

IMPLEMENTATION SQUASH TM_TA ARCHITECTURE ET METHODOLOGIE

Avril, 2014

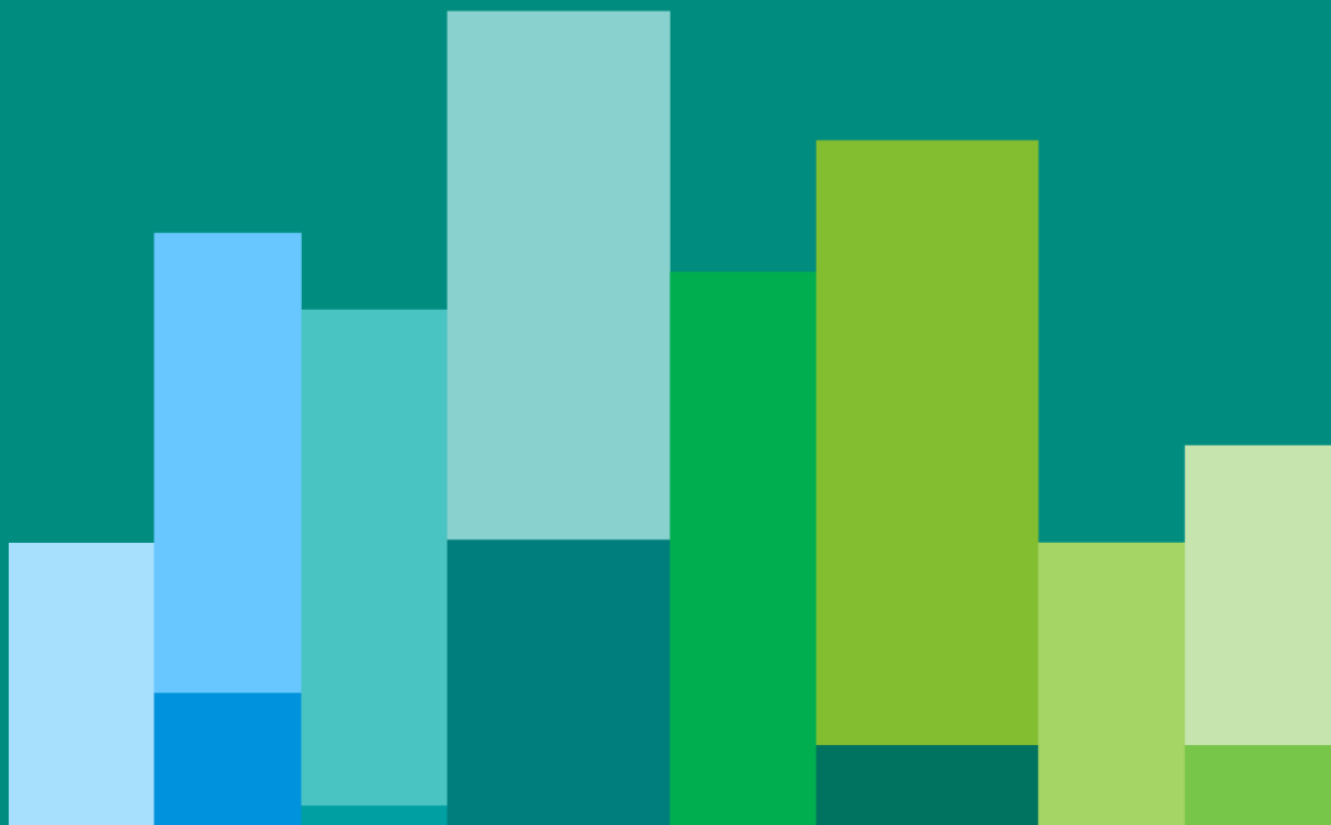


TABLE DES MATIÈRES

Configuration actuelle

Présentation générale - Volume

Architecture

Méthodologie

Problèmes

Solution Squash

Architecture mise en place

Une solution adaptée



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Un historique de test conséquent

100 000 cas de tests dont 50 000 automatisés

100 utilisateurs connectés simultanément avec envoi de tests multiplateforme



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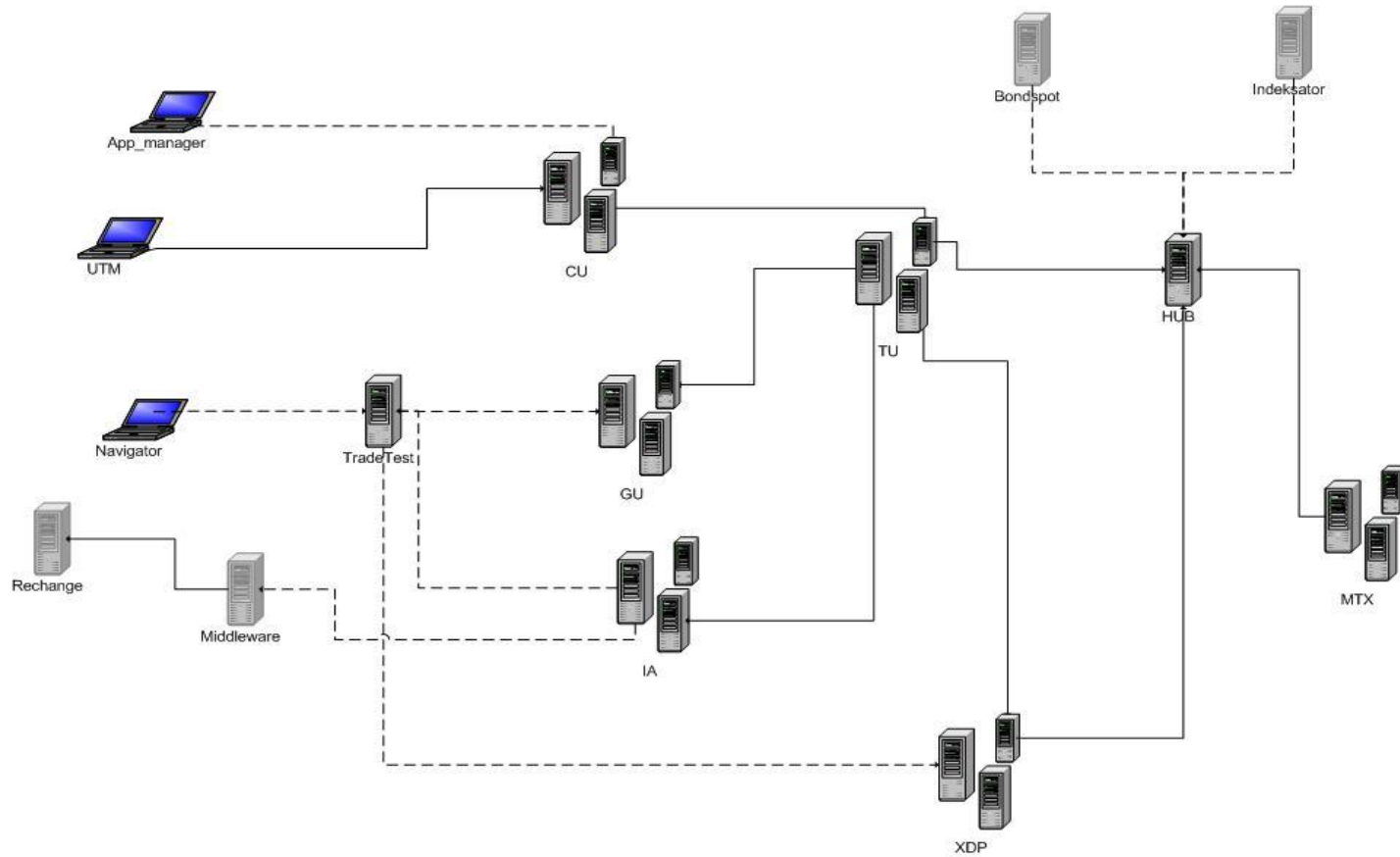
Solution Squash

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QA ENVIRONMENT



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GESTION DES EXIGENCES

	Requirements	Tests objectives	Files which contain cases	Planned cases	Written cases	% written/planned	Target Date 100% Written	Priority 1 High 2 Normal 3 Low	Lot	Owner
CBBO Touch Size										
	UTP will load in the CBBO Touch Size threshold values per instrument from a flat file before the start of trading each day	The ux_touch_size.dat file is modified and orders are placed which checks that the touch size is used from the file.	TOUCH 01-03	1		0%	8 march 2013	2	1.0	MMA
	If no CBBO Touch Size value is loaded in for any instrument, the value defined in UTM parameter <CBBOTouchSizeDefault> is used for that instrument	Changed the parameter for the touch file to different values and check that the minimum touch file size is obeyed.	TOUCH 17-25	2		0%	8 march 2013	2	1.0	MMA
	The default value of config parameter <CBBOTouchSizeDefault> is 1	For a symbol that is not in the ux_touch_size.dat file, orders are created to test that the default value is set to 1.	TOUCH 26-29	2		0%	8 march 2013	2	1.0	MMA
	The touch size check is executed on top of book prices only, depth of book is ignored	Orders are placed in the top of book do match touch size and the do contribute. Conversely, orders that don't match touch size at top of book while orders at increasing depth do meet touch size shouldn't contribute to CBBO	TOUCH 31-32	5		0%	8 march 2013	2	1.1	MMA
	The touch size check can be executed against more than one order where they are at the same price	Orders are entered that aggregate volume at the same top of book price level	TOUCH 04-15	12		0%	8 march 2013	2	1.2	MMA



OUTIL DE TEST ACTUEL: NAVIGATOR

Même outil pour la saisie des cas de test et l'injection des cas de tests automatisés

Actions	Test Case ID	Requirement ID	Description	Summary	Preconditions	Run Instructions
	AP0001	DERMTXCONT 3.1.8 DRS v0.8	Abstract Patterns - Futures Calendar Spread and two outrights assigned modification	Verify that you can modify the Futures Calendar Spread and two outrights pattern to be assigned to a contract or not assigned to a contract	<ul style="list-style-type: none">Matrix Env is availableAbstract Patterns are pre populated	<p>Steps</p> <ol style="list-style-type: none">Logon to the matrix EnvironmentSelect the Abstract Patterns tab in the right hand paneSearch for the contract YFEMAHighlight YFEMA and select the modify buttonEnsure that the Futures Calendar Spread and two outrights pattern can be assigned to the contractSelect modify again and unassign the pattern <p>Expected Results</p> <ol style="list-style-type: none">The Matrix GUI is displayedThe Abstract pattern pane is displayedThe details for YFEMA are displayed in the left hand paneThe All Abstract patters are diplayed in a seperate pane.The Futures Calendar Spread and two outrights pattern is assigned to the contractThe Futures Calendar Spread and two outrights pattern is no longer assigned to the contract

Une seule ligne pour plusieurs step de tests et un seul expected results sur la même ligne



OUTIL DE TEST ACTUEL: NAVIGATOR/INJECTION

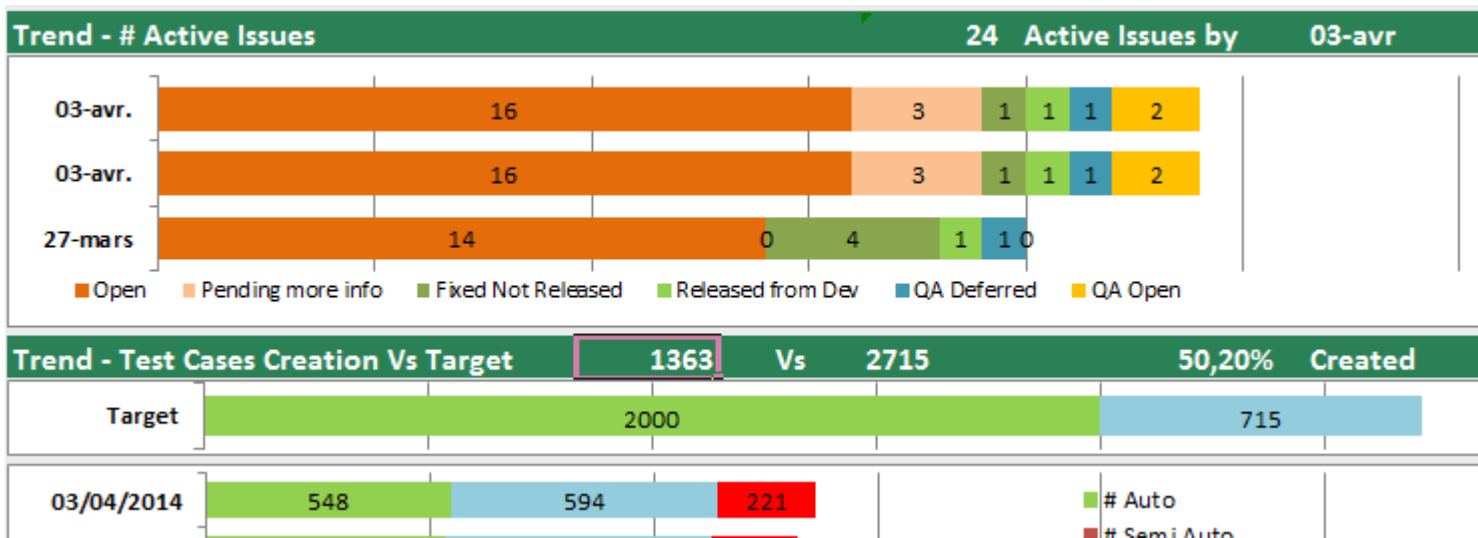
l'injection des cas de tests automatisés

FIX Tag	Value
MsgType (35)	MD
<i>#1 - UTP FIX.4.X/New Order</i>	
BeginString (8)	FIX.4.2
BodyLength (9)	@TESTTOOL
MsgType (35)	D <input checked="" type="checkbox"/>
MsgSeqNum (34)	@TESTTOOL
SenderCompID (49)	@TESTTOOL
TargetCompID (56)	@TESTTOOL
OnBehalfOfCompID (115)	@TESTTOOL
DeliverToCompID (128)	
SenderLocationID (142)	@TESTTOOL
SendingTime (52)	@TESTTOOL
PossDupFlag (43)	N <input checked="" type="checkbox"/>
PossResend (97)	N
ClOrdID (11)	@GEN-UNIQUE-VALUE
Symbol (55)	FR0000031106
Side (54)	2 <input checked="" type="checkbox"/>
OrdType (40)	2 <input checked="" type="checkbox"/>
TimeInForce (59)	0 <input checked="" type="checkbox"/>
ExecInst (18)	NULL <input checked="" type="checkbox"/>
Price (44)	101
StopPx (99)	
OrderQty (38)	1000
MinQty (110)	
MaxFloor (111)	
ExpireTime (126)	
ExpireDate (432)	
DiscretionInst (388)	NULL <input checked="" type="checkbox"/>
DiscretionOffset (389)	

Injection multiplateforme avec recueil automatiques des resultats



REPORTING



Configuration actuelle

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Problèmes et contraintes

Solution Squash

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LES PROBLÈMES ET CONTRAINTES

Couverture des exigences ardue

Outil interne ne répond pas aux besoins + problèmes de maintenance

Pas d'automatisation des GUI

Reporting excel

Volume important



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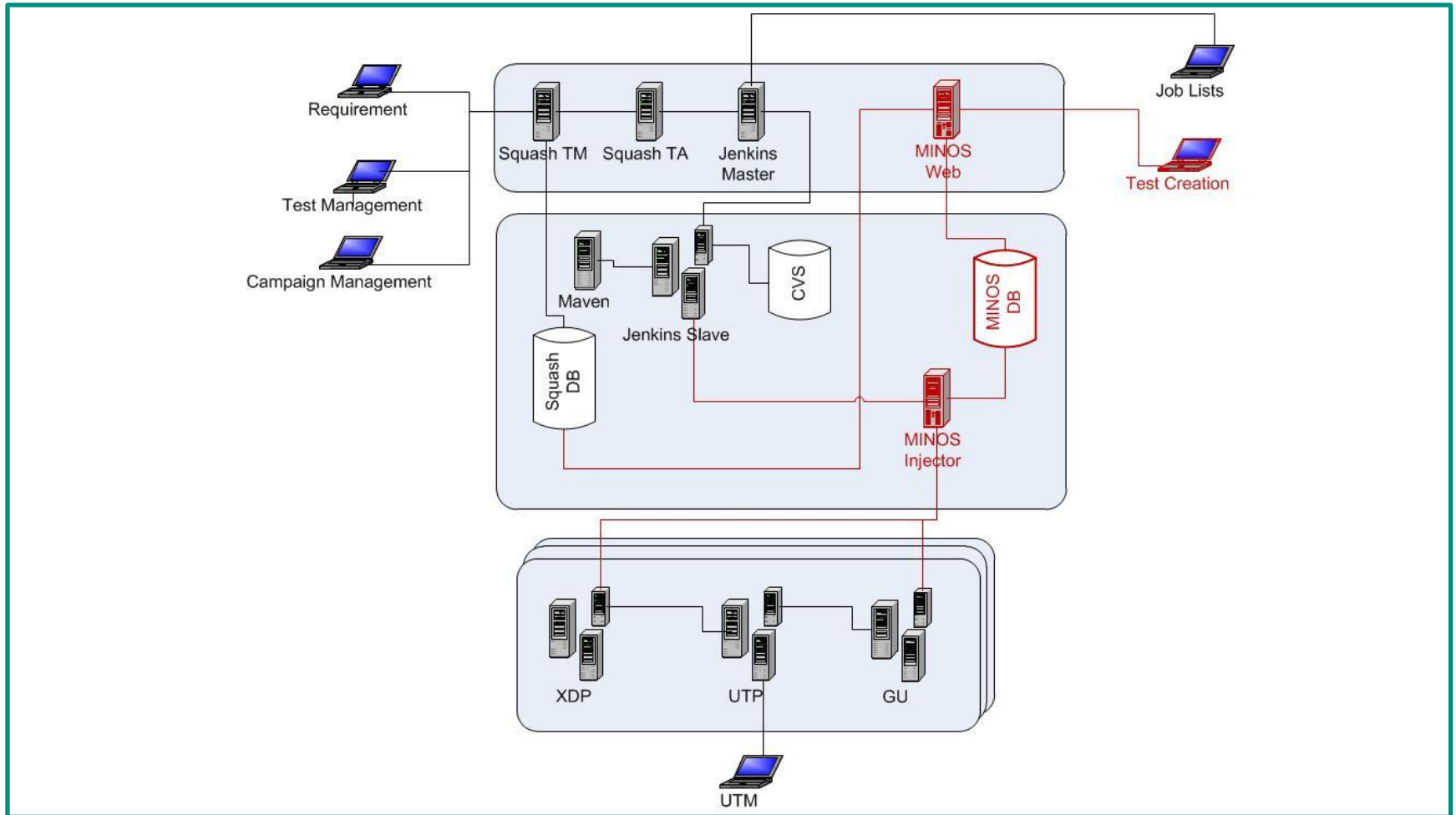
Solution Squash

Architecture mise en place

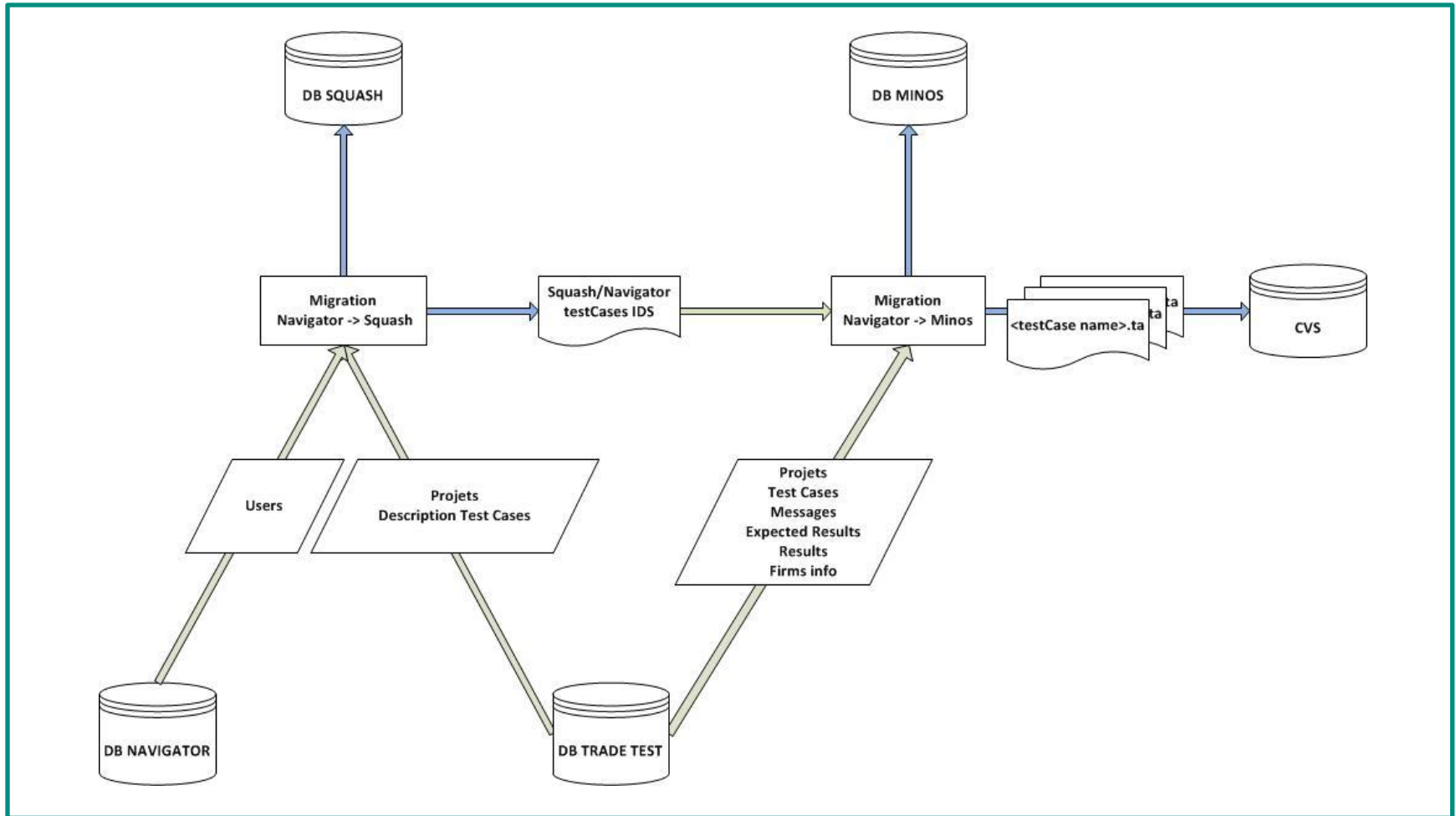
Une solution adaptée



Architecture



Architecture - Navigator Migration



Actual Status

Migration	Coding	Testing
Navigator	Done	Done
Excel	To do	To do
Aegis	To do	To do
Injection	Coding	Testing
FIX	Done	In Progress
BIN	Done	To do
XDP Reception	In Progress	To do
UTM Command	Coding	Testing
Old command	Done	To do
RunCmd script execution	To do	To do
New command	Done	In Progress
Squash TM	Coding	Testing
Requirement	-	Done
Test Case	-	Done
Campaign	-	In Progress
parameter enhancement	In Progress	To do
Jenkins job selection	In Progress	To do
Manual multiple status update	In Progress	To do
Redmine Interface	Done	Waiting For Delivery

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SQUASH

Problème 1 : Couverture des exigences ardue

Gestion des exigences souple facilement accessible – import de feuille excel facile

The screenshot displays the Squash Requirements Management interface. The main window shows a requirement titled "Requiemment : MTXDERABST" with the following details:

- Created on: 2014/03/11 14:35 (gotfrez)
- Updated on: 2014/04/09 15:51 (gotfrez)
- Buttons: Rename, Create a new version, Print
- Information: Version n°: 1 (View version history), ID: 15, Reference: (Click to edit...), Priority: 2-Minor, Category: Business, Status: 1-Work in progress
- Description: The last trading day must be defined between 0 and 20 before the LTD
- Test Cases verifying the requirement: A table with 10 rows, each representing a test case for "Derivatives EU".
- Log history: A table showing the creation of the requirement on 11/03/2014 14:35 by user gotfrez.

#	Project	Reference	Test Case	Type
1	Derivatives EU		CS0001	manual
2	Derivatives EU		CS0002	manual
3	Derivatives EU		CS0003	manual
4	Derivatives EU		CS0004	manual
5	Derivatives EU		CS0005	manual
6	Derivatives EU		CS0006	manual
7	Derivatives EU		CS0007	manual
8	Derivatives EU		CS0008	manual
9	Derivatives EU		CS0009	manual
10	Derivatives EU		CS0010	manual

Date	User	Event
11/03/2014 14:35	gotfrez	Creation

SQUASH

Problème 2 : Outil interne ne répond pas aux besoins Solution : Ergonomie de squash

Test Case : WP001

Created on : 2014/04/04 11:46 (admin)
Updated on : never

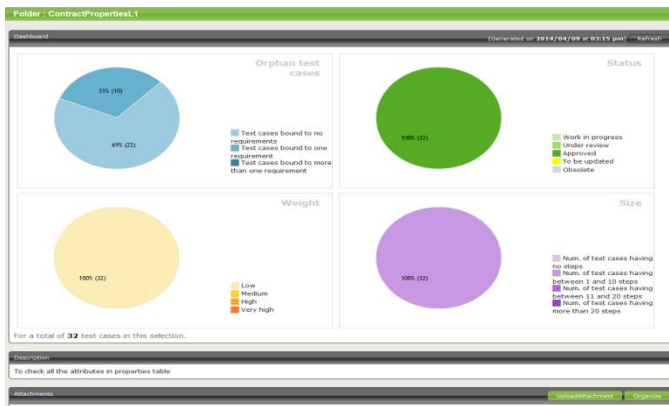
Rename Print

Informations Script Parameters Attachments Executions

Collapse Add a Step Delete Step(s) Add a Call Step Copy Paste

#	Att.	Rq.	Actions	Expected results		
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Step 1: Log in Matrix	Main screen well displayed - see the attached printscreen		
2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Step 2: click on the tab "Contract"	the trading types tab presents a GUI as outlined by the documentation		

Dashboard disponibles sur les cas de test et les campagnes



SQUASH

Problème 3 : Architecture actuelle peu maintenable

Solution : interfaçage avec tous les outils d'automatisation du marché facile

Dans notre cas :

Outil java

Batch python pour envoi des messages électroniques

Problème 4 : Pas d'automatisation des GUI

Solution : Une automatisation souple permettant de s'interfacer avec tous les outils

En cours : interfaçage squash TA / FlexMonkey

Dans l'avenir interfaçage prévu avec Squish pour QT



SQUASH

Problème 5 : Reporting

Squash : solution riche pour le suivi des exécutions + couverture des exigences

>> Report : Qualitative followup

Report Criteria

Qualitative Coverage Dashboard Requirement list with associated execution status

Qualitative coverage dashboard

Key *Critical* *Major* *Minor* *Undefined* *Total* *(Only the most recent execution is taken into account at each level: test suites, iterations, campaigns)*

of covered requirements

<i>To be tested</i>	<i>Tested</i>	<i>Total</i>	<i>Progress</i>	Validated requirements
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Project: Warsaw



SQUASH

Problème 6 : Volumétrie

100 000 cas de test déjà migrés dans squash TM

650 cas de tests exécutés en 45 minutes au lieu de 2h auparavant

En cours de test pour la multi-connexion avec 50 utilisateurs



RESULTAT

Une solution adaptée à nos besoins

Avant :



Après :



Q & A

Thanks for your attention

