AWS Cloud GuardDuty

Topics : AWS
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AWS GuardDuty is a managed threat detection service that continuously monitors for malicious or unauthorized activity in your AWS environment. It helps you protect your AWS accounts, workloads, and data by identifying security threats such as unusual behavior, compromised instances, and potential vulnerabilities.

1. **Continuous Monitoring:**
    - GuardDuty performs continuous monitoring of your AWS environment by analyzing events, logs, and network traffic. It uses machine learning, anomaly detection, and threat intelligence to identify potential security issues.
2. **Integrated with AWS CloudTrail, VPC Flow Logs, and DNS Logs:**
    - GuardDuty analyzes data from AWS CloudTrail for management events, Virtual Private Cloud (VPC) Flow Logs for network traffic, and DNS logs to identify potential security threats across multiple dimensions.
3. **Threat Intelligence Feeds:**
    - GuardDuty leverages threat intelligence feeds from various sources to detect known malicious IP addresses, domains, and other indicators of compromise. This helps in identifying and blocking threats based on external intelligence.
4. **Unusual API Activity Detection:**
    - GuardDuty identifies unusual or unexpected API activity in your AWS environment, such as changes to security groups, creation of new IAM users, or modification of key settings. This helps detect potentially malicious actions.
5. **Compromised Instance Detection:**
    - GuardDuty uses machine learning algorithms to identify compromised EC2 instances by analyzing their behavior, communication patterns, and deviations from normal activity. This can help detect instances that may be part of a botnet or used for unauthorized purposes.
6. **Behavioral Anomalies:**
    - GuardDuty detects behavioral anomalies by analyzing patterns of activity within your environment. This includes deviations from baseline behavior, which may indicate

potential security threats.

7. **Severity Levels and Findings:**
    - GuardDuty assigns severity levels to findings based on the perceived risk. Findings are detailed security alerts that provide information about the detected threat or suspicious activity, along with recommended actions for remediation.
8. **Integration with CloudWatch Events and Lambda:**
    - GuardDuty integrates with AWS CloudWatch Events, allowing you to automate responses to security findings. You can create CloudWatch Events rules to trigger AWS Lambda functions or other actions based on GuardDuty findings.
9. **Cross-Account Monitoring:**
    - GuardDuty supports cross-account monitoring, allowing you to monitor multiple AWS accounts from a central GuardDuty account. This is useful for organizations with a multi-account architecture.
10. **Integration with AWS Security Hub:**
    - GuardDuty findings can be sent to AWS Security Hub, providing a centralized view of security alerts and compliance status. This integration facilitates better management and analysis of security information.
11. **Managed Threat Detection:**
    - GuardDuty is a fully managed service, eliminating the need for you to deploy and manage your own threat detection infrastructure. AWS takes care of the backend operations, ensuring the service is always up to date.