Testing and Verifying bugs for released software.

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TDC
Test Driven
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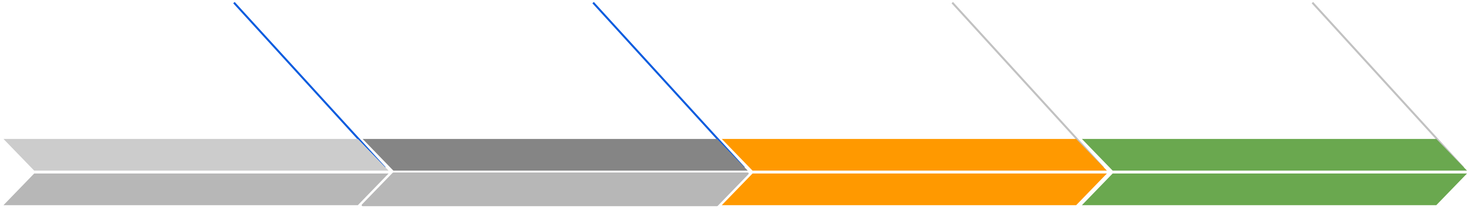
Will discuss ….

- **Bug verification** ! what it is ?
- Verification **approach** to get it in the right direction.
- **Tools** we use
- Verification **documentation**, Why it has great significance in the process?
- **Challenges** of testing and verifying community bug reports.
- How the **QA team** can **reduce bug inflow** for software after release.

Bug Verification ! What it is ?



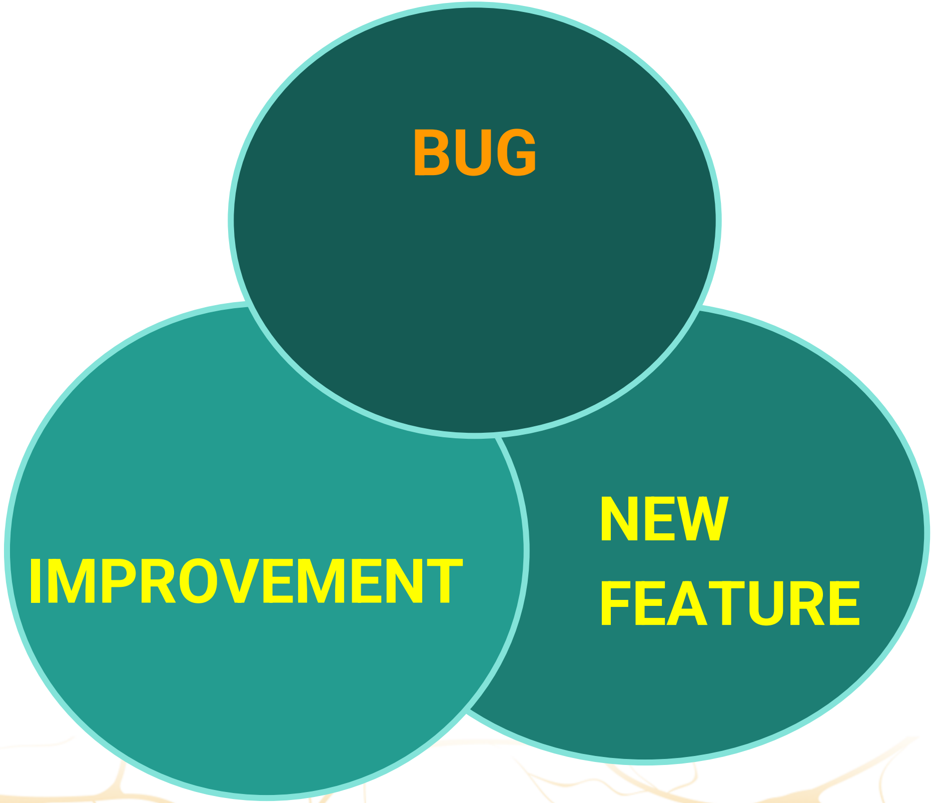
Understand the issue

Gather the details

Reproducible Test Case

Bug documentation

Bug Verification



BUG

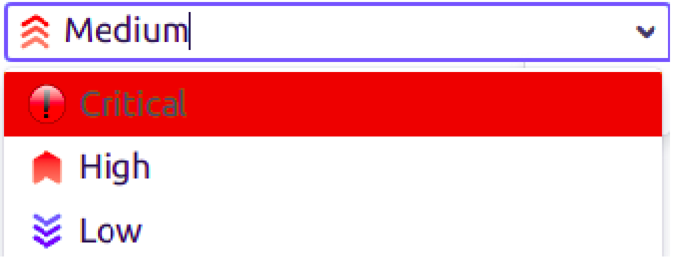
IMPROVEMENT

NEW FEATURE

Bug Verification

- **Customer** VS **Community** bugs

- Handling **Priorities**



User expectation and issue analysis.

- **Information** gathering
- Avoid back and forth **communication**
- Exchanging and Handling **sensitive data** like logs with user data, credentials, IP etc

mysqld got signal 11

When ?

Why ? User opinion ?

Can reproduce on demand ?

If not, Data we need is ….

Verification approach to get it in the right direction.

- Is it a real bug ?
- Behaviour Universal or environment specific
- Is it product issue or dependent components
    - Example: Network, Storage,OS bug and other incorrect configuration for product
- Don’t just say “NoT a Bug”

Tools: Database test automation

MySQL Test Framework (MTR)

- Test suite for the MySQL server
- Comes with existing test cases
- Useful for regression testing

Example:

```
shell> ./mysql-test-run.pl --force --suite=binlog
```

Tools: Test Setups

MySQL sandbox/dbdeployer

- Standalone
- Replication
- HA Clusters
- Easy to use

```
$ dbdeployer deploy single 8.0.20 --sandbox-home=/home/lalit/ --port 22691
--sandbox-binary=/home/lalit/

Database installed in /home/lalit/msb_8_0_20
run 'dbdeployer usage single' for basic instructions'
. sandbox server started...

$ dbdeployer deploy multiple --nodes=6 8.0.20 --sandbox-home=/home/lalit/
--port 32691 --sandbox-binary=/home/lalit/
```

Tools: Database load testing

sysbanch : Load testing for specific type of load [Read/Write, Read-only,etc]

mysqlslap: Emulate client load for a MySQL server and to report the timing of each stage

Mysql_random_load: Generate random data for a specific table

Tools: Debug

- GDB (Crash)
- Tcpdump (connection issue)
- Valgrind (Memory Leak)
- Perf (CPU performance and profiling)

- Tools awareness matters

Bug Verification documentation

Problems

- Bug ? You can but I don’t see issue
- Rework by different people
- Could lead to wrong fix

Benefits

- Clear understanding for everyone
- More productive
- Verifying fix with initial test report

Challenges verifying community bug reports.

- Deciding Priority
- No response issue
- Information sharing

Possible **Solutions**

- ➢ Analysis affected user base and problem severity
- ➢ Get full details in 1st reply if possible
- ➢ Private sftp for sensitive information sharing

How the QA team can reduce bug inflow for software after release ?

Challenges:

- Completely new product/technology/platform
- New tool use and integration
- Lack of user use case awareness in development

How the QA team can reduce bug inflow for software after release ?

Possible Solutions :

- Have an experience person
- In-house team help
- Research if expertise not inhouse
- Release as Technical Preview if is a new product or module

select *

Thank You

What next ?

Let's explore this topic further with your use cases and experiences….