

IT-112 System Verifications & Authentication



Information Technology Division

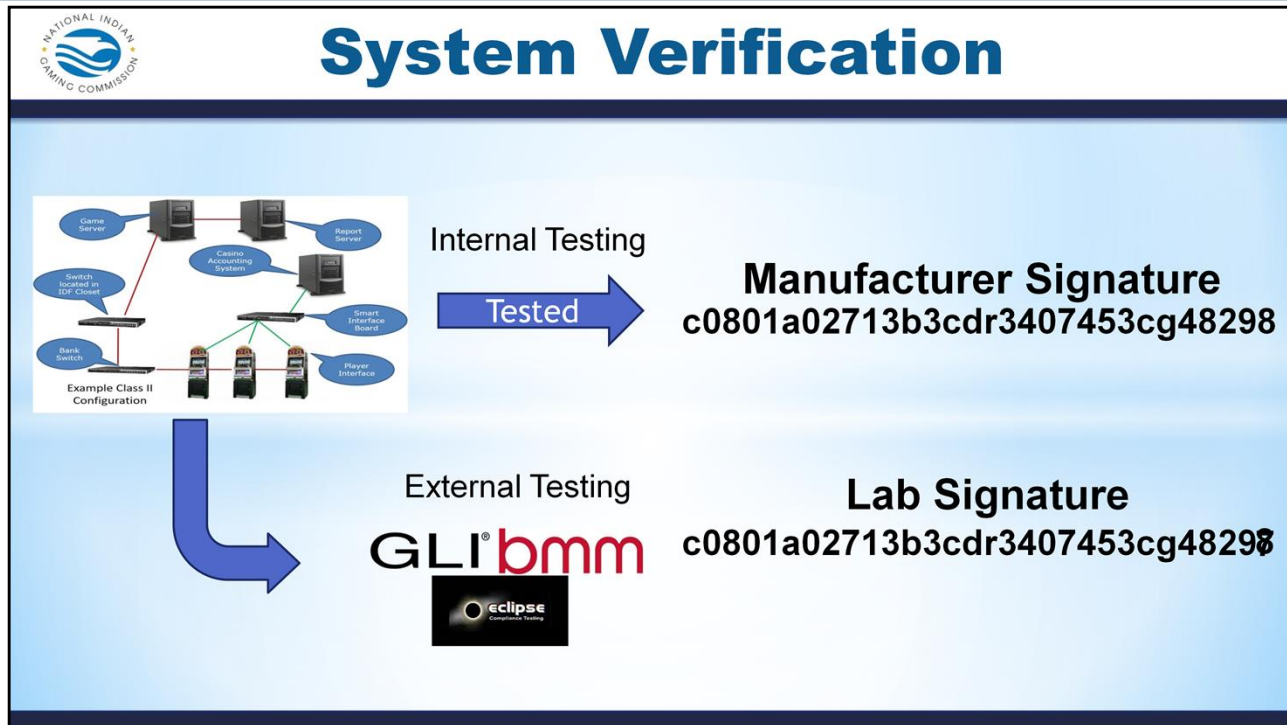
KEY POINTS



Course Overview

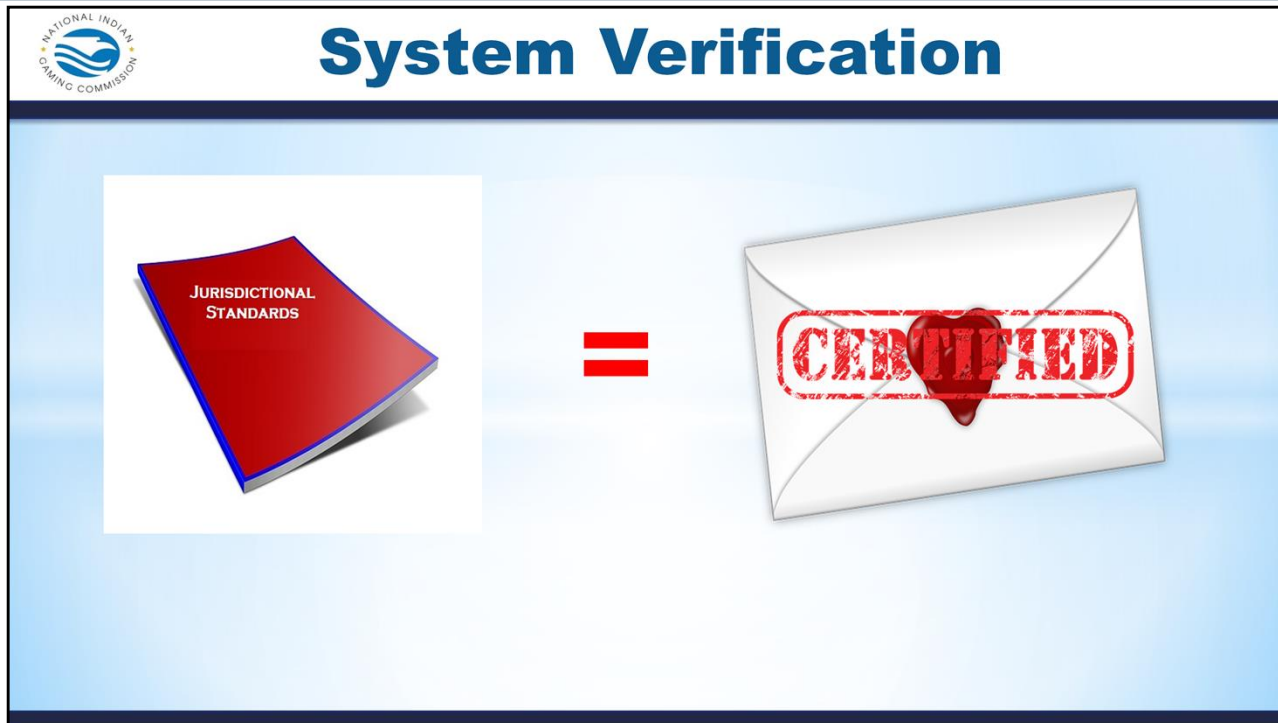


KEY POINTS



KEY POINTS

- The system or game is tested and assigned a signature before and after the testing is done by your ITL.
- There may be 2-3 or more iterations of a single piece of software from a single submission.
- Insures the software tested at the ITL is what is present on the floor of my operation.
- Consists of verifying the controlled files found in system will match those that have been through the Independent Testing Lab



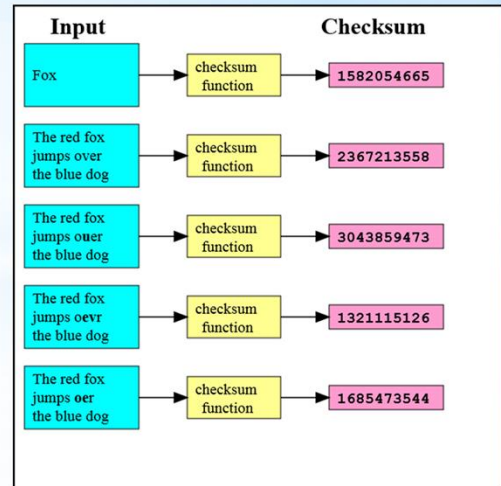
KEY POINTS

- Comply with your jurisdictional standards
- Using the tools to create the original signature that is present on the Certification Letter from the ITL
- The signature should match the Certification letter from the ITL



System Verification

- SHA-1
- SHA-256
- SHA-512
- MD5
- CRC-16 cyclic redundancy check
- CRC-32 cyclic redundancy check
- Checksum
- GAT



KEY POINTS

A wide variety of checksum algorithms exist each with its own design goals and limitations.



The slide features a light blue background with a white title bar at the top. In the top left corner of the slide area is the National Indian Gaming Commission logo. The title 'System Verification Types' is centered at the top in a large, bold, blue font. In the center of the slide is a dark blue rectangular box containing the text 'GAT' in a large white font, with '(Game Authentication Tool)' in a smaller white font below it.

KEY POINTS

GSA GAT – Newer. Industry standard. Not widely adopted, yet. Allows for remotely verifying EGMs.



System Verification Tools

Verify+ by Kobetron is an application developed by **Gaming Laboratories International, LLC. (GLI)** that will generate various signatures on files, folders, DVD, CD and Compact Flash media.



KEY POINTS



System Verification Tools

GLI® 



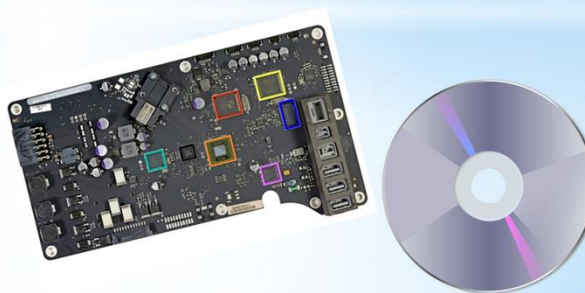
KEY POINTS



System Verification Tools

BMM Signatures

- BMM Signatures was created to provide a tool for the verification of gaming software.



KEY POINTS



KEY POINTS




System Verification Tools

CRC



KEY POINTS

 **System Verification Tools**



The diagram illustrates the process of system verification. It starts with the logos of the tools used: GLI, bmm, and Eclipse Compliance Testing. A red arrow points from a document icon to a CSV file icon, indicating the output of the verification process.

KEY POINTS

IT-112 System Verification and Authentication Participant Guide

NATIONAL INDIAN GAMING COMMISSION

System Verification Output

BMM - Microsoft Excel

Location	File/Folder	Signature	Signature	Total Byte	Elapsed Time
[root]:\Us \DONE	SHA1	7DF2EEA9	898048	00:00.0	
[root]:\Us \DONE	SHA256	1F2E0D40	898048	00:00.1	
[root]:\Us \DONE	SHA512	9558EC29I	898048	00:00.1	
[root]:\Us \DONE	MD5	764AAAEF	898048	00:00.0	
[root]:\Us \DONE	CRC16	CF86	898048	00:00.0	
[root]:\Us \DONE	HMACSHA0A18F432I	898048	00:00.0		
[root]:\Us \DONE	CRC32	4B3BD33A	898048	00:00.0	
[root]:\Us \DONE	CRC32	4B3BD33A	898048	00:00.0	
[root]:\Us \DONE	HMACSHA0A18F432I	898048	00:00.1		
[root]:\Us \DONE	HMACSHA0A18F432I	898048	00:00.0		

Ready | BMM | 11:30 AM 9/23/2015

KEY POINTS



Questions

Tim Cotton

IT Auditor
timothy_cotton@nigc.gov

Jeran Cox

IT Auditor
jeran_cox@nigc.gov

Michael Curry

IT Auditor
michael_curry@nigc.gov

Sean Mason

IT Auditor
sean_mason@nigc.gov

Travis Waldo

Director, IT
travis_waldo@nigc.gov

KEY POINTS



Course Evaluation

- Provide an honest assessment of your experience
- Written suggestions and comments are greatly appreciated and allow us to improve your experience



KEY POINTS

IT-112 System Verification and Authentication Participant Guide

Course Eval IT-111 System Verification
When survey is active, respond at [PollEv.com/nigc](https://www.poll Everywhere.com/nigc)

Start the presentation to activate live content
If you see this message in presentation mode, install the add-in or get help at [PollEv.com/app](https://www.poll Everywhere.com/app)
0 surveys underway

KEY POINTS

Poll Title: Course Eval IT-111 System Verification

<https://www.poll Everywhere.com/surveys/j0KEUu0ea>