

- investment in training, equipping testing centers;
- development of the scientific base: stimulation of research on combat diagnostics, survivability, counteraction to CEW, autonomy, etc.;
- introduction of combat experience into testing methodology;
- expansion of combat testing initiatives, in particular through Brave1, international partners.

The combination of scientific research, regulatory and methodological support and combat experience is becoming critically important in modern conditions. Ukraine has a unique research and testing potential, which can become the foundation for reforming the system of testing and certification of munitions.

APPROACH TO EFFECTIVE MANAGEMENT OF HTTP REQUEST FILTERS IN SIDECAR COMPONENTS

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The rapid development of microservice architectures and cloud technologies is driving private companies to transition to multi-tenant systems, which allow them to simultaneously serve multiple isolated groups of users or customers (tenants). This transition contributes to a significant reduction in infrastructure costs, increased resource efficiency, and improved system scalability.

However, the implementation of multi-tenant architectures creates a number of technical challenges related to data isolation between tenants, query processing performance, and the stability of system components in high-load environments. Sidecar components play an important role in the functioning of microservice architecture, ensuring modularity, centralization, and flexibility of the system. One of the key aspects of sidecar operation is the use of mechanisms for processing incoming HTTP requests through a set of filters. Filters allow you to perform tasks such as data validation, access control, header modification, routing, and statistical evaluation of requests. Thanks to their use, it is possible to centralize important business logic at the sidecar level, eliminating the duplication of functional components in microservices.

However, the high volume of parallel requests and the specifics of multi-

tenant environments create difficulties in processing data streams in systems with sidecar components. Lack of filter optimization can lead to delays in request processing, overload of key system components, and potential errors in inter-tenant interaction.

An approach to effective management of HTTP request filters in sidecar components is proposed based on the following developments: mathematical models of filter operation, which allow estimating the time required to process requests and the interrelationships between filters; dynamic data caching mechanisms to optimize the performance of filters, which reduce the number of calls to external systems (authorization servers); data isolation strategies between tenants, integrated into the filter process, which minimize the risk of accidental access to other clients' data.

IMPROVED METHODOLOGY FOR EVALUATING THE SURVIVAL OF ANTI-AIRCRAFT WEAPONS

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The survivability of air defense systems is characterized by the system's ability to maintain (quickly restore) its combat capability when the enemy uses various means of destruction. The survivability coefficient can be used as an indicator of the degree of combat capability preservation of an anti-aircraft unit.

However, in order to effectively counter small enemy unmanned aerial vehicles (UAVs), it is necessary to create a targeted countermeasure system that includes both an “active” component (engaging UAVs with fire on the ground and in the air) and a “passive” (non-fire) component.

Thus, improving the methodology for assessing the survivability of anti-aircraft weapons is a pressing scientific task.

The report analyzes known methods for ensuring the survivability of anti-aircraft weapons, as well as their advantages and disadvantages.

It has been determined that such methods focus primarily on determining the enemy's capabilities to detect weapon systems using reconnaissance and direct fire strikes. However, these methods do not sufficiently take into account