

1.0 TOPIC TITLE:

Repackage visibility checking minimizing dependency on Apache Accumulo

2.0 SUMMARY:

Our work within US Government (USG) security contexts requires diligent exercise of control over system data. Apache Accumulo provides technology for user database interaction that works well with USG control frameworks, and we would like to be able to leverage these technical measures without necessarily incorporating the entire Apache Accumulo project into our systems. This work will refactor a subset of Accumulo to enable security visibility checking without entailing the entire Accumulo project.

3.0 BACKGROUND:

MIT Lincoln Laboratory's Intelligence and Decision Technologies Group (Group 104) is supporting the US Air Force to realize its vision of an Open Architecture information infrastructure that reaches across all levels of its data enterprise from sensors to platforms, command and control, and intelligence surveillance and reconnaissance (ISR). In this context, an open architecture has many benefits. It allows for rapid deployment of capabilities vs. large infrequent software upgrades; it reduces costs due to leveraging of open source software components, and it lowers barrier to entry, which empowers non-traditional DoD contractors to provide best-of-breed solutions. We achieve this in part by utilizing an event-driven service oriented architecture (SOA) based on a standard XML message format.

MIT Lincoln Laboratory builds and deploys software systems, also known as software testbeds, to sites in support of program based events and demonstrations. These software systems are designed for use in secure US Government (USG) environments, and must conform to data handling and marking requirements levied by the USG. Our goal is to make a USG sourced data access control tool that is more broadly available for software development activities.

Additional concept ideas that support this challenge are also welcome.