Mesa County
Colorado
Voting Systems

Report #3
Election Database and Data Process Analysis

March 19 2022

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EXECUTIVE SUMMARY

This report documents the findings of an examination of tabulated vote databases based on forensic analysis of the drive image of Mesa County, Colorado's Dominion Voting Systems (DVS) Election Management System (EMS) server. The findings in this report were prepared by the authors as consultants to the legal team representing Tina Peters, the Mesa County Clerk and Recorder, pursuant to her statutory duties as Mesa County's Chief Election Official. The findings provide evidence of potentially unauthorized and illegal manipulation of tabulated vote data during the 2020 General Election and 2021 Grand Junction Municipal Election. Because of this evidence, which led to the vote totals for those elections being impossible to verify, the results and integrity of Mesa County's 2020 General Election and the 2021 Grand Junction Municipal Election are in question.

This analysis was performed using the forensic image of the EMS server, which was backed up before Colorado Secretary of State and DVS overwrote the hard drive with D-Suite version 5.13.

Findings and Implications:

1) There was an unauthorized creation of new election databases during early voting in the 2020 General Election on October 21, 2020, followed by the digital reloading of 20,346 ballot records into the new election databases, making the original voter intent recorded from the ballots unknown. In addition, 5,567 ballots in 58 batches did not have their digital records copied to the new database, although the votes from the ballots in those batches were recorded in the Main election database.

2) The same unauthorized creation of new election databases occurred during the 2021 Grand Junction Municipal Election on March 30, 2021, followed by the digital reloading of 2,974 ballot records, making the original voter intent recorded on those ballots unknown. In addition, 4,458 ballots in 46 batches did not have their digital records copied to the

new database, although the votes from the ballots in those batches were recorded in the Main election database.

3) The absence of secure hash algorithm (.sha) files for each digital ballot image makes the authenticity of each digital ballot image, and the ballot-level record for those ballots, impossible to verify.

4) The true total vote count in Mesa County, Colorado cannot be accurately calculated for the 2020 General Election or the 2021 Grand Junction Municipal Election from records in the databases of the county's voting system.

5) There is no function or feature on the EMS server that could be executed inadvertently or deliberately by a local election official that would cause this combination of events to occur, especially within the time frame that these events occurred. Given the complex sequence of data manipulations and deletions necessary to produce the digital evidence described in this report, this combination of events could not have been the result of either deliberate or inadvertent actions by those officials.

6) Dominion's installation of the Trusted Build update on the EMS in May of 2021, as ordered by the Colorado Secretary of State, destroyed all data on the EMS hard drive, including the batch and ballot records that evidenced the creation of new databases and reprocessing of ballot records described in Findings 1 and 2 above. This destruction of all data by the trusted build is described in the "Mesa County, Colorado Voting Systems Forensic Examination and Analysis Report".

7) The fact that such ballot record manipulation has been shown demonstrates a critical security failure with the DVS EMS wherever it is used. The manipulation would not be identifiable to an election official using the voting systems, nor to an observer or judge overseeing the election conduct, much less to citizens with no access to the voting systems; without both cyber and database management system expertise, and

unfettered access to database records and computer log files (many of which were destroyed by the actions of the Secretary of State) from the EMS server, the manipulation would be undetectable.

INTRODUCTION

The use of computerized election management systems is now nearly universal across counties in the United States. While the use of these systems is touted as "efficient", potentially decreasing manpower costs and time to produce election results, it also greatly reduces the transparency of the election process and exposes our elections to extraordinary vulnerability from both inadvertent and deliberate misconfiguration or misuse. Americans' right to free and fair elections is inalienable, but that right is infringed by lack of transparency, and by whatever lies behind that opaque curtain.

Without free and fair elections and the transparency to see it for themselves, without relying on the assertions of any other person or organization, Americans' consent and the legitimacy of our government, at all levels, is in doubt. If Americans' votes are to be recorded and counted by machines, every aspect of those machines' operation, configuration, and data must be recorded, immediately available at no cost or administrative burden to citizens and their independent examiners and confirmed 100% accurate through that independent verification. The absence or shortfall of any of those three imperatives (recorded, available, and independently verified) should immediately cause the public to distrust both the purported result from those machines, and also anyone who insists that they accept those results.

Numerous Federal and State laws attempt to safeguard our voting rights and the integrity of our elections. Title 52 USC provides for much of the Federal guidance in this area, and Colorado Revised Statute (CRS) Title 1 covers most of the Colorado state guidance.

a) 52 U.S. Code § 10307 prohibits any person acting under color of law to "…willfully fail or refuse to tabulate, count, and report…" the vote of any person entitled to vote.

b) 52 U.S. Code § 10308(a) prescribes penalties for any person depriving or attempting to deprive any person of voting rights under Federal statute.

c) 52 U.S. Code § 10308(c) prescribes penalties for conspiring to violate or interfere with secured voting rights.

d) 52 U.S. Code § 20701 mandates the preservation of all election records for 22 months after an election for Federal offices.[1,2]

e) 52 U.S. Code § 20702 prescribes penalties for theft, destruction, concealment, mutilation, or alteration of § 20701 election records.

f) 52 U.S. Code § 21081 requires that voting systems used in elections for Federal office meet the standards of that section, including that the voting system shall produce a record with an audit capacity for such system, and that "the error rate of the voting system in counting ballots…shall comply with the error rate standards established under section 3.2.1 of…" the Federal Election Commission 2002 Voting System Standards (VSS).[3]

g) CRS §1-5-601.5 requires that voting systems and equipment in Colorado meet 2002 VSS standards, at minimum.

h) CRS §1-7-802 requires the preservation of election records for 25 months after elections.

i) CRS §1-13-111 prescribes penalties for destroying, removing, or delaying delivery of election records.

Title 52 clarifies that the "every officer of election" is responsible for maintaining the election records.

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[1] U.S. Department of Justice Publication "Federal Law Constraints on Post-Election 'Audits'," July 28, 2021, states that "The materials covered by Section 301 extend beyond 'papers' to include other 'records.' Jurisdictions must therefore also retain and preserve records created in digital or electronic form."

[2] The Federal Election Commission's 2002 Voting System Standards, the standards of which are mandatory minima for certification of voting systems under Colorado state statute § 1-5-601.5., specifies that a voting system which "…provides access to incomplete election returns and interactive inquiries before the completion of the official count…shall: a. …be designed to provide external access to incomplete election returns only if that access for these purposes is authorized by the statutes and regulations of the using agency…b. Use voting system software and its security environment designed such that data accessible to interactive queries resides in an external file, or database, that is created and maintained by the elections software under the restrictions applying to any other output report, namely, that: 1) The output file or database has no provision for write-access back to the system. 2) Persons whose only authorized access is to the file or database are denied write-access, both to the file or database, and to the system," and states that the Standards are "intended to address…risks to the integrity of a voting system...," including "…Changing calculated vote totals;…" and "Preventing access to vote data, including individual votes and vote totals, to unauthorized individuals;…"

[3] 2002 VSS, para 3.2.1 specifies "d. For central-county systems…: Consolidation of vote selection data from multiple counting devices to generate jurisdiction-wide vote counts, including storage and reporting of the consolidated vote data…a target error rate of no more than one in 10,000,000 ballot positions." A ballot position is each and every choice (e.g. a "bubble" which can be marked or filled-in) on a ballot selectable by a voter to convey their voting choices.

Mesa County, Colorado, uses software and hardware provided by DVS and for the 2020 General Election and the 2021 Grand Junction Municipal Election, specifically used "D-Suite 5.11-CO." The primary voting system EMS server, which contains the raw tabulated vote information used to produce official election reports, makes use of Microsoft SQL Server 2016 databases running on the Microsoft Windows Server 2016 operating system. The forensic image used for the analysis, created on May 23, 2021, has been validated as authentic.

DEFINITION OF TERMS

"Ballot": Mesa County used two-sided paper ballots in the November 2020 General Election and the 2021 Grand Junction Municipal Election. A ballot is a device used to cast votes in an election. In Colorado, ballots are pieces of paper defining races and issues, and reflecting the choices of individual voters from among the options available for each race and issue. A digital image of each paper ballot is created by the DVS D-Suite voting system during the processing of ballots, as described below, and that ballot image is stored on the designated "NAS (Network Attached Storage device)" of the D-Suite voting system.

"Adjudication": A term used to describe the process of determining voter intent from a voter's ballot marks, where ballot markings are ambiguous. According to Dominion's Democracy Suite Use Procedure Manual, adjudication is "the process of examining voted ballots to determine, and, in the judicial sense, adjudicate voter intent". In the DVS D-Suite, adjudication refers to the operation and use of a software component called "EMS Adjudication," and the process of using that software component to manually or automatically interpret voter intent from scanned ballot images, and then to record that interpretation as the record of the vote choices for the affected ballots, in both "result files" and ballot images. Depending on software configuration choices, individual ballot images/result files, entire batches of ballot images/result files, or all ballot images/result files can be subjected to automatic or manual adjudication on the basis of "exceptions" or "outstack conditions" (e.g., "overvotes", where too many choices are marked for a race or issue; or "marginal marks" when ballot choice ovals are not adequately filled in), or by the arbitrary decision of EMS administrators.

"Manual Adjudication": Either all ballot images, or individual ballot images, or those from particular batches or tabulators, in which voter intent for any race or issue is flagged by the EMS Adjudication software module as not being determinable (or as having "exceptions"), are, in theory, sent to "Manual Adjudication" stations where officials called "Adjudicators" view the digital images of the ballots and decide the voter's intent. In this Report we sometimes use the terms "manual adjudication" and "machine adjudication" to clearly distinguish the process of human judging of voter intent from the process of the DVS EMS Adjudication software's determining of voter intent.

"Adjudication database": The DVS D-Suite version used in Mesa County during the November 2020 and April 2021 elections maintains a separate SQL Server database, called an "AdjudicableBallotStore," created by DVS software, for each election which contains records of all batches and ballots scanned into the voting system through ImageCast scanning workstations, and any batch and ballot records manually entered. The database maintains critical information about each batch and ballot, most importantly the ballot Adjudication status and the file location of the ballot image. A batch can have any of the following adjudication statuses in the adjudication system: In-Progress, Read Error, Review, Pending Submission, Submitted, or Submission Error.[4] Throughout, "Adjudication database."

"Main election database": The DVS D-Suite version used in Mesa County during the November 2020 and April 2021 elections maintains a database for each election, called an "ElectionStore" by DVS, which contains information defining an election, including contest, candidate, and ballot definitions as well as aggregated vote information which is used to produce all election reports generated by County officials. Throughout, "Main database."

"Tabulation database": The DVS D-Suite version used in Mesa County during the November 2020 and April 2021 elections maintains a database for each election,

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[4] In-Progress batches have been acquired by the system (e.g. through scanning at an ICC) and have ballots being served to clients (Adjudication); Read Error batches are those which encounter errors while being loaded into the system; Review are batches with all ballot adjudication complete, including batches with no adjudication required; Pending Submission are batches submitted to tally, but which have not yet completed that transmission to the tally process; Submitted are batches which have completed the transmission to the tally process; Submission Error are batches that were submitted to the tally process, but which were unsuccessfully submitted.

called a "TabulationStore" by DVS, which contains the timestamps and ballot counts for each batch of ballots, which duplicates that information contained in the Adjudication database. It contains other tables which are not used by Mesa County's elections. Throughout, "Tabulation database."

"Reprocessed": For the purposes of this Report, the term "reprocessed" means that one or more data records which had already been created, presumably by scanning of paper ballots through an ImageCast Central (ICC) workstation, though also technically possible through manual entry of records, within the databases associated with an election, were loaded into the system *again* to a different database, and that this re-loading was not performed in connection within any documented, authorized election-related operations procedure or function. A comparison with the log files of the respective ICC workstations might reveal whether the reprocessed paper ballots were, in fact, rescanned at the ICC, but many of those log files have been destroyed by the Secretary of State's "Trusted Build."

ANALYSIS

I.   Evidence of ballot record data manipulation – November 2020 General Election

Our analysis shows manipulation, which was neither initiated nor authorized by Mesa County election clerks, of the batches and ballots processed during the first three days of ballot processing in the November 2020 General Election.

The following timeline of events, beginning October 19, 2020, when Mesa County began processing ballots in the General Election, demonstrates this manipulation of ballots.

October 19, 2020 – October 21, 2020, 2:14 PM

On these first three days of ballot counting in Mesa County, up until 2:14 PM on October 21, 2020, 267 batches, consisting of 25,913 ballots, were physically processed (physically scanned on DVS ICC scanners with voters' choices, in the

form of marks on the ballots, scanned and interpreted by software) through three tabulators, internally identified in the Main database as tabulator IDs 4, 7, and 10. Mesa County election clerks reported no unusual activity or errors encountered during the processing of these 267 batches. The Adjudication database used at this time contains records of all batches with a sequential "load order" of 1 to 267, and other tables within it record the information about each ballot, for instance the time it was entered into the database, the tabulator used, and the adjudication status. Those which were selected for Adjudication have the proper status records indicating that the normal adjudication steps occurred.

The initial 10 batches processed through tabulator 10, containing a total of 941 ballots, had timestamps indicating that they were all entered into the database within 47 seconds (total – not 47 seconds per batch, but 47 seconds for 10 batches). (See Appendix A for a list of the batches and their timestamps in the **original** Adjudication database.) The Canon DR-G1130, which according to purchasing documents and Colorado Secretary of State voting equipment inventories is the model of scanners used by Mesa County (see Reference C and the Colorado Secretary of State website[5]), operates at approximately 100 pages per minute (ppm), duplex, meaning that scanning both sides of each ballot would take no less than 0.01 minutes, which is 0.6 seconds, per ballot. 941 ballots at 0.6 seconds per ballot should have taken a minimum of 564 seconds, or slightly under 9 and a half minutes, a significantly longer interval than 47 seconds, which is physically impossible. Mesa County election clerks were unaware of these batch timestamps, or any issue which could explain them.

October 21, 2020 - 2:14 PM

According to the data contained in the EMS SQL Server Database, new Tabulation and Adjudication databases were created on the EMS server at 12:18:50 PM October 01, 2020. These databases initially contained no data records.

Figure 1. "Before" Screenshot of Databases on the Mesa EMS Server

	name
1	2020 Mesa County General-2020-09-05-00-10-20
2	AdjudicableBallotStore_2020_Mesa_County_General_2020-10-01_12:18:50
3	TabulationStore_2020_Mesa_County_General_2020-10-01_12:18:50

One Adjudication database and one Tabulation database were listed, with creation times before the counting in Mesa County began on October 19, 2020.

Figure 2. "After" Screenshot of Databases on Mesa EMS Server

	name
1	2020 Mesa County General-2020-09-05-00-10-20
2	AdjudicableBallotStore_2020_Mesa_County_General_2020-10-21_14:18:51
3	TabulationStore_2020_Mesa_County_General_2020-10-21_14:18:51
4	AdjudicableBallotStore_2020_Mesa_County_General_2020-10-01_12:18:50
5	TabulationStore_2020_Mesa_County_General_2020-10-01_12:18:50

Two Adjudication databases ("AdjudicableBallotStore") and two Tabulation databases ("TabulationStore") are now listed, one set of which had creation times before the date and time ballot scanning and tabulation began in Mesa County on October 19, 2020 and the other set of which the EMS server data indicate were created two and a half days *after* ballot scanning and tabulation began.

It has been observed that a clerk giving the EMS system a command to stop and then restart adjudication in an election again creates new Adjudication and Tabulation databases. Mesa County clerks are very certain that they did not initiate any such action in either the November 2020 or the April 2021 elections. Therefore, it is likely that a procedure internal to the DVS software had to perform a stop and restart of the adjudication services in order to perform the batch and ballot manipulation which occurred later (see below).

There are only a few possibilities which would explain how the database copying process was initiated.

1. **Direct action by Mesa County personnel**

   The client application used by election clerks does give them the ability to stop and restart adjudication, which would create the new databases.

   However, Mesa County personnel are very clear that they did nothing of the sort and explained that they would only do such a thing in an extreme emergency, as the process would have made the production of legally mandated reports very difficult.

2. **Triggered remotely**

   "Report #2, Forensic Examination and Analysis Report" by D. Gould identifies numerous security vulnerabilities in the DVS EMS server. A signal, or external trigger,[6] giving instructions to software inside the EMS server could have been sent to and received through any of the open communication ports, or through the port 80 Web Server port, which has been demonstrated to be open on the server and accepting commands via an application programming interface (API).[7] This signal, along with other information, could have been received via a local network connection (from any device connected to the EMS server's internal network), from a remote network connection (if the EMS server's internal network has been bridged to the external internet), or via an internal cellular modem installed in the EMS server. If the EMS Server was connected to a wireless network, it is feasible that even a cell phone outside of the building, but still within the wireless signal radius, could have been used to trigger the events.

   This option is plausible but infers a degree of external, time-sensitive control over the DVS equipment in use in Mesa County. This control might

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[6] E.g., an "external trigger" most people are familiar with is the function whereby their smartphone's wi-fi connection is turned on in response to detecting the proximity of a saved, pre-approved wi-fi network. The external trigger satisfies the criteria of an internal, saved rule for application behavior, and the application then executes the correlated command or function. We likely don't think of "Do Not Disturb" mode on our smartphones as being similarly controlled by an external trigger, but if our smartphones are configured to "use network time," meaning the time signal transmitted by the cellular carrier network, then our smartphones' "Do Not Disturb" mode isn't turned on at the time we set, per se, but when our cellular carrier tells our phone that the specified time is reached.

[7] An API is a specification for interaction which allows computer applications to communicate with, make requests to, and issue commands to other computer applications. I.e., API enables machine-machine communication, coordination, and command and control, depending on the permissions and allowable exchanges of the specific API specification.

be considered undesirable by the perpetrators responsible for manipulating the election data, because it was a possibility that any unauthorized network connections, whether they be via standard ethernet, wireless network connection, or cellular modem, could have been discovered during the election period.

3. Algorithmically Triggered

A software algorithm[8] running inside the DVS computer systems in Mesa County could have made the decision to perform the new database creations and the selected record manipulation which followed based on preprogrammed criteria related to the election results at the time.

Given that this method requires the least amount of external control and monitoring, this option would seem to be the most likely. The decision to copy the Adjudication and Tabulation databases and re-process the ballot records would be made by software running inside the Dominion EMS (or inside another connected machine running Dominion software) based on unexpected voting patterns.

October 21, 2020, 2:30 PM – 2:34 PM

During this time period, 209 out of the original 267 batches (containing a total of 20,346 ballots) were digitally – not physically – loaded into the new Adjudication and Tabulation databases. Specifically, records for batches with load order 2 through 59 were not reloaded and do not appear in the new Adjudication database in any form. The timestamps of the 209 batch records (load order 1 and load orders 60 through 267) show an impossibly short processing time (approximately 4 seconds each) for these batches to have been physically processed into the newly created Adjudication and Tabulation databases. As described above, because of the minimum scanning time of one

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[8] An "algorithm" is simply a set of rules for logical, sequential consideration of inputs (e.g. a contingent variable state, like "the switch is off" or "the switch is on," or the value of field/memory location "X" is "1" or is "Not 1") to produce a consistent, expected output. In this case, a simple, hypothetical algorithm might have been something like "IF ('numberofbatches'>50) AND ("ElectionProjectActive"=TRUE) AND ("EMSAdminUserLoggedIn"=FALSE) AND (VOTETOTAL,"InternalMachineID:01">VOTETOTAL,"InternalMachineID:02") AND (SYSTIME>20201019) AND (SYSTIME<20201103) THEN COPY:BATCHID030010:BATCHID030059 AND INSERTINTO "adjudicableballotstore," etc.

minute per batch for the Canon DR-G1130 scanner-based tabulator, it is not possible for these 20,346 ballots to have been physically rescanned (i.e., the paper ballots were not reloaded into the scanning hardware), but rather the digital batch and ballot records were directly added to the new Adjudication database. This indicates that the batches could only have been loaded into the newly created Adjudication and Tabulation databases by using software code or a script running within the EMS server. See Appendix B for a list of all batches and their timestamps in the new Adjudication database. See Appendix C for a list of all commands executed prior to and after the database copy, which provides a precise timeline of the effects of those commands on the database copy.

It is important to note that this unauthorized procedure only copied the records of selected batches of ballots, indicating that this was an intentional act.

Below is a screenshot of the beginning of the list of batches recorded in the original Adjudication database, sorted by the order that they were loaded:

Figure 3. List of Batches Recorded in the Original Adjudication Database, Sorted by Load Order

	TabulatorId	BatchId	Category	CvrBatchId	Name	LoadOrder	CreationTime	ModificationTime
1	10	4001	0	1	Tabulator 10 - Batch 4001	1	2020-10-19 12:07:40.850	2020-10-19 12:09:58.200
2	10	4002	0	2	Tabulator 10 - Batch 4002	2	2020-10-19 12:07:44.443	2020-10-20 10:43:25.547
3	10	4003	0	3	Tabulator 10 - Batch 4003	3	2020-10-19 12:07:48.257	2020-10-20 10:43:26.437
4	10	4004	0	4	Tabulator 10 - Batch 4004	4	2020-10-19 12:07:50.960	2020-10-20 10:43:27.423
5	10	4005	0	5	Tabulator 10 - Batch 4005	5	2020-10-19 12:07:53.960	2020-10-20 10:43:28.500
6	10	4006	0	6	Tabulator 10 - Batch 4006	6	2020-10-19 12:08:12.123	2020-10-20 10:43:29.907
7	10	4007	0	7	Tabulator 10 - Batch 4007	7	2020-10-19 12:08:16.137	2020-10-20 10:43:30.953
8	10	4008	0	8	Tabulator 10 - Batch 4008	8	2020-10-19 12:08:20.107	2020-10-20 10:43:32.390
9	10	4009	0	9	Tabulator 10 - Batch 4009	9	2020-10-19 12:08:24.170	2020-10-20 10:43:33.673
10	10	4010	0	10	Tabulator 10 - Batch 4010	10	2020-10-19 12:08:28.233	2020-10-20 10:43:34.703
11	4	2001	0	11	Tabulator 4 - Batch 2001	11	2020-10-19 12:23:35.457	2020-10-20 10:42:50.047
12	4	2002	0	12	Tabulator 4 - Batch 2002	12	2020-10-19 12:30:25.763	2020-10-20 10:42:51.343
13	4	2003	0	13	Tabulator 4 - Batch 2003	13	2020-10-19 12:32:30.137	2020-10-20 10:42:52.470
14	4	2004	0	14	Tabulator 4 - Batch 2004	14	2020-10-19 12:36:19.937	2020-10-20 10:42:52.970
15	4	2005	0	15	Tabulator 4 - Batch 2005	15	2020-10-19 12:43:25.387	2020-10-20 10:42:53.797
16	4	2006	0	16	Tabulator 4 - Batch 2006	16	2020-10-19 13:50:28.623	2020-10-20 10:42:48.593
17	4	2007	0	17	Tabulator 4 - Batch 2007	17	2020-10-19 13:54:18.990	2020-10-20 10:42:54.533
18	4	2008	0	18	Tabulator 4 - Batch 2008	18	2020-10-19 13:58:23.777	2020-10-20 10:42:56.080
19	4	2009	0	19	Tabulator 4 - Batch 2009	19	2020-10-19 14:03:28.847	2020-10-20 10:42:57.673
20	4	2010	0	20	Tabulator 4 - Batch 2010	20	2020-10-19 14:06:33.427	2020-10-20 10:42:58.877
21	4	2011	0	21	Tabulator 4 - Batch 2011	21	2020-10-19 14:10:23.157	2020-10-20 10:42:59.563
22	4	2012	0	22	Tabulator 4 - Batch 2012	22	2020-10-19 14:14:28.253	2020-10-20 10:43:00.360
23	4	2013	0	23	Tabulator 4 - Batch 2013	23	2020-10-19 14:18:33.053	2020-10-20 10:43:00.970
24	4	2014	0	24	Tabulator 4 - Batch 2014	24	2020-10-19 14:22:22.753	2020-10-20 10:43:01.533

Note that there is a sequential order with all load order numbers represented.

Below is a screenshot of the same table in the newly created Adjudication database:

Figure 4. List of Batches in Newly Created Adjudication database

	TabulatorId	BatchId	Category	CvrBatchId	Name	LoadOrder	CreationTime	ModificationTime
1	10	4001	0	1	Tabulator 10 - Batch 4001	1	2020-10-21 14:20:07.257	2020-10-22 10:33:50.593
2	10	4025	0	60	Tabulator 10 - Batch 4025	60	2020-10-21 14:20:26.273	2020-10-22 10:33:51.907
3	4	2036	0	61	Tabulator 4 - Batch 2036	61	2020-10-21 14:20:30.477	2020-10-22 10:31:56.047
4	10	4026	0	62	Tabulator 10 - Batch 4026	62	2020-10-21 14:20:34.430	2020-10-22 10:33:53.330
5	4	2037	0	63	Tabulator 4 - Batch 2037	63	2020-10-21 14:20:39.043	2020-10-22 10:31:56.780
6	10	4027	0	64	Tabulator 10 - Batch 4027	64	2020-10-21 14:20:43.107	2020-10-22 10:33:54.423
7	10	4028	0	65	Tabulator 10 - Batch 4028	65	2020-10-21 14:20:47.370	2020-10-22 10:33:55.703
8	4	2038	0	66	Tabulator 4 - Batch 2038	66	2020-10-21 14:20:51.527	2020-10-22 10:31:57.297
9	4	2039	0	67	Tabulator 4 - Batch 2039	67	2020-10-21 14:20:55.887	2020-10-22 10:31:58.187
10	4	2040	0	68	Tabulator 4 - Batch 2040	68	2020-10-21 14:21:00.060	2020-10-22 10:31:58.860
11	4	2041	0	69	Tabulator 4 - Batch 2041	69	2020-10-21 14:21:04.060	2020-10-22 10:31:59.907
12	10	4029	0	70	Tabulator 10 - Batch 4029	70	2020-10-21 14:21:08.260	2020-10-22 10:33:56.843
13	4	2042	0	71	Tabulator 4 - Batch 2042	71	2020-10-21 14:21:12.747	2020-10-22 10:32:00.593
14	10	4030	0	72	Tabulator 10 - Batch 4030	72	2020-10-21 14:21:16.810	2020-10-22 10:33:57.640
15	4	2043	0	73	Tabulator 4 - Batch 2043	73	2020-10-21 14:21:20.747	2020-10-22 10:32:01.217

While the record of the batch with load order 1 was copied, there is a gap of 58 batches before the second line, which is a record of the batch with load order 60. Batch load order numbers 2 through 59 were *not* copied, effectively deleting them in the new Adjudication database.

The data records describing the batches and the ballots contained within them in the new Adjudication database, specifically the time stamps shown in Appendix B as well as statements by Mesa County election officials, indicate that the paper ballots and batches were not physically re-scanned. Therefore, it appears the process of scanning these ballots was simulated, and the records of the batches and the ballots contained within them were electronically transferred from the original Adjudication database into the new Adjudication database.

For example, below is the sequence of events detailing the processing of batch 4024 (whose ballots and records were *not* copied to the new Adjudication database) and batch 4025 (whose ballots and records were copied to the new Adjudication database). This will illustrate the contrast between copied and uncopied batch and ballot records.

Batch 4024 is recorded in the original Adjudication database as being created at 4:09:34 PM on October 19. It contained 100 ballots and was scanned by tabulator 10. Ten of these ballots from batch 4024 were subsequently manually adjudicated. The manually adjudicated ballot numbers in the batch which were manually adjudicated were 4, 8, 13, 14, 30, 48, 63, 87, 88, and 90. Then, the votes contained on all 100 ballots were recorded in the appropriate tables in the Main database (see Reference A for a list of these tables). When the new Adjudication database was created, no records from Batch 4024 were copied to it, and thus there was no reprocessing or physical rescanning of the ballots. Adjudication history for the 10 ballots which were manually adjudicated was no longer available to the Mesa County clerks, and the original voter intent of these ballots is unknown.

In contrast, Batch 4025 is recorded in the original Adjudication database as being processed at 4:12:23 PM on October 19. This batch contained 99 ballots and was also scanned by tabulator 10. Fourteen of these ballots were subsequently manually adjudicated. The ballot numbers in the batch which were manually adjudicated were 3, 10, 13, 21, 22, 23, 34, 40, 49, 59, 66, 79, 97, and 99. Then, the votes contained on all 99 ballots were recorded in the appropriate tables in the Main database.

After the new Adjudication database was created, a record of Batch 4025 appeared in its tables at 2:20:26 PM on October 21. It is still listed as having 99 ballots and from tabulator 10. In the new Adjudication database, however, only 6 of the batch 4025 ballots (8 less than the first time these batches were entered into the original Adjudication database), were *again* manually adjudicated. The individual ballot numbers were 3, 21, 22, 40, 59, and 66. At this point, the vote records from at least those 6 ballots and possibly all 99 would have been recorded in the appropriate tables in the Main database, replacing the votes which were already in that database from those ballots. Adjudication history for the 14 ballots which were manually adjudicated was no longer available to the Mesa County clerks, and the original voter intent of these ballots is unknown.

The selected batches in the new Adjudication database (batch 1 and batches 60 through 267) appeared in the same serial order that they were loaded into the original Adjudication database, with the same batch numbers, ballot counts, and load order numbers (compare Appendix A and Appendix B).

October 21, 2020, shortly after 2:34 PM

At this point, as reported by Mesa County election officials, some Mesa County adjudication officials began noticing that they were being asked to look at ballots that they had already adjudicated. This is consistent with these ballots and batches being reprocessed in the new Adjudication database. When the new Adjudication database was created, and the selected records described above were copied and reprocessed, there were outstanding ballots from the last set of batches scanned before the event. As some of these ballots were sent to manual adjudication again after the batches were reprocessed, this caused a situation where the same ballot was in the manual adjudication process twice. This caused confusion among the election staff who were assigned the duty of manual adjudication, since when a ballot was adjudicated the second time the master count of adjudicated ballots, which is displayed by the Dominion system and is used by the election clerks to track the overall adjudication process, did not change. This caused the Adjudication officials to assume that there had been an error and, in some cases, to attempt additional manual adjudications of the same ballot with the same unsatisfactory result.

According to several Mesa County election officials, DVS support was contacted at approximately 4PM on the 21st of October, and while the support representative claimed to not have a solution for the issue Mesa County was seeing, that issue ceased soon afterwards. This indicates that DVS may have performed or caused to be performed an operation unknown to Mesa County election officials (and outside of their control) to address this problem which manifested after the unauthorized database manipulation.

Of the 209 batches which were processed twice (batches 1 and 60 through 267), the ballot counts match between the old and new Adjudication database. However, DVS software marked 2,166 ballots for manual adjudication the first time they were processed in the original Adjudication database, but when reprocessed in the new Adjudication database the software marked only 965 ballots for manual adjudication.

The same ballots run through the same hardware and evaluated by the same software should have had the same resulting ballots marked for adjudication, but they did not. This leads to the logical critical conclusion that not all the ballots in the batches processed after the database copy were the same and had the same votes as the ballots in the same batches processed before the database copy. There is no record remaining of the votes originally recorded from the ballots, and therefore there can be no certainty that the votes now recorded are the same. In essence, the chain of custody has been broken for these votes in the database.

The 58 batches which were *not* duplicated in the new Adjudication database must also be seen as suspect, as their chain of custody has also been broken via the fact that no record of them or their adjudication exists in the Adjudication database in use at the end of the election. A clerk wishing to view the adjudication status of a ballot in any of the 58 batches would be unable to do so, as no information about those batches exists in the new Adjudication database.

Thus, all 25,931 ballot records processed before 2:14 PM on October 21, 2020, comprising over 25% of the County's total over the entire election, cannot be verified and should not have been counted.

II. Evidence of Ballot Manipulation – April 2021 Grand Junction Municipal Election

Our analysis shows a nearly identical manipulation of the batches and ballots processed during the first six days of ballot processing in the April 2021 Municipal Election in Grand Junction, Colorado.

The timeline of events beginning March 24, 2021, when Mesa County Election clerks began processing ballots in the 2021 Grand Junction Municipal Election, follows.

March 24, 2021 – March 30, 2021, 2:43 PM

On these first seven days of counting, up until 2:43 PM on March 30, 2021, 88 batches of ballots, consisting of 8,540 ballots, were processed. County Election clerks report no unusual activity or errors encountered *at any time* during the election counting process. The Adjudication database used at this time contains records of all batches with a sequential load order of 1 to 88, and other tables within it record each ballot. Those which were selected for Manual Adjudication (339 in total) have the proper status records indicating the normal adjudication steps occurred.

March 30, 2021, 2:58 PM

According to the data contained in the EMS server, new Adjudication and Tabulation databases were created and registered within the DVS system as the associated databases for the election. As in the circumstance previously described in the early voting period for the November 2020 election, these two databases initially contained no data.

See Appendix D for a list of all commands executed prior to and after the database creation in the April 2021 Municipal Election, which provides a precise timeline of the effects of creating the new databases and copying the batch and ballot records.

It is important to note that this unauthorized procedure copied the records of only selected batches of ballots, indicating that this was an intentional act.

Below is a screenshot of the beginning of the list of batches recorded in the original Adjudication database, sorted by the order that they were loaded:

Figure 5. List of Batches Recorded in the Original Adjudication Database, Sorted by Load Order

TabulatorId	BatchId	Category	CvrBatchId	Name	LoadOrder	CreationTime	ModificationTime
30	3000	0	2	Tabulator 30 - Batch 3000	1	2021-03-24 14:52:58.350	2021-03-29 14:07:57.213
30	3001	0	3	Tabulator 30 - Batch 3001	2	2021-03-24 15:09:05.203	2021-03-29 14:07:57.557
30	3002	0	4	Tabulator 30 - Batch 3002	3	2021-03-24 15:10:53.607	2021-03-29 14:07:57.917
30	3003	0	5	Tabulator 30 - Batch 3003	4	2021-03-24 15:13:57.637	2021-03-29 14:07:58.307
30	3004	0	6	Tabulator 30 - Batch 3004	5	2021-03-24 15:17:01.500	2021-03-29 14:07:58.587
30	3005	0	7	Tabulator 30 - Batch 3005	6	2021-03-24 15:21:03.903	2021-03-29 14:07:58.837
30	3006	0	8	Tabulator 30 - Batch 3006	7	2021-03-24 15:24:05.780	2021-03-29 14:07:56.837
30	3007	0	9	Tabulator 30 - Batch 3007	8	2021-03-24 15:28:55.220	2021-03-29 14:07:59.273
30	3008	0	10	Tabulator 30 - Batch 3008	9	2021-03-24 15:33:59.600	2021-03-29 14:07:59.650
30	3009	0	11	Tabulator 30 - Batch 3009	10	2021-03-24 15:37:03.750	2021-03-29 14:08:00.010
30	3010	0	12	Tabulator 30 - Batch 3010	11	2021-03-29 11:06:24.310	2021-03-29 14:08:00.323
30	3011	0	13	Tabulator 30 - Batch 3011	12	2021-03-29 11:38:04.150	2021-03-29 14:08:00.667
30	3012	0	14	Tabulator 30 - Batch 3012	13	2021-03-29 11:42:52.697	2021-03-29 14:08:01.040
30	3013	0	15	Tabulator 30 - Batch 3013	14	2021-03-29 11:45:56.630	2021-03-29 14:08:01.383
30	3014	0	16	Tabulator 30 - Batch 3014	15	2021-03-29 11:48:00.360	2021-03-29 14:08:01.713
30	3015	0	17	Tabulator 30 - Batch 3015	16	2021-03-29 11:51:03.987	2021-03-29 14:08:02.040
30	3016	0	18	Tabulator 30 - Batch 3016	17	2021-03-29 13:05:52.907	2021-03-29 14:08:02.400
30	3017	0	19	Tabulator 30 - Batch 3017	18	2021-03-29 13:08:56.587	2021-03-29 14:08:02.743
30	3018	0	20	Tabulator 30 - Batch 3018	19	2021-03-29 13:12:00.483	2021-03-29 14:08:03.073
30	3019	0	21	Tabulator 30 - Batch 3019	20	2021-03-29 13:14:04.207	2021-03-29 14:08:03.400
30	3020	0	22	Tabulator 30 - Batch 3020	21	2021-03-29 13:19:53.690	2021-03-29 14:08:03.727
30	3021	0	23	Tabulator 30 - Batch 3021	22	2021-03-29 13:22:57.557	2021-03-29 14:08:04.103
30	3022	0	24	Tabulator 30 - Batch 3022	23	2021-03-29 13:26:01.097	2021-03-29 14:08:04.430
30	3023	0	25	Tabulator 30 - Batch 3023	24	2021-03-29 13:28:04.527	2021-03-29 14:08:04.790
30	3024	0	26	Tabulator 30 - Batch 3024	25	2021-03-29 13:30:53.410	2021-03-29 14:08:05.133
30	3025	0	27	Tabulator 30 - Batch 3025	26	2021-03-29 13:32:57.050	2021-03-29 14:08:05.540
30	3026	0	28	Tabulator 30 - Batch 3026	27	2021-03-29 13:37:01.250	2021-03-29 14:08:05.900
30	3027	0	29	Tabulator 30 - Batch 3027	28	2021-03-29 13:40:05.090	2021-03-29 14:08:06.227
30	3028	0	30	Tabulator 30 - Batch 3028	29	2021-03-29 13:41:53.687	2021-03-29 14:08:06.573
30	3029	0	31	Tabulator 30 - Batch 3029	30	2021-03-29 13:44:57.640	2021-03-29 14:08:06.900

Below is a screenshot of the same table in the newly created Adjudication database, sorted by creation time:

Figure 6. List of Batches in the Newly Created Adjudication Database, Sorted by Creation Time

TabulatorId	BatchId	Category	CvrBatchId	Name	LoadOrder	CreationTime	ModificationTime
30	3047	0	49	Tabulator 30 - Batch 3047	48	2021-03-30 15:00:14.560	2021-03-30 15:25:33.373
30	3048	0	50	Tabulator 30 - Batch 3048	49	2021-03-30 15:00:17.950	2021-03-30 15:25:34.090
30	3050	0	52	Tabulator 30 - Batch 3050	51	2021-03-30 15:00:36.577	2021-03-30 15:25:33.733
30	3054	0	56	Tabulator 30 - Batch 3054	55	2021-03-30 15:00:50.780	2021-03-30 15:03:21.940
20	2000	0	59	Tabulator 20 - Batch 2000	58	2021-03-30 15:01:01.250	2021-03-30 15:03:19.520
20	2002	0	61	Tabulator 20 - Batch 2002	60	2021-03-30 15:01:07.983	2021-03-30 15:03:19.847
20	2003	0	62	Tabulator 20 - Batch 2003	61	2021-03-30 15:01:11.467	2021-03-30 15:03:20.050
20	2004	0	63	Tabulator 20 - Batch 2004	62	2021-03-30 15:01:15.123	2021-03-30 15:03:19.127
20	2005	0	64	Tabulator 20 - Batch 2005	63	2021-03-30 15:01:18.687	2021-03-30 15:03:20.237
20	2006	0	65	Tabulator 20 - Batch 2006	64	2021-03-30 15:01:22.203	2021-03-30 15:03:20.410
20	2008	0	67	Tabulator 20 - Batch 2008	66	2021-03-30 15:01:29.203	2021-03-30 15:03:20.627
20	2009	0	68	Tabulator 20 - Batch 2009	67	2021-03-30 15:01:32.953	2021-03-30 15:03:20.847
20	2010	0	69	Tabulator 20 - Batch 2010	68	2021-03-30 15:01:36.467	2021-03-30 15:03:21.033
20	2011	0	70	Tabulator 20 - Batch 2011	69	2021-03-30 15:01:40.437	2021-03-30 15:03:21.237
20	2012	0	71	Tabulator 20 - Batch 2012	70	2021-03-30 15:01:44.513	2021-03-30 15:03:21.410
20	2013	0	72	Tabulator 20 - Batch 2013	71	2021-03-30 15:01:48.063	2021-03-30 15:03:21.567
20	2015	0	74	Tabulator 20 - Batch 2015	73	2021-03-30 15:01:55.170	2021-03-30 15:03:21.723
20	2016	0	75	Tabulator 20 - Batch 2016	74	2021-03-30 15:01:58.827	2021-03-30 15:03:39.753
20	2018	0	77	Tabulator 20 - Batch 2018	76	2021-03-30 15:02:05.920	2021-03-30 15:03:47.913
20	2019	0	78	Tabulator 20 - Batch 2019	77	2021-03-30 15:02:09.407	2021-03-30 15:03:48.210
20	2020	0	79	Tabulator 20 - Batch 2020	78	2021-03-30 15:02:13.140	2021-03-30 15:03:47.613
20	2021	0	80	Tabulator 20 - Batch 2021	79	2021-03-30 15:02:16.017	2021-03-30 15:03:51.317
20	2023	0	82	Tabulator 20 - Batch 2023	81	2021-03-30 15:02:22.517	2021-03-30 15:04:13.667
20	2024	0	83	Tabulator 20 - Batch 2024	82	2021-03-30 15:02:26.050	2021-03-30 15:04:18.870
20	2025	0	84	Tabulator 20 - Batch 2025	83	2021-03-30 15:02:29.580	2021-03-30 15:04:18.527
20	2026	0	85	Tabulator 20 - Batch 2026	84	2021-03-30 15:02:33.597	2021-03-30 15:04:20.793
10	1001	0	87	Tabulator 10 - Batch 1001	86	2021-03-30 15:02:40.610	2021-03-30 15:04:48.777
10	1002	0	88	Tabulator 10 - Batch 1002	87	2021-03-30 15:02:44.050	2021-03-30 15:04:49.120
10	1003	0	89	Tabulator 10 - Batch 1003	88	2021-03-30 15:02:47.423	2021-03-30 15:04:48.417
10	1000	0	96	Tabulator 10 - Batch 1000	114	2021-03-30 16:04:55.357	2021-03-30 16:17:49.813

March 30, 2021, 3:00 PM – 3:03 PM

During this three-minute time period, records of 42 batches and the 4,082 ballots contained within them, previously processed into the original Adjudication database, were copied into the new Adjudication database. According to the time stamps, the records of the batches appeared in the new Adjudication database in intervals of a fraction of a second between them, much too quickly for the ballots contained in the batches to have been physically scanned (per the maximum scanning speeds discussed above). Mesa County election clerks state that they did not take any action to reprocess or re-scan any batches on that day, nor did they at any time stop and restart the Adjudication software process. Only 39 ballots in these 42 batches went through manual adjudication after being copied to the new database, and database records indicate that the adjudication process was completed successfully on those 39 ballots.

Unlike what was found in the November 2020 General Election records described above, the records for these 42 batches which were copied to the new database do not appear in the new Adjudication database in exactly the same order as they had originally been loaded; 12 batch records are out of order when the records in the original Adjudication database and the new Adjudication database are compared.

No further anomalies are shown in the Adjudication database records during the Election counting process, nor did Mesa County election clerks encounter any unexpected issues.

Of the 42 batches which were processed twice (batches 45 through 49 and 51 through 88), the ballot counts (total number of ballots) match between the old and new Adjudication databases. However, DVS software sent 339 ballots to manual adjudication the first time they were processed in the original Adjudication database, but when reprocessed in the new Adjudication database the software sent just 39 ballots to manual adjudication.

The same ballots run through the same hardware and evaluated by the same software should have had the same resulting ballots marked for adjudication, but they did not. This leads to the logical critical conclusion that not all the ballots in the batches processed after the database copy were the same and had the same votes as the ballots in the same batches processed before the database copy. There is no record remaining of the votes originally recorded from the ballots, and therefore there can be no certainty that the votes now recorded are the same. In essence, the chain of custody has been broken for these votes in the database.

The 46 batches which were *not* duplicated in the new Adjudication database must also be seen as suspect, as their chain of custody has also been broken via the fact that no record of them or their adjudication exists in the Adjudication database in use at the end of the election. A clerk wishing to view the adjudication status of a ballot in any of these 46 batches would be unable to do

so, as no information about these batches exists in the new Adjudication database.

Thus, all 8,540 ballots processed before 2:58 PM on March 30, 2021, comprising over 49% of the total votes in the entire 2021 Grand Junction Municipal Election, cannot be verified and should not have been counted. These 8,540 ballots represent more than twice the winning margin in any of the four City Council races that occurred in this election.

III. Comparison of the November 2020 General Election Findings and the April 2021 Grand Junction Municipal Election Findings

Comparing the above findings for the two elections shows numerous similarities and also critical differences.

Similarities:
- In both elections, a software process running within the DVS system performed an unauthorized creation of new Adjudication and Tabulation databases.
- In both elections, database records of selected batches and of the ballots within those batches were copied into the new databases and were reprocessed.
- In both elections, selected batches were not copied to the new Adjudication and Tabulation databases, making adjudication information invisible to the Mesa County election clerks.

Differences:
- In the November 2020 General Election, records of a sequential series of batches and the ballots contained within them were copied from the original Adjudication and Tabulation databases to the new Adjudication and Tabulation databases, and the batches were copied in the same order as in the original databases. In the April 2021 Grand Junction Municipal Election, records of a non-sequential series of batches and the ballots contained within

them were copied, and they appear in the new Adjudication database in a different order than in the original database.

- In the April 2021 Grand Junction Municipal Election, the EMS User Logs (which show events and commands which were executed) show reference to a batch 89. As there were 88 batches in the original Adjudication database, this would have logically been the next batch received from the scanners. However, no record of a batch with the load order '89' exists in either Adjudication database, and there are missing load orders between 88 and 114 as well.

The similarities lead to the conclusion that the same method was used to alter the database records in both elections.

The differences lead to the conclusion that there is a degree of control in the method used to alter the database records which used parameters unique to each election.

IV. Summary Impact of Above Findings

This manipulation of batch and ballot records described above is significant for three reasons.

First, when the ballots were reprocessed as described above, including re-adjudication, it is logical to conclude that whatever votes had been initially recorded could well have been replaced by the reprocessed votes in the Main election database. The differences in the Manual Adjudication numbers certainly supports this possible conclusion. Thus, this procedure could change votes in the Main database without leaving any evidence to indicate changes had been made, or any way to determine the nature of the changes or what the original vote data was.

Second, the adjudication status (including the timestamps of adjudication events, the results of the adjudication, and the user who performed the

adjudication) of any ballots in the batches not copied to the new Adjudication database would not be viewable through the DVS client software applications.

Third, an examination of the EMS server which was less rigorous than ours would not likely have caught the fact that the Adjudication and Tabulation databases used at the end of the elections were not the same, nor did they contain the same records, as the databases used at the beginning of the elections. This leads to the possible conclusion that some batches and ballots were excluded from the new databases so as to inhibit the possibility of their being audited or examined.

V.   Lack of Referential Integrity in DVS Database Tables

Most modern database designs include a concept called "referential integrity." For example, if you have one table of data that has information about "people," and another table that has information about "colleges," you might have a field in an individual record in the "people's" table that can contain an id, or pointer, to the college he or she attended. Referential integrity, in this case, would mean that if "John Smith's" record had a pointer to the "University of Pittsburgh", the system should give an error if you try to remove the item "University of Pittsburgh" from the "colleges" table. It would not allow you to do this action because a field in "John Smith's" record refers to the college "University of Pittsburgh" and deleting that entry in the "colleges" table makes "John Smith's" record invalid.

However, some of the DVS Election Management System data structures have no such referential integrity built into them. Therefore, batch records in one database could be deleted without any consequence to records that point to that batch in another database, and without any detection of the error. This lack of referential integrity means that vote or ballot information could easily be added or removed from one part of the database without any warnings or errors occurring in other parts of the database.

It is, for example, possible to change the fields with vote counts in one table of the Main election database without having that change affect any other tables

or cause a referential integrity violation. This is a fundamental and critical breach of sound database design, particularly considering the importance of chain-of-custody and audit trail evidence for the provenance of ballot record and tabulated vote information in a voting system.

Please see Reference D for an example of how the batch and ballot data moves through the various databases and tables in the Dominion EMS.

VI. Digital Ballot Images are Obfuscated and Unverifiable

An attempt was made to investigate the conditions of the digital ballot images to corroborate the findings above. This avenue of research is greatly hindered because the ballot IDs or sequence numbers in the batches are not relatable to their images, not even within the DVS databases themselves. This is an additional example of a lack of referential integrity within the system.

Additionally, the digital ballot images do not have the accompanying ".sha" files which are meant to prove the authenticity of the ballots. Therefore, any findings, including the integrity and authenticity of ballot images, related to the digital ballot images cannot be absolutely validated because there is no proof that the images are the ones created at the time the ballots were first processed.

Finally, code running within the EMS server that has the system access rights to create and alter SQL Server database records could be used to alter the stored digital ballot images themselves. The EMS Adjudication module software already has the capability of altering scanned images and legitimately does so for each manually adjudicated ballot.

DISCUSSION

The events described above show a significant manipulation of a large number of batch, ballot, and vote records in the DVS EMS Database in Mesa County, and there are only a few possible explanations for the manipulation.

1. Human Error

Extensive questioning of Mesa County election clerks has ruled out human error as the reason for the unauthorized creation of election databases on October 21, 2020, followed by reprocessing of 20,346 ballots. These personnel have a strong recollection of the events of October 21, 2020, and because of the timelines established both by their recollection and corresponding database time stamps, it is evident that any and all unusual actions they might have taken on that day were in response to the new database's creation having already occurred, and batch records being copied into the new database, which affected their ability to complete adjudication on some in-process ballots. Similarly, Mesa County election officials have a strong recollection of the events of March 30, 2021. They state that they did not take any steps that would have given rise to the unauthorized creation of new election databases during the 2021 Grand Junction Municipal Election on that day, followed by the reprocessing of 2,974 ballots,.

2. Software Failure

While an error or failure in the DVS EMS server is a possibility, it strains credulity that any error could cause the numerous specific events which are documented above. In particular, the non-sequential reloading of the batches during the 2021 Grand Junction Municipal Election, when compared with the sequential reloading in the November 2020 General Election, makes it inherently impossible for the same error to have caused both chains of events.

However, as noted in the section above labelled "Algorithmically Triggered", the DVS EMS server (or another connected machine running Dominion software) could have been preprogrammed to perform the unauthorized new database creations and the selected record manipulation which followed based on preprogrammed criteria related to the election results at the time. This would be the result of advance planning in the deliberate

design of the software to alter outcomes when unexpected voting patterns were detected.

3. **Network Breach or Pre-Installation of Manipulating Software or Algorithm**

A device external to the DVS D-Suite network could have connected to the DVS D-Suite and to the EMS server, using the open SQL Server port 1433, open Web Services port 80, or through any other open port directly into the DVS Software. As outlined in "Report #2, Forensic Examination and Analysis Report" by D. Gould, there are numerous flaws in the security of the server, many of which could provide an outside entity with direct access to the SQL Server Database or the Application itself. The DVS D-Suite makes use of "SOAP" messaging protocol API calls through its web server, so malicious procedures could be triggered by simple port 80 access.

As *all* Windows log files which would show these accesses are configured, as specified by DVS manuals published by the Colorado Secretary of State as mandatory technical procedures for County election officials, to keep only a small amount of log entries before they are overwritten, no record of external access to the DVS D-Suite is available in system logs.

Regardless of whether the voting system was connected to an external network or device, even momentarily, or whether a pre-installed software or algorithm was triggered by an external command or complex set of variable conditions, the execution of manipulating software or algorithm could plausibly be responsible for the results described in our findings.

CONCLUSIONS

1. Unauthorized creation of new Tabulation and Adjudication databases occurred during the counting of the November 2020 General Election, along with the selective copying of batch and ballot records from the original databases to the new ones. This manipulation places all 25,913 initial ballots counted into a state where they cannot be validated – some because

it is possible that their vote information was changed, and unverifiable that it was not, and the rest because their "chain of evidence" has been intentionally obfuscated. Even if the count and content of ballot images match the numbers and counts reported by the database, there is no method to validate those ballot images due to missing ".sha" files, which are intended to provide such validation.

2. Unauthorized creation of new Tabulation and Adjudication databases occurred during the 2021 Grand Junction Municipal Election, along with the selective copying of batch and ballot records from the original databases to the new ones. This places all 8,540 initial ballots counted into a state where they cannot be validated – some because it is possible that their vote information was changed and unverifiable that it was not, and some because their "chain of evidence" has been intentionally obfuscated.

3. As we have found evidence that thousands of ballot records have had their validity placed in serious question, none of the election results from the 2020 General or 2021 Grand Junction Municipal Elections in Mesa County can be considered trustworthy. If Mesa County has preserved the respective paper ballots, as they are required to do by law, and those ballots were forensically authenticated with confirmed chain-of-custody from eligible electors to sworn county election officials (not possible retrospectively, nor under current election procedures in Colorado), then a hand-count of paper ballots might support a verifiable, trustworthy conclusion about the county-level results of these two elections.

4. Because the unauthorized methods used to alter batch and ballot-level information described above are available within the DVS EMS server, this system cannot be considered reliable for use in any election. An investigation, involving all physical and cyber evidence, including a source code audit of the exact, verifiable version of all DVS-supplied executable and library files, is necessary to identify the exact software methods used to produce the manipulation and to determine other potential unauthorized actions that the code is able to cause or enable.

5. The Dominion Voting System's database structure stores actual vote information in only one table, in aggregated form, so alterations made to vote counts or candidates in just that table, create a single point of attack or failure for the entire vote reporting process (see Reference D).

TabulatorId	BatchId	LoadOrder	Creation Date	Creation Time	Difference from Prior	Ballots
10	4001	1	10/19/2020	12:07:41 PM		100
10	4002	2	10/19/2020	12:07:44 PM	0:00:04	42
10	4003	3	10/19/2020	12:07:48 PM	0:00:04	100
10	4004	4	10/19/2020	12:07:51 PM	0:00:03	100
10	4005	5	10/19/2020	12:07:54 PM	0:00:03	100
10	4006	6	10/19/2020	12:08:12 PM	0:00:18	100
10	4007	7	10/19/2020	12:08:16 PM	0:00:04	100
10	4008	8	10/19/2020	12:08:20 PM	0:00:04	99
10	4009	9	10/19/2020	12:08:24 PM	0:00:04	100
10	4010	10	10/19/2020	12:08:28 PM	0:00:04	100
4	2001	11	10/19/2020	12:23:35 PM	0:15:07	98
4	2002	12	10/19/2020	12:30:26 PM	0:06:50	100
4	2003	13	10/19/2020	12:32:30 PM	0:02:04	100
4	2004	14	10/19/2020	12:36:20 PM	0:03:50	100
4	2005	15	10/19/2020	12:43:25 PM	0:07:05	100
4	2006	16	10/19/2020	1:50:29 PM	1:07:03	100
4	2007	17	10/19/2020	1:54:19 PM	0:03:50	100
4	2008	18	10/19/2020	1:58:24 PM	0:04:05	100
4	2009	19	10/19/2020	2:03:29 PM	0:05:05	100
4	2010	20	10/19/2020	2:06:33 PM	0:03:05	100
4	2011	21	10/19/2020	2:10:23 PM	0:03:50	99
4	2012	22	10/19/2020	2:14:28 PM	0:04:05	100
4	2013	23	10/19/2020	2:18:33 PM	0:04:05	100
4	2014	24	10/19/2020	2:22:23 PM	0:03:50	100
4	2015	25	10/19/2020	2:26:27 PM	0:04:05	100
4	2016	26	10/19/2020	2:30:32 PM	0:04:05	100
4	2017	27	10/19/2020	2:34:23 PM	0:03:51	100
4	2018	28	10/19/2020	2:36:27 PM	0:02:04	33
4	2019	29	10/19/2020	2:40:30 PM	0:04:03	100
4	2020	30	10/19/2020	2:44:20 PM	0:03:51	100
4	2021	31	10/19/2020	2:48:25 PM	0:04:05	99
4	2022	32	10/19/2020	2:51:29 PM	0:03:04	100
4	2023	33	10/19/2020	2:57:21 PM	0:05:52	99
4	2024	34	10/19/2020	2:59:26 PM	0:02:04	100
10	4011	35	10/19/2020	3:05:31 PM	0:06:05	100
4	2025	36	10/19/2020	3:06:20 PM	0:00:49	100
10	4012	37	10/19/2020	3:09:24 PM	0:03:05	100
4	2026	38	10/19/2020	3:10:28 PM	0:01:04	99
10	4013	39	10/19/2020	3:12:33 PM	0:02:04	100

4	2027	40	10/19/2020	3:15:22 PM	0:02:49	100
10	4014	41	10/19/2020	3:16:26 PM	0:01:04	100
4	2028	42	10/19/2020	3:17:33 PM	0:01:07	100
4	2029	43	10/19/2020	3:19:22 PM	0:01:49	25
4	2030	44	10/19/2020	3:22:24 PM	0:03:02	100
10	4015	45	10/19/2020	3:24:29 PM	0:02:04	99
4	2031	46	10/19/2020	3:29:34 PM	0:05:05	100
10	4016	47	10/19/2020	3:30:23 PM	0:00:49	100
4	2032	48	10/19/2020	3:34:28 PM	0:04:05	99
10	4017	49	10/19/2020	3:34:32 PM	0:00:04	100
10	4018	50	10/19/2020	3:40:22 PM	0:05:50	100
10	4019	51	10/19/2020	3:44:26 PM	0:04:05	100
10	4020	52	10/19/2020	3:48:31 PM	0:04:05	99
4	2033	53	10/19/2020	4:00:24 PM	0:11:53	100
10	4021	54	10/19/2020	4:00:43 PM	0:00:19	99
4	2034	55	10/19/2020	4:03:33 PM	0:02:49	100
10	4022	56	10/19/2020	4:03:37 PM	0:00:04	100
10	4023	57	10/19/2020	4:05:26 PM	0:01:49	78
4	2035	58	10/19/2020	4:09:30 PM	0:04:04	100
10	4024	59	10/19/2020	4:09:34 PM	0:00:04	100
10	4025	60	10/19/2020	4:12:24 PM	0:02:50	99
4	2036	61	10/19/2020	4:13:28 PM	0:01:04	100
10	4026	62	10/19/2020	4:15:33 PM	0:02:04	100
4	2037	63	10/19/2020	4:16:22 PM	0:00:49	99
10	4027	64	10/19/2020	4:19:26 PM	0:03:04	100
10	4028	65	10/19/2020	4:22:31 PM	0:03:05	100
4	2038	66	10/19/2020	4:24:20 PM	0:01:50	100
4	2039	67	10/19/2020	4:28:25 PM	0:04:05	100
4	2040	68	10/19/2020	4:32:30 PM	0:04:05	100
4	2041	69	10/19/2020	4:35:22 PM	0:02:52	100
10	4029	70	10/19/2020	4:37:26 PM	0:02:04	100
4	2042	71	10/19/2020	4:41:31 PM	0:04:05	99
10	4030	72	10/19/2020	4:41:35 PM	0:00:04	99
4	2043	73	10/19/2020	4:46:25 PM	0:04:50	100
10	4031	74	10/19/2020	4:49:29 PM	0:03:05	97
10	4032	75	10/19/2020	4:53:34 PM	0:04:05	99
10	4033	76	10/19/2020	4:55:23 PM	0:01:49	100
4	2044	77	10/19/2020	4:57:27 PM	0:02:04	100
10	4034	78	10/19/2020	4:58:32 PM	0:01:04	100
4	2045	79	10/19/2020	5:00:22 PM	0:01:51	99
10	4035	80	10/19/2020	5:03:27 PM	0:03:05	100
10	4036	81	10/19/2020	5:06:31 PM	0:03:05	100
4	2046	82	10/19/2020	5:16:22 PM	0:09:51	99
4	2047	83	10/19/2020	5:18:28 PM	0:02:06	100
10	4037	84	10/19/2020	5:18:32 PM	0:00:04	100

4	2048	85	10/19/2020	5:22:22 PM	0:03:51	99
4	2049	86	10/20/2020	10:05:36 AM	16:43:13	100
4	2050	87	10/20/2020	10:07:25 AM	0:01:49	100
4	2051	88	10/20/2020	10:10:30 AM	0:03:05	99
4	2052	89	10/20/2020	10:13:35 AM	0:03:05	100
4	2053	90	10/20/2020	10:17:26 AM	0:03:51	100
4	2054	91	10/20/2020	10:29:33 AM	0:12:06	100
4	2055	92	10/20/2020	10:32:37 AM	0:03:05	100
4	2056	93	10/20/2020	10:40:29 AM	0:07:51	100
4	2057	94	10/20/2020	10:43:33 AM	0:03:05	100
4	2058	95	10/20/2020	10:50:38 AM	0:07:05	99
4	2059	96	10/20/2020	10:53:28 AM	0:02:49	100
4	2060	97	10/20/2020	10:56:32 AM	0:03:05	100
4	2061	98	10/20/2020	10:59:37 AM	0:03:04	100
4	2062	99	10/20/2020	11:02:27 AM	0:02:50	98
4	2063	100	10/20/2020	11:05:31 AM	0:03:04	100
4	2064	101	10/20/2020	11:08:36 AM	0:03:05	100
4	2065	102	10/20/2020	11:11:26 AM	0:02:50	100
4	2066	103	10/20/2020	11:16:31 AM	0:05:05	100
4	2067	104	10/20/2020	11:19:35 AM	0:03:05	100
4	2068	105	10/20/2020	11:22:40 AM	0:03:05	100
4	2069	106	10/20/2020	11:26:29 AM	0:03:50	99
4	2070	107	10/20/2020	11:30:34 AM	0:04:05	94
4	2071	108	10/20/2020	11:33:38 AM	0:03:04	100
4	2072	109	10/20/2020	11:38:28 AM	0:04:50	100
4	2073	110	10/20/2020	11:43:33 AM	0:05:05	100
10	4038	111	10/20/2020	11:43:37 AM	0:00:04	99
10	4039	112	10/20/2020	11:48:28 AM	0:04:50	100
10	4040	113	10/20/2020	11:50:32 AM	0:02:04	99
4	2074	114	10/20/2020	11:52:36 AM	0:02:04	99
10	4041	115	10/20/2020	11:55:28 AM	0:02:51	100
4	2075	116	10/20/2020	11:56:32 AM	0:01:04	99
10	4042	117	10/20/2020	11:58:36 AM	0:02:04	100
10	4043	118	10/20/2020	12:02:26 PM	0:03:50	100
10	4044	119	10/20/2020	12:05:31 PM	0:03:05	100
4	2076	120	10/20/2020	12:07:35 PM	0:02:04	100
4	2077	121	10/20/2020	12:13:40 PM	0:06:05	100
10	4045	122	10/20/2020	12:13:44 PM	0:00:04	100
4	2078	123	10/20/2020	12:16:34 PM	0:02:50	99
10	4046	124	10/20/2020	12:16:38 PM	0:00:04	100
4	2079	125	10/20/2020	12:19:28 PM	0:02:50	99
10	4047	126	10/20/2020	12:19:46 PM	0:00:19	99
4	2080	127	10/20/2020	12:22:36 PM	0:02:49	99
10	4048	128	10/20/2020	12:22:40 PM	0:00:04	100
4	2081	129	10/20/2020	12:25:30 PM	0:02:50	100

10	4049	130	10/20/2020	12:30:35 PM	0:05:05	100
4	2082	131	10/20/2020	1:08:32 PM	0:37:57	100
10	4050	132	10/20/2020	1:11:37 PM	0:03:05	100
4	2083	133	10/20/2020	1:14:29 PM	0:02:52	100
10	4051	134	10/20/2020	1:14:48 PM	0:00:19	100
4	2084	135	10/20/2020	1:16:37 PM	0:01:49	100
10	4052	136	10/20/2020	1:18:26 PM	0:01:49	100
4	2085	137	10/20/2020	1:20:30 PM	0:02:04	100
10	4053	138	10/20/2020	1:21:35 PM	0:01:04	100
4	2086	139	10/20/2020	1:22:39 PM	0:01:04	100
10	4054	140	10/20/2020	1:27:29 PM	0:04:50	100
10	4055	141	10/20/2020	1:31:34 PM	0:04:05	100
4	2087	142	10/20/2020	1:33:38 PM	0:02:04	98
4	2088	143	10/20/2020	1:37:28 PM	0:03:50	100
10	4056	144	10/20/2020	1:47:34 PM	0:10:06	97
4	2089	145	10/20/2020	1:53:39 PM	0:06:05	100
4	2090	146	10/20/2020	1:58:30 PM	0:04:51	99
10	4057	147	10/20/2020	2:02:35 PM	0:04:05	96
4	2091	148	10/20/2020	2:04:39 PM	0:02:04	100
4	2092	149	10/20/2020	2:07:29 PM	0:02:49	100
10	4058	150	10/20/2020	2:07:47 PM	0:00:18	97
4	2093	151	10/20/2020	2:10:37 PM	0:02:49	100
4	2094	152	10/20/2020	2:14:28 PM	0:03:52	100
4	2095	153	10/20/2020	2:19:33 PM	0:05:05	97
4	2096	154	10/20/2020	2:23:38 PM	0:04:05	99
7	3001	155	10/20/2020	2:26:28 PM	0:02:50	100
7	3002	156	10/20/2020	2:29:32 PM	0:03:05	100
4	2097	157	10/20/2020	2:31:37 PM	0:02:04	100
7	3003	158	10/20/2020	2:32:26 PM	0:00:49	100
7	3004	159	10/20/2020	2:36:31 PM	0:04:05	98
4	2098	160	10/20/2020	2:38:36 PM	0:02:05	100
7	3005	161	10/20/2020	2:39:40 PM	0:01:04	98
4	2099	162	10/20/2020	2:42:29 PM	0:02:49	99
7	3006	163	10/20/2020	2:43:33 PM	0:01:04	100
4	2100	164	10/20/2020	2:46:38 PM	0:03:05	100
7	3007	165	10/20/2020	2:47:27 PM	0:00:49	100
4	2101	166	10/20/2020	2:49:32 PM	0:02:05	100
7	3008	167	10/20/2020	2:51:36 PM	0:02:04	100
4	2102	168	10/20/2020	2:57:29 PM	0:05:53	97
7	3009	169	10/20/2020	2:57:47 PM	0:00:18	95
4	2103	170	10/20/2020	3:00:37 PM	0:02:49	99
7	3010	171	10/20/2020	3:01:41 PM	0:01:04	99
4	2104	172	10/20/2020	3:04:33 PM	0:02:53	99
7	3011	173	10/20/2020	3:04:37 PM	0:00:04	98
4	2105	174	10/20/2020	3:07:28 PM	0:02:51	100

7	3012	175	10/20/2020	3:07:47 PM	0:00:19	100
7	3013	176	10/20/2020	3:10:36 PM	0:02:50	98
4	2106	177	10/20/2020	3:12:41 PM	0:02:04	95
7	3014	178	10/20/2020	3:13:30 PM	0:00:49	100
4	2107	179	10/20/2020	3:21:35 PM	0:08:06	95
7	3015	180	10/20/2020	3:23:39 PM	0:02:04	94
4	2108	181	10/20/2020	3:25:30 PM	0:01:50	100
7	3016	182	10/20/2020	3:25:50 PM	0:00:20	100
7	3017	183	10/20/2020	3:29:39 PM	0:03:50	100
4	2109	184	10/20/2020	3:30:29 PM	0:00:50	94
7	3018	185	10/20/2020	3:35:34 PM	0:05:05	97
7	3019	186	10/20/2020	3:59:43 PM	0:24:09	95
2	1001	187	10/20/2020	4:02:32 PM	0:02:49	75
7	3020	188	10/20/2020	4:03:36 PM	0:01:03	99
7	3021	189	10/20/2020	4:06:40 PM	0:03:04	99
7	3022	190	10/20/2020	4:10:30 PM	0:03:50	99
7	3023	191	10/20/2020	4:13:34 PM	0:03:05	100
7	3024	192	10/20/2020	4:22:40 PM	0:09:06	99
4	2110	193	10/20/2020	4:24:30 PM	0:01:50	98
7	3025	194	10/20/2020	4:26:34 PM	0:02:04	100
4	2111	195	10/20/2020	4:28:38 PM	0:02:04	100
7	3026	196	10/20/2020	4:29:30 PM	0:00:51	100
7	3027	197	10/20/2020	4:34:35 PM	0:05:05	100
7	3028	198	10/20/2020	4:38:39 PM	0:04:05	100
2	1002	199	10/20/2020	4:46:29 PM	0:07:50	21
2	1003	200	10/20/2020	4:56:34 PM	0:10:04	75
2	1004	201	10/20/2020	4:57:37 PM	0:01:03	80
4	2112	202	10/21/2020	9:05:41 AM	16:08:04	99
4	2113	203	10/21/2020	9:07:45 AM	0:02:04	95
4	2114	204	10/21/2020	9:10:35 AM	0:02:50	98
4	2115	205	10/21/2020	9:14:40 AM	0:04:05	96
4	2116	206	10/21/2020	9:18:45 AM	0:04:05	99
4	2117	207	10/21/2020	9:20:34 AM	0:01:49	100
4	2118	208	10/21/2020	9:22:38 AM	0:02:04	100
4	2119	209	10/21/2020	9:28:44 AM	0:06:05	100
4	2120	210	10/21/2020	9:33:35 AM	0:04:51	100
4	2121	211	10/21/2020	9:36:39 AM	0:03:04	100
4	2122	212	10/21/2020	9:39:44 AM	0:03:05	100
4	2123	213	10/21/2020	9:42:35 AM	0:02:51	100
2	1005	214	10/21/2020	9:50:40 AM	0:08:05	68
2	1006	215	10/21/2020	9:54:43 AM	0:04:03	37
2	1007	216	10/21/2020	9:56:45 AM	0:02:02	76
2	1008	217	10/21/2020	10:14:37 AM	0:17:51	14
10	4059	218	10/21/2020	10:16:39 AM	0:02:02	100
10	4060	219	10/21/2020	10:25:45 AM	0:09:06	100

10	4061	220	10/21/2020	10:28:34 AM	0:02:50	100
10	4062	221	10/21/2020	10:32:39 AM	0:04:05	98
10	4063	222	10/21/2020	10:34:43 AM	0:02:04	100
10	4064	223	10/21/2020	10:37:35 AM	0:02:51	100
10	4065	224	10/21/2020	10:40:39 AM	0:03:05	100
10	4066	225	10/21/2020	10:43:44 AM	0:03:05	100
10	4067	226	10/21/2020	10:47:34 AM	0:03:51	99
10	4068	227	10/21/2020	10:51:39 AM	0:04:05	100
10	4069	228	10/21/2020	10:56:44 AM	0:05:05	100
10	4070	229	10/21/2020	10:59:33 AM	0:02:49	100
10	4071	230	10/21/2020	11:02:38 AM	0:03:05	99
10	4072	231	10/21/2020	11:05:42 AM	0:03:05	100
10	4073	232	10/21/2020	11:21:37 AM	0:15:54	100
10	4074	233	10/21/2020	11:27:42 AM	0:06:05	100
10	4075	234	10/21/2020	11:35:47 AM	0:08:06	97
10	4076	235	10/21/2020	11:38:37 AM	0:02:49	100
10	4077	236	10/21/2020	11:41:41 AM	0:03:05	100
10	4078	237	10/21/2020	11:46:46 AM	0:05:05	100
10	4079	238	10/21/2020	11:49:36 AM	0:02:50	100
10	4080	239	10/21/2020	11:53:41 AM	0:04:05	100
10	4081	240	10/21/2020	12:00:46 PM	0:07:05	101
10	4082	241	10/21/2020	12:02:36 PM	0:01:49	100
10	4083	242	10/21/2020	12:05:40 PM	0:03:05	100
10	4084	243	10/21/2020	12:08:45 PM	0:03:05	100
10	4085	244	10/21/2020	12:12:35 PM	0:03:50	100
10	4086	245	10/21/2020	12:15:40 PM	0:03:05	98
10	4087	246	10/21/2020	12:50:37 PM	0:34:57	98
10	4088	247	10/21/2020	12:53:41 PM	0:03:04	95
10	4089	248	10/21/2020	12:55:46 PM	0:02:04	97
10	4090	249	10/21/2020	12:58:35 PM	0:02:50	98
10	4091	250	10/21/2020	1:03:42 PM	0:05:06	95
10	4092	251	10/21/2020	1:08:46 PM	0:05:05	98
10	4093	252	10/21/2020	1:10:37 PM	0:01:50	98
10	4094	253	10/21/2020	1:13:41 PM	0:03:04	95
10	4095	254	10/21/2020	1:16:45 PM	0:03:04	97
10	4096	255	10/21/2020	1:19:35 PM	0:02:50	96
10	4097	256	10/21/2020	1:23:41 PM	0:04:05	95
10	4098	257	10/21/2020	1:28:46 PM	0:05:05	100
10	4099	258	10/21/2020	1:29:34 PM	0:00:49	63
10	4100	259	10/21/2020	1:34:38 PM	0:05:04	100
7	3029	260	10/21/2020	1:50:46 PM	0:16:07	100
7	3030	261	10/21/2020	1:53:37 PM	0:02:51	100
7	3031	262	10/21/2020	1:57:42 PM	0:04:05	100
7	3032	263	10/21/2020	2:00:50 PM	0:03:09	100
7	3033	264	10/21/2020	2:05:40 PM	0:04:50	100

7	3034	265	10/21/2020	2:08:46 PM	0:03:05	100
7	3035	266	10/21/2020	2:11:35 PM	0:02:50	100
7	3036	267	10/21/2020	2:14:40 PM	0:03:05	99

APPENDIX B – BATCHES - NEW ADJUDICATION DATABASE (WITH TIME BETWEEN BATCHES) – NOVEMBER 2020 ELECTION

TabulatorId	BatchId	CvrBatchId	LoadOrder	Creation Date	Creation Time	Difference from Prior	Ballots
10	4001	1	1	10/21/2020	2:20:07 PM		100
10	4025	60	60	10/21/2020	2:20:26 PM	0:00:19	99
4	2036	61	61	10/21/2020	2:20:30 PM	0:00:04	100
10	4026	62	62	10/21/2020	2:20:34 PM	0:00:04	100
4	2037	63	63	10/21/2020	2:20:39 PM	0:00:05	99
10	4027	64	64	10/21/2020	2:20:43 PM	0:00:04	100
10	4028	65	65	10/21/2020	2:20:47 PM	0:00:04	100
4	2038	66	66	10/21/2020	2:20:52 PM	0:00:04	100
4	2039	67	67	10/21/2020	2:20:56 PM	0:00:04	100
4	2040	68	68	10/21/2020	2:21:00 PM	0:00:04	100
4	2041	69	69	10/21/2020	2:21:04 PM	0:00:04	100
10	4029	70	70	10/21/2020	2:21:08 PM	0:00:04	100
4	2042	71	71	10/21/2020	2:21:13 PM	0:00:04	99
10	4030	72	72	10/21/2020	2:21:17 PM	0:00:04	99
4	2043	73	73	10/21/2020	2:21:21 PM	0:00:04	100
10	4031	74	74	10/21/2020	2:21:25 PM	0:00:04	97
10	4032	75	75	10/21/2020	2:21:29 PM	0:00:05	99
10	4033	76	76	10/21/2020	2:21:34 PM	0:00:04	100
4	2044	77	77	10/21/2020	2:21:40 PM	0:00:06	100
10	4034	78	78	10/21/2020	2:21:44 PM	0:00:04	100
4	2045	79	79	10/21/2020	2:21:48 PM	0:00:04	99
10	4035	80	80	10/21/2020	2:21:53 PM	0:00:05	100
10	4036	81	81	10/21/2020	2:21:57 PM	0:00:04	100
4	2046	82	82	10/21/2020	2:22:01 PM	0:00:04	99
4	2047	83	83	10/21/2020	2:22:05 PM	0:00:04	100
10	4037	84	84	10/21/2020	2:22:09 PM	0:00:04	100
4	2048	85	85	10/21/2020	2:22:13 PM	0:00:04	99
4	2049	86	86	10/21/2020	2:22:17 PM	0:00:04	100
4	2050	87	87	10/21/2020	2:22:21 PM	0:00:04	100
4	2051	88	88	10/21/2020	2:22:25 PM	0:00:04	99
4	2052	89	89	10/21/2020	2:22:30 PM	0:00:04	100
4	2053	90	90	10/21/2020	2:22:34 PM	0:00:04	100
4	2054	91	91	10/21/2020	2:22:38 PM	0:00:04	100
4	2055	92	92	10/21/2020	2:22:42 PM	0:00:04	100
4	2056	93	93	10/21/2020	2:22:46 PM	0:00:04	100
4	2057	94	94	10/21/2020	2:22:50 PM	0:00:04	100
4	2058	95	95	10/21/2020	2:22:54 PM	0:00:04	99
4	2059	96	96	10/21/2020	2:22:58 PM	0:00:04	100
4	2060	97	97	10/21/2020	2:23:02 PM	0:00:04	100

4	2061	98	98	10/21/2020	2:23:06 PM	0:00:04	100
4	2062	99	99	10/21/2020	2:23:11 PM	0:00:04	98
4	2063	100	100	10/21/2020	2:23:15 PM	0:00:04	100
4	2064	101	101	10/21/2020	2:23:19 PM	0:00:04	100
4	2065	102	102	10/21/2020	2:23:23 PM	0:00:04	100
4	2066	103	103	10/21/2020	2:23:28 PM	0:00:05	100
4	2067	104	104	10/21/2020	2:23:34 PM	0:00:06	100
4	2068	105	105	10/21/2020	2:23:38 PM	0:00:04	100
4	2069	106	106	10/21/2020	2:23:42 PM	0:00:04	99
4	2070	107	107	10/21/2020	2:23:46 PM	0:00:04	94
4	2071	108	108	10/21/2020	2:23:50 PM	0:00:04	100
4	2072	109	109	10/21/2020	2:23:54 PM	0:00:04	100
4	2073	110	110	10/21/2020	2:23:58 PM	0:00:04	100
10	4038	111	111	10/21/2020	2:24:02 PM	0:00:04	99
10	4039	112	112	10/21/2020	2:24:06 PM	0:00:04	100
10	4040	113	113	10/21/2020	2:24:10 PM	0:00:04	99
4	2074	114	114	10/21/2020	2:24:14 PM	0:00:04	99
10	4041	115	115	10/21/2020	2:24:18 PM	0:00:04	100
4	2075	116	116	10/21/2020	2:24:22 PM	0:00:04	99
10	4042	117	117	10/21/2020	2:24:26 PM	0:00:04	100
10	4043	118	118	10/21/2020	2:24:31 PM	0:00:05	100
10	4044	119	119	10/21/2020	2:24:35 PM	0:00:04	100
4	2076	120	120	10/21/2020	2:24:39 PM	0:00:04	100
4	2077	121	121	10/21/2020	2:24:43 PM	0:00:04	100
10	4045	122	122	10/21/2020	2:24:48 PM	0:00:04	100
4	2078	123	123	10/21/2020	2:24:52 PM	0:00:04	99
10	4046	124	124	10/21/2020	2:24:56 PM	0:00:05	100
4	2079	125	125	10/21/2020	2:25:00 PM	0:00:04	99
10	4047	126	126	10/21/2020	2:25:05 PM	0:00:04	99
4	2080	127	127	10/21/2020	2:25:09 PM	0:00:04	99
10	4048	128	128	10/21/2020	2:25:13 PM	0:00:04	100
4	2081	129	129	10/21/2020	2:25:17 PM	0:00:04	100
10	4049	130	130	10/21/2020	2:25:22 PM	0:00:05	100
4	2082	131	131	10/21/2020	2:25:26 PM	0:00:04	100
10	4050	132	132	10/21/2020	2:25:30 PM	0:00:04	100
4	2083	133	133	10/21/2020	2:25:35 PM	0:00:04	100
10	4051	134	134	10/21/2020	2:25:39 PM	0:00:04	100
4	2084	135	135	10/21/2020	2:25:44 PM	0:00:05	100
10	4052	136	136	10/21/2020	2:25:49 PM	0:00:05	100
4	2085	137	137	10/21/2020	2:25:53 PM	0:00:04	100
10	4053	138	138	10/21/2020	2:25:57 PM	0:00:04	100
4	2086	139	139	10/21/2020	2:26:01 PM	0:00:04	100
10	4054	140	140	10/21/2020	2:26:05 PM	0:00:04	100
10	4055	141	141	10/21/2020	2:26:09 PM	0:00:04	100
4	2087	142	142	10/21/2020	2:26:13 PM	0:00:04	98

4	2088	143	143	10/21/2020	2:26:17 PM	0:00:04	100
10	4056	144	144	10/21/2020	2:26:21 PM	0:00:04	97
4	2089	145	145	10/21/2020	2:26:25 PM	0:00:04	100
4	2090	146	146	10/21/2020	2:26:29 PM	0:00:04	99
10	4057	147	147	10/21/2020	2:26:33 PM	0:00:04	96
4	2091	148	148	10/21/2020	2:26:37 PM	0:00:04	100
4	2092	149	149	10/21/2020	2:26:41 PM	0:00:04	100
10	4058	150	150	10/21/2020	2:26:45 PM	0:00:04	97
4	2093	151	151	10/21/2020	2:26:49 PM	0:00:04	100
4	2094	152	152	10/21/2020	2:26:53 PM	0:00:04	100
4	2095	153	153	10/21/2020	2:26:58 PM	0:00:04	97
4	2096	154	154	10/21/2020	2:27:02 PM	0:00:04	99
7	3001	155	155	10/21/2020	2:27:06 PM	0:00:04	100
7	3002	156	156	10/21/2020	2:27:10 PM	0:00:04	100
4	2097	157	157	10/21/2020	2:27:14 PM	0:00:04	100
7	3003	158	158	10/21/2020	2:27:18 PM	0:00:04	100
7	3004	159	159	10/21/2020	2:27:22 PM	0:00:04	98
4	2098	160	160	10/21/2020	2:27:26 PM	0:00:04	100
7	3005	161	161	10/21/2020	2:27:30 PM	0:00:04	98
4	2099	162	162	10/21/2020	2:27:35 PM	0:00:04	99
7	3006	163	163	10/21/2020	2:27:39 PM	0:00:04	100
4	2100	164	164	10/21/2020	2:27:43 PM	0:00:04	100
7	3007	165	165	10/21/2020	2:27:47 PM	0:00:04	100
4	2101	166	166	10/21/2020	2:27:53 PM	0:00:06	100
7	3008	167	167	10/21/2020	2:27:58 PM	0:00:05	100
4	2102	168	168	10/21/2020	2:28:02 PM	0:00:04	97
7	3009	169	169	10/21/2020	2:28:06 PM	0:00:04	95
4	2103	170	170	10/21/2020	2:28:10 PM	0:00:04	99
7	3010	171	171	10/21/2020	2:28:14 PM	0:00:04	99
4	2104	172	172	10/21/2020	2:28:18 PM	0:00:04	99
7	3011	173	173	10/21/2020	2:28:22 PM	0:00:04	98
4	2105	174	174	10/21/2020	2:28:26 PM	0:00:04	100
7	3012	175	175	10/21/2020	2:28:30 PM	0:00:04	100
7	3013	176	176	10/21/2020	2:28:34 PM	0:00:04	98
4	2106	177	177	10/21/2020	2:28:38 PM	0:00:04	95
7	3014	178	178	10/21/2020	2:28:42 PM	0:00:04	100
4	2107	179	179	10/21/2020	2:28:47 PM	0:00:04	95
7	3015	180	180	10/21/2020	2:28:50 PM	0:00:04	94
4	2108	181	181	10/21/2020	2:28:54 PM	0:00:04	100
7	3016	182	182	10/21/2020	2:28:58 PM	0:00:04	100
7	3017	183	183	10/21/2020	2:29:02 PM	0:00:04	100
4	2109	184	184	10/21/2020	2:29:06 PM	0:00:04	94
7	3018	185	185	10/21/2020	2:29:10 PM	0:00:04	97
7	3019	186	186	10/21/2020	2:29:15 PM	0:00:05	95
2	1001	187	187	10/21/2020	2:29:19 PM	0:00:04	75

7	3020	188	188	10/21/2020	2:29:22 PM	0:00:03	99
7	3021	189	189	10/21/2020	2:29:26 PM	0:00:04	99
7	3022	190	190	10/21/2020	2:29:31 PM	0:00:04	99
7	3023	191	191	10/21/2020	2:29:35 PM	0:00:04	100
7	3024	192	192	10/21/2020	2:29:40 PM	0:00:05	99
4	2110	193	193	10/21/2020	2:29:44 PM	0:00:04	98
7	3025	194	194	10/21/2020	2:29:48 PM	0:00:05	100
4	2111	195	195	10/21/2020	2:29:53 PM	0:00:04	100
7	3026	196	196	10/21/2020	2:29:57 PM	0:00:04	100
7	3027	197	197	10/21/2020	2:30:01 PM	0:00:04	100
7	3028	198	198	10/21/2020	2:30:05 PM	0:00:04	100
2	1002	199	199	10/21/2020	2:30:09 PM	0:00:04	21
2	1003	200	200	10/21/2020	2:30:10 PM	0:00:02	75
2	1004	201	201	10/21/2020	2:30:14 PM	0:00:04	80
4	2112	202	202	10/21/2020	2:30:17 PM	0:00:03	99
4	2113	203	203	10/21/2020	2:30:22 PM	0:00:04	95
4	2114	204	204	10/21/2020	2:30:25 PM	0:00:04	98
4	2115	205	205	10/21/2020	2:30:29 PM	0:00:04	96
4	2116	206	206	10/21/2020	2:30:34 PM	0:00:04	99
4	2117	207	207	10/21/2020	2:30:38 PM	0:00:04	100
4	2118	208	208	10/21/2020	2:30:42 PM	0:00:04	100
4	2119	209	209	10/21/2020	2:30:46 PM	0:00:04	100
4	2120	210	210	10/21/2020	2:30:50 PM	0:00:04	100
4	2121	211	211	10/21/2020	2:30:54 PM	0:00:04	100
4	2122	212	212	10/21/2020	2:30:59 PM	0:00:04	100
4	2123	213	213	10/21/2020	2:31:03 PM	0:00:04	100
2	1005	214	214	10/21/2020	2:31:06 PM	0:00:04	68
2	1006	215	215	10/21/2020	2:31:09 PM	0:00:03	37
2	1007	216	216	10/21/2020	2:31:11 PM	0:00:02	76
2	1008	217	217	10/21/2020	2:31:14 PM	0:00:03	14
10	4059	218	218	10/21/2020	2:31:15 PM	0:00:01	100
10	4060	219	219	10/21/2020	2:31:20 PM	0:00:04	100
10	4061	220	220	10/21/2020	2:31:24 PM	0:00:04	100
10	4062	221	221	10/21/2020	2:31:28 PM	0:00:04	98
10	4063	222	222	10/21/2020	2:31:32 PM	0:00:04	100
10	4064	223	223	10/21/2020	2:31:36 PM	0:00:04	100
10	4065	224	224	10/21/2020	2:31:40 PM	0:00:04	100
10	4066	225	225	10/21/2020	2:31:44 PM	0:00:04	100
10	4067	226	226	10/21/2020	2:31:49 PM	0:00:04	99
10	4068	227	227	10/21/2020	2:31:53 PM	0:00:04	100
10	4069	228	228	10/21/2020	2:31:57 PM	0:00:04	100
10	4070	229	229	10/21/2020	2:32:02 PM	0:00:04	100
10	4071	230	230	10/21/2020	2:32:06 PM	0:00:04	99
10	4072	231	231	10/21/2020	2:32:10 PM	0:00:04	100
10	4073	232	232	10/21/2020	2:32:15 PM	0:00:05	100

10	4074	233	233	10/21/2020	2:32:19 PM	0:00:04	100
10	4075	234	234	10/21/2020	2:32:23 PM	0:00:04	97
10	4076	235	235	10/21/2020	2:32:27 PM	0:00:04	100
10	4077	236	236	10/21/2020	2:32:32 PM	0:00:05	100
10	4078	237	237	10/21/2020	2:32:36 PM	0:00:04	100
10	4079	238	238	10/21/2020	2:32:40 PM	0:00:04	100
10	4080	239	239	10/21/2020	2:32:44 PM	0:00:04	100
10	4081	240	240	10/21/2020	2:32:49 PM	0:00:04	101
10	4082	241	241	10/21/2020	2:32:53 PM	0:00:04	100
10	4083	242	242	10/21/2020	2:32:57 PM	0:00:04	100
10	4084	243	243	10/21/2020	2:33:02 PM	0:00:05	100
10	4085	244	244	10/21/2020	2:33:06 PM	0:00:04	100
10	4086	245	245	10/21/2020	2:33:11 PM	0:00:05	98
10	4087	246	246	10/21/2020	2:33:15 PM	0:00:04	98
10	4088	247	247	10/21/2020	2:33:19 PM	0:00:04	95
10	4089	248	248	10/21/2020	2:33:23 PM	0:00:04	97
10	4090	249	249	10/21/2020	2:33:27 PM	0:00:05	98
10	4091	250	250	10/21/2020	2:33:31 PM	0:00:04	95
10	4092	251	251	10/21/2020	2:33:35 PM	0:00:04	98
10	4093	252	252	10/21/2020	2:33:39 PM	0:00:05	98
10	4094	253	253	10/21/2020	2:33:43 PM	0:00:04	95
10	4095	254	254	10/21/2020	2:33:47 PM	0:00:04	97
10	4096	255	255	10/21/2020	2:33:51 PM	0:00:04	96
10	4097	256	256	10/21/2020	2:33:55 PM	0:00:04	95
10	4098	257	257	10/21/2020	2:33:59 PM	0:00:04	100
10	4099	258	258	10/21/2020	2:34:03 PM	0:00:04	63
10	4100	259	259	10/21/2020	2:34:06 PM	0:00:03	100
7	3029	260	260	10/21/2020	2:34:10 PM	0:00:04	100
7	3030	261	261	10/21/2020	2:34:14 PM	0:00:04	100
7	3031	262	262	10/21/2020	2:34:18 PM	0:00:04	100
7	3032	263	263	10/21/2020	2:34:22 PM	0:00:04	100
7	3033	264	264	10/21/2020	2:34:26 PM	0:00:04	100
7	3034	265	265	10/21/2020	2:34:30 PM	0:00:04	100
7	3035	266	266	10/21/2020	2:34:34 PM	0:00:04	100
7	3036	267	267	10/21/2020	2:34:38 PM	0:00:04	99
7	3037	268	268	10/21/2020	2:34:42 PM	0:00:04	100
7	3038	269	269	10/21/2020	2:39:47 PM	0:05:05	100
7	3039	270	270	10/21/2020	2:45:38 PM	0:05:50	100
7	3040	271	271	10/21/2020	2:48:42 PM	0:03:05	99
7	3041	272	272	10/21/2020	2:51:47 PM	0:03:05	100
7	3042	273	273	10/21/2020	2:55:39 PM	0:03:52	100
7	3043	274	274	10/21/2020	3:03:44 PM	0:08:06	99
7	3044	275	275	10/21/2020	3:08:37 PM	0:04:52	100
7	3045	276	276	10/21/2020	3:15:42 PM	0:07:05	100
7	3046	277	277	10/21/2020	3:25:48 PM	0:10:06	99

7	3047	278	278	10/21/2020	3:30:39 PM	0:04:51	100
7	3048	279	279	10/21/2020	3:33:43 PM	0:03:05	100
7	3049	280	280	10/21/2020	3:39:50 PM	0:06:06	99
7	3050	281	281	10/21/2020	3:42:39 PM	0:02:49	98
7	3051	282	282	10/21/2020	3:45:43 PM	0:03:04	99
7	3052	283	283	10/21/2020	3:49:48 PM	0:04:05	100
7	3053	284	284	10/21/2020	3:52:38 PM	0:02:49	99
7	3054	285	285	10/21/2020	3:56:43 PM	0:04:05	100
7	3055	286	286	10/21/2020	3:58:47 PM	0:02:04	100
4	2124	287	287	10/21/2020	4:06:38 PM	0:07:52	100
4	2125	288	288	10/21/2020	4:08:43 PM	0:02:04	100
4	2126	289	289	10/21/2020	4:11:48 PM	0:03:05	100
4	2127	290	290	10/21/2020	4:19:38 PM	0:07:51	98
4	2128	291	291	10/21/2020	4:23:43 PM	0:04:05	100
4	2129	292	292	10/21/2020	4:27:48 PM	0:04:05	100
4	2130	293	293	10/21/2020	4:30:37 PM	0:02:50	100
4	2131	294	294	10/21/2020	4:35:42 PM	0:05:05	99
4	2132	295	295	10/21/2020	4:39:47 PM	0:04:05	100
4	2133	296	296	10/21/2020	4:44:37 PM	0:04:50	99
4	2134	297	297	10/21/2020	4:47:42 PM	0:03:05	99
4	2135	298	298	10/21/2020	4:51:47 PM	0:04:05	100
4	2136	299	299	10/21/2020	4:55:38 PM	0:03:51	100
4	2137	300	300	10/21/2020	5:00:42 PM	0:05:05	100
4	2138	301	301	10/21/2020	5:03:47 PM	0:03:04	100
4	2139	302	302	10/21/2020	5:06:36 PM	0:02:50	100
4	2140	303	303	10/21/2020	5:09:41 PM	0:03:04	98
4	2141	304	304	10/21/2020	5:12:45 PM	0:03:05	100
4	2142	305	305	10/21/2020	5:17:36 PM	0:04:50	100
4	2143	306	306	10/21/2020	5:24:41 PM	0:07:05	99
10	4101	307	307	10/22/2020	8:33:49 AM		100
10	4102	308	308	10/22/2020	8:41:55 AM	0:08:06	96
10	4103	309	309	10/22/2020	8:49:45 AM	0:07:50	98
4	2144	310	310	10/22/2020	8:50:50 AM	0:01:05	100
4	2145	311	311	10/22/2020	8:53:41 AM	0:02:51	100
10	4104	312	312	10/22/2020	8:56:45 AM	0:03:05	100
4	2146	313	313	10/22/2020	9:01:50 AM	0:05:05	99
4	2147	314	314	10/22/2020	9:08:43 AM	0:06:53	96
4	2148	315	315	10/22/2020	9:13:48 AM	0:05:05	100
10	4105	316	316	10/22/2020	9:14:52 AM	0:01:04	100
10	4106	317	317	10/22/2020	9:20:43 AM	0:05:51	100
4	2149	318	318	10/22/2020	9:21:47 AM	0:01:04	96
10	4107	319	319	10/22/2020	9:24:52 AM	0:03:04	100
4	2150	320	320	10/22/2020	9:29:41 AM	0:04:50	99
10	4108	321	321	10/22/2020	9:30:46 AM	0:01:04	100
4	2151	322	322	10/22/2020	9:32:50 AM	0:02:04	100

10	4109	323	323	10/22/2020	9:35:54 AM	0:03:05	100
4	2152	324	324	10/22/2020	9:39:44 AM	0:03:50	100
10	4110	325	325	10/22/2020	9:40:48 AM	0:01:04	100
4	2153	326	326	10/22/2020	9:43:53 AM	0:03:05	100
10	4111	327	327	10/22/2020	9:44:42 AM	0:00:50	100
4	2154	328	328	10/22/2020	9:46:47 AM	0:02:04	100
10	4112	329	329	10/22/2020	9:48:51 AM	0:02:04	100
4	2155	330	330	10/22/2020	9:52:41 AM	0:03:50	100
10	4113	331	331	10/22/2020	9:52:59 AM	0:00:18	100
4	2156	332	332	10/22/2020	9:55:48 AM	0:02:49	99
10	4114	333	333	10/22/2020	9:56:52 AM	0:01:04	100
4	2157	334	334	10/22/2020	9:58:41 AM	0:01:49	100
10	4115	335	335	10/22/2020	10:00:46 AM	0:02:04	100
4	2158	336	336	10/22/2020	10:01:50 AM	0:01:05	100
4	2159	337	337	10/22/2020	10:04:42 AM	0:02:52	100
4	2160	338	338	10/22/2020	10:09:47 AM	0:05:05	100
4	2161	339	339	10/22/2020	10:12:52 AM	0:03:05	100
4	2162	340	340	10/22/2020	10:15:42 AM	0:02:51	100
10	4116	341	341	10/22/2020	10:18:47 AM	0:03:05	99
4	2163	342	342	10/22/2020	10:20:51 AM	0:02:04	100
10	4117	343	343	10/22/2020	10:20:55 AM	0:00:04	100
10	4118	344	344	10/22/2020	10:24:45 AM	0:03:50	100
10	4119	345	345	10/22/2020	10:28:50 AM	0:04:05	100
4	2164	346	346	10/22/2020	10:31:54 AM	0:03:04	99
10	4120	347	347	10/22/2020	10:32:42 AM	0:00:48	100
10	4121	348	348	10/22/2020	10:36:46 AM	0:04:04	100
4	2165	349	349	10/22/2020	10:37:50 AM	0:01:04	92
10	4122	350	350	10/22/2020	10:41:42 AM	0:03:51	100
4	2166	351	351	10/22/2020	10:44:46 AM	0:03:05	95
10	4123	352	352	10/22/2020	10:46:51 AM	0:02:04	100
4	2167	353	353	10/22/2020	10:52:40 AM	0:05:50	46
4	2168	354	354	10/22/2020	10:57:44 AM	0:05:04	65
4	2169	355	355	10/22/2020	11:08:49 AM	0:11:05	85
4	2170	356	356	10/22/2020	11:09:53 AM	0:01:04	85
4	2171	357	357	10/22/2020	11:11:42 AM	0:01:49	78
2	1009	358	358	10/22/2020	11:21:47 AM	0:10:05	26
2	1010	359	359	10/22/2020	11:22:48 AM	0:01:02	66
2	1011	360	360	10/22/2020	11:26:52 AM	0:04:04	100
2	1012	361	361	10/22/2020	11:28:41 AM	0:01:49	31
4	2172	362	362	10/22/2020	12:22:41 PM	0:54:01	60
4	2173	363	363	10/22/2020	3:01:48 PM	2:39:07	100
4	2174	364	364	10/22/2020	3:07:53 PM	0:06:05	99
4	2175	365	365	10/22/2020	3:12:43 PM	0:04:50	100
4	2176	366	366	10/22/2020	3:16:48 PM	0:04:05	100
4	2177	367	367	10/22/2020	3:18:53 PM	0:02:04	100

4	2178	368	368	10/22/2020	3:21:44 PM	0:02:51	100
4	2179	369	369	10/22/2020	3:26:49 PM	0:05:05	100
4	2180	370	370	10/22/2020	3:31:54 PM	0:05:05	100
4	2181	371	371	10/22/2020	3:37:44 PM	0:05:51	99
4	2182	372	372	10/22/2020	3:40:49 PM	0:03:05	100
4	2183	373	373	10/22/2020	3:43:54 PM	0:03:05	100
4	2184	374	374	10/22/2020	3:46:44 PM	0:02:50	100
10	4124	375	375	10/22/2020	4:19:55 PM	0:33:11	99
10	4125	376	376	10/22/2020	4:35:48 PM	0:15:53	85
10	4126	377	377	10/22/2020	4:37:52 PM	0:02:04	87
10	4127	378	378	10/22/2020	4:39:56 PM	0:02:04	100
10	4128	379	379	10/22/2020	4:42:45 PM	0:02:50	100
10	4129	380	380	10/22/2020	4:45:50 PM	0:03:04	100
10	4130	381	381	10/22/2020	4:48:54 PM	0:03:05	100
10	4131	382	382	10/22/2020	4:54:45 PM	0:05:51	100
10	4132	383	383	10/22/2020	4:57:49 PM	0:03:05	100
4	2185	384	384	10/22/2020	5:03:54 PM	0:06:05	98
4	2186	385	385	10/22/2020	5:06:44 PM	0:02:50	100
4	2187	386	386	10/22/2020	5:13:50 PM	0:07:05	100
4	2188	387	387	10/22/2020	5:18:55 PM	0:05:05	100
4	2189	388	388	10/22/2020	5:21:45 PM	0:02:50	100
4	2190	389	389	10/22/2020	5:24:50 PM	0:03:05	100
4	2191	390	390	10/22/2020	5:31:55 PM	0:07:05	99
4	2192	391	391	10/22/2020	5:36:45 PM	0:04:50	88
4	2193	392	392	10/22/2020	5:40:49 PM	0:04:04	100
4	2194	393	393	10/22/2020	5:43:54 PM	0:03:05	100
4	2195	394	394	10/22/2020	5:46:44 PM	0:02:50	100
4	2196	395	395	10/22/2020	5:49:48 PM	0:03:05	100
4	2197	396	396	10/22/2020	6:01:54 PM	0:12:06	24
4	2198	397	397	10/26/2020	10:25:50 AM		100
4	2199	398	398	10/26/2020	10:27:54 AM	0:02:04	100
4	2200	399	399	10/26/2020	10:30:45 AM	0:02:51	100
10	4133	400	400	10/26/2020	10:32:49 AM	0:02:04	99
4	2201	401	401	10/26/2020	10:33:54 AM	0:01:05	100
10	4134	402	402	10/26/2020	10:36:44 AM	0:02:49	99
4	2202	403	403	10/26/2020	10:37:48 AM	0:01:04	99
10	4135	404	404	10/26/2020	10:40:52 AM	0:03:05	100
4	2203	405	405	10/26/2020	10:43:42 AM	0:02:50	100
10	4136	406	406	10/26/2020	10:44:46 AM	0:01:04	100
4	2204	407	407	10/26/2020	10:46:51 AM	0:02:04	100
10	4137	408	408	10/26/2020	10:48:41 AM	0:01:50	100
4	2205	409	409	10/26/2020	10:49:45 AM	0:01:04	100
10	4138	410	410	10/26/2020	10:51:50 AM	0:02:04	100
2	1013	411	411	10/26/2020	10:53:40 AM	0:01:50	66
10	4139	412	412	10/26/2020	10:55:44 AM	0:02:04	100

2	1014	413	413	10/26/2020	10:58:48 AM	0:03:04	59
10	4140	414	414	10/26/2020	10:58:51 AM	0:00:02	55
2	1015	415	415	10/26/2020	11:02:40 AM	0:03:49	57
2	1016	416	416	10/26/2020	11:04:44 AM	0:02:03	87
2	1017	417	417	10/26/2020	11:06:48 AM	0:02:04	95
2	1018	418	418	10/26/2020	11:09:52 AM	0:03:04	97
2	1019	419	419	10/26/2020	11:12:41 AM	0:02:49	43
10	4141	420	420	10/26/2020	1:13:55 PM	2:01:14	99
10	4142	421	421	10/26/2020	1:17:45 PM	0:03:50	99
10	4143	422	422	10/26/2020	1:24:50 PM	0:07:05	100
10	4144	423	423	10/26/2020	1:28:55 PM	0:04:05	100
10	4145	424	424	10/26/2020	1:31:44 PM	0:02:50	100
10	4146	425	425	10/26/2020	1:34:49 PM	0:03:05	100
10	4147	426	426	10/26/2020	1:41:54 PM	0:07:05	100
4	2206	427	427	10/26/2020	1:42:45 PM	0:00:51	98
10	4148	428	428	10/26/2020	1:45:50 PM	0:03:04	99
10	4149	429	429	10/26/2020	1:49:54 PM	0:04:05	100
10	4150	430	430	10/26/2020	1:53:44 PM	0:03:50	99
4	2207	431	431	10/26/2020	1:56:49 PM	0:03:05	99
4	2208	432	432	10/26/2020	1:59:53 PM	0:03:05	100
4	2209	433	433	10/26/2020	2:02:43 PM	0:02:50	99
4	2210	434	434	10/26/2020	2:05:49 PM	0:03:05	100
4	2211	435	435	10/26/2020	2:08:53 PM	0:03:05	100
10	4151	436	436	10/26/2020	2:27:47 PM	0:18:54	100
10	4152	437	437	10/26/2020	2:30:51 PM	0:03:05	99
10	4153	438	438	10/26/2020	2:34:44 PM	0:03:53	100
10	4154	439	439	10/26/2020	2:38:49 PM	0:04:05	99
10	4155	440	440	10/26/2020	2:41:53 PM	0:03:05	100
10	4156	441	441	10/26/2020	2:50:44 PM	0:08:51	96
10	4157	442	442	10/26/2020	2:53:49 PM	0:03:04	100
10	4158	443	443	10/26/2020	2:56:55 PM	0:03:07	100
10	4159	444	444	10/26/2020	3:00:46 PM	0:03:50	100
10	4160	445	445	10/26/2020	3:03:50 PM	0:03:05	100
7	3056	446	446	10/26/2020	3:12:56 PM	0:09:06	100
4	2212	447	447	10/26/2020	3:13:45 PM	0:00:49	99
7	3057	448	448	10/26/2020	3:15:50 PM	0:02:04	100
4	2213	449	449	10/26/2020	3:16:54 PM	0:01:04	100
4	2214	450	450	10/26/2020	3:19:43 PM	0:02:49	37
4	2215	451	451	10/26/2020	3:26:47 PM	0:07:04	99
4	2216	452	452	10/26/2020	4:40:52 PM	1:14:05	100
4	2217	453	453	10/26/2020	4:44:57 PM	0:04:05	100
4	2218	454	454	10/26/2020	4:48:46 PM	0:03:50	99
4	2219	455	455	10/26/2020	4:52:51 PM	0:04:05	100
4	2220	456	456	10/26/2020	4:54:56 PM	0:02:04	100
4	2221	457	457	10/26/2020	4:59:45 PM	0:04:50	100

4	2222	458	458	10/26/2020	5:03:50 PM	0:04:05	100
4	2223	459	459	10/26/2020	5:06:55 PM	0:03:05	100
4	2224	460	460	10/26/2020	5:09:45 PM	0:02:50	100
4	2225	461	461	10/26/2020	5:12:49 PM	0:03:05	100
4	2226	462	462	10/26/2020	5:15:54 PM	0:03:04	98
4	2227	463	463	10/26/2020	5:21:44 PM	0:05:50	100
4	2228	464	464	10/26/2020	5:30:50 PM	0:09:06	100
4	2229	465	465	10/27/2020	12:58:54 PM		100
4	2230	466	466	10/27/2020	1:04:00 PM	0:05:05	98
10	4161	467	467	10/27/2020	1:06:04 PM	0:02:04	100
4	2231	468	468	10/27/2020	1:07:53 PM	0:01:49	100
10	4162	469	469	10/27/2020	1:08:58 PM	0:01:05	100
4	2232	470	470	10/27/2020	1:12:02 PM	0:03:05	100
10	4163	471	471	10/27/2020	1:12:52 PM	0:00:49	99
4	2233	472	472	10/27/2020	1:14:56 PM	0:02:04	100
10	4164	473	473	10/27/2020	1:16:00 PM	0:01:04	82
4	2234	474	474	10/27/2020	1:19:04 PM	0:03:04	100
10	4165	475	475	10/27/2020	1:19:53 PM	0:00:49	99
4	2235	476	476	10/27/2020	1:21:57 PM	0:02:04	100
10	4166	477	477	10/27/2020	1:23:02 PM	0:01:04	100
4	2236	478	478	10/27/2020	1:24:51 PM	0:01:49	99
2	1020	479	479	10/27/2020	1:30:56 PM	0:06:06	84
2	1021	480	480	10/27/2020	1:35:00 PM	0:04:04	34
2	1022	481	481	10/27/2020	1:38:03 PM	0:03:02	74
2	1023	482	482	10/27/2020	1:38:51 PM	0:00:49	71
4	2237	483	483	10/27/2020	1:49:57 PM	0:11:05	100
4	2238	484	484	10/27/2020	1:53:01 PM	0:03:05	100
4	2239	485	485	10/27/2020	1:55:52 PM	0:02:50	100
4	2240	486	486	10/27/2020	2:01:57 PM	0:06:06	98
4	2241	487	487	10/27/2020	2:06:02 PM	0:04:05	100
4	2242	488	488	10/27/2020	2:07:51 PM	0:01:49	100
4	2243	489	489	10/27/2020	2:14:57 PM	0:07:05	100
4	2244	490	490	10/27/2020	2:18:01 PM	0:03:05	100
4	2245	491	491	10/27/2020	2:20:51 PM	0:02:50	100
4	2246	492	492	10/27/2020	2:24:56 PM	0:04:05	100
4	2247	493	493	10/27/2020	2:29:01 PM	0:04:05	96
10	4167	494	494	10/27/2020	2:29:50 PM	0:00:49	68
4	2248	495	495	10/27/2020	2:30:53 PM	0:01:03	99
10	4168	496	496	10/27/2020	2:31:57 PM	0:01:04	100
4	2249	497	497	10/27/2020	2:35:02 PM	0:03:05	100
10	4169	498	498	10/27/2020	2:35:06 PM	0:00:04	100
4	2250	499	499	10/27/2020	2:38:56 PM	0:03:50	100
10	4170	500	500	10/27/2020	2:41:00 PM	0:02:04	99
4	2251	501	501	10/27/2020	2:42:04 PM	0:01:04	100
10	4171	502	502	10/27/2020	2:44:53 PM	0:02:50	100

4	2252	503	503	10/27/2020	2:45:58 PM	0:01:04	100
10	4172	504	504	10/27/2020	2:48:02 PM	0:02:04	100
4	2253	505	505	10/27/2020	2:49:53 PM	0:01:51	100
4	2254	506	506	10/27/2020	2:54:58 PM	0:05:05	98
4	2255	507	507	10/27/2020	2:59:02 PM	0:04:05	100
4	2256	508	508	10/27/2020	3:01:52 PM	0:02:50	100
4	2257	509	509	10/27/2020	3:08:57 PM	0:07:05	100
4	2258	510	510	10/27/2020	3:16:03 PM	0:07:05	100
4	2259	511	511	10/27/2020	3:22:54 PM	0:06:51	100
4	2260	512	512	10/27/2020	3:25:58 PM	0:03:05	100
4	2261	513	513	10/27/2020	3:30:03 PM	0:04:05	100
10	4173	514	514	10/27/2020	3:31:52 PM	0:01:49	100
10	4174	515	515	10/27/2020	3:37:58 PM	0:06:05	99
4	2262	516	516	10/27/2020	3:39:02 PM	0:01:04	100
4	2263	517	517	10/27/2020	3:44:53 PM	0:05:51	100
10	4175	518	518	10/27/2020	3:45:11 PM	0:00:19	100
10	4176	519	519	10/27/2020	4:06:05 PM	0:20:53	98
10	4177	520	520	10/27/2020	4:09:54 PM	0:03:50	98
10	4178	521	521	10/27/2020	4:13:59 PM	0:04:05	100
10	4179	522	522	10/27/2020	4:18:04 PM	0:04:05	100
10	4180	523	523	10/27/2020	4:21:54 PM	0:03:50	100
10	4181	524	524	10/27/2020	4:25:59 PM	0:04:05	100
4	2264	525	525	10/27/2020	4:27:02 PM	0:01:04	100
10	4182	526	526	10/27/2020	4:28:52 PM	0:01:49	100
4	2265	527	527	10/27/2020	4:29:56 PM	0:01:04	100
10	4183	528	528	10/27/2020	4:32:00 PM	0:02:04	100
4	2266	529	529	10/27/2020	4:32:52 PM	0:00:52	100
10	4184	530	530	10/27/2020	4:35:57 PM	0:03:05	98
4	2267	531	531	10/27/2020	4:42:02 PM	0:06:05	99
4	2268	532	532	10/27/2020	4:49:53 PM	0:07:51	99
4	2269	533	533	10/27/2020	4:54:58 PM	0:05:05	90
2	1024	534	534	10/27/2020	6:54:58 PM	2:00:00	57
7	3058	535	535	10/27/2020	7:01:02 PM	0:06:04	99
4	2270	536	536	10/28/2020	2:03:04 PM		10
4	2271	537	537	10/29/2020	12:58:08 PM		100
4	2272	538	538	10/29/2020	1:01:13 PM	0:03:05	100
4	2273	539	539	10/29/2020	1:08:05 PM	0:06:52	100
4	2274	540	540	10/29/2020	1:12:10 PM	0:04:05	100
4	2275	541	541	10/29/2020	1:17:00 PM	0:04:50	98
4	2276	542	542	10/29/2020	1:21:05 PM	0:04:05	100
4	2277	543	543	10/29/2020	1:24:09 PM	0:03:04	100
4	2278	544	544	10/29/2020	1:30:01 PM	0:05:52	100
4	2279	545	545	10/29/2020	1:36:06 PM	0:06:05	100
4	2280	546	546	10/29/2020	1:40:11 PM	0:04:05	99
4	2281	547	547	10/29/2020	1:44:02 PM	0:03:51	100

4	2282	548	548	10/29/2020	1:48:06 PM	0:04:05	99
4	2283	549	549	10/29/2020	1:54:11 PM	0:06:05	100
4	2284	550	550	10/29/2020	1:56:02 PM	0:01:51	100
4	2285	551	551	10/29/2020	1:59:07 PM	0:03:05	100
4	2286	552	552	10/29/2020	2:02:12 PM	0:03:05	100
4	2287	553	553	10/29/2020	2:09:03 PM	0:06:51	100
4	2288	554	554	10/29/2020	2:13:08 PM	0:04:05	100
4	2289	555	555	10/29/2020	2:19:12 PM	0:06:05	100
4	2290	556	556	10/29/2020	2:22:02 PM	0:02:50	100
4	2291	557	557	10/29/2020	2:25:07 PM	0:03:05	100
4	2292	558	558	10/29/2020	2:36:13 PM	0:11:06	100
4	2293	559	559	10/29/2020	2:38:04 PM	0:01:51	100
4	2294	560	560	10/29/2020	2:40:09 PM	0:02:04	100
4	2295	561	561	10/29/2020	2:45:13 PM	0:05:05	97
4	2296	562	562	10/29/2020	2:49:03 PM	0:03:50	99
4	2297	563	563	10/29/2020	2:51:07 PM	0:02:04	100
4	2298	564	564	10/29/2020	2:54:14 PM	0:03:06	100
4	2299	565	565	10/29/2020	2:57:03 PM	0:02:50	100
4	2300	566	566	10/29/2020	3:00:08 PM	0:03:05	100
2	1025	567	567	10/29/2020	3:16:15 PM	0:16:07	72
2	1026	568	568	10/29/2020	3:17:03 PM	0:00:48	61
2	1027	569	569	10/29/2020	3:23:07 PM	0:06:04	83
2	1028	570	570	10/29/2020	3:25:11 PM	0:02:04	82
2	1029	571	571	10/29/2020	3:27:14 PM	0:02:04	59
2	1030	572	572	10/29/2020	3:33:03 PM	0:05:49	82
2	1031	573	573	10/29/2020	3:34:07 PM	0:01:03	81
2	1032	574	574	10/29/2020	3:35:10 PM	0:01:03	76
2	1033	575	575	10/29/2020	3:37:13 PM	0:02:04	73
2	1034	576	576	10/29/2020	3:41:02 PM	0:03:49	52
4	2301	577	577	10/29/2020	3:45:05 PM	0:04:03	100
4	2302	578	578	10/29/2020	3:48:10 PM	0:03:04	99
4	2303	579	579	10/29/2020	3:52:14 PM	0:04:05	100
4	2304	580	580	10/29/2020	3:55:04 PM	0:02:49	100
4	2305	581	581	10/29/2020	3:59:09 PM	0:04:05	99
4	2306	582	582	10/29/2020	4:04:13 PM	0:05:05	99
4	2307	583	583	10/29/2020	4:07:03 PM	0:02:50	100
4	2308	584	584	10/29/2020	4:11:08 PM	0:04:05	100
4	2309	585	585	10/29/2020	4:13:12 PM	0:02:04	100
4	2310	586	586	10/29/2020	4:17:03 PM	0:03:50	98
4	2311	587	587	10/29/2020	4:20:07 PM	0:03:04	100
4	2312	588	588	10/29/2020	4:23:12 PM	0:03:05	100
4	2313	589	589	10/29/2020	4:26:04 PM	0:02:52	99
4	2314	590	590	10/29/2020	4:32:09 PM	0:06:05	98
4	2315	591	591	10/29/2020	4:38:14 PM	0:06:05	100
4	2316	592	592	10/29/2020	4:41:04 PM	0:02:50	100

4	2317	593	593	10/29/2020	4:49:10 PM	0:08:06	100
4	2318	594	594	10/29/2020	4:52:14 PM	0:03:05	99
4	2319	595	595	10/29/2020	4:56:04 PM	0:03:50	100
4	2320	596	596	10/29/2020	4:59:09 PM	0:03:05	99
4	2321	597	597	10/29/2020	5:01:13 PM	0:02:04	100
4	2322	598	598	10/29/2020	5:07:05 PM	0:05:52	99
4	2323	599	599	10/29/2020	5:11:09 PM	0:04:05	99
4	2324	600	600	10/29/2020	5:14:14 PM	0:03:05	100
4	2325	601	601	10/29/2020	5:16:03 PM	0:01:49	100
4	2326	602	602	10/29/2020	5:20:08 PM	0:04:05	100
4	2327	603	603	10/29/2020	5:22:13 PM	0:02:04	100
4	2328	604	604	10/29/2020	5:25:04 PM	0:02:51	100
4	2329	605	605	10/29/2020	5:30:09 PM	0:05:05	100
7	3059	606	606	10/30/2020	12:37:26 PM		97
7	3060	607	607	10/30/2020	12:41:16 PM	0:03:50	100
7	3061	608	608	10/30/2020	12:45:20 PM	0:04:05	100
7	3062	609	609	10/30/2020	12:50:11 PM	0:04:51	100
7	3063	610	610	10/30/2020	12:55:16 PM	0:05:05	99
10	4185	611	611	10/30/2020	1:16:25 PM	0:21:08	100
10	4186	612	612	10/30/2020	1:20:14 PM	0:03:50	100
10	4187	613	613	10/30/2020	1:23:19 PM	0:03:05	100
10	4188	614	614	10/30/2020	1:27:24 PM	0:04:05	99
10	4189	615	615	10/30/2020	1:30:13 PM	0:02:49	100
10	4190	616	616	10/30/2020	1:37:19 PM	0:07:05	100
10	4191	617	617	10/30/2020	1:40:23 PM	0:03:05	100
10	4192	618	618	10/30/2020	1:43:13 PM	0:02:50	100
10	4193	619	619	10/30/2020	1:48:18 PM	0:05:05	100
10	4194	620	620	10/30/2020	1:51:23 PM	0:03:05	100
10	4195	621	621	10/30/2020	1:54:12 PM	0:02:50	100
10	4196	622	622	10/30/2020	2:04:18 PM	0:10:06	99
10	4197	623	623	10/30/2020	2:07:23 PM	0:03:05	100
10	4198	624	624	10/30/2020	2:13:13 PM	0:05:50	100
10	4199	625	625	10/30/2020	2:22:19 PM	0:09:06	96
10	4200	626	626	10/30/2020	2:25:23 PM	0:03:04	100
10	4201	627	627	10/30/2020	2:28:13 PM	0:02:50	100
10	4202	628	628	10/30/2020	2:31:17 PM	0:03:05	100
10	4203	629	629	10/30/2020	2:34:22 PM	0:03:05	100
10	4204	630	630	10/30/2020	2:41:13 PM	0:06:51	98
10	4205	631	631	10/30/2020	2:44:17 PM	0:03:05	100
10	4206	632	632	10/30/2020	2:47:22 PM	0:03:05	100
10	4207	633	633	10/30/2020	2:51:11 PM	0:03:50	100
10	4208	634	634	10/30/2020	2:54:16 PM	0:03:05	100
10	4209	635	635	10/30/2020	2:57:21 PM	0:03:05	100
10	4210	636	636	10/30/2020	3:00:12 PM	0:02:51	100
10	4211	637	637	10/30/2020	3:03:17 PM	0:03:04	100

10	4212	638	638	10/30/2020	3:06:21 PM	0:03:05	100
2	1035	639	639	10/30/2020	3:09:11 PM	0:02:50	96
10	4213	640	640	10/30/2020	3:09:30 PM	0:00:18	100
2	1036	641	641	10/30/2020	3:11:19 PM	0:01:49	79
10	4214	642	642	10/30/2020	3:12:22 PM	0:01:04	100
2	1037	643	643	10/30/2020	3:14:12 PM	0:01:49	82
2	1038	644	644	10/30/2020	3:16:15 PM	0:02:03	69
2	1039	645	645	10/30/2020	3:18:18 PM	0:02:03	34
4	2330	646	646	10/30/2020	3:25:22 PM	0:07:03	100
10	4215	647	647	10/30/2020	3:27:12 PM	0:01:50	93
4	2331	648	648	10/30/2020	3:30:16 PM	0:03:04	98
10	4216	649	649	10/30/2020	3:35:23 PM	0:05:07	100
4	2332	650	650	10/30/2020	3:38:13 PM	0:02:49	100
10	4217	651	651	10/30/2020	3:38:31 PM	0:00:18	100
4	2333	652	652	10/30/2020	3:47:22 PM	0:08:51	100
10	4218	653	653	10/30/2020	3:48:11 PM	0:00:49	100
4	2334	654	654	10/30/2020	3:51:16 PM	0:03:04	100
10	4219	655	655	10/30/2020	3:53:20 PM	0:02:05	70
4	2335	656	656	10/30/2020	3:55:24 PM	0:02:03	100
10	4220	657	657	10/30/2020	3:57:13 PM	0:01:49	100
4	2336	658	658	10/30/2020	3:59:17 PM	0:02:04	99
10	4221	659	659	10/30/2020	4:00:21 PM	0:01:04	100
10	4222	660	660	10/30/2020	4:03:11 PM	0:02:50	100
4	2337	661	661	10/30/2020	4:04:15 PM	0:01:04	99
10	4223	662	662	10/30/2020	4:07:20 PM	0:03:05	100
10	4224	663	663	10/30/2020	4:10:25 PM	0:03:05	100
4	2338	664	664	10/30/2020	4:11:14 PM	0:00:49	100
4	2339	665	665	10/30/2020	4:17:19 PM	0:06:05	99
4	2340	666	666	10/30/2020	4:22:24 PM	0:05:05	100
4	2341	667	667	10/30/2020	4:27:14 PM	0:04:50	84
4	2342	668	668	10/30/2020	4:32:18 PM	0:05:04	75
4	2343	669	669	10/30/2020	4:37:22 PM	0:05:04	68
10	4225	670	670	11/1/2020	1:56:35 PM		100
10	4226	671	671	11/1/2020	1:59:40 PM	0:03:05	100
10	4227	672	672	11/1/2020	2:01:29 PM	0:01:49	100
10	4228	673	673	11/1/2020	2:04:34 PM	0:03:05	100
10	4229	674	674	11/1/2020	2:09:39 PM	0:05:05	100
10	4230	675	675	11/1/2020	2:12:43 PM	0:03:05	100
10	4231	676	676	11/1/2020	2:17:33 PM	0:04:50	100
10	4232	677	677	11/1/2020	2:22:38 PM	0:05:05	99
10	4233	678	678	11/1/2020	2:26:43 PM	0:04:05	99
10	4234	679	679	11/1/2020	2:29:32 PM	0:02:49	100
10	4235	680	680	11/1/2020	2:32:37 PM	0:03:05	99
10	4236	681	681	11/1/2020	2:35:41 PM	0:03:05	100
10	4237	682	682	11/1/2020	2:38:31 PM	0:02:49	100

10	4238	683	683	11/1/2020	2:44:36 PM	0:06:05	100
10	4239	684	684	11/1/2020	2:51:42 PM	0:07:05	97
10	4240	685	685	11/1/2020	2:54:31 PM	0:02:49	100
10	4241	686	686	11/1/2020	2:57:36 PM	0:03:05	100
10	4242	687	687	11/1/2020	3:00:40 PM	0:03:05	99
10	4243	688	688	11/1/2020	3:05:31 PM	0:04:51	100
10	4244	689	689	11/1/2020	3:07:35 PM	0:02:04	100
7	3064	690	690	11/1/2020	3:14:42 PM	0:07:07	100
7	3065	691	691	11/1/2020	3:17:32 PM	0:02:50	100
7	3066	692	692	11/1/2020	3:20:36 PM	0:03:05	100
7	3067	693	693	11/1/2020	3:24:41 PM	0:04:05	100
10	4245	694	694	11/1/2020	3:35:32 PM	0:10:51	100
10	4246	695	695	11/1/2020	3:38:37 PM	0:03:05	100
10	4247	696	696	11/1/2020	3:41:41 PM	0:03:05	100
10	4248	697	697	11/1/2020	3:45:31 PM	0:03:50	99
10	4249	698	698	11/1/2020	3:49:36 PM	0:04:05	99
10	4250	699	699	11/1/2020	3:51:40 PM	0:02:04	100
10	4251	700	700	11/1/2020	3:54:30 PM	0:02:50	100
10	4252	701	701	11/1/2020	3:57:35 PM	0:03:05	100
10	4253	702	702	11/1/2020	4:00:39 PM	0:03:05	100
10	4254	703	703	11/1/2020	4:02:44 PM	0:02:04	100
10	4255	704	704	11/1/2020	4:05:33 PM	0:02:49	100
10	4256	705	705	11/1/2020	4:12:39 PM	0:07:05	100
10	4257	706	706	11/1/2020	4:15:43 PM	0:03:05	100
10	4258	707	707	11/1/2020	4:19:33 PM	0:03:50	100
10	4259	708	708	11/1/2020	4:24:38 PM	0:05:05	100
4	2344	709	709	11/1/2020	4:27:42 PM	0:03:04	70
10	4260	710	710	11/1/2020	4:27:45 PM	0:00:03	100
10	4261	711	711	11/1/2020	4:30:35 PM	0:02:50	100
4	2345	712	712	11/1/2020	4:32:39 PM	0:02:04	100
10	4262	713	713	11/1/2020	4:33:43 PM	0:01:04	100
10	4263	714	714	11/1/2020	4:36:33 PM	0:02:50	100
10	4264	715	715	11/1/2020	4:38:37 PM	0:02:04	99
10	4265	716	716	11/1/2020	4:42:42 PM	0:04:05	100
4	2346	717	717	11/1/2020	4:45:31 PM	0:02:49	99
10	4266	718	718	11/1/2020	4:46:36 PM	0:01:04	100
4	2347	719	719	11/1/2020	4:48:39 PM	0:02:04	22
10	4267	720	720	11/1/2020	4:51:42 PM	0:03:02	100
10	4268	721	721	11/1/2020	4:54:31 PM	0:02:50	100
2	1040	722	722	11/2/2020	3:06:33 PM		94
2	1041	723	723	11/2/2020	3:06:36 PM	0:00:03	91
2	1042	724	724	11/2/2020	3:06:39 PM	0:00:03	77
2	1043	725	725	11/2/2020	3:06:58 PM	0:00:19	75
2	1044	726	726	11/2/2020	3:07:01 PM	0:00:03	83
2	1045	727	727	11/2/2020	3:07:04 PM	0:00:03	80

2	1046	728	728	11/2/2020	3:07:07 PM	0:00:03	72
2	1047	729	729	11/2/2020	3:07:10 PM	0:00:03	75
2	1048	730	730	11/2/2020	3:07:13 PM	0:00:03	36
2	1049	731	731	11/2/2020	3:07:14 PM	0:00:02	51
2	1050	732	732	11/2/2020	3:07:17 PM	0:00:02	55
2	1051	733	733	11/2/2020	3:07:19 PM	0:00:02	35
2	1052	734	734	11/2/2020	3:07:21 PM	0:00:02	61
2	1053	735	735	11/2/2020	3:07:23 PM	0:00:03	64
2	1054	736	736	11/2/2020	3:07:26 PM	0:00:03	53
2	1055	737	737	11/2/2020	3:07:29 PM	0:00:03	55
2	1056	738	738	11/2/2020	3:07:47 PM	0:00:18	98
10	4269	739	739	11/2/2020	3:07:51 PM	0:00:04	99
2	1057	740	740	11/2/2020	3:08:26 PM	0:00:35	97
10	4270	741	741	11/2/2020	3:08:45 PM	0:00:19	100
2	1058	742	742	11/2/2020	3:10:34 PM	0:01:49	97
2	1059	743	743	11/2/2020	3:12:23 PM	0:01:49	32
10	4271	744	744	11/2/2020	3:13:26 PM	0:01:03	100
2	1060	745	745	11/2/2020	3:17:30 PM	0:04:05	61
2	1061	746	746	11/2/2020	3:19:33 PM	0:02:03	62
2	1062	747	747	11/2/2020	3:20:36 PM	0:01:03	30
10	4272	748	748	11/2/2020	3:22:38 PM	0:02:02	98
10	4273	749	749	11/2/2020	3:26:28 PM	0:03:50	100
4	2348	750	750	11/2/2020	3:28:32 PM	0:02:04	99
10	4274	751	751	11/2/2020	3:29:36 PM	0:01:04	100
4	2349	752	752	11/2/2020	3:31:26 PM	0:01:50	100
10	4275	753	753	11/2/2020	3:32:31 PM	0:01:04	100
4	2350	754	754	11/2/2020	3:34:35 PM	0:02:04	100
4	2351	755	755	11/2/2020	3:36:26 PM	0:01:51	100
10	4276	756	756	11/2/2020	3:37:31 PM	0:01:04	99
4	2352	757	757	11/2/2020	3:40:35 PM	0:03:05	100
10	4277	758	758	11/2/2020	3:40:39 PM	0:00:04	100
4	2353	759	759	11/2/2020	3:44:29 PM	0:03:50	100
10	4278	760	760	11/2/2020	3:45:33 PM	0:01:04	100
4	2354	761	761	11/2/2020	3:50:25 PM	0:04:51	100
10	4279	762	762	11/2/2020	3:50:45 PM	0:00:20	99
10	4280	763	763	11/2/2020	3:54:34 PM	0:03:50	100
4	2355	764	764	11/2/2020	3:55:39 PM	0:01:04	100
4	2356	765	765	11/2/2020	3:58:28 PM	0:02:49	100
10	4281	766	766	11/2/2020	3:59:32 PM	0:01:04	99
4	2357	767	767	11/2/2020	4:02:37 PM	0:03:05	100
10	4282	768	768	11/2/2020	4:02:41 PM	0:00:04	100
10	4283	769	769	11/2/2020	4:05:30 PM	0:02:50	98
4	2358	770	770	11/2/2020	4:06:34 PM	0:01:04	100
10	4284	771	771	11/2/2020	4:12:27 PM	0:05:52	100
10	4285	772	772	11/2/2020	4:14:31 PM	0:02:04	100

10	4286	773	773	11/2/2020	4:19:37 PM	0:05:06	100
7	3068	774	774	11/2/2020	4:21:26 PM	0:01:49	98
10	4287	775	775	11/2/2020	4:22:30 PM	0:01:04	100
10	4288	776	776	11/2/2020	4:25:35 PM	0:03:05	100
7	3069	777	777	11/2/2020	4:27:25 PM	0:01:50	99
7	3070	778	778	11/2/2020	4:32:30 PM	0:05:05	100
7	3071	779	779	11/2/2020	4:42:36 PM	0:10:06	86
7	3072	780	780	11/2/2020	5:06:30 PM	0:23:54	60
2	1063	781	781	11/3/2020	1:58:38 PM		100
2	1064	782	782	11/3/2020	2:01:42 PM	0:03:05	100
2	1065	783	783	11/3/2020	2:07:33 PM	0:05:50	63
2	1066	784	784	11/3/2020	2:08:35 PM	0:01:03	61
2	1067	785	785	11/3/2020	2:12:39 PM	0:04:03	62
2	1068	786	786	11/3/2020	2:14:42 PM	0:02:03	69
2	1069	787	787	11/3/2020	2:19:45 PM	0:05:04	62
10	4289	788	788	11/3/2020	2:24:49 PM	0:05:04	86
2	1070	789	789	11/3/2020	2:26:38 PM	0:01:49	73
10	4290	790	790	11/3/2020	2:26:41 PM	0:00:03	100
2	1071	791	791	11/3/2020	2:28:45 PM	0:02:04	74
2	1072	792	792	11/3/2020	2:29:34 PM	0:00:49	78
10	4291	793	793	11/3/2020	2:29:52 PM	0:00:18	99
2	1073	794	794	11/3/2020	2:31:42 PM	0:01:49	79
10	4292	795	795	11/3/2020	2:32:45 PM	0:01:03	100
2	1074	796	796	11/3/2020	2:34:34 PM	0:01:49	40
10	4293	797	797	11/3/2020	2:35:36 PM	0:01:02	100
10	4294	798	798	11/3/2020	2:37:41 PM	0:02:04	100
2	1075	799	799	11/3/2020	2:40:45 PM	0:03:04	45
10	4295	800	800	11/3/2020	2:42:48 PM	0:02:03	97
10	4296	801	801	11/3/2020	2:44:37 PM	0:01:49	100
2	1076	802	802	11/3/2020	2:46:41 PM	0:02:04	86
2	1077	803	803	11/3/2020	2:48:45 PM	0:02:04	76
2	1078	804	804	11/3/2020	2:54:34 PM	0:05:49	61
10	4297	805	805	11/3/2020	2:57:38 PM	0:03:03	99
2	1079	806	806	11/3/2020	2:58:42 PM	0:01:04	72
2	1080	807	807	11/3/2020	3:00:45 PM	0:02:03	81
10	4298	808	808	11/3/2020	3:01:36 PM	0:00:51	100
2	1081	809	809	11/3/2020	3:02:40 PM	0:01:04	59
10	4299	810	810	11/3/2020	3:04:43 PM	0:02:03	100
10	4300	811	811	11/3/2020	3:07:48 PM	0:03:05	100
10	4301	812	812	11/3/2020	3:10:37 PM	0:02:49	100
7	3073	813	813	11/3/2020	3:11:41 PM	0:01:04	100
10	4302	814	814	11/3/2020	3:13:46 PM	0:02:04	99
7	3074	815	815	11/3/2020	3:14:35 PM	0:00:49	99
10	4303	816	816	11/3/2020	3:16:39 PM	0:02:04	100
7	3075	817	817	11/3/2020	3:17:43 PM	0:01:04	100

10	4304	818	818	11/3/2020	3:18:48 PM	0:01:04	100
7	3076	819	819	11/3/2020	3:20:37 PM	0:01:49	100
10	4305	820	820	11/3/2020	3:21:42 PM	0:01:05	100
7	3077	821	821	11/3/2020	3:23:47 PM	0:02:05	100
10	4306	822	822	11/3/2020	3:24:36 PM	0:00:49	100
10	4307	823	823	11/3/2020	3:26:40 PM	0:02:04	100
7	3078	824	824	11/3/2020	3:27:45 PM	0:01:04	99
10	4308	825	825	11/3/2020	3:30:36 PM	0:02:51	99
7	3079	826	826	11/3/2020	3:32:40 PM	0:02:04	100
10	4309	827	827	11/3/2020	3:33:44 PM	0:01:04	100
7	3080	828	828	11/3/2020	3:35:48 PM	0:02:04	100
7	3081	829	829	11/3/2020	3:41:38 PM	0:05:50	98
10	4310	830	830	11/3/2020	3:41:42 PM	0:00:04	100
7	3082	831	831	11/3/2020	3:45:47 PM	0:04:05	100
10	4311	832	832	11/3/2020	3:47:37 PM	0:01:50	98
7	3083	833	833	11/3/2020	3:49:41 PM	0:02:04	100
10	4312	834	834	11/3/2020	3:50:45 PM	0:01:04	100
10	4313	835	835	11/3/2020	3:54:35 PM	0:03:50	100
7	3084	836	836	11/3/2020	3:55:39 PM	0:01:04	100
7	3085	837	837	11/3/2020	3:58:44 PM	0:03:05	100
10	4314	838	838	11/3/2020	3:58:48 PM	0:00:04	99
7	3086	839	839	11/3/2020	4:03:38 PM	0:04:50	99
10	4315	840	840	11/3/2020	4:03:57 PM	0:00:19	99
10	4316	841	841	11/3/2020	4:07:46 PM	0:03:50	100
7	3087	842	842	11/3/2020	4:08:36 PM	0:00:49	99
10	4317	843	843	11/3/2020	4:10:40 PM	0:02:04	100
10	4318	844	844	11/3/2020	4:12:45 PM	0:02:05	100
7	3088	845	845	11/3/2020	4:16:35 PM	0:03:50	100
10	4319	846	846	11/3/2020	4:16:53 PM	0:00:18	100
10	4320	847	847	11/3/2020	4:19:43 PM	0:02:49	100
7	3089	848	848	11/3/2020	4:21:49 PM	0:02:06	100
10	4321	849	849	11/3/2020	4:22:40 PM	0:00:52	100
7	3090	850	850	11/3/2020	4:25:45 PM	0:03:05	97
7	3091	851	851	11/3/2020	4:28:37 PM	0:02:52	100
7	3092	852	852	11/3/2020	4:34:43 PM	0:06:05	95
10	4322	853	853	11/3/2020	4:37:47 PM	0:03:04	99
7	3093	854	854	11/3/2020	4:38:36 PM	0:00:49	100
7	3094	855	855	11/3/2020	5:11:47 PM	0:33:11	100
7	3095	856	856	11/3/2020	5:14:37 PM	0:02:50	100
10	4323	857	857	11/3/2020	5:44:47 PM	0:30:10	100
10	4324	858	858	11/3/2020	5:47:37 PM	0:02:50	100
10	4325	859	859	11/3/2020	5:55:43 PM	0:08:06	100
10	4326	860	860	11/3/2020	6:01:49 PM	0:06:06	100
7	3096	861	861	11/3/2020	6:11:40 PM	0:09:51	20
10	4327	862	862	11/3/2020	6:11:41 PM	0:00:01	86

7	3097	863	863	11/3/2020	6:48:53 PM	0:37:12	100
7	3098	864	864	11/3/2020	6:51:42 PM	0:02:50	100
7	3099	865	865	11/3/2020	7:19:52 PM	0:28:10	100
10	4328	866	866	11/3/2020	7:20:41 PM	0:00:49	100
7	3100	867	867	11/3/2020	7:24:46 PM	0:04:05	100
10	4329	868	868	11/3/2020	7:25:37 PM	0:00:51	100
7	3101	869	869	11/3/2020	7:27:42 PM	0:02:05	98
10	4330	870	870	11/3/2020	7:34:48 PM	0:07:05	100
7	3102	871	871	11/3/2020	7:35:37 PM	0:00:49	100
10	4331	872	872	11/3/2020	7:49:44 PM	0:14:07	99
7	3103	873	873	11/3/2020	7:50:48 PM	0:01:05	98
10	4332	874	874	11/3/2020	8:05:41 PM	0:14:52	100
10	4333	875	875	11/3/2020	8:09:46 PM	0:04:05	99
2	1082	876	876	11/3/2020	8:16:36 PM	0:06:51	100
2	1083	877	877	11/3/2020	8:17:41 PM	0:01:04	81
2	1084	878	878	11/3/2020	8:19:44 PM	0:02:04	81
10	4334	879	879	11/3/2020	8:23:35 PM	0:03:51	100
10	4335	880	880	11/3/2020	8:27:39 PM	0:04:04	99
2	1085	881	881	11/3/2020	8:29:43 PM	0:02:04	71
10	4336	882	882	11/3/2020	8:30:47 PM	0:01:03	100
2	1086	883	883	11/3/2020	8:31:36 PM	0:00:49	78
10	4337	884	884	11/3/2020	8:37:42 PM	0:06:06	100
2	1087	885	885	11/3/2020	8:38:46 PM	0:01:04	52
2	1088	886	886	11/3/2020	8:40:48 PM	0:02:03	57
10	4338	887	887	11/3/2020	8:40:51 PM	0:00:03	99
2	1089	888	888	11/3/2020	8:41:40 PM	0:00:49	35
2	1090	889	889	11/3/2020	8:44:42 PM	0:03:03	85
10	4339	890	890	11/3/2020	8:44:46 PM	0:00:03	100
2	1091	891	891	11/3/2020	8:46:36 PM	0:01:50	84
10	4340	892	892	11/3/2020	8:47:40 PM	0:01:04	100
2	1092	893	893	11/3/2020	8:48:44 PM	0:01:04	82
2	1093	894	894	11/3/2020	8:50:47 PM	0:02:04	82
10	4341	895	895	11/3/2020	8:50:51 PM	0:00:03	100
2	1094	896	896	11/3/2020	8:51:40 PM	0:00:49	74
10	4342	897	897	11/3/2020	8:53:43 PM	0:02:04	100
10	4343	898	898	11/3/2020	8:56:48 PM	0:03:04	99
2	1095	899	899	11/3/2020	8:58:37 PM	0:01:49	83
10	4344	900	900	11/3/2020	8:59:41 PM	0:01:04	100
2	1096	901	901	11/3/2020	9:01:45 PM	0:02:04	89
10	4345	902	902	11/3/2020	9:02:49 PM	0:01:04	100
10	4346	903	903	11/3/2020	9:08:39 PM	0:05:50	97
10	4347	904	904	11/3/2020	9:13:44 PM	0:05:05	99
10	4348	905	905	11/3/2020	9:17:48 PM	0:04:05	99
10	4349	906	906	11/3/2020	9:20:38 PM	0:02:50	99
7	3104	907	907	11/3/2020	9:24:43 PM	0:04:05	99

10	4350	908	908	11/3/2020	9:27:47 PM	0:03:05	100
7	3105	909	909	11/3/2020	9:28:37 PM	0:00:49	99
7	3106	910	910	11/3/2020	9:32:41 PM	0:04:05	68
10	4351	911	911	11/3/2020	10:13:38 PM	0:40:57	55
10	4352	912	912	11/3/2020	10:16:42 PM	0:03:03	98
10	4353	913	913	11/3/2020	10:22:47 PM	0:06:05	99
10	4354	914	914	11/3/2020	10:25:38 PM	0:02:51	100
10	4355	915	915	11/3/2020	10:28:43 PM	0:03:05	100
10	4356	916	916	11/3/2020	10:31:47 PM	0:03:05	99
10	4357	917	917	11/3/2020	10:34:38 PM	0:02:51	100
10	4358	918	918	11/3/2020	10:37:43 PM	0:03:05	100
10	4359	919	919	11/3/2020	10:40:47 PM	0:03:05	100
10	4360	920	920	11/3/2020	10:43:39 PM	0:02:52	100
10	4361	921	921	11/3/2020	10:45:44 PM	0:02:04	100
10	4362	922	922	11/3/2020	10:48:48 PM	0:03:05	100
2	1097	923	923	11/3/2020	10:50:37 PM	0:01:49	99
2	1098	924	924	11/3/2020	10:53:42 PM	0:03:04	94
10	4363	925	925	11/3/2020	10:55:46 PM	0:02:04	100
10	4364	926	926	11/3/2020	11:00:38 PM	0:04:52	98
10	4365	927	927	11/3/2020	11:03:43 PM	0:03:04	100
2	1099	928	928	11/3/2020	11:04:47 PM	0:01:04	68
10	4366	929	929	11/3/2020	11:06:51 PM	0:02:04	100
10	4367	930	930	11/3/2020	11:09:40 PM	0:02:50	100
2	1100	931	931	11/3/2020	11:10:44 PM	0:01:04	77
10	4368	932	932	11/3/2020	11:11:48 PM	0:01:03	100
2	1101	933	933	11/3/2020	11:15:37 PM	0:03:50	88
10	4369	934	934	11/3/2020	11:15:56 PM	0:00:19	100
10	4370	935	935	11/3/2020	11:18:45 PM	0:02:50	100
2	1102	936	936	11/3/2020	11:19:50 PM	0:01:04	99
10	4371	937	937	11/3/2020	11:20:39 PM	0:00:49	100
2	1103	938	938	11/3/2020	11:21:43 PM	0:01:04	65
2	1104	939	939	11/3/2020	11:22:45 PM	0:01:03	37
2	1105	940	940	11/3/2020	11:27:48 PM	0:05:03	95
2	1106	941	941	11/3/2020	11:28:37 PM	0:00:49	95
7	3107	942	942	11/3/2020	11:37:42 PM	0:09:05	66
2	1107	943	943	11/10/2020	12:58:43 PM		87
2	1108	944	944	11/10/2020	1:01:32 PM	0:02:49	81
2	1109	945	945	11/10/2020	1:03:36 PM	0:02:04	69
2	1110	946	946	11/10/2020	1:08:40 PM	0:05:04	98
2	1111	947	947	11/10/2020	1:15:45 PM	0:07:05	97
2	1112	948	948	11/10/2020	1:27:36 PM	0:11:51	95
2	1113	949	949	11/10/2020	1:28:40 PM	0:01:04	68
2	1114	950	950	11/10/2020	1:30:43 PM	0:02:03	81
2	1115	951	951	11/10/2020	1:37:33 PM	0:06:50	85
2	1116	952	952	11/10/2020	1:40:37 PM	0:03:04	81

2	1117	953	953	11/10/2020	1:42:41 PM	0:02:04	95
2	1118	954	954	11/10/2020	1:44:31 PM	0:01:50	94
2	1119	955	955	11/10/2020	1:54:37 PM	0:10:06	98
2	1120	956	956	11/10/2020	1:56:41 PM	0:02:04	87
2	1121	957	957	11/10/2020	1:58:31 PM	0:01:50	83
2	1122	958	958	11/10/2020	2:01:35 PM	0:03:04	85
2	1123	959	959	11/10/2020	2:02:39 PM	0:01:03	68
7	3108	960	960	11/10/2020	2:13:44 PM	0:11:05	97
7	3109	961	961	11/10/2020	2:21:34 PM	0:07:51	99
7	3110	962	962	11/10/2020	2:24:39 PM	0:03:04	100
7	3111	963	963	11/10/2020	2:33:45 PM	0:09:06	99
7	3112	964	964	11/10/2020	2:39:35 PM	0:05:50	90
7	3113	965	965	11/10/2020	2:45:40 PM	0:06:05	92
7	3114	966	966	11/10/2020	3:43:41 PM	0:58:01	82
2	1124	967	969	11/13/2020	11:38:15 AM		59
7	3115	968	970	11/13/2020	11:38:17 AM	0:00:02	21
7	3116	969	971	11/13/2020	11:38:18 AM	0:00:01	2
7	3117	970	972	11/13/2020	11:38:18 AM	0:00:00	23
7	3118	971	973	11/13/2020	12:59:07 PM	1:20:49	40
2	1125	972	976	11/20/2020	11:47:01 AM		12
7	3119	973	977	11/20/2020	11:53:03 AM	0:06:02	21

APPENDIX C – LOG ENTRIES FROM EMS USER LOG – OCTOBER 2020

Date and Time	Commands / Comments in red
10/21/2020 14:18:01	SubmitBatchCommand (execution duration: 1250ms): Batch 227 - Successfully synchronized results.
10/21/2020 14:18:02	SubmitBatchCommand (execution duration: 1156ms): Batch 226 - Successfully synchronized results.
10/21/2020 14:18:03	SubmitBatchCommand (execution duration: 1297ms): Batch 228 - Successfully synchronized results.
10/21/2020 14:18:05	SubmitBatchCommand (execution duration: 906ms): Batch 229 - Successfully synchronized results.
	The above four commands are the last 4 batches adjudicated before the database copy being written back to the database
10/21/2020 14:18:14	GetBatchesCommand (execution duration: 16ms): Cast vote record batch list was successfully retrieved (CvrSortOrder greater then 267).
10/21/2020 14:18:33	LoadResultsCommand (execution duration: 2688ms): Result file '1_1_7_3037_DETAIL.DVD' was loaded successfully.
	The above two statements are the Adjudication Module checking for new Batches, and then loading the DVD file from the NAS for the new one it encountered.
	Note that this batch never made it to the old Adjudication database, it eventually made it to the new one. We are at this point 18 seconds from the database copy.
10/21/2020 14:18:39	GetAdjudicationSupportStatusCommand (execution duration: 16ms): Adjudication status retrieved (Adjudication is enabled)
10/21/2020 14:18:52	GetAdjudicationSupportStatusCommand (execution duration: 0ms): Adjudication status retrieved (Adjudication is enabled)
	This is the only time that this command is seen in the log during the election period, and they happened 12 seconds BEFORE the copy and then again 1 second after.
10/21/2020 14:18:57	GetRelevantOutstackConditionsCommand (execution duration: 31ms): Successfully retrieved relevant outstack conditions
10/21/2020 14:19:26	GetRelevantOutstackConditionsCommand (execution duration: 0ms): Successfully retrieved relevant outstack conditions
	Again, the only time this command is seen, and to me it seems that it involves the new database trying to figure out the current adjudication status
10/21/2020 14:20:06	GetBatchesCommand (execution duration: 1156ms): Cast vote record batch list was successfully retrieved (CvrSortOrder greater then 0). Values of CvrSortOrder field for delivered batches are: 1
	This is the Adjudication Module looking for new batches on the NAS drive. As there are currently no batches (the new database was created with no records), it is looking for anything >0
10/21/2020 14:20:07	GetCastVoteRecordsCommand (execution duration: 219ms): Cast vote records for batch '1' successfully retrieved.
	1 Batch was found and retrieved
10/21/2020 14:20:25	GetBatchesCommand (execution duration: 47ms): Cast vote record batch list was successfully retrieved (CvrSortOrder greater then 1). Values of CvrSortOrder field for delivered batches are: 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268
	Now the Adjudication module checks for new batches again. Note that the 1st time it found only one, now it finds ALL the rest from 60 - 267 (no sign of 2-59)
10/21/2020 14:20:26	GetCastVoteRecordsCommand (execution duration: 219ms): Cast vote records for batch '60' successfully retrieved.
10/21/2020 14:20:30	GetCastVoteRecordsCommand (execution duration: 312ms): Cast vote records for batch '61' successfully retrieved.

10/21/2020 14:20:34	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '62' successfully retrieved.
10/21/2020 14:20:38	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '63' successfully retrieved.
10/21/2020 14:20:43	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '64' successfully retrieved.
10/21/2020 14:20:47	GetCastVoteRecordsCommand (execution duration: 344ms): Cast vote records for batch '65' successfully retrieved.
10/21/2020 14:20:51	GetCastVoteRecordsCommand (execution duration: 406ms): Cast vote records for batch '66' successfully retrieved.
10/21/2020 14:20:55	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '67' successfully retrieved.
10/21/2020 14:20:59	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '68' successfully retrieved.
10/21/2020 14:21:04	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '69' successfully retrieved.
10/21/2020 14:21:08	GetCastVoteRecordsCommand (execution duration: 359ms): Cast vote records for batch '70' successfully retrieved.
10/21/2020 14:21:12	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '71' successfully retrieved.
10/21/2020 14:21:16	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '72' successfully retrieved.
10/21/2020 14:21:20	GetCastVoteRecordsCommand (execution duration: 297ms): Cast vote records for batch '73' successfully retrieved.
10/21/2020 14:21:24	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '74' successfully retrieved.
10/21/2020 14:21:28	GetCastVoteRecordsCommand (execution duration: 344ms): Cast vote records for batch '75' successfully retrieved.
	The above log entries are the reloading of the batches 60 - 75
10/21/2020 14:21:29	GetCastVoteRecordImageCommand (execution duration: 0ms): Image for tabulator '10, batch '4001' and session '18' successfully retrieved.
	The Adjudication Module begins processing ballots needing adjudication (4001 = batch 1)
10/21/2020 14:21:33	GetCastVoteRecordsCommand (execution duration: 312ms): Cast vote records for batch '76' successfully retrieved.
10/21/2020 14:21:37	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '77' successfully retrieved.
10/21/2020 14:21:44	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '78' successfully retrieved.
10/21/2020 14:21:48	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '79' successfully retrieved.
10/21/2020 14:21:52	GetCastVoteRecordsCommand (execution duration: 375ms): Cast vote records for batch '80' successfully retrieved.
10/21/2020 14:21:56	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '81' successfully retrieved.
10/21/2020 14:22:00	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '82' successfully retrieved.
10/21/2020 14:22:04	GetCastVoteRecordsCommand (execution duration: 266ms): Cast vote records for batch '83' successfully retrieved.
10/21/2020 14:22:09	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '84' successfully retrieved.
10/21/2020 14:22:13	GetCastVoteRecordsCommand (execution duration: 344ms): Cast vote records for batch '85' successfully retrieved.
10/21/2020 14:22:17	GetCastVoteRecordsCommand (execution duration: 281ms): Cast vote records for batch '86' successfully retrieved.
10/21/2020 14:22:21	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '87' successfully retrieved.
10/21/2020 14:22:25	GetCastVoteRecordsCommand (execution duration: 297ms): Cast vote records for batch '88' successfully retrieved.

10/21/2020 14:22:29	GetCastVoteRecordsCommand (execution duration: 328ms): Cast vote records for batch '89' successfully retrieved.
10/21/2020 14:22:33	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '90' successfully retrieved.
10/21/2020 14:22:37	GetCastVoteRecordsCommand (execution duration: 266ms): Cast vote records for batch '91' successfully retrieved.
10/21/2020 14:22:41	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '92' successfully retrieved.
10/21/2020 14:22:46	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '93' successfully retrieved.
10/21/2020 14:22:50	GetCastVoteRecordsCommand (execution duration: 266ms): Cast vote records for batch '94' successfully retrieved.
10/21/2020 14:22:54	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '95' successfully retrieved.
10/21/2020 14:22:58	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '96' successfully retrieved.
10/21/2020 14:23:02	GetCastVoteRecordsCommand (execution duration: 359ms): Cast vote records for batch '97' successfully retrieved.
10/21/2020 14:23:06	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '98' successfully retrieved.
10/21/2020 14:23:10	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '99' successfully retrieved.
10/21/2020 14:23:14	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '100' successfully retrieved.
10/21/2020 14:23:18	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '101' successfully retrieved.
10/21/2020 14:23:23	GetCastVoteRecordsCommand (execution duration: 344ms): Cast vote records for batch '102' successfully retrieved.
10/21/2020 14:23:27	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '103' successfully retrieved.
10/21/2020 14:23:31	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '104' successfully retrieved.
10/21/2020 14:23:37	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '105' successfully retrieved.
10/21/2020 14:23:41	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '106' successfully retrieved.
10/21/2020 14:23:45	GetCastVoteRecordsCommand (execution duration: 312ms): Cast vote records for batch '107' successfully retrieved.
10/21/2020 14:23:49	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '108' successfully retrieved.
10/21/2020 14:23:53	GetCastVoteRecordsCommand (execution duration: 344ms): Cast vote records for batch '109' successfully retrieved.
10/21/2020 14:23:57	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '110' successfully retrieved.
10/21/2020 14:24:01	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '111' successfully retrieved.
10/21/2020 14:24:06	GetCastVoteRecordsCommand (execution duration: 328ms): Cast vote records for batch '112' successfully retrieved.
10/21/2020 14:24:10	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '113' successfully retrieved.
10/21/2020 14:24:13	GetCastVoteRecordsCommand (execution duration: 281ms): Cast vote records for batch '114' successfully retrieved.
10/21/2020 14:24:18	GetCastVoteRecordsCommand (execution duration: 297ms): Cast vote records for batch '115' successfully retrieved.
10/21/2020 14:24:22	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '116' successfully retrieved.
10/21/2020 14:24:26	GetCastVoteRecordsCommand (execution duration: 281ms): Cast vote records for batch '117' successfully retrieved.

10/21/2020 14:24:30	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '118' successfully retrieved.
10/21/2020 14:24:35	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '119' successfully retrieved.
10/21/2020 14:24:39	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '120' successfully retrieved.
10/21/2020 14:24:43	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '121' successfully retrieved.
10/21/2020 14:24:47	GetCastVoteRecordsCommand (execution duration: 328ms): Cast vote records for batch '122' successfully retrieved.
10/21/2020 14:24:51	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '123' successfully retrieved.
10/21/2020 14:24:55	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '124' successfully retrieved.
10/21/2020 14:25:00	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '125' successfully retrieved.
10/21/2020 14:25:04	GetCastVoteRecordsCommand (execution duration: 297ms): Cast vote records for batch '126' successfully retrieved.
10/21/2020 14:25:08	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '127' successfully retrieved.
10/21/2020 14:25:12	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '128' successfully retrieved.
10/21/2020 14:25:16	GetCastVoteRecordsCommand (execution duration: 297ms): Cast vote records for batch '129' successfully retrieved.
10/21/2020 14:25:20	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '130' successfully retrieved.
10/21/2020 14:25:25	GetCastVoteRecordsCommand (execution duration: 328ms): Cast vote records for batch '131' successfully retrieved.
10/21/2020 14:25:30	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '132' successfully retrieved.
10/21/2020 14:25:34	GetCastVoteRecordsCommand (execution duration: 266ms): Cast vote records for batch '133' successfully retrieved.
10/21/2020 14:25:38	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '134' successfully retrieved.
10/21/2020 14:25:42	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '135' successfully retrieved.
10/21/2020 14:25:47	GetCastVoteRecordsCommand (execution duration: 344ms): Cast vote records for batch '136' successfully retrieved.
10/21/2020 14:25:52	GetCastVoteRecordsCommand (execution duration: 266ms): Cast vote records for batch '137' successfully retrieved.
10/21/2020 14:25:57	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '138' successfully retrieved.
10/21/2020 14:26:01	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '139' successfully retrieved.
10/21/2020 14:26:05	GetCastVoteRecordsCommand (execution duration: 266ms): Cast vote records for batch '140' successfully retrieved.
10/21/2020 14:26:09	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '141' successfully retrieved.
10/21/2020 14:26:13	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '142' successfully retrieved.
10/21/2020 14:26:17	GetCastVoteRecordsCommand (execution duration: 344ms): Cast vote records for batch '143' successfully retrieved.
10/21/2020 14:26:21	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '144' successfully retrieved.
10/21/2020 14:26:25	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '145' successfully retrieved.
10/21/2020 14:26:29	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '146' successfully retrieved.

10/21/2020 14:26:33	GetCastVoteRecordsCommand (execution duration: 219ms): Cast vote records for batch '147' successfully retrieved.
10/21/2020 14:26:37	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '148' successfully retrieved.
10/21/2020 14:26:41	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '149' successfully retrieved.
10/21/2020 14:26:45	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '150' successfully retrieved.
10/21/2020 14:26:49	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '151' successfully retrieved.
10/21/2020 14:26:52	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '152' successfully retrieved.
10/21/2020 14:26:57	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '153' successfully retrieved.
10/21/2020 14:27:01	GetCastVoteRecordsCommand (execution duration: 297ms): Cast vote records for batch '154' successfully retrieved.
10/21/2020 14:27:05	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '155' successfully retrieved.
10/21/2020 14:27:10	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '156' successfully retrieved.
10/21/2020 14:27:14	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '157' successfully retrieved.
10/21/2020 14:27:18	GetCastVoteRecordsCommand (execution duration: 359ms): Cast vote records for batch '158' successfully retrieved.
10/21/2020 14:27:21	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '159' successfully retrieved.
10/21/2020 14:27:26	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '160' successfully retrieved.
10/21/2020 14:27:30	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '161' successfully retrieved.
10/21/2020 14:27:34	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '162' successfully retrieved.
10/21/2020 14:27:38	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '163' successfully retrieved.
10/21/2020 14:27:42	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '164' successfully retrieved.
10/21/2020 14:27:46	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '165' successfully retrieved.
10/21/2020 14:27:50	GetCastVoteRecordsCommand (execution duration: 266ms): Cast vote records for batch '166' successfully retrieved.
10/21/2020 14:27:56	GetCastVoteRecordsCommand (execution duration: 312ms): Cast vote records for batch '167' successfully retrieved.
10/21/2020 14:28:01	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '168' successfully retrieved.
10/21/2020 14:28:05	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '169' successfully retrieved.
10/21/2020 14:28:10	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '170' successfully retrieved.
10/21/2020 14:28:13	GetCastVoteRecordsCommand (execution duration: 266ms): Cast vote records for batch '171' successfully retrieved.
10/21/2020 14:28:18	GetCastVoteRecordsCommand (execution duration: 297ms): Cast vote records for batch '172' successfully retrieved.
10/21/2020 14:28:22	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '173' successfully retrieved.
10/21/2020 14:28:25	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '174' successfully retrieved.
10/21/2020 14:28:30	GetCastVoteRecordsCommand (execution duration: 344ms): Cast vote records for batch '175' successfully retrieved.

10/21/2020 14:28:34	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '176' successfully retrieved.
10/21/2020 14:28:38	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '177' successfully retrieved.
10/21/2020 14:28:42	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '178' successfully retrieved.
10/21/2020 14:28:46	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '179' successfully retrieved.
10/21/2020 14:28:50	GetCastVoteRecordsCommand (execution duration: 313ms): Cast vote records for batch '180' successfully retrieved.
10/21/2020 14:28:54	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '181' successfully retrieved.
10/21/2020 14:28:58	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '182' successfully retrieved.
10/21/2020 14:29:02	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '183' successfully retrieved.
10/21/2020 14:29:06	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '184' successfully retrieved.
10/21/2020 14:29:10	GetCastVoteRecordsCommand (execution duration: 312ms): Cast vote records for batch '185' successfully retrieved.
10/21/2020 14:29:14	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '186' successfully retrieved.
10/21/2020 14:29:18	GetCastVoteRecordsCommand (execution duration: 172ms): Cast vote records for batch '187' successfully retrieved.
10/21/2020 14:29:22	GetCastVoteRecordsCommand (execution duration: 438ms): Cast vote records for batch '188' successfully retrieved.
10/21/2020 14:29:26	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '189' successfully retrieved.
10/21/2020 14:29:30	GetCastVoteRecordsCommand (execution duration: 328ms): Cast vote records for batch '190' successfully retrieved.
10/21/2020 14:29:34	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '191' successfully retrieved.
10/21/2020 14:29:38	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '192' successfully retrieved.
10/21/2020 14:29:43	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '193' successfully retrieved.
10/21/2020 14:29:47	GetCastVoteRecordsCommand (execution duration: 281ms): Cast vote records for batch '194' successfully retrieved.
10/21/2020 14:29:52	GetCastVoteRecordsCommand (execution duration: 297ms): Cast vote records for batch '195' successfully retrieved.
10/21/2020 14:29:56	GetCastVoteRecordsCommand (execution duration: 266ms): Cast vote records for batch '196' successfully retrieved.
10/21/2020 14:30:00	GetCastVoteRecordsCommand (execution duration: 297ms): Cast vote records for batch '197' successfully retrieved.
10/21/2020 14:30:04	GetCastVoteRecordsCommand (execution duration: 281ms): Cast vote records for batch '198' successfully retrieved.
10/21/2020 14:30:08	GetCastVoteRecordsCommand (execution duration: 62ms): Cast vote records for batch '199' successfully retrieved.
10/21/2020 14:30:09	GetCastVoteRecordsCommand (execution duration: 203ms): Cast vote records for batch '200' successfully retrieved.
10/21/2020 14:30:13	GetCastVoteRecordsCommand (execution duration: 203ms): Cast vote records for batch '201' successfully retrieved.
10/21/2020 14:30:17	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '202' successfully retrieved.
10/21/2020 14:30:21	GetCastVoteRecordsCommand (execution duration: 281ms): Cast vote records for batch '203' successfully retrieved.
10/21/2020 14:30:25	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '204' successfully retrieved.

10/21/2020 14:30:29	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '205' successfully retrieved.
10/21/2020 14:30:33	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '206' successfully retrieved.
10/21/2020 14:30:37	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '207' successfully retrieved.
10/21/2020 14:30:41	GetCastVoteRecordsCommand (execution duration: 313ms): Cast vote records for batch '208' successfully retrieved.
10/21/2020 14:30:45	GetCastVoteRecordsCommand (execution duration: 313ms): Cast vote records for batch '209' successfully retrieved.
10/21/2020 14:30:50	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '210' successfully retrieved.
10/21/2020 14:30:54	GetCastVoteRecordsCommand (execution duration: 266ms): Cast vote records for batch '211' successfully retrieved.
10/21/2020 14:30:58	GetCastVoteRecordsCommand (execution duration: 266ms): Cast vote records for batch '212' successfully retrieved.
10/21/2020 14:31:02	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '213' successfully retrieved.
10/21/2020 14:31:06	GetCastVoteRecordsCommand (execution duration: 187ms): Cast vote records for batch '214' successfully retrieved.
10/21/2020 14:31:09	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '215' successfully retrieved.
10/21/2020 14:31:11	GetCastVoteRecordsCommand (execution duration: 266ms): Cast vote records for batch '216' successfully retrieved.
10/21/2020 14:31:14	GetCastVoteRecordsCommand (execution duration: 47ms): Cast vote records for batch '217' successfully retrieved.
10/21/2020 14:31:15	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '218' successfully retrieved.
10/21/2020 14:31:19	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '219' successfully retrieved.
10/21/2020 14:31:23	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '220' successfully retrieved.
10/21/2020 14:31:27	GetCastVoteRecordsCommand (execution duration: 266ms): Cast vote records for batch '221' successfully retrieved.
10/21/2020 14:31:31	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '222' successfully retrieved.
10/21/2020 14:31:35	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '223' successfully retrieved.
10/21/2020 14:31:40	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '224' successfully retrieved.
10/21/2020 14:31:44	GetCastVoteRecordsCommand (execution duration: 328ms): Cast vote records for batch '225' successfully retrieved.
10/21/2020 14:31:48	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '226' successfully retrieved.
10/21/2020 14:31:52	GetCastVoteRecordsCommand (execution duration: 266ms): Cast vote records for batch '227' successfully retrieved.
10/21/2020 14:31:56	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '228' successfully retrieved.
10/21/2020 14:32:01	GetCastVoteRecordsCommand (execution duration: 328ms): Cast vote records for batch '229' successfully retrieved.
10/21/2020 14:32:05	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '230' successfully retrieved.
10/21/2020 14:32:09	GetCastVoteRecordsCommand (execution duration: 219ms): Cast vote records for batch '231' successfully retrieved.
10/21/2020 14:32:14	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '232' successfully retrieved.
10/21/2020 14:32:18	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '233' successfully retrieved.

10/21/2020 14:32:23	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '234' successfully retrieved.
10/21/2020 14:32:27	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '235' successfully retrieved.
10/21/2020 14:32:31	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '236' successfully retrieved.
10/21/2020 14:32:36	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '237' successfully retrieved.
10/21/2020 14:32:40	GetCastVoteRecordsCommand (execution duration: 250ms): Cast vote records for batch '238' successfully retrieved.
10/21/2020 14:32:44	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '239' successfully retrieved.
10/21/2020 14:32:48	GetCastVoteRecordsCommand (execution duration: 266ms): Cast vote records for batch '240' successfully retrieved.
10/21/2020 14:32:52	GetCastVoteRecordsCommand (execution duration: 219ms): Cast vote records for batch '241' successfully retrieved.
10/21/2020 14:32:57	GetCastVoteRecordsCommand (execution duration: 313ms): Cast vote records for batch '242' successfully retrieved.
10/21/2020 14:33:01	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '243' successfully retrieved.
10/21/2020 14:33:06	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '244' successfully retrieved.
10/21/2020 14:33:10	GetCastVoteRecordsCommand (execution duration: 297ms): Cast vote records for batch '245' successfully retrieved.
10/21/2020 14:33:14	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '246' successfully retrieved.
10/21/2020 14:33:18	GetCastVoteRecordsCommand (execution duration: 219ms): Cast vote records for batch '247' successfully retrieved.
10/21/2020 14:33:22	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '248' successfully retrieved.
10/21/2020 14:33:26	GetCastVoteRecordsCommand (execution duration: 344ms): Cast vote records for batch '249' successfully retrieved.
10/21/2020 14:33:31	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '250' successfully retrieved.
10/21/2020 14:33:34	GetCastVoteRecordsCommand (execution duration: 219ms): Cast vote records for batch '251' successfully retrieved.
10/21/2020 14:33:38	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '252' successfully retrieved.
10/21/2020 14:33:43	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '253' successfully retrieved.
10/21/2020 14:33:47	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '254' successfully retrieved.
10/21/2020 14:33:51	GetCastVoteRecordsCommand (execution duration: 281ms): Cast vote records for batch '255' successfully retrieved.
10/21/2020 14:33:55	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '256' successfully retrieved.
10/21/2020 14:33:59	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '257' successfully retrieved.
10/21/2020 14:34:03	GetCastVoteRecordsCommand (execution duration: 141ms): Cast vote records for batch '258' successfully retrieved.
10/21/2020 14:34:05	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '259' successfully retrieved.
10/21/2020 14:34:10	GetCastVoteRecordsCommand (execution duration: 344ms): Cast vote records for batch '260' successfully retrieved.
10/21/2020 14:34:13	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '261' successfully retrieved.
10/21/2020 14:34:17	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '262' successfully retrieved.

10/21/2020 14:34:21	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '263' successfully retrieved.
10/21/2020 14:34:25	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '264' successfully retrieved.
10/21/2020 14:34:30	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '265' successfully retrieved.
	The reload is almost complete
10/21/2020 14:34:33	GetCastVoteRecordImageCommand (execution duration: 16ms): Image for tabulator '10, batch '4001' and session '25' successfully retrieved.
	A second ballot from batch 1 goes to adjudication
10/21/2020 14:34:34	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '266' successfully retrieved.
10/21/2020 14:34:38	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '267' successfully retrieved.
	At this point we have reloaded all of the batches from the original database. Time elapsed since copy event: 11 minutes, 47 seconds
	This is 3 seconds (on average) per copied batch, .03 seconds (on average) per ballot.
10/21/2020 14:34:42	GetCastVoteRecordsCommand (execution duration: 234ms): Cast vote records for batch '268' successfully retrieved.
	This is the system actually loading up batch 3037, the last one that was saved before the database copy. (See line 7 above)
	At this point all but 58 batches and their ballots from the original Adjudication database are now copied to the new database

APPENDIX D – LOG ENTRIES FROM EMS USER LOG – MARCH 2021

Date and Time	Command / Comment
03/30/2021 14:57:16	GetCastVoteRecordImageCommand (execution duration: 16ms): Image for tabulator '30, batch '3044' and session '72' successfully retrieved.
	Adjudication Module requesting an image so that it can be adjudicated
03/30/2021 14:57:17	GetBatchesCommand (execution duration: 0ms): Cast vote record batch list was successfully retrieved (CvrSortOrder greater then 88).
03/30/2021 14:57:32	GetBatchesCommand (execution duration: 16ms): Cast vote record batch list was successfully retrieved (CvrSortOrder greater then 88).
03/30/2021 14:57:47	GetBatchesCommand (execution duration: 16ms): Cast vote record batch list was successfully retrieved (CvrSortOrder greater then 88).
03/30/2021 14:58:02	GetBatchesCommand (execution duration: 0ms): Cast vote record batch list was successfully retrieved (CvrSortOrder greater then 88).
	Normal checks for new batches. We are 54 seconds from database copy event
03/30/2021 14:58:41	GetAdjudicationSupportStatusCommand (execution duration: 16ms): Adjudication status retrieved (Adjudication is enabled)
03/30/2021 14:58:57	GetAdjudicationSupportStatusCommand (execution duration: 16ms): Adjudication status retrieved (Adjudication is enabled)
	Like in the November 2020 election these two commands appear right before and right after the copy event.
03/30/2021 14:58:59	GetRelevantOutstackConditionsCommand (execution duration: 47ms): Successfully retrieved relevant outstack conditions
03/30/2021 14:59:15	GetRelevantOutstackConditionsCommand (execution duration: 0ms): Successfully retrieved relevant outstack conditions
	These two commands also were found just after the database copy event
03/30/2021 14:59:52	GetBatchesCommand (execution duration: 156ms): Cast vote record batch list was successfully retrieved (CvrSortOrder greater then 0). Values of CvrSortOrder field for delivered batches are: 45, 46
03/30/2021 14:59:52	GetCastVoteRecordsCommand (execution duration: 406ms): Cast vote records for batch '46' successfully retrieved.
03/30/2021 14:59:56	GetCastVoteRecordsCommand (execution duration: 109ms): Cast vote records for batch '47' successfully retrieved.
	The select batches from the original Adjudication database begin being encountered, although like November 2020, not all at once.
03/30/2021 15:00:14	GetBatchesCommand (execution duration: 16ms): Cast vote record batch list was successfully retrieved (CvrSortOrder greater then 46). Values of CvrSortOrder field for delivered batches are: 48, 49
03/30/2021 15:00:14	GetCastVoteRecordsCommand (execution duration: 78ms): Cast vote records for batch '49' successfully retrieved.
03/30/2021 15:00:18	GetCastVoteRecordsCommand (execution duration: 109ms): Cast vote records for batch '50' successfully retrieved.

03/30/2021 15:00:36	GetBatchesCommand (execution duration: 31ms): Cast vote record batch list was successfully retrieved (CvrSortOrder greater then 49). Values of CvrSortOrder field for delivered batches are: 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88
03/30/2021 15:00:36	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '52' successfully retrieved.
03/30/2021 15:00:40	GetCastVoteRecordsCommand (execution duration: 78ms): Cast vote records for batch '53' successfully retrieved.
03/30/2021 15:00:43	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '54' successfully retrieved.
03/30/2021 15:00:47	GetCastVoteRecordsCommand (execution duration: 78ms): Cast vote records for batch '55' successfully retrieved.
03/30/2021 15:00:51	GetCastVoteRecordsCommand (execution duration: 78ms): Cast vote records for batch '56' successfully retrieved.
03/30/2021 15:00:54	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '57' successfully retrieved.
03/30/2021 15:00:58	GetCastVoteRecordsCommand (execution duration: 78ms): Cast vote records for batch '58' successfully retrieved.
03/30/2021 15:01:01	GetCastVoteRecordsCommand (execution duration: 125ms): Cast vote records for batch '59' successfully retrieved.
03/30/2021 15:01:05	GetCastVoteRecordsCommand (execution duration: 78ms): Cast vote records for batch '60' successfully retrieved.
03/30/2021 15:01:08	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '61' successfully retrieved.
03/30/2021 15:01:11	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '62' successfully retrieved.
03/30/2021 15:01:15	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '63' successfully retrieved.
03/30/2021 15:01:19	GetCastVoteRecordsCommand (execution duration: 125ms): Cast vote records for batch '64' successfully retrieved.
03/30/2021 15:01:22	GetCastVoteRecordsCommand (execution duration: 78ms): Cast vote records for batch '65' successfully retrieved.
03/30/2021 15:01:25	GetCastVoteRecordsCommand (execution duration: 78ms): Cast vote records for batch '66' successfully retrieved.
03/30/2021 15:01:29	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '67' successfully retrieved.
03/30/2021 15:01:33	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '68' successfully retrieved.
03/30/2021 15:01:36	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '69' successfully retrieved.
03/30/2021 15:01:40	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '70' successfully retrieved.

03/30/2021 15:01:44	GetCastVoteRecordsCommand (execution duration: 109ms): Cast vote records for batch '71' successfully retrieved.
03/30/2021 15:01:48	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '72' successfully retrieved.
03/30/2021 15:01:51	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '73' successfully retrieved.
03/30/2021 15:01:55	GetCastVoteRecordsCommand (execution duration: 78ms): Cast vote records for batch '74' successfully retrieved.
03/30/2021 15:01:59	GetCastVoteRecordsCommand (execution duration: 109ms): Cast vote records for batch '75' successfully retrieved.
03/30/2021 15:02:02	GetCastVoteRecordsCommand (execution duration: 109ms): Cast vote records for batch '76' successfully retrieved.
03/30/2021 15:02:06	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '77' successfully retrieved.
03/30/2021 15:02:09	GetCastVoteRecordsCommand (execution duration: 78ms): Cast vote records for batch '78' successfully retrieved.
03/30/2021 15:02:12	GetCastVoteRecordsCommand (execution duration: 78ms): Cast vote records for batch '79' successfully retrieved.
03/30/2021 15:02:16	GetCastVoteRecordsCommand (execution duration: 63ms): Cast vote records for batch '80' successfully retrieved.
03/30/2021 15:02:19	GetCastVoteRecordsCommand (execution duration: 109ms): Cast vote records for batch '81' successfully retrieved.
03/30/2021 15:02:22	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '82' successfully retrieved.
03/30/2021 15:02:26	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '83' successfully retrieved.
03/30/2021 15:02:29	GetCastVoteRecordsCommand (execution duration: 78ms): Cast vote records for batch '84' successfully retrieved.
03/30/2021 15:02:33	GetCastVoteRecordsCommand (execution duration: 109ms): Cast vote records for batch '85' successfully retrieved.
03/30/2021 15:02:37	GetCastVoteRecordsCommand (execution duration: 78ms): Cast vote records for batch '86' successfully retrieved.
03/30/2021 15:02:40	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '87' successfully retrieved.
03/30/2021 15:02:44	GetCastVoteRecordsCommand (execution duration: 94ms): Cast vote records for batch '88' successfully retrieved.
03/30/2021 15:02:47	GetCastVoteRecordsCommand (execution duration: 47ms): Cast vote records for batch '89' successfully retrieved.
03/30/2021 15:03:04	GetBatchesCommand (execution duration: 16ms): Cast vote record batch list was successfully retrieved (CvrSortOrder greater then 88).

03/30/2021 15:03:19	SubmitBatchCommand (execution duration: 203ms): Batch 63 - Successfully synchronized results.
03/30/2021 15:03:19	GetBatchesCommand (execution duration: 16ms): Cast vote record batch list was successfully retrieved (CvrSortOrder greater then 88).
03/30/2021 15:03:19	SubmitBatchCommand (execution duration: 141ms): Batch 59 - Successfully synchronized results.
03/30/2021 15:03:20	SubmitBatchCommand (execution duration: 125ms): Batch 61 - Successfully synchronized results.
03/30/2021 15:03:20	SubmitBatchCommand (execution duration: 78ms): Batch 62 - Successfully synchronized results.
03/30/2021 15:03:20	SubmitBatchCommand (execution duration: 78ms): Batch 64 - Successfully synchronized results.
03/30/2021 15:03:20	SubmitBatchCommand (execution duration: 62ms): Batch 65 - Successfully synchronized results.
03/30/2021 15:03:21	SubmitBatchCommand (execution duration: 109ms): Batch 67 - Successfully synchronized results.
03/30/2021 15:03:21	SubmitBatchCommand (execution duration: 78ms): Batch 68 - Successfully synchronized results.
03/30/2021 15:03:21	SubmitBatchCommand (execution duration: 62ms): Batch 69 - Successfully synchronized results.
03/30/2021 15:03:21	SubmitBatchCommand (execution duration: 94ms): Batch 70 - Successfully synchronized results.
03/30/2021 15:03:21	SubmitBatchCommand (execution duration: 62ms): Batch 71 - Successfully synchronized results.
03/30/2021 15:03:22	SubmitBatchCommand (execution duration: 63ms): Batch 72 - Successfully synchronized results.
03/30/2021 15:03:22	SubmitBatchCommand (execution duration: 62ms): Batch 74 - Successfully synchronized results.
03/30/2021 15:03:22	SubmitBatchCommand (execution duration: 78ms): Batch 56 - Successfully synchronized results.
03/30/2021 15:03:34	GetBatchesCommand (execution duration: 0ms): Cast vote record batch list was successfully retrieved (CvrSortOrder greater then 88).
03/30/2021 15:03:40	SubmitBatchCommand (execution duration: 188ms): Batch 75 - Successfully synchronized results.
03/30/2021 15:03:48	SubmitBatchCommand (execution duration: 172ms): Batch 79 - Successfully synchronized results.
03/30/2021 15:03:48	SubmitBatchCommand (execution duration: 125ms): Batch 77 - Successfully synchronized results.
03/30/2021 15:03:48	SubmitBatchCommand (execution duration: 109ms): Batch 78 - Successfully synchronized results.

03/30/2021 15:03:49	GetBatchesCommand (execution duration: 0ms): Cast vote record batch list was successfully retrieved (CvrSortOrder greater then 88).
03/30/2021 15:03:51	SubmitBatchCommand (execution duration: 125ms): Batch 80 - Successfully synchronized results.
03/30/2021 15:04:04	GetBatchesCommand (execution duration: 16ms): Cast vote record batch list was successfully retrieved (CvrSortOrder greater then 88).
03/30/2021 15:04:14	SubmitBatchCommand (execution duration: 203ms): Batch 82 - Successfully synchronized results.
03/30/2021 15:04:18	SubmitBatchCommand (execution duration: 156ms): Batch 84 - Successfully synchronized results.
03/30/2021 15:04:19	SubmitBatchCommand (execution duration: 125ms): Batch 83 - Successfully synchronized results.
03/30/2021 15:04:19	GetBatchesCommand (execution duration: 0ms): Cast vote record batch list was successfully retrieved (CvrSortOrder greater then 88).
03/30/2021 15:04:21	SubmitBatchCommand (execution duration: 156ms): Batch 85 - Successfully synchronized results.
03/30/2021 15:04:34	GetBatchesCommand (execution duration: 16ms): Cast vote record batch list was successfully retrieved (CvrSortOrder greater then 88).
03/30/2021 15:04:48	SubmitBatchCommand (execution duration: 109ms): Batch 89 - Successfully synchronized results.
03/30/2021 15:04:49	SubmitBatchCommand (execution duration: 141ms): Batch 87 - Successfully synchronized results.
03/30/2021 15:04:49	SubmitBatchCommand (execution duration: 156ms): Batch 88 - Successfully synchronized results.
	Like November 2020, the rest of the batches from the original Adjudication database are copied and reprocessed.
	The order, however, is not the same, and there is a referenced to a batch 89 which does not have a record in either Adjudication database.

REFERENCE A – DATABASES AND TABLES

In order to assist other researchers, who may wish to examine these findings or perform additional analysis, here are the most important databases and tables which were used in this analysis.

Main election databases:

November 2020 General Election:
[2020 Mesa County General-2020-09-05-00-10-20]

April 2021 Municipal Election:
[City of Grand Junction-Municipal Election 2021-2021-02-05-16-01-32]

Primary Tables (specifically related to vote totals):
ResultContainer: (Batch level raw vote data)
ResultSplitter: (Vote Data by Polling Location
ChoiceResult: (Raw aggregated vote data)
CastVoteRecord: (Raw per-ballot list)
Choice: (All Candidates/Choices)
Contest: (All contests in Election)
Tabulator: (All defined tabulators)

Stored Procedures (useful for checking final results):
GetContestResults: Displays current results of any or all contests
GetContestStatistics: Displays stats for any or all contests, including undervotes and overvotes

Adjudication databases:

November 2020 General Election:
[AdjudicableBallotStore_2020_Mesa_County_General_2020-10-01_12:18:50] (before copy)
[AdjudicableBallotStore_2020_Mesa_County_General_2020-10-21_14:18:51] (after copy)

April 2021 Municipal Election:
[AdjudicableBallotStore_City_Of_Grand_Junction_Municipal_Election_2021_2021-03-18_10:48:14] (before copy)

[AdjudicableBallotStore_City_Of_Grand_Junction_Municipal_Election_2021_2021-03-30_14:58:56] (after copy)

Primary Tables:
Batches: Raw batch information
SerializedAdjudicableBallots: Contains one data record for each ballot received.
BallotStatusEvents: Every ballot with Adjudication status. New records for same ballot whenever any change occurs in the status of the ballot.

4.5 Processing Rate

The central scanning device's processing rate also depends on the handling and poll verification activities.

The number of ballots per minute depends on the width or length of the ballot. The following table documents the approximate scanning speed of the ICC scanners.

Scanner	Ballot Size	Pages per Minute (ppm) Scanned
Canon DR-G1130	8.5" x 11"	Approximately 100 ppm, as per Dominion Voting's Quality Assurance test results.
Canon DR-G2140	8.5" x 22"	Aproximately 70 ppm, as per Dominion Voting's Quality Assurance test results.
Canon DR-M160II	8.5" x 11"	Approximately 60 ppm, as per Dominion Voting's Quality Assurance test results.

https://www.sos.state.co.us/pubs/elections/VotingSystems/DVS-DemocracySuite511/documentation/2-03-ICC-FunctionalityDescription-5-11-CO.pdf

REFERENCE C – SCANNERS USED BY MESA COUNTY

DESCRIPTION	QTY	UNIT PRICE	EXTENSION
Central Scanning Hardware & Software License			
ImageCast Central Includes: *Canon DR-G1130 high speed document scanner.* *- ImageCast® Central Software including third party Kofax VRS 4.5 software.* *- OptiPlex 9020 All-in-One Series with pre-loaded software* *- One (1) iButton Programmer and (1) iButton Key Switch & Cat5 RJ 45 Cables* *- 12 months Hardware Warranty* *- 12 months Firmware License*	4	$18,500	$74,000

https://onbase.mesacounty.us/OnBaseAgendaOnline/Documents/Downloadfile/Special_Meeting_1018_Agenda_Packet_8_24_2021_1_00_00_PM.pdf?documentType=5&meetingId=1018&isAttachment=True

REFERENCE D – DATA MOVEMENT FROM BATCHES TO VOTES

Below please find an example of how the data moves through the system from the batch to its votes, and how the ballot level vote data is obfuscated in the process. Blank and irrelevant fields are omitted.

When batch 4025 was received in the Mesa County November 2020 election, the following record was created in the *batches* table of the Adjudication database.

Field	Value
TabulatorId	10
BatchId	4025
Name	Tabulator 10 - Batch 4025
LoadOrder	60
CreationTime	10/21/20 2:20 PM
ModificationTime	10/22/20 10:33 AM
BallotCount	99
HasAdjudicatedBallots	1

After all adjudication tasks were complete, a record exists in the Main election database *ResultContainer* table.

Field	Value
Id	60
containerType	CVR
resultState	Published
batchId	4025
fileName	1_1_10_4025_DETAIL.DVD
tabulatorId	10
CvrSortOrder	60
TimeStamp	10/19/20 4:12 PM

This table serves as a record of each individual batch received, and the *batchId* field (4025 in this case) references the *BatchId* of the Adjudication database's *Batches* table, as shown above. This is the first evidence of a break in referential integrity, as there is no database-level relationship between these two tables. In

other words, the *Batches* record in the Adjudication database can be removed or altered without any warning or error being generated by the database.

Of note also is that the number of ballots which exists in each batch is not a part of the *ResultContainer* table. This makes reconciling the data in the Main election database tables much more difficult.

From here, the information goes to three other tables of interest in the Main election database. The first is *CastVoteRecord*, which contains the ballot-level vote data.

Id	ResultContainerId	RecordId	PrecinctPortionId	IsCurrent	OriginalCvrId	OutstackConditions	BallotTypeId	tabulatorId	batchId
5892	60	1	124	1	NULL	1088	5	10	4025
5893	60	2	103	1	NULL	1088	7	10	4025
5894	60	3	66	0	NULL	256	8	10	4025
5895	60	4	44	1	NULL	1088	3	10	4025
5896	60	5	111	1	NULL	1088	7	10	4025
5897	60	6	63	1	NULL	1088	7	10	4025
5898	60	7	79	1	NULL	0	7	10	4025
5899	60	8	98	1	NULL	0	7	10	4025
5900	60	9	22	1	NULL	1088	3	10	4025
5901	60	10	22	0	NULL	256	3	10	4025
5902	60	11	111	1	NULL	0	7	10	4025
5903	60	12	134	1	NULL	0	7	10	4025
5904	60	13	134	0	NULL	256	7	10	4025
5905	60	14	4	1	NULL	1088	1	10	4025
5906	60	15	100	1	NULL	1088	7	10	4025
5907	60	16	98	1	NULL	1088	7	10	4025
5908	60	17	40	1	NULL	0	1	10	4025
5909	60	18	129	1	NULL	1088	7	10	4025
5910	60	19	124	1	NULL	1088	5	10	4025
5911	60	20	108	1	NULL	0	7	10	4025
5912	60	21	131	0	NULL	5	7	10	4025
5913	60	22	41	0	NULL	1344	1	10	4025
5914	60	23	42	0	NULL	256	1	10	4025
5915	60	24	13	1	NULL	1088	2	10	4025
5916	60	25	42	1	NULL	1088	1	10	4025
5917	60	26	2	1	NULL	0	1	10	4025
5918	60	27	42	1	NULL	0	1	10	4025
5919	60	28	60	1	NULL	0	7	10	4025
5920	60	29	95	1	NULL	0	7	10	4025
5921	60	30	100	1	NULL	1088	7	10	4025

5922	60	31	10	1	NULL	1088	1	10	4025
5923	60	32	117	1	NULL	1088	5	10	4025
5924	60	33	101	1	NULL	0	7	10	4025
5925	60	34	10	0	NULL	256	1	10	4025
5926	60	35	102	1	NULL	1088	7	10	4025
5927	60	36	60	1	NULL	0	7	10	4025
5928	60	37	101	1	NULL	1088	7	10	4025
5929	60	38	7	1	NULL	1088	1	10	4025
5930	60	39	41	1	NULL	0	1	10	4025
5931	60	40	101	0	NULL	1344	7	10	4025
5932	60	41	62	1	NULL	1088	8	10	4025
5933	60	42	46	1	NULL	1088	1	10	4025
5934	60	43	70	1	NULL	0	8	10	4025
5935	60	44	63	1	NULL	1088	7	10	4025
5936	60	45	100	1	NULL	0	7	10	4025
5937	60	46	94	1	NULL	1088	7	10	4025
5938	60	47	101	1	NULL	1088	7	10	4025
5939	60	48	79	1	NULL	1088	7	10	4025
5940	60	49	131	0	NULL	1	7	10	4025
5941	60	50	3	1	NULL	0	1	10	4025
5942	60	51	108	1	NULL	0	7	10	4025
5943	60	52	63	1	NULL	0	7	10	4025
5944	60	53	105	1	NULL	0	7	10	4025
5945	60	54	100	1	NULL	0	7	10	4025
5946	60	55	17	1	NULL	0	3	10	4025
5947	60	56	40	1	NULL	0	1	10	4025
5948	60	57	101	1	NULL	0	7	10	4025
5949	60	58	60	1	NULL	1088	7	10	4025
5950	60	59	22	0	NULL	1	3	10	4025
5951	60	60	134	1	NULL	1088	7	10	4025
5952	60	61	103	1	NULL	1088	7	10	4025
5953	60	62	60	1	NULL	0	7	10	4025
5954	60	63	7	1	NULL	1088	1	10	4025
5955	60	64	52	1	NULL	0	3	10	4025
5956	60	65	100	1	NULL	1088	7	10	4025
5957	60	66	100	0	NULL	256	7	10	4025
5958	60	67	101	1	NULL	0	7	10	4025
5959	60	68	79	1	NULL	0	7	10	4025
5960	60	69	100	1	NULL	0	7	10	4025
5961	60	70	129	1	NULL	1088	7	10	4025
5962	60	71	98	1	NULL	0	7	10	4025
5963	60	72	138	1	NULL	0	7	10	4025
5964	60	73	119	1	NULL	0	7	10	4025

5965	60	74	50	1	NULL	1088	1	10	4025
5966	60	75	102	1	NULL	0	7	10	4025
5967	60	76	100	1	NULL	0	7	10	4025
5968	60	77	22	1	NULL	1088	3	10	4025
5969	60	78	60	1	NULL	1088	7	10	4025
5970	60	79	44	0	NULL	1344	3	10	4025
5971	60	80	101	1	NULL	0	7	10	4025
5972	60	81	111	1	NULL	1088	7	10	4025
5973	60	82	129	1	NULL	0	7	10	4025
5974	60	83	98	1	NULL	1088	7	10	4025
5975	60	84	111	1	NULL	1088	7	10	4025
5976	60	85	34	1	NULL	0	1	10	4025
5977	60	86	35	1	NULL	1088	1	10	4025
5978	60	87	17	1	NULL	0	3	10	4025
5979	60	88	50	1	NULL	1088	1	10	4025
5980	60	89	104	1	NULL	0	7	10	4025
5981	60	90	104	1	NULL	0	7	10	4025
5982	60	91	30	1	NULL	0	1	10	4025
5983	60	92	134	1	NULL	0	7	10	4025
5984	60	93	134	1	NULL	1088	7	10	4025
5985	60	94	101	1	NULL	1088	7	10	4025
5986	60	95	105	1	NULL	1088	7	10	4025
5987	60	96	52	1	NULL	1088	3	10	4025
5988	60	97	105	0	NULL	256	7	10	4025
5989	60	98	100	1	NULL	1088	7	10	4025
5990	60	99	98	0	NULL	1344	7	10	4025
9514	60	3	66	1	5894	0	8	10	4025
9515	60	10	22	1	5901	0	3	10	4025
9516	60	13	134	1	5904	0	7	10	4025
9517	60	22	41	1	5913	1088	1	10	4025
9518	60	23	42	1	5914	0	1	10	4025
9519	60	21	131	1	5912	1092	7	10	4025
9620	60	34	10	1	5925	0	1	10	4025
9621	60	49	131	1	5940	1088	7	10	4025
9622	60	40	101	1	5931	1088	7	10	4025
9623	60	59	22	1	5950	1	3	10	4025
9624	60	66	100	1	5957	256	7	10	4025
9625	60	79	44	1	5970	1088	3	10	4025
9626	60	99	98	1	5990	1088	7	10	4025
9728	60	97	105	1	5988	0	7	10	4025

There is one record for each ballot in batch 4025, and then an additional record for each ballot which went through the manual adjudication process. The *IsCurrent* field indicates which of the two ballot records is the latest one. No timestamp exists in this table to be able to determine the time the ballot data was entered or modified.

Unlike a "Cast Vote Record" file, this table contains no vote information.

Next is *ResultSplitter*. Batch 4025 was separated into 42 rows in this table:

Id	numberOfValid	pollingDistrictId	resultContainerId	numberOfWriteIns	tabulatorId	ballotId
2008	1	30	60	0	10	1
2007	2	104	60	0	10	7
2006	1	35	60	0	10	1
2005	1	34	60	0	10	1
2004	2	50	60	0	10	1
2003	1	119	60	0	10	7
2002	1	138	60	0	10	7
2001	2	52	60	0	10	3
2000	2	17	60	0	10	3
1999	3	105	60	0	10	7
1998	1	3	60	0	10	1
1997	1	94	60	0	10	7
1996	1	70	60	0	10	8
1995	1	46	60	0	10	1
1994	1	62	60	0	10	8
1993	2	7	60	0	10	1
1992	2	102	60	0	10	7
1991	8	101	60	0	10	7
1990	1	117	60	0	10	5
1989	2	10	60	0	10	1
1988	1	95	60	0	10	7
1987	5	60	60	0	10	7
1986	1	2	60	0	10	1
1985	1	13	60	0	10	2
1984	3	42	60	0	10	1
1983	2	41	60	0	10	1
1982	2	131	60	0	10	7
1981	2	108	60	0	10	7
1980	3	129	60	0	10	7
1979	2	40	60	0	10	1
1978	9	100	60	0	10	7

1977	1	4	60	0	10	1
1976	5	134	60	0	10	7
1975	4	22	60	1	10	3
1974	5	98	60	0	10	7
1973	3	79	60	0	10	7
1972	3	63	60	0	10	7
1971	4	111	60	0	10	7
1970	2	44	60	0	10	3
1969	1	66	60	0	10	8
1968	2	103	60	0	10	7
1967	2	124	60	0	10	5

The 99 ballots in batch 4025 are segregated here by polling district number. No vote information appears in this table, and this table links back to its corresponding record in the *ResultContainer* table through the *resultContainerId* field. Again, this table contains no specific vote information for the ballots.

Next is the table *ChoiceResult*. Because of how the records are aggregated, there are over 1,600 records for batch 4025. For brevity, only the first 49 records are displayed.

Id	numberOfVotes	isValid	contestResultId	pollingDistrictId	tabulatorId	resultContainerId	choiceId	partyId
72135	2	1	56749	63	10	60	82	0
72136	1	1	56749	63	10	60	83	0
72137	2	1	56750	63	10	60	88	0
72138	1	1	56750	63	10	60	89	0
72139	2	1	56751	79	10	60	2	0
72140	1	1	56751	79	10	60	1	0
72141	2	1	56752	79	10	60	23	5
72142	1	1	56752	79	10	60	22	2
72143	2	1	56753	79	10	60	27	5
72144	1	1	56753	79	10	60	28	2
72145	2	1	56754	79	10	60	32	5
72146	1	1	56754	79	10	60	31	2
72147	2	1	56755	79	10	60	35	5
72148	1	1	56755	79	10	60	36	2
72149	2	1	56756	79	10	60	38	5
72150	2	1	56757	79	10	60	39	5
72151	1	1	56757	79	10	60	40	2
72152	2	1	56758	79	10	60	42	5
72153	1	1	56758	79	10	60	41	2

72154	3	1	56759	79	10	60	44	0
72155	3	1	56760	79	10	60	46	0
72156	3	1	56761	79	10	60	48	0
72157	3	1	56762	79	10	60	50	0
72158	2	1	56763	79	10	60	74	0
72159	1	1	56763	79	10	60	75	0
72160	3	1	56764	79	10	60	76	0
72161	3	1	56765	79	10	60	78	0
72162	3	1	56766	79	10	60	80	0
72163	2	1	56767	79	10	60	53	0
72164	1	1	56767	79	10	60	52	0
72165	3	1	56768	79	10	60	55	0
72166	2	1	56769	79	10	60	56	0
72167	1	1	56769	79	10	60	57	0
72134	3	1	56748	63	10	60	73	0
72133	1	1	56747	63	10	60	71	0
72132	2	1	56747	63	10	60	70	0
72131	3	1	56746	63	10	60	68	0
72130	2	1	56745	63	10	60	66	0
72129	1	1	56745	63	10	60	67	0
72128	2	1	56744	63	10	60	65	0
72127	1	1	56744	63	10	60	64	0
72126	1	1	56743	63	10	60	63	0
72125	2	1	56743	63	10	60	62	0
72124	1	1	56742	63	10	60	60	0
72123	2	1	56742	63	10	60	61	0
72122	2	1	56741	63	10	60	59	0
72121	1	1	56741	63	10	60	58	0
72120	1	1	56740	63	10	60	57	0
72119	2	1	56740	63	10	60	56	0

This table, the only table which actually has a record of the vote totals used to produce reports, aggregates the votes by polling district and candidate or issue choice. As an example, the fifth line of data specifies that there are two votes for Donald Trump (*choiceId* 2, which references the *internalMachineId field* of the table *Choice*) from polling district 3075539035 – GJ (*pollingDistrictId* 79, which references the *internalMachineId* field of the table *PollingDistrict*).
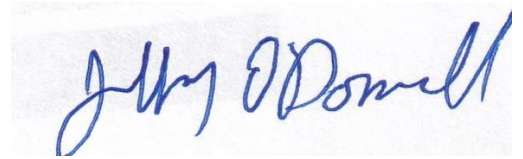
From this table, and the associated tables it links to, all reports are generated. As this is the only table which records vote choices, this is a single point of attack

or failure for the entire vote counting process of the Dominion system. Changes can be made to this table by any process, for instance changing the number of votes or the candidate, would be undetectable as such changes do not affect any other records in any other tables. Nor would such changes require alterations of any other records in any other tables.
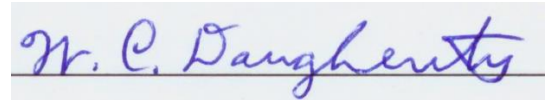
Additionally, there is no way to consistently link a particular vote shown in the *ChoiceResult* table to its original ballot within the batch.

The foregoing Forensic Examination and Report was prepared by us, and we are responsible for its content.

The 19th day of March 2022.

Jeffrey O'Donnell
Chief Information Officer
Ordros Analytics

Walter C. Daugherity
Senior Lecturer Emeritus
Department of Computer Science and Engineering
Texas A&M University

BIOGRAPHY

Jeffrey O'Donnell is a Full Stack software and database developer and analyst. He holds Bachelor's degrees in Computer Science and Mathematics from the University of Pittsburgh.

Over the last 40 years, Mr. O'Donnell has worked and consulted for numerous private sector corporations, including Rockwell International, Westinghouse Electric Nuclear, General Defense, U.S. Steel, Mellon Bank, IOTA 360, and the Penn State Applied Research Laboratory. For several years he also delivered and created computer science curriculum for the Community College of Allegheny County.

For the last two decades, Mr. O'Donnell has developed numerous "big data" analysis systems, including systems to provide short-term stock market investors with new types of research and predictive analytics.

He currently is President of Qest Development, a full-service software consulting and publishing company, and is Chief Information Officer of Ordros Analytics, which specializes in election analytics of all types.

Dr. Walter C. Daugherity is a computer consultant and also Senior Lecturer Emeritus in the Department of Computer Science and Engineering at Texas A&M University. He graduated from Oklahoma Christian University with a degree in mathematics, and then earned master's and doctor's degrees from Harvard University, which he attended on a Prize Fellowship from the National Science Foundation.

As a computer expert he has consulted for major national and international firms, and for government agencies. He helped develop the national computer keyboard standard and invented integrated user training within computer applications as well as various electronic computer interfaces.

As a computer science and engineering teacher and researcher, he has published 26 research articles from over $2.8 million in funded research projects, plus conference papers and other publications. He taught many areas of computer science and engineering for 37 years (32 years at Texas A&M University), including artificial intelligence, quantum computing, programming and software design, and cyber-ethics.

At Harvard he received the Bowdoin Prize and medal for writing, and in 2015 was named a Distinguished Alumnus of Oklahoma Christian University. He is a life member of the Association for Computing Machinery and American MENSA.