL-Hero Text Differences	Alt+Q, Alt+X				
1	SQL-Hero Generate Data	Alt+Q, Alt+G				
	SQL-Hero Web Portal	Alt+Q, Alt+W				

Claiming Objects

Some organizations will appreciate a "non-intrusive" database development process which allows developers to work with either a shared development database or individual sandbox databases. By "non-intrusive", we mean that developers are free to make changes in the live development database without having to pay a lot of attention to details like "what objects did I end up changing in this session?" or "now I need to commit all the work I've done to a source control system." Those who are source control purists may say "Tough! Deal with it: it's part of a robust process." However, we've observed that streamlining the process isn't all that hard while leveraging some of SQL-Hero's strengths to claw back a level of robustness. SQL-Hero does integrate with external source control systems such as TFS as well, but the process discussed here tends to be suited to organizations that feel the benefits of simplified but more manual change management outweigh the costs. Since SQL-Hero supports multiple models, the choice is largely organizational.

One way to achieve streamlining is to use the new SQL-Hero web portal's build pages. Let's start by looking at a scenario where we have developers using a shared development database. This database may serve a single application or many applications – and we need to worry about handling builds for all applications independently. Let's say we have a development, QA and production database:



Let's assume a developer does some work in the development database and changes a stored procedure and a UDF. It's not hard to imagine a busy developer perhaps remembering the procedure but forgetting that the UDF was changed. Of course different tools make it harder: such as TFS and Database Projects, where your objects would be checked out, awaiting check-in as part of a possibly larger change set. That topic is covered in a different whitepaper.

Assuming you wanted a simpler tracking system, if one were to visit the SQL-Hero web portal and pick the "Unassigned" menu option, it might look like this:

🖉 SOL-Hara Bartal

Obje	Objects Not Assigned to Builds SQL-Hero Port User: CODEX07V-EXP64\jchamp											
<u>Summary</u> <u>Unassigned</u> <u>Builds</u> Issues	The following list shows objects that are currently not associated with any active build and therefore need to be claimed as soon as possible. Please update the objects to associate them with a specific build. Also note that objects in the schema named "Debug" will be excluded from this list. If you need more information, please contact your build manager.											
Activity		Filters				🔲 Or	nly show objects	I've ever modified	F	Refresh		
	Data regions:	(All)				• Co	onsider object ch	nanges prior to the build created d	ate			
	Changed since:	Last 30 Days	-			Sh	ow object name	list		Save Changes		
	Database	Object	Туре	Last Change	Change By	Machine	Build	Own/Resp.	Label	Comment		
	Test- Development ^{dbo.u}	If_GetSomeValue	Function (scalar)	6/13/2011 10:54:18 PM	CODEX07V- EXP64 \jchampagne	CODEX07V- EXP64	•		•			
	Test- Development ^{dbo.u}	up_Procedure_AppA_1	Stored Procedure	6/13/2011 10:54:11 PM	CODEX07V- EXP64 \jchampagne	CODEX07V- EXP64	•		+			
	2 records											

🚵 💌 🖾 📼 🖶 💌 Page 💌 Safety 💌 Tools 💌 🚳

Notice how the portal "knows" what objects have been changed but are not associated with a particular build. We can perform that association directly on the site – simply pick the desired application and "Save Changes". A "responsible user" is also tracked and defaulted to the logged in user. The "label" drop-down and add (+) button allow you to pick an existing reference value or add a new one. Reference values can be bug numbers, or anything else you prefer to use to track work.

Also note that objects which have published region difference compliance failures are *excluded* from the "not assigned to builds" page's results. Including them could result in "lost updates" in the target region. The last section covers a report which shows these compliance issues separately.

ľ	Database	Object	Туре	Last Change	Change By	Machine	Build	Own/Resp.	Label	Comment
	Test- Development	dbo.uf_GetSomeValue	Function (scalar)	6/13/2011 10:54:18 PM	CODEX07V- EXP64 \jchampagne	CODEX07V- EXP64	Application A 👻	CODEX07V-EXP64\jchampagne	+	
	Test- Development	dbo.up_Procedure_AppA_1	Stored Procedure	6/13/2011 10:54:11 PM	CODEX07V- EXP64 \jchampagne	CODEX07V- EXP64		•	+	
	2 records	5					Application A			

Once these values have been assigned, clicking on the Save Changes button clears away the unassigned list, and the same objects now appear on the assigned list:

1-

🖉 SQL-Hero Porta	al							🛐 🔻 🔝 👻 🖃 🗰 🔻 Page 🔻	Safety ▼ Tools ▼			
Object	ts A	ssign	ed to Bui	lds				SQL-H User: CODEX07V-	ero Portal EXP64\jchampagne			
<u>Summary</u> <u>Unassigned</u> <u>Builds</u> Issues	The following list shows objects that are currently associated with an open or closed build. If you are a SQL-Hero administrator, you can use t page to correct object ownership and build association, if needed. You can also use it to get a complete list of objects which are to be include build, although the SQL-Hero client tools allow you to do more. If you need more information, please contact your build manager.											
Activity		Filters				Refre	sh					
	Build:	All Only sho	▼ w objects I'm responsil ject name list	ble for		Sav	re Changes					
	Status	Database	Object	Туре	Added	Label	Build	Own/Resp.	Comment			
	Open Test- Development dbo.uf_GetSomeValue Function (scalar) A				6/14/2011 6:00:01 AM		O - Application A-000001 👻	CODEX07V-EXP64\jchampagne				
	Open Test- Development dbo.up_Procedure_AppA_1 Stored 8/14/2011 Procedure AM						O - Application A-000001 👻	CODEX07V-EXP84\jchampagne				
	2 rec	ords										

(The assigned list is editable only for SQL-Hero administrators, mainly to correct mistakes – we trust that most assignments will be correct!)

But how does one define the values in the build drop-down? Given this is intended to be a one-time task, it's something that can be done using the SQL-Hero client application, SQL Editor tool. In this example, we used "Create Build...":

Editor	Data Compa	are	Sche	ma Com	pare	Differer	nces	History	No
Category:	Test		▼ Dat	abase:	Test-	Developn	nent	•	🝸 Filte
File - E	dit 🔹 Tabs 👻	Act	ions 🕶	Object	· ▼ Fa	vorites 🕶	Temp	olates 🝷	<u> </u>
2 SOL	، ᢓ ا 🛍 🕜	i li	Execu	ite In				Alt+F	5
E-Stor	ed Procedures		Execu	ite with	Variab	les		Shift+F	5
+··· SQL (+··· SQL (up_Procedure_/ up_Procedure_/		Execu	ute / Sav	e All C	hanged		F	6
	up_Procedure_	5	Execu	ite Curre	ent			Ctrl+	E
⊡ ∵ <i>Jx</i> User	-defined Function uf_GetSomeVal	1	Recer	ntly Use	d Quer	ies			
tabl	es	SOL	Chec	k Syntax	and T	est	Ctrl	+Shift+F6	5
	Customer CustomerType	\$	Refre	sh Obje	ts			Ctrl+I	R
		22	Show	Estimat	ed Exe	cution Pla	n	Shift+F	6
		۲	Reco	rd SQL					
		W	Add 1	Fo Build					
		R	Build	Search.					
			Creat	e Build					
		8	Cons	olidate B	Builds				
		_							

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SQL (5)	Build: New X				
Next:		▼ A Not In Build	🛍 Run Compare 📓	🖞 Promote 🛃 🛃 🗙	+ - 🗈
New build					
Build name:	Application B			Permanent?	1
Start from:	Test-Development	▼ Final: Tes	t-Production	▼ Status: Open	•
Current Object	Build Events Histo	ry			

We provide a friendly build name, specify which database serves as the starting point for object movement, and the final database where, when objects reach it, the build is considered complete. The status of "Open" implies we are free to add new objects to the build. When a build is promoted to any other database, the status automatically changes to "Closed" which means we can no longer add new objects, but the build is not yet complete. The Permanent check-box, when checked, implies that if the build changes from Open to Closed or Completed, a new build with the same name will be created in Open status, meaning we'll always be able to add new objects using the build in the starting database. Because of this, a sequence number is used to identify the build – the combined name and sequence number must be unique.

With objects now easily matched to applications, let's look at how easy it is to actually perform builds.

Modified Build Process

With objects now "claimed" by developers and associated to builds, we have a way to reliably know what objects to promote from one database region to the next logical region. The build process itself has streamlined support using the SQL-Hero client application (or Visual Studio integration), although technically one can work with raw object lists right from the portal itself. For example, you can copy-and-paste an object name list if you check "Show object name list":

Object	ts A	ssign	ed to <mark>B</mark> u	ilds							
<u>Summary</u> <u>Unassigned</u> <u>Builds</u> Issues	The foll page to build, a	owing list sl correct obj lthough the	nows objects that are ect ownership and bu SQL-Hero client tool	e currently a IIId associat s allow you	associated tion, if neo to do more	with ar eded. Yo e. If you	n open or closed build. If y ou can also use it to get a u need more information,	ou are ; comple please (
Activity	Filters Refresh										
		Only sho	w objects I'm respon ject name list	sible for		Sav					
	Status	Database	Object	Туре	Added	Label	Build				
	Open	Test- Development	dbo.uf_GetSomeValue	Function (scalar)	6/14/2011 6:00:01 AM		O - Application A-000001 👻	CODEX			
	Open	Test- Development	dbo.up_Proœdure_AppA	- ¹ Stored Procedure	6/14/2011 6:00:01 AM		O - Application A-000001 👻	CODEX			
	2 reco	ords									
	uf_Ge up_Pr ∢	tSomeValu ocedure_A	appA_1								

In the SQL-Hero client tool, we can search for open and closed builds:



Search											
Close efresh Edit ✓ Open? Completed? Permanent build? Build name like Group label like Contains object name like											
Drag a column	header h	ere to group by tha	t column.								
Name	Number	From	Last Promoted	Final	Status	Objects	Last Promoted On	Labels	Added By	Perm	Last Updated
Application A	1	Test-Development		Test-Production	Open	2				V	CODEX07V-EXP64\jc
Application B	1	Test-Development		Test-Production	Open	0				V	CODEX07V-EXP64\jc

If we double-click the first grid row (or click Edit), you're brought to the build details panel:

🔀 SQL-Hero - Profile localhost											
Editor Data Compare Schem	a Compare Differences Histo	ory Notifications Create	Data Testing Complia	nce Tracing Monito	oring Settings						
Category: Test - Datab	oase: Test-Development	🛛 🍸 Filter 🚰 🛛 Name Filter:	-		1 Dr Dr Dr Dr D						
File + Edit + Tabs + Actions + Object + Favorites + Templates + 🦉 🏦 Find: 🔹 🔻 Replace: 🔹 👻 🖺 🚇 🖉 🕌 🖓 🖓 🖓 🖓 🖓											
i 🛃 🕺 🍞 🏙 😒 🏂 🖄	- To 😹 🚅 🀙 🗔 🁒 To Es) 🔁 🛛 🖓 📲 🖓 🛐	🎦 🕙 🞦 🔀 🎘 🕾	👒 🖉 🧿 🛃 📩	😳 📥 🛃 🛃 🖆 🖕						
Stored Procedures	SQL (5) Build: Applica	tion A 🗙									
up_Procedure_AppA_1	Next:	🔻 🔛 Not In Build 🔤	Run Compare 🛛 Promot	e 👩 🔙 🗙 🔸 🗕	1 🖥 🏹 🚨						
	Last Updated CODEX07V-EXP64	jchampagne on 6/13/2011 10:54	01 PM, 2 objects								
$\exists \cdots f_{x}$ User-defined Functions (scalar) $\exists \cdots f_{x}$ uf GetSomeValue	Build name: Application A		Permane	ent? 1							
Tables	Start from: Test-Development	▼ Final: Test-Prod	uction - Sta	tus: Open 🔻							
⊡	Current Objects Build Events His	tory	_	,							
	Sahama Nama	Tuno			ant Added						
Containa Interio Type Labels Osta Audor Los Audor L											
	dbo up_Procedure	e_AppA_1 Stored Procedure	e CODEX07V-E	XP64\jchampagne 6	/13/2011 23:00:01.237						

Here we see the objects that comprise the build, any labels (e.g. bug numbers) that apply to each, and a log of events that relate to the build.

To actually promote objects from one database to another, pick the "next" database to move to in the drop-down in the panel tool bar:

						- Andre -		······································	
SQ	L (5) Build: Applic	ation A 🗙							
Next:	Test-QA	- 🛃	Not In Build	🛍 Run Com	pare 🎝 Pr	omote 🛛 😰 🛛	🚽 🗙 🔸	- 🔊 🗟 🏹	
Last Updated CODEX07V-EXP64\ichampagne on 6/13/2011 10:54:01 PM, 2 objects									
Build	name: Application A				Per Per	rmanent?	1		

Notice how some tool bar buttons are now enabled. In the simplest scenario, we now click "Run Compare". We're asked if the script that gets generated should include a directive that will cause SQL-Hero to update the build information in the repository when the script executes successfully.

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💦 Include	promotion directive?
2	The script that would be generated from this compare can include a directive which, when run in the SQL-Hero editor, automatically promotes this build if the script completes successfully. Electing to use raw SQL implies you will need to manually promote this build using the Promote button. Do you wish to include this directive to promote or generate just the raw SQL script?
Do not s	show this message again in this session show this message again in future sessions o Promote Raw SQL Cancel

If you intend to run the generated script outside of SQL-Hero, then Raw SQL may be a valid choice, although the directive that's added is added inside a SQL comment, so using Auto Promote produces script that can be executed anywhere. If you do not use Auto Promote or will not run the script in SQL-Hero, you'll need to manually click on the Promote button after you've applied the change script, as an extra step. (The promotion step changes a build's status from Open to Closed, so it's an important thing to do and should not be skipped.)

Let's assume we click Auto Promote. Now we're brought to the Schema Compare tool and the compare is issued automatically for us. We'll see the difference list, filtered to the objects involved in the build:

ĸ	SQL-Hero	- Profile lo	ocalhost									•
	Editor	Data Con	npare	Schema	Compare Difference	s Hist	ory Notifications	Create Data T	esting Compliance	Tracing	Monitoring Settings	
	Compare	e Objects	sat Cr	reate Scr	ipt 🛛 🕞 Toggle Selectio	n 🛄 Se	elect List For Currer	nt Only For All Sel	ected 🛛 🍸 Filter 🛛 🄇	👌 🥅 🦣 💡	A	
					Obje	cts 2 ite	m(s)			Source:	Test-Development	-
	Selected	Hide T	Ignore	Diff	Name	Туре 🗸	SourceUpdate	DestUpdate	SourceModB	Taraat		
•	V			!	up_Procedure_AppA_1	P	13-Jun-11 22:54	13-Jun-11 22:29	CODEX07V-EXP64\jch	raiget.	Test-QA	_
	V			!	uf_GetSomeValue	FN	13-Jun-11 22:54	13-Jun-11 22:29	CODEX07V-EXP64\jcl	Objects	5	
					1					🔽 Ta	ibles 🔽 Views	
										🔽 St	ored Procedures 🔽 Trigge	rs

Clicking "Create Script" gives us the actual change script to apply. Note that it includes the promotion directive, with the target database named, and the script's database set to QA. At this point we only need to hit F5 to execute the script:

Test-Development:SQL (5)	Build: Application A	Test-QA:SQL (6)* 🗙	
<build_promotion><buil< th=""><th>ldID>1<ta< th=""><th>rgetDatabase>Test-(</th><th>QA</th></ta<></th></buil<></build_promotion>	ldID>1 <ta< th=""><th>rgetDatabase>Test-(</th><th>QA</th></ta<>	rgetDatabase>Test-(QA

With the successful completion of the script, we're given a message that gets us to confirm the promotion operation:

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- <ed< th=""><th>ITOR_SETUR</th><th>P_COMMAND/></th><th></th></ed<>	ITOR_SETUR	P_COMMAND/>	
F (0	BJECT ID C	'#UnitPerfTestResults') IS NOT NULL) OR (OBJECT I	DL'tem
	🖹 Confirm	promotion.	3
-SHC REAT Obje bjTy urat	8	The executed script completed successfully. Are you sure you want to promote this build to database 'Test-QA'?	
erce rrMe		No	

After the promotion completes, a build report appears listing objects involved in the build. The report can be exported to PDF or Excel if the intent is to share the content.

🐏 Promotio	on Report					
∢ ∢ 1	of 1 ▶ ▶ ⊕ (8 🚯 🖨 🗐 🛍 🔍 -	100% -		Find Next	
Build R	Report					From: Test-Development
Applicati	on A					To: Test-QA
Bug/Project	Туре	<u>Schema</u>		Name		Added By
	Function (scalar)	dbo	uf_GetSomeValue			
	Stored Procedure		up_Procedure_AppA_1			

Let's assume now that the user makes a change in another object in development. Back on the Unassigned list on the SQL-Hero portal, we can assign this object to the proper application:

Obje	cts No	ot Assigne	ed to	o Bu	ilds			SQL
		-						User: CODEXC
<u>Summary</u> <u>Unassigned</u> <u>Builds</u>	The followin update the need more	ng list shows objects t objects to associate t information, please co	that are cu hem with ontact you	irrently no a specifio r build m	ot associate c build. Also anager.	d with any note that	active build and objects in the so	therefore need to be claimed as soon chema named "Debug" will be excluded
Issues A stivity		Filters					- hu - h - w - h i t-	Num anna an diffin d
ACTIVITY	Data and	(All)					nty snow objects	Tve ever modified
	Data regio	ns: (All)				▼ ■ Co	onsider object cl	hanges prior to the build created date
	Changed s	ince: Last 30 Days	•			Sh	now object name	list
	Database	Object	Туре	Last Change	Change By	Machine	Build	Own/Resp. La
	Test- Development	dbo.up_Procedure_AppA_	² Stored Procedure	6/14/2011 12:01:20 AM	CODEX07V- EXP64 \jchampagne	CODEX07V- EXP64	Application A	CODEX07V-EXP64\jchampagne
	1 record						Application B Application A	

Now performing a build search, we can see how "Application A" has two on-going builds: numbers 1 and 2. #1 has 2 objects and was the one we just promoted (hence the status of Closed). #2 is the Open build we just added the above object to.

Close 🛛 💋 🛛	Refresh 🛛	🚽 Edit								
Open?		Completed?	🖂 Permanent I	build?						
Build name like		Group la	bel like	Conta	ins object	t name lik	e			
								_		
		• <u> </u>	-	Source	database	:		- 🔽 AII		
	•	• [_/_/	-	Source	database	E				
Drag a column	header h	ere to group by that	▼ t column.	Source	database	e:				
Drag a column	header h	ere to group by that	t column.	Source	database Status	: Objects	Last Promoted On	Labels	Added By	Perm
Drag a column Name Application A	header he Number 2	ere to group by that From Test-Development	t column.	Source Final Test-Production	database Status Open	Cbjects	Last Promoted On	Labels	Added By CODEX07V-EXP64\jchampagne	Perm
Drag a column Name Application A Application A	header hi Number 2	ere to group by that From Test-Development Test-Development	t column. Last Promoted Test-QA	Source Final Test-Production Test-Production	database Status Open Closed	Objects	Last Promoted On 6/13/2011 23:58:27.067	Labels	Added By CODEX07V-EXP64ychampagne CODEX07V-EXP64ychampagne	Perm

After another promotion to QA, we'd see:

Close 🛛 😰 🛛	Refresh	j Edit								
Open?		Completed?	Permanent I	build?						
Build name like	L	Group la	bel like	Contai	ins object	t name lik	e			
				_						
		- I / /	T	Source	database			- Π ΔΠ		
//		• _/_/	_	Source	database	E				
Drag a column	header h	ere to group by tha	▼ t column.	Source	database	к <u> </u>	-			
]// Drag a column	header h	_/_/ ere to group by tha	t column.	Source	database	Ohiosta	Last Bransted On			Deer
/ Drag a column lame /	header h Number	ere to group by tha	t column.	Source	database Status	: Objects	Last Promoted On	✓ IV All	Added By	Perr
Drag a column lame / Application A	header H Number 3	Image: constraint of the second	t column.	Source Final Test-Production	database Status Open	Cbjects	Last Promoted On	Labels	Added By	Perr
Drag a column lame / Application A Application A	header H Number 3 2	Image: Imag	t column. Last Promoted Test-QA	Final Test-Production Test-Production	database Status Open Closed	Objects	Last Promoted On 6/14/2011 00:06:57.267	Labels	Added By CODEX07V-EXP64\jchampagne	Perr
Drag a column lame / Application A Application A	header h Number 3 2 1	Interest of group by that From Test-Development Test-Development Test-Development Test-Development Test-Development	t column. Last Promoted Test-QA Test-QA	Final Test-Production Test-Production Test-Production	Status Open Closed Closed	Objects 0 1 2	Last Promoted On 6/14/2011 00:06:57.267 6/13/2011 23:58:27.067	Labels	Added By CODEX07V-EXP64\jchampagne CODEX07V-EXP64\jchampagne	Perr

One can easily imagine a process by which regular builds are performed from development to QA, but much less frequent movements happen from QA to production. Do we really need to promote a large number of small builds in this case? Build consolidation is an alternative that can be used to combine multiple open or closed builds into one new build.

Build Consolidation

Combining builds is a straightforward process, launched from the SQL-Hero client tool:



The option presents all open and closed builds. It's legal to combine both open and closed builds, but all selections must be for the same "From database", "Final database" and "Build name". If any build is in closed status, the new build will also be closed. It's also illegal to include an open build if it's flagged as being permanent: such a build should be changed to closed first (either manually or through promotion). The new consolidated build contains all unique objects from selected source builds.

16									
C	onsolida	te C	ancel						
Sel	ected	Status	Build	Seq.	From database	Last To database	Final database	Obj. count	Last promotion
1	1	Closed	Application A	1	Test-Development	Test-QA	Test-Production	2	06/13/2011
١	V	Closed	Application A	2	Test-Development	Test-QA	Test-Production	1	06/14/2011
		Open	Application A	3	Test-Development		Test-Production	0	
		Open	Application B	1	Test-Development		Test-Production	0	

After the above consolidation is performed, a build search where we've elected to show completed builds would show this:

% Build Search										×
Close 🛛 🛃 🖡	Refresh	写 Edit								
☑ Open?		Completed?	Permanent I	build?						
Build name like.		Group la	bel like	Conta	ins object name	e like				
	-	•	•	Source	database:			All		
Drag a column	header h	ere to group by tha	t column.							
Drag a column Name	headerh Numb⊽	ere to group by tha From	t column. Last Promoted	Final	Status	Objects	Last Promoted On	Labels	Added By	Perm
Drag a column Name Application A	headerh Numb⊽ 4	ere to group by tha From Test-Development	t column. Last Promoted Test-QA	Final Test-Production	Status Closed	Objects 3	Last Promoted On 6/14/2011 00:06:57.267	Labels 11001	Added By CODEX07V-EXP64\jchampagne	Perm
Drag a column Name Application A Application A	headerh Numb⊽ 4 3	ere to group by tha From Test-Development Test-Development	t column. Last Promoted Test-QA	Final Test-Production Test-Production	Status Closed Open	Objects 3 0	Last Promoted On 6/14/2011 00:06:57.267	Labels 11001	Added By CODEX07V-EXP64\jchampagne	Perm
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Notice how builds #1 and #2 for "Application A" now have a status of "Consolidated." This status is treated the same as "Complete" for the most part: these builds can't be used in further promotions. Instead we can use build #4, which is now in closed status and contains 3 objects: 2 from #1 and 1 from #2. Why does it show "Last Promoted On" with a date? Because build events are copied from the source builds to ensure the new build will "know" where objects it contains were last promoted *from* – an important piece of information when we want to next promote this build.

Let's assume the 3 objects covered by the new consolidated build are ready to be moved to production. After picking the build on the search screen, we'd see:

. • <u></u>		- <u>-</u>				<u> </u>
SQ	L (1)	Build: Application A 🗙				
Next:	Test-Produc	ction 💌 🛃	Not In Build 🛍 Ru	in Compan	e 🎲 Promote 🔯 🔛 🗙 🔸	- 🗈 🗟 👕 -
Last	Updated COE)EX07V-EXP64\jchampagne	on 6/14/2011 12:13:08	AM, last pro	omoted to 'Test-QA' on 6/14/2011 12:00	6:57 AM, 3 objects
Build	name: Appli	cation A			Permanent? 4	
Start	from: Test	-Development 🗸	Final: Test-Producti	on	▼ Status: Closed ▼	
Curren	t Objects Bu	uild Events History				
S	chema	Name	Туре	Labels	Users Added	Last Added
	dbo	uf_GetSomeValue	Function (scalar)		CODEX07V-EXP64\jchampagne	6/14/2011 00:13:08.160
÷.	dbo	up_Procedure_AppA_1	Stored Procedure		CODEX07V-EXP64\jchampagne	6/14/2011 00:13:08.160
	dbo	up_Procedure_AppA_2	Stored Procedure	11001	CODEX07V-EXP64\jchampagne	6/14/2011 00:13:08.163
-	-					

After clicking on "Run Compare", we'd see (notice that the Source database has correctly been set to QA automatically):

1	🗶 SQL-Hero	- Profile l	ocalhost										
	Editor	Editor Data Compare Schema Compare Differences History Notifications Create Data Testing Compliance Tracing Monitoring Settings											
	Compare	🕨 Compare Objects 🕺 Create Script 🏹 Toggle Selection 🖽 Select List For Current Only For All Selected 🍸 Filter 🍨 🏢 🦣 🍘 🚈											
					Obje	cts 3 ite	m(s)			Source:	Test-QA	•	
	Selected	Hide 🝸	Ignore	Diff	Name	Туре 🖓	SourceUpdate	DestUpdate	SourceModB	Target			
	•			ļ	uf_GetSomeValue	FN	13-Jun-11 23:54	13-Jun-11 22:29	CODEX07V-EXP64\jch	raiget.	Test-Production	•	
				!	up_Procedure_AppA_1	P	13-Jun-11 23:54	13-Jun-11 22:29	CODEX07V-EXP64\jcł	Objec	cts		
				1	up_Procedure_AppA_2	Р	14-Jun-11 00:06	13-Jun-11 22:29	CODEX07V-EXP64\jcl	I ■ 1	Tables 🔽	Views	

After running the change script and confirming the promotion, we'd see this in a subsequent build search:

💫 Build Search										×	
Close 🛛 💋 F	Refresh 🛛	🚽 Edit									
☑ Open? ☑ Completed? ☑ Permanent build?											
Build name like Contains object name like											
,		- ,			,		_				
Drag a column I	header he	ere to group by that	t column.								
Name 스	$Numb\nabla$	From Last Promoted		Final	Status	Objects	Last Promoted On	Labels	Added By	Perm	
Application A	4	Test-Development	Test-Production	Test-Production	Complete	3	6/14/2011 00:21:17.153	11001	CODEX07V-EXP64\jchampagne		
Application A	3	Test-Development		Test-Production	Open	0				V	
A 1' A	2	Test-Development	Test-QA	Test-Production	Consolidated	1	6/14/2011 00:06:57.267	11001	CODEX07V-EXP64\ichampagne		
Application A	-	rest-Development								× 1	
Application A Application A	1	Test-Development	Test-QA	Test-Production	Consolidated	2	6/13/2011 23:58:27.067		CODEX07V-EXP64\jchampagne	✓	

Note that the status of #4 is now "Complete". Build #3 is still open and available to support on-going development.

Other Portal Reporting

The web site includes a menu option for "Issues". This report shows a combination of published region difference failures, published compliance check failures, and collected trace records that indicate an error condition. In the example below, we've made a change in a procedure in QA without ensuring it was updated in development as well:

🏉 SQL-Hero Port	al			🏠 • 🔊 • 🖃 🖶 •	Page 🔻 Safety 👻 Tools 👻 🔞									
Compl	iance Issues			S User: Ci	SQL-Hero Portal DDEX07V-EXP64\jchampagne									
Summary Unassigned Builds Issues	The following report shows objects that copying objects to different databases of results and the date shown represents h list. If you need more information, pleas	currently require atte or correcting their cor ow current the inform se contact your build	ntion as soon as possible due to r tents, depending on the rule. Thi lation is. Also note that objects ir manager.	not meeting certain compl is list comes from publishe n the schema named "Deb	iance rules. This can involve d compliance checking Jg" will be excluded from this									
Activity	Filters		Only show objects I've ever mod	odified										
	Database: (All) -		Only show failures not marked to	o ignore	Run Report									
	Changed since: Last 30 Days 🔻		Only show synchronization issues	sues										
	[4 4 1 of 1 ▷ ▷] ↓	100% 👻	Find Next 🔍	• 📀 🖨										
	Current Issues This report lists published problems with object synchronization between different databases, published violations of SQL coding vides detected in objects, and trace events stored in the repository that indicate an error.													
	User Issue DB Type	Schema	Object	Event										
	CODEX07V-EXP64\jchampagne													
	Region Difference													
	Test-QA	dha	us Presedure AssR 1	8/14/2011 Object is per	use in Tast OA compared to Tast Davider									
	Total for CODEX07V-EXP64/ichamp	agne: 1	ab ^{_1} .cosqnis_Whbp_1	ov 14/2011 Object is nev	ter in rest-on compared to rest-Develop									
	6/14/2011 12:36:00 AM													

This report is able to distinguish "legitimate differences" using SQL-Hero audit tracking – meaning one needs to be using DML tracking on any databases which participate in region difference checking. Source control integration also comes into play in deriving an accurate picture, so if TFS is being used, the TFS plug-in for SQL-Hero should be enabled. Note that the report is not performing a real-time analysis for compliance issues: it's looking at *published* issues. One typically schedules compliance checking with a frequency that depends on expected object turn-over for a given database – this topic is covered in another whitepaper.

The Summary report is a quick view of some development metrics, filtered to the logged in user:



The Activity report lets you query the object change log using a date range and some additional filter parameters. The report groups by "last modified" user and a description of the last activity is included (e.g. "Created" versus "Updated"). This is the same report that's available in the SQL-Hero client tool on the History window. Note that actions from external source control systems can be included here as well to give a complete and consolidated picture of change.

🏉 SQL-Hero Po	ortal													ł	🔄 🔹 I	<u>ə</u> -	🖃 🖶 🔻 Page 🕶 Sa	fety 🔻	Tools 🔻 🔞	•
Recei	nt Ac	tivi	ty R	еро	ort												SQL-He	ro Po	Ortal ampagne	^
Summary Unassigned Builds	The followi the last mo build mana	ng repor dified us ger.	t shows ch er. Also n	anges ote tha	made at obje	to SQL a cts in th	bjects e sche	s - ei ema r	ther o	direct d "De	ly in bug"	the o	Jataba be exc	ase itself, or cluded from	r in any this list	linked t. If you	source control systems I need more informatio	. The re on, pleas	port groups se contact y	
Activity		Filters												Database:	(All)		•			
	Changed between:	≤ Ma 29 30 5 6 12 13 19 20 26 27 3 4	June : Tu W 31 1 Z 8 14 15 21 22 28 29 5 6	2011 Th <u>2</u> <u>9</u> <u>16</u> <u>23</u> <u>30</u> <u>7</u>	Fr 5 3 10 17 24 2 1 8	≥ a 4 5 2 2	≤ Su 29 5 12 19 26 3	Mo <u>30</u> <u>6</u> <u>13</u> <u>20</u> <u>27</u> <u>4</u>	Jur Tu 31 7 14 21 28 5	We 1 8 15 22 29 6	11 Th 2 9 16 23 30 7	Fr 3 10 17 24 1 8	≥ Sa 4 11 18 25 2 9	User: Object name like:	(All) ✓ Incl ✓ Incl	All) Run Include object drops Include comments				
	4 4 1 of 1 ▷ ▷ 4 100% Test-QA dbo <u>Customer</u>				¢	100%	Find Next 🔍 🗸					t 🔍 🕶 (۰							
									Table - Created 6/14/2011					43:13 AM	1	CODEX07V-EXP84\johampagne	2	CODEX07V-EX Vjchampagne		
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