Xebia

Semester **08**

B.TECH CSE with Specialization in DevOps

# Monitoring

Module # 03

## Infrastructure Monitoring

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9. 1.3.3 What Needs to be Monitored

Module 3: Infrastructure Monitoring

# Module Objective

At the end of this module, you will be able to:

- Explain what is infrastructure monitoring
- Identify the components of monitoring and the metrics
- Differentiate the agent vs. agentless monitoring, reactive vs. proactive monitoring and cloud vs. on-premise monitoring
- Explain network and security aspects of monitoring
- List the challenges in infrastructure monitoring
- List the available tools for infrastructure monitoring

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# What did You Grasp?

Monitoring of hardware systems is known as .....

A) **End user monitoring**
B) **Infrastructure Monitoring**
C) **Application monitoring**
D) **Log Monitoring**

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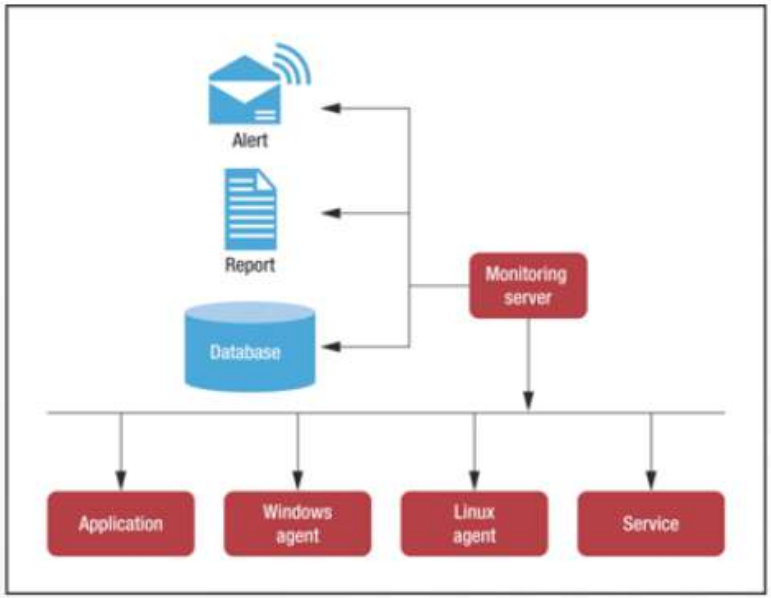
**Module 3:** Infrastructure Monitoring

# 1.4 Monitoring Components and Metrics

The components of monitoring are stages via which the information traverse.




*Source: https://csdl-images.computer.org/mags/so/2015/04/figures/mso20150400881.gif*

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11. 1.4 Monitoring Components and Metrics

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# 1.4.1 Monitoring Components

Various monitoring components are:

- Program details
- Data collection plan
- Monitoring plan
- Evaluation plan
- How the plan will be used

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11. 1.4 Monitoring Components and Metrics

12. 1.4.1 Monitoring Components

13. 1.4.2 Metrics

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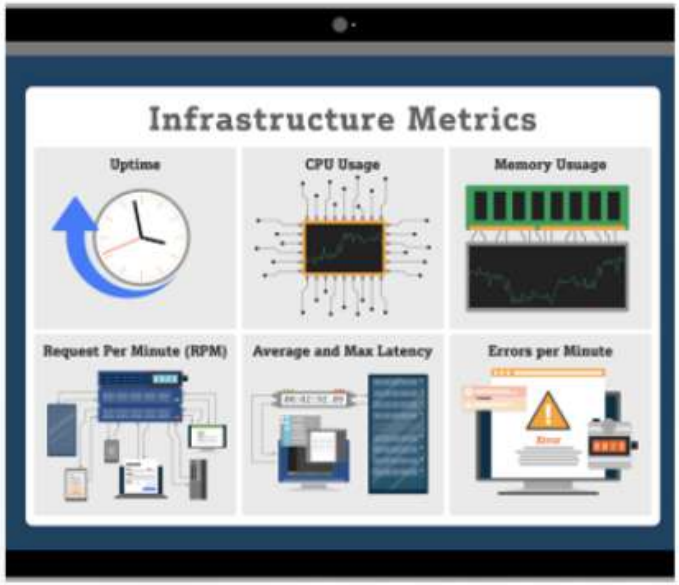
# 1.4.2 Metrics

The data points, which are collected from the source for monitoring.




*Source: https://www.apiscene.io/wp-content/uploads/2020/06/infrastructure-metrics-apiscene.png*

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# What did You Grasp?

What is the name of data point which is collected by monitoring system?

A. **Time series database**
B. **Metrics**
C. **Aggregator/filter**
D. **Alerting system**

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13. 1.4.2 Metrics

14. What did You Grasp?

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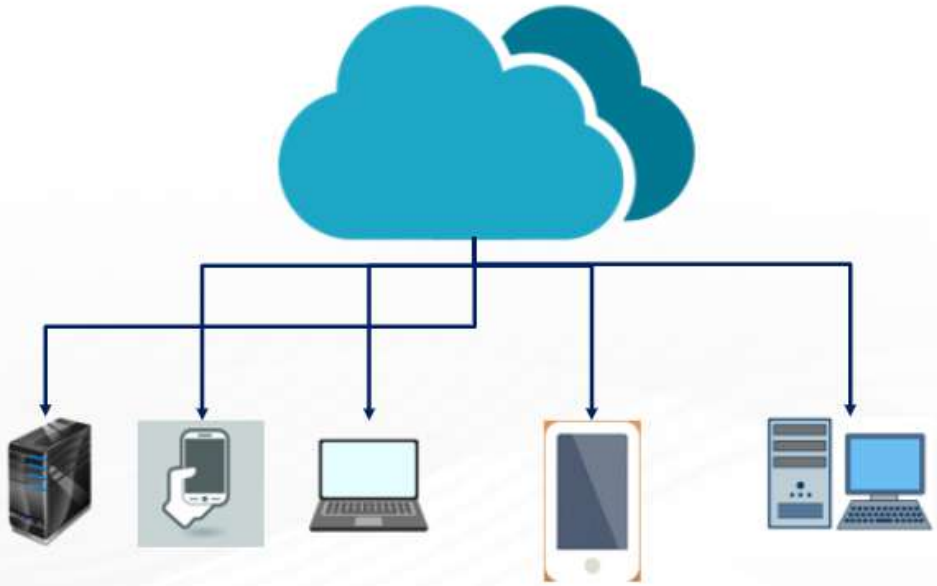
# 1.5 Agent vs Agentless Monitoring

There are two ways of collecting data for monitoring:

- Agent based
- Agent less



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14. What did You Grasp?

15. 1.5 Agent vs Agentless Monitoring

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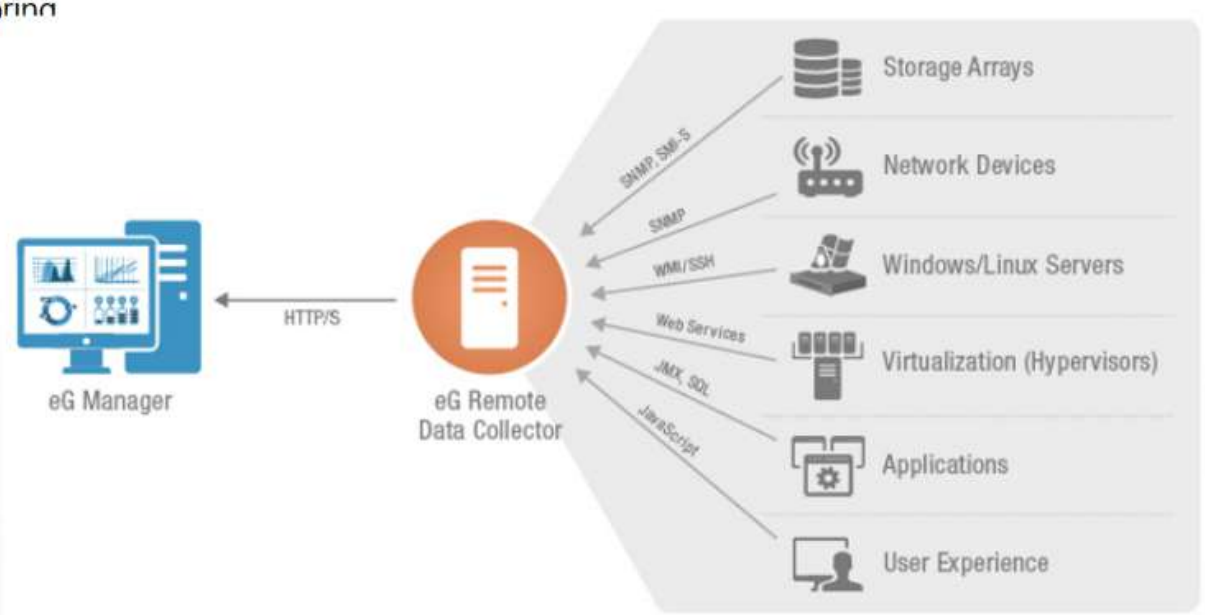
# 1.5.1 Agentless Monitoring

The approach, where data is collected from outside system. The following image represents the agentless monitoring




*Source: https://www.eginnovations.com/images/eg-enterprise-agentless-monitoring.jpg*

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16. 1.5.1 Agentless Monitoring
17. 1.5.2 Agent based

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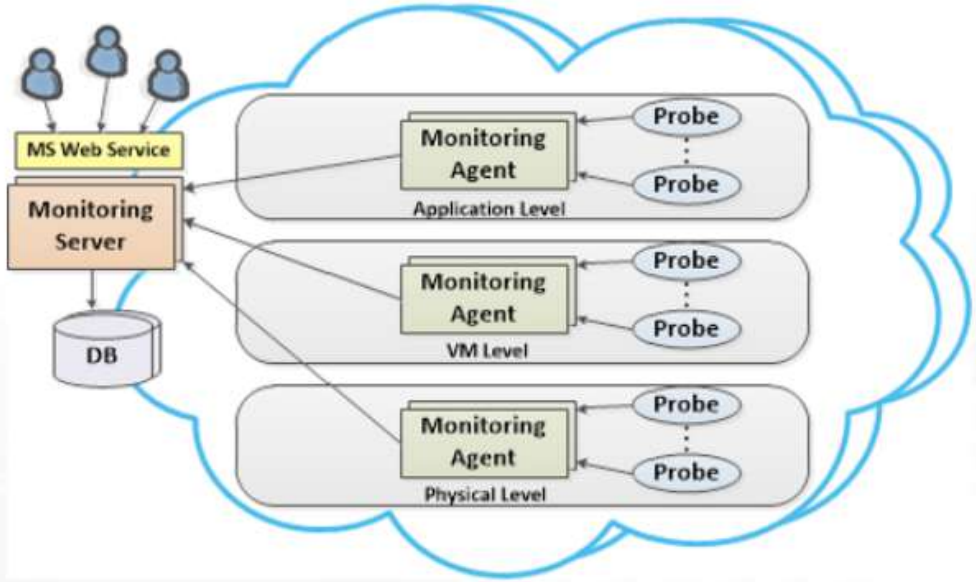
# 1.5.2 Agent based Monitoring

The approach, where data is collected from inside system. The following image represents the agent based monitoring.




*Source: https://www.researchgate.net/profile/Marios_Dikaiakos/publication/271428939/figure/fig1/AS:295242642280453@1447402739442/Abstract-Architecture-View-monitoring-metrics-from-the-Cloud-element-they-reside-on-and.png*

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# What did You Grasp?

Which monitoring uses embedded programs in platform to fetch metrics of a system?

A. **Proactive monitoring**
B. **Agentless Monitoring**
C. **Agent based monitoring**
D. **Reactive Monitoring**

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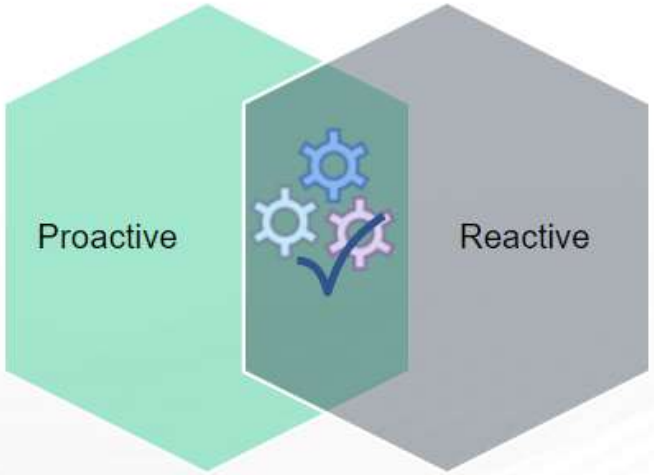
# 1.6 Reactive vs Proactive Monitoring

This segregation is based on how we respond to an event triggered by monitoring

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19. 1.6 Reactive vs Proactive Monitoring

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# What did You Grasp?

In which monitoring The problems are eliminated before they occur?

A. **Proactive monitoring**
B. **Agentless Monitoring**
C. **Agent based monitoring**
D. **Reactive Monitoring**

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# 1.7 Cloud vs On-Premise

The following image illustrates the difference between cloud vs on-premise monitoring.

*Source: https://cdn2.hubspot.net/hubfs/2295024/blog-images/Cloud%20Vs%20On%20Premises.jpg*

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21. 1.7 Cloud vs On-Premise

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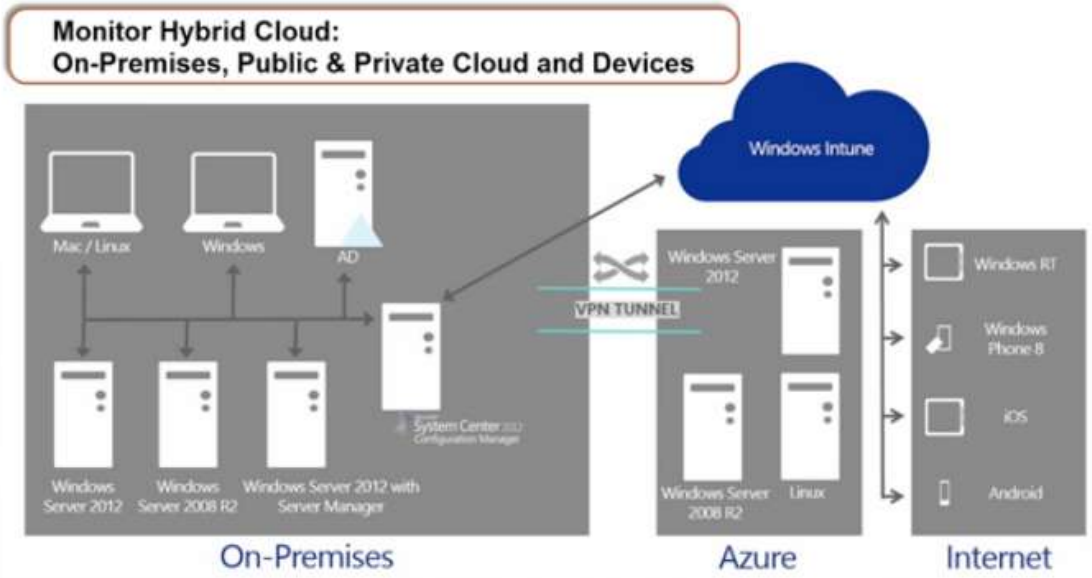
# 1.7.1 Monitoring in Cloud vs On-Premise

In this part we'll discuss how monitoring is done in cloud and on-prem infrastructure.




Source: https://itproguru.com/wp-content/uploads/2014/09/image.png

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# What did You Grasp?

Which monitoring suite offers a SAAS based solution?

**A) Cloud Monitoring**
**B) On-Prem Monitoring**
**C) Hybrid Monitoring**
**D) Pay as per usage model**

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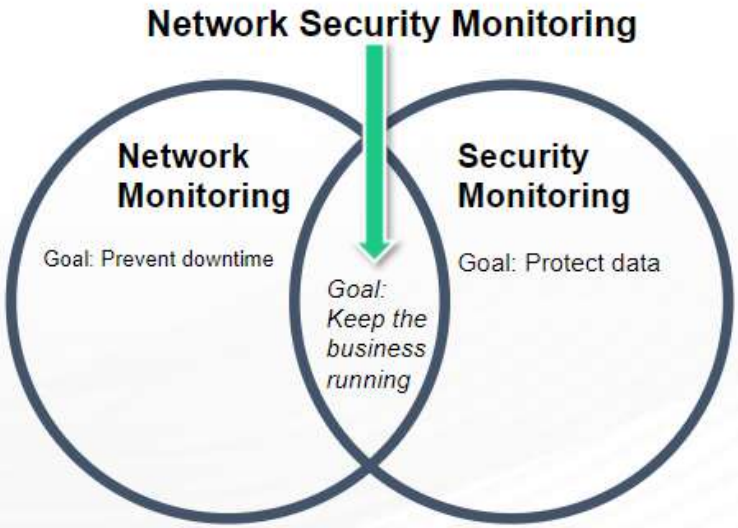
# 1.8 Network and Security Monitoring

In this segment, we'll discuss how to keep check of network health and security.

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# What did You Grasp?

Which monitoring looks after the encrypted session ?

A. **Network monitoring**
B. **Security Monitoring**
C. **Application monitoring**
D. **Log Monitoring**

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23. What did You Grasp?

24. 1.8 Network and Security Monitoring

25. What did You Grasp?

Module 3: Infrastructure Monitoring

# 1.9 Infrastructure Monitoring Challenges

The following are the challenges in infrastructure monitoring:

- Create modern monitoring for modern environments
- Develop customised dashboards and visualisations
- Instil a culture of visibility
- Achieve greater efficiency and scale

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22. 1.7.1 Monitoring in Cloud vs On-Premise

23. What did You Grasp?

24. 1.8 Network and Security Monitoring

25. What did You Grasp?

26. 1.9 Infrastructure Monitoring Challenges

**Module 3:** Infrastructure Monitoring

# What did You Grasp?

Which stage is the end point of the Infrastructure monitoring?

**A) Collecting metrics**
**B) Processing/aggregating data**
**C) Storing data**
**D) Visualising data**

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