efficient iP™
DEFINING SMART DDI

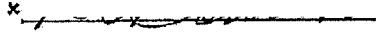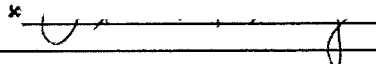# Statement of Work ("SOW")

Turnkey project

TEXAS A&M UNIVERSITY AT QATAR ("Customer") AND Efficient IP

A|M | TEXAS A&M
UNIVERSITY *at* QATAR

ACADEMIC SUCCESS CENTER

Project: TEXASAMQ

By signing below, Texas A&M University @ Qatar and Efficient IP hereby agree to this SOW and are representatives authorized to sign on behalf of their respective entity	
TEXAS A&M UNIVERSITY AT QATAR Signature	Efficient IP Signature
x _____	x _____
Name of Signatory: Robert C. Bounds Director, Procurement Services	Name of Signatory: SR. Project Manager
Date: 2 MAY 17	Date: May 4th, 2017

INTRODUCTION

This SOW describes the professional services ("**Services**") to be provided by Efficient IP in connection with Texas A&M University on behalf of its branch campus Texas A&M University at Qatar, a member of The Texas A&M University System, an agency of the State of Texas("Customer"), as further described in this document. This SOW shall take effect and project will commence when signed by Efficient IP and Customer ("**Effective Date**"). If the parties sign on different dates, then the later of the two shall be the effective date. This Statement of Work incorporates the requirements of Texas A&M's Purchase Order #P700078.

REVISION

Version	Date [yy/mm/dd]	Author	Comments/Modifications
1	17/02/27	Dennis Borin	Created for Texas A&M @ Qatar ["TEXASAMQ"]
2	17/03/31	Leah Kelly	Added deliverables, project details, team member names Document name: SOW170331_DB_TEXASMQ
3	17/04/03	Leah Kelly	Added Training dates and projected dates on tasks; updated existing technical environment Document name: SOW170403_DB_TEXASMQ

CHANGE CONTROL

This SOW may not be modified or amended except in a writing signed by an authorized representative of each party. Changes made to this SOW shall require the written agreement of both parties.

GENERAL PROJECT MATTERS

CUSTOMER COOPERATION

- To ensure a successful deployment, Customer agrees to the following:
  - Be responsive by providing all technical information and data requested by Efficient IP to complete required project tasks.
  - Provide Efficient IP with VPN access to customer's test and/or production environment both remote and onsite, including firewall and remote access server configuration.
  - Provide contact information for responsible team members and ensure their availability
  - Provide adequately trained staff available to perform customer obligations under this SOW.
  - Deploy solution into production only with the assistance of Efficient IP Professional Services and will not deploy any part or all the solution into production prior the agreed-upon rollout date.
  - Will not modify or alter Appliances (Hardware and Software) without Efficient IP's approval.
  - Provide a minimum of two week's cancellation notice for any production migration and rollout dates that have been mutually agreed upon.

PROJECT DELAYS

Delay by Customer:

- Any delay attributable to Customer will result in a corresponding delay in timeframe and/or deliverables without liability to Efficient IP.
- If Customer cancels any onsite activity less than two [2] weeks' notice, customer will be charged for the onsite days. Efficient IP and customer will work together for an agreed-upon rescheduled date.
- If additional Efficient IP resources are required as a result of such delay, these shall be paid for by the Customer. The precise amount of additional costs will be agreed via the Change Control process.
- If the rollout into production will be performed remotely and customer cancels the scheduled rollout without two weeks' prior notice, there are no guarantees Efficient IP can accommodate Customer's rescheduled rollout date. Efficient IP and Customer will mutually agree on a rescheduled rollout date.

Delay by Efficient IP:

- Any delay attributable to Efficient IP may result in corresponding delay in timeframe and/or deliverables without liability to Customer. Customer will not be held accountable for additional costs associated with this delay.

TRAVEL & EXPENSES

- All Professional Services will be completed remote for this project via GoToMeeting or VPN access; therefore, no travel expenses will be incurred. If TEXASAMQ would like on-site professional services, a new quote will be developed but this may impact the delivery schedule.
- Training will be conducted on-site at TEXASAMQ's campus. Travel and expenses are factored into the training quote as defined for that phase.

EFFICIENT IP WORK PERIOD/HOURS

- If the Customer requires Efficient IP resources to work outside the standard business hours of 8am to 5pm then, unless otherwise agreed by the Efficient IP Project Manager:
  - the relevant Efficient IP Professional Service Engineer resource shall not be required to work more than 8 hours per calendar day unless otherwise agreed by Efficient IP, and
  - the 8 hours of work will be delivered within the space of 10 consecutive hours of that day.
- If the Customer requires different rollout procedures than the one described in the migration phase of this SOW and agreed upon in the migration plan that requires additional hours, it will be out of scope of this SOW and must follow the Efficient IP Change Management process.

NO CUSTOMER SPECIFIC SOFTWARE DEVELOPMENT

- For the avoidance of doubt, Efficient IP will not develop customer specific software as part of this SOW.

PROJECT DESCRIPTION

EXECUTIVE SUMMARY

The purpose of this project is to migrate and deploy TEXASAMQ from the existing Microsoft DNS/DHCP and Cisco DHCP to an Efficient IP SOLIDserver platform for internal DNS and DHCP servers. Additionally, the external DNS will also be migrated to an Efficient IP SOLIDServer platform. Customer has purchased six [6] SOLIDServer 550 Hardware Appliances.

This SOW describes the work efforts to be done by Efficient IP to deliver IPAM, SmartArchitecture DNS and SmartArchitecture DHCP solutions.

Internal IPAM, DNS, and DHCP:
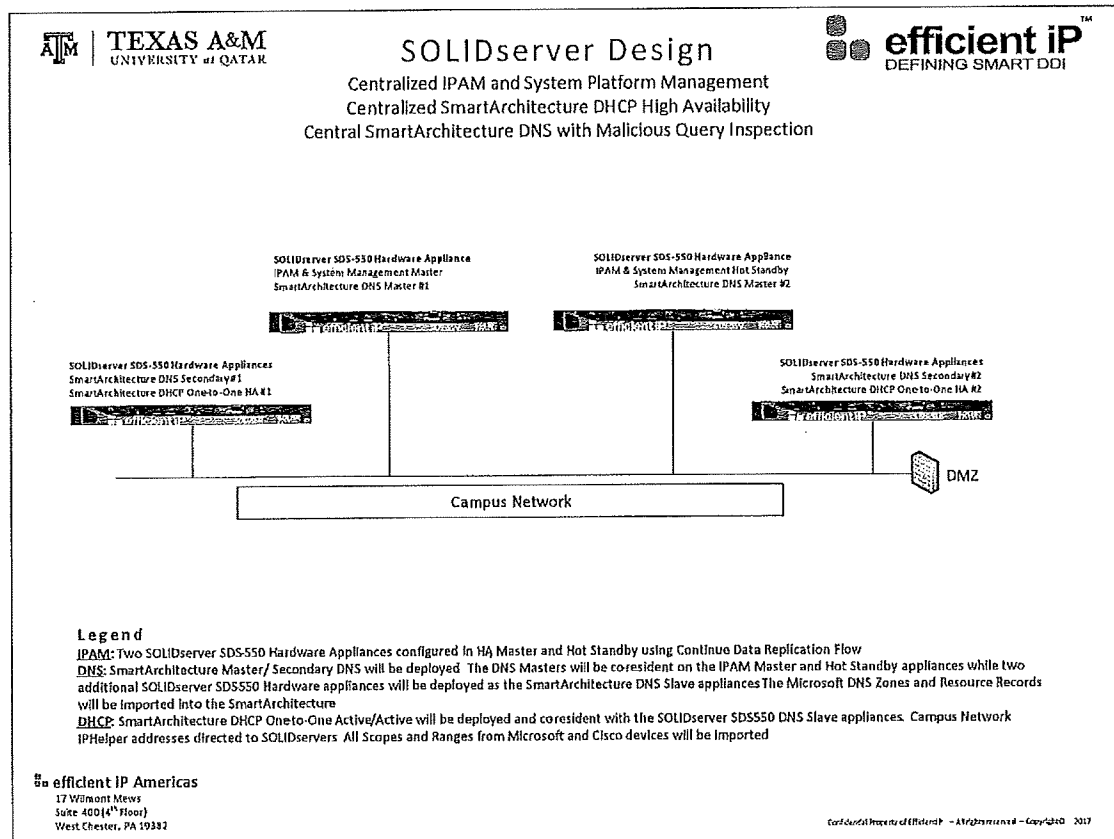
IPAM: Two SOLIDserver SDS-550 Hardware Appliances configured in HA, Master and Hot Standby using Continue Data Replication Flow.

Internal DNS: SmartArchitecture Master / Secondary DNS will be deployed. The DNS Masters will be co-resident on the IPAM Master and Hot Standby appliances while two additional SOLIDserver SDS-550 Hardware appliances will be deployed as the SmartArchitecture DNS Slave appliances. The Microsoft DNS Zones and Resource Records will be imported into the SmartArchitecture

DHCP: SmartArchitecture DHCP One-to-One Active/Active will be deployed and co-resident with the SOLIDserver SDS-550 DNS Slave appliances. Campus Network IPHelper addresses directed to SOLIDServers. All Scopes and Ranges from Microsoft and Cisco devices will be imported

---

External DNS:

SOLIDserver Design

Central External SmartArchitecture DNS with Hybrid DNS
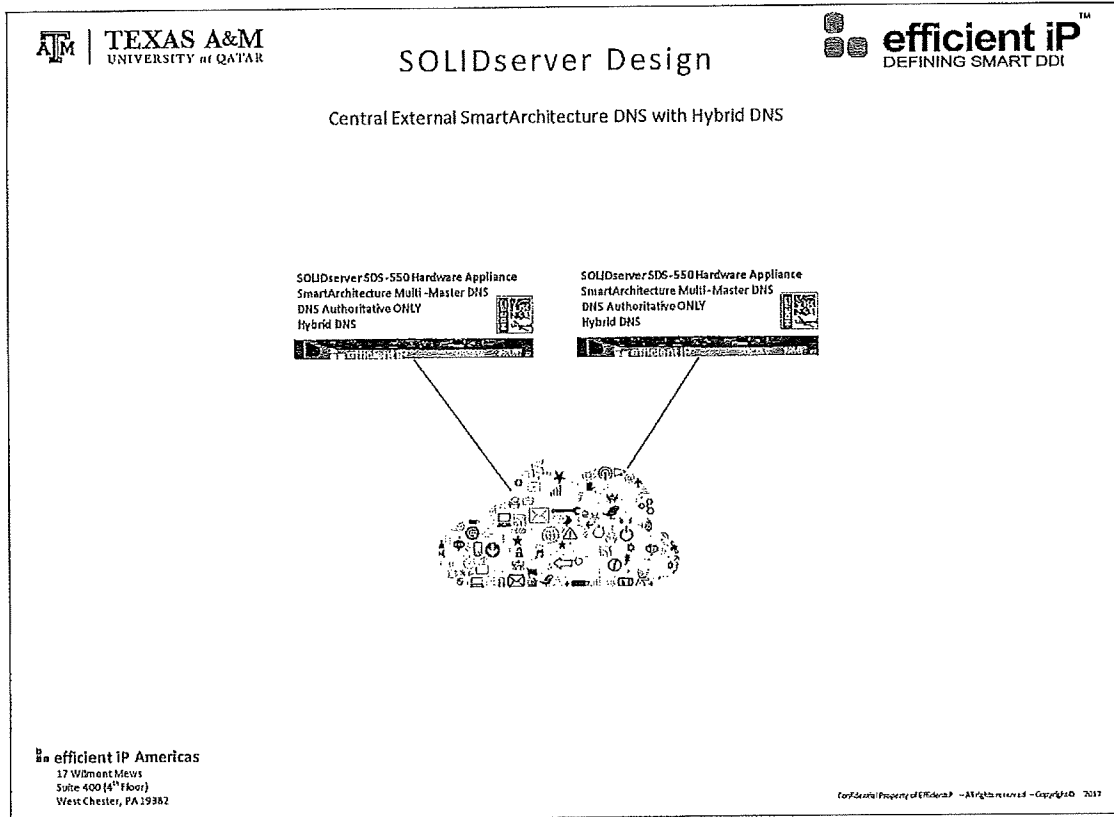
- Two (2) SOLIDserver SDS-550 Hardware appliances configured as Multi-Master will be deployed.
- These appliances will have the Force Hybrid Mode enabled to provide the ability to switch between ON-Demand from ISC BIND and NLNetLabs NSD DNS engines.
- SmartArchitecture will also have Recursion disabled and Response Rate Limiting set to 200 maximum queries per second. All ACLs will also be set to only allow the SOLIDserver Management appliances to update, no other devices or systems will be permitted to zone transfer, update, or change any zone or resource records.

Product Scope:

Efficient IP Module	
IPAM	YES
DNS	YES
DHCP	YES
VLAN Manager	YES
NetChange-IPL	NO
NetChange	NO
Device Manager	NO
Workflow	NO

DNS Qualifier		
Current DNS Solution		
Current DNS solution (Name and version)	Microsoft	Microsoft Server 2012 R2
Number of DNS Servers	4	
Architecture (Authoritative/Recursive Both)	Both	
Architecture (Private/Public/Both)	Both	
Number of DNS Zones (Public)	<=10	
Number of DNS Zones (Private)	<=20	
Number of RR's Public (total)	<=250	
Number of RR's Private (total)	<=4,000	
DNSSEC used (Yes/No)	No	
Performances : current DNS traffic (Queries / second)	1,000	
Targeted DNS Solution		
Number of Data Centers	1	
Architecture (Authoritative/Recursive Both)	Both	Internal Both / External Auth ONLY
Architecture (Private/Public/Both)	Both	
Dynamic DNS required (Yes/No)	Yes	
Enable DNSSEC (Yes/No)	No	
E-DNS required (Yes/No)	No	
DHCP Qualifier		
Current DHCP Solution		
Current DHCP solution (Name and version)	Windows/Cisco	Microsoft Server 2012 R2
Number of DHCP Servers	2	CSV can be provided
Architecture (Standalone / Failover / Cluster / Splitscope)	Standalone	
Total number of Scopes	<=100	
Number of Data Centers	1	
Number of Network Devices (For Staff, Guest, and Admin Users)	1,200	
Number of leases	2,500	
Performances : number of leases / second	150	
Targeted DHCP Solution		
Architecture (Standalone / Failover / Cluster / Splitscope)	Failover	
Expected Networks growth in the next 5 years (%)	10%	
IPv6 required (Yes/No)	No	
Dynamic DNS required (Yes/No)	Yes	
IPAM Qualifier		
Current IPAM Solution		
Current IPAM solution (Name and Version)	None	
Number of DataCenters	1	
Number of Switches		
Number of VLAN's	<= 250	
Number of IPv4 managed	<= 5,000	
Number of IPv6 managed		
Number of Subnets	<= 250	
Overlap on Subnets (Yes/No)	No	
Naming conventions (Yes/No)	No	
Specific criteria to qualify IP addresses (Yes/No)	No	
Targeted IPAM Solution		
IPv6 required (Yes/No)	No	
Expected IP's growth in the next 5 years (%)		

PROJECT APPROACH

A team approach will be employed and consists of Efficient IP and Customer team members. Efficient IP will assign a Project Manager who will be responsible for driving the project and interfacing with the Customer to manage the overall relationship. A key contact or Project Manager from the Customer will be assigned to this project who will manage customer deliverables.

PROJECT PLANNING

Efficient IP will manage the project in a phased approach with acceptance periods. In conjunction with the Customer, the Efficient IP Project Manager will determine projected timeframes for each phase outlined below.

The Efficient IP Project Manager is not responsible for developing a project plan that outlines Customer's internal tasks associated with this project.

This SOW, along with the project phases and deliverables, represent the tasks to be performed as part of this project and any tasks or deliverables not include in this SOW are outside the scope of this project.

PROJECT PHASES & ACCEPTANCE

There will be four sign off/acceptance periods during this project:

Phase / Acceptance	Description	Projected Start Date	Projected End Date
Phase One [YES]	Design Meeting TEXASAMQ: set up Support Access, send data to EIP, update Network & Services Config spreadsheet & update IPAM spreadsheet; send to EIP	4/3/17	4/7/17
Phase Two [NO]	TEXASAQM: Install appliances EIP to configure appliances TEXASAQM: Data Validation	4/10/17	4/21/17
Phase Three [YES]	Training [onsite]	5/10	5/12
Phase Four [YES]	Shared: Migration/ Rollout into Production/Testing [remote] 1 day migration/cutover 1 day monitoring		
Phase Five* [YES] * 15 calendar days post rollout	Final Acceptance EIP will transition account to Support		

EFFICIENT IP RESOURCES

Name	Role	Responsibility Overview
Joe Pollera Joe.pollera@Efficient IP.com	Sr. Account Executive	Account relationship with customer
Dennis Borin Db@Efficient IP.com	Sr. Sales Engineer	Design/architect targeted solution
Peter Vanek pv@Efficient IP.com	Professional Services Technical Manager	Provides design architecture and oversees all technical deployment activity.
Paul-Emile Bellaloum PEB@Efficient IP.com	Global Delivery Manager	Global delivery of projects and delivery team. Has authority to approve Change Requests.
Leah Kelly lk@Efficient IP.com	Project Manager	Point of contact and responsible for overseeing and managing the project. Coordinates shared tasks and communicates with customer throughout the project. Provides Customer with sign off/Acceptance documents for applicable phases.
Abdallah Tabi at@Efficient IP.com	Sr. Professional Services Engineer/Technical Lead	Point of contact for all technical matters on this project. Will oversee /execute the migration & cutover.
Tom Burley tb@Efficient IP.com	Sr. Professional Services Engineer	Sr. member of the professional services team; participate on technical items as needed.
Philippe Laonet pl@Efficient IP.com	Training Manager	Oversees the training department and training resources.

CUSTOMER RESOURCES

Name	Role	Responsibility Overview
Joe [JD] Lewis Joe.lewis@qatar.tamu.edu		Main point of contact on project
Thomas Mather Thomas.mather@qatar.tamu.edu		
Yaser Mansour Yaser.mansour@qatar.tamu.edu		

HIGH LEVEL RESPONSIBILITY MATRIX

The table below illustrates the high-level responsibility matrix in RACI format where:

R = Responsible, A = Accountable, C = Consulted, I = Informed

Task	Efficient IP	Customer
Project Planning	R/A	C
Technical Design	R/A	C
Install Appliances	C	R/A
Appliance Configuration and setup	C	R/A
Data integrity, qualification and testing	C	R/A
Data Import	R/A	C
Rollout into production	R/A	C
Signoff/Acceptance on phases	R/A	R/A
Transition to Support	R/A	I

PRODUCT SUPPORT OVERVIEW

Product Support Services will be granted to all customers under the following conditions:

- Customers must be trained and have maintenance agreements up-to-date
- Customers trained on Efficient IP's solution are entitled to 10 access accounts (ASC)

Access requests for Knowledge-base, downloads and/or the ticketing tool can be requested at any time:

- http://www.Efficient IP.com/support-access/
- Customers can request access prior to deployment but cannot raise a support ticket until Final Acceptance has been received [15 calendar days post rollout].

PROJECT DETAILS

PHASE ONE: TECHNICAL PRODUCT DESIGN & CUSTOMIZATION SPECIFICATIONS

Phase One Summary:

Efficient IP Responsibility:

- Analyze existing environment and collect data from TEXASAMQ (DNS and DHCP dumps, DHCP specific options, Cisco DHCP, IPAM exports and excel spreadsheets).
- Hold design meetings to discuss technical design architecture and deployment strategy.

Customer Responsibility:

- Provide requested data to Efficient IP in the format requested and Customer may need to provide data several times over the term of the project.
- Install and rack appliances in the relevant location and apply initial IP address configuration to appliances.
- Set up request for access to Efficient IP's knowledge-base, downloads and ticketing tool

Phase One Deliverables:

- Technical Specifications: Efficient IP will provide a design document as a result of meetings with customer that outlines the SOLIDServer solution overview.

- Standard TestBook: Efficient IP will provide a Standard TestBook that outlines tests to validate the initial set up/installation of appliances and connectivity. The Customer will be responsible to execute the testbook and customize with any specific use cases.

- Migration Plan: Efficient IP will provide a draft version of the Migration plan which explains details of the rollout. Adjustments will be made throughout the project and a Final Migration Plan will be developed before rollout.

- Network & Services Configuration Spreadsheet: Efficient IP will provide a spreadsheet that collects information on Customer's Network to be used for deployment. Efficient IP will review with Customer during the design meeting and request customer to update this spreadsheet and/or get assistance from Efficient IP.

- IPAM Template: Efficient IP will provide a spreadsheet and/or CSV template to collect IPAM data to be used for configuration and deployment. Efficient IP will review the spreadsheet and customer will be required to update the spreadsheet.

- SOLIDServer Monitoring Best Practices: Efficient IP will provide a document that outlines best practices for monitoring SOLIDServer appliances and hosted services.

- Phase One sign off/Acceptance for Design: Efficient IP will provide the Acceptance Form for Phase One that will be signed by both parties. Sign off is required prior to production migration/cutover.

PHASE TWO: CONFIGURATION & DATA VALIDATION

Phase Two Summary:

Efficient IP responsibilities:

- Provide csv templates for IPAM data importation. Efficient IP will be responsible for importation
- Build and configure architecture as outlined in the HLD
- Provide Final Migration Plan

Customer responsibilities:

- Transform/export actual data into csv templates and fix errors
- Supply an adequate technical environment with VPN connectivity
- Configure the appliances per HLD and perform data validation
- Prepare for production rollout and make any configuration changes to the network infrastructure for IPHelpers or any other network changes

Phase Two Deliverables:

- Efficient IP will:
    - deploy Centralized management appliance and perform system configuration setup.
    - apply the relevant configuration for IPAM following HLD
    - setup all internal SmartArchitecture for DNS/DHCP as described in the HLD
    - setup an external SmartArchitecture for DNS as described in the HLD

PHASE THREE: TRAINING

Phase Three Summary:

- Efficient IP Project Manager will coordinate and confirm training dates with Customer and Trainer. Efficient IP recommends that training be scheduled before the rollout.
- Efficient IP Trainer will contact Customer to obtain contact information of each student, location where training will be held, schedule training facility, and ensure facility is set up according to training requirements. Customer must provide this information at least four [4] full weeks before training is scheduled.
- Efficient IP Trainer will deliver Standard Training for 3 [three] days of training for up to six [6] students at designated customer site.

Phase Three Deliverables:

- Efficient IP Trainer will provide training materials in advance of the class to designated attendees.
- Deliver Standard Training.
- Phase Three Sign off/Acceptance: Efficient IP will provide the form for Phase Three to be signed off by both parties.

PHASE FOUR: MIGRATION & ROLLOUT INTO PRODUCTION & TESTING

Phase Four Summary:

Efficient IP Responsibility:

- Import final existing data into SmartArchitecture that has been qualified by Customer

- Apply any configuration changes to SmartArchitecture

- Rollout the solution into production based on the final migration plan

- Launch DNS/DHCP service migration

- Monitor results

- This deployment and migration will be accomplished remotely using a single migration batch off hours over two separate days as follows:
    - 1 day preparation to load latest data and prepare for rollout
    - Rollout itself - internal & external [same day]
    - 1 day post-migration checks, monitoring and knowledge transfer

- If Customer requires different migration procedures that results in additional number of migration batches, this will be out of scope of this SOW and must follow the Change Management process that will result in additional costs.

Customer Responsibility:

- Sign off prior to this phase acknowledging the production rollout plan and dates.

- Provide technical contacts for post migration tests and IPHELPER modification and guarantee availability of these contacts during the migration/rollout.

Phase Four Deliverables:

- Solution is successfully rolled out into production and Customer uses the solution in nominal mode.

- Efficient IP will monitor 15 calendar days remotely and fix any issues within this post-rollout period.

PHASE FIVE: FINAL ACCEPTANCE / TRANSITION TO SUPPORT

Phase Five Summary:

- Final Acceptance/Transition to Support is pronounced after 15 calendar days and shall not be withheld if there are:
    - zero "Crash Severity Level Issues"
    - zero "Block Severity Level Issues"
    - zero "Major Severity Level Issues"
    - no more than ten "Minor Severity Level Issues" and
    - unlimited "Request for Enhancement Severity Level Issues"
- Each level issue as defined in Efficient IP's standard support and maintenance terms

Phase Five Deliverables:

- Customer to sign off for Phase / Transition to support after 15 calendar days.

- Customer will be able to raise a ticket in Support

Maintenance contract

Please find below the details of your maintenance contract. This contract is submitted to the terms and conditions of the Support
Services Agreement attached to this confirmation.

Contract number : **180331170401TEXAS**

End user : **TEXAS A&M UNIVERSITY @ QATAR**

Start date : 01/04/2017

End date : 31/03/2018

Maintenance References	Quantity	Contract Type Bronze or Silver	Serial number(s)
M1G-SDS-550-DDI	1	Gold	D2CGZG2
M1G-SDS-550-DDI	1	Gold	D2CKZG2
M1G-SDS-550-DDI	1	Gold	D2DBZG2
M1G-SDS-550-DDI	1	Gold	D2DHZG2
M1G-SDS-550-DDI	1	Gold	D3SJZG2
M1G-SDS-550-DDI	1	Gold	DCWGZG2
M1G-SDS-550-DDI	**6**		

Hardware replacement services are limited to specific countries and are not available for all locations.
Therefore customer is responsible for determining whether hardware replacement services are available for any specific
location and must communicate to EIP the precise location where hardware appliance will have to be covered by the
hardware replacement services.
By default, Hardware Services will be delivered to the delivery site(s) indicated on the Orders associated to respective
Hardware Appliances.
EIP may refuse an Order for Hardware Services in case of non-eligible locations to Hardware Services.
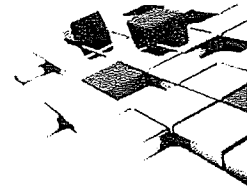
efficient iP

EfficientIP Technical Support Services in one page

Registration Process

To request access to EfficientIP's Product Downloads, Knowledge Base and/or Issue Management, the ASC or DSC must go to: http://www.efficientip.com/support-services/. Then click on *"Request Access Here"*.
After verification of the support contract, we will confirm the access rights and provide the credentials by email.

Technical Support Access

EfficientIP recommends the use of the web incident management tool as a mean of escalation to facilitate the follow up of the issue and for tracking/reporting purposes.

Support website: https://support.efficientip.com/issuetracker
Support phone numbers:
- EMEA: +33 1 75 84 89 50
- AMER: +1 888 228 4655

Operating Hours

EfficientIP local Support teams are available on the following hours excluding national/legal holidays in EMEA and AMER.

EMEA	AMER	APAC	Outside Hours
Mon-Fri	Mon-Fri	Mon-Fri	P1/Block tickets will be escalated to 24*7 support services.
08am to 06pm CET	08am to 08pm EST	08am to 06pm HKT	

Note: Full 24*7 services are additional and contracted with the product maintenance.

Response Times

Priority level	Tech. Support response time	Estimated resolution time before escalation to R&D	Estimated resolution time after escalation to R&D
P1 (Urgent)	4 hours	4 hours	5 working days
P2 (High)	6 hours	1 working day	10 working days
P3 (Normal)	1 working day	1 working week	1 working month
P4 (Low)	2 working days	3 working weeks	Next available Patch, Minor Release or Major Release

Response time: interval between the reception of the new ticket by the Technical Support Team and the first reply supplied.

Estimated resolution time before escalation to R&D: EfficientIP Technical Support Team will use all available resources to resolve or find a workaround to the incident in the given time.

Estimated resolution time after escalation to R&D: EfficientIP R&D team will use all available resources to resolve or find a workaround to the problem in the given time.