Relational Table design

CSV Format for each datalog file:

Dataload:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Log ID | Tail ID | Dataload Target | Software Part Number | Dataload Protocol | Features | Episode Start Date |

Firewall:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Log ID | Tail ID | Source IP Address | Destination IP Address | PROTO | SPT | DPT | Features | Episode Start Date |

Staging:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Log ID | Tail ID | Software Crate Number | Software Part Number | Features | Episode Start Date |

Features table:

This table will store information about each feature that was included in an episode.

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Description |
| feature id | int | Primary key for the table （auto-incrementing） |
| episode\_id | int | Foreign key referencing the Episodes table |
| feature name | varchar（10） | The name of the feature included in the episode |

make the feature\_id column auto-incrementing

feature\_id int PRIMARY KEY AUTO\_INCREMENT,

Airplanes table:

This table will store information about each airplane, including the tail number and

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Description |
| airplane\_id | int | Primary key for the table |
| tail\_number | varchar（10） | Unique identifier for the airplane |
| episode\_start\_date | datetime | The start date and time for the episode |

Episodes table:

This table will store information about each episode, including the start and end times.

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Description |
| episode\_id | int | Primary key for the table |
| airplane\_id | int | Foreign key referencing the Airplanes table |
| dataload\_target\_id | int | Foreign key referencing the Dataload table |
| software\_id | int | Foreign key referencing the Software table |
| firewall\_id | int | Foreign key referencing the Firewall table |

Software table:

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Description |
| software\_id | int | Primary key for the table |
| software\_crate\_number | varchar(20) | The software crate number for the episode |
| software\_part\_number | varchar(20) | The software part number for the episode |

Dataload table:

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Description |
| dataload\_id | int | Primary key for the table |
| dataload\_target | varchar(20) | The dataload target for the episode |
| dataload\_protocol | varchar(10) | The dataload protocol for the episode |

Firewall table:

|  |  |  |
| --- | --- | --- |
| Column Name | Data Type | Description |
| firewall\_id | int | Primary key for the table |
| source\_ip\_address | varchar(15) | The source IP address for the episode |
| destination\_ip\_address | varchar(15) | The destination IP address for the episode |
| proto | varchar(10) | The protocol for the episode |
| spt | int | The source port for the episode |
| dpt | int | The destination port for the episode |