**Question 2:-How does Azure Monitor help in proactive maintenance of applications and resources?**

**Answer:-**

Azure Monitor is a comprehensive monitoring service provided by Microsoft Azure that helps you maximize the availability and performance of your applications and services.Azure Monitor provides comprehensive monitoring and diagnostic capabilities it helps in proactive maintenance of applications and resources.

Here are some ways to facilitate proactive maintaince:-

1. Comprehensive Data Collection**:** Azure Monitor collects data from a variety of sources, including applications, operating systems, and Azure resources. This includes metrics, logs, and performance data, providing a holistic view of the health and performance of your infrastructure.
2. Real-time Alerts and Notifications: Azure Monitor can be configured to send real-time alerts and notifications based on specific conditions or thresholds. This helps in identifying and addressing issues before they impact users. Alerts can be sent via email, SMS, or integrated with other systems like IT service management tools.
3. Advanced Analytics: With Azure Monitor, you can leverage advanced analytics to identify patterns and trends in your data. This includes the use of Kusto Query Language (KQL) to query logs and gain insights into potential issues. By analyzing historical data, you can predict and prevent future problems.
4. Visualization with Dashboards: Azure Monitor provides customizable dashboards that offer a visual representation of the health and performance of your applications and resources. These dashboards can display real-time data and trends, making it easier to identify anomalies and areas that require attention.
5. Application Insights: Part of Azure Monitor, Application Insights is specifically designed for monitoring live applications. It provides detailed telemetry data, such as request rates, response times, and failure rates, helping you to understand how your application is performing and where improvements are needed.
6. Log Analytics: Azure Monitor integrates with Log Analytics, allowing you to aggregate and analyze log data from multiple sources. This helps in diagnosing issues, understanding operational patterns, and performing root cause analysis.
7. Automation and Remediation: Azure Monitor can trigger automated workflows using Azure Logic Apps or Azure Automation. This allows for automatic remediation of detected issues, such as restarting services, scaling resources, or executing custom scripts to resolve problems without manual intervention.
8. Integration with DevOps Tools: Azure Monitor integrates with DevOps tools like Azure DevOps and GitHub, enabling continuous monitoring and feedback throughout the development lifecycle. This helps in identifying and addressing issues early in the development process, ensuring higher quality and reliability of applications.
9. Resource Health Monitoring: Azure Monitor tracks the health of Azure resources and provides insights into their performance. This includes monitoring virtual machines, databases, and other services, helping to identify potential issues and optimize resource usage.
10. Service Map: Azure Monitor’s Service Map feature visualizes the dependencies between services and their interactions. This helps in understanding the impact of issues on interconnected components and in pinpointing the root cause of problems more efficiently.

