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Special Discovery Master

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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN JOSE DIVISION

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FACEBOOK, INC., et al.,	Case No.: 5:19-cv-07071-SVK
Plaintiffs,	
v.	SPECIAL DISCOVERY MASTER'S DATA DESTROYED OR WITHHELD REPORT
ONLINENIC INC, et al.,	
Defendants.	
	Hon. Susan van Keulen

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-1-
SPECIAL DISCOVERY MASTER'S DATA DESTROYED OR WITHHELD REPORT
Case No.: 5:19-cv-07071-SVK

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EXECUTIVE SUMMARY

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For this Data Destroyed or Withheld Report (hereinafter "Report"), the Special

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Discovery Master (hereinafter "Special Master") was charged with determining the adequacy

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of Defendants' past productions to Plaintiffs and whether Defendants destroyed or withheld

5

data from their Kayako Ticket Database (hereinafter "Ticket Database").

6

In reaching the conclusions below, Special Master collected electronically stored

7

information (hereinafter "ESI") with a cumulative data size of 184 GB, a total of 545,013

8

files, and 442,680,623 database records. To forensically analyze this large data set, most

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information was separately ingested into a "Consolidated Database," which is defined below.

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See Exhibit 1. Of particular importance to the analysis in this Report are Defendants' support

11

tickets and other ticket-related database tables. This ticket-related data is located in the

12

following six main tables: swtickets, swticketposts, swticketnotes, swattachments,

13

swticketmergelog, and swauditlogs.

14

In this case, there are two discovery protocols between the parties. The parties' first

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discovery protocol was limited to the July 1, 2015 – July 15, 2020, date range, and had 47

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search terms. However, the parties' new discovery protocol was not similarly limited, and

17

instead covers all dates, and has 194 search terms. This Report covers destroyed and withheld

18

ESI that was responsive to the parties' expanded new discovery protocol with no date limits

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but does not take into account the expanded search term list as it was received only one

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business day before submission to the parties. As much as possible, this Report also details

21

destroyed and withheld ESI that was responsive to the old discovery protocol's limited date

22

range.

23

As described in detail below, there is ample evidence that Defendants failed to

24

preserve responsive ESI, deleted ESI, and withheld ESI. Sometimes Defendants deleted data

25

using the Kayako SupportSuite Application, and other times, they deleted records directly

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from the live Ticket Database. Overall, Special Master identified that Defendants deleted over

27

one-half (52.35%) of the ticket-related database records in the entire database (11,059,388

28

records). Of these deleted records, Special Master estimates 30% of those records (based on

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1   the percent of responsive records from July 1, 2015 – July 15, 2020), or 3,317,816 records,

2   were responsive to the agreed past discovery protocol. However, because the new discovery

3   protocol agreement of the parties includes all dates and more search terms, presumably the

4   missing responsive tickets and ticket-related records will be higher and cannot be produced to

5   Plaintiffs.

6   This Report narrative covers the most relevant examples of record types that

7   Defendants deleted and withheld. With this Report, the parties received accompanying

8   exhibits, a supporting database, and analytics spreadsheets. Collectively, these items detail the

9   analysis Special Master applied to Defendants' productions and reveal instances of known

10 deleted and withheld data.

11   The most relevant instances of known deleted records involve tickets, ticket posts,

12 ticket notes, and attachment files. This latter group, attachment files, is particularly

13 noteworthy because they frequently contain the most material information in a ticket. In this

14 case, over 432,033 attachment records once existed in the Ticket Database. However,

15 Defendants deleted 331,390 of those attachments (76.7%). Of the 100,643 surviving

16 attachments, Special Master found 23,464 (23.31%) responsive attachment files. Assuming

17 the same responsive rate and applying it to the deleted attachments, Plaintiffs will never

18 receive an estimated 77,247 responsive attachments files. Furthermore, if the search term only

19 appeared in the attachment (and not the database records), then Plaintiffs would have received

20 additional related ticket database records had the attachments not been deleted.

21   In addition to deleting records, Defendants withheld responsive ESI that still resided in

22 the database. For example, Defendants used overly restrictive searches that excluded entire

23 years' worth of records and excluded entire ticket-related tables. Below is information about

24 tickets, ticket posts, and ticket attachments not provided to Plaintiffs.

25   To compound matters, Defendants produced to Plaintiffs a significant amount of

26 unresponsive data in their productions. In a review of a subset of all produced records, 5,096

27 responsive records were obscured by 27,823,240 non-responsive records.

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Finally, while some harm to Plaintiffs is mitigated because Special Master recovered a subset of Defendants' deleted data, the attachment files and other ticket-related records that are not recoverable are lost forever to Plaintiffs.

I.   SCOPE OF REPORT

The Order Appointing Special Discovery Master (hereinafter "Order") appointing Thomas Howe, on March 3, 2021, contained three primary responsibilities:

> A. Supervise and complete Defendants' collection, search, and production to Plaintiffs' counsel of the Ticket Database;
>
> B. Produce a result set of responsive data to the parties in native database format, based on an agreed new discovery protocol, with all related database tables (hereinafter "Result Set"); and
>
> C. Determine whether data was destroyed or withheld from Defendants' Ticket Database, and the adequacy of the productions to Plaintiffs.

This Data Destroyed or Withheld Report (hereinafter "Report") is in response to the third point above – determining the adequacy of Defendants' past productions to Plaintiffs and whether data from the Ticket Database was destroyed or withheld. The details below discuss Special Master's collection, analysis, findings, and conclusions.

II.   DISCOVERY AGREEMENT BY THE PARTIES

The parties had a limited discovery protocol agreement for past productions. Typically, a discovery protocol delineates the parameters of the search for responsive items by defining such terms as date filters; data types; and the method of production. Although there was no formal written discovery protocol or discovery agreement for the past productions, in this case, the parties did discuss the discovery they needed and exchanged emails with lists of search terms. Special Master worked with each parties' counsel to recreate their discovery protocol, based on their understanding at the time. This understanding is captured in the "Discovery Protocol for Past Productions." *See* Exhibit 2. That discovery agreement provides a benchmark against which to measure the adequacy of Defendants' past

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productions. However, it is important to note that several important specifics about the parties' past discovery protocol remained unidentified. For example:

    A. Should the search terms be applied to the entire database, or only to certain tables and table columns?

    B. Should the search terms be applied to the attachment files or just the database records?

    C. What was the method of production for legal review? After Defendants' initial production to Plaintiffs, the parties discussed and agreed on a preferred method of production for subsequent productions.

To analyze the productions provided to Plaintiffs per the agreed discovery protocol for past productions, Special Master provided the parties a new database that contained responsive records based on the 47 search terms in the past production protocol. As mentioned above, this Report uses all dates per the new discovery protocol, but does not include an analysis based on the expanded 194 search terms in the parties' new discovery protocol, because it was received one business day before providing this Report to the parties. See Exhibit 42.

III.   DATA SOURCES COLLECTED

Special Master relied on Defendants' previous productions and collected data directly from Defendants to complete the analysis and findings for this Report. Below is a description of the hardware devices and online services relevant to this Report.

    A. Domainwhois-verification.com Server (hereinafter "Domain Who Is Server").

    B. Kayako_support.onlinenic.com Server (hereinafter "Kayako Ticket Server")

    C. Dsktop-6h8msks Developer Workstation (hereinafter "Developer Workstation"). Defendants report that there was only one developer workstation used for programming and productions of the Kayako Ticket Database.

    D. Amazon AWS online storage. Special Master requested any Ticket Database related files on Defendant's Amazon AWS Storage drive but Defendants state

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1   that "nothing relating to the Ticketing software/database information was/is on

2   AWS."

3   E. SVN or GIT version control software or online storage. Special Master located

4   GIT files and SVN files on the Developer Workstation and requested them, but

5   Defendants stated, "There was no version control for the files located in

6   E:\phpstudy\WWW\onlinenic\1.1 Code\script as located on the Developer

7   Workstation. There were no such logs."

8   F. Additionally, the database, backups, and files that Special Master requested

9   from Defendants included:

10   1. Kayako Ticket Database

11   2. Kayako Ticket Database Backups

12   3. Ticket Attachment Files

13   4. PHP and SQL Script Files

14   5. Past Productions to Plaintiffs

15   6. Defendants' System and Log Files

16   7. Directory Lists (text files) of Servers and Developer Workstation Listed

17   above.

18   G. Special Master did not collect or analyze Defendants' Zoho Support Ticket

19   Database for this Report because its use did not begin until October or

20   November 2020, per Defendants. The responsive ticket information from the

21   Zoho Support Ticket Database will be provided to the parties soon based on

22   the new production protocol provided to the Special Master on July 2, 2021.

23   According to Defendants, not all devices listed above contained responsive data.

24   Overall, Special Master collected information with a cumulative data size of 184 GB, 545,013

25   files, and a total of 442,680,623 database records. *See* Exhibit 3.

26   **IV.   KAYAKO TICKET DATABASE**

27   To manage support tickets, Defendants used a relational database known as the

28   Kayako Ticket Database (hereinafter "Ticket Database"). A "ticket" is created by Defendants'

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1 staff and customers (e.g., resellers and users) any time someone requests support for a domain

2 or other issue.

3   In a relational database, complete information about an individual support ticket

4 requires consolidating related data found across multiple tables. When a user creates a ticket,

5 it is held in a parent table, "swtickets," and is automatically assigned a unique numerical

6 identifier (e.g., 1234) in the "ticketid" column. The ticket is also assigned a unique alpha-

7 numeric identifier, which is stored in the "ticketmaskid" column. Additional ticket-related

8 information is contained in related child tables, such as "swticketposts" (messages about a

9 ticket) and "swattachments" (attached images, spreadsheets, or documents that are linked to a

10 ticket or ticket post). The parent and child tables rely on "ticketid" to relate to each other.

11 Therefore, complete information for a responsive ticket necessitates compiling information

12 from multiple tables.

13   There are 18 tables in the Ticket Database with ticket-related data.

14   • swattachments

15   • swauditlogs

16   • swescalationpaths

17   • swparserlogdata

18   • swparserlogs

19   • swticketdrafts

20   • swticketemails

21   • swticketlabellinks

22   • swticketlabels

23   • swticketmergelog

24   • swticketmessageids

25   • swticketpostindex

26   • swticketpostlocks

27   • swticketposts

28   • swticketrecipients

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- swtickets

- swtickettimetrack

- swticketwords

A. Kayako Ticket Audit Log

The audit log gathers logged Kayako SupportSuite application actions performed by users, the system, or a staff user for a ticket. The ticket audit log provides information including, but not limited to: ticket created; ticket deleted; ticket post deleted; and ticket note deleted. *See* Kayako SupportSuite User Manual Version 3.60, Revision 13.

B. Defendants' Staff Members with Permission to Delete Tickets

Only users that are specifically authorized within the Ticket Database can delete ticket-related information. In this case, Defendants' staff members with permissions to delete ticket-related information include:

- Le**@onlinenic.com - Last Visit 3/17/2021

- Ra****@onlinenic.com - Last Visit 3/8/2021

- Lu**@onlinenic.com - Last Visit 9/16/2020

- Wa****@onlinenic.com - Last Visit 3/11/2021

V.   COLLECTION, PROCESSING, AND PRODUCTION METHODOLOGY

This section provides a detailed overview of Special Master's analysis and workflow.

A. Collection of all Data Sources

First, Special Master collected all possible electronically stored information (hereinafter "ESI") from all data sources needed to analyze this Report. The collection began March 12, 2021, and was completed June 17, 2021; Defendants' have produced to Special Master a total of 184 GBs of data. Overall, the ESI fell into the following high-level categories:

- Databases and Database Backups

- PHP & SQL Script Files

- Directory List Text Files

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- Ticket Attachment Files
- HTML Files
- Miscellaneous Files

The collection was an arduous process involving numerous email requests, Skype conference calls, and Skype remote sessions with Defendants' staff and their counsel, Perry Narancic. Throughout the process, Mr. Narancic was cooperative, responsive, and provided timely responses to Special Master's voluminous requests. For example, he arranged and participated in late-night phone calls on weekdays and weekends, as well as remote computer sessions. Furthermore, he assisted with language and communication challenges between Special Master and Defendants in China. In particular, he encouraged his clients to comply with all information requests and to cooperate with Special Master. Accordingly, Mr. Narancic's professionalism facilitated the collection of the ESI required by Special Master for this Report.

B. Backup Policies, Procedures, and Schedules

Special Master also requested copies of backup policies, schedules, and procedures from Defendants for both servers and the Kayako Ticket Database. The Defendants did not produce any of this information and stated there are no backups of either server or any workstation referenced in this Report. Also, Defendants stated several times there were no database backups of the Kayako Ticket Database before December 16, 2020. In total, Defendants produced to Special Master four databases dated: December 16, 2020; March 13, 2021; March 17, 2021; and March 23, 2021.

During the analysis, Special Master discovered a 2013 Ticket database on Defendants' server that was not previously disclosed or provided by Defendants. This database was restored and analyzed for this Report.

C. Past Productions to Plaintiffs

Special Master requested from Defendants all past productions delivered to Plaintiffs. Defendants stated they no longer had the productions, so Special Master requested the productions from Plaintiffs. Eventually, Defendants stated they had found four of the five

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1 productions and produced them to Special Master. Defendants could not find and produce to

2 Special Master the November 27, 2020 production to Plaintiffs. However, Plaintiffs were able

3 to provide the November 27, 2020, production to the Special Master.

4   The following is the list of all past productions Defendants produced to Plaintiffs:

5   • July 15, 2020

6   • November 27, 2020

7   • December 26, 2020

8   • February 4, 2021

9   • February 5, 2021

10   **D. Pre-Processing and Directory Organization**

11   Next, Special Master organized and cataloged all the collections into a pre-processing

12 directory. The root folder was named "\Original Source Files" and all sub-directories were

13 organized based on file type: databases; directory listings; ticket attachment files; HTML

14 productions; programmer scripts; and miscellaneous files.

15   "Data Pre-Processing" involves preparing ESI for processing pre-analysis. Pre-

16 processing methods vary based on the data type(s) involved. For example, for the database

17 productions, pre-processing involved ingesting and consolidating all sources into the MySQL

18 "Consolidated Database" (described below). Other pre-processing methods are described

19 below.

20   **1. Database Files**

21   The database MySQL Script and database backup files were organized into folders

22 (directories).

23   • "\Pre-Processing\Databases\Kayako Ticket Server\2013-05-16"

24   • "\Pre-Processing\Databases\Kayako Ticket Server\2020-12-16"

25   • "\Pre-Processing\Databases\Kayako Ticket Server\2021-03-11"

26   • "\Pre-Processing\Databases\Kayako Ticket Server\2021-03-14"

27   • "\Pre-Processing\Databases\Kayako Ticket Server\2021-03-17"

28   • "\Pre-Processing\Databases\Kayako Ticket Server\2021-03-23"

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- "\Pre-Processing\Databases\Produced by Defendant\2021-01-28"

2

- "\Pre-Processing\Databases\Produced by Defendant\2021-02-04"

3

- "\Pre-Processing\Databases\Produced by Defendant\2021-02-05"

4

- "\Pre-Processing\Databases\Produced by Plaintiff\2020-11-27"

5

- "\Pre-Processing\Databases\Produced by Plaintiff\2020-12-26"

6

- "\Pre-Processing\Databases\Produced by Plaintiff\2021-02-04"

7

- "\Pre-Processing\Databases\Produced by Plaintiff \2021-02-05"

8

2. Attachment Files

9

Each directory of attachment files was stored in a directory and cataloged. The

10

attachment files were files that were part of the attachments to emails that were received by

11

the Kayako Ticket Server and parsed into tickets, ticket posts, ticket emails, ticket recipients,

12

and ticket attachments. Each attachment was renamed, encoded, and cataloged by the Kayako

13

Ticket Server parser software. Special Master organized these files into directories based on

14

when they were received, as many of these directories and files were identical and there were

15

many duplicates. Special Master pre-processed and prepared each directory to perform

16

destruction and omission analysis.

17

3. Directory Listings

18

Defendants, at the request of Special Master, produced directory listings for the

19

Kayako Ticket Server, Domain Who-Is Server, and the Developer Workstation named

20

"desktop-6h8msks" using a variety of tools. For the Linux servers, Defendants downloaded,

21

installed, and configured a utility named "Zabbix-Apache" and produced directory listings to

22

Special Master on more than one occasion.

23

Listings of files in directories produced to Special Master from the Kayako Ticket

24

Server, the Domain Who-Is Server, and the Developer Workstation were placed in the

25

directories listed in Exhibit 4.

26

Each directory listing was processed by a software program created by Special Master

27

to convert each of these listed files into a Comma Separated File (CSV). As CSV files,

28

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1   Special Master was able to import them into MySQL and create the new databases named

2   here:

3   - "files_kayako_support_2021_03_16"

4   - "files_kayako_support_2021_04_06"

5   - "files_kayako_support_2021_04_13"

6   - "files_domainwhois_2021_03_16"

7   - "files_domainwhois_2021_04_06"

8   - "files_domainwhois_2021_06_04"

9   - "files_desktop_6h8msks_2021_05_03"

10   Special Master then created SQL Scripts to move the contents of directory listings

11   from these databases into the Consolidated Database (described below). Special Master then

12   used these records to create scripts and file requests of Defendants.

4. HTML Productions

14   One production to Plaintiffs and one production to Special Master contained ticket

15   information in HTML file format. The HTML information in both productions included the

16   Ticket Number, Subject, Email Address, Contents, and Date columns from the ticket

17   ('swtickets') and ticket posts ('swticketposts') tables in the database tables.

18   To pre-process these files, Special Master first wrote custom software to convert these

19   HTML files into CSV files to facilitate importing them into the Consolidated Database.

20   However, due to the nature of the information contained in the "contents" column, the files

21   were always corrupt. So, Special Master modified the software to instead insert these HTML

22   tickets directly into the Consolidated Database for processing and production. HTML

23   directories are listed in Exhibit 5.

5. Programming Scripts

25   Special Master requested Defendants to provide the programming script files they

26   used for productions. Defendants provided some but not all. The files received were organized

27   in the directories listed in Exhibit 6 for pre-processing.

28

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6. Miscellaneous Files

From time to time, Special Master received files that did not fit into any of the above categories, and they were pre-processed from the directories listed in Exhibit 7.

E. Consolidated Database

Processing, analyzing, and producing information spread across multiple databases is particularly challenging and time-consuming. To ensure accuracy and efficiency, Special Master centralized all data into a single database. Thus, searching, producing, and cataloging information became considerably faster.

The newly consolidated database for production was named "kayakodball" (hereinafter "Consolidated Database"). In creating the Consolidated Database, over 250 SQL scripts were created by Special Master to populate the tables in the Consolidated Database with all the records in the source databases. SQL Scripts were also generated to compare record counts to verify that no records were dropped when consolidating the database records. Special Master imported each set of produced data sources into the "Consolidated Database" and assigned a "Database ID" to distinctly identify each set of files. *See* Exhibit 8.

In the consolidated database, Special Master found 3,010,020 ticket records and 403,601,954 ticket-related records from all database versions reviewed. Thus, each ticket had an average of 134 ticket-related records. Specifically, there were:

Record Type	Total Records
Tickets (swtickets, tmp_data)	3,025,281
Ticket-Related Records	403,601,954
Ticket Posts (swticketposts, temp_data, htmltickets, kayako_searchterms tables) Sub-posts or messages related to a ticket.	12,389,604
Attachments (swattachments table) Records such as images, spreadsheets, or documents that are linked to a ticket or ticket post.	877,211

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Other Records Other related items such as email addresses, word indexes, notes, etc.	22,786,573

Table 1. Overview of tickets and ticket-related records.

Collectively, there are 22 database versions, from all collected data sources, with a cumulative file size of 82 GB and a total of 442,680,623 records across all versions of the database.

F. Data Processing

To facilitate responsive and privilege searches, Special Master created scripts to add the following columns to each table in the Consolidated Database that had been consolidated from the source databases:

- "batesid" - This is a unique identification number or Bates Number generated for each record in each table in the database. These numbers are unique within each table, as each table is treated as a separate production file.

- "searchtermsfound" - This column contains a list of any of the responsive search terms that were found for the record based on the production protocol.

- "ProducedBefore" - This column is set to "Yes" or "No" based on whether the record was ever part of a previous production to the Plaintiffs.

- "Responsive" - This column is set to "Yes" if the record was responsive based on the agreed protocol for the past collections and needed to be produced, and "No" or blank if it was not responsive.

- "Related" - This column is set to "yes" if it is related to a ticket marked responsive in a related table anywhere in the database.

Special Master then created scripts to populate the "ProducedBefore" column for each record in the Consolidated Database that had been produced by Defendants to Plaintiffs, and SQL scripts were generated to verify the records counts between the source databases and the Consolidated Database. *See* Exhibit 9.

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1   Special Master then created scripts to populate the responsive column for each table

2   and table records based upon the search terms in the agreed discovery protocol for past

3   productions. *See* Exhibit 10.

4   Special Master then created a table in the Consolidated Database named

5   "responsivetickets" (hereinafter "Responsive Tickets Table"). This table contained the Ticket

6   ID or Ticket Mask ID (Ticket Number) for any ticket that was marked as responsive in the

7   system. Special Master then created and executed SQL Scripts that populated the Responsive

8   Tickets Table with all the responsive ticket information from each of the responsive rows in

9   the source tables.

10   For records not marked as responsive, Special Master created scripts to mark records

11   as "related" in the database if the record was a related part of the responsive ticket. This

12   allowed Special Master to produce every column in every table for any information that is

13   contained in each responsive ticket. Thus, all responsive ticket records will be marked "Yes"

14   in either the related or responsive columns. Conversely, a non-responsive ticket will have the

15   column marked with a "No".

16   **G.   Data Analysis**

17   Special Master applied a variety of analysis methods to arrive at the conclusions in

18   this Report. Briefly, a few primary methods are described below.

19   One method used to determine if data was deleted, was to analyze index numbers in

20   each table. Tables assign index numbers automatically to each new record in sequential order.

21   This is known as auto-indexing. For example, the first record will be assigned the index ID of

22   1, and subsequent records are assigned the next sequential number. This can reveal the

23   maximum number of records in the table, as well as any gaps in sequential numbering created

24   by deleted records. Special Master applied this analysis to all the database tables.

25   Another method included comparing temporary records tables to live database records.

26   Programmers commonly create temporary tables in a database to test queries, test

27   programming code, update or delete data, and analyze data in a table. Temporary tables

28   should reflect the records in the live database. When a temporary table has records that no

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1   longer exist in the live database, this indicates they were used to test deletion scripts, which

2   were then applied against the live Database, and resulted in deleted records from the database.

3   In addition to the methods listed above, Special Master also reviewed and analyzed

4   directory listings from the file servers and Developer Workstation, reviewed PHP

5   programming scripts, reviewed attachment file directories, produced, and looked for missing

6   database records and attachments, compared previous production records to the live database

7   to identify missing or deleted records, and analyzed and compared 22 different databases

8   created from source information, among other things.

9   H.   Database Production for Report

10   Accompanying this Report, Special Master provided both parties a MySQL database

11 with all the responsive records (per the search terms in the past agreed discovery protocol),

12 responsive attachment files, and Excel spreadsheets containing the analytics data used for

13 working data to provide the information, findings, and conclusions in this Report.

14   Special Master produced responsive database records and attachments in the Kayako

15 Ticket Server from the Consolidated Database. The database provided to the parties with this

16 Report had a file size of 26 GB.

17   To produce the ticket attachment files, Special Master used custom software and an

18 industry-standard dtSearch engine to perform full-text indexing and searching for responsive

19 attachment files. This software assigns its own Bates Number to each attachment, creates a

20 spreadsheet with reference information, and includes the responsive records flagged with

21 matching responsive keywords. Hyperlink columns in the spreadsheet allow the parties to

22 quickly open PDF and Text files with the information from content fields in the database that

23 had voluminous text content.

24   To produce the production database, Special Master created

25 a database named "kayakodball_prod" (referred to as the "Consolidated" database in this

26 report) to serve as the production database for this Report. and then created scripts for each

27 table. Next, he copied and indexed any records that were marked responsive or related.

28

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1   Special Master then scripted and ran table maintenance to optimize the indexes and remove

2   any disk space that was no longer needed for this database.

3   Special Master then backed up each of these new databases and compressed and

4   archived the database backups. Special Master then created scripts to compare the record

5   counts in each table in each of these production databases and compared the results. *See*

6   Exhibit 11. The results were identical, and Special Master will use the second method

7   whenever producing records in the future.

8   The final production database is a relational database that has been reindexed to

9   optimize it for reporting and legal review by the parties. Most of the original indexing of the

10 tables was done to optimize it for being a live database, and these unnecessary indexes have

11 been removed to save disk space.

12 **VI. DEFENDANTS FAILED TO PRESERVE ESI**

13   Defendants failed to preserve potentially relevant ESI for this matter pre-litigation,

14 post complaint filing, during discovery, and even after the appointment of Special Master.

15 Defendants have sophisticated IT skills, requisite infrastructure, and have had ample time to

16 implement backup management software and procedures. Despite these circumstances, they

17 failed to preserve and produce relevant ESI. The exact extent of Defendants' backups is

18 unknown as Defendants obfuscated their backup management systems for servers, files, and

19 databases.

20   **A. Defendants' Have the Requisite IT Skills and Software Developer Knowledge**

21   **to Backup and Preserve ESI**

22   Notably, Defendants resell backup services to their clients. To preserve and produce

23 data, a company must have backup systems and procedures in place. Through their publicly

24 available website, found at https://onlinenic.com/en/, Defendants offer, market, and resell

25 backup services. A copy of OnlineNIC Inc.'s webpage is attached to this Report as Exhibit

26 12. Thus, Defendants have demonstrated they have the capacity and infrastructure to backup

27 and preserve responsive ESI.

28

1   Secondly, Defendants have advanced software developer skills. To produce or delete

2   data from a database, a company must have sufficiently advanced software developer skills.

3   In this case, Defendants created PHP script files (text files with programming code) to query

4   the Ticket Database and produce responsive materials to Plaintiffs and Special Master. In

5   producing responsive ESI to Special Master on March 25, 2021, April 15, 2021, and April 26,

6   2021, Defendants used 28 PHP script files. *See* Exhibit 13. Their third production even

7   included three additional PHP script files. *See* Exhibit 14. Furthermore, Defendants used a

8   SQL statement file (programming code used to copy and delete database records and

9   attachment files) and likely used these scripts or similar scripts to retrieve responsive

10   information for the productions to Plaintiffs. *See* Exhibit 15. Defendants' repeated

11   employment of PHP scripts and SQL statements demonstrates their advanced level of

12   software developer skills. Therefore, Special Master concludes Defendants possess the

13   requisite competence to backup, preserve, produce, and even delete responsive records from

14   the Ticket Database.

15   **B. Defendants Have Inadequate Backup Processes Despite Having Since At**

16   **Least October 2019 to Create Comprehensive Backup Procedures**

17   Defendants' backup processes are inadequate. The federal rules of civil procedure

18   require a party to take reasonable steps to preserve ESI from the moment they can reasonably

19   anticipate litigation. Fed. R. Civ. P. 37(e). In this case, Plaintiffs filed the complaint on

20   October 28, 2019. Dkt. No. 1. At a minimum, Defendants' duty to preserve arose at least by

21   the time served with Plaintiffs' complaint. Special Master was appointed on March 3, 2021.

22   Dkt. No. 72. By the time of Special Master's appointment Defendants had over one year to

23   address backup procedures and data retention policies in accordance with their preservation

24   obligations. However, despite this extensive period for implementing comprehensive backup

25   systems such as basic backup management software, Defendants failed to do so.

26

27

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C. Alternatively, Defendants Have a Robust Backup Management System but Have Obscured or Hidden Backups

Defendants obfuscate their backup processes. Generally, data backup for an online services company is crucial, not only for litigation, but also for business security, stability, compliance, and protection of client and intellectual property. Hence, companies typically act accordingly to institute clear backup policies and procedures. However, in this case, Defendants have not identified or defined their backup management system, and in fact, have been untruthful.

For example, during discovery, Defendants claimed no backups existed; however, this was not true. There are multiple instances of backups existing in seemingly random places. First, SQL backup files and attachment files were found on <u>both</u> servers in multiple locations and archive files. *See* Exhibit 16. In addition, Special Master found 11 unique backup scripts for the databases. Exhibit 17 shows the 11 backup scripts with the metadata. Furthermore, some of the productions Defendants made to Plaintiffs would have required creating backups, which were created on developer workstations but were not disclosed. *Id.* Further still, even though Defendants claimed that no programming files were on the servers, the files were present in their third production to the Special Master on April 26, 2021. *See* Exhibit 18. Finally, around May 2021, Special Master found a fifth database on Defendants' server they had failed to provide or disclose. Thus, Defendants have a history of being untruthful or misleading regarding the nature and extent of their backups and backup systems and procedures.

Therefore, given Defendants' sophisticated IT skills, a business need for backups, and a history of untruthfulness, Special Master believes it is likely there are additional files, including developer script files, on undisclosed or unlocated developer workstations or servers.

VII. DEFENDANTS DESTROYED DATA

Not only did Defendants fail to preserve ESI, but they also deleted significant amounts of records. In fact, Defendants deleted 52.35% of the ticket-related database records

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1   (11,059,388 records) in the Ticket database. Of these deleted records, Special Master

2   estimates 30% of those records (based on the percent of responsive records from July 1, 2015

3   – July 15, 2020), or 3,317,816 were responsive to the agreed past discovery protocol. This

4   ticket-related data is located in the following six tables: swtickets; swticketposts;

5   swticketnotes; swattachments; swticketmergelog; and swauditlogs. Broadly speaking,

6   Defendants employed two primary methods to delete data: 1) deletion using the Kayako

7   SupportSuite Application; and 2) deletion directly from the Ticket Database using PHP and

8   SQL scripts.

9   Special Master utilized a variety of analysis methods to identify instances of deleted

10   records. This Report narrative covers the most relevant examples of the record types that

11   Defendants deleted, including ticket posts, ticket notes, attachment files, and HTML files.

12   **A. Defendants Deleted Records Using the Kayako SupportSuite Application and**

13   **Obscured User Activity by Deleting Audit Logs**

14   For earlier ticket records, Defendants deleted records using the Kayako SupportSuite

15   Application (hereinafter "Application"). When using the Application, user activity is recorded

16   in the audit logs. An example of this is when records are deleted from the ticket and ticket-

17   related tables. According to the Application's audit logs, Defendants deleted: 4,106,268

18   tickets; 85 ticket posts; 8,991 ticket notes; and 25,253 e-mail recipients. This is a total of

19   4,140,597 records. As summarized in Table 2 below, 93% (3,863,451 records) of the deleted

20   records were created in 2008, 2009, and 2010, while newer records constitute a much smaller

21   portion of the total.

Year Created	Number of Deleted Database Records
2020	302
2019	22,348
2018	3,209
2017	2,926
2016	548
2015	16,850

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2014	1,204	
2013	25,859	
2012	52,596	
2011	151,304	
2010	809,668	
2009	1,782,491	
2008	1,271,292	
Total	**4,140,597**	

Table 2. Total records deleted using the Kayako SupportSuite Application (2008 – 2020), organized by record creation date.

However, not only did Defendants delete potentially responsive records using the Application, but they also deleted the Application's audit logs. Audit logs provide some information about when a user deletes records. In this case, there were over 15 million audit log records. Defendants deleted approximately 7.5 million of those records (roughly one-half). Special Master was able to recover 459,226 audit log records from a May 16, 2013 database. For this reason, the records in Table 2 are organized by the records' creation date data, as it was the only information consistently available. This made analyzing user activity considerably more challenging and thereby limits Special Master's ability to determine a precise timeline of when Defendants deleted these records, or even when "most" of the records were deleted.

Furthermore, users require special permission to access the database and delete the audit logs. Because audit logs are so small and require little storage, the primary benefit to deleting audit logs is to hide user activity (such as deleting tickets). Therefore, Special Master concludes that the audit logs were deleted by Defendants to hide their deletion activity.

B. Defendants Deleted Records Directly from the Ticket Database After Production

In more recent years, Defendants began deleting records directly from the live Ticket Database using PHP and SQL scripts. Based on the creation date of PHP and SQL scripts

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1   used for deletion, Special Master found Defendants began using this technique in more recent

2   years.

3   It is considered best practice, and certainly a common practice, to never delete data in

4   a database because it can create problems with the database's referential integrity. For

5   example, when deleting tickets directly in the database, a programmer can leave orphan

6   records (e.g., a ticket record is deleted, but associated ticket post and ticket attachment records

7   remain). Here, Defendants deleted records in some tables but not all related tables, thereby

8   creating orphan records in multiple places. If Defendants wished to make the deleted tickets

9   inactive, they should have closed tickets in the Application by setting the ticket status field to

10   "Closed." Instead, Defendants' deleted records directly from the database and left a lot of

11   orphaned records behind as markers of deletion activity.

12   Further indicators of data deletion directly from the Ticket Database existed in a

13   comparison between Defendants' productions and to the live Ticket Database. In fact, this

14   showed that Defendants even deleted database records in the live database *after* initially

15   producing the records to Plaintiffs. During multiple productions from Defendants, some

16   records were contained in one production but were missing from subsequent productions and

17   from the live Ticket Database itself.

18   For example, on March 23, 2021, Special Master collected Defendants' Ticket

19   Database and compared it to Defendants' production dated November 27, 2020. By relying on

20   the Ticket Mask Id, Special Master found that 208 of the 20,615 distinct tickets produced

21   November 27, 2020, were missing from the Ticket Database on and after December 16, 2020.

22   *See* Exhibit 19.

23   In another example, on or around March 12, 2021, Defendants' programmer created a

24   table named 'tmp_data'. *See* Exhibit 20. This temporary table contains a subset of the

25   columns found in the live Ticket Database table named 'swtickets' and 'swticketposts'. *See*

26   Exhibits 21 and 22. In fact, there are 3,716 matching ticket records between these two tables

27   (76% match). *Id.* However, the tmp_data table has 1,146 ticket posts that were since deleted

28   from the live Ticket Database table. *Id.*

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1   Similarly, on or around March 12, 2021, Defendants created a table named

2 'temp_data'. *See* Exhibit 23. This table contains a subset of the columns found in the live

3 Kayako Ticket Database table, "swticketposts". *Id.* There are 1,278,354 matching ticket posts

4 between the two tables. *Id.* However, there are 89,294 ticket posts in the 'temp_data' table

5 that were since deleted from the live Ticket Database table. *Id.*

6   In addition to the records deleted between productions to Plaintiffs, Special Master

7 found that Defendants deleted 1,281 unique tickets and 445 related ticket posts from the live

8 Ticket Database after these tickets and posts were initially produced to Special Master. These

9 records are reproducible using the Consolidated Database created by Special Master and will

10 be provided to the parties in a new production set.

11   For records deleted directly from the database, Special Master cannot determine when

12 the records were deleted. When records are deleted directly from the database, as opposed to

13 via the Application, there are no audit logs; a record created 10 years ago could have been

14 deleted 8 years ago or 8 days ago. Had Defendants provided regular backups, Special Master

15 could have provided a timeline for deleted records. In this case, Defendants did not maintain

16 or provide regular backups, and therefore he cannot determine when records were deleted.

17   However, Special Master did discover a 2013 database. By recovering the 2013

18 database, Special Master gleaned some context behind Defendants' deletion activities. In

19 particular, Special Master noted that post-2013, Defendants used programming scripts to

20 delete more records from the Ticket Word table (swticketwords) and Post Index table

21 (swticketpostindex) than any other table including tickets, ticket posts, attachments, and audit

22 logs. Special Master believes Defendants were removing word index records so that search

23 terms related to litigation would not be linked to specific tickets or ticket-related records. The

24 Special Master found that the Defendants deleted 2,919,130 database records between May

25 16, 2013, and December 16, 2020. The Special Master also found an additional 4,102,283

26 database records that were deleted and missing in the live ticket database as of March 23,

27 2021. This results in a total number of 7,021,413 orphaned records which means that there is

28 an incomplete set of records for the tickets.

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Below is a summary of the surviving responsive tickets:

- No date filter: 65,810 tickets

- Filtered for July 1, 2015 – July 14, 2020: 32,906 tickets

- Defendants previously produced to Plaintiffs: 32,054 tickets

- Additional tickets produced by Special Master to Plaintiffs: 852 (2.7% more)

C. Defendants Deleted Ticket Posts

Defendants deleted ticket post records from the live Ticket Database and thereby created orphaned ticket post index records. When a database record is deleted from a child table, such as a subsequent ticket post, but not delete the corresponding record from the parent table (based on the unique identifier), the result is an "orphaned record". In this case, Special Master found orphaned records by analyzing and comparing the unique Ticket ID fields in all 14 ticket-related tables. Specifically, Special Master found 987,862 orphaned ticket post index records, which is 3.6% of the total. *See* Exhibit 24. This means that the actual ticket posts, that originally referred to these orphaned records, have been deleted. It is also noteworthy that only 158 of these unique posts are also missing from the "temp_data" table of posts and is a further indication of Defendants deletion from the database.

Below is a summary of the surviving responsive tickets posts:

- No date filter: 253,506 ticket posts

- Filtered for July 1, 2015 – July 14, 2020: 93,669 ticket posts

- Defendants previously produced to Plaintiffs: 91,053 ticket posts

- Additional tickets posts produced by Special Master to Plaintiffs: 2,616 (2.9% more)

D. Defendants Deleted Ticket Notes

Defendants deleted ticket note records from the Ticket Database. Database indexes commonly assign unique numerical identifiers in consecutive order to new records automatically. This is known as auto-incrementing. Gaps in the sequential numbering of an index table are evidence that records were deleted. Special Master applied this analysis to the 'swticketnotes' table, where ticket notes are stored. He identified 612,729 ticket note records

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1   were deleted, representing 83% of the total ticket notes that were in the system. *See* Exhibit

2   25. Audit logs show that 8,991 of these ticket notes were deleted via the Application, and the

3   rest were deleted directly from the live ticket database.

4   **E. Defendants Deleted Attachment Database Records**

5   Not only did Defendants delete attachment files, as discussed above, they also deleted

6   attachment database records. Many of the attachment database records were responsive to

7   Plaintiffs' discovery requests and the agreed past discovery protocol of the parties.

8   As discussed above, Special Master determined Defendants had a total of 432,033

9   attachment database records. By the time of Special Master's final collection on March 23,

10   2021, Defendants had deleted 296,349 attachment database records – *68.59% of the total* –

11   leaving only 135,684 attachment records. Of the remaining 135,684 attachment records,

12   24,719 were responsive (18.22%). *Id*. Accordingly, of the 296,349 deleted attachment

13   database records, an estimated 53,995 attachments may have been responsive (18.22%).

14   Additionally, Defendants created orphaned attachment files when they deleted ticket

15   records, such as tickets or ticket posts, that had attachments, and failed to delete the

16   referenced attachment files. By comparing the attachment file directory to the live Ticket

17   Database, Special Master found 8,165 orphaned attachment files representing 8.22% of the

18   total. The 8,165 orphaned attachment files indicate Defendants deleted the corresponding

19   ticket records in the database. Because any given ticket record could have more than one

20   attachment, Special Master is unable to conclude how many ticket records were deleted.

21   Furthermore, of the 8,165 orphaned attachment files, Special Master used the agreed

22   past discovery protocol and determined that 97 are responsive. However, because they were

23   orphaned, they are no longer linked to a specific ticket or ticket post, and therefore contextual

24   information is missing for those attachment files. *See* Exhibit 28. Exhibit 28 shows the

25   responsive files categorized and totaled by file type.

26   Special Master noted that originally the total number of attachment database records

27   and the total number of attachment files was 432,033 each. Defendants deleted more

28   attachment files in the file system (331,390) than attachment database records (296,349). A

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user must have special permissions, and more importantly, expertise, to delete database records or attachment files either directly from the database or the file system. The deleted attachment files and records cannot have happened by accident. Therefore, Special Master concludes it must have been intentional.

Below is a summary of the surviving responsive database attachment records:

- No date filter: 44,004 attachment database records
- Filtered for July 1, 2015 – July 14, 2020: 23,464 attachment database records
- Defendants previously produced to Plaintiffs: 22,223 attachment database records
- Additional attachment database records produced by Special Master to Plaintiffs: 1,241 (5.6% more)

F. Defendants Deleted Attachment Files

Defendants deleted attachment database records from the Ticket Database, as well as attachment files from the file system. The Ticket Database stores an attachment file's location, original file name, and stored file name as a database record. *See* Exhibit 26. The actual attachment files, however, are stored in the file system on the server, outside the database. *Id*. Attachment files consist of various file types such as images; documents; and spreadsheets. Critically, attachments may be the most important part of a ticket, much like an email attachment may be more important than the email message itself. In this case, attachments included copyright notifications; email conversations; legal demands; account summaries; complaints; letters; legal information; financial information; and more.

Special Master determined that over time, Defendants had a total of 432,033 attachment files in the file system. While a ticket can have more than one attachment file, each attachment file has an associated database record in a one-to-one relationship. Therefore, since there were 432,033 attachment files in the file system there were also 432,033 attachment records in the database.

However, by the time of Special Master's final collection on March 23, 2021, Defendants had deleted 331,390 attachment files – *76.70% of the total*. Of the surviving

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1   100,643 attachment files, 23,464 were responsive (23.31%) to the search terms in the agreed

2   past production protocol. *See* Exhibit 27. To determine how many deleted attachment files

3   would have been responsive, Special Master used the 23.31%, responsive rate (the only

4   number available). Under this methodology, approximately 77,247 deleted attachment files

5   would have been responsive. Furthermore, the responsive rate for both the surviving and

6   deleted attachment files would likely be higher using the expanded list of search terms (194

7   instead of 42) in the new discovery protocol.

8   Finally, it is important to note that while some attachment files are a single file like a

9   PDF, others are compressed archive files like zip, tar, or gz files, and contain many individual

10 files. In other words, while the number of deleted attachment files is 331,390 there are likely

11 many more deleted individual files within those attachment files.

12   **G. Defendants Deleted HTML Files, Tickets, and Ticket Post Records**

13   Defendants deleted tickets after initially producing them to Special Master. On March

14 12, 2021, Defendants produced to Special Master a backup of the live Ticket Database. The

15 backup contained HTML files that were named in the same format as the original HTML

16 production Defendants made to Plaintiffs on July 15, 2020. Database record comparison

17 revealed they also deleted 1,073 tickets after initially producing them to Special Master in the

18 backup of the live Ticket Database on March 12, 2021.

19   Based on a group of search terms, Special Master requested Defendants produce 251

20 matching HTML files that were located on the Kayako Ticket Server as they were not

21 included in any of the previous productions. Defendants produced them to Special Master on

22 April 26, 2021. These newly produced HTML files contained 334,400 partial ticket post

23 records and 8,313 partial ticket records. A subset of 190 of these tickets were responsive

24 across all ticket-related tables.

25   Of the 190 responsive tickets, 31 of the tickets and 11,700 related ticket posts were

26 deleted from the Ticket Database. In addition, the HTML files contained 1,073 tickets that

27 Defendants since deleted and no longer exist in the Ticket Database. Of these 1,073 tickets,

28 14 tickets were responsive and had been produced to Plaintiffs before. *Id.* Finally, the PHP

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1   Script code used to produce these HTML files is not located on the servers. This is additional

2   evidence that Defendants deleted records from the Ticket database during discovery.

3   All HTML files discussed above are named with a prefix consisting of a search term

4   from the parties' past discovery protocol. "JenryHaris" is one of the search terms in the past

5   discovery protocol. When sorted alphabetically, Special Master saw that all files, beginning

6   and ending, were named with the JenryHaris prefix. *See* Exhibit 29. This indicates that there

7   were most likely other files with prefix names for other search terms that were deleted or

8   removed after they were created on March 12, 2021, and were not available for subsequent

9   productions. Relatedly, Defendants did not produce any HTML files or records related to

10 JenryHaris in the July 15, 2020, HTML production to Plaintiffs. *See* Exhibit 30.

11   **H. SQL Files and SQL Backups of Productions**

12   Defendants deleted SQL files and databases they previously provided Plaintiffs.

13 Generally, to produce a database, a programmer writes and executes SQL scripts to define the

14 scope of the produced database. Defendants produced MySQL Database Script Files

15 containing records for MySQL Database productions to Plaintiffs in December of 2020

16 through February of 2021. However, neither of these databases, or any associated

17 programming or SQL backup scripts, are located on any of the servers or workstations. This

18 poses two concerns. First, Special Master is unable to conclude how these production files

19 and backups were created to evaluate their adequacy at producing responsive records. Second,

20 the question remains of whether they were deleted from one of the two servers, whether they

21 were produced on the Developer Workstation and then deleted, or whether they were

22 produced on an undisclosed developer workstation.

23   **I. Defendants Used PHP and SQL Deletions Scripts to Delete Ticket Database**

24   **Records and Attachment Files**

25   Defendants' programmers created specific PHP and SQL scripts to delete database

26 records and attachment files. Scripts can be used to produce responsive records as well as to

27 delete records from a database. Special Master found 28 PHP scripts and one SQL script that

28 used record deletion language. *See* Exhibit 13. Here is a sample of some of those scripts:

1   • delete from swattachments where ticketid...

2   • delete from swauditlogs where ticketid...

3   • delete from swescalationpaths where ticketid...

4   • delete from swparserlogs where ticketmaskid...

5   • delete from swticketlocks where ticketid...

6   • delete from swticketmergelog where oldticketmaskid...

7   • delete from swticketmessageids where ticketid...

8   • delete from swticketpostindex where ticketpostid...

9   • delete from swticketpostlocks where ticketid...

10   • delete from swticketposts where ticketid...

11   • delete from swticketrecipients where ticketid...

12   Special Master can only conclude that Defendants programmatically deleted files

13   using PHP and SQL scripts, and tried to hide evidence of their use by deleting the scripts

14   themselves.

15   **J.   Text File Created by Defendants' PHP Script Files Reveals Deleted**

16   **Attachment Files and Attachment Database Records**

17   Defendants deleted 472 physical attachment files using PHP scripts. Defendants

18   demonstrate their ability to copy or delete files to and from servers with PHP Programming

19   Scripts, and to work with remote and local databases. On March 17, 2021, Defendants created

20   two PHP script files named 'zenghy_tmp_20210317.php' and

21   'zengy_attachment_copy_file.php.' The latter PHP script generated a text file named

22   '/root/duo_files.txt.' *See* Exhibit 31. This file was located on the Kayako Ticket Server, was

23   requested by Special Master, and was delivered on April 26, 2021. The file references 472

24   unique attachment files by their file paths. *See* Exhibit 31. However, when Special Master

25   cross referenced the directory lists from both servers and developer workstation, the 472 files

26   were not listed, indicating those attachment files had been deleted.

27   In addition, Special Master found that a subset of the 472 attachment files were

28   missing corresponding database records. Special Master cross-referenced all 472 files against

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1   the 'swattachments' table to look for matching database records. Notably, 34 of the listed

2   attachment files did not have matching database records in the cross-referenced table. *See*

3   Exhibit 32. The fact that the 34 records were no longer included in the 'swattachments' table

4   indicates Defendants deleted those attachments from the database with the PHP script file.

5   Notably, this deletion occurred just before Defendants' first production to Special Master on

6   or about March 17, 2021.

7   Conspicuously, the '/root/duo_files.txt' file also revealed other actions. For example,

8   the file was used to copy files to a directory, '/home/jumpol/script/ticket_20210106/files/',

9   which itself no longer exists. Furthermore, and most notably, the text file references database

10 servers, other than the live database server, indicating that there are undisclosed servers.

VIII.   DEFENDANTS WITHHELD DATA FROM PLAINTIFFS

12   There are multiple indicators of withheld records within Defendants' productions to

13 Plaintiffs including using an incorrect date filter; applying restrictive searches; providing

14 incomplete database records; excluding attachment files; and more.

A.   Defendants Excluded Two Years' Worth of ESI with Restrictive Date Filters

17   Defendants withheld multiple years' worth of ESI. The parties agreed to a date filter of

18 July 1, 2015, to July 14, 2020, for their past productions. *See* Exhibit 2. However, for each

19 production made to Plaintiffs, Defendants used different date ranges. For example, one PHP

20 script Defendants employed to query the Ticket Database for responsive records requested

21 data back to 2015, while a subsequent production only went back to 2017. *See* Exhibits 33

22 and 34. The varied date ranges were not consistent with the agreed past production protocol

23 and resulted in withholding responsive data from the Plaintiffs.

B.   Defendants Withheld ESI by Executing Incomplete Database Searches

25   Defendants withheld responsive ESI found in ticket-related tables. The parties'

26 discovery protocol for past productions included a list of search terms. *See* Exhibit 2. The

27 protocol did not specify which database tables or columns to search for the responsive records

28 and did not specify if search terms should apply to ticket attachments. However, it is common

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1   and a best practice to apply search terms to the entire unit of an item. For example, in an email

2   production, search terms should be applied against the entire email by including the header,

3   content, metadata fields, *and* all attachments to an email. Applying this same logic,

4   Defendants should have applied the search terms to the ticket database table, and all ticket-

5   related database tables.

6   In the present case, Defendants executed search terms inconsistently. In some

7   instances, Defendants' responsive searches were restricted to the email, subject, and contents

8   columns of the tickets or ticket posts table. *See* Exhibits 35 and 36. In other scripts, search

9   terms were applied in some but not all tables. *See* Exhibit 37. Therefore, Defendants withheld

10   responsive ticket-related ESI.

C.   Defendants did not Search Attachment Files

12   The agreed past discovery protocol contained search terms. However, the search terms

13   were not applied against the full text of each ticket attachment file to determine

14   responsiveness. All these attachments were subsequently not produced, and some were in fact

15   deleted, as discussed in Section VII. Special Master verified this by creating a full-text search

16   index of all the attachment files to search the attachment files for each search term.

D.   Defendants Withheld Responsive Ticket-Related Tables and Table Columns

in Early Productions

19   Defendants did not produce complete ticket records to Plaintiffs. As discussed

20   previously, complete responsive ticket data from the relational Ticket Database requires

21   consolidating information across multiple related tables. However, Defendants only included

22   a subset of all ticket-related database tables in their productions. *See* Exhibit 38. Specifically,

23   Defendants withheld records from most of the ticket and ticket post-related tables described in

24   productions conducted before December of 2020.

25   Furthermore, Defendants' productions not only excluded entire database tables, as

26   described above, but their productions also failed to include *all columns* within the tables that

27   they did produce. *See* Exhibit 39. As an analogy, imagine a party producing responsive Excel

28   spreadsheets, but then deleting certain columns in the spreadsheet. Therefore, by not

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1   providing all ticket-related tables, and all columns in each database table, Defendants

2   withheld responsive ticket-related information from Plaintiffs.

3   **E.   Defendants Produced Limited Attachment Files that were not in a**

4   **Reasonably Useable Format**

5   Defendants produced 21,455 ticket attachments to Plaintiffs in rather unusable format.

6   Ticket attachments to responsive tickets include many file types such as PDFs; emails; HTML

7   documents; spreadsheets; Word documents; PHP files; compressed files (e.g., rar, gz, and zip

8   files); Text files; and ISO. As discussed previously, attachment content can be the most

9   important part of a ticket, much like email attachments to an email. Special Master reviewed

10   numerous attachments and found the attachments were particularly important to provide

11   context and information about the tickets. In fact, among the withheld attachments were:

12   copyright notifications; email conversations; legal demands; account summaries; complaints;

13   letters; legal information; financial information, and more.

14   In this case, Defendants produced 21,455 attachments files to Plaintiffs out of a total

15   of 100,643 surviving attachment files. However, Defendants produced a greater number of

16   responsive attachment database records, 21,577, on February 05, 2021. This is unusual

17   because attachment files and attachment database records exist in a 1:1 relationship. Thus, the

18   discrepancy further confirms that Defendants deleted records directly from the database and

19   broke referential integrity.

20   Below is a summary of the surviving attachment files:

21   • Defendants previously produced plaintiffs: 21,455 attachment files

22   • Additional attachment files produced by Special Master to Plaintiffs: 2,122

23   (9.9% more)

24   Furthermore, the attachment files Defendants did produce, were not in a reasonably

25   useable format for Plaintiffs. When Defendants produced attachments, there were two

26   problems: 1) the attachments were missing file extensions; and 2) they contained virus files.

27   First, because the files were missing file extensions, they were not easily opened or

28   viewable. As mentioned, attachment files are stored outside the database. The database stores

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1   the file name and file extension of each attachment file. The Kayako SupportSuite

2   Application automatically looks up the file extension and opens the attachment file. Although

3   Defendants provided the files as they exist in their file system, Plaintiffs, do not have

4   Defendants' Kayako SupportSuite Application, and therefore were unable to open and view

5   the files. Therefore, to provide files in a reasonably useable format for Plaintiffs, Defendants

6   should have at a minimum supplied the file extensions to each attachment file, provided a

7   license to use the Application to view the attachments, and/or provided PDFs of all text-based

8   attachments.

9   Second, the group of attachment files provided to Plaintiffs contained viruses. It is

10   common best practice to run anti-virus software before a file production to opposing party.

11   However, Defendants reported to Special Master that its servers and workstations do not have

12   anti-virus software. In this case, there were over 150 virus files among the attachment files

13   provided by Defendants. Failing to run anti-virus software against files being produced to

14   Plaintiffs posed a risk to Plaintiffs' computer systems. Therefore, of the limited group of

15   attachment files provided, they were not provided to Plaintiffs in a reasonably useable format.

16   **F. SQL Backup File Requested but Withheld**

17   Special Master requested all database files and backup files in initial and subsequent

18   production requests. Defendants produced files from developer workstations, but many

19   requested files were omitted or incomplete. In fact, there was a specific file Special Master

20   identified in a directory list. *See* Exhibit 40. The Special Master on May 9, 2021, requested

21   that specific file named "/home/kayako/mysql.12.dump.gz", which is a Ticket Database

22   backup. Defendants responded to the request on May 10, 2021, that the file does "not exist".

23   However, the file did exist as shown on the directory listing provided by Defendants on April

24   06, 2021. When questioned further, Defendants claimed they deleted this file to free up space

25   on their server on April 11, 2021, in an email dated June 02, 2021, which contained this text:

26   The server (whois.onlinenic.com) [sic] running out of space around Apr 11.

27   As a server mainly for shared hosting servers' backup and sending out

28   notification [sic], it was a temporary station to place some processing files in

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1   this legal case, for example to analyze so it would not affect stableness of

2   ticket server, or to upload files from it, etc. When the server was running out

3   of space, the first move was to clean those temporary files. I think server's

4   [sic] admin cleaned a couple of temporary users (folders) to leave room for

5   SHARED hosting servers.

6   As shown in the email above, Defendants claimed the file had been deleted from the

7   "temporary station to place some processing files in this legal case." Special Master asked

8   Defendants by email, "Before deleting files to make room on the server, did your clients

9   backup or copy the files that were deleted to another computer, hard drive, storage device, or

10   cloud backup service? If so, where are those files now?" Defendants answered,

11   "Unfortunately, the server admin did not keep a copy of the files when cleaning server."

12   On June 7, 2021, the Defendants produced a new server directory list requested by the

13   Special Master. The Special Master analyzed the directory list and confirmed the Ticket

14   Database backup file, "/home/kayako/mysql.12.dump.gz", was no longer on the server. The

15   requested Ticket Database backup file, "/home/kayako/mysql.12.dump.gz," was never

16   provided to the Special Master.

17   Defendants had other options to free up space and did not need to delete the requested,

18   directly responsive, backup file. Not only could Defendants have moved (or copied) the files

19   to another server or purchased and used an external hard drive (less than $100 USD), they

20   could have instead deleted older versions of much larger files. For example, Defendants

21   elected to preserve 56 larger files created in 2017 and 2020 instead of preserving the file

22   named "mysql.12.dump.gz" directly responsive to the case. *See* Exhibit 41. Furthermore,

23   there were triplicate files that existed, meaning Defendants could have deleted older versions

24   of the same exceptionally large file. *Id.* Instead, they deleted a directly responsive, relatively

25   small file directly responsive to the case under pretense of freeing up space.

26   **IX.   DEFENDANTS CONDUCTED "DATA DUMPING"**

27   Defendants created a burden for Plaintiffs by producing a significant amount of ESI

28   that was not responsive to the agreed past discovery protocol (often referred to as "data

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1 dumping"). Data dumping is the practice of deliberately producing a significant amount of

2 non-responsive information and is often discouraged by courts. Generally, the intent is to

3 make it more difficult and expensive for the opposing party to find important evidence and

4 thereby receive a strategic advantage. By reviewing a subset of 27,823,240 records that

5 Defendants produced to Plaintiffs, only 5,096 records were responsive. These examples are

6 shown here:

Table	Total Records	Responsive Records	Responsive Percent
swcommentdata	163,502	3,892	2.38%
swcountryinfo	79,440	0	0.00%
swticketnotes	128,770	5	0.004%
swticketpostindex	26,288,906	0	0.00%
swticketpostindex	529,528	1,046	0.19%
swusers	633,094	153	0.28%

Table 3. Sample of productions comparing number of responsive records to total records provided.

X. RECORDS DELETED & WITHHELD FROM SPECIAL MASTER

Special Master made a great effort to collect databases and other information from Defendants via email, skype, phone calls, and remote computer sessions for information needed for this Report. Sometimes, Special Master requested information that was not provided by Defendants. After discovering information withheld, Defendants sometimes produced the specified items to the Special Master after a special request. In one example, Special Master found that Defendants' PHP scripts generate four text files (ticketid.txt, ticketmaskid.txt, email.txt, and postid.txt). Despite a specific request for the files, Defendants never produced them. Other times, Special Master had to make multiple requests for information before Defendants eventually complied. In a few instances, Defendants stated the information had been deleted and was no longer available. Thus, on multiple occasions, Defendants withheld and deleted records from Special Master, even though the Special

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1   Master has documentation in server directory lists to show the files did exist on the server

2   within the past two months.

3   **XI.   REPORT EXHIBITS AND PRODUCTION TO THE PARTIES**

4   This Report is derived from a tremendous amount of data and information. To fully

5   understand the information in this Report, the parties were provided the following

6   supplemental information:

7   • The "Special Discovery Master's Data Destroyed or Withheld Report" and all

8   exhibits (2 files, 13MB);

9   • MySQL database with all the responsive records, across all databases collected

10   by Special Master, per the past agreed discovery protocol (24 GB);

11   • Attachment files with all the responsive records per the past agreed discovery

12   protocol (23,464 files, 2.6 GB); and

13   • Excel spreadsheets containing the analytics data used to provide the

14   information, findings, and conclusions in this Report (33 files, 29 MB).

15   The cumulative file size of this Report and all supplemental information is over 26

16   GB.

17   **XII.   PARTIES' COMMENTS TO DRAFT REPORT**

18   The parties were provided two draft copies of this Report filed on July 12, 2021. The

19   parties received the first draft on June 9, 2021, and the second draft on July 7, 2021. Both

20   parties had an opportunity to provide comments. Those comments are included with this

21   Report as Exhibits 43 and 44 and are discussed below.

22   **A. Plaintiffs' Comments**

23   Plaintiffs' comments sought two additions. One, to clarify that based on Defendants'

24   own admissions, they deleted at least one database backup during discovery. See Exhibit 43.

25   Two, Plaintiffs sought to have Defendants' employees who provided information for this

26   Report be individually named. *Id.*

27   On Plaintiffs' first point regarding a known deleted backup, Special Master believes

28   Defendants have done several database backups and file copy backups of the database (see

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1   references to the 2013 database in the Report). However, the database backups and file copy

2   backups that existed on servers and workstations have been deleted. On Plaintiffs' second

3   point regarding employee identification, Special Master included the email address, partially

4   obfuscated, to reference but not identify employee names who are not officers of Defendants.

5   **B. Defendants' Comments**

6   Defendants' comments were more extensive and are included in Exhibit 44.

7   Defendants' comments are summarized here: 1) Defendants regularly deleted records to

8   improve the aging Ticket Database's functionality; 2) Defendants' expert performed a

9   waterfall analysis to show 44 non-recoverable tickets and posed hypotheses of what happened

10   to them; 3) the Application itself may be responsible for deleted audit log files; 4) backup

11   files discovered by Special Master were not in fact backups, but rather files that were created

12   for Special Master; 5) PHP files referenced in the Report do not contain deletion language and

13   created for responding to discovery in this case; and 6) date ranges in Defendants' PHP scripts

14   written for production are irrelevant and seeks clarification that Defendants produced records

15   going back to 2015 or not.

16   Special Master carefully reviewed Defendants' comments. In many ways, Defendants'

17   responses support the most important concerns Special Master raised in the Report. In fact,

18   Defendants do not dispute deleting records, they instead try to justify why. Defendants deleted

19   data post case filing, during discovery, after productions, and after Special Master's

20   appointment.

21   Special Master highlights the following points:

22   • Defendants did not state one step, method, process, or system they used for

23   data preservation.

24   • Servers and workstations were not backed up.

25   • Defendants failed to create and maintain regular backups of their database,

26   even post case filing.

27   • Defendants failed to use anti-spam/anti-virus software on their servers or

28   workstations.

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- Defendants allege database performance issues caused some problems. Defendants' Kayako Ticketing Database was approximately 7.7 GB. Special Master did not notice performance issues with the larger Consolidated Database (24 GB).

- Defendants continue to use the Kayako Ticketing Database that they allege was unstable, poor performing, spam-riddled, and un-backedup, even after purchasing the new Zoho Ticketing Database in October 2020.

- Defendants speculate that some audit logs were never written due to "glitches" in the system resulting from "several concurrent deletion requests getting submitted to the system." Special Master strongly disputes this assertion.

- Defendants do not explain why they would delete records directly from the database (causing orphaned records) instead of via the Application.

- Defendants failed to address why so many attachment files and database records were deleted, why surviving attachments files were not searched, or why they were provided to Plaintiffs with viruses.

- Defendants did not explain why they data-dumped 27,818,144 non-responsive records on Plaintiffs.

Finally, Defendants' experts' "waterfall analysis" is flawed.

- Defendants selected only those tables that supported their desired conclusion. The waterfall analysis does not include the many ticket-related tables that contained large numbers of orphaned records, such as: swattachments; swticketrecipients; or swticketposts.

- Defendants' analysis is based on the swticket table outward. Conversely, Special Master's analysis is based on an outward analysis from *all* ticket and ticket-related tables. Special Masters' more expansive analysis was necessitated by the high number of orphaned records across many ticket and ticket-related tables.

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- The analysis did not explain deleted ticket database records and attachment files.

- Defendants justify data exists because it is in "temp_data," even though the table was never produced to Plaintiffs.

- The waterfall analysis refers to a date range beginning "July 1, 2015", but fails to specify what end date was applied.

- The analysis focuses on deleted records but is silent concerning the issue of withheld records to the Plaintiffs. There was no explanation for why searches for responsive records were not done in ticket-related tables, certain columns in tables, or attachment files.

EXPERT CONCLUSIONS

Briefly put, Defendants did not do what they should have done (preserve and produce responsive ESI) yet did do what they should not have done (delete and obfuscate). Based on the sum of the evidence, Special Master concludes Defendants' behavior was intentional.

First, Defendants' failure to preserve ESI and deletion activities were widespread. In total, Special Master identified 11,059,388 deleted records. Deletion activities were so pervasive that they included many database tables (tickets, ticket posts, ticket notes, ticket words, audit logs, etc.), and attachment files. Of the deleted records, Special Master estimates 30% of those records (based on the percent of responsive records from July 1, 2015 – July 15, 2020), or 3,317,816 were responsive to the agreed past discovery protocol. Special Master even obtained some of the very PHP and SQL scripts Defendants used to programmatically delete data directly from the database. This behavior is more outrageous when considering the type of ESI Defendants deleted and withheld. Most egregious was Defendants' deletion and withholding of ticket attachments. As discussed, attachments arguably contained the most responsive ESI, yet Defendants deleted 76.7% of all attachments. Defendants' conduct was consistent and continuous. Defendants began deleting data before the complaint was filed, continued deleting responsive records during the discovery process, and even after Special Master's appointment.

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1   Admittedly, for many of the deleted records, Special Master is unable to determine

2 *when* they were deleted. This is because Defendants deleted audit logs and failed to provide

3 regular backups of Ticket Databases and attachment file directories. However, what is clear,

4 is that Defendants deleted data during discovery after previous productions to both Plaintiffs

5 and Special Master.

6   Second, throughout the discovery process Defendants' conduct included obfuscation

7 and ESI withholding. From the beginning, Defendants made material misrepresentations

8 regarding their backups and other ESI items to Special Master. For example, on multiple

9 occasions, Defendants denied items existed until they were discovered by Special Master.

10 Furthermore, Defendants used inaccurate date filters and did not search all ticket-related

11 tables and columns within those tables, resulting in more withheld records. Finally,

12 Defendants over-produced 27,823,240 non-responsive records (aka, data dumped) to obscure

13 5,096 responsive records. Consequently, Defendants' conduct throughout discovery resulted

14 in Plaintiffs not receiving all available responsive information.

15   Third, Plaintiffs suffered irreparable harm. Only some of the withheld and deleted

16 records were recoverable. While a subset of deleted records is recoverable from Defendants'

17 earlier productions, other responsive ESI will be unavailable because the data was destroyed

18 and no longer exists. In fact, of the most critical evidence type, attachments, 76.7% were

19 deleted. Furthermore, Special Master cannot indicate whether or how much of the non-

20 recoverable ESI was responsive or not; a record that cannot be seen, cannot be searched.

21 Therefore, Defendants caused irreparable harm to Plaintiffs through permanently deleted

22 responsive database records and attachment files, that they will never see or know the

23 contents.

24   Fourth, Plaintiffs will continue to suffer harm with the new production. Based on the

25 new discovery protocol (with an expanded date range and more search terms), there will be a

26 greater number of missing responsive database records and attachments. Even though Special

27 Master has recovered all possible data, not all deleted responsive ESI is available. Due to

28

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1   Defendants' data destruction efforts, the new production will be inadequate because it will not

2   include all responsive ESI that should have been produced to Plaintiffs.

3   In summary, based on Defendants' widespread activities involving ESI deletion,

4   information withholding, and data dumping there is no other conclusion than Defendants

5   acted intentionally to avoid producing responsive ESI to Plaintiffs.

6

7   DATED: July 12, 2021

8

9   Howe Law Firm
                                      By: /s/ Thomas P. Howe
10   Thomas P. Howe,
                                      Special Discovery Master
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Exhibit 1

Exhibit 1. Consolidated Database

kayakodball
- Tables (108)
  - databases
  - file_details
  - htmltickets
  - kayako_searchterms
  - swalertactions
  - swalertrules
  - swattachments
  - swauditlogs
  - swbreaklines
  - swcalendarcategories
  - swcalendardata
  - swcalendarlabels
  - swcalendarpriorities
  - swcalendarstatus
  - swcannedresponsedata
  - swcannedresponses
  - swchatdata
  - swchathits
  - swchatobjects
  - swcommentdata
  - swcomments
  - swcontacts
  - swcountryinfo
  - swcron
  - swcronlogs
  - swdepartments
  - swdownloadcategories
  - swdownloaddesc
  - swdownloaditems
  - swemailqueues
  - swescalationpaths
  - swescalationrules
  - swfloodhash
  - swgroupassigns

- swkbarticledata
- swkbarticlelinks
- swkbarticles
- swkbcategories
- swlanguagephrases
- swlanguages
- swmessagedata
- swmessagequeue
- swmessages
- swnews
- swnewsdata
- swnewssubscribers
- swnewsverihash
- swparserbans
- swparserlogdata
- swparserlogs
- swparserrules
- swpredefinedcategorie
- swpredefinedreplies
- swpredefinedreplydata
- swprivatemessagedata
- swprivatemessages
- swqueuesignatures
- swregistry
- swruleactions
- swrulecriteria
- swsettings
- swsettingsfields
- swsettingsgroups
- swsignatures
- swslaplanprioritylink
- swslaplans
- swslaplanstatuslink
- swslaschedules
- swstaff
- swstaffassigns
- swstaffgroup

- swstaffgroupsettings
- swstaffschedules
- swtemplatecategories
- swtemplatedata
- swtemplategroups
- swtemplates
- swtgroupassigns
- swticketdrafts
- swticketemails
- swticketlabellinks
- swticketlabels
- swticketmergelog
- swticketmessageids
- swticketnotes
- swticketpostindex
- swticketpostlocks
- swticketposts
- swticketpriorities
- swticketrecipients
- swtickets
- swticketsearches
- swticketstatus
- swtickettimetrack
- swticketviewfields
- swticketviews
- swticketwords
- swtroubleshooterlinks
- swuseremails
- swusergroups
- swusergroupsettings
- swusers
- swuserverifyhash
- swvisitorbans
- swvisitornotedata
- swvisitornotes
- temp_data
- tmp_data

Exhibit 2

Exhibit 2. Discovery Protocol for Past Productions

Discovery Protocol for Past Productions

Please confer and provide this information as soon as possible so I may complete my analysis.

Please carefully check all domain names, search terms, and spelling below.

Past Productions	Date Filter	Search Words	Wildcards	Privilege Terms
HTML Production 7/15/2020 (Defendants Uploaded to Blackstone)	July 1, 2015 – July 14, 2020	(per 6/4/2020 email) Abuse ACPA Actionable admin@sprinthost.ru Aleksandr Ivanov Anti-cybersquatting consumer protection act Anticybersquatting consumer protection act Avguro Technologies businessmedia@gmail.com COOP NIX Co.,Ltd Counterfeit Cybersquatting dilution Disclose domain@inet.vn Eugene Magdesiev Fraud iczcorporaz@gmail.com Identifies Identify Identity iNET Corporation info@jino.ru Infringement Infringing Jenry Haris Jenry Haris jenryhas@gmail.com Krisztian Lukacs Lanham Act Lockspin UK onlinenic@lockspin.com	No agreement regarding search terms was discussed	None

		Phishing Proxy Redact Redacted Reveal Service mark SPRINTHOST.RU LLC Takashi Yamaguchi Tanannop Juntima Thu Nguyen Anh Trademark Tran Kien UDRP Uniform Domain Name Dispute Resolution Policy yamaguchi.takashi8@gmail.com		
2020-11-27 Trouble Ticket db.sql	July 1, 2015 – July 14, 2020	Same as above	No agreement regarding search terms was discussed	None
2021-12-26 Trouble Ticket db.sql	July 1, 2015 – July 14, 2020	Same as above	No agreement regarding search terms was discussed	None
2021-02-05 Trouble Ticket db re 20 DNs.sql	July 1, 2015 – July 14, 2020	Same as above	No agreement regarding search terms was discussed	None
2021-02-05 Trouble Ticket db re 29 DNs.sql	July 1, 2015 – July 14, 2020	No agreement regarding search terms was discussed	No agreement regarding search terms was discussed	None

Exhibit 3

Exhibit 3. Special Master Collections from Defendants

Name	Date modified	Type	Size
attachements.tar.gz	6/1/2021 9:42 PM	GZ File	6,262,706 KB
webback.tar.gz	6/1/2021 9:37 PM	GZ File	10,808 KB
webbackup.tar.gz	6/1/2021 9:43 PM	GZ File	6,279,891 KB

Name	Date modified	Type	Size
mysql.14.dump.gz	6/1/2021 11:28 PM	GZ File	1,434,319 KB
mysql.14.tgz	6/1/2021 11:30 PM	TGZ File	3,833,999 KB
mysql.17.dump.gz	6/1/2021 11:29 PM	GZ File	1,434,329 KB
mysql.17.tgz	6/1/2021 11:31 PM	TGZ File	3,833,995 KB
tree_of_backup_domainwhois-verificatio...	6/1/2021 11:31 PM	Text Document	712,626 KB
tree_of_kayako_support.onlinenic.com.txt	6/1/2021 11:38 PM	Text Document	15,314 KB

Name	Date modified	Type	Size
attachements.tar.gz	6/1/2021 10:19 PM	GZ File	6,262,706 KB
kayako.20210317.sql	6/1/2021 11:19 PM	SQL File	6,942,394 KB
kayako.backup.sql.gz	6/1/2021 11:26 PM	GZ File	855,055 KB

	03-12-2021
	03-16-2021
	03-17-2021
>	03-21-2021
	03-23-2021
	04-06-2021
	04-07-2021
>	04-12-2021
>	04-22-2021
>	04-23-2021
>	05-07-2021
>	05-10-2021
	06-07-2021

Name	Date modified	Type	Size
KEYWORD SUPPORT TICKETs FROM 2015...	6/1/2021 11:26 PM	Compressed (zipp...	34,398 KB

	03-12-2021
	03-16-2021
	03-17-2021
>	03-21-2021
	03-23-2021
	04-06-2021
	04-07-2021
>	04-12-2021
>	04-22-2021
>	04-23-2021
>	05-07-2021
>	05-10-2021
	06-07-2021

Name	Date modified	Type	Size
attachementbackup20210323.tar	6/1/2021 10:14 PM	TAR File	7,122,520 KB
fb_kayako_20210128.sql	6/1/2021 11:15 PM	SQL File	1,236,859 KB
fb_kayako20.sql.gz	6/1/2021 11:14 PM	GZ File	228,941 KB
fb_kayako29.sql.gz	6/1/2021 11:14 PM	GZ File	229,758 KB
kayako.20210323.sql	6/1/2021 11:25 PM	SQL File	6,942,535 KB

	03-12-2021
	03-16-2021
	03-17-2021
>	03-21-2021
	03-23-2021
	04-06-2021
	04-07-2021
>	04-12-2021
>	04-22-2021
>	04-23-2021
>	05-07-2021
>	05-10-2021
	06-07-2021

Name	Date modified	Type	Size
tree_of_domainwhois-verification.txt	6/1/2021 11:38 PM	Text Document	915,006 KB
tree_of_support.txt	6/1/2021 11:38 PM	Text Document	24,721 KB

	Name ^	Date modified	Type	Size
03-12-2021				
03-16-2021	tree_of_domainwhois-verification.com.csv	6/1/2021 11:37 PM	Microsoft Excel C...	1,310,319 KB
03-17-2021	tree_of_kayako_support.onlinenic.com.csv	6/1/2021 11:38 PM	Microsoft Excel C...	34,441 KB
> 03-21-2021				
03-23-2021				
04-06-2021				
04-07-2021				
> 04-12-2021				
> 04-22-2021				
> 04-23-2021				
> 05-07-2021				
> 05-10-2021				
06-07-2021				

	Name ^	Date modified	Type	Size
03-12-2021				
03-16-2021	crotabhjlog.tar	6/1/2021 9:10 PM	TAR File	2,400 KB
03-17-2021	modules.zip	6/1/2021 9:10 PM	Compressed (zipp...	644 KB
> 03-21-2021	root.files.tar.gz	6/1/2021 9:15 PM	GZ File	4,926,838 KB
03-23-2021	var.www.html.support.onlinenic.com.file...	6/1/2021 9:16 PM	GZ File	6,270,262 KB
04-06-2021				
04-07-2021				
> 04-12-2021				
> 04-22-2021				
> 04-23-2021				
> 05-07-2021				
> 05-10-2021				
06-07-2021				

	Name ^	Date modified	Type	Size
03-12-2021				
03-16-2021	2fde41629d1b8a0cb0bbf7a8b371b6a0891...	6/1/2021 9:28 PM	File	2 KB
03-17-2021	06e079f9660dedd9eaf6d85ce94bc13d41a...	6/1/2021 9:28 PM	File	1 KB
03-21-2021	6bc624923f5581eacd023e713ff322e1f2a2c2	6/1/2021 9:28 PM	File	2 KB
03-23-2021	8e905d77dcb5ef6aa854b85c81ad7cb3df9...	6/1/2021 9:28 PM	File	1 KB
04-06-2021	98e58b245417185e99a75a81d4752bd4656...	6/1/2021 9:28 PM	File	4 KB
04-07-2021	104c49c479769b6a6f261003bfb3402b53b1...	6/1/2021 9:28 PM	File	1 KB
04-12-2021	0309e450b150f860a3a011a2c4f240cf431c76	6/1/2021 9:28 PM	File	1 KB
04-22-2021	775d3caa5cb67288a9e116978540c8ca998...	6/1/2021 9:28 PM	File	1 KB
04-23-2021	5280b5a6d057477e00de4bc134b5afe8155...	6/1/2021 9:28 PM	File	1 KB
05-07-2021	AnsiballZ_command.py	6/1/2021 9:28 PM	Python File	104 KB
05-10-2021	applypatch-msg.sample	6/1/2021 9:28 PM	SAMPLE File	1 KB
06-07-2021	authorized_keys	6/1/2021 9:28 PM	File	1 KB
	commit-msg.sample	6/1/2021 9:28 PM	SAMPLE File	1 KB

	Name	Date modified	Type	Size
03-12-2021	2020-11-16-zenghy11.tar.gz	6/1/2021 9:29 PM	GZ File	38 KB
03-16-2021	2020-11-20-zenghy10.tar.gz	6/1/2021 9:29 PM	GZ File	38 KB
03-17-2021	2020-11-20-zenghy11.tar.gz	6/1/2021 9:29 PM	GZ File	38 KB
03-21-2021	2020-11-23-zenghy10.tar.gz	6/1/2021 9:29 PM	GZ File	38 KB
03-23-2021	2020-11-23-zenghy11.tar.gz	6/1/2021 9:29 PM	GZ File	38 KB
04-06-2021	abusemail.txt	6/1/2021 9:45 PM	Text Document	0 KB
04-07-2021	attachementbackup20210323.tar	6/1/2021 9:51 PM	TAR File	7,122,520 KB
04-12-2021	duo_files.txt	6/1/2021 9:25 PM	Text Document	39 KB
04-22-2021	FilesToGetRelatedTo_Zenghy_Attachment...	6/1/2021 9:27 PM	GZ File	2,882,911 KB
04-23-2021	FilesToGetRelatedTo_Zenghy_Attachment...	6/1/2021 9:25 PM	GZ File	89,744 KB
05-07-2021	FilesToGetRelatedTo_Zenghy_Attachment...	6/1/2021 9:28 PM	Compressed (zipp...	30,735 KB
05-10-2021	get_domain.php	6/1/2021 9:29 PM	PHP File	4 KB
06-07-2021	get_post_info.php	6/1/2021 9:29 PM	PHP File	7 KB

	Name	Date modified	Type	Size
03-12-2021	2021-05-03_list_of_files.zip	6/1/2021 10:07 PM	Compressed (zipp...	16,644 KB
03-16-2021				
03-17-2021				
03-21-2021				
03-23-2021				
04-06-2021				
04-07-2021				
04-12-2021				
04-22-2021				
04-23-2021				
05-07-2021				
05-10-2021				
06-07-2021				

	Name	Date modified	Type	Size
03-12-2021	2017_to_now_active_customer_and_dom...	6/1/2021 10:09 PM	Text Document	16,337 KB
03-16-2021	Accounts.zip	6/1/2021 10:09 PM	Compressed (zipp...	32 KB
03-17-2021	all_other_domain_info.txt	6/1/2021 10:09 PM	Text Document	3 KB
03-21-2021	backup.202012.sql.zip	6/1/2021 10:08 PM	Compressed (zipp...	795,565 KB
03-23-2021	datadeal.zip	6/1/2021 10:09 PM	Compressed (zipp...	46,794 KB
04-06-2021	script.zip	6/1/2021 10:09 PM	Compressed (zipp...	41 KB
04-07-2021				
04-12-2021				
04-22-2021				
04-23-2021				
05-07-2021				
05-10-2021				
06-07-2021				

	Name	Date modified	Type	Size
03-12-2021				
03-16-2021	tree_of_whois_20210604.csv	6/7/2021 8:41 AM	Microsoft Excel C...	1,311,131 KB
03-17-2021				
03-21-2021				
03-23-2021				
04-06-2021				
04-07-2021				
04-12-2021				
04-22-2021				
04-23-2021				
05-07-2021				
05-10-2021				
06-07-2021				

2021-06-17 > files

Name	Date modified	Type	Size
attach_ff981ad8bbad593f944dd14f11bd09f8	2/4/2021 10:54 AM	File	1 KB
attach_ff02376aaa1297aa13558f44f3a7facf	2/4/2021 10:53 AM	File	1 KB
attach_ff3961fb04b247dbde7eda76333df116	2/4/2021 10:54 AM	File	1 KB
attach_ff4466dd259ddda0e4f22740e329ba5d	2/4/2021 10:54 AM	File	1 KB
attach_ff5352c505cf7336677a11efee705764	2/4/2021 10:53 AM	File	288 KB
attach_ff7579ae5889c1eb908ef66c1699b771	2/4/2021 10:54 AM	File	1 KB
attach_ff7898f70bdbe12e5be4d2eb3203f36c	2/4/2021 10:54 AM	File	1 KB
attach_ff8346eb8e64568dd318bf543fdbbd1c	2/4/2021 10:54 AM	File	1 KB
attach_ff8625d3a55e3a5c9fda555eeca0e950	2/4/2021 10:52 AM	File	94 KB
attach_ff10146a8726c4be882d1795a16c75c6	2/4/2021 10:52 AM	File	2 KB
attach_ff033249fd2cd456b936731953b998a2	2/4/2021 10:53 AM	File	1 KB
attach_ff42474d47d6774c22c94607a865bbaa	2/4/2021 10:53 AM	File	1 KB
attach_ff44662e9415b8b7d48873468f9d1445	2/4/2021 10:52 AM	File	158 KB
attach_ff45069b8b98dde6fb5df02fc4fcbd03	2/4/2021 10:54 AM	File	1 KB
attach_ff57189d5027f068065de70a40088733	2/4/2021 10:53 AM	File	1 KB
attach_ff85380c55b1862eacf269f735ee8df3	2/4/2021 10:52 AM	File	204 KB
attach_ff98425d19e8782c8508b348abdcf582	2/4/2021 10:52 AM	File	559 KB
attach_ff8514026cffcf7fad982e4492066550	2/4/2021 10:54 AM	File	1 KB
attach_ff36770242d47074693ee1a7ce7d0a9e	2/4/2021 10:53 AM	File	172 KB
attach_ff196746388cb4bc2e1b8624ed6624ce	2/4/2021 10:53 AM	File	1 KB
attach_ffa2fedd4e82d5d021523fb0087317a1	2/4/2021 10:54 AM	File	1 KB
attach_ffa25fb2d5dd3b2449c7440e22ab6f30	2/4/2021 10:53 AM	File	1 KB
attach_ffa26b2d9f8849972db896044ca98581	2/4/2021 10:53 AM	File	963 KB
attach_ffa87f5e0562fd30c5aead6650fda92c	2/4/2021 10:54 AM	File	1 KB
attach_ffa491cc60524b81231a8109827cb1f8	2/4/2021 10:54 AM	File	423 KB
attach_ffa50742e32bc2763a714109227acffb	2/4/2021 10:54 AM	File	1 KB
attach_ffa697893f67c23eb935a8ad6393c1cd	2/4/2021 10:53 AM	File	1 KB
attach_ffac6ea539f8750cd8768df014dae9da	2/4/2021 10:53 AM	File	1 KB
attach_ffac89e95082574a3f9194bb1e709c75	2/4/2021 10:54 AM	File	1 KB
attach_ffaffdae2b11792ebe34c38b5982354b	2/4/2021 10:54 AM	File	1 KB
attach_ffb4f551c42a375684bac6efa12f7554	2/4/2021 10:53 AM	File	5 KB
attach_ffb2479f96e4c1ac03a0c7c800ca3eff	2/4/2021 10:54 AM	File	1 KB
attach_ffb34212865a917e59c1ab6a82dee315	2/4/2021 10:52 AM	File	11 KB
attach_ffbbbf410b6b165a41d206116b3d0d30	2/4/2021 10:53 AM	File	8 KB
attach_ffbfe0cbd99bcb3b3e2084dfaadd8937	2/4/2021 10:54 AM	File	1 KB
attach_ffc3a9939e2660fea99cce4872327f85	2/4/2021 10:53 AM	File	1 KB
attach_ffc1536f31891d8ef00bd2d9e92ec8be	2/4/2021 10:53 AM	File	1 KB
attach_ffcb0c9b43a4262ac65b0283b64e88f9	2/4/2021 10:52 AM	File	91 KB
attach_ffcba4c56369d6a144a79d8ce838a9fc	2/4/2021 10:53 AM	File	1 KB
attach_ffced29614b5c61db2567ac643ebbcf2	2/4/2021 10:53 AM	File	186 KB
attach_ffd0ba089de905d2252d150e3c0c0377	2/4/2021 10:53 AM	File	1 KB
attach_ffd5b333b1f96ec9f8bca1a3f1ca8366	2/4/2021 10:54 AM	File	1 KB
attach_ffd939c2c1191038c20ed8139789cd67	2/4/2021 10:52 AM	File	19 KB
attach_ffda3f1696130629171c53062df00659	2/4/2021 10:54 AM	File	1 KB
attach_ffdad0ad16b7c665b3e1dffebe520f11	2/4/2021 10:53 AM	File	276 KB
attach_ffde5fc92e71d3cc53744c5926ca7085	2/4/2021 10:54 AM	File	1 KB
attach_ffdff44dff86672c4177c5d27f67af1c	2/4/2021 10:53 AM	File	6 KB
attach_ffe173f571384fc99e3db3d73e14095e	2/4/2021 10:54 AM	File	1 KB
attach_ffe3937168f1d3858538c50c929dc74c	2/4/2021 10:54 AM	File	1 KB
attach_ffec3331cd019dcc1ddd124a984938fc	2/4/2021 10:54 AM	File	1 KB
attach_fff7c66bcd2b83544785e9eaf2a84f6a	2/4/2021 10:53 AM	File	1 KB
attach_fff8af026f259c03ab03a997a41647a1	2/4/2021 10:54 AM	File	1 KB
attach_fff98c840dd461a419065bc116fc6115	2/4/2021 10:53 AM	File	1 KB
attach_fffc1c6c54c5f63b28ba140fe2cd3764	2/4/2021 10:54 AM	File	1 KB
attach_fffdcfdabb1882b6cc79a3855644935e	2/4/2021 10:54 AM	File	1 KB
2021-06-17 - Shortcut	7/4/2021 1:46 PM	Shortcut	1 KB

Exhibit 4

Exhibit 4. Directory Listings from both servers and Developer Workstation

A list of all the files and folders on the server referred to as "Domain Who-Is Server" collected on March 16, 2021 by the Special Discovery Master.

A list of all the files and folders on the server referred to as "Domain Who-Is Server" collected on April 6, 2021 by the Special Discovery Master.

A list of all the files and folders on the server referred to as "Domain Who-Is Server" collected on June 18, 2021, dated June 4, 2021, by the Special Discovery Master.

A list of all the files and folders on the server referred to as "Kayako Ticket Server" collected on March 16, 2021 by the Special Discovery Master.

A list of all the files and folders on the server referred to as "Kayako Ticket Server" collected on April 6, 2021 by the Special Discovery Master.

A list of all the files and folders on the server referred to as "Kayako Ticket Server" collected on April 13, 2021 by the Special Discovery Master.

	Name	Date modified	Type	Size
	2. Pre-Processing › Directory Listings › Kayako Ticket Server - kayako_support.onlinenic.com › 2021-04-13			
	tree_of_support.csv	4/22/2021 9:55 PM	CSV File	40,485 KB
	tree_of_support.txt	4/22/2021 9:55 PM	Text Document	24,373 KB

A list of all files and folders on the computer referred to as "Developer Workstation" collected on May 9, 2021 by the Special Discovery Master.

	Name	Date modified	Type	Size
	2. Pre-Processing › Directory Listings › Developer Workstation - desktop-6h8msks › 2021-05-03 ›			
	- Emails with Howe and Online Nic.txt	5/8/2021 2:46 PM	Text Document	2 KB
	`files_desktop-6h8msks_2021-05_07_file_details`.sql	5/9/2021 10:29 AM	dbForge Studio 20...	1 KB
	`files_desktop-6h8msks_2021-05_07`.sql	5/9/2021 10:25 AM	dbForge Studio 20...	1 KB
	2021-05-03_list_of_files.zip	5/7/2021 12:22 PM	Compressed (zipp...	16,644 KB
	AllFiles.csv	5/9/2021 12:48 PM	CSV File	209,609 KB
	AllFiles.xlsx	5/9/2021 12:56 PM	Microsoft Excel W...	38,924 KB
	C_dir_C.txt	5/9/2021 11:34 AM	Text Document	46,839 KB
	C_dir_W.txt	5/9/2021 11:35 AM	Text Document	46,838 KB
	E_dir_C.txt	5/9/2021 11:33 AM	Text Document	22,656 KB
	E_dir_W.txt	5/9/2021 11:34 AM	Text Document	22,656 KB
	F_dir_C.txt	5/9/2021 11:34 AM	Text Document	28 KB
	F_dir_W.txt	5/9/2021 11:33 AM	Text Document	28 KB
	G_dir_C.txt	5/9/2021 11:33 AM	Text Document	425 KB
	G_dir_W.txt	5/9/2021 11:32 AM	Text Document	425 KB
	SeverZipFiles.csv	5/9/2021 7:00 PM	CSV File	3,591 KB

Exhibit 5

Exhibit 5. HTML Directories

HTML Productions

A folder containing a backup of the original version of the production to the Plaintiff and contained 103 HTML files in 36 folders contained in 0.324 GB of storage space.

A folder containing 251 files stored in 0.250 GB of storage space in the same format as the original HTML production to the Plaintiff but were created on 03/12/2021 and appeared to be incomplete when sorted alphabetically. This was a set of files located on the server by the

Special Discovery Master that the Defendant produced to him containing responsive ticket information.

Name	Date modified	Type	Size
Abuse_0.html	7/15/2020 9:45 PM	Microsoft Edge H...	5,677 KB
Abuse_1.html	7/15/2020 9:45 PM	Microsoft Edge H...	5,402 KB
Abuse_2.html	7/15/2020 9:45 PM	Microsoft Edge H...	6,005 KB
Abuse_3.html	7/15/2020 9:45 PM	Microsoft Edge H...	5,532 KB
Abuse_4.html	7/15/2020 9:45 PM	Microsoft Edge H...	5,157 KB
Abuse_5.html	7/15/2020 9:45 PM	Microsoft Edge H...	4,685 KB
Abuse_6.html	7/15/2020 9:45 PM	Microsoft Edge H...	6,727 KB
Abuse_7.html	7/15/2020 9:45 PM	Microsoft Edge H...	5,837 KB
Abuse_8.html	7/15/2020 9:45 PM	Microsoft Edge H...	5,343 KB
Abuse_9.html	7/15/2020 9:45 PM	Microsoft Edge H...	7,330 KB
Abuse_10.html	7/15/2020 9:45 PM	Microsoft Edge H...	5,658 KB
Abuse_11.html	7/15/2020 9:45 PM	Microsoft Edge H...	5,574 KB
Abuse_12.html	7/15/2020 9:45 PM	Microsoft Edge H...	2,641 KB
Abuse_13.html	7/15/2020 9:45 PM	Microsoft Edge H...	2,174 KB
Abuse_14.html	7/15/2020 9:45 PM	Microsoft Edge H...	2,255 KB
Abuse_15.html	7/15/2020 9:45 PM	Microsoft Edge H...	2,565 KB
Abuse_16.html	7/15/2020 9:45 PM	Microsoft Edge H...	4,000 KB
Abuse_17.html	7/15/2020 9:45 PM	Microsoft Edge H...	2,698 KB
Abuse_18.html	7/15/2020 9:45 PM	Microsoft Edge H...	1,510 KB
Abuse_19.html	7/15/2020 9:45 PM	Microsoft Edge H...	1,513 KB
Abuse_20.html	7/15/2020 9:45 PM	Microsoft Edge H...	1,509 KB
Abuse_21.html	7/15/2020 9:45 PM	Microsoft Edge H...	1,517 KB
Abuse_22.html	7/15/2020 9:45 PM	Microsoft Edge H...	2,432 KB
Abuse_23.html	7/15/2020 9:45 PM	Microsoft Edge H...	2,541 KB
Abuse_24.html	7/15/2020 9:45 PM	Microsoft Edge H...	2,629 KB
Abuse_25.html	7/15/2020 9:45 PM	Microsoft Edge H...	2,202 KB
Abuse_26.html	7/15/2020 9:45 PM	Microsoft Edge H...	2,610 KB
Abuse_27.html	7/15/2020 9:45 PM	Microsoft Edge H...	724 KB

2. Pre-Processing > HTML Productions > 2020-07-15 > Abuse

2. Pre-Processing > HTML Productions > 2021-03-12

	Name	Date modified	Type	Size
	Abuse_0.html	3/12/2021 4:25 AM	Microsoft Edge H...	2,791 KB
	Abuse_1.html	3/12/2021 4:25 AM	Microsoft Edge H...	897 KB
	Abuse_2.html	3/12/2021 4:25 AM	Microsoft Edge H...	824 KB
	Abuse_3.html	3/12/2021 4:25 AM	Microsoft Edge H...	594 KB
	Abuse_4.html	3/12/2021 4:25 AM	Microsoft Edge H...	1,839 KB
	Abuse_5.html	3/12/2021 4:25 AM	Microsoft Edge H...	2,121 KB
	Abuse_6.html	3/12/2021 4:25 AM	Microsoft Edge H...	427 KB
	Abuse_7.html	3/12/2021 4:25 AM	Microsoft Edge H...	404 KB
	Abuse_8.html	3/12/2021 4:25 AM	Microsoft Edge H...	333 KB
	Abuse_9.html	3/12/2021 4:25 AM	Microsoft Edge H...	17 KB
	ACPA_0.html	3/12/2021 4:25 AM	Microsoft Edge H...	2,790 KB
	ACPA_1.html	3/12/2021 4:25 AM	Microsoft Edge H...	897 KB
	ACPA_2.html	3/12/2021 4:25 AM	Microsoft Edge H...	824 KB
	ACPA_3.html	3/12/2021 4:25 AM	Microsoft Edge H...	594 KB
	ACPA_4.html	3/12/2021 4:25 AM	Microsoft Edge H...	1,839 KB
	ACPA_5.html	3/12/2021 4:25 AM	Microsoft Edge H...	2,121 KB
	ACPA_6.html	3/12/2021 4:25 AM	Microsoft Edge H...	427 KB
	ACPA_7.html	3/12/2021 4:25 AM	Microsoft Edge H...	404 KB
	ACPA_8.html	3/12/2021 4:25 AM	Microsoft Edge H...	333 KB
	ACPA_9.html	3/12/2021 4:25 AM	Microsoft Edge H...	17 KB
	Actionable_0.html	3/12/2021 4:25 AM	Microsoft Edge H...	2,790 KB
	Actionable_1.html	3/12/2021 4:25 AM	Microsoft Edge H...	897 KB
	Actionable_2.html	3/12/2021 4:25 AM	Microsoft Edge H...	824 KB
	Actionable_3.html	3/12/2021 4:25 AM	Microsoft Edge H...	594 KB
	Actionable_4.html	3/12/2021 4:25 AM	Microsoft Edge H...	1,839 KB
	Actionable_5.html	3/12/2021 4:25 AM	Microsoft Edge H...	2,121 KB
	Actionable_6.html	3/12/2021 4:25 AM	Microsoft Edge H...	427 KB
	Actionable_7.html	3/12/2021 4:25 AM	Microsoft Edge H...	404 KB
	Actionable_8.html	3/12/2021 4:25 AM	Microsoft Edge H...	333 KB
	Actionable_9.html	3/12/2021 4:25 AM	Microsoft Edge H...	17 KB
	admin@sprinthost.ru_0.html	3/12/2021 4:25 AM	Microsoft Edge H...	2,790 KB
	admin@sprinthost.ru_1.html	3/12/2021 4:25 AM	Microsoft Edge H...	897 KB
	admin@sprinthost.ru_2.html	3/12/2021 4:25 AM	Microsoft Edge H...	824 KB
	admin@sprinthost.ru_3.html	3/12/2021 4:25 AM	Microsoft Edge H...	594 KB
	admin@sprinthost.ru_4.html	3/12/2021 4:25 AM	Microsoft Edge H...	1,839 KB
	admin@sprinthost.ru_5.html	3/12/2021 4:25 AM	Microsoft Edge H...	2,121 KB
	admin@sprinthost.ru_6.html	3/12/2021 4:25 AM	Microsoft Edge H...	427 KB
	admin@sprinthost.ru_7.html	3/12/2021 4:25 AM	Microsoft Edge H...	404 KB

Exhibit 6

Exhibit 6. Programming Script Directories

Programmer Scripts.

A directory containing 25 PHP Script files and one text file containing MySQL Script for deleting records in various ticket related tables in the "Kayako Ticket Database" that were produced on March 25, 2021. These scripts were likely used for the MySQL Database Productions by Defendant to Plaintiff.

A directory containing 25 PHP Script files and one text file containing MySQL Script for deleting records in various ticket related tables in the "Kayako Ticket Database" that were produced on April 15, 2021, and were identical to the files produced on March 25, 2021. These scripts were likely used for the MySQL Database Productions by Defendant to Plaintiff.

2. Pre-Processing › Programmer Scripts › 2021-04-15

Name	Date modified	Type	Size
zenghy_2017_until_now_abuse@onlinenic.com_tickets.php	4/15/2021 11:12 AM	PHP File	3 KB
zenghy_2017_until_now_complaints@onlinenic.com_tickets.php	4/15/2021 11:12 AM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets1.php	4/15/2021 11:12 AM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets2.php	4/15/2021 11:12 AM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets3.php	4/15/2021 11:12 AM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets4.php	4/15/2021 11:12 AM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets5.php	4/15/2021 11:12 AM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets6.php	4/15/2021 11:12 AM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets7.php	4/15/2021 11:12 AM	PHP File	3 KB
zenghy_2017_until_now_tickets.php	4/15/2021 11:12 AM	PHP File	3 KB
zenghy_admin_tickets.php	4/15/2021 11:12 AM	PHP File	26 KB
zenghy_all_domain_tickets - v1.php	4/15/2021 11:12 AM	PHP File	6 KB
zenghy_all_domain_tickets.php	4/15/2021 11:12 AM	PHP File	6 KB
zenghy_attachment_copy_file.php	4/15/2021 11:12 AM	PHP File	1 KB
zenghy_clippoo18.xxx_tickets.php	4/15/2021 11:12 AM	PHP File	26 KB
zenghy_domain_tickets.php	4/15/2021 11:12 AM	PHP File	26 KB
zenghy_evgeny.rekling_tickets.php	4/15/2021 11:12 AM	PHP File	26 KB
zenghy_jenryhas_tickets.php	4/15/2021 11:12 AM	PHP File	26 KB
zenghy_sql_statement.txt	4/15/2021 11:12 AM	Text Document	1 KB
zenghy_tenmiendaduocdangky_tickets.php	4/15/2021 11:12 AM	PHP File	26 KB
zenghy_tickets_20201009.php	4/15/2021 11:12 AM	PHP File	4 KB
zenghy_tuananh1080_tickets.php	4/15/2021 11:12 AM	PHP File	26 KB
zenghy_xKVRYEH.hfndY_tickets.php	4/15/2021 11:12 AM	PHP File	26 KB
zenghy_yamaguchi.takashi8_tickets.php	4/15/2021 11:12 AM	PHP File	26 KB
zenghy_yamakuqi_tickets.php	4/15/2021 11:12 AM	PHP File	5 KB
zenghy_zvedenyuk.eugene_tickets.php	4/15/2021 11:12 AM	PHP File	26 KB

A directory containing 25 PHP Script files and one text file containing MySQL Script for deleting records in various ticket related tables in the "Kayako Ticket Database" that were produced on April 26, 2021 and were identical to the files produced on March 25, 2021. These scripts were likely used for the MySQL Database Productions by Defendant to Plaintiff. In addition, three PHP Script files were produced that the Special Discovery Master located on the "Kayako Ticket Server" that were not included in the previous productions.

2. Pre-Processing > Programmer Scripts > 2021-04-26

	Name	Date modified	Type	Size
	get_domain.php	4/26/2021 5:13 PM	PHP File	4 KB
	get_post_info.php	4/26/2021 5:13 PM	PHP File	7 KB
	zenghy_2017_until_now_abuse@onlinenic.com_tickets.php	4/26/2021 5:13 PM	PHP File	3 KB
	zenghy_2017_until_now_complaints@onlinenic.com_tickets.php	4/26/2021 5:13 PM	PHP File	3 KB
	zenghy_2017_until_now_keyword_tickets1.php	4/26/2021 5:13 PM	PHP File	3 KB
	zenghy_2017_until_now_keyword_tickets2.php	4/26/2021 5:13 PM	PHP File	3 KB
	zenghy_2017_until_now_keyword_tickets3.php	4/26/2021 5:13 PM	PHP File	3 KB
	zenghy_2017_until_now_keyword_tickets4.php	4/26/2021 5:13 PM	PHP File	3 KB
	zenghy_2017_until_now_keyword_tickets5.php	4/26/2021 5:13 PM	PHP File	3 KB
	zenghy_2017_until_now_keyword_tickets6.php	4/26/2021 5:13 PM	PHP File	3 KB
	zenghy_2017_until_now_keyword_tickets7.php	4/26/2021 5:13 PM	PHP File	4 KB
	zenghy_2017_until_now_tickets.php	4/26/2021 5:13 PM	PHP File	3 KB
	zenghy_admin_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
	zenghy_all_domain_tickets - v1.php	4/26/2021 5:13 PM	PHP File	6 KB
	zenghy_all_domain_tickets.php	4/26/2021 5:13 PM	PHP File	6 KB
	zenghy_attachment_copy_file.php	4/26/2021 5:13 PM	PHP File	1 KB
	zenghy_clippoo18.xxx_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
	zenghy_domain_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
	zenghy_evgeny.rekling_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
	zenghy_jenryhas_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
	zenghy_sql_statement.txt	4/26/2021 5:13 PM	Text Document	2 KB
	zenghy_tenmiendaduocdangky_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
	zenghy_tickets_20201009.php	4/26/2021 5:13 PM	PHP File	4 KB
	zenghy_tmp_20210317.php	4/26/2021 5:13 PM	PHP File	1 KB
	zenghy_tuananh1080_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
	zenghy_xKVRYEH.hfndY_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
	zenghy_yamaguchi.takashi8_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
	zenghy_yamakuqi_tickets.php	4/26/2021 5:13 PM	PHP File	5 KB
	zenghy_zvedenyuk.eugene_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB

Exhibit 7

Exhibit 7. Miscellaneous Files Directories

Miscellaneous Files.

		Name	Date modified	Type
2. Pre-Processing › Miscellaneous Files › 2021-04-26 ›				
	📌	1 - root_duo_files.txt	5/23/2021 4:38 PM	File folder
	📌	2 - FilesToGetRelatedTo_Zenghy_Attachment_copy_file.xlsx	5/23/2021 4:50 PM	File folder

A directory containing the file collected named duo_files.txt which contained the names of 472 distinct attachment files from the folder named "/var/www/html/support.onlinenic.com/files/" on the "Kayako Ticket Server".

		Name	Date modified	Type	Size
2. Pre-Processing › Miscellaneous Files › 2021-04-26 › 1 - root_duo_files.txt					
	📌	duo_files.txt	4/26/2021 5:10 PM	Text Document	39 KB
	📌	Howe_Notes.txt	4/27/2021 9:18 AM	Text Document	1 KB

duo_files.txt - Notepad

File Edit Format View Help

```
/var/www/html/support.onlinenic.com/files/attach_787bfa9204b6758f7b93e301579aae8a
/var/www/html/support.onlinenic.com/files/attach_63f60ddc33ea7c2591826cf02e809677
/var/www/html/support.onlinenic.com/files/attach_77e6a714a3ad76c417e56470a06df46f
/var/www/html/support.onlinenic.com/files/attach_50e8812239b284f93b31599d76e12cb8
/var/www/html/support.onlinenic.com/files/attach_14e66dc0a16f381afe173fafb1b250b7
/var/www/html/support.onlinenic.com/files/attach_2658e4ce918ffd07ef0e52f121ac00d0
/var/www/html/support.onlinenic.com/files/attach_b207e9417d768adc480e488f521ea60a
/var/www/html/support.onlinenic.com/files/attach_8bdb8b145c6ece8cacdb16f09a3b9bb7
/var/www/html/support.onlinenic.com/files/attach_49ff30f78b572dd9eb77a2a07b28eb23
/var/www/html/support.onlinenic.com/files/attach_bda6f43f2dab9fd5a3ed83f5c1b9418a
/var/www/html/support.onlinenic.com/files/attach_7dc886ef36c5c8a18589e6327427c51d
/var/www/html/support.onlinenic.com/files/attach_fd0356506550440456a7cc9b52e5faac
/var/www/html/support.onlinenic.com/files/attach_808aa7813e2701dcc7d9e80dd2f14f88
/var/www/html/support.onlinenic.com/files/attach_ba65064b0528decc84d7f9d3a735ab3c
/var/www/html/support.onlinenic.com/files/attach_a020dac5ba4aab0742bc105425cf2d5f
/var/www/html/support.onlinenic.com/files/attach_a0dbd7e9bd0c52fbf3617e8534331159
/var/www/html/support.onlinenic.com/files/attach_1750e5a775a87401ae9028873e51457a
/var/www/html/support.onlinenic.com/files/attach_2ae2c668f75995172d44654bbf4d3f0d
/var/www/html/support.onlinenic.com/files/attach_5b649bacf8bb3bcb9e9fa3790d65fee5
/var/www/html/support.onlinenic.com/files/attach_8067c7c1f5b4ecdc27ad5787f97780fa
/var/www/html/support.onlinenic.com/files/attach_acda3744680da0cc36c3a0f95a747658
/var/www/html/support.onlinenic.com/files/attach_9518637c5047c85b688fbe9335c499cf
/var/www/html/support.onlinenic.com/files/attach_14b70d254859292f007192cbfd32e7d5
/var/www/html/support.onlinenic.com/files/attach_59411bbe69ada5961a292ea185cacee1
/var/www/html/support.onlinenic.com/files/attach_4ee760b069db8673a63ace2c43f109be
/var/www/html/support.onlinenic.com/files/attach_f7b1fdd7efb8ca0fa8d38f04d5c1b68c
/var/www/html/support.onlinenic.com/files/attach_28483a72e6742a08a57798c18349d4d8
/var/www/html/support.onlinenic.com/files/attach_266f449585e30fb4ca393bbf848e93fd
/var/www/html/support.onlinenic.com/files/attach_2a26c6e164e1e9eeca0905ceb625c46e
/var/www/html/support.onlinenic.com/files/attach_e2f63cee4be1e07cd50d269560eaba4c
/var/www/html/support.onlinenic.com/files/attach_9931e7e44506647890ae9e56f2ad9d5d
/var/www/html/support.onlinenic.com/files/attach_3e93b5e6b8c3e59773ac61c93bb55916
/var/www/html/support.onlinenic.com/files/attach_f277fe3c88dc9b0d2b6775278c31c50d
/var/www/html/support.onlinenic.com/files/attach_da03cbc58512892998bf01dcfacc33bc
/var/www/html/support.onlinenic.com/files/attach_28d54cb5b50c7862df9ba2c963d95542
/var/www/html/support.onlinenic.com/files/attach_cdba79331a7bda112078e2343a5656a5
/var/www/html/support.onlinenic.com/files/attach_013ec8f0e06238e917ad4955179b2d00
/var/www/html/support.onlinenic.com/files/attach_5a197f39ccef1580ba3740897b492f31
/var/www/html/support.onlinenic.com/files/attach_377ba31fb44bd13c380b8b7f71b8c680
/var/www/html/support.onlinenic.com/files/attach_174e4afc101486a67fda6fb24334c668
/var/www/html/support.onlinenic.com/files/attach_fbdc770e07f41a67f3359e6f4d645a2d
/var/www/html/support.onlinenic.com/files/attach_a68178e5cf6863e6bc1e38473c7c05c0
/var/www/html/support.onlinenic.com/files/attach_0516d9e9e0fb8fb75a7387f06ae06b18
/var/www/html/support.onlinenic.com/files/attach_c6deade8e1f271425ee3d8dc0ea9ea3f
/var/www/html/support.onlinenic.com/files/attach_a29d89f107dce254a22659776035d387
/var/www/html/support.onlinenic.com/files/attach_4a5263d8d7a41fc54abe937b43e73d51
/var/www/html/support.onlinenic.com/files/attach_920c78e51ed4a2ab250c7c12130b2d5f
/var/www/html/support.onlinenic.com/files/attach_cd8662f242eabe5383f3ff4b82e7f365
/var/www/html/support.onlinenic.com/files/attach_1855fae53b67b11830e89603466ecdf2
/var/www/html/support.onlinenic.com/files/attach_77c00d26f2c93a272d14fd1837dc09d8
/var/www/html/support.onlinenic.com/files/attach_242a112389fd6326312c0f498d434dc7
/var/www/html/support.onlinenic.com/files/attach_e26bd7bd366c8364a5971084e48d36ff
/var/www/html/support.onlinenic.com/files/attach_0ac9899e4fcf4466f53d6cf63398bf61
```

A directory used to unarchive the files collected on this date that possibly related to the processing of attachment files on the "Kayako Ticket Server".

2. Pre-Processing › Miscellaneous Files › 2021-04-26 › 2 - FilesToGetRelatedTo_Zenghy_Attachment_copy_file.xlsx ›

	Name	Date modified	Type
	backup	5/23/2021 5:02 PM	File folder
	FilesToGetRelatedTo_Zenghy_Attachment_copy_file.xlsx_1.tar	5/23/2021 5:06 PM	File folder
	FilesToGetRelatedTo_Zenghy_Attachment_copy_file.xlsx_2.tar	5/23/2021 4:50 PM	File folder

2. Pre-Processing > Miscellaneous Files > 2021-04-26 > 2 - FilesToGetRelatedTo_Zenghy_Attachment_copy_file.xlsx > backup >

Name	Date modified	Type	Size
2fde41629d1b8a0cb0bbf7a8b371b6a08916f1	4/26/2021 5:13 PM	File	2 KB
06e079f9660dedd9eaf6d85ce94bc13d41ab00	4/26/2021 5:13 PM	File	1 KB
6bc624923f5581eacd023e713ff322e1f2a2c2	4/26/2021 5:13 PM	File	2 KB
8e905d77dcb5ef6aa854b85c81ad7cb3df9505	4/26/2021 5:13 PM	File	1 KB
98e58b245417185e99a75a81d4752bd4656094	4/26/2021 5:13 PM	File	4 KB
104c49c479769b6a6f261003bfb3402b53b11c	4/26/2021 5:13 PM	File	1 KB
0309e450b150f860a3a011a2c4f240cf431c76	4/26/2021 5:13 PM	File	1 KB
775d3caa5cb67288a9e116978540c8ca998839	4/26/2021 5:13 PM	File	1 KB
5280b5a6d057477e00de4bc134b5afe815538b	4/26/2021 5:13 PM	File	1 KB
AnsiballZ_command.py	4/26/2021 5:13 PM	PY File	104 KB
applypatch-msg.sample	4/26/2021 5:13 PM	SAMPLE File	1 KB
authorized_keys	4/26/2021 5:13 PM	File	1 KB
commit-msg.sample	4/26/2021 5:13 PM	SAMPLE File	1 KB
config	4/26/2021 5:13 PM	File	1 KB
d22e598afae021319dd5404f04794cdb62c2f8	4/26/2021 5:13 PM	File	1 KB
d0995412c1a01fcf2b7c7b40ddd98da8b3ffb0	4/26/2021 5:13 PM	File	2 KB
d72933036aee672dadb4f461fecb4e01f64a9c	4/26/2021 5:13 PM	File	1 KB
description	4/26/2021 5:13 PM	File	1 KB
dfaf0cc6494abd07f96f198c7bb6ee42d49005	4/26/2021 5:13 PM	File	2 KB
exclude	4/26/2021 5:13 PM	File	1 KB
filelist_whoisverification_list.txt	4/26/2021 5:13 PM	Text Document	7 KB
HEAD	4/26/2021 5:13 PM	File	1 KB
Howe_Notes.txt	5/23/2021 5:02 PM	Text Document	1 KB
index	4/26/2021 5:13 PM	File	1 KB
install	4/26/2021 5:13 PM	File	1 KB
install.sh	4/26/2021 5:13 PM	SH File	1 KB
maillog.pl	4/26/2021 5:13 PM	PL File	11 KB
master	4/26/2021 5:13 PM	File	1 KB
packed-refs	4/26/2021 5:13 PM	File	1 KB
post-commit.sample	4/26/2021 5:13 PM	SAMPLE File	1 KB
post-receive.sample	4/26/2021 5:13 PM	SAMPLE File	1 KB
post-update.sample	4/26/2021 5:13 PM	SAMPLE File	1 KB
pre-applypatch.sample	4/26/2021 5:13 PM	SAMPLE File	1 KB
pre-commit.sample	4/26/2021 5:13 PM	SAMPLE File	2 KB
prepare-commit-msg.sample	4/26/2021 5:13 PM	SAMPLE File	2 KB
pre-rebase.sample	4/26/2021 5:13 PM	SAMPLE File	5 KB
README.md	4/26/2021 5:13 PM	Markdown File	3 KB
update.sample	4/26/2021 5:11 PM	SAMPLE File	4 KB

Exhibit 8

Exhibit 8. Database ID listing for Consolidated Database

id	databasename
1	full_ticketdb_2020_12_16
2	full_ticketdb_2021_03_14
3	full_ticketdb_2021_03_17
4	full_ticketdb_2021_03_23
5	prod_df_ticketdb_2021_01_28
6	prod_df_ticketdb_2021_02_04
7	prod_df_ticketdb_2021_02_05
8	prod_pl_ticketdb_2020_11_27
9	prod_pl_ticketdb_2020_12_26
10	prod_pl_ticketdb_2021_02_04
11	prod_pl_ticketdb_2021_02_05
12	prod_df_html_2020_07_15
13	files_kayako_support_2021_03_16
14	files_kayako_support_2021_04_06
15	files_domainwhois_2021_03_16
16	files_domainwhois_2021_04_06
17	files_kayako_support_2021_04_13
18	prod_df_html_2021_04_26
19	files_desktop_6h8msks_2021_05_03
20	files_domainwhois_2021_06_04
21	full_ticketdb_2013_05_16
22	full_ticketdb_2021_03_11

Exhibit 9

Exhibit 9. Compare Records Counts between Defendants Produced Databases and the Consolidated Database

Analysis - Record Counts by Produced Before, Responsive, Related, and Produced for All Data Sources .xlsx

Exhibit 10

Exhibit 10. Records Counts of Responsive Columns by Table in Consolidated Database

Analysis - Record Counts by Produced Before, Responsive, Related, and Produced for All Data Sources .xlsx

Record Count Summary by Table and Database

TableName	Records	ProducedBefore	Responsive	Related	Produced
swslaplanstatuslink	204	204	-	-	-
swslaschedules	24	24	-	-	-
swstaff	171	150	-	-	-
swstaffassigns	1,511	1,090	-	-	-
swstaffgroup	72	72	-	-	-
swstaffgroupsettings	3,024	3,024	-	-	-
swstaffschedules	171	150	-	-	-
swtemplatecategories	192	192	-	-	-
swtemplatedata	2,256	2,256	-	-	-
swtemplategroups	24	24	-	-	-
swtemplates	2,256	2,256	-	-	-
swtgroupassigns	1,680	1,676	-	-	-
swticketdrafts	337	333	59	59	59
swticketemails	205,987	19,554	7,437	-	7,437
swticketlabellinks	14	12	12	12	12
swticketlabels	58	54	-	-	-
swticketmergelog	16,595	140	4,776	4,776	4,776
swticketmessageids	26,226	14,175	15,959	15,959	15,959
swticketnotes	1,536,383	1,536,272	92	-	92
swticketpostindex	328,237,988	262,242,895	97,708,721	97,708,721	97,708,721
swticketpostlocks	171	30	40	38	40
swticketposts	7,745,678	954,877	1,881,037	1,092,572	1,881,037
swticketpriorities	96	96	-	-	-
swticketrecipients	1,657,503	129,298	257,950	257,950	257,950
swtickets	3,010,020	325,402	517,706	424,383	517,706
swticketsearches	17	-	-	-	-
swticketstatus	99	99	1	-	1
swtickettimetrack	11	11	-	-	-
swticketviewfields	242	242	-	-	-
swticketviews	22	22	-	-	-
swticketwords	8,373,463	6,079,760	12,709	-	12,709
swtroubleshooterlinks	-	-	-	-	-
swuseremails	3,221,452	55,334	3,099	-	3,099
swusergroups	22	22	-	-	-
swusergroupsettings	198	198	-	-	-
swusers	6,366,647	6,338,233	1,704	-	1,704
swuserverifyhash	883	-	-	-	-
swvisitorbans	22	22	-	-	-
swvisitornotedata	66	66	-	-	-
swvisitornotes	66	66	-	-	-
temp_data	4,102,944	-	781,587	586,515	781,587
tmp_data	15,261	-	498	498	498
	442,680,623				

Exhibit 11

Exhibit 11. Record Counts of Production Database For This Report

Analysis - Record Counts by Produced Before, Responsive, Related, and Produced for All Data Sources .xlsx

Exhibit 12

Exhibit 12. Online-NIC's Webpages

Reseller Hosting Plans with cPanel | OnlineNIC

25GB Disk Space	40GB Disk Space	80GB Disk Space	150GB Disk Space
500GB Bandwidth	800GB Bandwidth	Unlimited Bandwidth	Unlimited Bandwidth
40 Accounts	80 Accounts	Unlimited Accounts	Unlimited Accounts
Order Now	Order Now	Order Now	Order Now

Demo

Product specifications

| Free SSL Certificates Hosting | MySQL, PHP 5.4+, Perl, Curl python | Latest cPanel/WHM | App Installer Softaculous | Weekly backup | Unlimited Addons | 24/7 Customer Support |

Join our free reseller program with more than 10,000 resellers worldwide

BECOME RESELLER NOW

Join Our Newsletter & Marketing Communication
We'll send you news and offers.

Join

| Company Info | Domain Reseller | Domain Price | Value Added Services | Domain Whois | Domain |
| About Us | Domains | Escrow Service | Special Offer | Email Services | Email Plans |

https://www.onlinenic.com/en/Host/index/58.html[5/10/2021 20:56]

Reseller Hosting, cPanel, Web Server - OnlineNIC Inc.

Order

Package Features
√ Free SSL Certificates for Life
√ Latest cPanel/WHM Version Cpanel Hosting Panel
√ One-click App Installer Softaculous
√ Weekly backup twice a week !
√ 24/7 Customer Support
√ Dedicated IP(s) $36/year
√ SSH Access (Jailed) Please contact Support
√ Money Back Guarantee 30 days

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Company Info	Domain Reseller	Domain Price	Value Added Services	Domain Whois	ODNAM
About Us	Domains	Escrow Service	Special Offer	Email Services	Email Plans
Partners	Business Email	RapidSSL	Web Hosting	Hosting Services	Reseller Hosting
News Center	cPanel Demo	Comodo SSL	QuickSSL Premium	True BusinessID	True BusinessID wildcard
Payment Info	SSL certificates	Anti-Malware Scan	Symantec SSL	Secure Site	True BusinessID EV
Testimonials	Secure Site Pro	Support	About Us	News Center	Payment Info
Legal Policies	Maintenance Schedule		FAQ	Open/Track a Ticket	Contact Us

1998-2018 OnlineNIC is an accredited ICANN registrar. Please read our Privacy Policy, Service terms , and Dispute Policy

Exhibit 13

Exhibit 13. Directory Listing of All PHP Files Produced

2. Pre-Processing > Programmer Scripts > 2021-04-26

Name	Date modified	Type	Size
zenghy_tmp_20210317.php	4/26/2021 5:13 PM	PHP File	1 KB
zenghy_zvedenyuk.eugene_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_xKVRYEH.hfndY_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_yamaguchi.takashi8_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_yamakuqi_tickets.php	4/26/2021 5:13 PM	PHP File	5 KB
zenghy_evgeny.rekling_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_jenryhas_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_sql_statement.txt	4/26/2021 5:13 PM	Text Document	2 KB
zenghy_tenmiendaduocdangky_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_tickets_20201009.php	4/26/2021 5:13 PM	PHP File	4 KB
zenghy_tuananh1080_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_all_domain_tickets - v1.php	4/26/2021 5:13 PM	PHP File	6 KB
zenghy_all_domain_tickets.php	4/26/2021 5:13 PM	PHP File	6 KB
zenghy_attachment_copy_file.php	4/26/2021 5:13 PM	PHP File	1 KB
zenghy_clippoo18.xxx_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_domain_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_2017_until_now_keyword_tickets3.php	4/26/2021 5:13 PM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets4.php	4/26/2021 5:13 PM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets5.php	4/26/2021 5:13 PM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets6.php	4/26/2021 5:13 PM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets7.php	4/26/2021 5:13 PM	PHP File	4 KB
zenghy_2017_until_now_tickets.php	4/26/2021 5:13 PM	PHP File	3 KB
zenghy_admin_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
get_domain.php	4/26/2021 5:13 PM	PHP File	4 KB
get_post_info.php	4/26/2021 5:13 PM	PHP File	7 KB
zenghy_2017_until_now_abuse@onlinenic.com_tickets.php	4/26/2021 5:13 PM	PHP File	3 KB
zenghy_2017_until_now_complaints@onlinenic.com_tickets.php	4/26/2021 5:13 PM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets1.php	4/26/2021 5:13 PM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets2.php	4/26/2021 5:13 PM	PHP File	3 KB

Exhibit 14

Exhibit 14. Directory Listing of 3 PHP Files Produced 4/26/2021

2. Pre-Processing > Programmer Scripts > 2021-04-26

Name	Date modified	Type	Size
get_domain.php	4/26/2021 5:13 PM	PHP File	4 KB
get_post_info.php	4/26/2021 5:13 PM	PHP File	7 KB
zenghy_2017_until_now_abuse@onlinenic.com_tickets.php	4/26/2021 5:13 PM	PHP File	3 KB
zenghy_2017_until_now_complaints@onlinenic.com_tickets.php	4/26/2021 5:13 PM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets1.php	4/26/2021 5:13 PM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets2.php	4/26/2021 5:13 PM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets3.php	4/26/2021 5:13 PM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets4.php	4/26/2021 5:13 PM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets5.php	4/26/2021 5:13 PM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets6.php	4/26/2021 5:13 PM	PHP File	3 KB
zenghy_2017_until_now_keyword_tickets7.php	4/26/2021 5:13 PM	PHP File	4 KB
zenghy_2017_until_now_tickets.php	4/26/2021 5:13 PM	PHP File	3 KB
zenghy_admin_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_all_domain_tickets - v1.php	4/26/2021 5:13 PM	PHP File	6 KB
zenghy_all_domain_tickets.php	4/26/2021 5:13 PM	PHP File	6 KB
zenghy_attachment_copy_file.php	4/26/2021 5:13 PM	PHP File	1 KB
zenghy_clippoo18.xxx_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_domain_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_evgeny.rekling_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_jenryhas_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_sql_statement.txt	4/26/2021 5:13 PM	Text Document	2 KB
zenghy_tenmiendaduocdangky_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_tickets_20201009.php	4/26/2021 5:13 PM	PHP File	4 KB
zenghy_tmp_20210317.php	4/26/2021 5:13 PM	PHP File	1 KB
zenghy_tuananh1080_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_xKVRYEH.hfndY_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_yamaguchi.takashi8_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB
zenghy_yamakuqi_tickets.php	4/26/2021 5:13 PM	PHP File	5 KB
zenghy_zvedenyuk.eugene_tickets.php	4/26/2021 5:13 PM	PHP File	27 KB

Exhibit 15

Exhibit 15. Defendants Code to Copy and Delete Database Records and Attachment Files

zenghy_sql_statement.txt

```
zenghy_sql_statement.txt - Notepad
File  Edit  Format  View  Help
if (strpos($v, '@') !== false) {
    $sql = 'select * from swtickets where email = "' . $v . '" and dateline >= 1435680000';
} else {
    // ¹∅¼ü´Ê
    $sql = "select * from (select ticketid from swticketposts where (contents like '%$v%' or subject like '%$v%') and dateline >= 1435680000  group by ticketid) as u";
}

È»º∅Ê¹ÓÃselect ticketpostid from swticketposts where ticketid in () »ñÈ¡ticketpostid

delete from swattachments where ticketid not in ()
delete from swauditlogs where ticketid not in ()
delete from swescalationpaths where ticketid not in ()
delete from swparserlogs where ticketmaskid not in ()
delete from swticketlocks where ticketid not in ()
delete from swticketmergelog where oldticketmaskid not in ()
delete from swticketmessageids where ticketid not in ()
delete from swticketpostindex where ticketpostid not in ()
delete from swticketpostlocks where ticketid not in ()
delete from swticketposts where ticketid not in ()
delete from swticketrecipients where ticketid not in ()
```

zenghy_attachment_copy_file.php

```
zenghy_attachment_copy_file.php - Notepad
File  Edit  Format  View  Help
<?php




$dbhost = 'localhost';   // mysql·þÎñÆ÷Ö÷»úµØÖ·

$dbuser = 'kayako';               // mysqlÓÃ»§Ãû

$dbpass = '';            // mysqlÓÃ»§ÃûÃÜÂë


$conn = mysqli_connect($dbhost, $dbuser, $dbpass, 'kayako');
if (!$conn) {

    var_dump('connect error: ' . mysqli_error($conn));

}


$sql = 'select * from swattachments';
$file = fopen('duo_files.txt','a+');
$retval = mysqli_query($conn, $sql);
$dir = '/home/jumpol/script/ticket_20210106/files/';
$ori_dir = '/var/www/html/support.onlinenic.com/files/';
while ($row = mysqli_fetch_assoc($retval)) {
    $file = $row['storefilename'];
    if (!file_exists($ori_dir.trim($file))) {
        echo $file;
    }
    copy($ori_dir.trim($file), $dir.trim($file));
}
echo 'done';
```

Exhibit 16

Exhibit 16. Directory Locations on both Servers Containing Attachment Files and SQL Backups

Directories Containing Attachments on Both Servers.xlsx

Directories Containing Attachments on Both Servers

ServerName	ListingDate	file_path	Files
Domain Who Is Server	3/16/2021	/home/kayakobackup/web/support.onlinenic.com/files/	62144
Domain Who Is Server	4/6/2021	/home/kayakobackup/web/support.onlinenic.com/files/	62144
Domain Who Is Server	6/4/2021	/home/kayakobackup/web/support.onlinenic.com/files/	62144
Kayako Ticket Server	3/16/2021	/root/files/	40203
Kayako Ticket Server	3/16/2021	/var/www/html/support.onlinenic.com/files/	62144
Kayako Ticket Server	4/6/2021	/var/www/html/support.onlinenic.com/files/	62168
Kayako Ticket Server	4/6/2021	/root/files/	40203
Kayako Ticket Server	4/13/2021	/root/files/	40103
Kayako Ticket Server	4/13/2021	/var/www/html/support.onlinenic.com/files/	61889

"MySQL Backup Files on Both Servers.xlsx"

MySQL Backup Files on Both Servers

databasename	file_path	file_name	file_time	file_date	file_size	file_extension
files_kayako_support_2021_03_16	/home/backup/	mysql.14.dump.gz				.gz
files_kayako_support_2021_04_06	/home/backup/	mysql.14.dump.gz	0:57:01	3/14/2021	1,468,742,037	.gz
files_kayako_support_2021_04_06	/home/backup/	mysql.14.dump.gz	57:01.0	3/14/2021	1,468,742,037	gz
files_kayako_support_2021_03_16	/home/backup/	mysql.14.tgz				.tgz
files_kayako_support_2021_04_06	/home/backup/	mysql.14.tgz	48:10.0	3/14/2021	3,926,014,121	tgz
files_kayako_support_2021_03_16	/home/backup/	mysql.17.dump.gz				.gz
files_kayako_support_2021_04_06	/home/backup/	mysql.17.dump.gz	10:18:07	3/17/2021	1,468,752,263	.gz
files_kayako_support_2021_04_06	/home/backup/	mysql.17.dump.gz	18:07.0	3/17/2021	1,468,752,263	gz
files_kayako_support_2021_03_16	/home/backup/	mysql.17.tgz				.tgz
files_kayako_support_2021_04_06	/home/backup/	mysql.17.tgz	10:09:46	3/17/2021	3,926,010,269	tgz
files_kayako_support_2021_04_06	/home/jumpol/	kayako.20210317.sql	15:16:12	3/17/2021	7,108,999,731	sql
files_kayako_support_2021_04_06	/home/jumpol/	kayako.20210323.sql	9:20:20	3/23/2021	7,109,144,273	sql
files_domainwhois_2021_03_16	/home/kayako/	mysql.12.dump.gz				.gz
files_domainwhois_2021_04_06	/home/kayako/	mysql.12.dump.gz	9:56:21	3/17/2021	999,432,384	.gz
files_domainwhois_2021_03_16	/home/kayakobackup/backup/	mysql.14.dump.gz				.gz
files_domainwhois_2021_04_06	/home/kayakobackup/backup/	mysql.14.dump.gz	0:55:49	3/14/2021	1,468,742,037	.gz
files_domainwhois_2021_06_04	/home/kayakobackup/backup/	mysql.14.dump.gz	0:55:49	3/14/2021	1,468,742,037	.gz
files_domainwhois_2021_03_16	/home/kayakobackup/backup/	mysql.17.dump.gz				.gz
files_domainwhois_2021_04_06	/home/kayakobackup/backup/	mysql.17.dump.gz	10:13:06	3/17/2021	1,468,752,263	.gz
files_domainwhois_2021_06_04	/home/kayakobackup/backup/	mysql.17.dump.gz	10:13:06	3/17/2021	1,468,752,263	.gz

Exhibit 17

Exhibit 17. Metadata Analysis of SQL Dump / Script File Backups

Pre-Processing Database Backup SQL File Scripts Metadata.xlsx

Pre-Processing Database Backup SQL File Scripts Metadata

Local Preprocessing Folder	Original Source	Original Source File	Filename	File Size	Date Created	Host	Database Backed Up	Server Version	PHP Version	Dump Type	Notes
\Pre-Processing\Databases\Kayako Ticket Server\2021-03-23\			kayako.20210323.sql	6,942,535	3/23/2021	localhost	kayako	5.0.95		MySQL dump 10.11	
\Pre-Processing\Databases\Kayako Ticket Server\2021-03-17\	2021-03-16 Original	kayako.20210317.sql	kayako.20210317.sql	6,942,594	3/17/2021	localhost	kayako	5.0.95		MySQL dump 10.11	Also in mysql.17.dump.gz
\Pre-Processing\Databases\Kayako Ticket Server\2021-03-14\	2021-03-16 Original	mysql.14.dump.gz	mysql.14.dump.sql	6,942,370	3/13/2021	localhost	kayako	5.0.95		MySQL dump 10.11	Also in mysql.14.dump.gz
\Pre-Processing\Databases\Kayako Ticket Server\2020-12-16\	2021-03-16 Original	kayako.backup.sql.gz	kayako.backup.sql	4,250,284	12/16/2020	localhost	kayako3	5.6.48-log		MySQL dump 10.13 Distrib 5.6.48, for Linux (x86_64)	
\Pre-Processing\Databases\Produced by Plaintiff\2021-02-05\			2021-02-05 - Trouble Ticket db re 29 DNs.sql	1,243,775	2/5/2021	localhost	kayako	10.1.48-MariaDB-0+deb9u1		MySQL dump 10.16 Distrib 10.1.48-MariaDB, for debian-linux-gnu (x86_64)	
\Pre-Processing\Databases\Produced By Defendant\2021-02-05\			kayako29.sql	1,243,775	2/5/2021	localhost	kayako	10.1.48-MariaDB-0+deb9u1		MySQL dump 10.16 Distrib 10.1.48-MariaDB, for debian-linux-gnu (x86_64)	
\Pre-Processing\Databases\Produced by Plaintiff\2021-02-04\			2021-02-05 - Trouble Ticket db re 20 DNs.sql	1,237,996	2/4/2021	localhost	kayako	10.1.48-MariaDB-0+deb9u1		MySQL dump 10.16 Distrib 10.1.48-MariaDB, for debian-linux-gnu (x86_64)	
\Pre-Processing\Databases\Produced By Defendant\2021-02-04\			kayako20.sql	1,237,996	2/4/2021	localhost	kayako	10.1.48-MariaDB-0+deb9u1		MySQL dump 10.16 Distrib 10.1.48-MariaDB, for debian-linux-gnu (x86_64)	
\Pre-Processing\Databases\Produced By Defendant\2021-01-28\			fb_kayako_20210128.sql	1,052,398	1/28/2021	localhost	kayako	10.1.47-MariaDB-0+deb9u1		MySQL dump 10.16 Distrib 10.1.47-MariaDB, for debian-linux-gnu (x86_64)	
\Pre-Processing\Databases\Produced by Plaintiff\2020-12-26\			2020-12-26 - Trouble Ticket db.sql	1,829,903	12/26/2020	173.255.221.136	kayako	10.1.47-MariaDB-0+deb9u1		MySQL dump 10.16 Distrib 10.3.27-MariaDB, for debian-linux-gnu (x86_64)	
\Pre-Processing\Databases\Produced by Plaintiff\2020-11-27\			2020-11-27 - Trouble Ticket db.sql	109,171	8/19/2021	localhost	OnlineNIC - Tickets working - 2020-11-30	5.5.62-0ubuntu0.14.04.1	5.5.9-1ubuntu4.29	phpMyAdmin SQL Dump, version 4.0.10deb1ubuntu0.1, http://www.phpmyadmin.net	

Exhibit 18

Exhibit 18. Directory Locations of 3 PHP Files on Kayako Ticket Server and Developer Workstation

ServerName VARCHAR(21)	file_name VARCHAR(255)	file_size VARCHAR(30)	file_extension VARCHAR(100)	file_path TEXT
Kayako Ticket Server	zenghy_tmp_20210317.php	984	php	/root/zenghy_tmp_20210317.php
Developer Workstation	wv_get_domain.php	1,357	.php	E:\phpstudy\WWW\onlinenic\1.1 Code\1.1.1 SRC\cgi\bin
Developer Workstation	wv_get_domain.php	1,396	.php	E:\phpstudy\WWW\onlinenic\1.1 Code\1.1.1 SRC\cgi\bin\php
Developer Workstation	get_domain.php	3,505	.php	E:\phpstudy\WWW\onlinenic\1.1 Code\script
Developer Workstation	get_post_info.php	6,116	.php	E:\phpstudy\WWW\onlinenic\1.1 Code\script

Exhibit 19

Exhibit 19. Analysis of Records Missing between 11/27/2020 production and 3/23/2021 Live Database Backup

Deleted Tickets and Ticket Posts that were Previously Produced to Plaintiffs.xlsx

Deleted Tickets and Ticket Posts that were Previously Produced to Plaintiffs

SourceDatabaseName	SourceTable	SourceColumn	LiveDatabaseName	LiveTable	LiveColumn	ComparisonType	Records
prod_df_html_2021_04_26	htmltickets	TicketNumber	full_ticketdb_2020_12_16	swtickets	ticketmaskid	Deleted	1073
prod_df_html_2021_04_26	htmltickets	TicketNumber	full_ticketdb_2021_03_11	swtickets	ticketmaskid	Deleted	1073
prod_df_html_2021_04_26	htmltickets	TicketNumber	full_ticketdb_2021_03_14	swtickets	ticketmaskid	Deleted	1073
prod_df_html_2021_04_26	htmltickets	TicketNumber	full_ticketdb_2021_03_17	swtickets	ticketmaskid	Deleted	1073
prod_df_html_2021_04_26	htmltickets	TicketNumber	full_ticketdb_2021_03_23	swtickets	ticketmaskid	Deleted	1073
prod_pl_ticketdb_2020_11_27	kayako_searchterms	ticketid	full_ticketdb_2020_12_16	swtickets	ticketmaskid	Deleted	208
prod_pl_ticketdb_2020_11_27	kayako_searchterms	ticketid	full_ticketdb_2021_03_11	swtickets	ticketmaskid	Deleted	208
prod_pl_ticketdb_2020_11_27	kayako_searchterms	ticketid	full_ticketdb_2021_03_14	swtickets	ticketmaskid	Deleted	208
prod_pl_ticketdb_2020_11_27	kayako_searchterms	ticketid	full_ticketdb_2021_03_17	swtickets	ticketmaskid	Deleted	208
prod_pl_ticketdb_2020_11_27	kayako_searchterms	ticketid	full_ticketdb_2021_03_23	swtickets	ticketmaskid	Deleted	208
prod_pl_ticketdb_2020_12_26	swticketposts	ticketpostid	full_ticketdb_2020_12_16	swticketposts	ticketpostid	Deleted	445
prod_pl_ticketdb_2020_12_26	swticketposts	ticketpostid	full_ticketdb_2021_03_11	swticketposts	ticketpostid	Deleted	445
prod_pl_ticketdb_2020_12_26	swticketposts	ticketpostid	full_ticketdb_2021_03_14	swticketposts	ticketpostid	Deleted	445
prod_pl_ticketdb_2020_12_26	swticketposts	ticketpostid	full_ticketdb_2021_03_17	swticketposts	ticketpostid	Deleted	445
prod_pl_ticketdb_2020_12_26	swticketposts	ticketpostid	full_ticketdb_2021_03_23	swticketposts	ticketpostid	Deleted	445
prod_pl_ticketdb_2020_12_26	swtickets	ticketid	full_ticketdb_2020_12_16	swtickets	ticketid	Deleted	208
prod_pl_ticketdb_2020_12_26	swtickets	ticketid	full_ticketdb_2021_03_11	swtickets	ticketid	Deleted	208
prod_pl_ticketdb_2020_12_26	swtickets	ticketid	full_ticketdb_2021_03_14	swtickets	ticketid	Deleted	208
prod_pl_ticketdb_2020_12_26	swtickets	ticketid	full_ticketdb_2021_03_17	swtickets	ticketid	Deleted	208
prod_pl_ticketdb_2020_12_26	swtickets	ticketid	full_ticketdb_2021_03_23	swtickets	ticketid	Deleted	208
prod_pl_ticketdb_2020_12_26	swtickets	ticketmaskid	full_ticketdb_2020_12_16	swtickets	ticketmaskid	Deleted	208
prod_pl_ticketdb_2020_12_26	swtickets	ticketmaskid	full_ticketdb_2021_03_11	swtickets	ticketmaskid	Deleted	208
prod_pl_ticketdb_2020_12_26	swtickets	ticketmaskid	full_ticketdb_2021_03_14	swtickets	ticketmaskid	Deleted	208
prod_pl_ticketdb_2020_12_26	swtickets	ticketmaskid	full_ticketdb_2021_03_17	swtickets	ticketmaskid	Deleted	208
prod_pl_ticketdb_2020_12_26	swtickets	ticketmaskid	full_ticketdb_2021_03_23	swtickets	ticketmaskid	Deleted	208

Exhibit 20

Exhibit 20. 'tmp_data' Table Schema

tmp_data Table Schema.sql

TABLE_CATALOG VARCHAR(64)	TABLE_SCHEMA VARCHAR(64)	TABLE_NAME VARCHAR(64)	COLUMN_NAME VARCHAR(64)	ORDINAL_POSITION UNSIGNED INT	COLUMN_DEFAULT TEXT	IS_NULLABLE VARCHAR(3)	DATA_TYPE LONGTEXT	CHARACTER_MAXIMUM_LENGTH BIGINT	CHARACTER_OCTET_LENGTH BIGINT	NUMERIC_PRECISION UNSIGNED BIGINT	NUMERIC_SCALE UNSIGNED BIGINT	DATETIME_PRECISION UNSIGNED INT	CHARACTER_SET_NAME VARCHAR(64)	COLLATION_NAME VARCHAR(64)	COLUMN_TYPE MEDIUMTEXT
def	full_ticketdb_2021_03_23	tmp_data	ticketmaskid	1		YES	varchar	20	60	(null)	(null)	(null)	utf8	utf8_general_ci	varchar(20)
def	full_ticketdb_2021_03_23	tmp_data	dateline	2	0	NO	int	(null)	(null)	10	0	(null)	(null)	(null)	int unsigned
def	full_ticketdb_2021_03_23	tmp_data	email	3		NO	varchar	255	255	(null)	(null)	(null)	latin1	latin1_swedish_ci	varchar(255)
def	full_ticketdb_2021_03_23	tmp_data	emailto	4		NO	varchar	255	255	(null)	(null)	(null)	latin1	latin1_swedish_ci	varchar(255)
def	full_ticketdb_2021_03_23	tmp_data	subject	5		NO	varchar	255	255	(null)	(null)	(null)	latin1	latin1_swedish_ci	varchar(255)
def	full_ticketdb_2021_03_23	tmp_data	contents	6	(null)	YES	mediumtext	16777215	16777215	(null)	(null)	(null)	latin1	latin1_swedish_ci	mediumtext

SELECT * FROM `INFORMATION_SCHEMA`.`COLUMNS` WHERE TABLE_SCHEMA =
"full_ticketdb_2021_03_23" AND TABLE_NAME='tmp_data' ORDER BY
ORDINAL_POSITION

Exhibit 21

Exhibit 21. 'tmp_data' vs. 'swtickets' Schema Comparison

tmp_data vs swtickets Schema Comparison.xlsx

TABLE_NAME	COLUMN_NAME	ORDIN	COLU	IS_NULLABLE	DATA_TYPE	CHARACTER_MAXIMUM_LENGTH	NUMERIC_PRECISION	NUMERIC_SCALE	DATETIME_PRECISION	CHARACTER_SET_NAME	COLLATION_NAME	COLUMN_TYPE	COLUMN_KEY	EXTRA
tmp_data	ticketmaskid	1		YES	varchar	20				utf8	utf8_general_ci	varchar(20)		
tmp_data	dateline	2	0	NO	int		10	0				int unsigned		
tmp_data	email	3		NO	varchar	255				latin1	latin1_swedish_ci	varchar(255)		
tmp_data	emailto	4		NO	varchar	255				latin1	latin1_swedish_ci	varchar(255)		
tmp_data	subject	5		NO	varchar	255				latin1	latin1_swedish_ci	varchar(255)		
tmp_data	contents	6		YES	mediumtext	16777215				latin1	latin1_swedish_ci	mediumtext		
swtickets	ticketid	1		NO	int		10	0				int unsigned	PRI	auto_increment
swtickets	ticketmaskid	2		NO	varchar	20				latin1	latin1_swedish_ci	varchar(20)	MUL	
swtickets	departmentid	3	0	NO	int		10	0				int unsigned	MUL	
swtickets	ticketstatusid	4	0	NO	int		10	0				int unsigned		
swtickets	priorityid	5	0	NO	int		10	0				int unsigned		
swtickets	emailqueueid	6	0	NO	int		10	0				int unsigned		
swtickets	userid	7	0	NO	int		10	0				int unsigned	MUL	
swtickets	staffid	8	0	NO	int		10	0				int unsigned		
swtickets	ownerstaffid	9	0	NO	int		10	0				int unsigned		
swtickets	assignstatus	10	0	NO	smallint		5	0				smallint unsigned		
swtickets	fullname	11		NO	varchar	255				latin1	latin1_swedish_ci	varchar(255)	MUL	
swtickets	email	12		NO	varchar	180				latin1	latin1_swedish_ci	varchar(180)	MUL	
swtickets	lastreplier	13		NO	varchar	255				latin1	latin1_swedish_ci	varchar(255)	MUL	
swtickets	replyto	14		NO	varchar	255				latin1	latin1_swedish_ci	varchar(255)	MUL	
swtickets	subject	15		NO	varchar	150				latin1	latin1_swedish_ci	varchar(150)	MUL	
swtickets	dateline	16	0	NO	int		10	0				int unsigned	MUL	
swtickets	lastactivity	17	0	NO	int		10	0				int unsigned		
swtickets	laststaffreplytime	18	0	NO	int		10	0				int unsigned		
swtickets	slaplanid	19	0	NO	int		10	0				int unsigned	MUL	
swtickets	ticketslaplanid	20	0	NO	int		10	0				int unsigned		
swtickets	duetime	21	0	NO	int		10	0				int unsigned		
swtickets	totalreplies	22	0	NO	int		10	0				int unsigned		
swtickets	ipaddress	23		NO	varchar	120				latin1	latin1_swedish_ci	varchar(120)		
swtickets	flagtype	24	0	NO	smallint		5	0				smallint unsigned		
swtickets	hasnotes	25	0	NO	smallint		5	0				smallint unsigned		
swtickets	hasattachments	26	0	NO	smallint		5	0				smallint unsigned		
swtickets	isemailed	27	0	NO	smallint		5	0				smallint unsigned		
swtickets	edited	28	0	NO	smallint		5	0				smallint unsigned		
swtickets	editedbystaffid	29	0	NO	int		10	0				int unsigned		
swtickets	editeddateline	30	0	NO	int		10	0				int unsigned		
swtickets	creator	31	0	NO	smallint		5	0				smallint		
swtickets	charset	32		NO	varchar	100				latin1	latin1_swedish_ci	varchar(100)		
swtickets	transferencoding	33		NO	varchar	50				latin1	latin1_swedish_ci	varchar(50)		
swtickets	timeworked	34	0	NO	int		10	0				int unsigned		
swtickets	dateicon	35	0	NO	int		10	0				int unsigned		
swtickets	lastpostid	36	0	NO	int		10	0				int unsigned		
swtickets	firstpostid	37	0	NO	int		10	0				int unsigned		
swtickets	tgroupid	38	0	NO	int		10	0				int unsigned		
swtickets	messageid	39		NO	varchar	15				latin1	latin1_swedish_ci	varchar(15)		
swtickets	escalationruleid	40	0	NO	int		10	0				int unsigned		
swtickets	hasdraft	41	0	NO	smallint		5	0				smallint unsigned		
swtickets	hasbilling	42	0	NO	smallint		5	0				smallint unsigned		
swtickets	isphonecall	43	0	NO	smallint		5	0				smallint unsigned		
swtickets	isescalated	44	0	NO	smallint		5	0				smallint unsigned		
swtickets	phoneno	45		NO	varchar	255				latin1	latin1_swedish_ci	varchar(255)		
swtickets	autoclosetimeline	46	0	NO	int		10	0				int unsigned		
swtickets	islabeled	47	0	NO	smallint		5	0				smallint unsigned		
swtickets	lastuserreplytime	48	0	NO	int		10	0				int unsigned		
swtickets	escalatedtime	49	0	NO	int		10	0				int unsigned		
swtickets	followupcount	50	0	NO	int		10	0				int unsigned		

"tmp_data vs swtickets Schema Comparison.sql"

```
SELECT * FROM `INFORMATION_SCHEMA`.`COLUMNS` WHERE TABLE_SCHEMA =
"full_ticketdb_2021_03_23" AND TABLE_NAME='tmp_data'
UNION
SELECT * FROM `INFORMATION_SCHEMA`.`COLUMNS` WHERE TABLE_SCHEMA =
"full_ticketdb_2021_03_23" AND TABLE_NAME='swtickets'
 ORDER BY TABLE_NAME, ORDINAL_POSITION
```

Exhibit 22

Exhibit 22. 'tmp_data' vs. 'swticketposts' Schema Comparison

tmp_data vs swticketposts Schema Comparison.xlsx

TABLE_NAME	COLUMN_NAME	ORDINAL	COLUMN_DEFAULT	IS_NULLABLE	DATA_TYPE	CHARACTER_MAXIMUM	CHARACTER_OCTE	NUMERIC_PRECISION	NUMERIC_SCALE	DATETIME	CHARACTER	COLLATION_NAME	COLUMN_TYPE	COLUMN_KEY	EXTRA
swticketposts	ticketpostid	1		NO	int			10	0				int unsigned	PRI	auto_increme
swticketposts	ticketid	2	0	NO	int			10	0				int unsigned	MUL	
swticketposts	dateline	3	0	NO	int			10	0				int unsigned	MUL	
swticketposts	userid	4	0	NO	int			10	0				int unsigned		
swticketposts	fullname	5		NO	varchar	255	255				latin1	latin1_swedish_ci	varchar(255)	MUL	
swticketposts	email	6		NO	varchar	255	255				latin1	latin1_swedish_ci	varchar(255)	MUL	
swticketposts	emailto	7		NO	varchar	255	255				latin1	latin1_swedish_ci	varchar(255)	MUL	
swticketposts	subject	8		NO	varchar	255	255				latin1	latin1_swedish_ci	varchar(255)	MUL	
swticketposts	ipaddress	9		NO	varchar	255	255				latin1	latin1_swedish_ci	varchar(255)		
swticketposts	hasattachments	10	0	NO	smallint			5	0				smallint		
swticketposts	edited	11	0	NO	smallint			5	0				smallint unsigned		
swticketposts	editedbystaffid	12	0	NO	int			10	0				int unsigned		
swticketposts	editeddateline	13	0	NO	int			10	0				int unsigned		
swticketposts	creator	14	0	NO	smallint			5	0				smallint	MUL	
swticketposts	ishtml	15	0	NO	smallint			5	0				smallint unsigned		
swticketposts	isemailed	16	0	NO	smallint			5	0				smallint unsigned		
swticketposts	staffid	17	0	NO	int			10	0				int unsigned		
swticketposts	contents	18		YES	mediumtext	16777215	16777215				latin1	latin1_swedish_ci	mediumtext		
swticketposts	contenthash	19		NO	varchar	32	32				latin1	latin1_swedish_ci	varchar(32)		
swticketposts	subjecthash	20		NO	varchar	32	32				latin1	latin1_swedish_ci	varchar(32)		
tmp_data	ticketmaskid	1		YES	varchar	20	60				utf8	utf8_general_ci	varchar(20)		
tmp_data	dateline	2	0	NO	int			10	0				int unsigned		
tmp_data	email	3		NO	varchar	255	255				latin1	latin1_swedish_ci	varchar(255)		
tmp_data	emailto	4		NO	varchar	255	255				latin1	latin1_swedish_ci	varchar(255)		
tmp_data	subject	5		NO	varchar	255	255				latin1	latin1_swedish_ci	varchar(255)		
tmp_data	contents	6		YES	mediumtext	16777215	16777215				latin1	latin1_swedish_ci	mediumtext		

"tmp_data vs swticketposts Schema Comparison.sql"
SELECT * FROM `INFORMATION_SCHEMA`.`COLUMNS` WHERE TABLE_SCHEMA = "full_ticketdb_2021_03_23" AND TABLE_NAME='tmp_data'
UNION
SELECT * FROM `INFORMATION_SCHEMA`.`COLUMNS` WHERE TABLE_SCHEMA = "full_ticketdb_2021_03_23" AND TABLE_NAME='swticketposts'
 ORDER BY TABLE_NAME, ORDINAL_POSITION

Exhibit 23

Exhibit 23. 'temp_data' vs. 'swticketposts' Schema Comparison

temp_data vs swticketposts Schema Comparison.xlsx

TABLE_NAME	COLUMN_NAME	ORDINAL_POSITION	COLUMN_DEFAULT	IS_NULLABLE	DATA_TYPE	CHARACTER_MAXIMUM_LE	CHARACTER_OCTET	NUMERIC_PREC	NUMERIC_SCALE	CHARACTER	COLLATION_NAME	COLUMN_TYPE	COLUMN_KEY	EXTRA
swticketposts	ticketpostid	1		NO	int			10	0			int unsigned	PRI	auto_increment
swticketposts	ticketid	2	0	NO	int			10	0			int unsigned	MUL	
swticketposts	dateline	3	0	NO	int			10	0			int unsigned	MUL	
swticketposts	userid	4	0	NO	int			10	0			int unsigned		
swticketposts	fullname	5		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)	MUL	
swticketposts	email	6		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)	MUL	
swticketposts	emailto	7		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)	MUL	
swticketposts	subject	8		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)	MUL	
swticketposts	ipaddress	9		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)		
swticketposts	hasattachments	10	0	NO	smallint			5	0			smallint		
swticketposts	edited	11	0	NO	smallint			5	0			smallint unsigned		
swticketposts	editedbystaffid	12	0	NO	int			10	0			int unsigned		
swticketposts	editeddateline	13	0	NO	int			10	0			int unsigned		
swticketposts	creator	14	0	NO	smallint			5	0			smallint	MUL	
swticketposts	ishtml	15	0	NO	smallint			5	0			smallint unsigned		
swticketposts	isemailed	16	0	NO	smallint			5	0			smallint unsigned		
swticketposts	staffid	17	0	NO	int			10	0			int unsigned		
swticketposts	contents	18		YES	mediumtext	16777215	16777215			latin1	latin1_swedish_ci	mediumtext		
swticketposts	contenthash	19		NO	varchar	32	32			latin1	latin1_swedish_ci	varchar(32)		
swticketposts	subjecthash	20		NO	varchar	32	32			latin1	latin1_swedish_ci	varchar(32)		
temp_data	ticketpostid	1	0	NO	int			10	0			int unsigned		
temp_data	ticketid	2	0	NO	int			10	0			int unsigned		
temp_data	dateline	3	0	NO	int			10	0			int unsigned		
temp_data	userid	4	0	NO	int			10	0			int unsigned		
temp_data	fullname	5		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)		
temp_data	email	6		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)		
temp_data	emailto	7		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)		
temp_data	subject	8		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)		
temp_data	ipaddress	9		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)		
temp_data	hasattachments	10	0	NO	smallint			5	0			smallint		
temp_data	edited	11	0	NO	smallint			5	0			smallint unsigned		
temp_data	editedbystaffid	12	0	NO	int			10	0			int unsigned		
temp_data	editeddateline	13	0	NO	int			10	0			int unsigned		
temp_data	creator	14	0	NO	smallint			5	0			smallint		
temp_data	ishtml	15	0	NO	smallint			5	0			smallint unsigned		
temp_data	isemailed	16	0	NO	smallint			5	0			smallint unsigned		
temp_data	staffid	17	0	NO	int			10	0			int unsigned		
temp_data	contents	18		YES	mediumtext	16777215	16777215			latin1	latin1_swedish_ci	mediumtext		
temp_data	contenthash	19		NO	varchar	32	32			latin1	latin1_swedish_ci	varchar(32)		
temp_data	subjecthash	20		NO	varchar	32	32			latin1	latin1_swedish_ci	varchar(32)		

"temp_data vs swticketposts Schema Comparison.sql"

```
SELECT * FROM `INFORMATION_SCHEMA`.`COLUMNS` WHERE TABLE_SCHEMA =
"full_ticketdb_2021_03_23" AND TABLE_NAME='temp_data'
UNION
SELECT * FROM `INFORMATION_SCHEMA`.`COLUMNS` WHERE TABLE_SCHEMA =
"full_ticketdb_2021_03_23" AND TABLE_NAME='swticketposts'
 ORDER BY TABLE_NAME, ORDINAL_POSITION
```

Exhibit 24

Exhibit 24. Analysis – Count Total Records and Missing by Table

Analysis - Count Total Records and Missing By Table.xlsx

Analysis - Count Total Records and Missing By Table

DatabaseName	TableName	ticketpostid	ticketid	ticketmaskid	Max Records	Based on Auto ID Records	Missing	% Missing
full_ticketdb_2021_03_23	swattachments	Yes	Yes		432,033	135,303	296,730	68.68%
full_ticketdb_2021_03_23	swchatdata				9,480	9,478	2	0.02%
full_ticketdb_2021_03_23	swticketdrafts		Yes		177	29	148	83.62%
full_ticketdb_2021_03_23	swticketemails				34,475	34,271	204	0.59%
full_ticketdb_2021_03_23	swticketlabellinks		Yes		6	1	5	83.33%
full_ticketdb_2021_03_23	swticketlabels				6	6	-	0.00%
full_ticketdb_2021_03_23	swticketmergelog		Yes		3,195	3,083	112	3.51%
full_ticketdb_2021_03_23	swticketmessageids	Yes	Yes		2,429,070	852	2,428,218	99.96%
full_ticketdb_2021_03_23	swticketnotes				741,633	128,878	612,755	82.62%
full_ticketdb_2021_03_23	swticketpostlocks		Yes		321,454	11	321,443	100.00%
full_ticketdb_2021_03_23	swticketpostindex	Yes			N/A	27,693,045		
full_ticketdb_2021_03_23	swticketposts	Yes	Yes		2,429,085	1,278,474	1,150,611	47.37%
full_ticketdb_2021_03_23	swticketpriorities				14	8	6	42.86%
full_ticketdb_2021_03_23	swticketrecipients		Yes		339,570	269,421	70,149	20.66%
full_ticketdb_2021_03_23	swtickets		Yes	Yes	1,678,654	494,119	1,184,535	70.56%
full_ticketdb_2021_03_23	swticketsearches				33,603	8	33,595	99.98%
full_ticketdb_2021_03_23	swticketstatus				12	9	3	25.00%

Analysis - Count Total Records and Missing By Table

DatabaseName	TableName	ticketpostid	ticketid	ticketmaskid	Max Records	Based on Auto ID Records	Missing	% Missing	Analyzed with swtickets on ticketpostid Orphaned3	% Orphaned3	Hanging3	Hanging %3
full_ticketdb_2021_03_23	swslaplanstatuslink				345	17	328	95.07%				
full_ticketdb_2021_03_23	swslaschedules				2	2	-	0.00%				
full_ticketdb_2021_03_23	swstaff				122	14	108	88.52%				
full_ticketdb_2021_03_23	swstaffassigns				6,733	123	6,610	98.17%				
full_ticketdb_2021_03_23	swstaffgroup				6	6	-	0.00%				
full_ticketdb_2021_03_23	swstaffgroupsettings				1,932	252	1,680	86.96%				
full_ticketdb_2021_03_23	swstaffschedules				122	14	108	88.52%				
full_ticketdb_2021_03_23	swtemplatecategories				16	16	-	0.00%				
full_ticketdb_2021_03_23	swtemplatedata				188	188	-	0.00%				
full_ticketdb_2021_03_23	swtemplategroups				2	2	-	0.00%				
full_ticketdb_2021_03_23	swtemplates				188	188	-	0.00%				
full_ticketdb_2021_03_23	swtgroupassigns				380	140	240	63.16%				
full_ticketdb_2021_03_23	swticketdrafts		Yes		177	29	148	83.62%				
full_ticketdb_2021_03_23	swticketemails				34,475	34,271	204	0.59%				
full_ticketdb_2021_03_23	swticketlabellinks		Yes		6	1	5	83.33%				
full_ticketdb_2021_03_23	swticketlabels				6	6	-	0.00%				
full_ticketdb_2021_03_23	swticketmergelog		Yes		3,195	3,083	112	3.51%				
full_ticketdb_2021_03_23	swticketmessageids	Yes	Yes		2,429,070	852	2,428,218	99.96%	1	0.12%	1,277,623	99.93%
full_ticketdb_2021_03_23	swticketnotes				741,633	128,878	612,755	82.62%				
full_ticketdb_2021_03_23	swticketpostlocks		Yes		321,454	11	321,443	100.00%				
full_ticketdb_2021_03_23	swticketpostindex	Yes			N/A	27,693,045			987,862	3.57%	810,632	63.41%
full_ticketdb_2021_03_23	swticketposts	Yes	Yes		2,429,085	1,278,474	1,150,611	47.37%				
full_ticketdb_2021_03_23	swticketpriorities				14	8	6	42.86%				
full_ticketdb_2021_03_23	swticketrecipients		Yes		339,570	269,421	70,149	20.66%				
full_ticketdb_2021_03_23	swtickets		Yes	Yes	1,678,654	494,119	1,184,535	70.56%				

Exhibit 25

Exhibit 25. GAP Analysis

Gap Analysis By Year for Ticket Related Tables.xlsx

Gap Analysis Totals - All Years

TableName	Year	First ID	Last ID	Expected Count	Actual Count	% Exist	Missing Count	% Missing	First Date	Last Date
swattachment:	2021	431,817	432,033	216	215	99.54%	1	0.46%	1/1/2021	3/22/2021
swattachment:	2020	406,614	431,816	25,202	24,681	97.93%	521	2.07%	1/1/2020	12/31/2020
swattachment:	2019	397,768	406,613	8,845	7,485	84.62%	1,360	15.38%	1/1/2019	12/31/2019
swattachment:	2018	391,459	397,767	6,308	5,967	94.59%	341	5.41%	1/1/2018	12/31/2018
swattachment:	2017	383,879	391,458	7,579	6,844	90.30%	735	9.70%	1/1/2017	12/31/2017
swattachment:	2016	377,171	383,878	6,707	6,449	96.15%	258	3.85%	1/1/2016	12/31/2016
swattachment:	2015	369,368	377,170	7,802	7,425	95.17%	377	4.83%	1/1/2015	12/31/2015
swattachment:	2014	363,945	369,367	5,422	5,194	95.79%	228	4.21%	1/1/2014	12/31/2014
swattachment:	2013	357,126	363,944	6,818	6,201	90.95%	617	9.05%	1/1/2013	12/31/2013
swattachment:	2012	349,618	357,125	7,507	6,806	90.66%	701	9.34%	1/1/2012	12/31/2012
swattachment:	2011	323,518	349,614	26,096	10,282	39.40%	15,814	60.60%	1/1/2011	12/31/2011
swattachment:	2010	201,823	323,514	121,691	23,050	18.94%	98,641	81.06%	1/1/2010	12/31/2010
swattachment:	2009	95,246	201,814	106,568	14,459	13.57%	92,109	86.43%	1/1/2009	12/31/2009
swattachment:	2008	209	95,100	94,891	10,245	10.80%	84,646	89.20%	4/1/2008	12/31/2008
Totals - All Years			432,033				296,349	68.59%		
swauditlogs	2021	15,828,928	15,841,003	12,075	11,954	99.00%	121	1.00%	1/1/2021	3/22/2021
swauditlogs	2020	15,378,792	15,828,927	450,135	432,630	96.11%	17,505	3.89%	1/1/2020	12/31/2020
swauditlogs	2019	15,141,024	15,378,791	237,767	219,932	92.50%	17,835	7.50%	1/1/2019	12/31/2019
swauditlogs	2018	14,916,830	15,141,023	224,193	207,869	92.72%	16,324	7.28%	1/1/2018	12/31/2018
swauditlogs	2017	14,658,297	14,916,829	258,532	239,130	92.50%	19,402	7.50%	1/1/2017	12/31/2017
swauditlogs	2016	14,352,075	14,658,296	306,221	284,932	93.05%	21,289	6.95%	1/1/2016	12/31/2016
swauditlogs	2015	13,993,563	14,352,074	358,511	333,172	92.93%	25,339	7.07%	1/1/2015	12/31/2015
swauditlogs	2014	13,648,799	13,993,562	344,763	328,286	95.22%	16,477	4.78%	1/1/2014	12/31/2014
swauditlogs	2013	13,199,701	13,648,798	449,097	391,795	87.24%	57,302	12.76%	1/1/2013	12/31/2013
swauditlogs	2012	12,568,727	13,199,700	630,973	563,003	89.23%	67,970	10.77%	1/1/2012	12/31/2012
swauditlogs	2011	11,557,277	12,568,726	1,011,449	787,222	77.83%	224,227	22.17%	1/1/2011	12/31/2011
swauditlogs	2010	8,482,763	11,557,269	3,074,506	1,555,877	50.61%	1,518,629	49.39%	1/1/2010	12/31/2010
swauditlogs	2009	3,153,505	8,482,743	5,329,238	1,646,433	30.89%	3,682,805	69.11%	1/1/2009	12/31/2009
swauditlogs	2008	372	3,153,504	3,153,132	1,022,795	32.44%	2,130,337	67.56%	3/25/2008	12/31/2008
Totals - All Years			15,841,003				7,815,562	49.34%		
swticketnotes	2021	741,628	741,633	5	6	120.00%	(1)	-20.00%	1/3/2021	2/17/2021
swticketnotes	2020	741,330	741,627	297	280	94.28%	17	5.72%	1/1/2020	12/29/2020
swticketnotes	2019	740,515	741,329	814	647	79.48%	167	20.52%	1/1/2019	12/31/2019
swticketnotes	2018	739,157	740,514	1,357	1,048	77.23%	309	22.77%	1/2/2018	12/29/2018
swticketnotes	2017	737,350	739,156	1,806	1,645	91.09%	161	8.91%	1/1/2017	12/30/2017
swticketnotes	2016	735,535	737,349	1,814	1,719	94.76%	95	5.24%	1/3/2016	12/30/2016
swticketnotes	2015	733,951	735,534	1,583	1,311	82.82%	272	17.18%	1/1/2015	12/31/2015
swticketnotes	2014	732,088	733,949	1,861	1,778	95.54%	83	4.46%	1/1/2014	12/30/2014
swticketnotes	2013	729,687	732,087	2,400	2,158	89.92%	242	10.08%	1/1/2013	12/31/2013
swticketnotes	2012	726,503	729,686	3,183	3,008	94.50%	175	5.50%	1/1/2012	12/31/2012
swticketnotes	2011	722,789	726,502	3,713	3,371	90.79%	342	9.21%	1/1/2011	12/31/2011
swticketnotes	2010	607,956	722,787	114,831	40,890	35.61%	73,941	64.39%	1/1/2010	12/31/2010
swticketnotes	2009	177,448	607,953	430,505	54,573	12.68%	375,932	87.32%	1/1/2009	12/31/2009
swticketnotes	2008	5	177,443	177,438	16,444	9.27%	160,994	90.73%	4/8/2008	12/31/2008
Totals - All Years			741,633				612,729	82.62%		

TableName	Year	First ID	Last ID	Expected Count	Actual Count	% Exist	Missing Count	% Missing	First Date	Last Date
swticketposts	2021	2,426,165	2,429,085	2,920	2,891	99.01%	29	0.99%	1/1/2021	3/22/2021
swticketposts	2020	2,338,695	2,426,164	87,469	83,526	95.49%	3,943	4.51%	1/1/2020	12/31/2020
swticketposts	2019	2,288,162	2,338,694	50,532	46,646	92.31%	3,886	7.69%	1/1/2019	12/31/2019
swticketposts	2018	2,237,861	2,288,161	50,300	46,978	93.40%	3,322	6.60%	1/1/2018	12/31/2018
swticketposts	2017	2,180,481	2,237,860	57,379	53,631	93.47%	3,748	6.53%	1/1/2017	12/31/2017
swticketposts	2016	2,113,442	2,180,480	67,038	63,122	94.16%	3,916	5.84%	1/1/2016	12/31/2016
swticketposts	2015	2,036,450	2,113,441	76,991	69,607	90.41%	7,384	9.59%	1/1/2015	12/31/2015
swticketposts	2014	1,962,517	2,036,449	73,932	69,716	94.30%	4,216	5.70%	1/1/2014	12/31/2014
swticketposts	2013	1,874,041	1,962,516	88,475	78,904	89.18%	9,571	10.82%	1/1/2013	12/31/2013
swticketposts	2012	1,755,112	1,874,040	118,928	104,072	87.51%	14,856	12.49%	1/1/2012	12/31/2012
swticketposts	2011	1,584,888	1,755,111	170,223	129,050	75.81%	41,173	24.19%	1/1/2011	12/31/2011
swticketposts	2010	1,096,616	1,584,886	488,270	234,306	47.99%	253,964	52.01%	1/1/2010	12/31/2010
swticketposts	2009	446,041	1,096,611	650,570	186,671	28.69%	463,899	71.31%	1/1/2009	12/31/2009
swticketposts	2008	194	446,040	445,846	109,354	24.53%	336,492	75.47%	3/26/2008	12/31/2008
Totals - All Years			**2,429,085**				**1,150,399**	**47.36%**		
swtickets	2021	1,677,489	1,678,654	1,165	1,152	98.88%	13	1.12%	1/1/2021	3/22/2021
swtickets	2020	1,613,675	1,677,488	63,813	53,325	83.56%	10,488	16.44%	1/1/2020	12/31/2020
swtickets	2019	1,592,672	1,613,674	21,002	17,152	81.67%	3,850	18.33%	1/1/2019	12/31/2019
swtickets	2018	1,576,948	1,592,671	15,723	13,442	85.49%	2,281	14.51%	1/1/2018	12/31/2018
swtickets	2017	1,556,170	1,576,947	20,777	17,572	84.57%	3,205	15.43%	1/1/2017	12/31/2017
swtickets	2016	1,533,090	1,556,169	23,079	19,608	84.96%	3,471	15.04%	1/1/2016	12/31/2016
swtickets	2015	1,503,588	1,533,089	29,501	22,438	76.06%	7,063	23.94%	1/1/2015	12/31/2015
swtickets	2014	1,473,710	1,503,587	29,877	26,754	89.55%	3,123	10.45%	1/1/2014	12/31/2014
swtickets	2013	1,435,021	1,473,709	38,688	24,475	63.26%	14,213	36.74%	1/1/2013	12/31/2013
swtickets	2012	1,377,597	1,435,013	57,416	24,401	42.50%	33,015	57.50%	1/1/2012	12/31/2012
swtickets	2011	1,287,988	1,377,593	89,605	34,485	38.49%	55,120	61.51%	1/1/2011	12/31/2011
swtickets	2010	895,232	1,287,985	392,753	128,986	32.84%	263,767	67.16%	1/1/2010	12/31/2010
swtickets	2009	363,447	895,227	531,780	70,908	13.33%	460,872	86.67%	1/1/2009	12/31/2009
swtickets	2008	148	363,353	363,205	39,421	10.85%	323,784	89.15%	3/25/2008	12/31/2008
Totals - All Years			**1,678,654**				**1,184,265**	**70.55%**		

Gap Analysis by Year for Ticket Related Tables with Date Fields

DatabaseName	TableName	Year	First ID	Last ID	Expected Count	Actual Count	% Exist	Missing Count	% Missing	First Date	Last Date
full_ticketdb_2021_03_23	swattachments	2021	431,817	432,033	216	215	99.54%	1	0.46%	1/1/2021	3/22/2021
full_ticketdb_2021_03_23	swattachments	2020	406,614	431,816	25,202	24,681	97.93%	521	2.07%	1/1/2020	12/31/2020
full_ticketdb_2021_03_23	swattachments	2019	397,768	406,613	8,845	7,485	84.62%	1,360	15.38%	1/1/2019	12/31/2019
full_ticketdb_2021_03_23	swattachments	2018	391,459	397,767	6,308	5,967	94.59%	341	5.41%	1/1/2018	12/31/2018
full_ticketdb_2021_03_23	swattachments	2017	383,879	391,458	7,579	6,844	90.30%	735	9.70%	1/1/2017	12/31/2017
full_ticketdb_2021_03_23	swattachments	2016	377,171	383,878	6,707	6,449	96.15%	258	3.85%	1/1/2016	12/31/2016
full_ticketdb_2021_03_23	swattachments	2015	369,368	377,170	7,802	7,425	95.17%	377	4.83%	1/1/2015	12/31/2015
full_ticketdb_2021_03_23	swattachments	2014	363,945	369,367	5,422	5,194	95.79%	228	4.21%	1/1/2014	12/31/2014
full_ticketdb_2021_03_23	swattachments	2013	357,126	363,944	6,818	6,201	90.95%	617	9.05%	1/1/2013	12/31/2013
full_ticketdb_2021_03_23	swattachments	2012	349,618	357,125	7,507	6,806	90.66%	701	9.34%	1/1/2012	12/31/2012
full_ticketdb_2021_03_23	swattachments	2011	323,518	349,614	26,096	10,282	39.40%	15,814	60.60%	1/1/2011	12/31/2011
full_ticketdb_2021_03_23	swattachments	2010	201,823	323,514	121,691	23,050	18.94%	98,641	81.06%	1/1/2010	12/31/2010
full_ticketdb_2021_03_23	swattachments	2009	95,246	201,814	106,568	14,459	13.57%	92,109	86.43%	1/1/2009	12/31/2009
full_ticketdb_2021_03_23	swattachments	2008	209	95,100	94,891	10,245	10.80%	84,646	89.20%	4/1/2008	12/31/2008
full_ticketdb_2021_03_23	swauditlogs	2021	15,828,928	15,841,003	12,075	11,954	99.00%	121	1.00%	1/1/2021	3/22/2021
full_ticketdb_2021_03_23	swauditlogs	2020	15,378,792	15,828,927	450,135	432,630	96.11%	17,505	3.89%	1/1/2020	12/31/2020
full_ticketdb_2021_03_23	swauditlogs	2019	15,141,024	15,378,791	237,767	219,932	92.50%	17,835	7.50%	1/1/2019	12/31/2019
full_ticketdb_2021_03_23	swauditlogs	2018	14,916,830	15,141,023	224,193	207,869	92.72%	16,324	7.28%	1/1/2018	12/31/2018
full_ticketdb_2021_03_23	swauditlogs	2017	14,658,297	14,916,829	258,532	239,130	92.50%	19,402	7.50%	1/1/2017	12/31/2017
full_ticketdb_2021_03_23	swauditlogs	2016	14,352,075	14,658,296	306,221	284,932	93.05%	21,289	6.95%	1/1/2016	12/31/2016
full_ticketdb_2021_03_23	swauditlogs	2015	13,993,563	14,352,074	358,511	333,172	92.93%	25,339	7.07%	1/1/2015	12/31/2015
full_ticketdb_2021_03_23	swauditlogs	2014	13,648,799	13,993,562	344,763	328,286	95.22%	16,477	4.78%	1/1/2014	12/31/2014
full_ticketdb_2021_03_23	swauditlogs	2013	13,199,701	13,648,798	449,097	391,795	87.24%	57,302	12.76%	1/1/2013	12/31/2013
full_ticketdb_2021_03_23	swauditlogs	2012	12,568,727	13,199,700	630,973	563,003	89.23%	67,970	10.77%	1/1/2012	12/31/2012
full_ticketdb_2021_03_23	swauditlogs	2011	11,557,277	12,568,726	1,011,449	787,222	77.83%	224,227	22.17%	1/1/2011	12/31/2011
full_ticketdb_2021_03_23	swauditlogs	2010	8,482,763	11,557,269	3,074,506	1,555,877	50.61%	1,518,629	49.39%	1/1/2010	12/31/2010
full_ticketdb_2021_03_23	swauditlogs	2009	3,153,505	8,482,743	5,329,238	1,646,433	30.89%	3,682,805	69.11%	1/1/2009	12/31/2009
full_ticketdb_2021_03_23	swauditlogs	2008	372	3,153,504	3,153,132	1,022,795	32.44%	2,130,337	67.56%	3/25/2008	12/31/2008
full_ticketdb_2021_03_23	swticketmergelog	2021				-		-			
full_ticketdb_2021_03_23	swticketmergelog	2020	3,167	3,195	28	29	103.57%	(1)	-3.57%	1/27/2020	9/3/2020
full_ticketdb_2021_03_23	swticketmergelog	2019	3,081	3,166	85	86	101.18%	(1)	-1.18%	1/6/2019	12/29/2019
full_ticketdb_2021_03_23	swticketmergelog	2018	2,994	3,080	86	78	90.70%	8	9.30%	1/9/2018	12/17/2018
full_ticketdb_2021_03_23	swticketmergelog	2017	2,894	2,993	99	100	101.01%	(1)	-1.01%	1/1/2017	12/29/2017
full_ticketdb_2021_03_23	swticketmergelog	2016	2,398	2,893	495	495	100.00%	-	0.00%	1/3/2016	12/25/2016
full_ticketdb_2021_03_23	swticketmergelog	2015	1,670	2,397	727	727	100.00%	-	0.00%	1/12/2015	12/27/2015
full_ticketdb_2021_03_23	swticketmergelog	2014	1,366	1,669	303	304	100.33%	(1)	-0.33%	1/2/2014	12/31/2014
full_ticketdb_2021_03_23	swticketmergelog	2013	817	1,365	548	546	99.64%	2	0.36%	1/1/2013	12/30/2013
full_ticketdb_2021_03_23	swticketmergelog	2012	388	816	428	427	99.77%	1	0.23%	1/1/2012	12/31/2012
full_ticketdb_2021_03_23	swticketmergelog	2011	266	387	121	117	96.69%	4	3.31%	2/8/2011	12/23/2011
full_ticketdb_2021_03_23	swticketmergelog	2010	183	265	82	34	41.46%	48	58.54%	1/3/2010	12/7/2010
full_ticketdb_2021_03_23	swticketmergelog	2009	94	182	88	68	77.27%	20	22.73%	3/10/2009	12/20/2009
full_ticketdb_2021_03_23	swticketmergelog	2008	1	78	77	72	93.51%	5	6.49%	4/18/2008	8/1/2008

DatabaseName	TableName	Year	First ID	Last ID	Expected Count	Actual Count	% Exist	Missing Count	% Missing	First Date	Last Date
full_ticketdb_2021_03_23	swticketnotes	2021	741,628	741,633	5	6	120.00%	(1)	-20.00%	1/3/2021	2/17/2021
full_ticketdb_2021_03_23	swticketnotes	2020	741,330	741,627	297	280	94.28%	17	5.72%	1/1/2020	12/29/2020
full_ticketdb_2021_03_23	swticketnotes	2019	740,515	741,329	814	647	79.48%	167	20.52%	1/1/2019	12/31/2019
full_ticketdb_2021_03_23	swticketnotes	2018	739,157	740,514	1,357	1,048	77.23%	309	22.77%	1/2/2018	12/29/2018
full_ticketdb_2021_03_23	swticketnotes	2017	737,350	739,156	1,806	1,645	91.09%	161	8.91%	1/1/2017	12/30/2017
full_ticketdb_2021_03_23	swticketnotes	2016	735,535	737,349	1,814	1,719	94.76%	95	5.24%	1/3/2016	12/30/2016
full_ticketdb_2021_03_23	swticketnotes	2015	733,951	735,534	1,583	1,311	82.82%	272	17.18%	1/1/2015	12/31/2015
full_ticketdb_2021_03_23	swticketnotes	2014	732,088	733,949	1,861	1,778	95.54%	83	4.46%	1/1/2014	12/30/2014
full_ticketdb_2021_03_23	swticketnotes	2013	729,687	732,087	2,400	2,158	89.92%	242	10.08%	1/1/2013	12/31/2013
full_ticketdb_2021_03_23	swticketnotes	2012	726,503	729,686	3,183	3,008	94.50%	175	5.50%	1/1/2012	12/31/2012
full_ticketdb_2021_03_23	swticketnotes	2011	722,789	726,502	3,713	3,371	90.79%	342	9.21%	1/1/2011	12/31/2011
full_ticketdb_2021_03_23	swticketnotes	2010	607,956	722,787	114,831	40,890	35.61%	73,941	64.39%	1/1/2010	12/31/2010
full_ticketdb_2021_03_23	swticketnotes	2009	177,448	607,953	430,505	54,573	12.68%	375,932	87.32%	1/1/2009	12/31/2009
full_ticketdb_2021_03_23	swticketnotes	2008	5	177,443	177,438	16,444	9.27%	160,994	90.73%	4/8/2008	12/31/2008
full_ticketdb_2021_03_23	swticketposts	2021	2,426,165	2,429,085	2,920	2,891	99.01%	29	0.99%	1/1/2021	3/22/2021
full_ticketdb_2021_03_23	swticketposts	2020	2,338,695	2,426,164	87,469	83,526	95.49%	3,943	4.51%	1/1/2020	12/31/2020
full_ticketdb_2021_03_23	swticketposts	2019	2,288,162	2,338,694	50,532	46,646	92.31%	3,886	7.69%	1/1/2019	12/31/2019
full_ticketdb_2021_03_23	swticketposts	2018	2,237,861	2,288,161	50,300	46,978	93.40%	3,322	6.60%	1/1/2018	12/31/2018
full_ticketdb_2021_03_23	swticketposts	2017	2,180,481	2,237,860	57,379	53,631	93.47%	3,748	6.53%	1/1/2017	12/31/2017
full_ticketdb_2021_03_23	swticketposts	2016	2,113,442	2,180,480	67,038	63,122	94.16%	3,916	5.84%	1/1/2016	12/31/2016
full_ticketdb_2021_03_23	swticketposts	2015	2,036,450	2,113,441	76,991	69,607	90.41%	7,384	9.59%	1/1/2015	12/31/2015
full_ticketdb_2021_03_23	swticketposts	2014	1,962,517	2,036,449	73,932	69,716	94.30%	4,216	5.70%	1/1/2014	12/31/2014
full_ticketdb_2021_03_23	swticketposts	2013	1,874,041	1,962,516	88,475	78,904	89.18%	9,571	10.82%	1/1/2013	12/31/2013
full_ticketdb_2021_03_23	swticketposts	2012	1,755,112	1,874,040	118,928	104,072	87.51%	14,856	12.49%	1/1/2012	12/31/2012
full_ticketdb_2021_03_23	swticketposts	2011	1,584,888	1,755,111	170,223	129,050	75.81%	41,173	24.19%	1/1/2011	12/31/2011
full_ticketdb_2021_03_23	swticketposts	2010	1,096,616	1,584,886	488,270	234,306	47.99%	253,964	52.01%	1/1/2010	12/31/2010
full_ticketdb_2021_03_23	swticketposts	2009	446,041	1,096,611	650,570	186,671	28.69%	463,899	71.31%	1/1/2009	12/31/2009
full_ticketdb_2021_03_23	swticketposts	2008	194	446,040	445,846	109,354	24.53%	336,492	75.47%	3/26/2008	12/31/2008
full_ticketdb_2021_03_23	swtickets	2021	1,677,489	1,678,654	1,165	1,152	98.88%	13	1.12%	1/1/2021	3/22/2021
full_ticketdb_2021_03_23	swtickets	2020	1,613,675	1,677,488	63,813	53,325	83.56%	10,488	16.44%	1/1/2020	12/31/2020
full_ticketdb_2021_03_23	swtickets	2019	1,592,672	1,613,674	21,002	17,152	81.67%	3,850	18.33%	1/1/2019	12/31/2019
full_ticketdb_2021_03_23	swtickets	2018	1,576,948	1,592,671	15,723	13,442	85.49%	2,281	14.51%	1/1/2018	12/31/2018
full_ticketdb_2021_03_23	swtickets	2017	1,556,170	1,576,947	20,777	17,572	84.57%	3,205	15.43%	1/1/2017	12/31/2017
full_ticketdb_2021_03_23	swtickets	2016	1,533,090	1,556,169	23,079	19,608	84.96%	3,471	15.04%	1/1/2016	12/31/2016
full_ticketdb_2021_03_23	swtickets	2015	1,503,588	1,533,089	29,501	22,438	76.06%	7,063	23.94%	1/1/2015	12/31/2015
full_ticketdb_2021_03_23	swtickets	2014	1,473,710	1,503,587	29,877	26,754	89.55%	3,123	10.45%	1/1/2014	12/31/2014
full_ticketdb_2021_03_23	swtickets	2013	1,435,021	1,473,709	38,688	24,475	63.26%	14,213	36.74%	1/1/2013	12/31/2013
full_ticketdb_2021_03_23	swtickets	2012	1,377,597	1,435,013	57,416	24,401	42.50%	33,015	57.50%	1/1/2012	12/31/2012
full_ticketdb_2021_03_23	swtickets	2011	1,287,988	1,377,593	89,605	34,485	38.49%	55,120	61.51%	1/1/2011	12/31/2011
full_ticketdb_2021_03_23	swtickets	2010	895,232	1,287,985	392,753	128,986	32.84%	263,767	67.16%	1/1/2010	12/31/2010
full_ticketdb_2021_03_23	swtickets	2009	363,447	895,227	531,780	70,908	13.33%	460,872	86.67%	1/1/2009	12/31/2009
full_ticketdb_2021_03_23	swtickets	2008	148	363,353	363,205	39,421	10.85%	323,784	89.15%	3/25/2008	12/31/2008

Exhibit 26

Exhibit 26. Sample of Attachment Record with Matching File Listing

swattachments.xlsx

Exhibit 27

Exhibit 27. Overview of Deleted Attachment Records and Files

Attachment Files Found in Directory Listings from Servers.xlsx

Attachment Files Found in Directory Listings from Servers

Database Name	Collection Type	Server Name	Collection Date	Complete Listing	Files Listed	Unique File Attachments	Missing in 03/23/2021 DB	Missing in 03/17/2021 DB	Missing in 03/14/2021 DB	Missing in 12/16/2020 DB
files_domainwhois_2021_03_16	File Listing	Domain Who Is Serve	3/16/2021	Yes	7,375,104	62,144	2,241	2,241	2,241	2,498
files_domainwhois_2021_04_06	File Listing	Domain Who Is Serve	4/6/2021	Yes	7,381,595	62,144	2,241	2,241	2,241	2,498
files_domainwhois_2021_06_04	File Listing	Domain Who Is Serve	6/4/2021	Yes	7,389,077	62,144	2,241	2,241	2,241	2,498
files_kayako_support_2021_03_16	File Listing	Kayako Ticket Server	3/16/2021	Yes	345,139	102,349	8,153	8,153	8,153	8,412
files_kayako_support_2021_04_06	File Listing	Kayako Ticket Server	4/6/2021	Yes	360,096	102,371	8,166	8,175	8,175	8,434
files_kayako_support_2021_04_13	File Listing	Kayako Ticket Server	4/13/2021	No	102,374	101,992	8,172	8,181	8,181	8,440
TOTALS						102,584	8,174			
* Missing in 03/23/2021 DB	These are files that exist on the server but do not have corresponding database records							7.98% Missing Database Records		
* Missing in 03/17/2021 DB	These are files that exist on the server but do not have corresponding database records									
* Missing in 03/14/2021 DB	These are files that exist on the server but do not have corresponding database records									
* Missing in 12/16/2020 DB	These are files that exist on the server but do not have corresponding database records									

Attachment Files Missing in File Listings from Servers.xlsx

Attachment Files Missing in File Listings from Servers

Database ID	Database Name	Database Type	Attachment Records	Missing File Attachments	% Missing	Responsive Attachment Records	% Responsive Records	Responsive Records Missing Attachment Files	% Responsive Missing
21	full_ticketdb_2013_05_16	Live Database	84,120	51,931	61.73%	14,239	16.93%	7,261	50.99%
1	full_ticketdb_2020_12_16	Live Database	135,035	41,094	30.43%	43,976	32.57%	7,261	16.51%
22	full_ticketdb_2021_03_11	Live Database	135,292	41,094	30.37%	44,004	32.53%	7,261	16.50%
2	full_ticketdb_2021_03_14	Live Database	135,294	41,094	30.37%	44,004	32.52%	7,261	16.50%
3	full_ticketdb_2021_03_17	Live Database	135,294	41,094	30.37%	44,004	32.52%	7,261	16.50%
4	full_ticketdb_2021_03_23	Live Database	135,303	41,094	30.37%	44,004	32.52%	7,261	16.50%
5	prod_df_ticketdb_2021_01_28	Production	20,654	6	0.03%	20,654	100.00%	6	0.03%
6	prod_df_ticketdb_2021_02_04	Production	20,962	6	0.03%	20,962	100.00%	6	0.03%
7	prod_df_ticketdb_2021_02_05	Production	21,577	6	0.03%	21,577	100.00%	6	0.03%
9	prod_pi_ticketdb_2020_12_26	Production	11,141	-	0.00%	11,141	100.00%	-	0.00%
10	prod_pi_ticketdb_2021_02_04	Production	20,962	6	0.03%	20,962	100.00%	6	0.03%
11	prod_pi_ticketdb_2021_02_05	Production	21,577	6	0.03%	21,577	100.00%	6	0.03%

* 41,094 File Attachments are missing and cannot be full text indexed to see if they are responsive or privileged.

Exhibit 28

Exhibit 28. Report of 97 Responsive Orphaned Attachment Files

Attachment_responsive_orphans_computerfiles.xlsx

Summary of Responsive Orphan Computer Files by File Type

File_Type	File_Extension	File Count	%
EML File	.eml	6	6%
HTML File	.htm or .html	5	5%
Microsoft Excel Worksheet	.xls or .xlsx	9	9%
Microsoft Word 97 - 2003 Document	.doc or .docx	6	6%
MSG File	.msg	3	3%
Other Files	.maff, .php, .webarchive	4	4%
Text Document	.txt	16	16%
Adobe Acrobat Document	.pdf	48	49%
	Totals	**97**	

attachmentfiles_responsive_orphans_computerfiles - DeviceDetails.xlsx

Exhibit 29

Exhibit 29. Files with 'JenryHaris' Prefix

When sorted alphabetically, the Special Discovery Master saw that all files, beginning and ending, were named with the JenryHaris prefix.

Exhibit 30

Exhibit 30. No 'JenryHaris' Prefixed Files in Past HTML Production

Relatedly, Defendants did not produce any HTML files or records related to JenryHaris in the July 15, 2020 HTML production to Plaintiffs.

Exhibit 31

Exhibit 31. Details for File Named 'duo_files.txt'

Defendants deleted 34 attachment database records in the swattachments table. The Defendants' PHP script file named 'zenghy_tmp_20210317.php' generated a text file named '/root/duo_files.txt', which was created on March 17, 2021. This file was located on the Ticket Database, was requested by Special Discovery Master, and was delivered on April 26, 2021. The file references 472 unique attachment files by their file paths.

Information Regarding duo_files.txt and zenghy_tmp_20210317.php from Kayako Ticket Server					
file_name	file_time	file_date	file_size	file_extension	file_path
duo_files.txt	2:26:10 PM	3/17/2021	38704	txt	/root/duo_files.txt
zenghy_tmp_20210317.php	2:28:27 PM	3/17/2021	984	php	/root/zenghy_tmp_20210317.php

2. Pre-Processing › Miscellaneous Files › 2021-04-26 › 1 - root_duo_files.txt

	Name	Date modified	Type	Size
	duo_files.txt	4/26/2021 5:10 PM	Text Document	39 KB

File   Edit   Format   View   Help

```
/var/www/html/support.onlinenic.com/files/attach_787bfa9204b6758f7b93e301579aae8a
/var/www/html/support.onlinenic.com/files/attach_63f60ddc33ea7c2591826cf02e809677
/var/www/html/support.onlinenic.com/files/attach_77e6a714a3ad76c417e56470a06df46f
/var/www/html/support.onlinenic.com/files/attach_50e8812239b284f93b31599d76e12cb8
/var/www/html/support.onlinenic.com/files/attach_14e66dc0a16f381afe173fafb1b250b7
/var/www/html/support.onlinenic.com/files/attach_2658e4ce918ffd07ef0e52f121ac00d0
/var/www/html/support.onlinenic.com/files/attach_b207e9417d768adc480e488f521ea60a
/var/www/html/support.onlinenic.com/files/attach_8bdb8b145c6ece8cacdb16f09a3b9bb7
/var/www/html/support.onlinenic.com/files/attach_49ff30f78b572dd9eb77a2a07b28eb23
/var/www/html/support.onlinenic.com/files/attach_bda6f43f2dab9fd5a3ed83f5c1b9418a
/var/www/html/support.onlinenic.com/files/attach_7dc886ef36c5c8a18589e6327427c51d
/var/www/html/support.onlinenic.com/files/attach_fd0356506550440456a7cc9b52e5faac
/var/www/html/support.onlinenic.com/files/attach_808aa7813e2701dcc7d9e80dd2f14f88
/var/www/html/support.onlinenic.com/files/attach_ba65064b0528decc84d7f9d3a735ab3c
/var/www/html/support.onlinenic.com/files/attach_a020dac5ba4aab0742bc105425cf2d5f
/var/www/html/support.onlinenic.com/files/attach_a0dbd7e9bd0c52fbf3617e8534331159
/var/www/html/support.onlinenic.com/files/attach_1750e5a775a87401ae9028873e51457a
/var/www/html/support.onlinenic.com/files/attach_2ae2c668f75995172d44654bbf4d3f0d
/var/www/html/support.onlinenic.com/files/attach_5b649bacf8bb3bcb9e9fa3790d65fee5
/var/www/html/support.onlinenic.com/files/attach_8067c7c1f5b4ecdc27ad5787f97780fa
/var/www/html/support.onlinenic.com/files/attach_acda3744680da0cc36c3a0f95a747658
/var/www/html/support.onlinenic.com/files/attach_9518637c5047c85b688fbe9335c499cf
/var/www/html/support.onlinenic.com/files/attach_14b70d254859292f007192cbfd32e7d5
/var/www/html/support.onlinenic.com/files/attach_59411bbe69ada5961a292ea185cacee1
/var/www/html/support.onlinenic.com/files/attach_4ee760b069db8673a63ace2c43f109be
/var/www/html/support.onlinenic.com/files/attach_f7b1fdd7efb8ca0fa8d38f04d5c1b68c
/var/www/html/support.onlinenic.com/files/attach_28483a72e6742a08a57798c18349d4d8
/var/www/html/support.onlinenic.com/files/attach_266f449585e30fb4ca393bbf848e93fd
/var/www/html/support.onlinenic.com/files/attach_2a26c6e164e1e9eeca0905ceb625c46e
/var/www/html/support.onlinenic.com/files/attach_e2f63cee4be1e07cd50d269560eaba4c
/var/www/html/support.onlinenic.com/files/attach_9931e7e44506647890ae9e56f2ad9d5d
/var/www/html/support.onlinenic.com/files/attach_3e93b5e6b8c3e59773ac61c93bb55916
/var/www/html/support.onlinenic.com/files/attach_f277fe3c88dc9b0d2b6775278c31c50d
/var/www/html/support.onlinenic.com/files/attach_da03cbc58512892998bf01dcfacc33bc
/var/www/html/support.onlinenic.com/files/attach_28d54cb5b50c7862df9ba2c963d95542
/var/www/html/support.onlinenic.com/files/attach_cdba79331a7bda112078e2343a5656a5
/var/www/html/support.onlinenic.com/files/attach_013ec8f0e06238e917ad4955179b2d00
/var/www/html/support.onlinenic.com/files/attach_5a197f39ccef1580ba3740897b492f31
/var/www/html/support.onlinenic.com/files/attach_377ba31fb44bd13c380b8b7f71b8c680
/var/www/html/support.onlinenic.com/files/attach_174e4afc101486a67fda6fb24334c668
/var/www/html/support.onlinenic.com/files/attach_fbdc770e07f41a67f3359e6f4d645a2d
/var/www/html/support.onlinenic.com/files/attach_a68178e5cf6863e6bc1e38473c7c05c0
/var/www/html/support.onlinenic.com/files/attach_0516d9e9e0fb8fb75a7387f06ae06b18
/var/www/html/support.onlinenic.com/files/attach_c6deade8e1f271425ee3d8dc0ea9ea3f
/var/www/html/support.onlinenic.com/files/attach_a29d89f107dce254a22659776035d387
/var/www/html/support.onlinenic.com/files/attach_4a5263d8d7a41fc54abe937b43e73d51
/var/www/html/support.onlinenic.com/files/attach_920c78e51ed4a2ab250c7c12130b2d5f
/var/www/html/support.onlinenic.com/files/attach_cd8662f242eabe5383f3ff4b82e7f365
/var/www/html/support.onlinenic.com/files/attach_1855fae53b67b11830e89603466ecdf2
/var/www/html/support.onlinenic.com/files/attach_77c00d26f2c93a272d14fd1837dc09d8
/var/www/html/support.onlinenic.com/files/attach_242a112389fd6326312c0f498d434dc7
/var/www/html/support.onlinenic.com/files/attach_e26bd7bd366c8364a5971084e48d36ff
/var/www/html/support.onlinenic.com/files/attach_0ac9899e4fcf4466f53d6cf63398bf61
```

Contents of zengy_tmp_20210317.php PHP Script file: (Created on 3/17/2021)

```php
<?php


$dbhost = '173.255.221.136';  // mysql·þÎñÆ÷Ö÷»úµØÖ·

$dbuser = 'xxxxxx';           // mysqlÓÃ»§Ãû

$dbpass = 'xxxxxx';           // mysqlÓÃ»§ÃûÃÜÂë


$dbhost = 'localhost';  // mysql·þÎñÆ÷Ö÷»úµØÖ·

$dbuser = 'xxxxxx';           // mysqlÓÃ»§Ãû

$dbpass = 'xxxxxx';           // mysqlÓÃ»§ÃûÃÜÂë


$conn = mysqli_connect($dbhost, $dbuser, $dbpass, 'kayako');

if (!$conn) {

   var_dump('connect error: ' . mysqli_error($conn));

}


$sql = 'select * from swattachments';

$file1 = fopen('duo_files.txt','a+');

$retval = mysqli_query($conn, $sql);

//$dir = '/home/jumpol/script/ticket_20210106/files/';

$ori_dir = '/var/www/html/support.onlinenic.com/files/';

while ($row = mysqli_fetch_assoc($retval)) {

   $file = $row['storefilename'];
```

```php
    if (!file_exists($ori_dir.trim($file))) {

      echo $ori_dir.trim($file)."\n";

      fwrite($file1,$ori_dir.trim($file)."\n");

   }

//   copy($ori_dir.trim($file), $dir.trim($file));

}

echo 'done';
```

Contents of zengy_attachment_copy_file.php PHP Script file (Created 9/13/2020):

```php
<?php


$dbhost = 'localhost';  // mysql·þÎñÆ÷Ö÷»úµØÖ·
$dbuser = 'kayako';         // mysqlÓÃ§Ãû
$dbpass = '';        // mysqlÓÃ§ÃûÃÜÂë

$conn = mysqli_connect($dbhost, $dbuser, $dbpass, 'kayako');
if (!$conn) {
   var_dump('connect error: ' . mysqli_error($conn));
}

$sql = 'select * from swattachments';
$file = fopen('duo_files.txt','a+');
$retval = mysqli_query($conn, $sql);
$dir = '/home/jumpol/script/ticket_20210106/files/';
$ori_dir = '/var/www/html/support.onlinenic.com/files/';
while ($row = mysqli_fetch_assoc($retval)) {
   $file = $row['storefilename'];
   if (!file_exists($ori_dir.trim($file))) {
      echo $file;
   }
   copy($ori_dir.trim($file), $dir.trim($file));
}
echo 'done';
```

Exhibit 32

Exhibit 32. Attachment Files Missing Records from duo_files.txt

Attachment Files Missing Records from duo_files.txt.xlsx

Attachment Files Missing Records from duo_files.txt

Description	Records
Total Attachment Files named in duo_files.txt	472
Physcial Attachment Files Deleted or Missing	472
Matching Attachment File Records	444
Responsive Attachment File Records	236
Missing Attachment File Records	28

attachmentid	ticketid	ticketpostid	downloaditemid	filename	filetype	storefilename	attachmenttype	dateline	filesize
3758	21548	30570	0	image003.jpg	image/jpeg	attach_787bfa9204b6758f7b93e301579aae8a	2	4/29/2008 12:35	981
3759	21548	30570	0	image004.jpg	image/jpeg	attach_63f60ddc33ea7c2591826cf02e809677	2	4/29/2008 12:35	1023
3562	17879	22718	0	my_license.jpg	image/jpeg	attach_77e6a714a3ad76c417e56470a06df46f	2	4/28/2008 18:58	226996
3748	18136	30497	0	Scan10003.jpg	image/jpeg	attach_50e8812239b284f93b31599d76e12cb8	2	4/29/2008 12:05	64077
744	3732	4052	0	image001.jpg	image/jpeg	attach_14e66dc0a16f381afe173fafb1b250b7	2	4/8/2008 3:20	3034
1536	7836	9549	0	image001.jpg	image/jpeg	attach_2658e4ce918ffd07ef0e52f121ac00d0	2	4/15/2008 15:00	3034
1537	7836	9549	0	image002.jpg	image/jpeg	attach_b207e9417d768adc480e488f521ea60a	2	4/15/2008 15:00	115180
3094	16138	20190	0	pago ONLINENIC 5 --- 63082.jpg	image/jpeg	attach_8bdb8b145c6ece8cacdb16f09a3b9bb7	2	4/25/2008 18:15	178193
3560	17884	22588	0	my_license.jpg	image/jpeg	attach_49ff30f78b572dd9eb77a2a07b28eb23	2	4/28/2008 18:35	226996
1384	6427	8667	0	Polat E-mail 13-04-08.pdf	application/pdf	attach_bda6f43f2dab9fd5a3ed83f5c1b9418a	2	4/15/2008 10:25	28372
2994	15685	19768	0	Document.pdf	application/octet-stream	attach_7dc886ef36c5c8a18589e6327427c51d	2	4/25/2008 9:40	179382
2992	14255	19744	0	Untitled.PDF	application/octet-stream	attach_fd0356506550440456a7cc9b52e5faac	2	4/25/2008 8:55	84573
3457	17672	22120	0	175239_domain_info_0428.xls	application/octet-stream	attach_808aa7813e2701dcc7d9e80dd2f14f88	2	4/28/2008 8:28	125440
3740	18138	30496	0	Scan10002.JPG	image/jpeg	attach_ba65064b0528decc84d7f9d3a735ab3c	2	4/29/2008 12:05	172840
2973	15719	19628	0	onlinenic.jpg	image/pjpeg	attach_a020dac5ba4aab0742bc105425cf2d5f	2	4/25/2008 6:10	352762
2974	15721	19631	0		message/delivery-status	attach_a0dbd7e9bd0c52fbf3617e8534331159	2	4/25/2008 6:15	388
2975	13716	19635	0	adrian-signature.thumbnail.jpg	image/jpeg	attach_1750e5a775a87401ae9028873e51457a	2	4/25/2008 6:20	1845
727	3665	3944	0	OnlineNIC.jpg	image/jpeg	attach_2ae2c668f75995172d44654bbf4d3f0d	2	4/7/2008 22:35	32148
1488	6469	9261	0	danl_license.jpg	image/jpeg	attach_5b649bacf8bb3bcb9e9fa3790d65fee5	2	4/15/2008 13:25	72535
4703	27115	38238	0	DSC01134.jpg	image/jpeg	attach_8067c7c1f5b4ecdc27ad5787f97780fa	2	5/9/2008 6:35	64613
3755	14027	30561	0	OnlineNIC form.pdf	application/pdf	attach_acda3744680da0cc36c3a0f95a747658	2	4/29/2008 12:30	158359
3756	21548	30570	0	image001.jpg	image/jpeg	attach_9518637c5047c85b688fbe9335c499cf	2	4/29/2008 12:35	1741
3388	15695	21718	0	ehliyet.jpg	image/jpeg	attach_14b70d25485929f007192cbfd32e7d5	2	4/27/2008 22:00	102612
3743	18136	30497	0	Scan10002.jpg	image/jpeg	attach_59411bbe69ada5961a292ea185cacee1	2	4/29/2008 12:05	49686
3258	10210	21064	0	stemp-logo-small.jpg	image/jpeg	attach_4ee760b069db8673a63ace2c43f109be	2	4/26/2008 19:25	3191
3745	18136	30497	0	Scan10004.jpg	image/jpeg	attach_f7b1fdd7efb8ca0fa8d38f04d5c1b68c	2	4/29/2008 12:05	45188
3531	17918	22444	0	amantis.pdf	application/pdf	attach_28483a72e6742a08a57798c18349d4d8	2	4/28/2008 14:20	32359
3299	17004	21297	0		text/rfc822-headers	attach_266f449585e30fb4ca393bbf848e93fd	2	4/27/2008 5:50	946
3739	18138	30496	0	Scan10001.jpg	image/jpeg	attach_2a26c6e164e1e9eeca0905ceb625c46e	2	4/29/2008 12:05	125444
1485	7538	9232	0	online.jpg	image/jpeg	attach_e2f63cee4be1e07cd50d269560eaba4c	2	4/15/2008 13:15	141747
3306	17082	21388	0		message/delivery-status	attach_9931e7e44506647890ae9e56f2ad9d5d	2	4/27/2008 10:50	376
3751	18685	30503	0	OnlineNIC Whois Search Results.doc	application/msword	attach_3e93b5e6b8c3e59773ac61c93bb55916	2	4/29/2008 12:10	25088
3528	17918	22444	0	escritura_21Covercom.pdf	application/pdf	attach_f277fe3c88dc9b0d2b6775278c31c50d	2	4/28/2008 14:20	5646533
3529	17918	22444	0	ResoluciÃ³n de ConcesiÃ³n.jpg	image/jpeg	attach_da03cbc585128929898bf01dcfacc33bc	2	4/28/2008 14:20	393619
3741	18138	30496	0	Scan10003.jpg	image/jpeg	attach_28d54cb5b50c7862df9ba2c963d95542	2	4/29/2008 12:05	1060044
3532	17923	22451	0	escritura_21Covercom.pdf	application/pdf	attach_cdba79331a7bda112078e2343a5656a5	2	4/28/2008 14:25	5646533
3523	17906	22422	0	pago ONLINENIC 5 --- 63082.jpg	image/jpeg	attach_013ec8f0e06238e917ad4955179b2d00	2	4/28/2008 14:00	178193

Special Discovery Master cross referenced all 472 files against the 'swattachments' table to look for matching database records. Notably, 28 of the listed attachment files did not have matching database records in the cross-referenced table. All 472 physical file attachments do not appear anywhere in any of the directory listings the Special Master was provided for both servers and the Developer's Workstation.

Exhibit 33

Exhibit 33. PHP Script Referencing Date Range back to 2015

PHP Analysis Spreadsheet.xlsx

Date Ranges applied in Each PHP Script

PHP File	Produced On	Search Date Range	Date PHP Created	Date PHP Modified
get_domain.php	4/26/2021	>=June 30, 2015 and <=July 13, 2020	1/28/2020	1/29/2020
get_post_info.php	4/26/2021	>=June 30, 2015 and <=July 13, 2020	1/28/2020	1/29/2020
zenghy_2017_until_now_abuse@onlinenic.com_tickets.php	3/25/2021	After 12/31/2016	6/12/2020	6/12/2020
zenghy_2017_until_now_complaints@onlinenic.com_tickets.php	3/25/2021	After 12/31/2016	6/12/2020	6/12/2020
zenghy_2017_until_now_keyword_tickets1.php	3/25/2021	Between June 30, 2015 and July 14, 2020	6/12/2020	6/12/2020
zenghy_2017_until_now_keyword_tickets2.php	3/25/2021	Between June 30, 2015 and July 14, 2020	6/12/2020	6/22/2020
zenghy_2017_until_now_keyword_tickets3.php	3/25/2021	Between June 30, 2015 and July 14, 2020	6/12/2020	6/12/2020
zenghy_2017_until_now_keyword_tickets4.php	3/25/2021	Between June 30, 2015 and July 14, 2020	6/12/2020	6/12/2020
zenghy_2017_until_now_keyword_tickets5.php	3/25/2021	Between June 30, 2015 and July 14, 2020	6/12/2020	6/12/2020
zenghy_2017_until_now_keyword_tickets6.php	3/25/2021	Between June 30, 2015 and July 14, 2020	6/12/2020	6/22/2020
zenghy_2017_until_now_keyword_tickets7.php	3/25/2021	Between June 30, 2015 and July 14, 2020	6/12/2020	6/22/2020
zenghy_2017_until_now_tickets.php	3/25/2021	> December 31, 2016	5/12/2020	9/25/2020
zenghy_admin_tickets.php	3/25/2021	N/A	5/12/2020	5/12/2020
zenghy_all_domain_tickets.php	3/25/2021	>=June 30, 2015	7/3/2020	7/21/2020
zenghy_all_domain_tickets - v1.php	3/25/2021	>=June 30, 2015		
zenghy_attachment_copy_file.php	3/25/2021	N/A	9/13/2020	9/13/2020
zenghy_clippoo18.xxx_tickets.php	3/25/2021	N/A	5/13/2020	5/13/2020
zenghy_domain_tickets.php	3/25/2021	N/A	5/13/2020	5/13/2020
zenghy_evgeny.rekling_tickets.php	3/25/2021	N/A	10/21/2020	10/21/2020
zenghy_jenryhas_tickets.php	3/25/2021	N/A	5/13/2020	5/13/2020
zenghy_sql_statement.txt	3/25/2021	>=June 30, 2015	3/25/2021	5/7/2021
zenghy_tenmiendaduocdangky_tickets.php	3/25/2021	N/A	6/20/2020	6/20/2020
zenghy_tickets_20201009.php	3/25/2021	> December 31, 2016	10/9/2020	10/10/2020
zenghy_tmp_20210317.php	4/26/2021	N/A	3/17/2021	3/17/2021
zenghy_tuananh1080_tickets.php	3/25/2021	N/A	5/13/2020	10/21/2020
zenghy_xKVRYEH.hfndY_tickets.php	3/25/2021	N/A	6/12/2020	6/25/2020
zenghy_yamaguchi.takashi8_tickets.php	3/25/2021	N/A	5/13/2020	5/13/2020
zenghy_yamakuqi_tickets.php	3/25/2021	N/A	5/12/2020	9/25/2020
zenghy_zvedenyuk.eugene_tickets.php	3/25/2021	N/A	5/13/2020	5/13/2020

* zenghy_all_domain_tickets - v1.php - Not in Developer Workstation file listing
* zenghy_tmp_20210317.php - Not in Developer Workstation file listing, only on Kayako Ticket Server

Exhibit 34

Exhibit 34. PHP Script Referencing Date Range back to 2017

PHP Analysis Spreadsheet.xlsx

Date Ranges applied in Each PHP Script

PHP File	Produced On	Search Date Range	Date PHP Created	Date PHP Modified
get_domain.php	4/26/2021	>=June 30, 2015 and <=July 13, 2020	1/28/2020	1/29/2020
get_post_info.php	4/26/2021	>=June 30, 2015 and <=July 13, 2020	1/28/2020	1/29/2020
zenghy_2017_until_now_abuse@onlinenic.com_tickets.php	3/25/2021	After 12/31/2016	6/12/2020	6/12/2020
zenghy_2017_until_now_complaints@onlinenic.com_tickets.php	3/25/2021	After 12/31/2016	6/12/2020	6/12/2020
zenghy_2017_until_now_keyword_tickets1.php	3/25/2021	Between June 30, 2015 and July 14, 2020	6/12/2020	6/12/2020
zenghy_2017_until_now_keyword_tickets2.php	3/25/2021	Between June 30, 2015 and July 14, 2020	6/12/2020	6/22/2020
zenghy_2017_until_now_keyword_tickets3.php	3/25/2021	Between June 30, 2015 and July 14, 2020	6/12/2020	6/12/2020
zenghy_2017_until_now_keyword_tickets4.php	3/25/2021	Between June 30, 2015 and July 14, 2020	6/12/2020	6/12/2020
zenghy_2017_until_now_keyword_tickets5.php	3/25/2021	Between June 30, 2015 and July 14, 2020	6/12/2020	6/12/2020
zenghy_2017_until_now_keyword_tickets6.php	3/25/2021	Between June 30, 2015 and July 14, 2020	6/12/2020	6/22/2020
zenghy_2017_until_now_keyword_tickets7.php	3/25/2021	Between June 30, 2015 and July 14, 2020	6/12/2020	6/22/2020
zenghy_2017_until_now_tickets.php	3/25/2021	> December 31, 2016	5/12/2020	9/25/2020
zenghy_admin_tickets.php	3/25/2021	N/A	5/12/2020	5/12/2020
zenghy_all_domain_tickets.php	3/25/2021	>=June 30, 2015	7/3/2020	7/21/2020
zenghy_all_domain_tickets - v1.php	3/25/2021	>=June 30, 2015		
zenghy_attachment_copy_file.php	3/25/2021	N/A	9/13/2020	9/13/2020
zenghy_clippoo18.xxx_tickets.php	3/25/2021	N/A	5/13/2020	5/13/2020
zenghy_domain_tickets.php	3/25/2021	N/A	5/13/2020	5/13/2020
zenghy_evgeny.rekling_tickets.php	3/25/2021	N/A	10/21/2020	10/21/2020
zenghy_jenryhas_tickets.php	3/25/2021	N/A	5/13/2020	5/13/2020
zenghy_sql_statement.txt	3/25/2021	>=June 30, 2015	3/25/2021	5/7/2021
zenghy_tenimendaduocdangky_tickets.php	3/25/2021	N/A	6/20/2020	6/20/2020
zenghy_tickets_20201009.php	3/25/2021	> December 31, 2016	10/9/2020	10/10/2020
zenghy_tmp_20210317.php	4/26/2021	N/A	3/17/2021	3/17/2021
zenghy_tuananh1080_tickets.php	3/25/2021	N/A	5/13/2020	10/21/2020
zenghy_xKVRYEH.hfndY_tickets.php	3/25/2021	N/A	6/12/2020	6/25/2020
zenghy_yamaguchi.takashi8_tickets.php	3/25/2021	N/A	5/13/2020	5/13/2020
zenghy_yamakuqi_tickets.php	3/25/2021	N/A	5/12/2020	9/25/2020
zenghy_zvedenyuk.eugene_tickets.php	3/25/2021	N/A	5/13/2020	5/13/2020

* zenghy_all_domain_tickets - v1.php - Not in Developer Workstation file listing
* zenghy_tmp_20210317.php - Not in Developer Workstation file listing, only on Kayako Ticket Server

Exhibit 35

Exhibit 35. Table and Column Schema for all Ticket Related Tables Marked with Produced Columns for Early Productions

swticketposts and swticketposts Schema.xlsx

TABLE_NAME	COLUMN_NAME	ORDINAL_I	COLUMN_DEFAULT	IS_NULLABLE	DATA_TYPE	CHARACTER_	CHARACTER_O	NUMERIC_PRECISION	NUMERIC_SCALE	CHARACTER_SET_NAME	COLLATION_NAME	COLUMN_TYPE	COLUMN_KEY	EXTRA
swticketposts	ticketpostid	1		NO	int			10	0			int unsigned	PRI	auto_increment
swticketposts	ticketid	2	0	NO	int			10	0			int unsigned	MUL	
swticketposts	dateline	3	0	NO	int			10	0			int unsigned	MUL	
swticketposts	userid	4	0	NO	int			10	0			int unsigned		
swticketposts	fullname	5		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)	MUL	
swticketposts	email	6		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)	MUL	
swticketposts	emailto	7		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)	MUL	
swticketposts	subject	8		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)	MUL	
swticketposts	ipaddress	9		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)		
swticketposts	hasattachments	10	0	NO	smallint			5	0			smallint		
swticketposts	edited	11	0	NO	smallint			5	0			smallint unsigned		
swticketposts	editedbystaffid	12	0	NO	int			10	0			int unsigned		
swticketposts	editeddateline	13	0	NO	int			10	0			int unsigned		
swticketposts	creator	14	0	NO	smallint			5	0			smallint	MUL	
swticketposts	ishtml	15	0	NO	smallint			5	0			smallint unsigned		
swticketposts	isemailed	16	0	NO	smallint			5	0			smallint unsigned		
swticketposts	staffid	17	0	NO	int			10	0			int unsigned		
swticketposts	contents	18		YES	mediumtext	16777215	16777215			latin1	latin1_swedish_ci	mediumtext		
swticketposts	contenthash	19		NO	varchar	32	32			latin1	latin1_swedish_ci	varchar(32)		
swticketposts	subjecthash	20		NO	varchar	32	32			latin1	latin1_swedish_ci	varchar(32)		
swtickets	ticketid	1		NO	int			10	0			int unsigned	PRI	auto_increment
swtickets	ticketmaskid	2		NO	varchar	20	20			latin1	latin1_swedish_ci	varchar(20)	MUL	
swtickets	departmentid	3	0	NO	int			10	0			int unsigned	MUL	
swtickets	ticketstatusid	4	0	NO	int			10	0			int unsigned		
swtickets	priorityid	5	0	NO	int			10	0			int unsigned		
swtickets	emailqueueid	6	0	NO	int			10	0			int unsigned		
swtickets	userid	7	0	NO	int			10	0			int unsigned	MUL	
swtickets	staffid	8	0	NO	int			10	0			int unsigned		
swtickets	ownerstaffid	9	0	NO	int			10	0			int unsigned		
swtickets	assignstatus	10	0	NO	smallint			5	0			smallint unsigned		

TABLE_NAME	COLUMN_NAME	ORDINAL_I	COLUMN_DEFAULT	IS_NULLABLE	DATA_TYPE	CHARACTER_	CHARACTER_O	NUMERIC_PRECISION	NUMERIC_SCALE	CHARACTER_SET_NAME	COLLATION_NAME	COLUMN_TYPE	COLUMN_KEY	EXTRA
swtickets	fullname	11		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)	MUL	
swtickets	email	12		NO	varchar	180	180			latin1	latin1_swedish_ci	varchar(180)	MUL	
swtickets	lastreplier	13		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)	MUL	
swtickets	replyto	14		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)	MUL	
swtickets	subject	15		NO	varchar	150	150			latin1	latin1_swedish_ci	varchar(150)	MUL	
swtickets	dateline	16	0	NO	int			10	0			int unsigned	MUL	
swtickets	lastactivity	17	0	NO	int			10	0			int unsigned		
swtickets	laststaffreplytime	18	0	NO	int			10	0			int unsigned		
swtickets	slaplanid	19	0	NO	int			10	0			int unsigned	MUL	
swtickets	ticketslaplanid	20	0	NO	int			10	0			int unsigned		
swtickets	duetime	21	0	NO	int			10	0			int unsigned		
swtickets	totalreplies	22	0	NO	int			10	0			int unsigned		
swtickets	ipaddress	23		NO	varchar	120	120			latin1	latin1_swedish_ci	varchar(120)		
swtickets	flagtype	24	0	NO	smallint			5	0			smallint unsigned		
swtickets	hasnotes	25	0	NO	smallint			5	0			smallint unsigned		
swtickets	hasattachments	26	0	NO	smallint			5	0			smallint unsigned		
swtickets	isemailed	27	0	NO	smallint			5	0			smallint unsigned		
swtickets	edited	28	0	NO	smallint			5	0			smallint unsigned		
swtickets	editedbystaffid	29	0	NO	int			10	0			int unsigned		
swtickets	editeddateline	30	0	NO	int			10	0			int unsigned		
swtickets	creator	31	0	NO	smallint			5	0			smallint		
swtickets	charset	32		NO	varchar	100	100			latin1	latin1_swedish_ci	varchar(100)		
swtickets	transferencoding	33		NO	varchar	50	50			latin1	latin1_swedish_ci	varchar(50)		
swtickets	timeworked	34	0	NO	int			10	0			int unsigned		
swtickets	dateicon	35	0	NO	int			10	0			int unsigned		
swtickets	lastpostid	36	0	NO	int			10	0			int unsigned		
swtickets	firstpostid	37	0	NO	int			10	0			int unsigned		
swtickets	tgroupid	38	0	NO	int			10	0			int unsigned		
swtickets	messageid	39		NO	varchar	15	15			latin1	latin1_swedish_ci	varchar(15)		
swtickets	escalationruleid	40	0	NO	int			10	0			int unsigned		
swtickets	hasdraft	41	0	NO	smallint			5	0			smallint unsigned		
swtickets	hasbilling	42	0	NO	smallint			5	0			smallint unsigned		
swtickets	isphonecall	43	0	NO	smallint			5	0			smallint unsigned		
swtickets	isescalated	44	0	NO	smallint			5	0			smallint unsigned		
swtickets	phoneno	45		NO	varchar	255	255			latin1	latin1_swedish_ci	varchar(255)		
swtickets	autoclosetimeline	46	0	NO	int			10	0			int unsigned		
swtickets	islabeled	47	0	NO	smallint			5	0			smallint unsigned		
swtickets	lastuserreplytime	48	0	NO	int			10	0			int unsigned		
swtickets	escalatedtime	49	0	NO	int			10	0			int unsigned		
swtickets	followupcount	50	0	NO	int			10	0			int unsigned		

Exhibit 36

Exhibit 36. PHP Samples Where Filters were Applied Differently to Columns

PHP Analysis Spreadsheet.xlsx

PHP Script Columns Searched by Table

PHP File	Produced On	Columns Searched
get_domain.php	4/26/2021	swticketposts.subject, swticketposts.ticketid, swticketposts.contents, swticketposts.dateline
get_post_info.php	4/26/2021	swticketposts.ticketid, swtickets.ticketid, swticketposts.email, swticketposts.emailto, swticketposts.dateline, swticketposts.email, swtickets.email, swtickets.replyto, swtickets.lastreplier, swtickets.fullname
zenghy_2017_until_now_abuse@onlinenic.com_tickets.php	3/25/2021	swtickets.email, swtickets.dateline
zenghy_2017_until_now_complaints@onlinenic.com_tickets.php	3/25/2021	swtickets.email, swtickets.dateline
zenghy_2017_until_now_keyword_tickets1.php	3/25/2021	swticketposts.email, swticketposts.emailto, swticketposts.subject, swticketposts.ticketid, swticketposts.dateline, swticketposts.contents, swticket.ticketid, swticketposts.ticketid
zenghy_2017_until_now_keyword_tickets2.php	3/25/2021	swticketposts.email, swticketposts.emailto, swticketposts.subject, swticketposts.ticketid, swticketposts.dateline, swticketposts.contents, swticket.ticketid, swticketposts.ticketid
zenghy_2017_until_now_keyword_tickets3.php	3/25/2021	swticketposts.email, swticketposts.emailto, swticketposts.subject, swticketposts.ticketid, swticketposts.dateline, swticketposts.contents, swticket.ticketid, swticketposts.ticketid
zenghy_2017_until_now_keyword_tickets4.php	3/25/2021	swticketposts.email, swticketposts.emailto, swticketposts.subject, swticketposts.ticketid, swticketposts.dateline, swticketposts.contents, swticket.ticketid, swticketposts.ticketid
zenghy_2017_until_now_keyword_tickets5.php	3/25/2021	swticketposts.email, swticketposts.emailto, swticketposts.subject, swticketposts.ticketid, swticketposts.dateline, swticketposts.contents, swticket.ticketid, swticketposts.ticketid
zenghy_2017_until_now_keyword_tickets6.php	3/25/2021	swticketposts.email, swticketposts.emailto, swticketposts.subject, swticketposts.ticketid, swticketposts.dateline, swticketposts.contents, swticket.ticketid, swticketposts.ticketid
zenghy_2017_until_now_keyword_tickets7.php	3/25/2021	swticketposts.email, swticketposts.emailto, swticketposts.subject, swticketposts.ticketid, swticketposts.dateline, swticketposts.contents, swticket.ticketid, swticketposts.ticketid
zenghy_2017_until_now_tickets.php	3/25/2021	swtickets.email, swticketposts.ticketid, swtickets.dateline, swticketposts.contents, swticketposts.subject
zenghy_admin_tickets.php	3/25/2021	swtickets.email, swticketposts.ticketid
zenghy_all_domain_tickets.php	3/25/2021	swtickets.ticketid, swticketposts.ticketid, swticketposts.subject, swticketposts.email, swticketposts.contents, swticketposts.emailto, swticketposts.dateline
zenghy_all_domain_tickets - v1.php	3/25/2021	swtickets.ticketid, swticketposts.ticketid, swticketposts.subject, swticketposts.email, swticketposts.contents, swticketposts.dateline
zenghy_attachment_copy_file.php	3/25/2021	N/A
zenghy_clippoo18.xxx_tickets.php	3/25/2021	swtickets.email, swticketposts.ticketid
zenghy_domain_tickets.php	3/25/2021	swtickets.email, swticketposts.ticketid
zenghy_evgeny.rekling_tickets.php	3/25/2021	swtickets.email, swticketposts.ticketid
zenghy_jenryhas_tickets.php	3/25/2021	swtickets.email, swticketposts.ticketid

PHP File	Produced On	Columns Searched
zenghy_sql_statement.txt	3/25/2021	swtickets.email, swtickets.dateline, swticketposts.contents, swticketposts.subject, swticketposts.dateline, swattachments.ticketid, swauditlogs.ticketid, swescalationpaths.ticketid, swparserlogs.ticketmaskid, swticketlocks.ticketid, swticketmergelog.oldticketmaskid, swticketmessageids.ticketid, swticketpostindex.ticketpostid, swticketpostlocks.ticketid, swticketposts.ticketid, swticketrecipients.ticketid
zenghy_tenmiendaduocdangky_tickets.php	3/25/2021	swtickets.email, swticketposts.ticketid
zenghy_tickets_20201009.php	3/25/2021	swticketposts.ticketid, swtickets.ticketid, swticketposts.contents, swticketposts.subject, swticketposts.dateline
zenghy_tmp_20210317.php	4/26/2021	N/A
zenghy_tuananh1080_tickets.php	3/25/2021	swtickets.email, swticketposts.ticketid
zenghy_xKVRYEH.hfndY_tickets.php	3/25/2021	swtickets.email, swticketposts.ticketid
zenghy_yamaguchi.takashi8_tickets.php	3/25/2021	swtickets.email, swticketposts.ticketid
zenghy_yamakuqi_tickets.php	3/25/2021	swtickets.ticketid
zenghy_zvedenyuk.eugene_tickets.php	3/25/2021	swtickets.email, swticketposts.ticketid

Exhibit 37

Exhibit 37. PHP Script Samples where Filters were Applied to only One Table instead of All

PHP Analysis Spreadsheet.xlsx

PHP Script Columns Searched by Table		
PHP File	**Produced On**	**Columns Searched**
get_domain.php	4/26/2021	swticketposts.subject, swticketposts.ticketid, swticketposts.contents, swticketposts.dateline
get_post_info.php	4/26/2021	swticketposts.ticketid, swticketposts.ticketid, swticketposts.email, swticketposts.emailto, swticketposts.dateline, swticketposts.email, swticketposts.email, swtickets.replyto, swtickets.lastreplier, swtickets.fullname
zenghy_2017_until_now_abuse@onlinenic.com_tickets.php	3/25/2021	swtickets.email, swtickets.dateline
zenghy_2017_until_now_complaints@onlinenic.com_tickets.php	3/25/2021	swtickets.email, swtickets.dateline
zenghy_2017_until_now_keyword_tickets1.php	3/25/2021	swticketposts.email, swticketposts.emailto, swticketposts.subject, swticketposts.ticketid, swticketposts.dateline, swticketposts.contents, swticket.ticketid, swticketposts.ticketid
zenghy_2017_until_now_keyword_tickets2.php	3/25/2021	swticketposts.email, swticketposts.emailto, swticketposts.subject, swticketposts.ticketid, swticketposts.dateline, swticketposts.contents, swticket.ticketid, swticketposts.ticketid
zenghy_2017_until_now_keyword_tickets3.php	3/25/2021	swticketposts.email, swticketposts.emailto, swticketposts.subject, swticketposts.ticketid, swticketposts.dateline, swticketposts.contents, swticket.ticketid, swticketposts.ticketid
zenghy_2017_until_now_keyword_tickets4.php	3/25/2021	swticketposts.email, swticketposts.emailto, swticketposts.subject, swticketposts.ticketid, swticketposts.dateline, swticketposts.contents, swticket.ticketid, swticketposts.ticketid
zenghy_2017_until_now_keyword_tickets5.php	3/25/2021	swticketposts.email, swticketposts.emailto, swticketposts.subject, swticketposts.ticketid, swticketposts.dateline, swticketposts.contents, swticket.ticketid, swticketposts.ticketid
zenghy_2017_until_now_keyword_tickets6.php	3/25/2021	swticketposts.email, swticketposts.emailto, swticketposts.subject, swticketposts.ticketid, swticketposts.dateline, swticketposts.contents, swticket.ticketid, swticketposts.ticketid
zenghy_2017_until_now_keyword_tickets7.php	3/25/2021	swticketposts.email, swticketposts.emailto, swticketposts.subject, swticketposts.ticketid, swticketposts.dateline, swticketposts.contents, swticket.ticketid, swticketposts.ticketid
zenghy_2017_until_now_tickets.php	3/25/2021	swtickets.email, swticketposts.ticketid, swtickets.dateline, swticketposts.contents, swticketposts.subject
zenghy_admin_tickets.php	3/25/2021	swtickets.email, swticketposts.ticketid
zenghy_all_domain_tickets.php	3/25/2021	swtickets.ticketid, swticketposts.ticketid, swticketposts.subject, swticketposts.email, swticketposts.contents, swticketposts.emailto, swticketposts.dateline
zenghy_all_domain_tickets - v1.php	3/25/2021	swtickets.ticketid, swticketposts.ticketid, swticketposts.subject, swticketposts.email, swticketposts.contents, swticketposts.dateline
zenghy_attachment_copy_file.php	3/25/2021	N/A
zenghy_clippoo18.xxx_tickets.php	3/25/2021	swtickets.email, swticketposts.ticketid
zenghy_domain_tickets.php	3/25/2021	swtickets.email, swticketposts.ticketid
zenghy_evgeny.rekling_tickets.php	3/25/2021	swtickets.email, swticketposts.ticketid
zenghy_jenryhas_tickets.php	3/25/2021	swtickets.email, swticketposts.ticketid

Exhibit 38

Exhibit 38. Ticket Related Tables Excluded in Early Productions

"Ticket Related Tables Excluded in Early Productions.xlsx"

Ticket Related Tables Excluded in Early Productions	
Table Name ▾	**Some Columns included in Early Defendants Productions** ▾
swattachments	
swauditlogs	
swescalationpaths	
swparserlogs	
swticketdrafts	
swticketlabellinks	
swticketmergelog	
swticketmessageids	
swticketpostindex	
swticketposts	Yes
swticketrecipients	
swtickets	Yes
swtickettimetrack	

Exhibit 39

Exhibit 39. Excel Example showing Limited Columns

Bates ID	Database ID	Database Name	Search Terms	File	TicketNumber	Subject	date
499872	18	prod_df_html_2021_04_26	Abuse	JenryHaris_5.html	XMD-821168	abuse你-今-天-要 13:14-开-票-吗电话137=9816=1806李QQ2724=8924=39咨询![%]	12/26/2019 5:44
499884	18	prod_df_html_2021_04_26	Abuse	JenryHaris_5.html	BIL-771867	abuse@onlinenic.com需-要-发-票-报-销-费-用吗电话137=1507=1094李QQ1664=2724=77咨	12/29/2019 13:10
499886	18	prod_df_html_2021_04_26	RELATED	JenryHaris_5.html	MJZ-887154	16:24代开发、票，验后付/款 详情+QQ：1094923009 小许 13612481426 2020/1/5	1/5/2020 9:52
499888	18	prod_df_html_2021_04_26	Abuse	JenryHaris_5.html	TXL-940012	3:27-發-曝- V电 13612481426 许小姐 Q:1094923009 abuse	1/6/2020 1:41
499903	18	prod_df_html_2021_04_26	Abuse	JenryHaris_5.html	LKD-175229	代开發 票+微 信：13662542997 2020/1/16 星期四 abused	1/15/2020 22:21
500777	18	prod_df_html_2021_04_26	Abuse	JenryHaris_6.html	YNL-895809	代开 票+微 信：13662542997 2020/2/12 星 期三 abuseK	2/11/2020 16:06
500824	18	prod_df_html_2021_04_26	Abuse	JenryHaris_6.html	DIM-498439	abuse想你么，开 票QQ599953971，手机15710058496	2/12/2020 16:46
500834	18	prod_df_html_2021_04_26	Abuse	JenryHaris_6.html	FNM-441264	abuse@onlinenic.com需-开-当-地-正-规-票-吗电话138=2445=2407李QQ2534=9210=43咨	2/13/2020 8:01
500899	18	prod_df_html_2021_04_26	Abuse	JenryHaris_6.html	AMD-566423	abuse@onlinenic.com需-开-当-地-正-0:26规-票-吗电话137=1507=1094李QQ1664=2724=77	2/15/2020 0:35
501321	18	prod_df_html_2021_04_26	RELATED	JenryHaris_6.html	NFQ-478040	[Bdm-devel] 代开正规票据，点数优惠。咨询QQ：782906986 电话：13660459087 苏小	2/27/2020 0:09
501698	18	prod_df_html_2021_04_26	Abuse	JenryHaris_7.html	TCX-143897	abuse想你么，开 票QQ599953971，手机15710058496	3/9/2020 2:09
502028	18	prod_df_html_2021_04_26	RELATED	JenryHaris_7.html	ISH-200806	OnlineNIC Your Reseller ID is 609926	3/18/2020 23:27
502029	18	prod_df_html_2021_04_26	RELATED	JenryHaris_7.html	ISH-200806	OnlineNIC Your Reseller ID is 609926	3/18/2020 12:43
502030	18	prod_df_html_2021_04_26	Identity	JenryHaris_7.html	ISH-200806	OnlineNIC Your Reseller ID is 609926	3/18/2020 12:25
502031	18	prod_df_html_2021_04_26	Identity	JenryHaris_7.html	ISH-200806	OnlineNIC Your Reseller ID is 609926	3/18/2020 2:45
502052	18	prod_df_html_2021_04_26	Abuse	JenryHaris_7.html	CIO-473650	~]@有需要閞票吗电v132=5758=5186qq738255636李abuse	3/18/2020 16:07
502425	18	prod_df_html_2021_04_26	Abuse	JenryHaris_7.html	BHG-779447	uh可.閞.真.票.电132=5758=5186qq738255636李abuse	4/1/2020 9:44
502618	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	ZJI-301546	abuse@onlinenic.com可-开-当-地-2020/4/8正-规-发-票电话137=9816=1806李QQ2724=892	4/8/2020 0:14
502722	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	ECZ-817233	![你好开票电话158-9990-4712李-q3060-687915abuse	4/10/2020 23:58
502921	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	OCN-441319	WG: [ADVANZIA.S.K] Update erforderlich	4/22/2020 2:19
502922	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	OCN-441319	WG: [ADVANZIA.S.K] Update erforderlich	4/22/2020 2:19
502923	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	OCN-441319	WG: [ADVANZIA.S.K] Update erforderlich	4/21/2020 18:23
502924	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	OCN-441319	WG: [ADVANZIA.S.K] Update erforderlich	4/21/2020 18:23
502925	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	OCN-441319	WG: [ADVANZIA.S.K] Update erforderlich	4/21/2020 17:38
502926	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	OCN-441319	WG: [ADVANZIA.S.K] Update erforderlich	4/21/2020 17:38
502927	18	prod_df_html_2021_04_26	RELATED	JenryHaris_8.html	OCN-441319	WG: [ADVANZIA.S.K] Update erforderlich	4/21/2020 11:01
502928	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	OCN-441319	WG: [ADVANZIA.S.K] Update erforderlich	4/21/2020 10:31
502929	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	OCN-441319	WG: [ADVANZIA.S.K] Update erforderlich	4/21/2020 10:31
502930	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	OCN-441319	WG: [ADVANZIA.S.K] Update erforderlich	4/21/2020 8:58
502931	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	OCN-441319	WG: [ADVANZIA.S.K] Update erforderlich	4/21/2020 8:58
502932	18	prod_df_html_2021_04_26	RELATED	JenryHaris_8.html	OCN-441319	WG: [ADVANZIA.S.K] Update erforderlich	4/19/2020 10:03
502933	18	prod_df_html_2021_04_26	RELATED	JenryHaris_8.html	OCN-441319	WG: [ADVANZIA.S.K] Update erforderlich	4/19/2020 10:03
502934	18	prod_df_html_2021_04_26	RELATED	JenryHaris_8.html	OCN-441319	WG: [ADVANZIA.S.K] Update erforderlich	4/17/2020 23:02
502935	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	YVA-118842	abuse@onlinenic.com需-开-当-地-正-规-票-吗电话137=1507=1094李QQ1664=2724=77咨	4/17/2020 23:02
502980	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	CNF-379647	2020/4/23想你么，开 票QQ599953971，手机15710058496abuse@onlinenic.com	4/23/2020 4:47
502994	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	BEZ-550475	abuse想你么，开 票QQ599953971，手机15710058496	4/26/2020 2:20
503006	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	UYC-179345	ÃãÔÚ¼Æ½âÎÒ¶Ê§µÄÊÖ»ú£~ÊÖ»úÒÑ±º°_£~ÃãÐ¡ÐÄµã¶ù°É	5/15/2020 6:20
503007	18	prod_df_html_2021_04_26	RELATED	JenryHaris_8.html	UYC-179345	ÃãÔÚ¼Æ½âÎÒ¶Ê§µÄÊÖ»ú£~ÊÖ»úÒÑ±º°_£~ÃãÐ¡ÐÄµã¶ù°É	5/15/2020 6:11
503015	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	JKY-340717	abuse@onlinenic.com你好，可-开-当-地-正-规-票-电话137=1507=1094李QQ1664=2724=7	5/21/2020 23:11
503018	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	MOD-940341	abuse@onlinenic.com公-司-需-要 2020/5/22-开-票-了-吗电话138=2445=2407李QQ2534=92	5/22/2020 17:25
503022	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	ZKT-885057	لبتاب لنوو به قيمت 3500000 تومان	6/1/2020 16:30
503023	18	prod_df_html_2021_04_26	RELATED	JenryHaris_8.html	ZKT-885057	لبتاب لنوو به قيمت 3500000 تومان	6/1/2020 15:11
503028	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	FIQ-927589	abuse想你么，开 票QQ599953971，手机15710058496	6/9/2020 3:22
503044	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	SCR-375295	冬-虫夏草 23:32邮Uq箱回 复 abuse	7/14/2020 0:09
503052	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	JLT-452524	abuse	7/26/2020 3:52
503053	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	DBE-504806	Sua conta digital vivo chegou - 4048444	8/13/2020 15:51
503054	18	prod_df_html_2021_04_26	RELATED	JenryHaris_8.html	DBE-504806	Sua conta digital vivo chegou - 4048444	8/13/2020 12:18
503055	18	prod_df_html_2021_04_26	RELATED	JenryHaris_8.html	DBE-504806	Sua conta digital vivo chegou - 4048444	8/13/2020 7:43
503087	18	prod_df_html_2021_04_26	Abuse	JenryHaris_8.html	RMS-314160	abuse@onlinenic.com今-天-需-要-14:25开-票-吗电话138=2445=2407李QQ2534=9210=43咨	8/28/2020 6:30

Exhibit 40

Exhibit 40. File Named mysql.12.dump.gz On Domain Who Is Server

"File Named mysql.12.dump.gz On Domain Who Is Server.xlsx

File Named mysql.12.dump.gz On Domain Who Is Server					
file_name	file_time	file_date	file_size	file_extension	file_path
mysql.12.dump.gz	9:56:21 AM	3/17/2021	999432384	.gz	/home/kayako/mysql.12.dump.gz

"File Named mysql.12.dump.gz On Domain Who Is Server.SQL"
SELECT
  file_details.file_name,
  file_details.file_time,
  file_details.file_date,
  file_details.file_size,
  file_details.file_extension,
  file_details.file_path
FROM files_domainwhois_2021_04_06.file_details
WHERE file_details.file_name LIKE '%mysql.12.dump.gz%'

Exhibit 41

Exhibit 41. Files Preserved instead of mysql.12.dump.gz On Domain Who Is Server

This Exhibit shows files for domain WhoIs Server sorted descending by file size - Large Files Only.xlsx

Defendants elected to preserve 56 larger files created in 2017 and 2020 instead of preserving the file named **mysql.12.dump.gz** directly responsive to the case.

Defendants elected to preserve 66 larger files created in 2021 instead of preserving the file named **mysql.12.dump.gz** directly responsive to the case.

name	file_time	file_date	file_size
sfer1.tar.gz	12:19:25 AM	5/22/2021	97,930,556,425
sfer1.tar.gz	2:21:18 AM	5/25/2021	97,930,556,404
sfer1.tar.gz	3:48:24 AM	5/29/2021	97,930,556,402
orbit.tar.gz	7:07:48 PM	11/16/2020	39,640,130,340
orbit.tar.gz	9:03:35 PM	4/23/2021	39,640,130,340
orbit.tar.gz	7:07:48 PM	11/16/2020	39,640,130,340
orbit.tar.gz	7:12:28 PM	11/23/2020	39,640,130,274
orbit.tar.gz	7:12:28 PM	11/23/2020	39,640,130,274
orbit.tar.gz	10:06:39 PM	11/20/2020	39,640,130,223
orbit.tar.gz	10:06:39 PM	11/20/2020	39,640,130,223
sfer1.tar.gz	6:41:26 AM	3/30/2021	35,409,214,012
sfer1.tar.gz	5:47:32 PM	4/2/2021	35,409,213,986
sfer1.tar.gz	2:12:47 AM	4/6/2021	35,409,213,983
sfer1.tar.gz	9:07:33 PM	3/26/2021	35,409,213,291
nove-nuwair.tar.gz	5:32:59 AM	5/27/2017	15,848,089,880
nove-nuwair.tar.gz	5:32:59 AM	5/27/2017	15,848,089,880
nove-stream1.tar.gz	3:13:37 PM	9/13/2017	13,692,155,839
nove-stream1.tar.gz	3:13:37 PM	9/13/2017	13,692,155,839
nove-toyotasuvarn.tar.gz	4:42:18 AM	5/27/2017	10,622,187,365
nove-toyotasuvarn.tar.gz	4:42:18 AM	5/27/2017	10,622,187,365
sportscom.tar.gz	6:12:41 PM	4/2/2021	10,320,500,556
sportscom.tar.gz	3:43:38 AM	3/30/2021	10,069,147,955
nove-pakcolum.tar.gz	5:47:12 AM	5/27/2017	9,825,436,510
nove-pakcolum.tar.gz	5:47:12 AM	5/27/2017	9,825,436,510
nove-bestheadphonesre.tar.gz	2:48:35 PM	9/13/2017	9,617,317,823
nove-bestheadphonesre.tar.gz	2:48:35 PM	9/13/2017	9,617,317,823
tspak.tar.gz	1:48:12 AM	11/24/2020	9,514,819,742
tspak.tar.gz	1:48:12 AM	11/24/2020	9,514,819,742
tspak.tar.gz	5:29:36 PM	11/20/2020	9,514,810,065
tspak.tar.gz	9:02:19 PM	4/23/2021	9,514,810,065
tspak.tar.gz	5:29:36 PM	11/20/2020	9,514,810,065
tspak.tar.gz	8:19:43 PM	11/16/2020	9,514,250,037
tspak.tar.gz	9:03:35 PM	4/23/2021	9,514,250,037
tspak.tar.gz	8:19:43 PM	11/16/2020	9,514,250,037
sportscom.tar.gz	7:10:59 PM	5/31/2021	9,187,831,549
sportscom.tar.gz	8:15:57 PM	5/28/2021	9,075,522,353
sportscom.tar.gz	3:43:35 PM	5/24/2021	8,769,575,631
sportscom.tar.gz	11:56:11 AM	5/22/2021	8,709,841,354
co.tar.gz	11:36:00 PM	4/5/2021	8,409,619,597
co.tar.gz	6:32:55 AM	4/3/2021	8,409,617,785
co.tar.gz	10:36:41 PM	3/26/2021	8,409,615,707
co.tar.gz	9:04:53 AM	3/30/2021	8,409,613,005
co.tar.gz	2:11:25 AM	3/30/2021	8,382,509,528
co.tar.gz	3:33:35 PM	5/31/2021	8,381,309,979
co.tar.gz	6:58:31 AM	5/29/2021	8,381,061,830
co.tar.gz	11:56:29 AM	5/25/2021	8,380,576,528
co.tar.gz	5:56:05 PM	5/21/2021	8,380,256,908
co.tar.gz	9:30:21 PM	4/5/2021	8,379,437,402
co.tar.gz	7:18:23 PM	4/2/2021	8,378,990,959
nove-chanmr.tar.gz	2:42:46 AM	5/27/2017	8,346,571,563
nove-chanmr.tar.gz	2:42:46 AM	5/27/2017	8,346,571,563
tspak.tar.gz	4:01:47 AM	3/30/2021	8,109,404,831
tspak.tar.gz	9:59:14 PM	3/26/2021	8,109,063,349
tspak.tar.gz	3:10:09 PM	4/5/2021	8,108,887,295
tspak.tar.gz	8:57:57 PM	4/2/2021	8,108,449,688
nove-shanyoma.tar.gz	3:31:12 PM	9/13/2017	7,751,853,146
nove-shanyoma.tar.gz	3:31:12 PM	9/13/2017	7,751,853,146
nove-farshid2.tar.gz	2:07:17 AM	5/27/2017	7,461,987,493
nove-farshid2.tar.gz	2:07:17 AM	5/27/2017	7,461,987,493
excel.tar.gz	3:39:12 AM	11/24/2020	7,165,067,855

Exhibit 42

Exhibit 42. Discovery Protocol for New Production

Discovery Protocol Agreement

The parties agree to this joint Discovery Protocol Agreement. This Discovery Protocol can be modified by mutual agreement of the parties. If you make changes to the Discovery Protocol, please send an updated version to Tom Howe at howe@howelawfirm.com.

Matter Name:	Facebook, Inc. et al v. OnlineNic Inc et al - Case No. 3:19-cv-0707
Dated:	2021-05-06

Collections and Data to Process

X	Ticketing Database Sources	Details
X	Ticketing Database Backups; Attachment Files; and Productions.	All ticketing databases, database backups and attachment files collected by the Special Master. The Special Master will also download a copy of the current version of the Zoho database used by Defendants and include that data in subsequent searches. Defendants will provide all credentials to Special Master to allow Special Master to download the Zoho database in native format. Note: Searches will be run across all data sources above.

Date Filter

The information will be culled to include only the relevant date range, as indicated below, for this matter.

Begin Date:	No date filter.
End Date:	No date filter.

Search Terms

The following search terms and search phrases will be used to cull the information. Search terms are not case sensitive (e.g., the search term "Steve" also returns STEVE and steve). Search terms will apply to readable text information. Wildcards (%) will be used before and after each search term listed below.

Example Search Term	Responsive Items
%trollfacebook.com%	trollfacebook.com, www.trollfacebook.com, http://trollfacebook.com
%Trademark%	Trademark, Trademarks, Trademarked

Enter Search Terms
ACPA
Actionable
admin@sprinthost.ru
Akhmed
Aleksandr
Aleksandr Ivanov
Aleksandrovich
Anti-cybersquatting consumer protection act
Anticybersquatting consumer protection act
ANTON PRIKHODKO
Anton Prikhodko
Avguro Technologies
Axatovich
Bakkura
Bakkura Dzhikhad Akhmed
Batista
businessmedia@gmail.com
buyinstagramfans.com
Chowdhury
clippoo18.xxx@gmail.com
COOP NIX Co.,Ltd
Counterfeit
Cybersquatting
David Wilke
deepsleeper@hotmail.co.uk
dilution
Disclose
domain@inet.vn
domains@digiport.nl
domreg@microware.hu
Dzhikhad
Esther Batista
EUGENE MAGDESIEV
Eugene Magdesiev
eugene@magdesiev.ru
Evgeny
Evgeny Magdesiev
evgeny.rekling@gmail.com
face2bouk.com
facebook-alkalmazasok.net
facebook-chat-emoticons.com
facebook-fans-buy.com
facebook-hirdetesek.com

facebook-login-signup.com
facebook-mails.com
facebook-pass.com
facebook-pw.com
facebook-rodo.com
facebookdrummers.com
facebookperottici.com
facebookphysician.com
facebooktopten.com
facebookvideodownload.net
facebux2.com
facekhook.com
facessbook.com
faecb00k-page.com
faecbook-page.com
findfacebookid.com
Fraud
GAMBERINI
Ganiullin
Ganiullin Artur Axatovich
GregoryJLuton
Gyoergy
hackfacebook-now.com
hackingfacebook.net
hacksomeonesfacebook.com
Haris
HISATA
iczcorporaz@gmail.com
Identifies
Identify
Identity
iiinstagram.com
iNET Corporation
info@avguro.ru
info@digiport.nl
info@dima.hu
info@jino.ru
Infringement
Infringing
instaface.org
instagram-login.xyz
instagram01.com
instagramdrummer.com
instagramdrummers.com
instakram.com

iroda@tarhely.eu
Itsuki
Itsuki nimikoo
Ivan V Kandzyuba
Ivanov
Jenry
Jenry Haris
jenryhas@gmail.com
jobi110@hotmail.com
Juntima
Kandzyuba
Karpati
Karpati Zoltan
Kien Tran
kien@inet.vn
KJ STOL
klaasjan@digiport.nl
Koleszar
Komaromi
komaromi.zsolt@microware.hu
Krisztian
Krisztian Lukacs
lamsocialfacebook.net
Lanham Act
Laszlo
Laszlo Krisztian
Laura Yun
learntohackfacebook.com
LH.pl Sp. z o.o.
Lockspin UK
login-lnstargram.com
Lukacs
Luton
m-facebook-login.com
magdesiev
Magos
Magos TamÃ¡s
Magos TamÃ¡s LÃ¡szlÃ³
mail-instgram.com
manage-instagram.xyz
Marek
Marek Panek
marek@lh.pl
MAURO
MAURO GAMBERINI

mehdi
mgr@speee.jp
Microware Hungary Kft.
modelfacebook.com
Monir Mahmud Chowdhury
mr.elgoud@gmail.com
myfacebooktop10.com
newvolna01@yandex.ru
nimikoo
ofacebooklogin.com
onlinenic@lockspin.com
Panek
pay_pal@offshore-hosting-service.com
Peter Koleszar
peter@koleszar.hu
Phishing
Prikhodko
Proxy
RACHID ASSOIB
Redact
Redacted
Rekling
Rekling Evgeny Aleksandrovich
Reveal
S M A zaidi
Service mark
sickfacebook.com
singin-lnstargram.com
SOMA Katarzyna Sokol
spiritkind@gmail.com
SPRINTHOST.RU LLC
syed Zaidi
Takashi
Takashi Yamaguchi
Tanannop
Tanannop Juntima
tenmiendaduocdangky@gmail.com
TETSUSHI
TETSUSHI HISATA
Thu Nguyen
Thu Nguyen Anh
Trademark
Tran Kien
trollfacebook.com
UDRP

Uniform Domain Name Dispute Resolution Policy
watch-facebook.com
Wilke
wwhatsap.com
www-facebook-login.com
www-facebook-pages.com
www-instagram.net
Yamaguchi
yamaguchi.takashi8@gmail.com
Zaidi
Zoltan
Zoltan Karpati
Zsolt
Zsolt Gyoergy Komaromi
Zsolt Gyorgy Komaromi
Zsolt Komaromi

Search Protocol

- All ticket-related tables in all databases (above), except database tables with no records, will be searched. All attachments files will be searched.
- Each search term (above) will be searched in all tables and all columns that contain text (including but not limited to, varchar, text, tinytext, etc. data types), including searching index tables. Wildcards ("%") will be used before and after each search item.
- Produce all records where the search term was located (including records referenced by an index entry). The seach terms will be searched without regard to letter-case (i.e., "M" will match the same as "m")
- If the search term is found in any record associated with a trouble ticket (ticket table, ticket-related tables, or attachment files or index table), then the entire trouble ticket, including all trouble ticket related tables (e.g. trouble ticket posts) and attachments will be produced.

Privilege Terms

List all privilege terms in this section. You may want to include current and past law firms for your clients.

Lawyer Names:	David Steele, Howard Kroll, Steven E. Lauridsen, Bart Kessel
Law Firm Name:	Tucker Ellis LLP
Phone Numbers:	(213) 430-3360, (213) 430-3400
Email Addresses:	%@tuckerellis.com
Website:	*tuckerellis.com

Lawyer Names:	Perry J. Narancic,

Law Firm Name:	LexAnalytica, PC
Phone Numbers:	(650) 655-2800
Email Addresses:	*@lexanalytica.com
Website:	*lexanalytica.com

Method of Production

De-Duplication. Duplicate records will not be produced. Instead, the most recent instance of a record will be produced, and older duplicate records will be culled.

The information responsive to this Discovery Protocol shall be provided to <u>both</u> parties, contemporaneously.

Responsive and non-privileged items will be produced as follows:

- <u>Relational Database</u>: The responsive database records will be produced in a MySQL database including all responsive ticket-related tables.
- <u>Attachment Folder</u>: A folder with all responsive ticket attachments.
- The number of rows, columns, and records exceeds Excel worksheet/workbook capacity and therefore will not be provided.

Each party can import, or ingest, the native files, emails, and phone data into the litigation software of their choice.

Redaction

There will be no redactions of the responsive data.

Privilege

If privilege data is produced, the Defendants may claw back the information as described in the 'Claw Back Agreement" section below.

Claw Back Agreement

Both parties agree that any inadvertent production of any privileged information, or information that should not have been produced pursuant to this protocol, shall not result in the waiver of any associated privilege nor result in a subject matter waiver of any kind. If either party inadvertently receives privileged information, or information not subject to this protocol, the receiving party shall notify the producing party of the disclosure. The parties agree, however, that the disclosure of any particular information shall cease to be "inadvertent" if, 14 days after notification of the inadvertent disclosure the party does not request the return of the information.

If the producing party discovers their inadvertent production of any privileged information, or information not subject to this protocol, the producing party shall notify the

receiving party of the disclosure and request return of the information. The receiving party shall return the information within seven days.

Data Destruction

At the conclusion of the matter, the Howe Law Firm will forensically delete the discovery information.

Exhibit 43. Plaintiffs' Comments in Response to Draft Report

The parties were provided two draft copies of this Report. The parties received the first draft on June 9, 2021, and the second draft on July 7, 2021. Both parties had an opportunity to provide comments. Plaintiffs' comments were delivered on June 16, 2021, and are included below, without the referenced attachments.

Tom,

As we discussed yesterday, Plaintiffs would like your final report contain two additional items.

First, we believe it noteworthy to point out that Defendants' representations during discovery establish that they deleted at least one database backup. On page 8 of the Report, you state that Defendants stated that no backups of the support ticket database prior to December 16, 2020 were in existence. However, in a letter attempting to explain the issues that Defendants were having with the production of the support ticket database, Mr. Narancic stated that Defendants' November 27, 2020 MySQL database production to Plaintiffs was taken from a partial backup:

> *There was a mysql database version of the ticket system provided, which is referenced on page 5 of ECF 56 (the "Second Production"). That production, apparently, was not complete because it was taken from a partial backup.*

Assuming that this statement was true, Defendants' admissions establish a backup of the support ticket database existed prior to November 27, 2020 that Defendants deleted prior to your review. Mr. Narancic's letter, and the filing to which it was directed (ECF 56.04), are attached for you reference.

Second, we believe that it is important for you to identify for the Court the names of the individuals with whom you spoke as well as those individual from whom you obtained the information and materials referenced in your report. We believe this information will be helpful to the Court in subsequent proceedings.

Lastly, we attach a copy of CMC statement filed by the Parties yesterday. The Parties discuss the Report and issues related to the Report in the filing. Accordingly, we wanted you to be aware of this filing and to have an opportunity to review the comments before you file the final Report.

Thank you in advance for your consideration of both of these requests.

David Steele | Partner | Tucker Ellis LLP
515 South Flower Street | Forty-Second Floor| Los Angeles, CA 90071
Direct: 213-430-3360
david.steele@tuckerellis.com

Exhibit 44. Defendants' Comments in Response to Draft Report

The parties were provided two draft copies of this Report. The parties received the first draft on June 9, 2021, and the second draft on July 7, 2021. Both parties had an opportunity to provide comments. Defendants' comments were delivered on July 8, 2021 and are included below.

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LexAnalytica, PC
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WWW.LEXANALYTICA.COM
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E:// PJN@LEXANALYTICA.COM

July 8, 2021

Thomas Howe
Howe Law Firm
519 SW Park Avenue, Suite 418
Portland, OR 97205

Re: Facebook, Inc. v. OnlineNIC, Inc.
Case No. 19-cv-7071

Dear Mr. Howe,

The purpose of this letter is to seek your assistance in helping Defendants better understand the draft "Special Discovery Master's Data Destroyed or Withheld Report" that was delivered on July 6, 2021 (the "Draft Report"). For ease of reference, I present Defendants' questions and comments as enumerated below.

1. Defendants' Search Methodology.

It is not disputed that certain database records were deleted from the production Kayako Database after the complaint in this case was filed on October 28, 2019 (the "Complaint Date"). However, it is not clear that the Draft Report addressed Defendants' search methodology and the relevance of that methodology to investigating *when*, *how* and *why* the deletions were made.

As an initial matter, it is important to note that the Kayako support ticket database is a legacy product that is no longer supported. Over the course of years of operation, the database became unwieldy and stuffed with spam and voluminous, old support data - resulting in a very slow database which was difficult to search and manage. To help address these issues, Defendants regularly deleted huge amounts of spam that had been sent through the support system, including the email address that as designated for support. The spam included content with unreadable characters, which would further slow down the database. Thus, even before the Complaint Date, Defendants had the practice of deleting huge amounts of spam and old content from the Kayako Database.

As you know, Plaintiffs began propounding discovery in early 2020. In order to deliver responses to Plaintiffs' numerous discovery requests, which have been continuing throughout

this litigation, Defendants were conducting searches against their production Kayako Database. Defendants did not set up a parallel Kayako environment for conducting discovery due to the prohibitive cost, time and difficulty of doing so – particularly where the underlying Kayako software was no longer being supported.

In the course of preparing their discovery responses, Defendants had to increase database performance in order to execute queries efficiently. Consequently, Defendants created a temporary table for the purpose of replicating some records from the production database into a temporary location. This temporary table, called "temp_data" was created in March 2021, and is referenced at page 23 of the Draft Report. After the records were replicated, Defendants went back to optimize the production database by deleting some records. The records that were deleted from the production database included unreadable characters, or which otherwise caused inefficiency (the "Hang-up Records"). By replicating and deleting the Hang-up Records, Defendants were able to more efficiently conduct discovery searches in the production database. The screenshot below, taken from "temp_data", illustrates the problems with the Hang-up Records, including unreadable characters:

Given the foregoing, it is not surprising that there are differences between the first production of the Kayako Database on July 15, 2020 and subsequent productions. Moreover, when records were directly deleted in the Kayako Database (as opposed to using the Kayako Application interface), some so-called "orphan" records were created.

It is also important to note that when a ticket was deleted through the Kayako Application interface, all related records were automatically deleted as well. For example, if Ticket #123456 was deleted from the production database using the Kayako Application, all the posts associated with that ticket were automatically deleted as well. Thus, the huge numbers of files shown as having been deleted in the Draft Report are somewhat misleading because a single deletion command could result in the automatic deletion of many more records. The screenshot below shows the relevant scripts from the Kayako Application:

```
require_once ("./modules/tickets/functions_search.php");
emptyTicketPostIndex($ticketpostidlist, $text);

// Delete all data related to this ticket
$dbCore->query("DELETE FROM `". TABLE_PREFIX ."tickets` WHERE `ticketid` IN (". $strticketidlist .");");
$dbCore->query("DELETE FROM `". TABLE_PREFIX ."ticketpost` WHERE `ticketpostid` IN (". buildIN($
    ticketpostidlist) .");");
$dbCore->query("DELETE FROM `". TABLE_PREFIX ."auditlogs` WHERE `ticketid` IN (". $strticketidlist .");");
$dbCore->query("DELETE FROM `". TABLE_PREFIX ."ticketnotes` WHERE `typeid` IN (". $strticketidlist .") AND
    `notetype` = '". NOTE_TICKET ."';");
$dbCore->query("DELETE FROM `". TABLE_PREFIX ."tickettimetrack` WHERE `ticketid` IN (". $strticketidlist ."
    );");
$dbCore->query("DELETE FROM `". TABLE_PREFIX ."ticketmergelog` WHERE `ticketid` IN (". $strticketidlist .");
    ");
$dbCore->query("DELETE FROM `". TABLE_PREFIX ."ticketmessageids` WHERE `ticketid` IN (". $strticketidlist ."
    );");
$dbCore->query("DELETE FROM `". TABLE_PREFIX ."ticketlabellinks` WHERE `ticketid` IN (". $strticketidlist ."
    );");
```

2. Defendants' "Waterfall" Analysis

Defendants engaged an independent expert to help understand the Draft Report. This independent expert conducted a "waterfall" analysis of missing tickets, based on information provided by Defendants, as follows:

Table "swtickets" with support ticket data from July 1, 2015

A.	Starting "ticketid" value	1,514,466
B.	Ending "ticketid" value	1,678,903
C.	Total number of tickets created: *1+B-A*	164,438
D.	Number of tickets still present in the table	135,571
E.	Total number of missing tickets: *C-D*	28,866

Table "temp_data" created by Defendants

F.	Missing tickets from E found in "temp_data"	18,180
G.	Missing tickets from E **not found** in "temp_data": *E-F*	10,686

"swauditlogs" with data for tickets deleted through Kayako UI

H.	Missing tickets from G found in swauditlogs	9,508
I.	Missing tickets from G **not found** in swauditlogs: *G-H*	1,178

Table "swticketmergelog" with data for tickets merged via Kayako UI

  J. Missing tickets from I found in swticketmergelog   1134
  K. Missing tickets from I **not found** in swticketmergelog: *I-J* 44

For the 44 tickets that are missing, Defendants' technical team was able to discover the estimated creation dates of those tickets as shown below in a ranked order.

- 12 tickets were created in 2019 (between March 31 & November 15):
- 9 tickets were created in 2018 (between August 17 & August 18)
- 8 tickets were created in 2015 (between September 9 & November 12)
- 8 tickets were created in 2020 (between February 12 & August 11)
- 3 tickets were created in 2017 (on May 16)
- 3 tickets were created in 2021 (on January 7)
- 1 ticket was created in 2016 (on February 24)

Defendant's technical team has some hypothesis about why these 44 tickets have disappeared and believe that this could be due to the poor implementation of Kayako database transaction processing. After looking at the Kayako software code, Defendants' technical team determined that these steps are taken when a ticket is selected for deletion through the Kayako user interface:

  a. The ticket ID for the selected ticket is determined and the record corresponding to that ticket ID is deleted in "swtickets" table
  b. All other records for posts, attachments, etc. associated with the deleted ticket ID are identified in various tables, e.g., "swticketposts" and "swattachments", and also deleted
  c. A record about the deletion of specific ticket ID is inserted into "swauditlogs" table and earlier log records associated with the deleted ticket ID are removed from "swauditlogs" table

Defendants think that in some rare cases the necessary deletion log record may not have been written into the "swauditlogs" table because of potential technical glitches in the system. Such glitches could be due to several concurrent deletion requests getting submitted to the system and the "swauditlogs" table getting locked by a single request, thus preventing other requests from writing into this table. If the Kayako transaction processing code was correctly implemented, failure to write the log data into "swauditlogs" table would force the system to roll back earlier changes in other tables and therefore the ticket ID would remain in the "swtickets" table.

3. **Deleted audit logs.**

Can you kindly describe which audit logs were deleted, as stated at page 21 of the Draft Report, or the methodology used to arrive at this conclusion. Was the conclusion that audit logs were deleted based on a "gap" analysis? In any event, it appears that, when a ticket is deleted, the out-of-the-box Kayako Application deletes all log records except for the last deletion record for that ticket. Therefore, a deletion of *any* ticket would automatically cause a gap in the audit logs.

4.   Back-ups

The Draft Report, at page 19, states that Defendants hid back up files. However, it appears from creation dates in the screenshots below that the referenced files were actually created specifically for the Special Master – and that they were not regularly-generated "back-ups":

5.   Use of PHP and SQL Deletion Scripts

The Draft Report concludes that Defendants used PHP and SQL deletion scripts to delete records (p. 28). However, Defendants' expert was not able to verify that any of the 28 PHP scripts contained any deletion language. See command "findstr del *.*" result below:

Moreover, these scripts were all created specifically for the purpose of responding to discovery in this case, as shown in the below creation dates:

名称	创建日期
zenghy_sql_statement.txt	2021/3/25 18:04
zenghy_evgeny.rekling_tickets.php	2020/10/21 10:18
zenghy_tuananh1080_tickets.php	2020/5/13 16:09
zenghy_tickets_20201009.php	2020/10/9 10:12
zenghy_yamakuqi_tickets.php	2020/5/12 15:41
zenghy_2017_until_now_tickets.php	2020/5/12 15:21
zenghy_attachment_copy_file.php	2020/9/13 16:18
zenghy_all_domain_tickets.php	2020/7/3 16:58
zenghy_all_domain_tickets - v1.php	2020/7/3 16:58
zenghy_xKVRYEH.hfndY_tickets.php	2020/6/12 21:58
zenghy_2017_until_now_keyword_tickets1.php	2020/6/12 21:59
zenghy_2017_until_now_keyword_tickets2.php	2020/6/12 21:58
zenghy_2017_until_now_keyword_tickets6.php	2020/6/12 21:59
zenghy_2017_until_now_keyword_tickets7.php	2020/6/12 21:58
zenghy_tenmiendaduocdangky_tickets.php	2020/6/20 15:32
zenghy_2017_until_now_keyword_tickets5.php	2020/6/12 21:58
zenghy_2017_until_now_keyword_tickets4.php	2020/6/12 21:58
zenghy_2017_until_now_keyword_tickets3.php	2020/6/12 17:51
zenghy_2017_until_now_complaints@onlinenic.com_tickets.php	2020/6/12 15:32
zenghy_2017_until_now_abuse@onlinenic.com_tickets.php	2020/6/12 15:27
zenghy_admin_tickets.php	2020/5/13 16:10
zenghy_zvedenyuk.eugene_tickets.php	2020/5/13 16:11
zenghy_domain_tickets.php	2020/5/13 16:10
zenghy_clippoo18.xxx_tickets.php	2020/5/13 16:07
zenghy_yamaguchi.takashi8_tickets.php	2020/5/13 16:12
zenghy_jenryhas_tickets.php	2020/5/13 16:04
get_domain.php	2020/1/28 15:45
get_post_info.php	2020/1/28 15:45

Likewise, the SQL deletion "script" referenced in the Draft Report was merely a summary of steps taken by Defendants' database operator in executing commands (through a database client application) to respond to discovery- which employed the following steps:

a. Defendants' technician first imported an original ticket database into the database on server 173.255.221.136.

b. Defendants used the search terms provided by Plaintiffs to search table swtickets, find the relevant ticketid, and then record the ticketid.

c. Defendants used the ticketid to find its associating ticketmaskid, oldticketmaskid, ticketpostid.

d. Defendants then deleted ticket records that were not associated with ticketid, ticketmaskid, oldticketmaskid, ticketpostid generated in above 2 and 3.

e. The data after deletion was the responsive data that was shared with Plaintiffs.

6.   Date Ranges

The Draft Report references certain PHP scripts as evidence that defendants only performed a search of some records from 2017, instead of 2015 (See p. 30). During the discovery process, Defendants wrote numerous scripts for various purposes. However, the only relevant inquiry is what was *actually* produced. Therefore, can you please state whether the records that were actually produced went back to 2015, or not.

Conclusion.

Due to time and budget constraints, the above comments and questions are not complete or final. But it would be greatly appreciated if you could respond to them, or at least address them in the final report.

Yours very truly,

LEXANALYTICA, P.C.

By: Perry J. Narancic