



مجلس الأمن السيبراني
CYBER SECURITY COUNCIL



Critical Vulnerability in Apache ZooKeeper

Tracking #:432316490

Date:08-11-2024

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EXECUTIVE SUMMARY:

The UAE Cyber Security Council has observed a critical vulnerability in Apache ZooKeeper's Admin Server component, which could be exploited to gain unauthorized access to vulnerable systems.

TECHNICAL DETAILS:

A critical security vulnerability (CVE-2024-51504) exists in Apache ZooKeeper's Admin Server component. This flaw allows potential attackers to bypass authentication through IP spoofing, posing a significant risk to the integrity and security of ZooKeeper deployments.

Vulnerability Details:

- **CVE-2024-51504**
- CVSS Score 9.1 **Critical**
- The vulnerability stems from a weakness in the IPAuthenticationProvider used by ZooKeeper's Admin Server. The default configuration relies on the X-Forwarded-For HTTP header to determine the client's IP address, which can be easily spoofed by attackers. This flaw in the IP-based authentication mechanism potentially allows unauthorized access to critical Admin Server commands.
- Successful exploitation of this vulnerability could lead to unauthorized access to Admin Server commands, execution of critical operations like snapshot and restore, potential information leakage, disruption of service availability, and compromise of ZooKeeper's integrity in distributed applications.

Affected Versions:

- Apache ZooKeeper versions prior to 3.9.3,

Fixed Versions:

- Apache ZooKeeper version 3.9.3 or later

RECOMMENDATIONS:

The UAE Cyber Security Council recommends to upgrade the affected versions to the fixed versions at the earliest.

Kindly circulate this information to your subsidiaries and partners as well as share with us any relevant information and findings.

The UAE Cyber Security Council extends its appreciation for the continued collaboration.

REFERENCES:

- <https://zookeeper.apache.org/releases.html>
- <https://lists.apache.org/thread/nh6wzylzy5m5p3xzj57g56o5mk4mmwpv>