GWDG
AG Computing
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Exercise 1 / Feburary 21st, 2023
HPC System Administration / WiSe 2022/23
0 Minutes Total

Exercise Introduction

Contents

Task 1: Security concerns of an FTP server (0 min)

In the original FTP model, security measures were not included. As a result, there are many significant security problems. Here are two websites you will some vulnerabilities and solutions.

- FTP Security Best Practices – FTP Vulnerabilities and Mitigation

- Three significant risks of FTP use and how to overcome them

Task 2: Service catalog for Performance Data Dashboards and Security (0 min)

You have installed the TIG stack from the monitoring tutorial. Now you want to provide this as Service "Performance Data Dashboards" to the HPC customers and engineers.

1. Multiple service have to be installed to get the TIG stack running - one has to create at least 3 entries in the service catalogue to cover them all

   - name Performance Data Dashboards

   - uuid 2984379871

   - reference-id - 123

   - acronym for the kind of service service_pdd

   - references/dependencies to others

     – service_influxd

     – service_telegraf_hpc

     – service_cloudvm

   - service-type

     – service

   - technical description

     – description: Grafana dashboard for user and engineers

     – product used: Grafana

- version: 9.3.6
- server name: frontend
- ports used: 8000
- installation procedure: link
- License: commercial
  - License required: yes
  - type: Grafana enterprise
  - responsible: your name
  - contact: your name
- assets: n/a.
- target service scope audience
  - intern (GWDG)
  - extern (customers)
- lifecycle-status: testing
- first release date: 21.02.2023
- last modified/updated: 21.02.2023
- responsibilities
  - resp. group: Network team
  - executive group: network team
  - supporting group: Infrastructur Group, hpc Group
  - service owner: best admin
  - service manager: nice manager
  - resp. team: webservice team
  - internal deputy: nice guy
  - service-Co-Owner: na
  - contact person (other it services): na
- Customers / Users / Usergroups: hpcusers, admins
- service-Window: 24/7/365
- maintenance window: thursday 17:00-19:00 (Berlin)
- short description of Service: Dashboards for HPC performance visualization
- login categories: group hpcusers
- login process SSO/SAML
- Scopes
  - GDPR

- ISO27001

- name InfluxDB

- uuid 2989827435

- reference-id - 122

- acronym for the kind of service service_influx

- references/dependencies to others
  - service_cloudvm
  - service_hpc_telegraf (actually no, works without it)

- service-type
  - service

- technical description
  - description: Influx TSDG for collecting data form devices/nodes
  - product used: InfluxDB
  - version: 2.6.11
  - server name: frontend
  - ports used: 8009
  - installation procedure: link

- License: OSS
  - License required: no

- assets: n/a.

- target service scope audience

- lifecycle-status: testing

- first release date: 21.02.2023

- last modified/updated: 21.02.2023

- responsibilities
  - resp. group: Network team
  - executive group: network team
  - supporting group: Infrastructur Group
  - service owner: best admin
  - service manager: nice manager
  - resp. team: webservice team
  - internal deputy: nice guy
  - service-Co-Owner: na
  - contact person (other it services): na

- Customers / Users / Usergroups: na

- service-Window: 24/7/365

- maintenance window: thursday 17:00-19:00 (Berlin)

- short description of Service: database to collect and store metric

- login categories: na

- login process

- Scopes

  - ISO27001

- name HPC telegraf

- uuid 298941125

- reference-id - 124

- acronym for the kind of service service_telegraf_hpc

- references/dependencies to others

  - service_hpc

  - service_influx (need to send data there)

- service-type

  - service

- technical description

  - description: Telegraf agents to collect node statistics

  - product used: Influx Telegraf

  - version: 2.6.11

  - server name: nodes

  - ports used: 8009

  - installation procedure: link

- License: OSS

  - License required: no

- assets: n/a.

- target service scope audience

- lifecycle-status: testing

- first release date: 21.02.2023

- last modified/updated: 21.02.2023

- responsibilities

  - resp. group: hpc team

  - executive group: hpc team

- supporting group: na

- service owner: hpc admin

- service manager: hpc admin

- resp. team: hpc admin team

- internal deputy: nice guy

- service-Co-Owner: na

- contact person (other it services): na

- Customers / Users / Usergroups: na

- service-Window: 24/7/365

- maintenance window: na

- short description of Service: node agents to collect and send metrics

- login categories: na

- login process

- Scopes

    - na

2. - InfluxDB user token is used to write from Grafana

   - Setting up only one user in InfluxDB can pose security risks to the system, especially if that user has administrator rights. This is because there could be severe repercussions if the user's credentials are stolen or if they intentionally or mistakenly harm the system. As a consequence, there is no way to restrict access to the database based on roles or permissions. Moreover, if the single user account has administrative privileges and its credentials are compromised, an attacker can gain full control of the database, which will allow him to modify or delete data.

   - Limitation of the open-source version of Grafana: no granular data source permission settings, which means that all users who have access to a data source can see all the data available in that data source. The enterprise version of Grafana offers more advanced permission settings that allow administrators to set granular access control for data sources.

   - Grafana is not secured, and it can be protected using an ssh tunnel, or a reverse proxy.