Witness build guidelines

Version 1.1.1

Queensland
Government

For further information, please contact the Office of Liquor and Gaming Regulation on 13 QGOV (13 74 68) or visit www.business.qld.gov.au/industry/liquor-gaming

1 Contents

2   Introduction

Policy

For evaluations of gaming equipment where source code is required, it is typical to confirm that the source code reconciles with the submitted object code via the building/compilation of the source code.

Preferably the process of building a submission from source is performed at the premises of the tester on a trusted computer, but under some circumstances this is not convenient for the licensee. (E.g. licensing costs.) Accordingly, in these cases, the tester will visit the premises of the licensee in order to carry out the operation of building the source for verification with object code.

This has generally become known as a 'Witness Build' and this term will be used throughout the document.

Witness builds are charged at the software evaluation fee of the tester. Travel/accommodation costs will also be charged.

Licensees should take into account the frequency multiplied by the cost of witness builds in comparison to the cost of providing another development environment before deciding to propose a witness build.

In high risk environments, witness builds may not be an option. This is at the discretion of the regulator.

Purpose

The purpose of this document is to:

- Advise the industry of OLGR's guidelines for a Witness Build.
- Ensure requirements are consistently applied.
- Achieve an equitable standard of integrity with respect to witness builds with respect to risk.

Scope

This document is of most interest to test facilities and Licensees who submit gaming equipment for evaluation/approval under a respective Queensland gaming Act.

Prerequisites

This document assumes the reader has an IT background with previous experience in building software.

3 Definitions / Abbreviations

Development Environment

Refers to the necessary compiler software and tools needed in order to build/compile the source code and verify it with the submitted object code.

OS   Operating System

4   Witness Build Guidelines

4.1   Pre-Build Preparation

Licensees seeking gaming equipment approval under various gaming Acts should be mindful of the requirement pertaining to the verification of source code with object code and therefore at the very early product stages, utilise a development environment that facilitates:

1. Repeatable and verifiable builds
2. The ability for the development environment to be authenticated and trusted with respect to associated risk of the target gaming equipment in operation.

The procedure for the witness build must be agreed upon by the regulator (or other delegated authority) to ensure that it contains enough security/integrity to offset risk.

Initially, the storage media on the computer used for the Witness build at the licensee's premises should be erased (no OS installed) and the computer should not be on a network. .

4.2   Build Procedure Guidelines

The OS and development environment should be installed from media for which its authenticity has been verified. E.g. Windows uses disks with holograms which can be verified on their website. In other cases (such as the development environment) the installation media can be hashed and verified on the website of the product provider. The same applies to the necessary patches needed of the OS and development environment. To save time, as much of the required software and patches as possible should be downloaded and submitted prior to the build day.

The source code, build scripts etc should be loaded onto the development environment for building/compilation from the source media that was submitted to the tester. This ensures that:

1. The submission is complete and able to be completely built from the submission material and,
2. It saves having to do hashing or comparisons of the source code.

Anything else that has to be added should also be authenticated before use.

The build PC should be locked/secured by the tester if it is to be left unattended by the tester/s at any time during the witness build. E.g. techniques are: removing the hard drive, sealing the build PC and locking the screen within the booted OS (provided the tester is the only user with admin rights), etc.

After the build has completed, the object code should be securely reconciled against the object code on the previously submitted submission material. E.g. direct comparison or via the use of a secure hashing algorithm.

Witness Build Checklist v1.0 (Template*)

(*This checklist template is a guide only and will require customisation for each witness build)

Product Name:

Product Version:

Location: Date:

Build Environment OS and Version:
Development Environment and Version:
Unattended build PC was secured via the following method:

Pass

OS installation media authenticated .... ☐
Install OS .... ☐
OS patches authenticated .... ☐
Patch OS as required .... ☐

Development environment installation media authenticated .... ☐
Install development environment.. ☐
Development environment patches authenticated... ☐
Patch development environment.. ☐

Other tools installation media authenticated (state versions below) .... ☐
Install other tools... ☐

Build source code .... ☐
Successfully verify with submitted object code .... ☐

Attach the approved witness build procedure that was followed....................................... ☐
(changes shown and initialled if there where deviations from expected procedure)
Attach and sign any supplementary material created during procedure (Eg Hashes) .... ☐

Anything additional undertaken not mentioned in the witness build procedure should be summarised here:

Representative/s for Licensee (please sign and date)

Representative/s for Testers/Witnesses (please sign and date)

5   Revision History

Version	Changes	QIR	Who	Release Date	Incept Date
1.0	Initial Release		RL	9/9/2009	Immediate
1.1	Updated to DEEDI template		NW	20/8/2010	Immediate
1.1.1	Updated to JAG template		JG	31/5/2016	Immediate