
DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems

Unscheduled Task Status Details Report

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DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems

Report Contents

Rank	ID	Name	State	Plan Est	Task Est	To Do	Discussion Count	Owner
				104.0	104.0	104.0		
	US24	Run Tests With "Real" Password Capture	<div>D</div> <div>P</div> <div>C</div> <div>A</div>	8.0	8.0	8.0	0	Stephen
	TA41	Replace stub contents with actual processing of password parameters	<div>D</div> <div>P</div> <div>C</div>	8.0	8.0	8.0	0	Allen
	US25	Run Tests With Real AT&T Voice Authentication	<div>D</div> <div>P</div> <div>C</div> <div>A</div>	8.0	8.0	8.0	0	Stephen
	TA42	Replace stub contents with actual call to AT&T voice	<div>D</div> <div>P</div> <div>C</div>	8.0	8.0	8.0	0	Allen
	US26	Run Tests With Face Recognition Test	<div>D</div> <div>P</div> <div>C</div> <div>A</div>	8.0	8.0	8.0	0	Stephen
	TA52	Replace stub contents with actual call to BetaFace and AT&T Face	<div>D</div> <div>P</div> <div>C</div>	8.0	8.0	8.0	0	Allen
	US27	Run Tests With Real SMS Message Check	<div>D</div> <div>P</div> <div>C</div> <div>A</div>	8.0	8.0	8.0	0	Stephen
	TA53	Replace stub contents with actual call to SMS Message Check	<div>D</div> <div>P</div> <div>C</div>	8.0	8.0	8.0	0	Allen
	US28	Run Tests With "Real" Challenge Question Checks	<div>D</div> <div>P</div> <div>C</div> <div>A</div>	8.0	8.0	8.0	0	Stephen
	TA54	Replace stub contents with actual call to Challenge Question Check	<div>D</div> <div>P</div> <div>C</div>	8.0	8.0	8.0	0	Allen
	US30	Run Tests With Real RMM Evaluation	<div>D</div> <div>P</div> <div>C</div> <div>A</div>	24.0	24.0	24.0	0	Stephen
	TA63	Replace RMM Stub with real code.	<div>D</div> <div>P</div> <div>C</div>	16.0	16.0	16.0	0	Allen
	TA67	Replace Threshold Calculator stub with real code.	<div>D</div> <div>P</div> <div>C</div>	8.0	8.0	8.0	0	Allen
	US22	Perform Simulated Login	<div>D</div> <div>P</div> <div>C</div> <div>A</div>	24.0	24.0	24.0	0	Stephen
	TA59	Modify Probability Drive to operate in realtime mode.	<div>D</div> <div>P</div> <div>C</div>	8.0	8.0	8.0	0	Allen
	TA60	Initiate the simulated login with a username and "password"	<div>D</div> <div>P</div> <div>C</div>	4.0	4.0	4.0	0	Allen
	TA61	Select environmental "conditions" for the simulation	<div>D</div> <div>P</div> <div>C</div>	4.0	4.0	4.0	0	Allen
	TA62	Invoke the "probability drive".	<div>D</div> <div>P</div> <div>C</div>	8.0	8.0	8.0	0	Allen
	US31	Generate Additional Test/Use Cases By Modulating Authentication Scores	<div>D</div> <div>P</div> <div>C</div> <div>A</div>	16.0	16.0	16.0	0	Stephen
	TA56	Clone a test/use case many times with different values of authenticators	<div>D</div> <div>P</div> <div>C</div>	16.0	16.0	16.0	0	Allen

DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems	
US24: Run Tests With "Real" Password Capture	
General	
ID:	US24
Name:	Run Tests With "Real" Password Capture
Tags:	
Description:	<p>As an Experimental Tester,</p> <p>I need to enter password reliability information during the baseline capture sequence so that we can ensure the capture process can collect and store test case information</p> <p><i>The password stub is to be replaced with a code that evaluates the descriptors for password that the tester enters (e.g. How strong is it? How old is it? How many missed attempts precede the successful entry?)</i></p>
Attachments:	
Owner:	Stephen
Hierarchy	
Parent:	US20: (EPIC) Capture Baseline Data
Schedule	
State:	Defined
Blocked:	false
Ready:	false
Blocked Reason:	
Iteration:	
Plan Est:	8.0 Points
Task Est:	8.0 Hours
To Do:	8.0 Hours
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DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems	
TA41: Replace stub contents with actual processing of password parameters	
General	
ID:	TA41
Name:	Replace stub contents with actual processing of password parameters
Tags:	
Description:	<p><i>The screen should already be there. Now add the processing to calculate a score based on whatever reliability information we're capturing.</i></p>
Attachments:	
Owner:	Allen
Task	
State:	Defined
Blocked:	false
Ready:	false
Blocked Reason:	

Estimate: 8.0 Hours
To Do: 8.0 Hours
Work Product: US24: Run Tests With "Real" Password Capture
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DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems	
US25: Run Tests With Real AT&T Voice Authentication	
General	
ID:	US25
Name:	Run Tests With Real AT&T Voice Authentication
Tags:	
Description:	<p>As an Experimental Tester,</p> <p>I need to access AT&T Voice during raw authenticator capture</p> <p>so that we can include actual authentication data in our test cases</p> <p><i>The AT&T Voice stub is to be replaced with a code that actually invokes the AT&T Voice Authenticator, obtains a result of the phone-based authentication, and then returns those results to the calling function code.</i></p>
Attachments:	
Owner:	Stephen
Hierarchy	
Parent:	US20: (EPIC) Capture Baseline Data
Schedule	
State:	Defined
Blocked:	false
Ready:	false
Blocked Reason:	
Iteration:	
Plan Est:	8.0 Points
Task Est:	8.0 Hours
To Do:	8.0 Hours
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DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems	
TA42: Replace stub contents with actual call to AT&T voice	
General	
ID:	TA42
Name:	Replace stub contents with actual call to AT&T voice
Tags:	
Description:	<p><i>Screen should already be there. Now add the code to actually trigger the AT&T Voice check and return the results. Keep the "manual entry" available, but implement it as "Manual Override".</i></p>

Attachments:	
Owner: Allen	
Task	
State: Defined	Blocked: false
Ready: false	Blocked Reason:
Estimate: 8.0 Hours	
To Do: 8.0 Hours	
Work Product: US25: Run Tests With Real AT&T Voice Authentication	
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DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems**US26: Run Tests With Face Recognition Test**

General

ID: US26
Name: Run Tests With Face Recognition Test
Tags:
Description: As an Experimental Tester , I need to access the Face Recognition Check during raw authenticator capture so that we can include actual authentication data in our test cases <i>The stub is to be replaced with a code that calls either BetaFace or AT&T Face, or both. A result is obtained and returned to the probability driver.</i>
Attachments:
Owner: Stephen
Hierarchy
Parent: US20: (EPIC) Capture Baseline Data
Schedule
State: DefinedBlocked: false
Ready: falseBlocked Reason:
Iteration:
Plan Est: 8.0 PointsTask Est: 8.0 Hours
To Do: 8.0 Hours
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DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems**TA52: Replace stub contents with actual call to BetaFace and AT&T Face**

General

ID: TA52
Name: Replace stub contents with actual call to BetaFace and AT&T Face
Tags:

Description:	<i>Screen should already be there. Now add the code to actually trigger the calls to BetaFace and AT&T Face. Keep the "manual entry" available, but implement it as "Manual Override".</i>		
Attachments:			
Owner:	Allen		
Task			
State:	Defined	Blocked:	false
Ready:	false	Blocked Reason:	
Estimate:	8.0 Hours		
To Do:	8.0 Hours		
Work Product:	US26: Run Tests With Face Recognition Test		
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DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems**US27: Run Tests With Real SMS Message Check**

General

ID:	US27		
Name:	Run Tests With Real SMS Message Check		
Tags:			
Description:	<p>As an Experimental Tester, I need to access the SMS Message Check during raw authenticator capture so that we can include actual authentication data in our test cases</p> <p><i>The SMS Message Check stub is to be replaced with code that actually invokes the authenticator, and returns the result of the test.</i></p>		
Attachments:			
Owner:	Stephen		
Hierarchy			
Parent:	US20: (EPIC) Capture Baseline Data		
Schedule			
State:	Defined	Blocked:	false
Ready:	false	Blocked Reason:	
Iteration:			
Plan Est:	8.0 Points	Task Est:	8.0 Hours
To Do:	8.0 Hours		
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DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems**TA53: Replace stub contents with actual call to SMS Message Check**

General

ID:	TA53
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Name: Replace stub contents with actual call to SMS Message Check	
Tags:	
Description: <i>Screen should already be there. Now add the code to actually trigger the SMS Message Check check and return the results. Keep the "manual entry" available, but implement it as "Manual Override".</i>	
Attachments:	
Owner: Allen	
Task	
State: Defined	Blocked: false
Ready: false	Blocked Reason:
Estimate: 8.0 Hours	
To Do: 8.0 Hours	
Work Product: US27: Run Tests With Real SMS Message Check	
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DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems	
US28: Run Tests With "Real" Challenge Question Checks	
General	
ID: US28	
Name: Run Tests With "Real" Challenge Question Checks	
Tags:	
<p>Description: As an Experimental Tester, I need to access the Challenge Question Check authenticator during raw authenticator capture so that we can include actual authentication data in our test cases</p> <p><i>The Challenge Question stub is to be replaced with code that actually evaluates challenge questions and answers -- or at least evaluates some input indicating the nature of the results of such tests. As with others, "Manual Override" should be an option.</i></p>	
Attachments:	
Owner: Stephen	
Hierarchy	
Parent: US20: (EPIC) Capture Baseline Data	
Schedule	
State: Defined	Blocked: false
Ready: false	Blocked Reason:
Iteration:	
Plan Est: 8.0 Points	Task Est: 8.0 Hours
To Do: 8.0 Hours	
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TA54: Replace stub contents with actual call to Challenge Question Check	
General	
ID:	TA54
Name:	Replace stub contents with actual call to Challenge Question Check
Tags:	
Description:	<i>Screen should already be there. Now add the code to actually trigger the challenge question evaluation and return the results. Three challenge questions and their answers will be handled here. "Results" for each of the three questions will be listed separately. Keep the "manual entry" available, but implement it as "Manual Override".</i>
Attachments:	
Owner:	Allen
Task	
State:	Defined
Blocked:	false
Ready:	false
Blocked Reason:	
Estimate:	8.0 Hours
To Do:	8.0 Hours
Work Product:	US28: Run Tests With "Real" Challenge Question Checks
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DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems	
US30: Run Tests With Real RMM Evaluation	
General	
ID:	US30
Name:	Run Tests With Real RMM Evaluation
Tags:	
Description:	As the Lead Researcher, I need to be able to run tests with RMM and thresholds fully implemented so that I can generate test results for later evaluation. <i>This user story involves replacing the remaining stub with actual processing.</i>
Attachments:	
Owner:	Stephen
Hierarchy	
Parent:	US20: (EPIC) Capture Baseline Data
Schedule	
State:	Defined
Blocked:	false
Ready:	false
Blocked Reason:	
Iteration:	
Plan Est:	24.0 Points
Task Est:	24.0 Hours
To Do:	24.0 Hours
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DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems	
TA63: Replace RMM Stub with real code.	
General	
ID:	TA63
Name:	Replace RMM Stub with real code.
Tags:	
Description:	<i>Call the "R" scripts needed to perform necessary probabilistic calculations and invoke the MrE engine. Return the resulting Bayes and MrE "scores". Remove any temporary input/output variables that were unique to the stub.</i>
Attachments:	
Owner:	Allen
Task	
State:	Defined
Blocked:	false
Ready:	false
Blocked Reason:	
Estimate:	16.0 Hours
To Do:	16.0 Hours
Work Product:	US30: Run Tests With Real RMM Evaluation
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DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems	
TA67: Replace Threshold Calculator stub with real code.	
General	
ID:	TA67
Name:	Replace Threshold Calculator stub with real code.
Tags:	
Description:	<i>Perform the threshold evaluation calculations and return the results to the probability Drive so it can determine Pass / Fail / Try Again.</i>
Attachments:	
Owner:	Allen
Task	
State:	Defined
Blocked:	false
Ready:	false
Blocked Reason:	
Estimate:	8.0 Hours
To Do:	8.0 Hours
Work Product:	US30: Run Tests With Real RMM Evaluation
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US22: Perform Simulated Login	
General	
ID:	US22
Name:	Perform Simulated Login
Tags:	
Description:	<p>As an Experimental Tester, I need to simulate a login attempt so that we can demonstrate the tuned RMM system.</p> <p><i>In general, the overall plan for preparing "the system" to demonstrate user login attempts and the performance of the RMM is as follows:</i></p> <ol style="list-style-type: none"> <i>1) Capture baseline data for each "user" that will be part of the testing.</i> <i>2) Tune thresholds.</i> <i>3) Demonstrate the system.</i> <p><i>This user story implements Step 3:</i> <i>With the thresholds set, testers can now perform "simulated logins" where a set of environment variables is selected and they are interactively walked through authenticators and evaluation until either a "YES" or "NO" is achieved. Full results of evaluation at each stage are displayed and captured.</i></p>
Attachments:	
Owner:	Stephen
Hierarchy	
Parent:	
Schedule	
State:	Defined
Blocked:	false
Ready:	false
Blocked Reason:	
Iteration:	
Plan Est:	24.0 Points
Task Est:	24.0 Hours
To Do:	24.0 Hours
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TA59: Modify Probability Drive to operate in realtime mode.

General	
ID:	TA59
Name:	Modify Probability Drive to operate in realtime mode.
Tags:	
Description:	<p><i>In earlier testing, the Probability Drive was fed a full set of authenticator results at the same time as it received all environmental factors for a test. Now, the Probability Drive will not get those factors (other than password?). (Perhaps the matrix array of potential authenticator scores is still there, but empty now that we're in realtime?) If an authenticator wasn't passed in, the Probability Drive needs to be able to call it.</i></p>
Attachments:	
Owner:	Allen
Task	

State: Defined	Blocked: false
Ready: false	Blocked Reason:
Estimate: 8.0 Hours	
To Do: 8.0 Hours	
Work Product: US22: Perform Simulated Login	
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DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems

TA60: Initiate the simulated login with a username and "password"

General

ID: TA60
Name: Initiate the simulated login with a username and "password"
Tags:
Description: <i>Accept a username and a "password" -- actually the parameters that will define the strength of the password.</i>
Attachments:
Owner: Allen

Task

State: Defined	Blocked: false
Ready: false	Blocked Reason:
Estimate: 4.0 Hours	
To Do: 4.0 Hours	
Work Product: US22: Perform Simulated Login	
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DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems

TA61: Select environmental "conditions" for the simulation

General

ID: TA61
Name: Select environmental "conditions" for the simulation
Tags:
Description: <i>Select Device, Location, User Class, and Target System environmental parameters.</i>
Attachments:
Owner: Allen

Task

State: Defined	Blocked: false
Ready: false	Blocked Reason:
Estimate: 4.0 Hours	
To Do: 4.0 Hours	

Work Product: US22: Perform Simulated Login	
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DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems

TA62: Invoke the "probability drive".

General

ID: TA62

Name: Invoke the "probability drive".

Tags:

Description: *Pass the username and password to the RMM and wait for a "Yea" or "Nay". Display results and a total response time on screen. (Also save to file?)*

Attachments:

Owner: Allen

Task

State: Defined Blocked: false

Ready: false Blocked Reason:

Estimate: 8.0 Hours

To Do: 8.0 Hours

Work Product: US22: Perform Simulated Login

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DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems

US31: Generate Additional Test/Use Cases By Modulating Authentication Scores

General

ID: US31

Name: Generate Additional Test/Use Cases By Modulating Authentication Scores

Tags:

Description:

As the Lead Experimenter,
I need to generate additional "synthetic" test cases
So that we can perform meaningful analysis on a sufficiently large result set.

For each test/use case, we will generate a set of additional synthetic cases by varying the authentication results within boundaries established by examining the variability observed during the capture of the raw authentication results.

We will also introduce some "imposter" datasets by deliberately altering some authenticator values to be outside "acceptable" ranges.

Attachments:

Owner: Stephen

Hierarchy

Parent: US20: (EPIC) Capture Baseline Data

Schedule

State: Defined	Blocked: false
Ready: false	Blocked Reason:
Iteration:	
Plan Est: 16.0 Points	Task Est: 16.0 Hours
To Do: 16.0 Hours	
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DARPA RA-11-52 Risk Mitigation Metric in Multifactor Authentication Systems	
TA56: Clone a test/use case many times with different values of authenticators	
General	
ID: TA56	
Name: Clone a test/use case many times with different values of authenticators	
Tags:	
Description:	<p><i>For a given baseline case, store many test/use case records using copies of the original environmental factors, but slight variations (within predetermined specifications) on the authentication scores..</i></p> <p><i>NOTE: We need to determine whether we're going to vary more than one authenticator at a time. We would also need to do the statistical analysis on the baseline cases to determine the allowable ranges.</i></p>
Attachments:	
Owner: Allen	
Task	
State: Defined	Blocked: false
Ready: false	Blocked Reason:
Estimate: 16.0 Hours	
To Do: 16.0 Hours	
Work Product: US31: Generate Additional Test/Use Cases By Modulating Authentication Scores	
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