## Blue Team Level 1 Certification (Standard) TI3) Operational Threat Intelligence 7 Topics | 1 Quiz TI4) Tactical Threat Intelligence 7 Topics | 1 Quiz TI5) Strategic Threat Intelligence 5 Topics | 1 Quiz TI6) Malware and Global Campaigns 6 Topics | 1 Quiz **DIGITAL FORENSICS DOMAIN** DF1) Introduction to Digital Forensics 5 Topics O DF2) Forensics Fundamentals ■ 10 Topics | 5 Ouizzes DF3) Digital Evidence Collection 8 Topics | 1 Quiz DF4) Windows Investigations ■ 3 Topics | 3 Ouizzes O DF5) Linux Investigations 4 Topics | 2 Quizzes DF6) Volatility 3 Topics | 1 Quiz O DF7) Autopsy 4 Topics | 1 Quiz SECURITY INFORMATION AND EVENT MANAGEMENT DOMAIN SI1) Introduction to SIEM 7 Topics | 1 Quiz SI2) Logging 6 Topics 2 Quizzes O SI3) Aggregation 2 Topics | 1 Quiz O Section Introduction, Aggregation O Log Aggregation Explained Activity) End of Section Review, Aggregation SI4) Correlation 6 Topics | 1 Quiz SI5) Using Splunk 5 Topics | 2 Quizzes INCIDENT RESPONSE DOMAIN IR1) Introduction to Incident Response 8 Topics | 1 Quiz IR2) Preparation Phase ■ 10 Topics | 2 Quizzes IR3) Detection and Analysis Phase 7 Topics 4 Ouizzes IR4) Containment, Eradication, and Recovery 5 Topics | 1 Quiz IR5) Lessons Learned and Reporting 7 Topics

○ IR6) MITRE ATT&CK

# Log Aggregation Explained

Blue Team Level 1 Certification (Standard) > SI3) Aggregation > Log Aggregation Explained

IN PROGRESS



Log aggregation is the process of collecting logs from multiple computing systems, parsing them, extracting structured data, and putting them together in a format that is easily searchable and explorable by modern data tools

There are four common ways to aggregate logs, and many log aggregation systems combine multiple methods.

These include:

### **Syslog**

A standard logging protocol. Network administrators can set up a Syslog server that receives logs from
multiple systems, storing them in an efficient, condensed format which is easily queryable. Log aggregators
can directly read and process Syslog data.

#### **Event Streaming**

Protocols like SNMP, Netflow and IPFIX allow network devices to provide standard information about their
operations, which can be intercepted by the log aggregator, parsed and added to central log storage.

#### Log Collectors

 Software agents that run on network devices, capture log information, parse it and send it to a centralized aggregator component for storage and analysis.

#### **Direct Access**

Log aggregators can directly access network devices or computing systems, using an API or network protocol
to directly receive logs. This approach requires custom integration for each data source.

#### **DATA TYPES**

When considering the data that is being pulled into a SIEM platform, there are two categories; Structured data, and Unstructured data.

- Structured data: These are usually logs for Apache, IIS, Windows events, Cisco logs, and some other
  manufacturers. They have clearly-defined fields (such as "src\_ip") and are similar to other structured logs,
  making them relatively easy to parse and normalize.
- Unstructured data: This type of logging typically comes from a custom-built application where each message
  can be printed differently in different operations and the event itself can span multiple lines with no defined
  event start point, or event end point, or both. This is likely to be the majority of the data being sent to the
  SIEM.

In order to get all logs to follow a similar format to make it easier to perform searches across a large set of different logs, where possible, we can use normalization techniques, which we will cover in the next section of this domain.



< Previous Topic



