

Office of Liquor and Gaming Regulation

Data Requirements for QCOM3 Machines

Version 1.1





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Introduction

This document acts as an addendum to the existing OLGR requirements document titled "Data Requirements for Monitored EGMs". This document defines the data that is to be transferred between the Licensed Provider's Systems and this Office and between this Office and Licensed Providers in relation to QCOM 3 gaming machines.

Definitions

CSV – Comma Separated Value is a non-standard format utilising commas as delimiters for fields of tabular data stored in plain text. The CSV files in this document refers to the files stipulated in the Data Requirements for Monitored EGMs v2.51.

JSON – Javascript Object Notation is an open standard format that uses human-readable text to transmit data objects consisting of attribute-value pairs.

QCOM 3 Content Auditing – Refer QCOM3 Protocol document - section 26: "Content Auditing". QCOM 3 content auditing relates to what was called Program Hash Request/Hash responses in QCOM v1.

Conventions

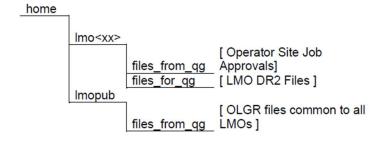
Filename – Refer section 5 Entity Relationships in the OLGR Data Requirements for Monitored EGMs document. The naming convention for a given file:

e.g. qgaaaaaa-game-content-hash-list.json

aaaaaa is a zero padded, 6 digit sequential number for this file (increments each time the file is sent, starting from 000001).

Location – Refer section 4.1 Data Transfer in the OLGR Data Requirements for Monitored EGMs document. In summary data is to be transferred between the Provider & OLGR is specific formats. The location is on a SFTP server with a common directory, for example:

e.g. Imopub / files_from_qg



Frequency – As per section 4.1.1 Data Transferred from OLGR in the OLGR Data Requirements for Monitored EGMs document.

Design Requirements

The data requirements provided to operators must be reflective of the QCOM3 data schemas used in QCOM3 Content Auditing.

The new data schemas must eliminate limitations of the previous designated list of approved software tied with an "Approval Number". These previous data files were too strict with respect to a single approval number. For example: A single Approval Number corresponded to a single configuration of a game software. This brought issues where multiple software configurations (different BIOS and/or Base combination) would each require an additional approval number.

The proposed changes in this version of game data files will instead provide a list of "approved software" per manufacturer. Removing the reliant on approving multiple versions (configurations) of the same software – simply approving "game software" for a specific manufacturer.

The structure of the game details in the new data files should follow QCOM3 games with respect to content auditing. QCOM 3 promotes a categorised approach to content auditing:

- Common content.
- · Game content and
- Peripheral content.

This document describes both Common and Game content. Peripheral content auditing (e.g. Coin/Note Acceptors firmware) is outside the scope of this document.

Upgrade from using CSV data format to a more extensible format. (The json data format was chosen.)

Data Schemas

QCOM3 game content hash list

These details are controlled by the Technical Unit, OLGR, and contain up to one 1 month's of program hashes per **approved** software component. For QCOM3 Gaming Machines, SHA256 will be used as its algorithm. The seeds used for the calculation of program hashes is the _seed field for each day included in this file.

Filename: qgaaaaaa-game-content-hash-list.json Location: lmopub / files_from_qg (refer section 0)

Frequency: On update (1 file)

Record Info: Appendix A – QCOM3 game content hash list schema

Example of QCOM3 game content hash list

The following is an example of a single day (2025-03-31) of a *qgaaaaaa-game-content-hash-list.json* data structure for a QCOM3 game content hash list for two manufacturers (manufacturer = Manufacturer A & Manufacturer B) only. Additional days will be included in the list as per the schema.

Note:

[

- The 'Mega Moon Gold' game is an example of how a player selectable denomination game will appear. Note the identical hashes for each denomination of the game (as internally in the EGM, PSD games are a single game).
- Manufacturer B is basically QSIM 3's default example games being a legacy multi-game machine
- Many games will have the same hash result for cd & media.

```
"_alg": "sha256",
"_date": "2025-03-31",
 seed": "88cb095743a2334c510f126e6fc8d2e2e47e97c97adca43396791c3da2939f22",
'game-content": [
    "manufacturer": "Manufacturer A",
    "games": [
        "gameuid": "Mega Moon Gold 100c;1.01;2023",
"gameid": "MMGfaab",
        "gcccm": true,
         "gccgidlist": ["MMGfaaa", "MMGfaa7", "MMGfaa8", "MMGfaa9"],
         "gvn": "0xfaab<sup>-</sup>,
           "cd": "61f28c05b5721794c88fd613b6822f11bdff25eda4fce7f65146b716b073a533",
           "md": "61f28c05b5721794c88fd613b6822f11bdff25eda4fce7f65146b716b073a533"
      },
        "gameuid": "Mega Moon Gold 10c;1.01;2023",
         "gameid": "MMGfaaa",
         "gcccm": true,
        "gccgidlist": ["MMGfaaa", "MMGfaa7", "MMGfaa8", "MMGfaa9"],
         "gvn": "0xfaaa<sup>"</sup>,
         "hashes": {
          "cd": "61f28c05b5721794c88fd613b6822f11bdff25eda4fce7f65146b716b073a533",
          "md": "61f28c05b5721794c88fd613b6822f11bdff25eda4fce7f65146b716b073a533"
      },
         "gameuid": "Mega Moon Gold 1c;1.01;2023",
         "gameid": "MMGfaa7",
         "gcccm": true,
```

```
"gccgidlist": ["MMGfaaa", "MMGfaa7", "MMGfaa8", "MMGfaa9"],
             "gvn": "0xfaa7<sup>"</sup>,
             "hashes": {
               "cd": "61f28c05b5721794c88fd613b6822f11bdff25eda4fce7f65146b716b073a533",
               "md": "61f28c05b5721794c88fd613b6822f11bdff25eda4fce7f65146b716b073a533"
           },
             "gameuid": "Mega Moon Gold 2c;1.01;2023",
"gameid": "MMGfaa8",
             "gcccm": true,
             "gccgidlist": ["MMGfaaa", "MMGfaa7", "MMGfaa8", "MMGfaa9"],
             "gvn": "0xfaa8",
             "hashes": {
    "cd": "61f28c05b5721794c88fd613b6822f11bdff25eda4fce7f65146b716b073a533",
               "md": "61f28c05b5721794c88fd613b6822f11bdff25eda4fce7f65146b716b073a533"
             }
           },
             "gameuid": "Mega Moon Gold 5c;1.01;2023",
"gameid": "MMGfaa9",
             "gcccm": true,
             "gccgidlist": ["MMGfaaa", "MMGfaa7", "MMGfaa8", "MMGfaa9"],
             "gvn": "0xfaa9",
             "hashes": {
               "cd": "61f28c05b5721794c88fd613b6822f11bdff25eda4fce7f65146b716b073a533",
                "md": "61f28c05b5721794c88fd613b6822f11bdff25eda4fce7f65146b716b073a533"
          }
        ]
      },
         "manufacturer": "Manufacturer B",
         "games": [
             "gameuid": "Big Bucks;mv01.00.00;2014",
"gameid": "BigBucks",
             "gvn": "0xbb00",
             "hashes": {
               "cd": "3e423198a8f8cc01e2c830b802709e435757012397153f0cb99c0765b36e18a9",
               "md": "be3b08ccd511c9fe826c54154abaf2c8c228065710774ef84399a190931e6292"
           },
             "gameuid": "Dyna Dollars;mv01.00.00;2018",
"gameid": "DynDollars",
             "gvn": "0xdd00",
             "hashes": {
               "cd": "7bc825d5efb4c0420fe7411e3fcd7cc5aae5f9f1d451cc54e8360bbd969a627a",
               "md": "0d6c56d715815867a07a0097cf1c472449c4fb2bdf6ae4b3f88a2e3b77b08cdb"
   }
 }
]
```

QCOM3 platform-component list

These details are controlled by the Technical Unit Section of OLGR and contains a snapshot of the current details about **approved** software components for a specific platform. This file provides information on approved components for each **approved** platform per manufacturer.

The 'component' lists below denote common component uid strings as defined in QCOM 3.

The 'platform' fields are also defined in QCOM 3. (FYI A GMM must update the platform name whenever the total number of component entries changes, or whenever any component uid name part changes.

Filename: qgaaaaaa-platform-component.json
Location: lmopub / files_from_qg (refer section 0)

Frequency: On update

Record Info: Appendix C – QCOM3 platform list schema

Example of QCOM3 platform list file

```
"manufacturer": "Manufacturer A",
  "platform-list": [
      "platform": "Gen12",
       "component": [
         "Logic BIOS; v7.12; 2011; U14",
         "Logic CPLD; v6.00; 2009; U67"
         "Logic OS WindowsXP;v12.01.01;2012",
         "Logic Main APP; v3.01.03; 2011",
         "Logic audit APP; v4.1.23; 2011",
         "IO BIOS; v3.2.1; 2011; U4"
    }
  ]
  "manufacturer": "Manufacturer B",
  "platform-list": [
       "platform": "Mercury Max",
       "component": [
         "Kernel-OS;S3QLQ03A;2015",
         "BIOS main; SBSLV003; 2009",
         "BIOS io; SBAL2105; 2010"
  ]
}
```

QCOM3 common content hash list

These details are controlled by the Technical Unit Section of OLGR, and contain details about **approved** QCOM3 common-content software. The file contains up to **1** months of program hashes per approved software component. For QCOM3 Gaming Machines, SHA256 will be used as its algorithm. The seeds used for the calculation of program hashes is the seed field for each day included in this file.

Filename: qgaaaaaa-common-content-hash-list.json Location: lmopub / files_from_qg (refer section 0)

Frequency: On update (1 file)

Record Info: Appendix B – QCOM3 common content hash list schema

Example of QCOM3 common content hash list file for one day.

```
[
    {
      "_alg": "sha256";
      "_date": "2025-03-31",
        seed": "88cb095743a2334c510f126e6fc8d2e2e47e97c97adca43396791c3da2939f22",
      "common-content": [
          "manufacturer": "Manufacturer A",
          "component-list": [
              "component": "Logic BIOS; v7.12; 2011"]
              "hash": "6c47fb643bf3537be9fef88690109d3dc19b90132364765b8688346c16a4a41e"
              "component": "Logic CPLD; v6.00; 2009",
              "hash": "e97f23390299b4fa531a58d23174e15d4ea5c356f712872939f18c383957175d"
              "component": "Logic OS WindowsXP;v12.01.01;2012",
              "hash": "075af7066000bf7bf36df5637845d50789594a1f31888b1d03966f6fa24b8c1c"
              "component": "Logic Main APP; v3.01.03; 2011",
              "hash": "a1bca0109941cc5a2416d6076f1cc25184ded52a096fcc0ac1511b612085078e"
              "component": "Logic audit APP;v4.1.23;2011",
              "hash": "98473b0bc4260e726f7b48c893373715880af41ac3b460e017ecaaf36e0e9a71"
              "component": "IO BIOS; v3.2.1; 2011; U4",
              "hash": "23ca4b584baea29c0b03ddb17455436e8965968e1be417c3db11d40be5522e69"
          ]
        },
          "manufacturer": "Manufacturer B",
          "component-list": [
              "component": "Kernel S3QLQ03A;S3QLQ03A;2015",
              "hash": "085af7066000bf7bf36df5637845d50789594a1f31888b1d03966f6fa24b761c"
              "component": "SLV002 BIOS; SBSLV002; 2007",
              "hash": "23ca4b584baea29c0b03ddb17455436e8965968e1be417c3db11d40be5522e67"
              "component": "SLV003 BIOS; SBSLV003; 2009",
              "hash": "23ca4b584baea29c0b03ddb17455436e8965968e1be417c3db11d40be5522e69"
              "component": "BIOS 2.1;SBAL2105;2010",
```

Updates

Addition of new versions of common content item/s for an existing platform.

The addition of a new common component adds any new item into the platform-list (refer section 0 QCOM3 Platform List). Recall the platform-list is a snapshot and includes only approved common components for each manufacturer's approved platform.

Example:

Manufacturer B now includes a new version of the "Kernel-OS" with a uid of:

"Kernel-OS;S3QLQ03E;2016" for the platform: "Mercury Max". Note that the previous version still be listed until approval for it is removed.

QCOM3 platform-component-list updated

```
"manufacturer": "Manufacturer A",
  "platform-list": [
      "platform": "Gen12",
      "component": [
         "Logic BIOS;v7.12;2011;U14",
        "Logic CPLD;v6.00;2009;U67"
        "Logic OS WindowsXP; v12.01.01; 2012",
        "Logic Main APP; v3.01.03; 2011",
        "Logic audit APP; v4.1.23; 2011",
        "IO BIOS; v3.2.1; 2011; U4"
    }
  ]
  "manufacturer": "Manufacturer B",
  "platform-list": [
      "platform": "Mercury Max",
       .
'component": [
        "Kernel-OS; S3QLQ03E; 2016",
        "Kernel-OS; S3QLQ03A; 2015"
        "BIOS main; SBSLV003; 2009",
        "BIOS io; SBAL2105; 2010"
    }
 ]
}
```

The new component is also added into the common content hash list file, once a hash is generated for each day. The example below is for one (1) day for all common-content hash list, including the new component.

QCOM common-content-hash-list updated

```
"common-content": [
    {
      "manufacturer": "Manufacturer A",
      "component-list": [
          "component": "Logic BIOS;v7.12;2011",
          "hash": "6c47fb643bf3537be9fef88690109d3dc19b90132364765b8688346c16a4a41e"
          "component": "Logic CPLD; v6.00; 2009",
          "hash": "e97f23390299b4fa531a58d23174e15d4ea5c356f712872939f18c383957175d"
          "component": "Logic OS WindowsXP;v12.01.01;2012",
          "hash": "075af7066000bf7bf36df5637845d50789594a1f31888b1d03966f6fa24b8c1c"
          "component": "Logic Main APP;v3.01.03;2011",
          "hash": "a1bca0109941cc5a2416d6076f1cc25184ded52a096fcc0ac1511b612085078e"
          "component": "Logic audit APP;v4.1.23;2011",
          "hash": "98473b0bc4260e726f7b48c893373715880af41ac3b460e017ecaaf36e0e9a71"
          "component": "IO BIOS; v3.2.1; 2011; U4",
          "hash": "23ca4b584baea29c0b03ddb17455436e8965968e1be417c3db11d40be5522e69"
      ]
      "manufacturer": "Manufacturer B",
"component-list": [
          "component": "Kernel-OS; S3QLQ03E; 2016";
          "hash": "075af7066000bf7bf36df5637845d50789594a1f31888b1d03966f6fa24b8c1c"
          "component": "Kernel-OS;S3QLQ03A;2015",
          "hash": "085af7066000bf7bf36df5637845d50789594a1f31888b1d03966f6fa24b761c"
          "component": "BIOS;SBSLV003;2009",
          "hash": "23ca4b584baea29c0b03ddb17455436e8965968e1be417c3db11d40be5522e69"
          "component": "BIOS io; SBAL2105; 2010",
          "hash": "98473b0bc4260e726f7b48c893373715880af41ac3b460e017ecaaf36e0e9a71"
}
}
```

Addition of a new game version

The addition of a new version of a game for a manufacturer will add new *gameuid* entries alongside any old version/s for the game if they are still approved. Related: Any *gameuid* entries that are no longer "Approved" are removed from the table.

Note that when there is a new version of a game, all games that share the same hash will also change. For example: Player Selectable Denomination games.

Example:

Manufacturer A has a new approved version of the Grand Prix Racing version 1.02;2025.

In this example, the old version of the game: "Grand Prix Racing" – is still approved so will still be present in the file.

QCOM game-content-hash-list updated

```
"game-content": [
    "manufacturer": "Manufacturer A",
    "games": [
      {
         "gameuid": "Grand Prix Racing;1.01;2023",
"gameid": "GPR_ccbb",
         "gvn": "0xccbb<sup>"</sup>,
         "hashes": {
    "cd": "fae3d99697a8f6a281fc77bbef4735448f2ccb5669b364a1a10f591cb2d3f699",
           "md": "fae3d99697a8f6a281fc77bbef4735448f2ccb5669b364a1a10f591cb2d3f699"
         }
      },
         "gameuid": "Grand Prix Racing;1.02;2025",
"gameid": "GPR_ccbc",
         "gvn": "0xccbc<sup>"</sup>,
         "hashes": {
           "cd": "c83bd07b82cc3323e9a01a5be778cc61e7d47549d7ab059c22bb75c5b1aed05d",
           "md": "c83bd07b82cc3323e9a01a5be778cc61e7d47549d7ab059c22bb75c5b1aed05d"
      }
    ]
    "manufacturer": "Manufacturer B",
    "games": [
         "gameuid": "Big Bucks;v01.00.00;2014",
"gameid": "BigBucks",
         "gvn": "0xbb00",
         "hashes": {
           "cd": "3e423198a8f8cc01e2c830b802709e435757012397153f0cb99c0765b36e18a9",
           "md": "be3b08ccd511c9fe826c54154abaf2c8c228065710774ef84399a190931e6292"
         "gameuid": "Dyna Dollars;v01.00.00;2018",
"gameid": "DynDollars",
         "gvn": "0xdd00",
         "hashes": {
           "cd": "7bc825d5efb4c0420fe7411e3fcd7cc5aae5f9f1d451cc54e8360bbd969a627a",
```

Appendix A – QCOM3 game content hash list schema

```
{
  "$schema": "https://json-schema.org/draft/2020-12/schema",
  "$id": "urn:olgr:qcom3:datafiles:schema:GChashlist:00001",
"type": "array",
"items": {
    "type": "object",
    ""
     "properties": {
        "_alg": {
          "type": "string",
"description": "The hashing algorithm used."
        "_date": {
    "type": "string",
    "description": "The date of record."
        "_seed": {
   "type": "string",
   "description": "A seed value, for the date."
         game-content": {
          "type": "array",
"items": {
    "type": "object",
             "properties": {
               "manufacturer": {
                 "type": "string",
"description": "Manufacturer name as returned by QCOM3 API IdMfr()."
                "games": {
    "type": "array",
                  "items": {
    "type": "object",
                    "properties": {
                       "gameuid": {
                          "type": "string",
                         "description": "Manufacturer unique identifier for the game."
                         "type": "string",
"description": "QCOM3 unique identifier for the game."
                       "gvn": {
                          "type": "string",
                         "description": "A hexadecimal version number or identifier."
                       "gcccm": {
    "type": "boolean",
                         "description": "Optional flag that indicates whether the game content hashes will be the
same for both cd and media"
                        'gccgidlist": {
                         "type": "array",
"description": "Optional list of gameIDs that share the same game-content",
                         "items": {
   "type": "string"
                         }
                       "hashes": {
    "type": "object",
                         "description": "Hash values for game components.",
                          "properties": {
                             "cd": {
                              "type": "string",
                               "description": "Hash value representing game code/data."
                            "md": {
```

Appendix B – QCOM3 common content hash list schema

```
"$schema": "https://json-schema.org/draft/2020-12/schema",
"$id": "urn:olgr:qcom3:datafiles:schema:CChashlist:00001",
"type": "array",
"items": {
  "type": "object",
  "properties": {
      "_alg": {
    "type": "string",
    "description": "The hashing algorithm used (e.g., sha256)"
    "pattern": "^\\d{4}-\\d{2}-\\d{2}$",
        "description": "Date in the format YYYY-MM-DD"
    "pattern": "^[a-fA-F0-9]+$",
"description": "A hexadecimal seed value."
     },
"common-content": {
    " "annav",
        "type": "array",
"items": {
    "type": "object",
           "properties": {
             "manufacturer": {
               "type": "string"
             "component-list": {
  "type": "array",
  "items": {
     "type": "object",
                  "properties": {
                     "component": {
    "type": "string"
                     "hash": {
   "type": "string",
                       "pattern": "^[a-fA-F0-9]+$",
"description": "A hexadecimal hash value."
                  },
"required": ["component", "hash"]
            }
           "required": ["manufacturer", "component-list"]
    }
  },
"required": ["_alg", "_date", "_seed", "common-content"]
```

Appendix C – QCOM3 platform list schema

```
"$schema": "https://json-schema.org/draft/2020-12/schema"
  "$id": "urn:olgr:qcom3:datafiles:schema:platformlist:00001",
"type": "array",
  "description": "List of platform components by manufacturer",
  "items": {
  "type": "object",
  "description": "Platforms of a manufacturer",
     "properties": {
        "manufacturer": {
         "type": "string",
"description": "Manufacturer name as returned by QCOM3 API IdMfr()"
       },
"platform-list": {
    " 'array",
         "type": "array",
"items": {
    "type": "object",
            "description": "Components of a platform",
            "properties": {
               "platform": {
                 "type": "string",
"description": "The name of the platform (e.g., Gen12)"
              "type": "array",
"items": {
    "type": "string",
                    "description": "A component included in the platform (e.g., Logic BIOS)"
                 "description": "A list of UID components included in the platform"
            "required": ["platform", "component"],
"additionalProperties": false
       }
     "required": ["manufacturer", "platform-list"],
     "additionalProperties": false
}
```

Revision History

Version	Changes	Who	Release Date	Incept Date
1.0 draft	Initial Industry Comment Release	JA	16/12/16	* see below
1.0	Initial Release	JA	24/1/17	* see below
1.1	Full review. Updated schemas and example updates. Moved all schemas to Appendices. Updated to Departmental template	JA	21/5/2025	ASAP

^{*}Unless otherwise specified, the effective date for the implementation of any new or amended minimum requirements outlined in this version of the document shall be 12 months from the date of its release.