MISSISSIPPI STATE UNIVERSITY
Request for Proposals (RFP) 19-62
Cybersecurity Assessment for Mississippi State University

ISSUE DATE: August 23, 2019

ISSUING AGENCY: Office of Procurement and Contracts
Mississippi State University
610 McArthur Hall
245 Barr Avenue
Mississippi State, MS 39762

Sealed Proposals, subject to the conditions made a part hereof, will be received September 17, 2019 at 2:00 PM in the MSU Office of Procurement and Contracts, same address above, for furnishing services and potentially, optional services as described herein.

IMPORTANT NOTE: Indicate firm name, and RFP number on the front of each sealed proposal envelope or package.

All inquiries concerning this RFP should be directed to:
Jennifer Mayfield
Office of Procurement and Contracts, (Same address as above)
jmayfield@procurement.msstate.edu
662-325-2550

Any addendum associated with this RFP will be posted at http://www.procurement.msstate.edu/procurement/bids/index.php located under RFP 19-62.

It is the respondent’s responsibility to assure that all addenda have been reviewed and if applicable, signed and returned.
1. **UNIVERSITY OVERVIEW**

Mississippi State University (MSU) is a comprehensive land grant university of 21,500+ students and approximately 5,000 faculty and staff. The main campus is located adjacent to the community of Starkville in northeast Mississippi, with a remote campus located in Meridian with an enrollment of around 700 students. Additionally, the university operates several remote agricultural experiment stations and has an Extension office located in each of the eighty-two Mississippi counties. Additional information about MSU can be found at our website [www.msstate.edu](http://www.msstate.edu).

2. **INVITATION TO SUBMIT PROPOSAL ON RFP**

Mississippi State University (MSU), is requesting proposals from experienced and qualified organizations to provide a comprehensive cybersecurity assessment of the Mississippi State University network to meet the State of Mississippi’s Enterprise Security Policy requirements. The goal of the assessment is to identify and validate weaknesses in the university’s information security architecture and posture from both an internal and external vantage point. Detailed network ranges and further information are included in Supplementary Technical Appendix B.

3. **SCOPE OF SERVICES REQUIRED**

The following requirements are absolute minimums that a contractor must meet. If these requirements are not met, the proposal will be removed from consideration. The contractor must provide a detailed description of how each of these requirements will be met by the proposed firm. Proposal cost is not to exceed $250,000 and services must be completed by January 31, 2020.

a) Architecture Review: Identify flaws with the security program’s overall architecture.

b) Advanced Penetration Test: Perform penetration testing involving the emulation of advanced persistent threat groups, including tools, tactics, and procedures. An emphasis should be placed on human-driven testing, with a team-based approach, not reliant on automated vulnerability assessment tools.

c) The penetration test must be comprehensive, testing all devices accessible on the entire network, not a sample or subset of hosts. MSU is concerned about the total cost of this project and will entertain alternate proposals which may not test all devices but do test enough to provide an adequate evaluation of the MSU environment.

d) Testing should determine the impact of vulnerabilities identified through the exploitation of vulnerable systems, leveraging those systems to gain control of other systems on the network, and testing for the ability to exfiltrate sensitive data.
e) The network is composed of systems and software that are unique to this environment. The penetration test provider must have experience in finding previously unknown vulnerabilities in non-mainstream IT software.

f) The penetration testing provider must provide 24/7 availability in case of an emergency during the test.

g) The penetration testing provider must perform testing of specified mission-critical systems at predetermined time windows specified by and scheduled with university IT staff.

h) Wireless Scanning: Identify rogue wireless devices and additional security architecture weaknesses related to the wireless networks.

i) Social Engineering: Assess the security posture and employee adherence to established security policies and practices. Testing should not be designed to target a specific person, but rather target the university culture.

j) APT Assessment: Perform a holistic assessment and identify weaknesses that could be used in a targeted and/or advanced attack. Assess the current environment for indications of an existing breach.

k) Final Report: Provide a written report presenting verified findings and the impact of the vulnerabilities identified on the organization (if exploited by malicious attackers), with enough detail that IT staff can reproduce the findings and remediate them. Additionally, an oral overview and written executive summary of the report must be given to the appropriate University officials including the campus Chief Information Officer. The final report should include a ranking of the severity of risks based on likelihood and impact levels. Finally, the report should include suggested mitigation strategies.

l) All work must be conducted directly by the contracted entity; no work may be outsourced or sub-contracted to a third party.

m) In an effort to minimize real or perceived conflicts of interest, the contractor awarded a contract under this RFP will not be permitted to bid or submit proposals in any RFP or invitation for bids related to any remediation goods or services.

n) MSU desires to do business with a contractor that has a proven track record in similar services. The proposer shall provide a list of three references where similar services were provided for an organization of a size comparable to or greater than MSU. MSU will contact these references to determine the quality of services rendered; such information will be considered in the evaluation of the proposal. The list must include contact person and telephone number.
4. **INQUIRIES ABOUT RFP**

Prospective respondents may make written inquiries concerning this request for proposal to obtain clarification of requirements. Responses to these inquiries may be made by addendum to the Request for Proposal (RFP). Please send your inquiries to Jennifer Mayfield via electronic mail at jmayfield@procurement.msstate.edu

All inquiries should be marked “URGENT INQUIRY. MSU RFP #19-62”

5. **ADDENDUM OR SUPPLEMENT TO RFP**

In the event it becomes necessary to revise any part of this RFP, an addendum to this RFP will be provided to each respondent who received the original RFP. Respondents shall not rely on any other interpretations, changes or corrections.

6. **ADMINISTRATIVE INFORMATION**

**Issuing Office:**

This RFP is issued by the following office:

Office of Procurement and Contracts
Mississippi State University
245 Barr Avenue, 610 McArthur Hall
Mississippi State, MS 39762

**Schedule of Critical Dates:**

The following dates are for planning purposes only unless otherwise stated in this RFP progress towards their completion is at the sole discretion of the university.

<table>
<thead>
<tr>
<th>Event</th>
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<tr>
<td>RFP Posted</td>
<td>August 23, 2019</td>
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<tr>
<td>Questions from Vendors Due</td>
<td>September 3, 2019</td>
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<tr>
<td>MSU Q&amp;A Response Due</td>
<td>September 10, 2019</td>
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<tr>
<td>Proposal Submission Deadline – 2:00 p.m.</td>
<td>September 17, 2019</td>
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<td>Award Date (Estimated Target)</td>
<td>September 20, 2019</td>
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7. **PROPOSAL CONTENTS**

This is a two-step RFP process. The technical proposals and the cost proposals are to be submitted in separate sealed envelopes. Indicate firm name, RFP# and word “Technical Proposal” on the front of the sealed technical proposal envelope or package. Indicate the firm name, RFP# and the word “Cost Proposal” on the front of the sealed proposal envelope or package.

**At a minimum, the following items should be included in the contents of the Technical Proposal:**

1) Cover letter, indicating the scope of the proposal. The letter should include an overview of the services being offered. The letter should include a statement of exceptions to any of the terms and conditions outlined in this RFP. (Cover letter should be no more than 3 pages in length.)

2) Corporate Structure and Credentials
   a) Number of years of experience
   b) Staffing levels and support proposed
   c) Examples of similar previous work.

3) Operations and Ability to Perform
   a) Provide operation plan. This should include, but not be limited to, acknowledgement and agreement with all requirements as well as explanations, where applicable, of the intended plan to achieve the requirements.
   b) Describe how services will be provided to MSU.

**At a minimum, the following items should be included in the contents of the Cost Proposal:**

1) The cost proposal should provide proposed hourly or task costs as well as a total cost and clear details as to how the total cost is arrived at. The cost proposal must also indicate any variables that may impact the cost.

2) Name the primary individuals who would work with MSU, and explain their experience, relevant background, and anticipated responsibilities. Include brief resumes for each.

3) Include a calendar of events such that MSU can understand the overall timeframe and support required.

8. **DISCUSSIONS/EVALUATION CRITERIA/AWARD PROCESS**

MSU reserves the right to conduct discussions with any or all respondents, or to make an award of a contract without such discussions based only on evaluation of the written proposals. MSU reserves the right to contact and interview anyone connected with any past or present projects with which the respondent has been associated. MSU likewise reserves the right to designate a review committee to evaluate the proposals according to the criteria
set forth under this section. MSU may make a written determination showing the basis
upon which the award was made, and such determination shall be included in the
procurement file.

MSU reserves the right to award this contract in whole or in part depending on what is in
the best interest of MSU with MSU being the sole judge thereof.

The evaluation factors set forth in this section are described as follows:

- The Vendor’s ability to deliver an assessment meeting the overall objectives described
  in the RFP.
- Projected Financial Cost to MSU
- Vendor’s experience with similar risk assessments and penetration testing
- Compliance with applicable State and Federal laws and regulations
- The committee may invite finalists for interviews and/or presentations

Upon award of contract(s), successful respondent(s) will be asked to provide a transition
plan and timeline and obtain MSU’s input and concurrence before moving forward.

- Proposals will be scored based on the following weights (100 points total):
  - Projected Financial Cost – 40 pts
  - Corporate Structure/Years of Experience/References – 25 pts
  - Operation Plan/Ease of Use/Services Offered – 35 pts.

9. PROPOSAL SUBMISSION

Proposals shall be submitted in two packages (envelopes or boxes) as set forth in Section
7a. Please make sure that the RFP number is clearly visible on the outside of the
package.

Technical Proposal – One (1) original and one (1) electronic copy (of the complete technical
proposal in one pdf file on a flash drive) of parts 7(b)(i) (Cover Letter), 7(b)(ii) (Corporate
Structure and Credentials), and 7(b)(iii) (Operations and Ability to Perform) should be
sealed in a package with “Technical Proposal” in the lower left hand corner. Each
submitted package should be a complete copy. The original shall be marked on the first
page “Original”.

Cost Proposal – One (1) original and one (1) electronic copy (of the complete cost proposal
in one pdf file on a flash drive). Should be sealed in a package with “Cost Proposal” in the
lower left-hand corner. Each submitted package should be a complete copy. The original
shall be marked on the first page “Original”.

6
The proposal package must be received on or before **2:00 p.m. on September 17, 2019**. It is the responsibility of the respondent to ensure that the proposal package arrives in the Procurement and Contracts office on-time. The proposal package should be delivered or sent by mail to:

**Office of Procurement and Contracts**

**Mississippi State University**
610 McArthur Hall
245 Barr Avenue
Mississippi State, MS 39762

Your response must include the signature page included in this RFP (See Appendix A) and contain the signature of an authorized representative of the respondent’s organization. The signature on the “Original” signature page should be in **blue** ink.

MSU reserves the right to reject any and all proposals and to waive informalities and minor irregularities in proposals received and to accept any portion of a proposal or all items bid if deemed in the best interest of the University to do so.

**Proposals received after the stated due date and time will be returned unopened. Submission via facsimile or other electronic means will not be accepted.**

**10. TWO-PHASE, BEST AND FINAL OFFER**

If the initial proposals do not provide MSU with a clear and convincing solution, or if MSU feels it is appropriate to offer the potential providers an opportunity to submit revised proposals, MSU reserves the right to use a two-phase approach and/or invite Best and Final Offers (BAFO). Based on the information obtained through the proposal submittals (Phase-One), MSU may choose a specific business model, and potential providers may be asked to submit revised proposals based upon that specific model.

The evaluation committee may develop, for distribution to the top-ranked firms, refined written terms with specific information on what is being requested as a result of information obtained through initial RFP submittal process. Proposers may be asked to reduce cost or provide additional clarification to specific sections of the RFP. Selected proposers are not required to submit a BAFO and may submit a written response notifying the solicitation evaluation committee that their response remains as originally submitted.
11. **CONTRACT TERMS**

MSU reserves the right to terminate this agreement with thirty (30) days-notice, by the Director of Procurement and Contracts via certified mail to the address listed on the signature page of this RFP (See Appendix A) if any of the terms of the proposal and/or contract are violated.

In the event the contractor fails to carry out and comply with any of the conditions and agreements to be performed under the specifications, MSU will notify the contractor, in writing, of such failure or default. In the event the necessary corrective action has not been completed within a ten (10) day period, the contractor must submit, in writing, why such corrective action has not been performed. The University reserves the right to determine whether or not such noncompliance may be construed as a failure of performance of the contractor.

Termination of contract by contractor without cause can only occur with at least one-hundred and twenty (120) days-notice prior to the proposed termination of the contract.

In the event MSU employs attorneys or incurs other expenses it considers necessary to protect or enforce its rights under this contract, the contractor agrees to pay the attorney’s fees and expenses so incurred by MSU.

12. **ACCEPTANCE TIME**

Proposal shall be valid for one-hundred and eighty (180) days following the proposal due date.

13. **RFP CANCELLATION**

This RFP in no manner obligates MSU to the eventual purchase of any services described, implied or which may be proposed until confirmed by a written contract. Progress towards this end is solely at the discretion of MSU and may be terminated without penalty or obligations at any time prior to the signing of a contract. MSU reserves the right to cancel this RFP at any time, for any reason, and to reject any or all proposals or any parts thereof.

14. **INDEPENDENT CONTRACTOR CLAUSE**

The contractor shall acknowledge that an independent contractor relationship is established and that the employees of the contractor are not, nor shall they be deemed employees of MSU and that employees of MSU are not, nor shall they be deemed employees of the contractor.
15. **OTHER CONTRACT REQUIREMENTS**

**Award Terms:** This contract shall be awarded at the discretion of the University based on the capabilities and overall reputation of the Supplier, as well as the cost. Acceptance shall be confirmed by the issuance of a contract from the University.

**Standard Contract:** The awarded contractor(s) will be expected to enter into a contract that is in substantial compliance with MSU’s standard contract [http://www.procurement.msstate.edu/pdf/standard_rfp_contract.pdf](http://www.procurement.msstate.edu/pdf/standard_rfp_contract.pdf). Proposal should include any desired changes to the standard contract. It should be noted that there are many clauses which the MSU cannot change (see Standard Addendum [http://www.procurement.msstate.edu/contracts/standardaddendum.pdf](http://www.procurement.msstate.edu/contracts/standardaddendum.pdf)). Significant changes to the standard contract may be cause for rejection of a proposal.

**The Procurement Process:** The following is a general description of the process by which a firm will be selected to fulfill this Request for Proposal.

- Request for Proposals (RFP) is issued to prospective suppliers.
- A deadline for written questions is set.
- Proposals will be received as set forth in Section 9.
- Unsigned proposals will not be considered.
- All proposals must be received by MSU no later than the date and time specified on the cover sheet of this RFP.
- At that date and time, the package containing the proposals from each responding firm will be opened publicly and the name of each respondent will be announced.
- Proposal evaluation: The University will review each proposal.
- At their option, the evaluators may request oral presentations or discussions for the purpose of clarification or to amplify the materials presented in the proposal.
- Respondents are cautioned that this is a request for proposals, not a request to contract, and the MSU reserves the unqualified right to reject any and all proposals when such rejection is deemed to be in the best interest of the University.
- The proposals will be evaluated according to the criteria set forth in Section 8.
APPENDIX A: SIGNATURE PAGE

Provide information requested, affix signature and return this page with your proposal:

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<tr>
<th>Field</th>
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APPENDIX B: Technical Background

Mississippi State University is a large, high research activity institution, with systems and software consistent with peer institutions and with a decentralized IT management environment. Many units and individual faculty manage their own systems. Best estimate of total number desktops is approximately 8,000 with an Internal Audit Survey showing over 2,600 servers in 26 units and over 800 public facing web servers. Our campus network has over 170 firewall contexts typically to the building level to isolate traffic and provide interdepartmental protection.

Number of IP Ranges (public facing)
- 130.18.0.0/16 primary
- 192.208.128.0/20
- 192.208.144.0/21
- 192.208.152.0/22

172.16.0.0/13 – Wireless network (NAT) has over 55,000 devices connecting per day. Architecture and design is in scope but not student equipment.

As per Internal Audit Survey for servers and systems: 467 software systems, 2604 servers both physical and virtual across 26 units

MSU primarily uses Cisco network equipment.
- 10 Core routers/switches 7700/6500/4500x
- 1,030+ edge switches
- Approximately 4,000 access points state wide

Logical network diagram available at: http://www.its.msstate.edu/files/campusbackbone.pdf

Information Security Program is publicly available at https://Infosecurity.msstate.edu policies related to information security at https://policies.msstate.edu. Internal policies will be provided to winning vendor.

Desktop and server systems are not typically standardized images and are often not centrally managed.

State of Mississippi’s Enterprise Security Policy is available on request.