Red teaming or adversary-based assessment is a flexible tool that program managers use to understand threat and to deliver components and systems that achieve their mission in hostile environments. Red teaming methods apply across the full life-cycle from concept through retirement.

Step one
Successful use of red teaming begins with clear understanding of the programmatic need for adversary-based assessment. What are you trying to accomplish, and what types of red teaming can help you achieve your goals? RT4PM presents many common programmatic needs that red teaming uniquely addresses.

Step two
Specifying what your red team should do comes next. RT4PM introduces eight types of red teaming that are described as black-boxes by their objectives, special considerations, key cost factors, and common deliverables.

Step three
Hiring or standing-up a red team is not always straightforward. RT4PM examines important issues to consider when hiring or establishing a red team.

Step four
Using red team deliverables effectively can greatly enhance the value of an assessment. RT4PM introduces non-trivial uses of common red team deliverables.
Why RT4PM?

Of the little published work on red teaming, most addresses *how to perform adversary-based assessments*, knowledge and skills a red team project lead would need.

In Sandia’s red team experience many of the biggest obstacles to successful assessments have more to do with why the assessment is needed, what the red team must deliver, who performs the assessment, and how the deliverables will be used to satisfy the assessment goals.

Sandia developed the RT4PM concepts, methods, and materials as a means of communicating effectively about these issues from the perspective of program managers or others who use adversary-based assessments.

RT4PM will prepare participants to effectively use red teaming to address common programmatic concerns such as assuring a prospective design will prove robust in a hostile environment, not just in the presence of routine failures and natural disasters. The course introduces eight types of red teaming that separately and in combination address such problems: *design assurance, hypothesis testing, benchmarking, behavioral, gaming, operational, penetration testing, and analytical.*

RT4PM will also alert participants to common difficulties in specifying and ensuring a successful assessment – such difficulties as drafting effective rules of engagement or mitigating schedule impact due to assessment activities.

Course outline

- Course introduction
- Identifying types of red teaming that address programmatic needs
- Understanding different types of red teaming
- Questions to consider when hiring or standing-up a red team
- Effectively using red team deliverables
- Conclusions

Course materials

Participants will receive a handbook with all presentation materials, and also a quick reference sheet that summarizes the course.

Course methods

RT4PM instruction is available initially in four hour training sessions. Eight hour and multi-day courses are in the works that will provide opportunities for greater depth of discussion and extended exercises.

In the four hour course, RT4PM instructors will blend mini-lectures together with discussions and several short exercises to illustrate and clarify course concepts.

For more information or to schedule a course, please contact:

<table>
<thead>
<tr>
<th>John F. Clem</th>
<th>Raymond C. Parks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandia National Laboratories</td>
<td>Sandia National Laboratories</td>
</tr>
<tr>
<td>Information Design Assurance</td>
<td>Information Design Assurance</td>
</tr>
<tr>
<td>Red Team</td>
<td>Red Team</td>
</tr>
<tr>
<td>(505) 844-9016</td>
<td>(505) 844-4024</td>
</tr>
<tr>
<td><a href="mailto:jfclem@sandia.gov">jfclem@sandia.gov</a></td>
<td><a href="mailto:rcparks@sandia.gov">rcparks@sandia.gov</a></td>
</tr>
</tbody>
</table>