

# Key Management Infrastructure (KMI)

The National Security Agency (NSA) Senior Acquisition Executive approved the Key Management Infrastructure (KMI) Increment 3 Milestone B in November 2020. The NSA awarded the KMI Increment 3 development contract in January 2021. The Joint Interoperability Test Command (JITC) intends to conduct early KMI Increment 3 release testing scheduled in late 2022.



## System Description

KMI replaces the legacy Electronic Key Management System (EKMS) to provide a means for securely ordering, generating, producing, distributing, managing, and auditing cryptographic products, to include encryption keys, cryptographic applications, and account management tools. KMI consists of core nodes that provide web operations at sites operated by the NSA, as well as individual client nodes distributed globally, to enable secure key and software provisioning services for the DOD, the Intelligence Community, and other Federal agencies. KMI combines substantial custom software and hardware development with commercial off-the-shelf computer components, which include a client host computer with monitor and peripherals, printer, and barcode scanner.

## Program

The NSA is delivering KMI Increment 3 in eight planned Agile releases that will enhance existing capabilities and subsume EKMS Tier 0 and Tier 1 cryptographic product delivery into the infrastructure. The KMI Program Management Office (PMO) produced an initial draft test and deployment schedule for the Increment 3 acquisition in September 2021 that supports Release 0 infrastructure and initial capability enhancements; however, the schedule has yet to be updated with the Tier 0 and Tier 1 infrastructure requirements. The KMI PMO began Increment 3 capability development in July 2021.

## Major Contractor

Lidos – Columbia, Maryland (Prime).

## Test Adequacy

The KMI Increment 3 Test and Evaluation Master Plan, approved by DOT&E in August 2020, defines an adequate operational test strategy for the KMI program release testing through IOT&E scheduled for late FY25. JITC is developing the operational test plan in late 2021 to support early KMI Increment 3 release testing that will commence in late 2022.

## Performance

The preliminary performance assessment will be available after the completion of the early KMI Increment 3 release testing in late 2022. The KMI test community is concerned about the overly aggressive KMI Increment 3 schedule and concurrency with test planning, execution, and reporting. In addition, while the KMI Test Infrastructure provides a safe laboratory for evaluating KMI software builds, it is currently not maintained in the same configuration

as the operational KMI. This may limit the KMI Test Infrastructure users' ability to identify problems prior to deploying a new KMI release to the operational system; however, the PMO intends to refresh the KMI Test Infrastructure and the production system to be the same in Increment 3.

## Recommendations

1. The KMI PMO should reassess the release cadence to reduce delivery and test concurrency to make the schedule more achievable.
2. JITC should employ a multi-release test plan that would cover up to four releases over two years, since the test team will not know what KMI capabilities will be in each release until 45-60 days prior to testing.
3. The NSA should maintain the KMI Test Infrastructure configuration to be the same as the operational environment.