

SESSION TITLE	Measuring Authentication: NIST 800-63 and Vectors of Trust
SESSION QUICK ABSTRACT	Find out how the IETF Vectors of Trust Draft influenced the new NIST 800-63-3, and how authentication will be measured in the future domestically and internationally.
SESSION ABSTRACT	NIST 800-63-3 went into public review last year. It outlines three new scales for measuring the assurance of an authentication event. Those scales were heavily informed by Vectors of Trust, which is on track to become an IETF informational draft this year. Find out how Vectors of Trust influenced NIST 800-63, and how authentication will be measured in the future domestically and internationally.
SESSION DETAIL	<p>First, I talk about what NIST does. NIST is under the Department of Commerce, and they are in charge of making sure that governments and businesses are measuring things in the same ways so that they can do business in an effective and fair manner. That's why NIST has been tasked with measuring identity transactions like authentication. Then I talk about the old 800-63-2 draft, and the fact that it outlined four "levels of assurance," but that those levels conflated authentication and identity proofing. Then I talk about each of the levels of assurance that 800-63-2 outlined, how governments and businesses attempted to meet those levels, and how they haven't exactly worked out well for everyone for a variety of reasons. Then I talk about the feedback NIST has been getting on adoption of 800-63-2. This includes the fact that the publication doesn't address the concept of identity federation, least privilege or newer methods of privacy preservation. Then I talk about the bigger problems with conflating identity proofing with authentication strength. There are times when we want someone to be really well authenticated, but we don't actually want to know who they are. This includes spies, political dissidents, and whistleblowers. Identity proofing those people could actually endanger their lives. Then I talk about how the Vectors of Trust draft was written to address these very problems. It has separate scales for identity proofing, credential management, and assertion presentation. I go over the actual requirements for each of those scales, and give an example of how a vectors-of-trust-compliant assertion would look over the wire. Then I talk about the new 80-63-3 publication. It was heavily influenced by the Vectors of Trust draft. It also outlines three separate scales - Identity Assurance Level, Authenticator Assurance Level, and Federation and Assertion Level. I go over each of these scales and give examples of how they would be used. Then I talk about adoption of each project. Vectors of Trust is being adopted by the iGov working group in the OpenID Foundation for use in measuring international authentication events. 800-63-3 is being adopted by the US Government for use in measuring domestic authentication events.</p>