



**BOARD OF SUPERVISORS AGENDA ITEM REPORT**  
**CONTRACTS / AWARDS / GRANTS**

☐ Award ☒ Contract ☐ Grant

Requested Board Meeting Date: 04/02/19

\* = Mandatory, information must be provided

or Procurement Director Award ☐

**\*Contractor/Vendor Name/Grantor (DBA):**

Microsoft Corporation (Headquarters: Redmond, WA)

**\*Project Title/Description:**

IT- Microsoft Engagement

**\*Purpose:**

Award: Master Agreement No. MA-PO-19-154. This Master Agreement is for an initial term of one (1) year in the award amount of \$1,200,000.00 (including sales tax). The contract will renew for one (1) year periods and will remain in effect until terminated.

Administering Department: Information Technology.

**\*Procurement Method:**

Pursuant to Pima County Procurement Code 11.12.060, Emergency and other limited competition procurement, award of Requisition No. 19-193, is recommended to the above named vendor with which the County has negotiated a satisfactory agreement.

PRCUID: 333571

Attachments: Limited Competition Memo, Master Agreement and Microsoft Master Service Agreement.

**\*Program Goals/Predicted Outcomes:**

Create a Master Agreement with Microsoft in order to better secure the entire County computing environment and put systems in place that will allow us to reduce costs through the adoption of cloud technology.

**\*Public Benefit:**

Reduce cost through the adoption of cloud technology.

**\*Metrics Available to Measure Performance:**

Pima County ITD will monitor contractor's performance to assure quality of service and compliance with specifications called for herein.

**\*Retroactive:**

No

Procure Ref: 03/20/19 P10401

To CoB: 3-20-19(1)  
Ver. 1  
pgs. 82

**Contract / Award Information**

Document Type: MA Department Code: PO Contract Number (i.e., 15-123): 19-154  
Effective Date: 04/02/19 Termination Date: 04/01/20 Prior Contract Number (Synergen/CMS): \_\_\_\_\_  
☒ Expense Amount: \$\* 1,200,000.00 ☐ Revenue Amount: \$ \_\_\_\_\_  
\*Funding Source(s) required: Internal Service Fund

Funding from General Fund? ☐ Yes ☒ No If Yes \$ \_\_\_\_\_ % \_\_\_\_\_

Contract is fully or partially funded with Federal Funds? ☐ Yes ☒ No

\*Is the Contract to a vendor or subrecipient? Vendor

Were insurance or indemnity clauses modified? ☐ Yes ☒ No

If Yes, attach Risk's approval

Vendor is using a Social Security Number? ☐ Yes ☒ No

If Yes, attach the required form per Administrative Procedure 22-73.

**Amendment / Revised Award Information**

Document Type: \_\_\_\_\_ Department Code: \_\_\_\_\_ Contract Number (i.e., 15-123): \_\_\_\_\_

Amendment No.: \_\_\_\_\_ AMS Version No.: \_\_\_\_\_

Effective Date: \_\_\_\_\_ New Termination Date: \_\_\_\_\_

Prior Contract No. (Synergen/CMS): \_\_\_\_\_

☐ Expense or ☐ Revenue ☐ Increase ☐ Decrease Amount This Amendment: \$ \_\_\_\_\_

Is there revenue included? ☐ Yes ☐ No If Yes \$ \_\_\_\_\_

\*Funding Source(s) required:

Funding from General Fund? ☐ Yes ☐ No If Yes \$ \_\_\_\_\_ % \_\_\_\_\_

**Grant/Amendment Information** (for grants acceptance and awards) ☐ Award ☐ Amendment

Document Type: \_\_\_\_\_ Department Code: \_\_\_\_\_ Grant Number (i.e., 15-123): \_\_\_\_\_

Effective Date: \_\_\_\_\_ Termination Date: \_\_\_\_\_ Amendment Number: \_\_\_\_\_

☐ Match Amount \$ \_\_\_\_\_ ☐ Revenue Amount: \$ \_\_\_\_\_

\*All Funding Source(s) required:

\*Match funding from General Fund? ☐ Yes ☐ No If Yes \$ \_\_\_\_\_ % \_\_\_\_\_

\*Match funding from other sources? ☐ Yes ☐ No If Yes \$ \_\_\_\_\_ % \_\_\_\_\_

\*Funding Source: \_\_\_\_\_

\*If Federal funds are received, is funding coming directly from the Federal government or passed through other organization(s)?

Contact: Eric Welch, Procurement Officer 3/18/19

Department: Procurement 3/18/19 Telephone: 520-724-9510

Department Director Signature/Date: [Signature] 3-20-19

Deputy County Administrator Signature/Date: [Signature] 3-20-19

County Administrator Signature/Date: [Signature] 3/20/19  
(Required for Board Agenda/Addendum Items)



# MASTER AGREEMENT

PIMA COUNTY, ARIZONA

THIS IS NOT AN ORDER - TRANSMISSION CONSTITUTES  
CONTRACT EXECUTION

Master Agreement No: 1900000000000000154

MA Version: 1

Page: 1 of 2

Description: IT - Microsoft Engagement

I S S U E R	Pima County Procurement Department 130 W. Congress St. 3rd Fl Tucson AZ 85701  Issued By: ERIC WELCH Phone: 5207249510 Email: eric.welch@pima.gov
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T E R M S	Initiation Date: 04-02-2019 Expiration Date: 04-01-2020  <table><tr><td>NTE Amount:</td><td>\$1,200,000.00</td></tr><tr><td>Used Amount:</td><td>\$0.00</td></tr></table>	NTE Amount:	\$1,200,000.00	Used Amount:	\$0.00
NTE Amount:	\$1,200,000.00				
Used Amount:	\$0.00				

V E N D O R	MICROSOFT CORPORATION PO BOX 844510 DALLAS TX 75284-4510  Contact: Jon Carder Phone: 480-383-2643 Email: jon.carder@microsoft.com Terms: 0.00 % Days: 30
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Shipping Method:	Vendor Method
Delivery Type:	
FOB:	FOB Dest, Freight Prepaid
<b>Modification Reason</b> This Master Agreement is for an initial term of one (1) year in the annual award amount of \$1,200,000.00 (including sales tax). The contract will renew for one (1) year periods and will remain in effect until terminated. Attachment: Microsoft Master Service Agreement.	

~~This Master Agreement incorporates the attached documents, and by reference all instructions, Standard Terms and Conditions, Special Terms and Conditions, and requirements that are included in or referenced by the solicitation documents used to establish this agreement. All transactions and conduct are required to conform to these documents.~~



# MASTER AGREEMENT DETAILS

Master Agreement No: 1900000000000000154

MA Version: 1

Page: 2 of 2

Line	Description					
1	HCF Core: Envision and Plan Phases Complete					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$26,600.00			
2	HCF Core: Build Phase Complete					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$26,600.00			
3	HCF Core: Stabilize Phase Complete					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$53,000.00			
4	HCF IaaS: Envision and Plan Phases Complete					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$26,600.00			
5	HCF IaaS: Build Phase Complete					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$78,000.00			
6	HCF IaaS: Stabilize Phase Complete					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$29,200.00			
7	PAM: Envision Phase Complete					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$15,000.00			
8	PAM: Plan Phase Complete					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$15,000.00			
9	PAM: Build Phase Complete					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$36,000.00			
10	PAM: Stabilize Phase Complete					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$24,000.00			
11	PAM: Deploy Phase Complete					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$59,000.00			
12	ESAE: Envision Phase Complete					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$74,000.00			
13	ESAE: Plan Phase Complete					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$179,000.00			
14	ESAE: Build Phase Complete					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$203,000.00			
15	ESAE: Stabilize Phase Complete					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$57,000.00			
16	ESAE: Deploy Phase Complete					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$142,000.00			
17	County Contingency					
	Discount	UOM	Unit Price	Stock Code	VPN	MPN
	0.0000 %	EA	\$156,000.00			



**PIMA COUNTY**

INFORMATION TECHNOLOGY

**MEMORANDUM**

Date: March 14, 2019

To: Chuck Huckelberry  
County Administrator

From: Dan Hunt  
Chief Information Officer

Via: Tom Burke  
Deputy County Administrator for Administration

Re: Request for Limited Competition - Microsoft

In order to better secure the entire County computing environment and put systems in place that will allow us to reduce costs through the adoption of cloud technology, the Information Technology Department (ITD) is undertaking three separate projects within our Microsoft environment.

The first two, Enhanced Security Administrative Environment, commonly referred to as Red Forest, and Privileged Access Management, commonly referred to as PAM, will dramatically increase the security of County data and systems through the adoption of current-generation security practices/methodologies for the County's Active Directory Environment.

The third, commonly called Azure Active Directory, will allow Pima County to start utilizing cloud offerings. This will allow us to eventually reduce costs by eliminating the Administration West 6<sup>th</sup> (AW6) floor data center, improve service, and increase emergency response in the event of a large-scale event that affects ITD's ability to provide services.

Pima County does not have the available staffing nor the highly-specialized skills required to perform these projects without assistance.

Pursuant to Pima County Code, Title 11, Chapter 11.12.060, Emergency and Other Limited Competition Procurement, ITD is requesting your approval of a Limited Competition for the acquisition of specialized consulting services from Microsoft to advance the above goals.

ITD recommends selecting Microsoft due to the following factors:

- Microsoft created the software, products, and methodologies we wish to adopt/upgrade. As such, they are uniquely positioned to provide such consulting for Microsoft systems (on which the County's computing systems are reliant).
- Pima County does have contracts with resellers, such as SHI and CDW, but use of these vendors as a middleman will likely increase the cost to the County. For these type of projects, these resellers would need to contract with Microsoft to do the work.

We anticipate the total cost for these three engagements will not exceed \$1.2 million.

Chuck Huckleberry, County Administrator  
Re: Request for Limited Competition - Microsoft  
March 14, 2019  
Page 2 of 2

ITD has identified funding in this budget cycle to cover these costs, so no additional funding should be required or requested for these efforts.

TR/mk

Your approval is recommended.

APPROVED:

C. Huckleberry 3/14/19  
Chuck Huckelberry, County Administrator (Date)

# Microsoft Master Service Agreement State and Local Government & Public Educational Institutions

The contents of this contract are confidential. Requests for a copy shall be submitted to the Clerk of the Board by completing a Public Records Request pursuant to County Administrative Procedure 4-4. The Public Records Request form can be located at [webcms.pima.gov](http://webcms.pima.gov) under the 'Quick Links' section. Release of confidential contract information involves a process above and beyond the basic Public Records Request process. This process will be performed by the Procurement Department after the Clerk of the Board receives the completed Public Records Request.

If you have any questions, please call (520)724-8161.

# Microsoft Consulting Services Work Order

<b>(For Microsoft Internal Purposes Only)</b>  <b>MCS (SLG WO Fixed-Price)- (Public Sector)</b>	Work Order Number: T002192-220586-257848
	Project Code:
	Client ID:
	Client Type:
	Vertical Industry: State and Local Government
	Customer Purchase Order Number:

This work order is made pursuant to that certain Microsoft Master Services Agreement (the "agreement") effective as of \_\_\_\_\_, by and between the undersigned customer ("you") and the undersigned Microsoft affiliate ("we," "us," or "our"). The terms of the agreement are incorporated herein by this reference. Any terms not otherwise defined herein will assume the meanings set forth in the agreement. This work order is comprised of this cover page and the work order terms below, which are incorporated herein by this reference.

<i>Customer Invoice Information</i>		
Name of Customer	<b>Pima County, AZ</b>	A/P Contact Name (This person receives invoices under this work order.) Finance & Risk Management - Accounts Payable
Street Address P.O. Box 791		Contact E-mail Address
City Tucson	State/Province AZ	Phone
Country United States	Postal Code 85701	Fax
<i>Invoicing</i>		
We will invoice you according to our fiscal monthly billing schedule for services performed and expenses incurred during the previous period. Our invoices for payment will be directed to your representative for payment at the address shown above.		
<b>Source to confirm Per Diem limits – hotel, rental car, meals, etc. (if applicable):</b>		
Contact Name:	Contact E-mail address:	Contact phone No.:
Web site address:		
<i>Period of Performance</i>		
Services under this work order will commence on the Effective Date herein. This work order will expire on <u>December 31, 2019</u> . In order for us to continue work after the expiration date, you and we must agree in writing to a new work order or an amendment to this work order identifying the new expiration date and any other terms upon which you and we agree. During delivery of this engagement, the parties agree to review and re-evaluate the delivered services under standard change management.		
<b>Payments to Microsoft should be made to the following, include reference to our invoice number:</b> <b>By Check: Microsoft Enterprise Services, P.O. Box 844510, Dallas, TX 75284-4510, or if by overnight delivery, Microsoft Enterprise Services, Lockbox #844510, 1401 Elm Street, Fifth Floor, Dallas, TX 75202</b> <b>By Wire: Microsoft Enterprise Services #844510, Acct 3750825354/ ABA#0260-0959-3, Bank of America, N.A.</b> <b>By ACH: Microsoft Enterprise Services, Acct#3750825354/ ABA#11100001-2, Bank of America, N.A.</b>		



☐ Attachments required with Invoice (Status Reports/Time /Expense Breakouts, Other):

*Place of Performance/Project Point of Contact(Customer Satisfaction Contact)*

Name of Customer Same as above.

Project leader (This person is your point of contact for all service-related matters under this work order.)  
Timothy W Rolston

Street Address  
33 N. Stone Ave., 14th Floor

Contact  
E-mail  
Address: tim.rolston@pima.gov

City  
Tucson

State/Province  
AZ.

Phone  
520-724-7202

Country USA

Postal Code  
85701

Fax

By signing below the parties acknowledge and agree to be bound to the terms of the agreement and this work order.

<i>Customer</i>	<i>Microsoft Affiliate</i>
Name of Customer (please print) <b>Pima County, AZ</b>	Name <b>Microsoft Corporation</b>
Signature	Signature
Name of person signing (please print)	Name of person signing (please print) David T. Gallagher
Title of person signing (please print)	Title of person signing (please print) Director of Contracts
Signature date	Signature date

1. **Scope of services.** We will perform the services, and if applicable, the milestones, service deliverables and acceptance criteria for the service deliverables, for you as described in the Statement of Work, entitled "**Hybrid Cloud Foundation**", attached and incorporated herein. "Service deliverables" means computer code and related materials, other than fixes, we provide to you when performing services. The acceptance process that applies to the services is set forth in Section 6 below. Most of the services will be performed at the place of performance identified on the cover page or at such other facility as you specify in writing. Some services may be performed off-site at our facilities. All off-site services will be coordinated with your project leader for the services.
2. **Customer responsibilities.**
  - a. **General.** In addition to your obligations set forth in the agreement and elsewhere in this work order, you will provide the following, at your expense:
    - (1) access to and the right to use your facilities reasonably necessary for us to perform the services, including office space, telephones, internet access, computing systems and other IT infrastructure;
    - (2) access to and copies of relevant technical information or other project related information that is timely, current, accurate, and complete;
    - (3) provision of all your and third party products or services with all necessary consents and licenses for us to use under this work order which are not specifically identified in this work order as being provided by us but which are necessary for successful delivery of the services;
    - (4) access to and sufficient time with your technical, management and other personnel necessary for our performance of the services;
    - (5) systems or programs upon which the service deliverables depend that do not change during the term of this work order (except as may be agreed to in a change order); and
    - (6) any other responsibilities or duties that are generally a customer's responsibility in similar engagements; and
    - (7) all commercial product that is necessary for use of the service deliverable(s).
  - b. **Reliance on instructions.** In performing our obligations under this work order, we will rely upon any instructions, authorizations, approvals or other information provided to us by your project leader or by any other personnel identified by your project leader.
3. **Assumptions and dependencies.** See Section 1.A.5 of this work order.
4. **Project management.** Each party shall appoint and identify to the other party a project manager who shall be the person responsible on behalf of such party for the administration of this work order. Each party agrees to provide written notice to the other party if a successor project manager is subsequently appointed. The project managers or any other necessary personnel will meet as needed. The project managers and any successors will have the authority to make decisions with respect to actions to be taken under this work order and provide technical direction to us in performing the services.
5. **Fees.** This is a fixed-price work order in the amount of **\$240,000**. The **\$240,000** fixed price includes all fees and expenses. The total fee and, if applicable, periodic or phase fees, for all services to be provided as described in the Statement of Work, above, are set forth below. Upon completion of each phase, we will submit an invoice for the appropriate fee referenced below. You will pay us within thirty (30) calendar days of the date of our accurate invoice. In the event of any dispute with regard to a portion of an invoice, the undisputed portion shall be paid as provided herein.

#### **Invoicing Payment Schedule**

<b>Milestone</b>	<b>Invoice Amount</b>
HCF Core: Envision and Plan Phases Complete	\$ 26,600
HCF Core: Build Phase Complete	\$ 26,600
HCF Core: Stabilize Phase Complete	\$ 53,000
HCF IaaS: Envision and Plan Phases Complete	\$ 26,600
HCF IaaS: Build Phase Complete	\$ 78,000
HCF IaaS: Stabilize Phase Complete	\$ 29,200
<b>Total Amount</b>	<b>\$240,000</b>

#### **6. Acceptance of service deliverables.**

- a. **Acceptance process.** Upon completion and delivery of the service deliverables we will notify your Pima County Project Manager and commence the acceptance process as described in any agreed acceptance plan for the service deliverables. "Acceptance plan" means the agreed-upon process and procedures by which the parties will verify that the service deliverables meet the acceptance criteria, and "acceptance criteria" means the agreed upon objective standards by which the parties will verify that the service deliverables substantially meet the functional specification specified in this work order. Conformity to the acceptance criteria shall solely determine your right to accept or reject the service deliverables. You shall appoint personnel who shall attend and verify the results of the acceptance process. Within ten (10) days of completion of the acceptance testing, you will issue a written notice of acceptance or provide us with (i) a detailed list of any non-conformances and proposed steps necessary to address the non-conformances, and (ii) the appropriate personnel to assist us in correcting the non-conformities.
- b. **Acceptance.** Notwithstanding the foregoing, the service deliverable(s) will be deemed accepted by you if any of the following occur: (i) you fail to issue either a notice of acceptance or a list of non-conformances within ten (10) days after completion of the acceptance process; or a notice that all defects have been corrected; (ii) you delay commencement of the acceptance process for more than ten (10) days from the date we make the service deliverables available for acceptance; or (iii) you make productive use of the service deliverable(s) prior to completion of the acceptance process. Service deliverables for which no acceptance process or acceptance plan is specified shall be deemed accepted upon completion and delivery to you.
- c. **Cure process.** If a list of non-conformances is issued, we will notify you, in writing, of our concurrence or objections within ten (10) days of receipt of such list. We will have a commercially reasonable time to cure all agreed non-conformances. Within ten (10) days following the delivery of our notice that the non-conformances have been corrected, you will (i) issue us a written notice of acceptance, or (ii) if you do not concur, the project managers shall work together in good faith to resolve the dispute, with escalation to senior management for each party as necessary. If the dispute is not resolved within ten (10) days, the parties may agree to use non-binding, third-party mediation to help resolve such dispute(s). We are not obligated to provide any services until the dispute is resolved and will not be liable for any resulting delay. The project schedule will be adjusted accordingly in the event a dispute causes a delay.

7. **Warranty for service deliverables.** We warrant that the service deliverables will materially conform to the functional specifications, if any, at the time of your acceptance and for a period of sixty (60) days thereafter, provided you notify us in writing of any non conformance within the sixty (60) day period.

As our sole obligation and your exclusive remedy for breach of this warranty, we will, at our option, correct any material non-conformance in the service deliverables reported by you within the warranty period or refund the fees you paid us for the non-conforming service deliverables. If we investigate the claimed non-conformance and determine that the service deliverables conform, you will pay us for such investigative services at our then current published standard hourly rates. This warranty shall not apply if (i) the system(s) on which the service deliverables depend, is modified by you or a third party; (ii) is used improperly or (iii) if non-conformance is due to causes external to the services deliverable(s).

8. **Termination charges.** If we exercise our right to terminate this work order due to your material breach or default, or you terminate this work order (with or without cause), your obligation to pay us for services performed and expenses incurred prior to termination shall include the following:
  - a. any amounts previously invoiced but unpaid; and
  - b. fees for services performed through the termination date which have not been invoiced based on an equitable rate and/or equitable adjustment that the parties will mutually agree upon.
9. **Change order process.** All changes to the services, service deliverables, or any obligation of either party under this work order require a written change order (a "change order") substantially in the form attached in the Statement of Work. Either party's project manager may initiate a change order by submitting a written request for a change order to the other party's project manager along with an explanation of why the modification is desirable or necessary. To be effected a change order must (i) be signed by both parties, and (ii) contain a description of any change to the services, service deliverables, schedule, resource allocation and availability, fees, expenses or other requirements of the work order or any other obligations of either party.
10. **Cost or pricing data.** We will not, under any circumstances, accept work that would require the submission of cost or pricing data.

# Statement of Work

## Hybrid Cloud Foundation

**Prepared for**

County of PIMA, Arizona

**Prepared by**

Paul Wu, Solution Architect

Date: March 19, 2019

Version: 2.0

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This Statement of Work (SOW) and any exhibits, appendices, schedules, and attachments to it are made pursuant to Work Order T002192-220586-257848 and describes the work to be performed (Services) by Microsoft ("us," "we") for County of PIMA, Arizona ("PIMA", "Customer," "you," "your") relating to Hybrid Cloud Foundation (project).

This SOW and the associated Work Order expire 30 days after their publication date, unless signed by both parties or formally extended in writing by Microsoft.

## Introduction

In this project, Microsoft will assist PIMA as it seeks to integrate Azure capabilities into its environment. The project will help the Customer establish a foundational understanding of Azure, discuss and document an initial design, establish initial external connectivity, setup a pair of Active Directory domain controllers in Azure IaaS, integrate AD DS with Azure Active Directory, configure AD FS, and begin implementing and configuring its Azure environment.

## 1. Project objectives and scope

### 1.1. Objectives

The objectives of this project are listed by module in the following table.

Module	Objectives
Core Azure design (Hybrid Cloud Foundation core)	<ul style="list-style-type: none"><li>• Establish Azure as a platform for cloud-based applications and services.</li><li>• Focus on core Azure design components as defined in the General project scope section.</li><li>• Assist the Customer with implementing its core Azure design within the limits specified in the General project scope section.</li></ul>
Azure Infrastructure as a Service (IaaS) design (Hybrid Cloud Foundation IaaS)	<ul style="list-style-type: none"><li>• Extend the Customer's core Azure design with Azure Infrastructure as a Service (IaaS) capabilities to enable virtual machine related resources and workloads.</li><li>• Focus on Azure IaaS design components as defined in the General project scope section.</li><li>• Assist the Customer with implementing its core Azure design within the limits specified in the General project scope section.</li></ul>

### 1.2. Areas in scope

#### 1.2.1. General project scope

Microsoft will provide Services in support of the following scope for the core Azure design module.

Work Area	Description	Assumptions
Workshop	<p>Microsoft will conduct an architectural design session to guide your design decisions. This work includes presentations, discussions, and creating and reviewing documents. The core Azure design module addresses the following topics:</p> <ul style="list-style-type: none"> <li>• Overview and approach</li> <li>• Envisioning and service overview</li> <li>• Subscriptions and operations</li> <li>• Naming standards design</li> <li>• Networking</li> <li>• Network security</li> <li>• Identity</li> <li>• Security</li> <li>• Monitoring</li> </ul>	<p>The workshop will be delivered at the at the start of the Plan phase and conclude before end of the Plan phase</p> <p>Exact schedule and attendees will be determined during the engagement initiation phase and the kick off meeting.</p>
Implementation of the core Azure design using Resource Manager	<p>Microsoft will assist the Customer with implementing its core Azure design using sample Resource Manager templates.</p> <ul style="list-style-type: none"> <li>• 1 Azure virtual network model</li> </ul>	
Configure Azure subscriptions and administrators	<p>Microsoft will assist the Customer with the configuration of:</p> <ul style="list-style-type: none"> <li>• Up to 3 Azure subscriptions</li> <li>• The defined naming standards</li> <li>• The Azure resource groups required to support the subscription design</li> <li>• Up to 3 role-based access control (RBAC) roles that use built-in Azure RBAC role definitions</li> </ul>	
Configure Azure external network connectivity	<p>Microsoft will assist the Customer with the configuration of:</p> <ul style="list-style-type: none"> <li>• The Azure portion of a site-to-site virtual private network</li> </ul>	<p>Microsoft will not configure the physical routers or network virtual appliances.</p>
Configure Azure networking	<p>Microsoft will assist the Customer with the configuration of:</p> <ul style="list-style-type: none"> <li>• Up to 3 Azure virtual networks, address space, and subnets</li> <li>• Name resolution using Domain Name System (DNS)</li> <li>• Virtual network-to-virtual network connectivity</li> <li>• Network security settings (such as network security group settings, force tunneling, and egress planning)</li> </ul>	<p>Microsoft will not configure the physical routers or network virtual appliances.</p>



Work Area	Description	Assumptions
Configure AD FS	<p>Microsoft will assist the Customer with the configuration of:</p> <ul style="list-style-type: none"> <li>• Installation and configuration of AD FS and Web Application Proxy (WAP) roles will be performed on up to two (2) servers in one (1) Customer datacenter.</li> <li>• Configure a new AD FS farm using Windows Internal Database (WID).</li> </ul>	
Configure Azure identity	<p>Microsoft will assist the Customer with the configuration of:</p> <ul style="list-style-type: none"> <li>• Installation and configuration of Azure Active Directory Connect (AADC) synchronization to Customer specifications on up to 2 servers (1 primary and 1 staging), limited to options that are configurable through the Azure Active Directory Connect configuration wizard</li> <li>• Configuration of Azure Active Directory authentication using password hash synchronization, or federated authentication</li> <li>• Federation on the Azure Active Directory tenant</li> </ul>	Assumes AADC is installed in Azure IaaS. If installed on-premises, Customer must provide server before Build Phase.
Configure Azure monitoring	<p>Microsoft will assist the Customer with the configuration of:</p> <ul style="list-style-type: none"> <li>• Azure portal monitoring (alerts, thresholds, and operational monitoring).</li> </ul>	
Solution demonstration session	Microsoft will lead 1 solution demonstration session with Customer staff to provide informal knowledge transfer and share recommended solution-operating practices.	The solution demonstration will occur during 2 days of the Stabilize phase.

Microsoft will provide Services in support of the following scope for the Azure IaaS design module.

Work Area	Description	Assumptions
Workshop	<p>Microsoft will conduct an architectural design session to guide your design decisions. This work includes presentations, discussions, and creating and reviewing documents. The Azure IaaS design module addresses the following topics:</p> <ul style="list-style-type: none"> <li>• Overview and approach</li> <li>• Envisioning and service overview</li> <li>• Subscriptions and operations</li> <li>• Naming standards design</li> <li>• Storage</li> <li>• Networking</li> <li>• Network security</li> <li>• Compute IaaS</li> <li>• Monitoring</li> <li>• Maintenance</li> <li>• Automation</li> <li>• Backup</li> </ul>	<p>The workshop will be delivered at the at the start of the Plan phase and conclude before end of the Plan phase</p> <p>Exact schedule and attendees will be determined during the engagement initiation phase and the kick off meeting.</p>
Implementation of the Azure IaaS design using Resource Manager	<p>Microsoft will assist the Customer with implementing its core Azure design using sample Resource Manager templates.</p> <ul style="list-style-type: none"> <li>• 1 Azure storage account model</li> <li>• 1 Azure virtual network model</li> <li>• 1 virtual machine workload</li> </ul>	
Configure Azure networking	<p>Microsoft will assist the Customer with the configuration of:</p> <ul style="list-style-type: none"> <li>• Up to 3 Azure virtual networks, address space, and subnets</li> <li>• Name resolution using Domain Name System (DNS)</li> <li>• Virtual network to virtual network connectivity</li> <li>• Network security settings (such as network security group settings, force tunneling, and egress planning).</li> </ul>	<p>Microsoft will not configure the physical routers or network virtual appliances.</p>

Work Area	Description	Assumptions
Configure Azure storage	<p>Microsoft will assist the Customer with the configuration of:</p> <ul style="list-style-type: none"> <li>• The base storage account stamp</li> <li>• Storage account management and monitoring capabilities</li> <li>• Up to 2 custom server images (achieved by uploading Customer's existing images into the Azure subscription)</li> <li>• Up to 1 Azure Files instance as a central file sharing service</li> <li>• Data protection mechanisms for storage</li> </ul>	If an Azure-supported custom image cannot be made available to support the timeline of the project, an existing gallery image will be used.
Configure Azure identity	<p>Microsoft will assist the Customer with the configuration of:</p> <ul style="list-style-type: none"> <li>• Extend the on-premises Active Directory Domain Services (AD DS) Domain Controllers to Azure, up to two (2) Domain Controller Virtual Machines in Azure.</li> </ul>	
Configure Azure compute (IaaS)	<p>Microsoft will assist the Customer with the configuration of:</p> <ul style="list-style-type: none"> <li>• 1 virtual machine-based workload in Azure</li> <li>• Using the Customer's custom server image, if uploaded during the implement storage workstream—else using gallery images</li> <li>• Based on a sample Resource Manager template</li> <li>• Resource Manager template configuration and customization effort time-boxed to 4 days in the build phase</li> </ul>	
Configure Azure management and monitoring	<p>Microsoft will assist the Customer with the configuration of:</p> <ul style="list-style-type: none"> <li>• Azure Portal monitoring (alerts, thresholds, and operational monitoring)</li> <li>• Log Analytics</li> <li>• Azure Backup for up to 10 Azure IaaS virtual machines</li> </ul>	
Solution demonstration session	<p>Microsoft will lead 1 solution demonstration session with Customer staff to provide informal knowledge transfer and share recommended solution-operating practices.</p>	The solution demonstration will occur during 2 days of the Stabilize phase.

Microsoft will provide Services in support of the following scope for the Azure Operations Introduction module.

Work Area	Description	Assumptions
Workshop	Microsoft will conduct workshops and knowledge exchange sessions with the Customer that cover the following cloud operations topics: <ul style="list-style-type: none"><li>• Service readiness</li><li>• Process readiness</li><li>• Operational readiness</li><li>• Cost optimization for cloud</li></ul>	Delivered over a 1-week period (40 hours) within the Plan or Build phases.

### 1.2.2. Software products and technologies

The products and technology that are listed in the following table are required for project implementation. The Customer is responsible for obtaining all identified licenses and products.

Product and technology item	Version	Ready by
Up to 3 Azure subscriptions based on the selected Azure subscription model	Not applicable	Project start date

### 1.2.3. Environments

The following environments will be required to deliver the project.

Environment	Location	Responsibility	Ready by
Azure	Customer-selected Azure region	Customer	Project start date

### 1.2.4. Testing and defect remediation

#### Testing

Microsoft will assist with the following testing as part of this SOW.

In the Plan phase of the project, Microsoft will conduct a workshop that focuses on planning test cases and the exit criteria. Following these decisions, a high-level test plan will be created to guide testing activities related to the Resource Manager templates that were created as outputs of the design and planning sessions. The test plan typically consists of a Microsoft Excel workbook that lists up to five test cases, expected results, and observed results. Testing is focused on Customer-specific scenarios as opposed to generic testing of Azure fundamentals. Testing activities that are related to test cases are time-boxed (that is, not to exceed) a total of five business days. This means that after five business days, if

additional testing effort is necessary, it is subject to the Change management process defined later in this document.

The following testing is included in the scope of the project. If the Customer has responsibility for testing, the Microsoft effort to support that activity is identified. If additional time is needed for Microsoft testing support, it can be requested through the Change management process described in this SOW.

Test type (environment)	Description	Responsibility		
		Has responsibility for testing?	Provides data or test cases	Provides guidance and support
System testing (Azure)	System testing focuses on determining whether functionality meets design. Test cases are based on the functional specification document.	Microsoft	Customer	Customer

## Defect remediation

If defects are identified during testing, the priority of the item will be jointly agreed upon by the Customer and Microsoft. Defect prioritization is defined in the following table.

Priority	Description	Remediation in scope?
P1	<b>Blocking defect</b> Development, testing, or production launch cannot proceed until this type of defect is corrected. A defect of this type blocks further progress in this area. The solution cannot ship, and the project team cannot achieve the next milestone until such a defect is corrected.	Yes
P2	<b>Significant defect</b> This type of defect must be fixed prior to moving to production. Such a defect, however, will not affect test plan implementation.	Yes
P3	<b>Important defect</b> It is important to correct this type of defect. However, it is possible to move forward into production using a workaround.	No; the problem will be logged. Remediation will be performed through an agreed-upon change request only.
P4	<b>Enhancements and low priority defects</b> P4 defects consist of feature enhancement and cosmetic defects. These include design requests that vary from original concepts.	No; the problem will be logged. Remediation will be performed through an agreed-upon change request only.

## 1.3.Areas out of scope

Any area not explicitly included in the Areas in scope section is out of scope for Microsoft during this project. Areas out of scope for this project are listed in the following table.

Area	Description
Active Directory configuration	Configuration of AD DS, AD FS, and Azure Active Directory, beyond that which is explicitly required to support Azure integration, is out of scope.
Azure Active Directory configuration	<ul style="list-style-type: none"><li>• Implementation of the Azure Active Directory seamless single sign-on (SSO)</li><li>• Installation of the Azure Active Directory Connect Health Agent</li><li>• Implementation of Azure Active Directory business-to-business (B2B)</li><li>• Implementation of Conditional Access</li><li>• Changes to individual group objects to accommodate self-service management in Azure Active Directory, including conversion of synchronized groups to cloud-based groups, is out of scope.</li></ul>
Custom automation development	Creation of automation or scripts for deployment, management, or other purposes is out of scope. Microsoft, however, might share sample automation or scripts to use as a reference. Any extension or customization of this code is out of scope.
Product licenses and subscriptions	Product licenses (Microsoft or non-Microsoft) and cloud service subscriptions are not included.
Hardware	Microsoft will not provide hardware for this project.
Networking	Configuration of physical network devices, such as routers and firewalls, and virtual network appliances deployed on Azure is out of scope.
Integration with third-party software	Microsoft will not be responsible for integration with third-party software.
Data migration	Data migration activities are not in scope for this project.
System integration	System integration and interfaces are not in scope for this project.
Product bugs and upgrades	Product upgrades, bugs, and design change requests for Microsoft products are not in scope for this project.
Source code review	The Customer will not provide Microsoft with access to non-Microsoft source code or source code information. For any non-Microsoft code, Microsoft Services will be limited to the analysis of binary data, such as a process dump or network monitor trace.
Process reengineering	Designing functional business components of the solution is not included.

Area	Description
Organizational change management	Designing—or redesigning—the Customer's functional organization is not included.
Certification and accreditation	Customer regulatory compliance certification and accreditation activities outside of general support for existing Customer processes are out of scope.

## 2. Project approach, timeline, and deliverable acceptance

### 2.1.Approach

The project will be structured following the Microsoft solution delivery methodology across four distinct phases: Envision, Plan, Build, Stabilize. Each phase has distinct activities and deliverables that are described in the following sections.

If a deliverable requires formal review and acceptance (a process described in the Deliverable acceptance process section), this is indicated in the following sections.



#### 2.1.1. Engagement initiation

Before beginning the project, the following prerequisites must be completed.

Category	Description
<b>Microsoft activities</b> The activities to be performed by Microsoft	<ul style="list-style-type: none"> <li>Conduct a preinitiation call to initiate team formation and communicate expectations.</li> <li>Conduct a detailed walk-through of the SOW with the Customer to agree on an initial project schedule and approach.</li> <li>Communicate the project prerequisites using input from this SOW.</li> <li>Track the status of launch prerequisites and adjust the engagement initiation phase start date accordingly.</li> </ul>
<b>Customer activities</b> The activities to be performed by the Customer	<ul style="list-style-type: none"> <li>Attend and participate in the preinitiation call.</li> <li>Assign project initiation and launch prerequisite responsibilities to accountable Customer leadership and establish target completion dates.</li> <li>Complete the project initiation and launch prerequisites.</li> <li>Staff the project with the required Customer resources in the time frames that were agreed upon in the preinitiation call.</li> </ul>

Category	Description
	<ul style="list-style-type: none"> <li>Site-readiness activities that are a prerequisite for the completion of Microsoft Services tasks (such as hardware deployment) will be completed before the start of the engagement. Failure to complete site-readiness activities that are required for Microsoft to deliver its Services according to the agreed-upon project schedule can result in project delays requiring change orders to this project and additional project costs.</li> <li>Customer networking staff will be responsible for ExpressRoute or VPN setup and configuration.</li> <li>Validate that an Azure-certified VPN endpoint is in place (supported devices list at <a href="https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-about-vpn-devices">https://docs.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-about-vpn-devices</a>). The network device must be updated with the latest firmware, and have required routes, port allocations, and IP addressing to facilitate connectivity to Azure. Provide a network border configuration that facilitates access to at least TCP 80, 443, and 3389 across Azure datacenters. Other specific ports, protocols, and destinations can be determined jointly during the Plan phase.</li> </ul>

### 2.1.2. Envision

During the Envision phase, the team (Microsoft and the Customer) will reach agreement on a shared vision for the project and the specific scope that will be required to make that vision a reality.

Category	Description
<b>Microsoft activities</b> The activities to be performed by Microsoft	<ul style="list-style-type: none"> <li>Lead a formal project kickoff meeting to begin onsite activities. The kickoff itself can be held remotely.</li> <li>Discuss the project objectives, structure, timeline, and team.</li> <li>Begin capturing the Customer's vision and requirements for the Customer's core Azure design.</li> </ul>
<b>Customer activities</b> The activities to be performed by the Customer	<ul style="list-style-type: none"> <li>Discuss the project objectives, structure, timeline, and team.</li> <li>Discuss the vision and requirements for your core Azure design.</li> <li>Verify that prerequisites are met to connect the Customer datacenter to Azure. Either an ExpressRoute or a VPN connection is required at the beginning of the engagement.</li> <li>Procure a non-trial Azure subscription or verify that an Azure enrollment is in place.</li> <li>Determine and coordinate the timing of, and key personnel availability for, the design sessions.</li> <li></li> </ul>



## Deliverables

Name	Description	Acceptance required?	Responsibility
Workshop agenda and schedule	Describes the workshop schedule and attendees	No	Microsoft
Project plan	Describes the project timeline and tasks.	No	Microsoft

### 2.1.3. Plan

During the Plan phase, the team will develop a detailed plan for the project that includes a list of activities that are to be completed and the project schedule.

Category	Description
<b>Microsoft activities</b> The activities to be performed by Microsoft	<ul style="list-style-type: none"> <li>Conduct design sessions that help guide your design decisions to align your requirements with Azure capabilities.</li> <li>Assist the Customer with the implementation of the Office 365 IdFix directory synchronization error remediation tool to identify conflicts and formatting errors in AD DS that need to be remediated prior to directory synchronization.</li> <li>Produce a preparation checklist that details the tasks that must be completed to facilitate implementation of the integration solution, including the resources that must be procured</li> <li>Document the design decisions in a workshop report and a design document.</li> </ul>
<b>Customer activities</b> The activities to be performed by the Customer	<ul style="list-style-type: none"> <li>Participate in the design sessions, document creation, and document review.</li> <li>Facilitate additional meetings with additional experts and stakeholders as determined during the design sessions.</li> <li>Make the required environmental changes if identified during the design sessions.</li> <li>Verify that your existing infrastructure AD DS, Azure Active Directory, DNS, and other dependent infrastructure is deployed in a supported configuration.</li> </ul>
<b>Key assumptions</b>	<ul style="list-style-type: none"> <li>Any required environmental changes must be made in a manner that supports the overall schedule. Delays in making required changes can affect the overall schedule and require a change order.</li> <li>The Customer environment must be ready for the Build phase.</li> </ul>

## Deliverables

Name	Description	Acceptance required?	Responsibility
Workshop presentations	The presentations used during the design sessions will be shared.	No	Microsoft
Workshop report	Captures the decisions taken during the design sessions.	No	Microsoft
Design document	Describes your core Azure design. Focuses on the areas covered during the design sessions.	Yes	Microsoft
Test plan	Documents planned tests and results required to validate the Azure design.	No	Microsoft
Operations recommendations summary	Outlines the gaps identified in the Azure Operations processes to be used for adopting Azure.	No	Microsoft
Preparation Checklist	A Microsoft Excel spreadsheet that documents the tasks that must be completed by the Customer and the resources that must be procured to facilitate the completion of in-scope work.	No	Microsoft

### 2.1.4. Build

During the Build phase, the team will build all the aspects of the solution and prepare it for final testing.

Category	Description
<b>Microsoft activities</b> The activities to be performed by Microsoft	<ul style="list-style-type: none"> <li>Assist you with the configuration of Azure within the limits defined in the General project scope section.</li> <li>Assist you with the implementation of your core Azure design as documented in your Azure design document.</li> <li>Assist you with the development of sample Resource Manager templates within the limits defined in the General project scope section.</li> </ul>
<b>Customer activities</b> The activities to be performed by the Customer	<ul style="list-style-type: none"> <li>Confirm that key personnel have been identified and their time has been allocated.</li> <li>Perform Azure configuration activities with assistance from Microsoft.</li> <li>Answer questions and provide requested data during implementation.</li> </ul>

## Deliverables

Name	Description	Acceptance required?	Responsibility
Operating system image	Your standard operating system environment as an image file in Azure within the limits defined in the General project scope section	Not applicable	Customer
Resource Manager templates	Codification of your core Azure design within the limits defined in the General project scope section above	No	Microsoft

### 2.1.5. Stabilize

During the Stabilize phase, the team will focus on testing the solution and preparing it for release.

Category	Description
<b>Microsoft activities</b> The activities to be performed by Microsoft	<ul style="list-style-type: none"> <li>• Validate Resource Manager templates and core Azure design by assisting with testing activities as defined in the test plan and Testing and defect remediation section.</li> <li>• Lead a demonstration of the solution that includes recommended operations and management practices to the Customer staff.</li> <li>• Conduct the closeout meeting.</li> </ul>
<b>Customer activities</b> The activities to be performed by the Customer	<ul style="list-style-type: none"> <li>• Identify and coordinate key personnel who can participate in the testing.</li> <li>• Conduct all testing to review features and functionality.</li> <li>• Facilitate communication, information, and coordination needed for testing across teams.</li> <li>• Perform operational transition of the Azure subscription. <ul style="list-style-type: none"> <li>○ Develop and communicate the support strategy, procedures, and information required by the Customer's help desk and field technical support.</li> <li>○ Submit and obtain approvals for the change control processes required for production deployment in subsequent phases.</li> </ul> </li> <li>• Participate in the closeout meeting.</li> </ul>

## Deliverables

Name	Description	Acceptance required?	Responsibility
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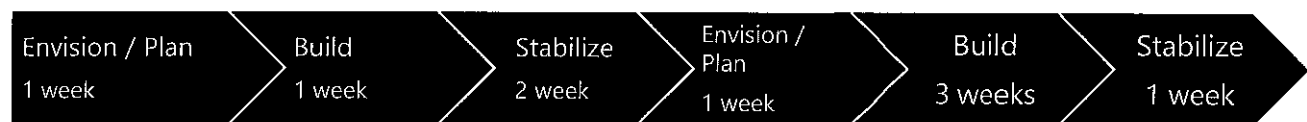
Completed test plan	Documents the results of the conducted test.	Yes	Microsoft
Configured Azure environment	Your core Azure environment, configured within the limits defined the General project scope section.	No	Microsoft

## 2.2. Timeline

During project planning, a detailed timeline will be developed. All dates and durations are relative to the project start date and are estimates only.

Core Azure design module (HCF core)

Plus, Azure IaaS design (HCF IaaS)



## 2.3. Deliverable acceptance process

During the project, Microsoft will submit certain deliverables (listed in the Approach section as deliverables with "Acceptance required?" equal to "Yes") for the Customer's review and approval.

Within three business days of the date of submittal, the Customer is required to:

- **Accept the deliverable** by signing, dating, and returning a service deliverable acceptance form, which can be sent by email, or by using (or partially using) the deliverable  
Or
- **Reject the deliverable** by notifying Microsoft in writing; the Customer must include a complete list of reasons for rejection.

Deliverables shall be deemed accepted unless the written rejection notification is received by Microsoft in the time frame specified.

If a rejection notification is received, Microsoft will correct problems with a deliverable that are in scope for the project (and documented in this SOW), after which the deliverable is deemed accepted.

Problems that are outside the scope of this SOW, and feedback provided after a deliverable has been accepted, will be addressed as a change request, managed as described in the Change management process section.

## 2.4. Project governance

The governance structure and processes the team will adhere to for the project are described in the following sections:

### 2.4.1. Project communication

The following will be used to communicate during the project:

- **Communication plan:** this document will describe the frequency, audience, and content of communication with the team and stakeholders. It will be developed by Microsoft and the Customer as part of project planning.
- **Status reports:** the Microsoft team will prepare and issue regular status reports to project stakeholders according to the frequency defined in the communication plan.
- **Status meetings:** the Microsoft team will schedule regular status meetings to review the overall project status, the acceptance of deliverables, and review open problems and risks.

## 2.4.2. Risk and issue management

The following general procedure will be used to manage active project issues and risks during the project:

- **Identify:** identify and document project issues (current problems) and risks (potential problems that could affect the project).
- **Analyze and prioritize:** assess the potential impact and determine the highest priority risks and problems that will be actively managed.
- **Plan and schedule:** determine the strategy for managing priority risks and issues and identify a resource who can take responsibility for mitigation and remediation.
- **Track and report:** monitor and report the status of risks and problems.
- **Escalate:** escalate to project sponsors the high impact problems and risks that the team is unable to resolve.
- **Control:** review the effectiveness of risk and issue management actions.

Active issues and risks will be regularly monitored during the project.

## 2.4.3. Change management process

During the project, either party can request, in writing, additions, deletions, or modifications to the Services described in this SOW ("change"). Approved changes will be managed through amendments and could lead to additional costs and schedule impacts. We shall have no obligation to commence work in connection with any change until the details of the change are agreed upon in an amendment signed by the authorized signatories from both parties.

Within three consecutive business days of receipt of the proposed amendment, you must either indicate acceptance of the proposed change by signing the amendment or advise us not to perform the change. If you advise us not to perform the change, we will proceed with the original agreed-upon Services only. In the absence of your acceptance or rejection within the previously noted time frame, we will not perform the proposed change.

## 2.4.4. Escalation path

The Microsoft project manager will work closely with the Customer project manager, sponsor, and other designees to manage project issues, risks, and change requests as described previously. The Customer will provide reasonable access to the sponsor or sponsors to expedite resolution. The standard escalation path for review, approval, or dispute resolution is as follows:

- Project team member (Microsoft or the Customer)

- Project manager (Microsoft and the Customer)
- Microsoft delivery manager
- Microsoft and the Customer project sponsor

## 2.5. Project completion

The project will be considered complete when at least one of the following conditions is met:

- All Microsoft deliverables that require acceptance have been delivered and accepted (or deemed accepted).
- The Work Order has been terminated.

## 3. Project organization

### 3.1. Project roles and responsibilities

The key project roles and the responsibilities are as follows.

#### Customer

Role	Responsibilities
<b>Project sponsor</b>	<ul style="list-style-type: none"> <li>• Make key project decisions.</li> <li>• Serve as a point of escalation to support clearing project roadblocks.</li> </ul>
<b>Project manager</b>	<ul style="list-style-type: none"> <li>• Serve as primary point of contact for the Microsoft team.</li> <li>• Manage the overall project.</li> <li>• Deliver the project on schedule.</li> <li>• Take responsibility for Customer resource allocation, risk management, and project priorities.</li> <li>• Communicate with executive stakeholders.</li> </ul>
<b>Technical team lead</b>	<ul style="list-style-type: none"> <li>• Serve as primary technical point of contact.</li> <li>• Take responsibility for technical architecture and driving decisions that facilitate the Azure design creation.</li> <li>• Coordinate the installation and configuration activities of the required hardware elements.</li> </ul>
<b>Network lead</b>	<ul style="list-style-type: none"> <li>• Serve as the primary point of contact for subject area.</li> <li>• Verify connectivity to Azure, VPN, or ExpressRoute.</li> <li>• Take responsibility for managing and performing the installation and configuration of subject area components.</li> </ul>
<b>Storage or backup lead</b>	<ul style="list-style-type: none"> <li>• Serve as the primary point of contact for the subject area.</li> <li>• Take responsibility for managing and performing the installation and configuration of subject area components.</li> </ul>

Role	Responsibilities
<b>Security lead</b>	<ul style="list-style-type: none"> <li>• Serve as the primary point of contact for the subject area.</li> <li>• Take responsibility for managing and performing the installation and configuration of subject area components.</li> </ul>
<b>Identity or Active Directory lead</b>	<ul style="list-style-type: none"> <li>• Serve as the primary point of contact for the subject area.</li> <li>• Take responsibility for managing and performing the installation and configuration of subject area components.</li> </ul>
<b>Operations lead</b>	<ul style="list-style-type: none"> <li>• Serve as the primary point of contact for the subject area.</li> <li>• Verify that Azure Services will be integrated in existing management environment</li> <li>• Take responsibility for managing and performing the installation and configuration of subject area components.</li> </ul>
<b>Application or workload lead</b>	<ul style="list-style-type: none"> <li>• Serve as primary point of contact for the subject area.</li> <li>• Provide insights into current or planned workloads deployed on Azure.</li> <li>• Take responsibility for managing and performing the installation and configuration of subject area components.</li> </ul>

## Microsoft

Role	Responsibilities
<b>Delivery manager</b>	<ul style="list-style-type: none"> <li>• Manage and coordinate the overall Microsoft project.</li> <li>• Serve as a single point of contact for escalations, billing issues, personnel matters, and contract extensions.</li> </ul>
<b>Microsoft project manager</b>	<ul style="list-style-type: none"> <li>• Manage and coordinate Microsoft project delivery.</li> <li>• Take responsibility for issue and risk management, change management, project priorities, status communications, and status meetings.</li> <li>• Coordinate Microsoft and Microsoft subcontractor resources but not Customer resources.</li> </ul>
<b>Microsoft Azure architect</b>	<ul style="list-style-type: none"> <li>• Lead the design sessions and deliver selected workshops.</li> <li>• Take responsibility for the Azure design document.</li> <li>• Assist with Azure configuration and other solution build activities.</li> <li>• Assist with solution testing.</li> <li>• Support the solution walk-through.</li> </ul>
<b>Microsoft Azure consultants</b>	<ul style="list-style-type: none"> <li>• Deliver the design sessions.</li> <li>• Lead Azure configuration and other solution build activities.</li> <li>• Lead solution development activities.</li> <li>• Lead solution testing.</li> <li>• Lead the solution walk-through.</li> </ul>

## 4. Customer responsibilities and project assumptions

### 4.1. Customer responsibilities

In addition to Customer activities defined in the Approach section, the Customer is also required to:

- Provide information.
  - This includes accurate, timely (within three business days or as mutually agreed upon), and complete information.
- Provide access to people and resources.
  - This includes access to knowledgeable Customer personnel, including business user representatives, and access to funding if additional budget is needed to deliver project scope.
  - Identify key personnel (stakeholders, decision makers, architects, and subject matter specialists) to participate in the workshops, design sessions, and testing activities described in the Approach section.
- Confirm key personnel availability and coordinate their participation.
  - Key personnel will attend workshops and design sessions to provide requirements and participate in the discussions and decision making.
  - Key personnel identified to participate must be empowered to make decisions on behalf of the organization, and to engage with and coordinate with other teams.
- Provide access to systems.
  - This includes access to all necessary Customer work locations, networks, systems, and applications (remote and onsite).
- Provide a work environment.
  - This consists of suitable work spaces, including desks, chairs, and Internet access.
- Manage non-Microsoft resources.
  - The Customer will assume responsibility for the management of all Customer personnel and vendors who are not managed by Microsoft.
- Manage external dependencies.
  - The Customer will facilitate any interactions with related projects or programs to manage external project dependencies.

### 4.2. Project assumptions

The project scope, Services, fees, timeline, and our detailed solution are based on the information provided by the Customer to date. During the project, the information and assumptions in this SOW will be validated, and if a material difference is present, this could result in Microsoft initiating a change request to cover additional work or extend the project duration. In addition, the following assumptions have been made:

- If there is a stoppage gap in project timelines, then new resources may have to be on boarded resulting in a Change Request and/or a delay in staffing the project again.
- Work day:
  - The standard work day for the Microsoft project team is between 8:00 AM and 5:00 PM, Monday through Friday.



- Standard holidays:
  - Observance of consultants' country-of-residence holidays is assumed and has been factored into the project timeline.
- Remote working:
  - The Microsoft project team may perform Services remotely.
  - If the Microsoft project team is required to be present at the Customer location on a weekly basis, resources will typically be on site for three nights and four days, arriving on a Monday and leaving on a Thursday.
- Language:
  - All project communications and documentation will be in English. Local language support and translations will be provided by the Customer.
- Staffing:
  - If necessary, Microsoft will make staffing changes. These can include, but are not limited to, the number of resources, individuals, and project roles.
- Informal knowledge transfer:
  - Customer staff members who work alongside Microsoft staff will be provided with information knowledge transfer throughout the project. No formal training materials will be developed or delivered as part of this informal knowledge transfer.

# Microsoft Consulting Services Work Order

<b>(For Microsoft Internal Purposes Only)</b>  <b>MCS (SLG WO Fixed-Price)- (Public Sector)</b>	Work Order Number: T002192-221017-258378
	Project Code:
	Client ID:
	Client Type:
	Vertical Industry: State and Local Government
	Customer Purchase Order Number:

This work order is made pursuant to that certain Microsoft Master Services Agreement (the "agreement") effective as of \_\_\_\_\_, by and between the undersigned customer ("you") and the undersigned Microsoft affiliate ("we," "us," or "our"). The terms of the agreement are incorporated herein by this reference. Any terms not otherwise defined herein will assume the meanings set forth in the agreement. This work order is comprised of this cover page and the work order terms below, which are incorporated herein by this reference.

<i>Customer Invoice Information</i>		
Name of Customer	Pima County, AZ	
	A/P Contact Name (This person receives invoices under this work order.) Finance & Risk Management - Accounts Payable	
Street Address	Contact	
P.O. Box 791	E-mail	
	Address	
City	State/Province	Phone
Tucson	AZ.	
Country	Postal Code	Fax
United States	85701	
<i>Invoicing</i>		
We will invoice you according to our fiscal monthly billing schedule for services performed and expenses incurred during the previous period. Our invoices for payment will be directed to your representative for payment at the address shown above.		
<b>Source to confirm Per Diem limits – hotel, rental car, meals, etc. (if applicable):</b>		
Contact Name:	Contact E-mail address:	Contact phone No.:
Web site address:		
<i>Period of Performance</i>		
Services under this work order will commence on the Effective Date herein. This work order will expire on <u>June 30, 2019</u> . In order for us to continue work after the expiration date, you and we must agree in writing to a new work order or an amendment to this work order identifying the new expiration date and any other terms upon which you and we agree. During delivery of this engagement, the parties agree to review and re-evaluate the delivered services under standard change management.		
<b>Payments to Microsoft should be made to the following, include reference to our invoice number:</b> <b>By Check: Microsoft Enterprise Services, P.O. Box 844510, Dallas, TX 75284-4510, or if by overnight delivery, Microsoft Enterprise Services, Lockbox #844510, 1401 Elm Street, Fifth Floor, Dallas, TX 75202</b> <b>By Wire: Microsoft Enterprise Services #844510, Acct 3750825354/ ABA#0260-0959-3, Bank of America, N.A.</b> <b>By ACH: Microsoft Enterprise Services, Acct#3750825354/ ABA#11100001-2, Bank of America, N.A.</b>		

☐ **Attachments required with Invoice (Status Reports/Time /Expense Breakouts, Other):**

*Place of Performance/Project Point of Contact(Customer Satisfaction Contact)*

Name of Customer    Same as above.		Project leader (This person is your point of contact for all service-related matters under this work order.) Timothy W Rolston	
Street Address 33 N. Stone Ave., 14th Floor		Contact E-mail Address: tim.rolston@pima.gov	
City Tucson	State/Province AZ.	Phone 520-724-7202	
Country USA	Postal Code 85701	Fax	

By signing below the parties acknowledge and agree to be bound to the terms of the agreement and this work order.

<i>Customer</i>	<i>Microsoft Affiliate</i>
Name of Customer (please print) <b>Pima County, AZ</b>	Name <b>Microsoft Corporation</b>
Signature	Signature
Name of person signing (please print)	Name of person signing (please print) David T. Gallagher
Title of person signing (please print)	Title of person signing (please print) Director of Contracts
Signature date	Signature date

1. **Scope of services.** We will perform the services, and if applicable, the milestones, service deliverables and acceptance criteria for the service deliverables, for you as described in the Statements of Work, entitled "**Enhanced Security Administrative Environment**" and "**Privileged Access Management**", attached and incorporated herein. "Service deliverables" means computer code and related materials, other than fixes, we provide to you when performing services. The acceptance process that applies to the services is set forth in Section 6 below. Most of the services will be performed at the place of performance identified on the cover page or at such other facility as you specify in writing. Some services may be performed off-site at our facilities. All off-site services will be coordinated with your project leader for the services.
2. **Customer responsibilities.**
  - a. **General.** In addition to your obligations set forth in the agreement and elsewhere in this work order, you will provide the following, at your expense:
    - (1) access to and the right to use your facilities reasonably necessary for us to perform the services, including office space, telephones, internet access, computing systems and other IT infrastructure;
    - (2) access to and copies of relevant technical information or other project related information that is timely, current, accurate, and complete;
    - (3) provision of all your and third party products or services with all necessary consents and licenses for us to use under this work order which are not specifically identified in this work order as being provided by us but which are necessary for successful delivery of the services;
    - (4) access to and sufficient time with your technical, management and other personnel necessary for our performance of the services;
    - (5) systems or programs upon which the service deliverables depend that do not change during the term of this work order (except as may be agreed to in a change order); and
    - (6) any other responsibilities or duties that are generally a customer's responsibility in similar engagements; and
    - (7) all commercial product that is necessary for use of the service deliverable(s).
  - b. **Reliance on instructions.** In performing our obligations under this work order, we will rely upon any instructions, authorizations, approvals or other information provided to us by your project leader or by any other personnel identified by your project leader.
3. **Assumptions and dependencies.** See Section 1.A.5 of this work order.
4. **Project management.** Each party shall appoint and identify to the other party a project manager who shall be the person responsible on behalf of such party for the administration of this work order. Each party agrees to provide written notice to the other party if a successor project manager is subsequently appointed. The project managers or any other necessary personnel will meet as needed. The project managers and any successors will have the authority to make decisions with respect to actions to be taken under this work order and provide technical direction to us in performing the services.
5. **Fees.** This is a fixed-price work order in the amount of **\$804,000**. The **\$804,000** fixed price includes all fees and expenses. The total fee and, if applicable, periodic or phase fees, for all services to be provided as described in the Statement of Work, above, are set forth below. Upon completion of each phase, we will submit an invoice for the appropriate fee referenced below. You will pay us within thirty (30) calendar days of the date of our accurate invoice. In the event of any dispute with regard to a portion of an invoice, the undisputed portion shall be paid as provided herein.

**Invoicing Payment Schedule**

<b>Milestone</b>	<b>Invoice Amount</b>
PAM: Envision Phase Complete	\$ 15,000
PAM: Plan Phase Complete	\$ 15,000
PAM: Build Phase Complete	\$ 36,000
PAM: Stabilize Phase Complete	\$ 24,000
PAM: Deploy Phase Complete	\$ 59,000
ESAE: Envision Phase Complete	\$ 74,000
ESAE: Plan Phase Complete	\$179,000
ESAE: Build Phase Complete	\$203,000
ESAE: Stabilize Phase Complete	\$ 57,000
ESAE: Deploy Phase Complete	\$142,000
<b>Total Amount</b>	<b>\$804,000</b>

**6. Acceptance of service deliverables.**

- a. **Acceptance process.** Upon completion and delivery of the service deliverables we will notify your Pima County Project Manager and commence the acceptance process as described in any agreed acceptance plan for the service deliverables. "Acceptance plan" means the agreed-upon process and procedures by which the parties will verify that the service deliverables meet the acceptance criteria, and "acceptance criteria" means the agreed upon objective standards by which the parties will verify that the service deliverables substantially meet the functional specification specified in this work order. Conformity to the acceptance criteria shall solely determine your right to accept or reject the service deliverables. You shall appoint personnel who shall attend and verify the results of the acceptance process. Within ten (10) days of completion of the acceptance testing, you will issue a written notice of acceptance or provide us with (i) a detailed list of any non-conformances and proposed steps necessary to address the non-conformances, and (ii) the appropriate personnel to assist us in correcting the non-conformities.
- b. **Acceptance.** Notwithstanding the foregoing, the service deliverable(s) will be deemed accepted by you if any of the following occur: (i) you fail to issue either a notice of acceptance or a list of non-conformances within ten (10) days after completion of the acceptance process; or a notice that all defects have been corrected; (ii) you delay commencement of the acceptance process for more than ten (10) days from the date we make the service deliverables available for acceptance; or (iii) you make productive use of the service deliverable(s) prior to completion of the acceptance process. Service deliverables for which no acceptance process or acceptance plan is specified shall be deemed accepted upon completion and delivery to you.
- c. **Cure process.** If a list of non-conformances is issued, we will notify you, in writing, of our concurrence or objections within ten (10) days of receipt of such list. We will have a commercially reasonable time to cure all agreed non-conformances. Within ten (10) days following the delivery of our notice that the non-conformances have been corrected, you will (i) issue us a written notice of acceptance, or (ii) if you do not concur, the project managers shall work together in good faith to resolve the dispute, with escalation to senior management for each party as necessary. If the dispute is not resolved within ten (10) days, the parties may agree to use non-binding, third-party mediation to help resolve such dispute(s). We are not obligated to provide any services until the

dispute is resolved and will not be liable for any resulting delay. The project schedule will be adjusted accordingly in the event a dispute causes a delay.

7. **Warranty for service deliverables.** We warrant that the service deliverables will materially conform to the functional specifications, if any, at the time of your acceptance and for a period of sixty (60) days thereafter, provided you notify us in writing of any non conformance within the sixty (60) day period. As our sole obligation and your exclusive remedy for breach of this warranty, we will, at our option, correct any material non-conformance in the service deliverables reported by you within the warranty period or refund the fees you paid us for the non-conforming service deliverables. If we investigate the claimed non-conformance and determine that the service deliverables conform, you will pay us for such investigative services at our then current published standard hourly rates. This warranty shall not apply if (i) the system(s) on which the service deliverables depend, is modified by you or a third party; (ii) is used improperly or (iii) if non-conformance is due to causes external to the services deliverable(s).
8. **Termination charges.** If we exercise our right to terminate this work order due to your material breach or default, or you terminate this work order (with or without cause), your obligation to pay us for services performed and expenses incurred prior to termination shall include the following:
  - a. any amounts previously invoiced but unpaid; and
  - b. fees for services performed through the termination date which have not been invoiced based on an equitable rate and/or equitable adjustment that the parties will mutually agree upon.
9. **Change order process.** All changes to the services, service deliverables, or any obligation of either party under this work order require a written change order (a "change order") substantially in the form attached in the Statement of Work. Either party's project manager may initiate a change order by submitting a written request for a change order to the other party's project manager along with an explanation of why the modification is desirable or necessary. To be effected a change order must (i) be signed by both parties; and (ii) contain a description of any change to the services, service deliverables, schedule, resource allocation and availability, fees, expenses or other requirements of the work order or any other obligations of either party.
10. **Cost or pricing data.** We will not, under any circumstances, accept work that would require the submission of cost or pricing data.

# Statement of Work

## Enhanced Security Administrative Environment

*Prepared for*

**County of PIMA**

March 19, 2019

Version 3.0 Final

*Prepared by*

**Jason Chrane**

Cybersecurity Architect

Contributors

Prior to the parties indicating final agreement by signing a Work Order, the information contained in this document represents the current view of Microsoft on the issues discussed as of the date of publication and is subject to change. Furthermore, prior to the signing of the Work Order, this document should not be interpreted as an invitation to contract or a commitment on the part of Microsoft. After the Work Order has been signed, changes to this document will be managed through the Change Management Process described in this document.

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## Introduction

This statement of work (SOW) and any exhibits, appendices, schedules, and attachments to it are made pursuant to the Work Order number T002192-221017-258378, the terms of which are incorporated herein by reference, by and between County of PIMA ("customer," "you," "your") and Microsoft Corporation ("Microsoft," "us," "we," "our") or Microsoft's affiliate, and sets forth the services to be performed by us related to Enhanced Security Administrative Environment ("project"). This SOW, together with the Work Order, represents the complete baseline for scope, services, Service Deliverables, and acceptance applicable to this project. All changes to this document will be managed in accordance with the Change Management Process defined below. Any terms not otherwise defined herein will assume the meanings set forth in the Work Order.

This SOW and the associated Work Order expire 30 days after their publication date, unless they have been formally extended in writing by Microsoft.

County of PIMA, like many organizations in both the commercial and government sectors, faces an increasingly challenging cyber threat environment. Attackers have become sophisticated in both attack methodologies and in navigating business/social structures to obtain the information they are seeking. These modern cyber-attackers are adept at rapidly gaining administrative access to computing environments.

Protecting against these attacks is a key priority for County of PIMA.

# 1 Project Objectives and Scope

## 1.1 Objectives

The objective of the project is to implement the Enhanced Security Administrative Environment (ESAE) to provide advanced protections for Tier-0 accounts (Domain Administrators, Enterprise Administrators, and equivalent) based upon Microsoft's recommended practices, architectures, and accumulated field experience. ESAE helps protect these Tier-0 accounts with dedicated administrative workstations, enhanced security controls and configurations, and a dedicated environment to administer identity within the organization.

## 1.2 Areas Within Scope

### 1.2.1 General Project Scope

Microsoft will provide the following services:

In-Scope	Description	Scope Assumptions
ESAE Design	<ul style="list-style-type: none"><li>Configure the ESAE reference architecture to fit County of PIMA environment</li></ul>	<ul style="list-style-type: none"><li>ESAE reference architecture and product set will be used</li><li>Environment contains up to 20 production Domain Controllers (DCs)</li></ul>
ESAE Administrative Workstation image	<ul style="list-style-type: none"><li>Implement one Administrative Workstation image</li></ul>	<ul style="list-style-type: none"><li>One device model will be used for Administrative Workstations</li></ul>
Network traffic security	<ul style="list-style-type: none"><li>Design and configure IP security (IPsec) and purpose-build Public Key Infrastructure (PKI) Certification Authority (CA) in ESAE environment</li></ul>	
Smart card configuration	<ul style="list-style-type: none"><li>Design, configure, and deploy up to 10 customer-supplied smart cards to County of PIMA administrators</li></ul>	<ul style="list-style-type: none"><li>One type of smart card will be used</li><li>Smart cards are compatible with the Microsoft Base Smart Card Cryptographic Service Provider standard</li><li>Distribution will not require travel</li></ul>

In-Scope	Description	Scope Assumptions
Security Alerting	<ul style="list-style-type: none"> <li>Plan and configure security alerting for ESAE and production Domain Controllers (DCs) using System Center Operations Manager and management agents</li> </ul>	<ul style="list-style-type: none"> <li>No custom tuning of supplied health monitoring is required</li> </ul>
Build and connect ESAE to production environment	<ul style="list-style-type: none"> <li>Build and configure ESAE environment</li> <li>Connect ESAE to one production domain</li> <li>Configure up to 4 DCs, located on up to 2 different network segments (subnets), for the ESAE environment</li> <li>Support customer configuration of up to 16 additional DCs for the ESAE environment</li> </ul>	<ul style="list-style-type: none"> <li>One production instance of ESAE will be deployed – the instance created and tested in the Build environment will be moved to the datacenter and connected to the production environment</li> </ul>
Document Operations Guide	<ul style="list-style-type: none"> <li>Document the recommended operational guidance and practices for using and maintaining the security infrastructure and systems within the ESAE</li> </ul>	<ul style="list-style-type: none"> <li>County of PIMA or a County of PIMA service partner will run and maintain the ESAE infrastructure</li> </ul>
Integrate Remote Access	<ul style="list-style-type: none"> <li>Integrate County of PIMA current remote access software into the solution's Administrative Workstation image</li> </ul>	<ul style="list-style-type: none"> <li>Remote access software is compatible with the Administrative Workstation OS and native OS IPSec functionality</li> </ul>
Implement ESAE on VMWare	<ul style="list-style-type: none"> <li>Instead of implementing ESAE on Hyper-V, it will be implemented on VMWare.</li> </ul>	<ul style="list-style-type: none"> <li>County of PIMA performs the setup and installation of the VMWare hosts and VMWare.</li> <li>All VMWare resources (storage, network) should be isolated from the existing VMWare environment.</li> <li>The VMWare environment for ESAE should only be administered from ESAE admin workstations.</li> </ul>

## 1.2.2 Software Products and Technologies

The following software and licenses are required for implementation. It is the County of PIMA's responsibility to procure the software and licenses described.

**Important Note:** Unless otherwise agreed in writing in the Work Order, County of PIMA temporarily appoints Microsoft to act as its agent for the limited purpose of accepting and agreeing to the end-user terms of any click through license agreement that accompanies the software (Microsoft or non-Microsoft) listed in this SOW or the Work Order and included within the test and development environments. Customer can read these terms at any time by clicking the **About** box in the toolbar ribbon for the specific product, at [www.microsoft.com](http://www.microsoft.com), or by requesting a copy from the Microsoft Engagement Manager.

Unless otherwise agreed in writing in the Work Order, County of PIMA temporarily entitles Microsoft to act as its agent for the download of all required software. Acting on this entitlement, Microsoft can apply the Known Good Media Process to download and validate all required software and can compile the software into a specific disk image structure that can be used directly to build the MDT server.

Operating Systems and Server Applications (Paid Licenses)	Provided By
Windows Server 2016	County of PIMA
Windows 10 Enterprise x64	County of PIMA
Microsoft SQL Server Standard 2016	County of PIMA
System Center Operations Manager 2016	County of PIMA

Additional Microsoft software packages will be required by the solution and are available as Internet downloads at no cost. Microsoft will provide a text file with all packages, versions, and their respective download locations. A script will be provided to download these required files.

### 1.2.3 Integration and Interfaces

The ESAE environment has interfaces with the following production system in County of PIMA environment.

Interface Name	Description	In Scope	Responsibility
Production Forest	Active Directory trust relationship	An outgoing forest trust will be established from the production domain to the ESAE forest.	County of PIMA

### 1.2.4 Environments

The following system environments describe the development and test facilities to be used by the project team members. For the following environments, County of PIMA will be responsible for the allocation and setup of the base hardware, network hardware, and network connectivity,

and will provide all required software. The joint Microsoft and County of PIMA team will install and configure the software products as described in Section 1.2.1 of this document.

The Enhanced Security Administrative Environment will be developed in a dedicated secure room before being connected to the production environment. The secure room should meet the following criteria:

- Provide physically secured access to project materials and all hardware prior to deployment
- Provide conference facilities with desks and chairs for workshops, meetings, and interviews
- Provide network connections giving the Microsoft onsite team access to the Internet and email
- Provide a separate dedicated Internet connection with at least 4 Mbps downstream to be used for the Known Good Media build process
- Provide a safe place for storage of all documentation and DVDs used by the project
- Provide at least one DVD writer device (external or built-in)
- Provide a stack of 20 writable DVDs (single-layer)
- Provide a high-speed printer
- Provide at least five unused and unopened laptops or desktops
- Provide air-conditioning appropriate for the room and all the equipment in the room
- Provide projector

Environment	Location	Responsibility	Ready By
Build	Dedicated secure room	County of PIMA	Before the Build phase of this project
Production	Secure datacenter	County of PIMA	Before the Deploy phase of this project

### 1.2.5 Training and Knowledge Transfer

Informal knowledge transfer will be provided throughout the project. Informal knowledge transfer is defined as informal activities that occur when County of PIMA staff works side by side with Microsoft, and include whiteboard discussions, email threads, conference calls, and facilitated meetings on technical topics. Knowledge transfer activities are secondary to completing deliverables and maintaining the project schedule. No deliverables or meeting summary will be provided for these sessions or activities.

### 1.2.6 Testing

The following testing will be performed as part of this SOW.

Test Type	Description	Responsible	Provides Test Data or Cases	Guidance and Support	Environment
System testing	System testing focuses on the functionality meeting the design. Testing duration is time boxed to 8 days. Test cases are based upon the test guide.	County of PIMA	Microsoft and County of PIMA	Microsoft	Test
Customer acceptance testing	Administrator functionality of key real-world scenarios. Test cases are based upon operations guide document. Testing duration is time boxed to 3 days.	County of PIMA	County of PIMA provides all test data.	Microsoft	Production

As defects are identified during testing, the defect priority will be jointly agreed upon by County of PIMA and Microsoft. The Microsoft team will triage the defect and fix all in-scope P1 and P2 defects. Defect priorities are shown in the following table.

Defect Priority	Description of Priority
P1	Showstopper defect. Development, testing, or production launch cannot proceed until the defect is corrected. Must fix as soon as possible. Defect is blocking further progress in this area. Solution cannot ship and the project team cannot achieve the next milestone.
P2	Defect must be fixed prior to moving to production. Does not affect test guide implementation.
P3	It is important to correct the defect. However, it is possible to move forward into production by using a workaround. Does not impact functionality as designed (for example, message change in user experience program).
P4	Feature enhancement or cosmetic defect. Design change from original concepts.

**Note:** P3 and P4 defects will be logged and County of PIMA can choose to schedule their remediation either by change request, through the Change Management Process described in Section 2.4.4 of this SOW, or during a subsequent release. P3 and P4 defects will not be corrected by default under this SOW.

**Note:** Product bug fixes and design change requests are not in scope. Product-related issues must be addressed separately through Premier support.

## 1.3 Areas Out of Scope

Any area that is not explicitly listed in Section 1.2 as within scope is out of scope for this engagement. The areas that are out of scope for this engagement include, but are not limited to, the following:

Out of Scope—Component or Feature	Description and Considerations
Physical server setup, management, and maintenance	Physical server acquisition, setup, installation, and networking interfaces or evaluation of new hardware and software. Ongoing production operational support.
Disaster recovery	Setup and configuration of disaster recovery sites at multiple datacenters. Fault tolerance and clustering for high availability or disaster recovery is out of scope.
Server and client licenses	Procurement of required server licenses or client access licenses, including external connectors.
Networking services	Setup or configuration of network load-balancing servers or services, including security-enhanced reverse-proxy publishing mechanisms.
Operations	Operational assessments, improvement plans, or designs for new operational processes and procedures beyond the operations guide document.
Current production environment	Changes to the current environment to resolve issues not related to the defined scope of this project.
Third-party software support	Microsoft will not be responsible for integration or support of County of PIMA third-party software.
Migration or consolidation	Migration, consolidation, or rationalization of Active Directory objects such as users, groups, workstations, servers, applications, and group policies (including logon scripts), or any data migration.
Formal training	Formal classroom or hands-on lab training.
Test environment	Microsoft will not build a test environment. Microsoft will not duplicate County of PIMA existing Windows corporate domain environment within a test lab or create County of PIMA test domains to simulate the production domains. Microsoft will not run test cases.
Support	Post-deployment support. Additional support can be purchased separately.
Systems runbooks and playbooks	Preparation of systems runbooks and playbooks.
Older operating systems	Support for admin desktops that use an operating system version or image configuration other than those included in the project scope.



Out of Scope—Component or Feature	Description and Considerations
Improving the security on any services other than DCs and associated forest or domain-level administration accounts	This project looks only at securing Tier 0 of the Active Directory infrastructure. Providing a secure administration environment for standard user workstations or laptops and for applications servers (such as Exchange, SharePoint, or SQL Server) is out of scope.
General production domain hardening	ESAE helps secure only Tier 0 user accounts; it does not secure other components of Active Directory Domain Services. General hardening of servers such as DCs is out of scope.
SCOM Tuning	Tuning of the SCOM Management Pack

## 2 Project Approach, Timeline, and Service Deliverables

### 2.1 Approach

#### 2.1.1 Envision Phase

During the Envision Phase the team develops the project Vision and Scope that aligns expectations between the project team and stakeholders. The Envision Phase ends when the Vision and Scope document is approved. This milestone indicates that the team is aligned to a common vision and the specific scope of work necessary to bring the vision to reality.

Category	Description
Microsoft Activities	<ul style="list-style-type: none"> <li>Conduct project kick-off meeting</li> <li>Lead workshops and design sessions</li> <li>Document Vision and Scope</li> <li>Create Project Plan</li> </ul>
Customer Responsibilities	<ul style="list-style-type: none"> <li>Participate in project kick-off meeting, workshops, and design sessions</li> <li>Provide requested information and documentation</li> </ul>
Exit Criteria	<ul style="list-style-type: none"> <li>Vision and Scope document completed</li> <li>Draft Project Plan</li> </ul>

#### Workshops

With Customer participation, the following workshops will be led by Microsoft during this phase.

Activity	Topics Covered	Maximum Hours per Session	Maximum Number of Sessions
Workshop	<ul style="list-style-type: none"> <li>Team introductions</li> <li>Objectives and delivery framework</li> <li>Current state, requirements, and end state objectives</li> </ul>	4	1
Design Session	<ul style="list-style-type: none"> <li>Conceptual architecture design for ESAE</li> </ul>	4	5

#### Phase Outputs

Microsoft will provide the following Service Deliverables. Those that require formal review and acceptance under the process described in Section 2.3 are indicated.

Name	Description	Acceptance Required (Y/N)
Vision and Scope	Microsoft Word document describing the technical architecture of the solution	Y
Project Plan	Microsoft Project document organizing the project	N

### 2.1.2 Plan Phase

During the Plan Phase the team prepares the Architecture and Design Document, works through the design, and prepares detailed work plans documenting what is to be delivered and when.

Category	Description
Microsoft Activities	<ul style="list-style-type: none"> <li>Lead design sessions</li> <li>Create Architecture and Design document</li> <li>Update Project Plan to reflect detailed timeline for build, stabilize and deploy</li> </ul>
Customer Responsibilities	<ul style="list-style-type: none"> <li>Participate in design sessions</li> <li>Provide requested information and documentation</li> </ul>
Exit Criteria	<ul style="list-style-type: none"> <li>Architecture and Design document complete</li> </ul>

#### Workshops

With Customer participation, the following workshops will be led by Microsoft during this phase.

Activity	Topics Covered	Hours per Session	Number of Sessions
Design Session	<ul style="list-style-type: none"> <li>Functional definitions for in scope ESAE features</li> </ul>	4	6

#### Phase Outputs

Microsoft will provide the following Service Deliverables. Those that require formal review and acceptance under the process described in Section 2.3 are indicated.

Name	Description	Acceptance Required (Y/N)
Architecture and Design Document	Microsoft Word document describing the physical architecture of the ESAE solution	Y

### 2.1.3 Build Phase

During the Build Phase the team refines the baseline design created in the Plan Phase and builds and tests the solution. Completion of this phase marks the transition to the Stabilization Phase.

Category	Description
Microsoft Activities	<ul style="list-style-type: none"> <li>• Implement ESAE in Build environment</li> <li>• Deploy ESAE on VMWare</li> <li>• Establish ESAE build definitions for all solution components in scope</li> <li>• Deploy VPN on Admin workstations</li> <li>• Create Test Guide document</li> <li>• Document the build process in the Implementation Guide document</li> </ul>
Customer Responsibilities	<ul style="list-style-type: none"> <li>• Provide a secure room for the Build environment, and execute any procedural requirements to build servers in a secure room</li> <li>• Participate in Build activities</li> </ul>
Exit Criteria	<ul style="list-style-type: none"> <li>• ESAE build environment created</li> <li>• Test Guide completed</li> <li>• Implementation Guide completed</li> </ul>

## Phase Outputs

Microsoft will provide the following Service Deliverables. Those that require formal review and acceptance under the process described in Section 2.3 are indicated.

Name	Description	Acceptance Required (Y/N)
ESAE Build Environment	ESAE implemented in the Build Environment's secure room	N
Test Guide	Microsoft Word document describing how to test the ESAE solution	N
Implementation Guide	Microsoft Word document describing how to build the ESAE environment inside of the County of PIMA environment	Y

## 2.1.4 Stabilize Phase

During the Stabilize Phase testing is conducted and the team focuses on resolving issues and bugs to prepare the solution for release. Then the solution is ready for deployment.

Category	Description
Microsoft Activities	<ul style="list-style-type: none"> <li>• Support System Testing and update test guide</li> <li>• Create Operations Guide document</li> </ul>
Customer Responsibilities	<ul style="list-style-type: none"> <li>• Prepare test data and customer specific tests</li> <li>• Perform System Testing, with the following estimated durations: <ul style="list-style-type: none"> <li>– 1 day for onboarding users</li> <li>– 2 days to execute test guide</li> <li>– 5 days to execute customer specific tests</li> </ul> </li> </ul>
Exit Criteria	<ul style="list-style-type: none"> <li>• Functional testing is complete, P1 and P2 defects are fixed</li> <li>• Operations Guide complete</li> </ul>

## Phase Outputs

Customer will provide the following items:

Name	Description
ESAE Testing Results	Documentation describing the outcome of the testing process (test results in the Test Guide tables provided)

Microsoft will provide the following Service Deliverables. Those that require formal review and acceptance under the process described in Section 2.3 are indicated.

Name	Description	Acceptance Required (Y/N)
Operations Guide	Microsoft Word document describing operational procedures for using the ESAE solution in production	Y

### 2.1.5 Deploy Phase

During the Deploy Phase the team conducts the activities needed to deliver the solution.

Category	Description
Microsoft Activities	<ul style="list-style-type: none"><li>• Assist with moving ESAE from the Build environment to the datacentre and connecting it to the production environment</li><li>• Configure in-scope DCs for the ESAE environment</li><li>• Provide support for additional in-scope DCs being configured for the ESAE environment</li><li>• Support Customer Acceptance Testing</li><li>• Conduct project closeout</li></ul>
Customer Responsibilities	<ul style="list-style-type: none"><li>• Execute the Implementation Guide to move ESAE to the production environment and connect it</li><li>• Configure any additional DCs for the ESAE environment</li><li>• Remove existing members from Domain Admins group in all production domains managed by ESAE</li><li>• Perform Customer Acceptance Testing</li><li>• Execute required change control processes</li></ul>
Exit Criteria	<ul style="list-style-type: none"><li>• ESAE production implementation complete</li><li>• Customer Acceptance Tests complete</li></ul>
Key Assumptions	<ul style="list-style-type: none"><li>• Customer will leverage this reverse shadow to develop internal capability for any additional forest, domain, or DC deployments</li></ul>

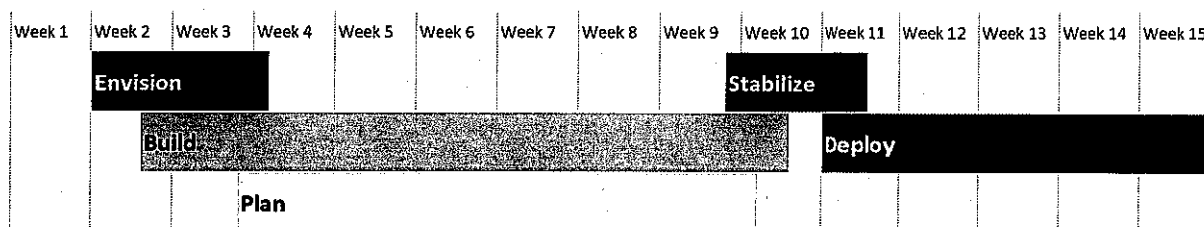
## Phase Outputs

Customer will provide the following items:

Name	Description
Production ESAE deployment	Execute production deployment of ESAE based on the Implementation Guide

## 2.2 Timeline

It is estimated that this engagement will be performed in approximately 15 weeks and will include the phases and milestones noted. The actual timeline for this engagement will be relative to the project start date, and all dates and durations provided are estimates only.



Note: Project initiation activities are being completed during Week 1.

## 2.3 Service Deliverable Acceptance Process

At specified milestones throughout the project, Microsoft will submit completed project service deliverables for customer's review and approval. Service deliverables will fall into the following categories:

1. Document deliverables (for example, Word, Excel, Visio, or Project)
2. Functioning components or solution deliverables

County of PIMA's use or partial use of a service deliverable will constitute acceptance of that service deliverable. The customer may provide its acceptance or rejection of deliverables electronically through email. The following details the acceptance process for each of the deliverable types.

Document deliverables: within three business days from the date of submittal, County of PIMA must do one of the following:

- Accept the document deliverable by signing, dating, and returning the Service Deliverable Acceptance Form.
- Provide a written notice rejecting the document deliverable, including a single and complete list describing every reason for rejection.

The following assumptions also apply:

- Document Deliverables shall be deemed accepted unless County of PIMA provides a timely, written rejection notice as described previously.
- Microsoft will correct problems with a document deliverable that are identified in the written rejection notice, as described earlier, and within the scope of this SOW, after which the document deliverable will be deemed accepted.
- Issues that are outside the scope of this SOW and feedback provided after a document deliverable has been deemed accepted will be addressed as a potential change of scope pursuant to the change management process outlined in this SOW.

Functioning components or solution deliverables: the functioning solution is typically comprised of configured commercial software and custom source code and associated objects. Review and acceptance of the solution or custom source code, for this SOW only, is based on completion of and sign-off on the defined customer acceptance test.

## 2.4 Project Governance Approach

### 2.4.1 Part-Time Project Management

The project will be managed by a part-time Project Manager by using the hours defined in the Work Order. Prior to the start of the engagement, a mutually agreed-upon coverage plan or meeting schedule will be documented in writing. Because this resource is part-time, the following operational constraints are assumed:

Project Management	Description
Communications	Provide one weekly status report. Prepare and lead one status meeting per week of no more than one hour in duration. Attend or participate in one steering committee meeting per month. Note: not all customer meetings will be attended.
Scope management and change control	Attend one scope meeting per week. Manage project change control.
Finance	Provide weekly budget burn report as part of the weekly status report, including Microsoft Consulting Services (MCS) time and expense (T&E).
Schedule	Manage the schedule for the MCS scope of work and MCS resources.
Human resources and staff management	Coordinate MCS resources (only), including staffing, task assignments, and status reporting.

The scope of the Microsoft part-time project management service is limited to managing MCS resources and Microsoft partners subcontracted through MCS.

Microsoft will provide project management for the duration defined in the Work Order. Changes to this duration or the amount of hours per week will be handled by the change management process.

## 2.4.2 Communication Plan

The following will be used to provide formal communication during the project:

- The Microsoft Project Manager, working in conjunction with the County of PIMA Project Manager, will compile weekly status reports for distribution to the County of PIMA.
- Weekly status meetings will be held to review the project's overall status, the acceptance of deliverables, the project schedule, and open issues noted in the status report.

## 2.4.3 Issue and Risk Management Procedure

The following general procedure will be used to manage active project issues and risks during the project:

- Identify: identify and document project issues (current problems) and risks (potential events that affect the project).
- Analyze and prioritize: assess the impact and determine the high-priority risks and issues that will be managed actively.
- Plan and schedule: decide how high-priority risks are to be managed and assign responsibility for risk management and issue resolution.
- Track and report: monitor and report the status of risks and issues and communicate issue resolutions.
- Control: review the effectiveness of the risk and issue management actions

Active issues and risks will be monitored and reassessed on a weekly basis. Mutually agreed-upon issue escalation and risk management processes will be defined at the outset of the project.

## 2.4.4 Change Management Process

During the project, either party may request in writing additions, deletions, or modifications to the services described in this SOW ("change"). Approved changes will be managed through Change Requests or Contract Amendments, and may incur additional cost and/or schedule impacts or a zero dollar impact. We shall have no obligation to commence work in connection with any change until the details of the change are agreed upon in an Amendment signed by the authorized signatories from both parties.

Within three (3) consecutive business days of receipt of the proposed Change Request or Contract Amendment, you shall either indicate acceptance of the proposed change by signing the Change Request or Contract Amendment or advise us not to perform the change. If you advise us not to perform the change, then we shall proceed only with the original agreed upon



services. In the absence of your acceptance or rejection within the timeframe noted, we will not perform the proposed change.

## 2.4.5 Escalation Process

The Microsoft Project Manager will work closely with the County of PIMA Project Manager, Sponsor, and other designees to manage project issues, risks, and change requests, as described in Sections 2.4.3 and 2.4.4. The standard escalation process for review and approval or dispute resolution is as follows:

### Escalation Path

- Project team member (Microsoft or County of PIMA)
- Project Manager (Microsoft and County of PIMA)
- Microsoft Engagement Manager or Project Sponsor

## 2.5 Project Completion

The project will be considered complete when at least one of the following conditions is met:

- All Microsoft deliverables that require acceptance have been delivered and accepted (or deemed accepted).
- The Work Order has been terminated.

### 3 Project Roles and Responsibilities

#### Customer Project Roles and Responsibilities

Role	Responsibilities	Project Commitment
Project Sponsor	Makes key project decisions, assists in escalating unresolved issues to the executive steering committee, and clears project roadblocks	Part-time availability with expected allocation of 2–4 hours per week
Project Manager	<ul style="list-style-type: none"> <li>Primary point of contact for Microsoft team</li> <li>Responsible for managing and coordinating the overall project</li> <li>Responsible for resource allocation, risk management, project priorities, and communication to executive management</li> <li>Manages day-to-day activities of the project</li> <li>Coordinates the activities of the team to deliver deliverables according to the project schedule</li> </ul>	Full-time availability with expected allocation of 20–40 hours
Technical Team Lead	Primary technical point of contact for the team that is responsible for technical architecture and code deliverables	Full-time availability with expected allocation of 16–40 hours per week
Technical Architect	QA and escalation of technical decisions and issues	Full-time availability with expected allocation of 4–12 hours per week
Test and QA Lead	Test plans and guides, coordinating testing resources for acceptance tests	Full-time availability with expected allocation of 4–12 hours per week
Active Directory SMEs	Technical representation for Active Directory Domain Services	Full-time availability with expected allocation of 4–12 hours per week
Security SMEs	Technical representation for cybersecurity that relates to the security architecture to be implemented	Full-time availability with expected allocation of 4–12 hours per week
Other SMEs	Technical representation for related systems and services, including network, DNS, PKI, and smart card integration	Full-time availability with expected allocation of 4–12 hours per week

#### Microsoft Project Roles and Responsibilities

Role	Responsibilities	Project Commitment
Microsoft Account Delivery Executive	<ul style="list-style-type: none"> <li>Responsible for managing and coordinating the overall Microsoft project</li> </ul>	Part-time

Role	Responsibilities	Project Commitment
	<ul style="list-style-type: none"> <li>Single point of contact for billing issues, personnel matters, contract extensions.</li> </ul>	
Microsoft Project Manager	<ul style="list-style-type: none"> <li>Responsible for staffing the Microsoft team</li> <li>Responsible for managing and coordinating the Microsoft project delivery</li> <li>Responsible for issue and risk management, change management, project priorities, and weekly status communication and weekly status meeting</li> <li>Coordinates only Microsoft resources and partners subcontracted to Microsoft, including staffing, task assignments and status reporting</li> </ul>	Part-time
Microsoft Architects	<ul style="list-style-type: none"> <li>Provide technical oversight</li> <li>Verify whether Microsoft-recommended practices are followed</li> <li>Responsible for overall technical solution management</li> </ul>	Part-time
Microsoft Consultants	<ul style="list-style-type: none"> <li>Technical design leadership</li> <li>Delivery of all workshops and sessions</li> <li>Development of technical deliverables</li> </ul>	Full-time

## 4 General Customer Responsibilities and Project Assumptions

### 4.1 General Customer Responsibilities

In addition to any customer activities identified elsewhere in this SOW, the customer will perform or provide the following:

1. Provide suitable work spaces with desks, chairs, telephones.
2. Provide LAN connections giving the Microsoft onsite team access to the Internet and e-mail.
3. Provide access to all necessary Customer work sites, systems logon and passwords as well as material and resources as needed and as advised by us in advance.
4. Assume responsibility for management of all non-Microsoft managed vendors.
5. Provide access with proper licenses to all necessary tools and third-party products required for Microsoft to complete its assigned tasks.
6. Acquire and install the appropriate server capacity required to support the environments as defined in the scope section of this SOW.
7. Provide personnel who are knowledgeable about the current County of PIMA systems and specific County of PIMA security requirements.
8. Provide business user representatives required during the project.
9. Provide access to all necessary County of PIMA work sites, systems logons, and passwords
10. Provide access to other materials and resources as needed, and as advised by us in advance

#### 4.1.1 Support

1. County of PIMA will provide adequate knowledge transition throughout the project to end users and IT support personnel, and all detailed training documentation that is required to support the solution components.
2. County of PIMA operational teams will be ready to support all in-scope technology prior to the pilot and will develop operational procedures.

3. County of PIMA operational teams are responsible for testing and deployment of operational support systems not covered by this project, including but not limited to backup, restore, and antivirus programs.
4. County of PIMA owns the coordination of the helpdesk and support readiness prior to the pilot and subsequent deployment efforts.
5. County of PIMA owns the overall project plan, including schedule and implementation.
6. County of PIMA owns the operational processes and procedures.

## 4.2 Project Assumptions

All estimates regarding fees, timelines and our detailed solution are based on information provided by the customer to date, known documented requirements, and all of the listed assumptions within this document being validated as true during this project. They are also based on the customer and Microsoft working in partnership, as described within the approach and governance sections of the document. Anything that differs materially regarding the information provided, the approach and governance documented, or the assumptions, can result in Microsoft raising a change request to cover additional work or extended durations as a direct result.

The services, fees, and delivery schedule for this project are based on the following assumptions:

1. If there is a stoppage gap in project timelines, then new resources may have to be on boarded resulting in a Change Request and/or a delay in staffing the project again.
2. The standard business day for the project will be between 8:30 A.M. and 5:00 P.M. local time, Monday to Friday, except for scheduled holidays.
3. All services and communications will be provided in the English language only.
4. If consultants are to work on site and they are traveling, they will be on a 3–4–5 schedule, meaning three nights in a hotel, four days on site, and the fifth day working remotely. Resources may stretch their daily work plan to accommodate the project's weekly activities within those four days.
5. In performing services under this SOW and the applicable Work Order, Microsoft will rely upon any instructions, authorizations, approvals, or other information provided by Customer's Project Manager or personnel duly designated by Customer's Project Manager. All estimates regarding fees, timelines and our detailed solution are based on information provided by Customer to date.
6. The resources of Microsoft and their subcontractors may perform services remotely or on site from Microsoft facilities, County of PIMA facilities, or Microsoft partner's facilities.

# Statement of Work

## Privileged Access Management

Prepared for

**County of PIMA**

Prepared by

**Jason Chrane**

Date: 19 March 2019

Version:1.2

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This Statement of Work (SOW) and any exhibits, appendices, schedules, and attachments to it are made pursuant to Work Order T002192-221017-258378 and describes the work to be performed (Services) by Microsoft ("us," "we") for County of PIMA ("Customer," "you," "your") relating to the Privileged Access Management project.

This SOW and the associated Work Order expire 30 days after their publication date, unless signed by both parties or formally extended in writing by Microsoft.

## Introduction

The County of PIMA is looking to reduce privileged credential exposure within their Active Directory Domain Services (AD DS) infrastructure and enable new ways to securely administer AD DS and applications which use AD DS for authentication and authorization services.

In many organizations, administering AD DS means assigning a user highly privileged access one time (statically) which comes with default credential timeframes assigned by an AD DS domain controller. These permissions often are associated with the regular, day-to-day, user account ("productivity account") resulting in significant security exposure as the productivity account is used for tasks such as viewing emails, accessing corporate applications, and is typically a local administrator on the system they are using. With one of the most common attack vectors being phishing attacks, users who have privileged access associated with regular user accounts leave themselves vulnerable to a variety of malicious software capabilities often targeted at capturing a higher level of access which grants the attacker enough permissions to carry out their mission.

To address this, Microsoft has built the "Privileged Access Management" (PAM) solution. The PAM solution removes static privileged access from regular, day-to-day accounts and gives you control over how long access is granted reducing the security exposure of those accounts.

The purpose of the PAM solution is to reduce the usefulness of any captured credential by granting access to resources only as-needed, when needed, and for an enforced and limited amount of time. The PAM offer has been built using Microsoft's reference architecture for AD DS administration and leverages experiences gained from deploying privileged access management solutions across a wide variety of Microsoft customers. The solution is based on Microsoft Identity Manager 2016 Privileged Access Management (MIM PAM) technology and provides just-in-time to access to AD DS administrative (Tier 0), server operator (Tier 1) and application specific roles.

Benefits of the PAM solution includes:

- Limit the privileges and exposure of administrative accounts and gain visibility/control over critical privileges
- Provide Just-in-Time (JIT) Administrative privileges and enable the path to "zero" standing rights for privileged user accounts
- Provide an auditable, enforced, and time-limited access to critical assets

This SOW details the services Microsoft will provide to implement Microsoft's PAM solution for the County of PIMA.



# 1. Project objectives and scope

## 1.1. Objectives

The objective of this project is to implement Microsoft's PAM solution to provide privileged access management functionality for the County of PIMA's production Domain Services environment.

## 1.2. Areas in scope

### 1.2.1. General project scope

To deliver the Privileged Access Management solution for the County of PIMA, Microsoft will provide the following services:

Area	Description	Assumptions
Implement Privileged Access Management in the County of PIMA Environment	<ul style="list-style-type: none"><li>• Implement up to 2 Microsoft PAM solution deployments for 1 Active Directory Domain Services domain in Development and Production environments</li><li>• Create PAM groups and configure PAM functionality for the following Tier 0 Active Directory administration groups:<ul style="list-style-type: none"><li>○ Enterprise Admins</li><li>○ Domain Admins</li><li>○ Schema Admins</li><li>○ Group Policy Creator Owners</li><li>○ Tier 0 Server Operators</li><li>○ Account Operators</li><li>○ Backup Operators</li><li>○ Print Operators</li><li>○ Cryptographic Operators</li><li>○ Virtualization Admins</li></ul></li><li>• Create PAM groups and configure PAM functionality for the Tier 1 Admins group</li><li>• Create PAM groups and configure PAM functionality for the Tier 2 Admins group</li><li>• Create PAM groups for up to 2 Applications which leverage Active Directory for authentication and authorization services for the following pre-configured roles; Application Admins, Application Operators, Application Viewers</li><li>• Implement a new AD DS forest based on Microsoft Windows Server 2016 to serve as</li></ul>	<ul style="list-style-type: none"><li>• Microsoft will support the County of PIMA during the process of building the production PAM environment</li><li>• County of PIMA has at least 1x Microsoft Windows 2012 R2 domain controller with the May 2016 update in the production, in-scope, corporate Active Directory forest</li><li>• County of PIMA has deployed Microsoft's Reference Model for Active Directory Administration and has either transitioned, or is in the process of transitioning, into the new model (OU structure and Administrative groups)</li><li>• County of PIMA is already familiar with PAWs, has implemented the PAW solution, has administrative PAW's deployed, and has</li></ul>

Area	Description	Assumptions
	<p>the privileged forest ("PRIV") – up to 2 domain controllers</p> <ul style="list-style-type: none"> <li>Implement Microsoft Identity Manager 2016 SP1 with PAM functionality <ul style="list-style-type: none"> <li>Deployment of one MIM synchronization server</li> <li>Deployment of up to two MIM Service servers</li> <li>Deployment of one SQL Server in support of MIM component deployment</li> <li>Enablement of PAM trust between the existing production corporate Active Directory forest and the bastion "PRIV" forest.</li> </ul> </li> <li>Configure PAW for the PAM scenario <ul style="list-style-type: none"> <li>Assist Customer with enabling communications between existing administrative PAW's and the production MIM portal for up to 1 days' worth of assistance</li> </ul> </li> <li>Enable and validate PAM groups for up to 5 users per group</li> </ul>	<p>operational processes in place.</p> <ul style="list-style-type: none"> <li>The SQL Server used for this deployment will be used exclusively for the MIM PAM functionality</li> </ul>
PAM Role Definition	<p>Lead up to 3 role definition workshops, for up to 4 hours each session, to define PAM roles for core Active Directory groups:</p> <ul style="list-style-type: none"> <li>Define PAM settings for Active Directory Domain Services groups which are located within the "Admin OU" ("tier model") in County of PIMA's Active Directory Domain Services environment</li> </ul> <p>Lead 1 workshop, up to 2 hours, to assist County of PIMA with defining Privilege Account Standards</p> <p>Lead up to 2 role definition workshops, for up to 2 hours each session, to define PAM roles for 2 Active Directory integrated applications focused on the following roles per application:</p> <ul style="list-style-type: none"> <li>Application Admins, Application Operators, Application Viewers</li> </ul>	<ul style="list-style-type: none"> <li>2 applications are in scope for application role definition workshops</li> <li>Role definition workshops, which are focused on defining roles for applications, will be delivered on a per-application basis consisting of 2, 2-hour sessions per application totaling 4 workshops and no more than 8 hours to complete role definitions for both in-scope applications.</li> </ul>
Design a PAM Architecture	<p>Design the following components for the customer environment:</p> <ul style="list-style-type: none"> <li>PAM forest</li> </ul>	<ul style="list-style-type: none"> <li>After these design workshops, County of PIMA will procure appropriate systems for</li> </ul>

Area	Description	Assumptions
	<ul style="list-style-type: none"> <li>Microsoft Identity Manager configuration with PAM functionality</li> <li>Administration</li> <li>Test Plan</li> </ul>	production, so they are ready in time for production deployment per the project schedule.

### 1.2.2. Software products and technologies

The products and technology that are listed in the following table are required for project execution. The Customer is responsible for obtaining all identified licenses and products.

Product and technology item	Version	Ready by
Microsoft Identity Manager 2016	SP1	Start of Build phase
SQL Server 2014	SP1 or Later	Start of Build phase
SharePoint Server 2016		Start of Build phase
Windows Server 2016		Start of Build phase
Two physical, or virtual machine, systems running Windows Server 2016 to be used as: <ul style="list-style-type: none"> <li>1 x Lab MIM server running the MIM Service, MIM PAM, MIM Synchronization Engine, SharePoint 2016 and SQL Server 2014</li> <li>1 x Lab bastion forest (PRIV) domain controller</li> </ul>		Start of Build phase
Systems required to deploy the in-scope PAM solution will be determined during the Planning phase of this engagement and will be expected to be available at the beginning of the Deploy phase of this project.		Start of Deploy phase

### 1.2.3. Environments

The following environments will be required to deliver the project.

Environment	Location	Responsibility	Ready by
Development	Customer	Customer	Before the Build phase of this project
Production	Customer	Customer	Before the Deploy phase of this project

## 1.2.4. Testing and defect remediation

### Testing

The following testing is included in the scope of the project. If the Customer has responsibility for testing, the Microsoft effort to support that activity is identified. If additional time is needed for Microsoft testing support, then it can be requested through the Change management process described in this SOW.

Test type (environment)	Description	Responsibility		
		Has responsibility for testing?	Provides data or test cases	Provides guidance and support
System / Functional testing (development)	System / Functional testing focuses on determining whether functionality meets design. Test cases are based on the Test Plan document. The Microsoft effort to support this testing is limited to 32 hours.	Customer	Customer	Microsoft
User acceptance testing (UAT)	The user functionality of key real-world scenarios will be tested. Test cases are based on the Test Plan document. The Microsoft effort to support this testing is limited to 28 hours.	Customer	Customer	Microsoft

### Defect remediation

If defects are identified during testing, the priority of the item will be jointly agreed upon by the Customer and Microsoft. Defect prioritization is defined in the following table.

Priority	Description	Remediation in scope?
P1	<b>Blocking defect</b> Development, testing, or production launch cannot proceed until this type of defect is corrected. A defect of this type blocks further progress in this area. The solution cannot ship, and the project team cannot achieve the next milestone until such a defect is corrected.	Yes; up to 8 hours of P1 defect remediation is in scope.
P2	<b>Significant defect</b> This type of defect must be fixed prior to moving to production. Such a defect, however, will not affect test plan implementation.	No; the problem will be logged. Remediation will be performed through an agreed-upon change request only.
P3	<b>Important defect</b> It is important to correct this type of defect. However,	No; the problem will be logged. Remediation will be performed

Priority	Description	Remediation in scope?
	it is possible to move forward into production using a workaround.	through an agreed-upon change request only.
P4	<b>Enhancements and low priority defects</b> P4 defects consist of feature enhancement and cosmetic defects. These include design requests that vary from original concepts.	No; the problem will be logged. Remediation will be performed through an agreed-upon change request only.

### 1.2.5. Training

The following training will be delivered during the project.

Type	Description (including location)	Quantity and duration
Instructor-Led	<b>Description:</b> Privileged Access Management Overview <b>Location:</b> Delivered onsite on-site at Customer facility <b>Materials:</b> PowerPoint Presentation (PPT) <b>Project Phase:</b> Plan	<b>Number of sessions:</b> 1 <b>Duration:</b> up to 2 hours <b>Number of participants:</b> up to 30
Instructor-Led	<b>Description:</b> Tiered Admin Model and Least Privileged Administration <b>Location:</b> Delivered onsite on-site at Customer facility <b>Materials:</b> PowerPoint Presentation (PPT) <b>Project Phase:</b> Plan	<b>Number of sessions:</b> 1 <b>Duration:</b> up to 2 hours <b>Number of participants:</b> up to 30
Instructor-Led	<b>Description:</b> Privileged Access Management Technical Education <b>Location:</b> Delivered onsite on-site at Customer facility <b>Materials:</b> PowerPoint Presentation (PPT) <b>Project Phase:</b> Plan	<b>Number of sessions:</b> 1 <b>Duration:</b> up to 2 hours <b>Number of participants:</b> up to 30
Instructor-Led	<b>Description:</b> Privilege Access Management Operations <b>Location:</b> Delivered onsite on-site at Customer facility <b>Materials:</b> PowerPoint Presentation (PPT) <b>Project Phase:</b> Stabilize	<b>Number of sessions:</b> 1 <b>Duration:</b> up to 4 hours <b>Number of participants:</b> up to 30

### 1.3.Areas out of scope

Any area not explicitly included in the Areas in scope section is out of scope for Microsoft during this project. Areas out of scope for this project are listed in the following table.

Area	Description
Product licenses and subscriptions	Product licenses (Microsoft or non-Microsoft) and cloud service subscriptions are not included.
Hardware	Microsoft will not provide hardware for this project.
Integration with third-party software	Microsoft will not be responsible for integration with third-party software.
Data migration	Data migration activities are not in scope for this project.
Product bugs and upgrades	Product upgrades, bugs, and design change requests for Microsoft products are not in scope for this project.
Source code review	The Customer will not provide Microsoft with access to non-Microsoft source code or source code information. For any non-Microsoft code, Microsoft Services will be limited to the analysis of binary data, such as a process dump or network monitor trace.
Process reengineering	Designing functional business components of the solution is not included.
Organizational change management	Designing—or redesigning—the Customer's functional organization is not included.
Physical server setup, management, and maintenance	Physical server setup, installation, and networking interfaces or evaluation of new hardware or software. Ongoing production operational support.
Discovery	Discovery and categorization of administrative tasks and applications.
Multiple domain or forest support	Support for more than one domain or forest. This project focuses on implementing PAM to support 1 domain in the core production forest. It will provide a model for the management of systems in other domains or forests.
General production domain hardening	Securing of AD DS components other than privileged user accounts. General hardening of servers such as domain controllers is out of scope.
Monitoring services	Setup or configuration of monitoring, auditing, or alerting services to monitor the health of the environment beyond any items that are explicitly included in the scope.

Area	Description
PAM Role Enablement	Enablement of PAM functionality for computers or groups which reside outside of the Microsoft Reference Architecture for Active Directory Administration is out of scope.

## 2. Project approach, timeline, and deliverable acceptance

### 2.1.Approach

The project will be structured following the Microsoft solution delivery methodology across five distinct phases; Envision, Plan, Build, Stabilize, and Deploy. Each phase has distinct activities and deliverables that are described in the following sections.

If a deliverable requires formal review and acceptance (a process described in the Deliverable acceptance process section), it is indicated in the following sections.



#### 2.1.1. Engagement initiation

Before beginning the project, the following prerequisites must be completed.

Category	Description
<b>Microsoft activities</b> The activities to be performed by Microsoft	<ul style="list-style-type: none"> <li>Conduct a preinitiation call to initiate team formation and communicate expectations.</li> <li>Document the project launch prerequisites using input from this SOW.</li> <li>Track the status of launch prerequisites and adjust the engagement initiation phase start date accordingly.</li> <li>Conduct a detailed walk-through of the SOW with the customer to agree on an initial project schedule and approach.</li> </ul>
<b>Customer activities</b> The activities to be performed by the Customer	<ul style="list-style-type: none"> <li>Attend and participate in the preinitiation call.</li> <li>Complete the project initiation and launch prerequisites.</li> <li>Staff the project with the required customer resources in the time frames that were agreed upon in the preinitiation call.</li> <li>Hardware Procurement</li> </ul>

## 2.1.2. Envision

During the Envision phase, the team (Microsoft and the Customer) will reach agreement on a shared vision for the project and the specific scope that will be required to make that vision a reality.

Envision	
Category	Description
<b>Microsoft activities</b> The activities to be performed by Microsoft	<ul style="list-style-type: none"><li>• Conduct a project kick-off meeting</li><li>• Lead up to 4 requirements gathering workshops lasting no more than 6 hours in total</li><li>• Develop vision and scope document</li></ul>
<b>Customer activities</b> The activities to be performed by the Customer	<ul style="list-style-type: none"><li>• Identify appropriate personnel to attend workshops</li><li>• Participate in project kick-off meeting and workshops</li><li>• Participate in requirement gathering workshops</li><li>• Provide requested information and documentation</li><li>• Review, acceptance and approval of the vision and scope document</li></ul>

## Deliverables

Name	Description	Acceptance required?	Responsibility
Vision/Scope document	The Vision Scope documents the agreement on the desired solution and overall project direction between the team and the customer.	Yes	Microsoft

## 2.1.3. Plan

During the Plan phase, the team will develop a detailed plan for the project that includes a list of activities that are to be completed, and the project schedule.

Plan	
Category	Description
<b>Microsoft activities</b> The activities to be performed by Microsoft	<ul style="list-style-type: none"><li>• Conduct training as defined in section 1.2.5 of this SOW</li><li>• Lead Role Definition Workshops as defined in section 1.2.1 of this document</li><li>• Lead up to 4 Technical Design Workshops, up to 2 hours each session, to establish the PAM technical design</li><li>• Document system design document</li></ul>





Category	Description
<b>Customer activities</b> The activities to be performed by the Customer	<ul style="list-style-type: none"> <li>• Provide requested information and documentation</li> <li>• Identify appropriate personnel to attend education workshops</li> <li>• Attendance in education workshops</li> <li>• Participate in role definition workshops</li> <li>• Participate in technical design workshops</li> <li>• Participate in solution design document review meeting</li> <li>• Review, acceptance and approval of the system design document</li> </ul>

## Deliverables

Name	Description	Acceptance required?	Responsibility
Project Plan	Project plan with key milestones.	No	Microsoft
System Design Document	Microsoft Word document describing application roles definition, and the physical design of the PAM solution.	Yes	Microsoft

### 2.1.4. Build

During the Build phase, the team will build the solution within the build environment and prepare it for final testing.



Category	Description
<b>Microsoft activities</b> The activities to be performed by Microsoft	<ul style="list-style-type: none"> <li>• Build Development PAM solution:               <ul style="list-style-type: none"> <li>○ Validate Development environment prerequisites</li> <li>○ Validate clean source media for Windows Server 2016 and Microsoft Identity Manager 2016 SP1</li> <li>○ Build the Development PAM (PRIV) forest</li> <li>○ Deploy of the PAM solution components into Development environment</li> <li>○ Configure PAM solution per the System Design document</li> <li>○ Provide Customer with a demonstration of the configured Development PAM solution</li> </ul> </li> <li>• Lead the following test planning workshops:</li> </ul>



Category	Description
	<ul style="list-style-type: none"> <li>○ Up to 3 test planning workshops to define test cases for core Active Directory roles; up to 2 hours each session</li> <li>○ Up to 2 test planning workshops, per in-scope application, to define application specific roles; up to 2 hours each session</li> <li>• Document and deliver draft Test Plan document</li> <li>• Document and deliver the Implementation Guide document</li> </ul>
<b>Customer activities</b> The activities to be performed by the Customer	<ul style="list-style-type: none"> <li>• Provide a Development environment</li> <li>• Provide a representation of the in-scope production Active Directory in the Development environment including; OU's, users who are in scope for privilege access management, at least 1x standard user workstation, and at least 1x Windows Server member server</li> <li>• Identify appropriate personnel to attend workshops</li> <li>• Participate in build activities</li> <li>• Participate in test planning</li> <li>• Attend solution demonstration meeting</li> <li>• Review and approval of the draft test plan document</li> <li>• Attend the implementation guide review meeting</li> <li>• Review, acceptance and approval of the implementation guide document</li> </ul>


## Deliverables

Name	Description	Acceptance required?	Responsibility
Draft Test Plan	Microsoft Word document which includes a listing of test cases to validate the system and functional operations of the PAM solution. This document is delivered in draft form during this phase and is finalized once all test cases have been completed, and documented, during the Stabilize phase of this project.	No	Microsoft
Implementation Guide	A Microsoft Word document that includes step-by-step instructions for	Yes	Microsoft

Name	Description	Acceptance required?	Responsibility
	the deployment of PAM solution into a production environment.		

## 2.1.5. Stabilize

During the Stabilize phase, the team will focus on testing the solution and preparing it for release.


	
Category	Description
<b>Microsoft activities</b> The activities to be performed by Microsoft	<ul style="list-style-type: none"> <li>Assist with System / Functional testing activities as defined in section 1.2.4 of this document</li> <li>Update draft test plan with testing results</li> <li>Lead a meeting to review test results with Customer</li> <li>Document the operations guide document</li> <li>Conduct educational workshops as defined in section 1.2.5 of this SOW</li> </ul>
<b>Customer activities</b> The activities to be performed by the Customer	<ul style="list-style-type: none"> <li>Perform System / Functional Testing</li> <li>Attend the test results review meeting</li> <li>Review, acceptance and approval of the final test plan document</li> <li>Attend education workshops</li> <li>Attend the operations guide review meeting</li> <li>Review, acceptance and approval of the operations guide document</li> </ul>

## Deliverables

Name	Description	Acceptance required?	Responsibility
Test Plan	A Microsoft Word document that includes test results and notes about implementing the defined test cases in the document.	Yes	Microsoft
Operations Guide	Microsoft Word document describing operational procedures for using the PAM solution in production	Yes	Microsoft

## 2.1.6. Deploy

During the Deploy phase, the team will perform the activities that will be required to make the solution available.

 Category		Description
<b>Microsoft activities</b> The activities to be performed by Microsoft		Microsoft will assist with the following activities: <ul style="list-style-type: none"><li>• Deploy the production PAM (PRIV) forest</li><li>• Implement the PAM solution (MIM PAM) into the production environment</li><li>• Enable Privileged Access Workstation (PAW) for the PAM solution</li><li>• Enable and validate PAM groups</li><li>• User Acceptance Testing Assistance</li><li>• Conduct project closeout</li></ul>
<b>Customer activities</b> The activities to be performed by the Customer		<ul style="list-style-type: none"><li>• Complete all appropriate change management requests and approvals to deploy the PAM solution into production</li><li>• Deploy the production PAM (PRIV) forest</li><li>• Implement the PAM solution (MIM PAM) into the production environment</li><li>• Enable Privileged Access Workstation (PAW) for the PAM solution</li><li>• Enable and validate PAM groups</li><li>• User Acceptance Testing</li><li>• Participate in project closeout</li></ul>
<b>Key assumptions</b>		<ul style="list-style-type: none"><li>• County of PIMA has already deployed Microsoft's reference architecture for Active Directory Administration ("tier model") into the Active Directory Domain Services environment that will be used for this phase.</li><li>• County of PIMA will provide a list of up to 5 pilot users per role who will validate PAM functionality</li></ul>

## 2.2. Timeline

During project planning of the project, a detailed project timeline will be developed. All dates and durations are relative to the project start date and are estimates only.



## 2.3. Deliverable acceptance process

During the project, Microsoft will submit certain deliverables (listed in the Approach section as deliverables with "Acceptance required?" equal to "Yes") for the customer's review and approval.

Within three business days of the date of submittal, the customer is required to:

- **Accept the deliverable** by signing, dating, and returning a service deliverable acceptance form, which can be sent by email, or by using (or partially using) the deliverable
- Or
- **Reject the deliverable** by notifying Microsoft in writing; the customer must include a complete list of reasons for rejection.

Deliverables shall be deemed accepted unless the written rejection notification is received by Microsoft in the timeframe specified.

If a rejection notification is received, Microsoft will correct problems with a deliverable that are in scope for the project (and documented in this SOW), after which the deliverable is deemed accepted. Problems that are outside the scope of this SOW, and feedback provided after a deliverable has been accepted will be addressed as a change request, managed as described in the Change management process section.

## 2.4. Project governance

The governance structure and processes the team will adhere to for the project are described in the following sections:

### 2.4.1. Project communication

The following will be used to communicate during the project:

- **Status reports:** the Microsoft team will prepare and issue regular status reports to project stakeholders per the frequency defined in the communication plan.
- **Status meetings:** the Microsoft team will schedule regular status meetings to review the overall project status, the acceptance of deliverables, and review open problems and risks.

### 2.4.2. Risk and issue management

The following general procedure will be used to manage active project issues and risks during the project:

- **Identify:** identify and document project issues (current problems) and risks (potential problems that could affect the project).

- **Analyze and prioritize:** assess the potential impact and determine the highest priority risks and problems that will be actively managed.
- **Plan and schedule:** determine the strategy for managing priority risks and issues and identify a resource who can take responsibility for mitigation and remediation.
- **Track and report:** monitor and report the status of risks and problems.
- **Escalate:** escalate to project sponsors the high impact problems and risks that the team is unable to resolve.
- **Control:** review the effectiveness of risk and issue management actions.

Active issues and risks will be regularly monitored during the project.

### 2.4.3. Change management process

During the project, either party can request modifications to the Services described in this SOW. These changes only take effect when the proposed change is agreed upon by both parties. The change management process steps are:

- **The change is documented:** all change requests will be documented by Microsoft in a Microsoft change request form and submitted to the Customer. The change request form includes:
  - A description of the change.
  - The estimated effect of implementing the change.
- **The change is submitted:** the change request form will be provided to the Customer.
- **The change is accepted or rejected:** The Customer has three business days to confirm the following to Microsoft:
  - Acceptance—the Customer must sign and return change request form.
  - Rejection—if the Customer does not want to proceed with the change or does not provide an approval within three business days, no changes will be performed.

## 2.5. Project completion

Microsoft will provide Services defined in this SOW to the extent of the fees available and the term specified in the Work Order. If additional services are required, the Change management process will be followed and the contract modified. The project will be considered complete when at least one of the following conditions has been met:

- All fees available have been utilized for Services delivered and expenses incurred.
- The term of the project has expired.
- All Microsoft activities and in-scope items have been completed.
- The Work Order has been terminated.

## 3. Project organization

### 3.1. Project roles and responsibilities

The key project roles and the responsibilities are as follows.

## Customer

Role	Responsibilities
Project sponsor	<ul style="list-style-type: none"> <li>• Part-time, 2–4 hours a week</li> <li>• Make key project decisions.</li> <li>• Serve as a point of escalation to support clearing project roadblocks.</li> </ul>
Project manager	<ul style="list-style-type: none"> <li>• Full time</li> <li>• Serve as primary point of contact for the Microsoft team</li> <li>• Manage the overall project.</li> <li>• Deliver the project on schedule.</li> <li>• Take responsibility for customer resource allocation, risk management, and project priorities.</li> <li>• Communicate with executive stakeholders.</li> </ul>
Technical lead	<ul style="list-style-type: none"> <li>• Full time throughout project</li> <li>• Serve as primary technical point of contact.</li> <li>• Take ownership of technical architecture and code deliverables.</li> </ul>
Technical architect	<ul style="list-style-type: none"> <li>• Part time, 4-12 hours a week</li> <li>• Serve as primary functional point of contact for the team that is responsible for functional business analysis, technical decisions and issues.</li> </ul>
Test Lead	<ul style="list-style-type: none"> <li>• Full time during Stabilize phase</li> <li>• Part time, 50% time, during the Pilot Enablement portion of the Deploy phase</li> <li>• Responsible for test plans and guides and coordinating testing resources for acceptance tests</li> </ul>
AD DS SMEs	<ul style="list-style-type: none"> <li>• Part time, 4-12 hours per week</li> <li>• Provides technical representation for the Active Directory infrastructure</li> </ul>
Security SMEs	<ul style="list-style-type: none"> <li>• Part time, 4-12 hours per week</li> <li>• Provides technical representation for cybersecurity standards within the environment</li> </ul>
Application SMEs	<ul style="list-style-type: none"> <li>• Part time, 4-12 hours per week</li> <li>• Responsible for providing technical details for the in-scope applications</li> </ul>

## Microsoft

Role	Responsibilities
Account Delivery Executive	<ul style="list-style-type: none"> <li>• Part time</li> <li>• Manage and coordinate the overall Microsoft project.</li> </ul>

Role	Responsibilities
	<ul style="list-style-type: none"> <li>• Serve as a single point of contact for escalations, billing issues, personnel matters, and contract extensions.</li> </ul>
Microsoft Project Manager	<ul style="list-style-type: none"> <li>• Part time</li> <li>• Manage and coordinate Microsoft project delivery.</li> <li>• Take responsibility for issue and risk management, change management, project priorities, status communications, and status meetings.</li> <li>• Coordinate Microsoft and Microsoft subcontractor resources but not customer resources.</li> </ul>
Microsoft Consultant	<ul style="list-style-type: none"> <li>• Full time</li> <li>• Deliver workshops and sessions</li> <li>• Responsible for development of technical deliverables</li> </ul>
Microsoft Architect	<ul style="list-style-type: none"> <li>• Part time</li> <li>• Provide technical design leadership</li> <li>• Provide guidance based on Microsoft-recommended practices.</li> </ul>

## 4. Customer responsibilities and project assumptions

### 4.1. Customer responsibilities

In addition to Customer activities defined in the Approach section, the Customer is also required to:

- Provide information:
  - This includes accurate, timely (within three business days or as mutually agreed-upon), and complete information.
- Provide access to people and resources.
  - This includes access to knowledgeable customer personnel, including business user representatives, and access to funding if additional budget is needed to deliver project scope.
- Provide access to systems.
  - This includes access to all necessary customer work locations, networks, systems, and applications (remote and onsite).
- Provide a work environment.
  - This consists of suitable work spaces, including desks, chairs, and Internet access.
- Provide a meeting room to facilitate educational and planning workshops.
  - This consists of a suitable room which is equipped with a projector that accommodates participants for both educational and planning workshop sessions.
- Manage non-Microsoft resources.
  - The customer will assume responsibility for the management of all customer personnel and vendors who are not managed by Microsoft.
- Manage external dependencies.
  - The customer will facilitate any interactions with related projects or programs in order to manage external project dependencies.



- Customer will follow all appropriate change management processes and obtain approval in time for the deployment of the solution per this projects schedule
- Coordinate appropriate personnel to attend the project close out meeting
- Customer is responsible for providing resources and leading the completion of the PAM tests as documented in the Test Plan
- Customer has already deployed Microsoft's reference architecture for Active Directory Administration ("tier model") into their production Active Directory Domain Services environment.
- Customer will provide a representation of the in-scope production Active Directory environment that will be used in the Build and Stabilize phases of this project which includes; OU's, users who are in scope for privilege access management, at least 1x standard user workstation, and at least 1x Windows Server member server

## 4.2. Project assumptions

The project scope, services, fees, timeline, and our detailed solution are based on the information provided by the Customer to date. During the project, the information and assumptions in this SOW will be validated, and if a material difference is present, this could result in Microsoft initiating a change request to cover additional work or extend the project duration. In addition, the following assumptions have been made:

- Work day:
  - The standard work day for the Microsoft project team is between 8 AM and 5 PM, Monday through Friday.
- Standard holidays:
  - Observance of consultants' country-of-residence holidays is assumed and has been factored into the project timeline.
- Remote working:
  - The Microsoft project team may perform services remotely.
  - If the Microsoft project team is required to be present at the customer location on a weekly basis, resources will typically be on site for three nights and four days, arriving on a Mondays and leaving on a Thursday.
- Language:
  - All project communications and documentation will be in English Local language support and translations will be provided by the Customer.
- Staffing:
  - If necessary, Microsoft will make staffing changes. These can include, but are not limited to, the number of resources, individuals, and project roles.
- Informal knowledge transfer:
  - Customer staff members who work alongside Microsoft staff will be provided with information knowledge transfer throughout the project. No formal training materials will be developed or delivered as part of this informal knowledge transfer.
- Technical Assumptions:
  - Customer has implemented the Microsoft Reference Model for Active Directory administration and has either transitioned, or is in process of transitioning, into this model.

- Customer has at least 1x Microsoft Windows Server 2012 R2 domain controller running in the production corporate Active Directory domain with the May 2016 update applied to it. This allows for the use of the PIM trust type.
- Customer is already familiar with PAWs and has both operational processes, and technical components, in place providing PAW functionality.