

MISSOURI GAMING COMMISSION
MINIMUM INTERNAL CONTROL STANDARDS
CHAPTER V – SERVER-SUPPORTED GAME SYSTEMS

CONTENTS

<u>Section</u>	<u>Page</u>
§ 1. Definition	V-2
§ 2. General	V-2
§ 3. Criteria for Electronic Gaming Devices	V-4

Note: Sections 313.800 through 313.850, RSMo, et seq., and Title 11, Division 45 of the Code of State Regulations establish standards to which Class B Licensees must comply. Class B Licensees should review these statutes and rules to ensure their ICS include compliance with the requirements set forth. (June 30, 2011)

**MINIMUM INTERNAL CONTROL STANDARDS -
CHAPTER V – SERVER-SUPPORTED GAME SYSTEMS -**

§ 1 Definition

- 1.01 A Server-Supported Game System (SSGS) is the combination of an on-site Central Server, Player Terminals, and all Interface Elements (any device or piece of equipment that communicates with or through which data is transmitted to the system) that function collectively for the purpose of downloading or communicating Player Terminal Game Content from the Central Server to the Player Terminal(s), which may include:
- (A) The Player Terminal Control Program; and/or
 - (B) Other Game Content that is generated by the Central Server and downloaded or communicated to the Player Terminal for the operation of the game.

§ 2 General

- 2.01 Server-Supported Game Systems shall meet the applicable Gaming Laboratory International (GLI) technical standards (or their equivalent as approved by the Missouri Gaming Commission (MGC)) and Missouri statutes, regulations, and Minimum Internal Control Standards.
- 2.02 All aspects of a Server-Supported Game System, including all hardware and software utilized therein, shall be subject to testing by the MGC or an independent testing laboratory designated by the MGC, and review and approval by the MGC prior to the implementation of the system by a Class B Licensee and following implementation, prior to any changes thereto, or at any other time the MGC deems appropriate, the cost for which shall be borne by the Class B Licensee.
- 2.03 The Class B Licensee shall ensure that the SSGS in use at the Class B Licensee's facility performs the following minimum functions to control logical access to the system:
- (A) Utilizes encryption or password protection or equivalent security for files and directories containing critical or sensitive data. If encryption is not used, the Class B Licensee shall restrict users from viewing the contents of such files and directories, which at a minimum shall provide for the following:
 - (1) The effective segregation of duties and responsibilities with regard to the system in the MIS department; and
 - (2) The automatic monitoring and recording by the system of access by any person to such files and directories; and
 - (B) Ensures all data transmitted to or from the SSGS utilizes an encryption algorithm with a minimum of a 128-bit key size.

Note: Sections 313.800 through 313.850, RSMo, et seq., and Title 11, Division 45 of the Code of State Regulations establish standards to which Class B Licensees must comply. Class B Licensees should review these statutes and rules to ensure their ICS include compliance with the requirements set forth. (June 30, 2011)

**MINIMUM INTERNAL CONTROL STANDARDS -
CHAPTER V – SERVER-SUPPORTED GAME SYSTEMS -**

- 2.04 The Class B Licensee shall ensure the SSGS in use at the licensee’s facility performs the following minimum functions to control system operations:
- (A) Validates the identity of those Player Terminals and devices to which it transmits and from which transmissions are received;
 - (B) Ensures that all data sent through a transmission is completely and accurately received; and
 - (C) Detects the presence of corrupt or lost data packets and, as necessary, rejects the transmission.
- 2.05 The Class B Licensee shall ensure the MGC is provided a Server-Supported Game System manual that includes:
- (A) Documentation of the system design and layout both in narrative and diagrammatic formats;
 - (B) Copies of all reports used to monitor security activity and system error codes;
 - (C) Procedures for assigning Player Terminal asset numbers and IP addresses;
 - (D) Procedures for issuance, modification, and termination of system user accounts;
 - (E) Constraints used to configure and maintain user passwords;
 - (F) Procedures for restricting special rights and privileges such as “administrator” and override capabilities;
 - (G) The duties and responsibilities of the MIS, Internal Audit, Slot and Accounting departments, respectively, and the level of access for each position with regard to the system;
 - (H) Identification of all software files and directories, the location and a description of each, and the reports generated from such files;
 - (I) A description of physical controls on all critical hardware such as locks and surveillance, including the location and security of each piece of equipment as approved by the MGC;
 - (J) Logs used to document and maintain the details of any hardware and software modifications upon implementation; and
 - (K) Procedures for reviewing the system’s operation and the adequacy and effectiveness of policies and procedures.
- 2.06 The Central Server shall immediately notify the Class B Licensee upon the occurrence of any communication failure. At least once each gaming day, the server shall execute a self-monitoring process on each of its critical Interface Elements and notify the Class B Licensee of any communication failure.
- 2.07 All critical components of the Server-Supported Game System must be verifiable utilizing an external third-party methodology approved by the MGC and which may, as determined by the MGC, have security seals attached thereto.

Note: Sections 313.800 through 313.850, RSMo, et seq., and Title 11, Division 45 of the Code of State Regulations establish standards to which Class B Licensees must comply. Class B Licensees should review these statutes and rules to ensure their ICS include compliance with the requirements set forth. (June 30, 2011)

**MINIMUM INTERNAL CONTROL STANDARDS -
CHAPTER V – SERVER-SUPPORTED GAME SYSTEMS -**

- 2.08 The Central Server must employ a verification mechanism that automatically, on a time interval approved by the MGC and on demand, authenticates all critical files including, but not limited to, executables, data and operating system files and any other file residing on the server which may influence the operation and calculation of game play, game display, game result determination, game accounting, revenue, or security. The verification mechanism must provide at least 128 bits of resolution, must reside on and load from unalterable media, and a report shall be available that details the verification results for each control program component on the server.
- 2.09 The Game Program Library shall only be written to using a secure methodology approved by the MGC, access to which is controlled by the MGC in a manner acceptable to the MGC. The Class B Licensee and the licensee authorized to provide the Server-Supported Game System in use at the Class B Licensee’s gaming establishment may access the Game Program Library, providing this access does not permit altering of files within, adding to, or amending the Game Program Library, unless specifically approved in writing by the MGC.
- 2.10 All changes made to the Game Program Library must be stored in an unalterable audit log, which shall include:
- (A) Time and Date of the access or event;
 - (B) Log-in name;
 - (C) ID Numbers of Game Programs added, changed, or deleted;
 - (D) Player Terminal(s) to which the Game Program was downloaded and the program replaced; and
 - (E) Player Terminal configuration setting changes (from & to).
- 2.11 The SSGS server shall utilize adequate virus protection mechanisms to preserve the integrity and operability of the system. The virus protection mechanism(s) shall be updated at least once every 30 days to ensure the SSGS is protected against known threats, unless otherwise approved in writing by the MGC.

§ 3 - Criteria for Electronic Gaming Devices

- 3.01 Remote access to a Player Terminal may only be conducted with the SSGS server.
- 3.02 Player Terminals, unless otherwise approved in writing by the MGC, shall function independently of the Central Server upon completion of a successful Control Program download.

Note: Sections 313.800 through 313.850, RSMo, et seq., and Title 11, Division 45 of the Code of State Regulations establish standards to which Class B Licensees must comply. Class B Licensees should review these statutes and rules to ensure their ICS include compliance with the requirements set forth. (June 30, 2011)

MINIMUM INTERNAL CONTROL STANDARDS
CHAPTER V – SERVER-SUPPORTED GAME SYSTEMS

- 3.03 The Player Terminal must provide a mechanism by which all Critical Program Storage Media can be verified utilizing an external third-party methodology approved by the MGC and which may, as determined by the MGC, have security seals attached thereto.
- 3.04 Each Player Terminal must upon power-up, following any download, and on an on- demand basis utilize a verification process acceptable to the MGC to authenticate all critical files including, but not limited to, executables, data and operating system files and any other file residing on the terminal which may influence the operation and calculation of game play, game display, game result determination, game accounting, revenue, or security.
- 3.05 Player Terminals shall employ a third-party industry standard secure hashing algorithm (e.g., MD-5 or SHA-1) that utilizes a key or seed acceptable to and approved by the MGC. Any breach to the security of the methodology approved shall result in its continued approval being reevaluated by the MGC.
- 3.06 In the event the active operating software fails authentication, the Player Terminal shall immediately enter an Error Condition with the appropriate audible and visual indicator, and record the details, including the time and date of the error in a log. This error shall require operator intervention. The terminal shall display specific error information and shall not clear until the file authenticates properly following the operator intervention.
- 3.07 Player terminals shall be in an idle state (no activity, no credits, no door open, and no error condition) four minutes prior to and upon the commencement of any download to the terminal's main processor. During the download process the terminal must be disabled and unplayable and shall display upon its screen a message approved by the MGC indicating the terminal's status.
- 3.08 Game content may be downloaded to player terminals without a four minute idle state, if stored or queued in a secondary or isolated area of the terminal's memory in a manner that adequately insulates the download from the terminal's active operating software and precludes any affect on the terminal's operation.
- 3.09 Upon any download to the control program of a player terminal from the central server, the accounting and security events data stored within the player terminal's non-volatile memory shall be retained and stored in a manner approved by the MGC. The data to be retained and stored shall include at a minimum:
- (A) Error Logs;
 - (B) All meters (amount-in, amount-out, amount dropped, WAT, CEP, NCEP, number of games played, and jackpot amount paid, etc.);

Note: Sections 313.800 through 313.850, RSMo, et seq., and Title 11, Division 45 of the Code of State Regulations establish standards to which Class B Licensees must comply. Class B Licensees should review these statutes and rules to ensure their ICS include compliance with the requirements set forth. (June 30, 2011)

**MINIMUM INTERNAL CONTROL STANDARDS
CHAPTER V – SERVER-SUPPORTED GAME SYSTEMS**

- (C) Bill Recall;
 - (D) Cashless Transaction Logs; and
 - (E) Audit Logs of Player Terminal Game Program Transactions.
- 3.10 Player terminal control programs may employ multiple pay tables and/or denominations that can be configured via the central server, provided:
- (A) All pay tables meet the required theoretical payback percentage and odds requirements set forth in 11 CSR 45-5.190(1);
 - (B) The player terminal maintains the Amounts Bet and Amounts Won meters within critical memory for each of the pay tables available;
 - (C) The Player Terminal maintains the Master Accounting meters in dollars and cents or in pennies, or other accounting unit approved by the MGC;
 - (D) The game is in an Idle State when an update occurs; and
 - (E) Any change will not cause inaccurate crediting or payment.
- 3.11 The process of clearing random access memory (RAM) on a Player Terminal via the Central Server must utilize a secure methodology approved by the MGC, access to which is controlled by the MGC.

Note: Sections 313.800 through 313.850, RSMo, et seq., and Title 11, Division 45 of the Code of State Regulations establish standards to which Class B Licensees must comply. Class B Licensees should review these statutes and rules to ensure their ICS include compliance with the requirements set forth. (June 30, 2011)