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COLLECTION SHEET ENTRY TEST FOR Mifos

**For Grameen Foundation,**

October, 2009

**Problem of Statement:**

Testing Collection sheet entry details with mifos trunk and 1.3 tag version

The major concentration for the testing is to check the flowing issues:

1. Missing attendance:

 2. Partial submits:

3. Duplicate Submits:

4. Missing Payments:

And also to find performance of the tag 1.3 and trunk versions.

**Proposal:**

Testing mifos trunk (revision 15849) and 1.3 tag version(revision 15757) with Load Runner to analyze the results and find the issues with mifos collection sheet entry.

**Methodology:**

**-Create sample data for the collection sheet entry**.

 Sample Data can be created by running the following commands in Mysql prompt.

Open Mysql command prompt,

**Use database:**

Mysql>USE mifos\_gazelle\_acceptance;

**Create the procedures:**

1. Mysql>SOURCE < local path >/GF-CreateData.sql;

2. Mysql>SOURCE < local path >/GF-Customer\_Script.sql;

3. Mysql>SOURCE < local path >/GF-Loan\_Savings\_Account\_Script.sql;

4. Mysql>SOURCE < local path > /GF-LoanOffering\_Script.sql;

5. Mysql>SOURCE < local path > /GF-Meeting\_Script.sql;

6. Mysql>SOURCE < local path > /GF-Office\_Script.sql;

7. Mysql>SOURCE < local path >/GF-Personnel\_Script.sql;

8. Mysql>SOURCE < local path >/GF-Product\_Script.sql;

Procedures can be created using Mysql tools like TOAD for Mysql

After creation of all the procedures,

**Insert data**

Mysql>CALL mifos\_collectionsubmit\_data\_insert ();

**-Parameterize the data in Load Runner to perform the tests.**

**-Run the tests, capture the images while the tests are being executed.**

**Findings:**

Found JasperExceptions, NumberFormatExcetpions when collection sheet is filled and clicked “Preview” button.



Data entered in the entry screen was not proper when it showed in the preview screen



NumberFormatException:





Because of the exceptions, there were missing attendance, partial submits and missing payments.

**Query used to find Partial Submits**:

*select distinct(kc.global\_cust\_num), kc.display\_name,o.display\_name*

*from customer c,customer\_meeting cm,recur\_on\_day rd,recurrence\_detail cmd,*

*account a,loan\_schedule ls,customer Gc, Customer Kc,office o*

*where c.customer\_id=cm.customer\_id*

*and cm.meeting\_id=cmd.meeting\_id*

*and cmd.details\_id=rd.details\_id*

*and c.parent\_customer\_id=Gc.customer\_id*

*and Gc.parent\_customer\_id=Kc.customer\_id*

*and a.customer\_id=c.customer\_id*

*and a.account\_id=ls.account\_id*

*and a.office\_id=o.office\_id*

*and a.office\_id in (3)*

*and ls.action\_Date=curdate()*

**Query used to find Missing Attendance**:

*Select Count(\*),centercust.customer\_id from customer*

*inner join customer groupcust on groupcust.customer\_id = customer.parent\_customer\_id*

*inner join customer centercust on centercust.customer\_id = groupcust.parent\_customer\_id*

*where customer.customer\_id not in (select customer\_id from customer\_Attendance ) and customer.BRANCH\_ID = 3 and customer.Discriminator = 'CLIENT' group by centercust.customer\_id;*

**Query used to find missing payments*:***

***Select Count(\*),centercust.customer\_id from customer***

***inner join customer groupcust on groupcust.customer\_id = customer.parent\_customer\_id***

***inner join customer centercust on centercust.customer\_id = groupcust.parent\_customer\_id***

***where customer.customer\_id in (select customer\_id from loan\_schedule where payment\_Status=0 and installment\_id=1 ) and customer.BRANCH\_ID = 3***

***and customer.Discriminator = 'CLIENT'***

***group by centercust.customer\_id;***

**Query used to find Duplicate Submits*:***

***select lad.account\_id***

***from loan\_activity\_details lad,***

***(Select a.account\_id,a.office\_id as oid***

***from customer c, customer\_meeting cm,recurrence\_detail rd, recur\_on\_day rod,account a***

***Where c.customer\_id = cm.customer\_id***

***and cm.meeting\_id=rd.meeting\_id***

***and rd.details\_id=rod.details\_id***

***and a.customer\_id=c.customer\_id***

***and c.customer\_level\_id=1***

***and c.status\_id=3***

***and rod.days=weekday(curdate())+2***

***and (a.account\_state\_id=5 or (a.account\_state\_id=6 and a.closed\_date=curdate()))) dayacc***

***Where lad.account\_id = dayacc.account\_id***

***and lad.created\_date=curdate()***

***and lad.comments='Payment rcvd.'***

***and lad.balan***

**Fixes:**

Based on the screen shots, found that there are issues with CSE

1. ‘LocalizationConverter’ class.
2. PersistenceException: Could not find attendance for clientId 3 and meeting date Wed Oct 07 00:00:00 GMT+05:30 2009” this message is spurious error message that was in 1.3 tag.

Which have been fixed in the mifos trunk.

**Performance:**

Following information contains the performance of mifos tag 1.3 and trunk versions captured with LoadRunner.

**Test Results for 50 Users, for mifos 1.3 tag with empty database:**

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| **Transaction Name** | **SLA Status** | **Minimum** | **Average** | **Maximum** | **Std. Deviation** | **90 Percent** | **Pass** | **Fail** | **Stop** |
| Action\_Transaction | Show SLA Results | 60.132 | 191.292 | 315.386 | 62.101 | 268.729 | 220 | 80 | 0 |
| Branch\_Select | Show SLA Results | 0.021 | 2.132 | 25.947 | 4.238 | 7.676 | 300 | 0 | 0 |
| Continue Click | Show SLA Results | 4.294 | 40.19 | 96.907 | 22.089 | 74.286 | 300 | 0 | 0 |
| Enter Collection Sheet | Show SLA Results | 0.063 | 3.043 | 26.348 | 4.81 | 9.694 | 300 | 0 | 0 |
| Kendra Select | Show SLA Results | 0.021 | 2.817 | 26.14 | 5.27 | 10.479 | 300 | 0 | 0 |
| Loan Officer Select | Show SLA Results | 0.028 | 3.048 | 28.431 | 6.083 | 10.651 | 300 | 0 | 0 |
| Login | Show SLA Results | 4.064 | 5.396 | 7.12 | 0.565 | 5.818 | 50 | 0 | 0 |
| Logout | Show SLA Results | 11.024 | 11.5 | 16.497 | 0.961 | 12.473 | 50 | 0 | 0 |
| Preview\_Click | Show SLA Results | 0.064 | 3.117 | 24.246 | 5.018 | 10.55 | 258 | 42 | 0 |
| **Submit\_Click** | **Show SLA Results** | **6.767** | **104.121** | **190.833** | **40.62** | **156.72** | **220** | **38** | **0** |
| vuser\_end\_Transaction | Show SLA Results | 11.024 | 11.5 | 16.497 | 0.961 | 12.473 | 50 | 0 | 0 |
| vuser\_init\_Transaction | Show SLA Results | 10.219 | 11.006 | 12.781 | 0.457 | 11.452 | 50 | 0 | 0 |
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Found all the issues except duplicate submits for the above test.

**Test Results for 50 Users, for mifos trunk with empty database:**

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| **Transaction Name** | **SLA Status** | **Minimum** | **Average** | **Maximum** | **Std. Deviation** | **90 Percent** | **Pass** | **Fail** | **Stop** |
| Action\_Transaction | Show SLA Results | 31.326 | 70.933 | 122.27 | 17.405 | 94.145 | 300 | 0 | 0 |
| Branch\_Select | Show SLA Results | 0.023 | 0.645 | 23.748 | 2.385 | 0.727 | 300 | 0 | 0 |
| Continue Click | Show SLA Results | 0.207 | 3.363 | 27.152 | 3.461 | 7.127 | 300 | 0 | 0 |
| Enter Collection Sheet | Show SLA Results | 0.043 | 1.898 | 33.137 | 5.612 | 4.075 | 300 | 0 | 0 |
| Kendra Select | Show SLA Results | 0.021 | 0.717 | 23.48 | 2.984 | 0.776 | 300 | 0 | 0 |
| Loan Officer Select | Show SLA Results | 0.021 | 0.454 | 20.8 | 1.789 | 0.657 | 300 | 0 | 0 |
| Login | Show SLA Results | 1.28 | 2.325 | 3.829 | 0.651 | 3.033 | 50 | 0 | 0 |
| Logout | Show SLA Results | 11.023 | 11.178 | 12.407 | 0.229 | 11.394 | 50 | 0 | 0 |
| Preview\_Click | Show SLA Results | 0.079 | 1.425 | 38.904 | 5.244 | 1.397 | 300 | 0 | 0 |
| **Submit\_Click** | **Show SLA Results** | **4.642** | **36.379** | **72.528** | **12.216** | **52.777** | **300** | **0** | **0** |
| vuser\_end\_Transaction | Show SLA Results | 11.023 | 11.178 | 12.407 | 0.229 | 11.394 | 50 | 0 | 0 |
| vuser\_init\_Transaction | Show SLA Results | 2.124 | 3.474 | 6.231 | 0.962 | 4.572 | 50 | 0 | 0 |
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No errors/issues found for the above test. The response time of the submit\_click transaction is gradually increasing as number of users increases.

**Load Runner tests on trunk, the results are as follows:**

For 20 users submit\_click transaction was approximately 25 seconds

For 30 users submit\_click transaction was approximately 35 seconds

For 50 users submit\_click transaction was approximately 52 seconds