

**HAWAIIAN TELCOM, INC.'S BAFO PROPOSAL RESPONSE
TO
STATE OF HAWAII
RFP-12-006-SW**

**TO FURNISH, DELIVER, INSTALL, AND MANAGE
NETWORK AND TELECOMMUNICATIONS SERVICES FOR
HAWAII STATE GOVERNMENT**

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June 8, 2012

State of Hawaii
State Procurement Office
1151 Punchbowl Street, Room 416
Honolulu, Hawaii 96813

Dear State Procurement Officer:

Subject: Hawaiian Telcom, Inc.'s Transmittal Letter for its Best and Final Offer (BAFO) Response to the State of Hawaii, Hawaii State Government's RFP-12-006-SW To Furnish, Deliver, Install, and Manage Network and Telecommunications Services for Hawaii State Government

Hawaiian Telcom is pleased to submit its Best and Final Offer (BAFO) and revised Proposal to the State of Hawaii, Hawaii State Government's RFP-12-006-SW, To Furnish, Deliver, Install, and Manage Network and Telecommunications Services for Hawaii State Government.

Hawaiian Telcom is uniquely qualified to provide the State with its network and telecommunications needs.

- **Continuity** – We have a proud local heritage of providing telecommunications services in the State of Hawaii for over 129 years!
- **Reliability** – Hawaiian Telcom has a robust, statewide infrastructure that has expanded over the years to meet the State's evolving technology requirements.
- **Stability** – Hawaiian Telcom is a financially stable company and we will continue to service the State as a trustworthy business partner.

The following information is provided per the requirements identified in RFP Section 3.2.3. Transmittal Letter:

Name of Firm: Hawaiian Telcom, Inc.
 Address of Firm: 1177 Alakea Street, Honolulu, Hawaii 96813
 P.O. Box 2200, Honolulu, Hawaii 96841
 Binding Authority: Kurt Hoffman
 Title of Authority: Chief Operating Officer
 Contact Person: Phyllis Morihara
 Title: Government Account Manager
 Address of Contact: 1177 Alakea Street, Honolulu, Hawaii 96813
 P.O. Box 2200, Honolulu, Hawaii 96841
 Phone: (808) 546-8736
 Facsimile: (808) 546-8288
 Email: phyllis.morihara@hawaiiantel.com



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Hawaiian Telcom will comply with all the provisions set forth in the State's RFP-12-006-SW, subject to the clarifications identified in Hawaiian Telcom's BAFO Proposal.

As required by the State's Addendum 4, Section 1.b, we are submitting a new Proposal in its entirety as our BAFO response.

For your ease in reviewing our submittal, be advised that the Proposal sections that have been revised are as follows:

- Transmittal Letter (with updated Certificate of Secretary Certifying as to the Signing Authorization Relating to Government Contracts)
- Offer Page, Resumes, Wage Certificate, and Certificate of Vendor Compliance
- Technical Requirements – Responses to Section Two:
In particular, revisions have been made to the following sections:
 - 2.2.1.2
 - 2.3.1.2
 - 2.3.1.4
 - 2.3.1.5
 - 2.3.2.2
 - 2.3.5.4
 - 2.3.6
 - 2.4
 - 2.4.1
 - 2.7.1.2
 - 2.9.1.1
 - 2.9.1.2
 - 2.9.1.4
 - 2.9.1.5.1
 - 2.9.1.5.3
 - 2.9.1.5.4
 - 2.9.2.1
 - 2.9.2.2
 - 2.10.1



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- Schedule A – Networking and Telecommunications Rates
In particular, revisions have been made to the following pricing sheets:
 - Other Services - Business All-in-One (BAiO)
 - Digital Subscriber Line - High Speed Internet (HSI)
 - Broadband Ethernet – EIPDS, RNS
 - Internet Service Provider – DIA
 - Hawaiian Telcom Wireless Services and Devices (new Other Service in Section 2.3.6 of Section 2 - Technical Requirements)
- Schedule B – Managed Services
- Schedule C – Minimum Qualifications

Hawaiian Telcom’s BAFO Proposal submittal, as uploaded to the State’s HePS website, is comprised of the following sections:

- Transmittal Letter.....Tab 1
(with updated Certificate of Secretary Certifying as to the Signing Authorization Relating to Government Contracts)
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• Attachments.....Tab 9

Sample Capacity Management Report	(Section 2.5.4.1)
MNS - Customer Portal	(Section 2.9.2.3)
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Sample Customer Bill Detail	(Section 2.9.2.3)
Sample Trunk Usage	(Section 2.9.2.3)

Hawaiian Telcom appreciates the opportunity to submit our BAFO Proposal and we look forward to a positive response from the State.

If you have any questions, please contact the Government Account Manager, Phyllis Morihara at (808) 546-8736 or by email at phyllis.morihara@hawaiiantel.com.

Sincerely,

Kurt Hoffman
Chief Operating Officer



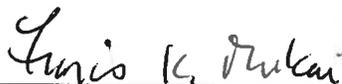
HAWAIIAN TELCOM, INC.

**Certificate of Secretary
Certifying as to the Signing Authorization
Relating to Government Contracts**

I, Francis K. Mukai, Secretary of HAWAIIAN TELCOM, INC., a Hawaii corporation, do hereby certify that the following is a full, true, and correct copy of a resolution duly adopted by the Board of Directors of said corporation by Unanimous Written Consent effective as of April 4, 2011 and that said resolution has not been modified, amended, or rescinded, and continues in full force and effect:

RESOLVED, that any individual at the time holding the position of President, Chief Executive Officer, Chief Operating Officer, Senior Vice President, or Vice President be, and each of them hereby is, authorized to execute on behalf of the Corporation any bid, proposal or contract with the United States Government or State of Hawaii or the City and County of Honolulu, or any County or Municipal Government of said State, or any department or subdivision of any of them, for the sale or rental of the products of the Corporation or for services to be performed by the Corporation, and to execute any bond required by any such bid, proposal or contract.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of said HAWAIIAN TELCOM, INC. this 8th day of June, 2012.



Secretary

**SIGNING AUTHORIZAION OF
HAWAIIAN TELCOM, INC.**

President & Chief Executive Officer	Eric K. Yeaman
Chief Operating Officer	Kurt Hoffman
Senior Vice President - Customer Operations	Michael E. Czerwinski
Senior Vice President - Strategy and Marketing	Bradley J. Fisher
Senior Vice President - Sales	Craig T. Inouye
Senior Vice President	John T. Komeiji
Senior Vice President - Technology	Kevin T. Paul
Senior Vice President	Robert F. Reich
Vice President - Finance	John K. Duncan
Vice President - External Affairs	Steven P. Golden
Vice President - Service Centers	James D. LaClair
Vice President	Francis K. Mukai

Business Address:
HAWAIIAN TELCOM, INC.
P.O. BOX 2200
HONOLULU, HAWAII 96841

**STATE OF HAWAII
RFP-12-006-SW**

HAWAIIAN TELCOM, INC.'S BAFO PROPOSAL RESPONSE

EXECUTIVE SUMMARY

Hawaiian Telcom's response to the State of Hawaii RFP-12-006-SW to Furnish, Deliver, Install, and Manage Network and Telecommunications Service for Hawaii State Government provides a comprehensive solution to all of the requirements stated in the RFP. Hawaiian Telcom is the only bidder with the breadth and depth of experience in Hawaii to provide all the network services and network infrastructure the State could desire for years to come.

History:

Hawaiian Telcom is uniquely qualified and experienced, as it has served as Hawaii's Local Exchange Carrier (LEC) in Hawaii for approximately 129 years. Our company has been, and is, committed to its original mission statement – **providing the best technology services to the people and businesses of Hawaii.**

Hawaiian Telcom has an extensive statewide network with presence on each of the major Hawaiian Islands that includes a fiber optic network linking all islands.

Experience, Organization and Resources:

With approximately 1,300 skilled employees, Hawaiian Telcom is the state's largest provider of information technology services. Our portfolio includes next generation IP data services, proactive managed services, dedicated internet access (DIA), high-speed internet (HSI), legacy transport services, along with local telephone, long-distance, and wireless services. Hawaiian Telcom has extensive expertise in the design, implementation, and support of voice and data equipment and services, VoIP solutions, video conferencing and structured cabling systems.

Benefits:

As Hawaiian Telcom provisions broadband Ethernet services over our high performance, highly reliable Multi-Protocol Label Switching (MPLS) network, the State can be assured of:

- Any-to-Any access
- A proven and secure technology
- A scalable and resilient network
- Cost-effective options
- Network simplification

Hawaiian Telcom's Local Enhanced Network Operations Center (eNOC) offers the following:

- A State-of-the-Art network operations facility
- Monitoring of Hawaiian Telcom's network 24x7x365
- Staffing with vendor certified technicians

Why Hawaiian Telcom:

- Hawaiian Telcom has been in business in Hawaii for 129 years and has facilities and personnel stationed on every island.
- Hawaiian Telcom is uniquely acquainted with the State's equipment, network, Frame Relay, Private Line and DLS services, and is, therefore, ideally poised to ensure a smooth transition to the next generation of network services.
- Hawaiian Telcom manages, monitors, and maintains its statewide network and associated network systems through advanced Element Management Systems (EMS) which is a carrier grade management system and through proprietary processes and procedures to ensure seamless network integration and lifecycle support.
- All core components of Hawaiian Telcom's network including our MPLS core routers, access switches, frame relay equipment, DSL access devices, fiber optic transmission devices, and associated support equipment are monitored 24x7x365 from our eNOC located in downtown Honolulu.
- Hawaiian Telcom's Managed Services offers the State multiple levels of network services and security, which can address many of the State's concerns about intrusions, viruses and network performance.

Summary:

Hawaiian Telcom has been partnering with the State for over 52 years. We understand the State and Local Government's current infrastructure and want to be a part of the State's agencies' information technology transformation.

Hawaiian Telcom's proposal will satisfy both the immediate and long-term needs of the State. Through our MPLS backbone we provide robust, reliable and resilient network services, managed, monitored and maintained by qualified, personnel located on the key Hawaiian Islands.

We look forward to continuing our long-standing partnership with the State as you migrate into the next generation of converged IP and Network Services. Thank you.

HAWAIIAN TELCOM, INC.'S (BAFO) PROPOSAL RESPONSE
SECTION TWO
TECHNICAL REQUIREMENTS

2.1 GENERAL

The Offeror must provide a response to all requirements in Section Two, Technical Requirements.

The Offeror must first respond with the level of compliance: “Comply”, “Does Not Comply”, or “Exception” to each paragraph. (See Section 3.2.5) Then, for “Comply” responses, the Offeror shall submit a detailed explanation, diagrams, and other descriptive information as to how the technical requirements will be accomplished. For “Exception” responses, the Offeror shall explain what portion of the requirement that it is able to meet and what portion it is unable to meet and the proposed alternative or modification, if any. The State will evaluate the “Exception” responses and make a determination if the response will be considered acceptable.

2.2 QUALIFICATIONS

Section 2.2 describes the minimum qualifications required for participation. Failure to comply with any of these requirements may result in disqualification of the Offeror. Responses to these questions must be answered in Schedule C found in Section Six.

2.2.1 Meets the Technical Support Requirements

2.2.1.1 Offeror shall be able to provide toll free telephone support via a technical support center which is staffed 24 hours a day, 7 days a week, 365 days a year (24x7x365).

Comply.

Hawaiian Telcom offers free telephone and online support, backed by a Network Operations Center (NOC) in downtown Honolulu that is staffed with certified engineers and technicians on a 24x7x365 basis.

2.2.1.2 Offeror shall be able to initiate troubleshooting within 30 minutes of receiving a call and if necessary, deploy technicians onsite within two Business Hours of problem determination on Oahu and four Business Hours on the neighbor islands.

Comply.

Hawaiian Telcom trouble shooting begins with customer initiation of a trouble ticket. When a customer trouble call is first received, Hawaiian

Telcom will work with the customer to identify their Hawaiian Telcom service and obtain facts about the trouble.

Upon receipt of the trouble report, customer care advocates will immediately perform a series of front line troubleshooting to attempt a One Touch resolution. If unable to resolve, the trouble ticket routes to Hawaiian Telcom's network support to perform remote diagnostics. Remote diagnostics allows Hawaiian Telcom to perform trouble isolation before a Hawaiian Telcom technician is dispatched so that if necessary an appropriate technician can be dispatched with the appropriate tools. Using remote diagnostics, Hawaiian Telcom can often clear a trouble without dispatching a technician onsite. Especially for Hawaiian Telcom's IP services, on site dispatch may often be unnecessary because trouble isolation and repair may be accomplished within Hawaiian Telcom's NOC rather than at the customer's premise.

Hawaiian Telcom will initiate troubleshooting within 30 minutes of receiving a call and if necessary, deploy technicians onsite as follows:

Critical/Priority 1 trouble (No connectivity, out of service resulting in critical impact to end users.): If necessary, Hawaiian Telcom will respond onsite within two business hours on Oahu and four business hours on the islands of Kauai, Maui and the Big Island outages. While Hawaiian Tel has a larger staff of technicians on Oahu, Maui, and Kauai, we have two (2) technicians stationed on Molokai and one (1) technician stationed on Lanai. For a Critical/Priority 1 trouble on Molokai or Lanai Hawaiian Telcom will commit to do the following 3 steps within four (4) hours:

1. Hawaiian Telcom's NOC will work to isolate and remediate the trouble remotely;
2. As necessary, on-island technicians will troubleshoot the issue; and
3. If neither the NOC nor the on-island technicians can resolve the trouble, then Hawaiian Telcom will initiate travel arrangements for a technician to fly from Oahu or Maui to Molokai or Lanai to continue trouble resolution. As flights to Molokai and Lanai are limited, Hawaiian Telcom cannot commit to a specific time when the Oahu or Maui technician will arrive on Molokai or Lanai.

Major/Priority 2 trouble (Moderate to frequent packet loss, excessive errors on the circuit and latency issues. Service is available, but performance is degraded resulting in major impact to end users.): If necessary, Hawaiian Telcom will respond onsite within eight business

hours on Oahu and eight business hours on the islands of Kauai, Maui and the Big Island outages. For the islands of Molokai and Lanai, Hawaiian Telcom will commit to doing steps 1, 2, and 3 noted under Critical/Priority 1 trouble above within 8 hours.

Minor/Priority 3 trouble (Low to intermittent packet loss, some errors on the circuit, moderate latency. Service is working, with occasional performance issues resulting in minor impact to end users.): If necessary, Hawaiian Telcom will respond onsite within twenty-four business hours on Oahu and twenty-four business hours on the island of Kauai, Maui and the Big Island outages. For the islands of Molokai and Lanai, Hawaiian Telcom will commit to doing steps 1, 2, and 3 noted under Critical/Priority 1 trouble above within 24 hours.

Hawaiian Telcom's technician will provide the customer a final status update after the outage is resolved.

(Continued on next page.)

Response Time to Outages

Trouble	Priority	Trouble Shooting Initiation from Receiving Call	Offsite or Onsite Problem Determination Oahu	Offsite or Onsite Problem Remediation Kauai, Maui, & Big Island	Offsite or Onsite Problem Remediation Molokai & Lanai
Critical/Priority 1 – No Connectivity. Out of service resulting in critical impact to end users.	1	Within 30 minutes	2 Business Hours for Oahu	4 Business Hours	Within 4 Business Hours: <ol style="list-style-type: none"> 1. Hawaiian Telcom will work to isolate and remediate the trouble. 2. As necessary, on-island technicians will troubleshoot. 3. If neither the NOC nor the on-island technicians can correct the issue, Hawaiian Telcom will initiate travel arrangements for a technician to fly from Oahu or Maui to Molokai or Lanai.
Major/Priority 2 – Moderate to frequent packet loss, excessive errors on the circuit and latency issues. Service is available, but performance is degraded resulting in major impact to end users.	2	Within 30 minutes	8 Business Hours	8 Business Hours	Within 8 Business Hours: <ol style="list-style-type: none"> 1. Hawaiian Telcom will work to isolate and remediate the trouble. 2. As necessary, on-island technicians will troubleshoot. 3. If neither the NOC nor the on-island technicians can correct the issue, Hawaiian Telcom will initiate travel arrangements for a technician to fly from Oahu or Maui to Molokai or Lanai.
Minor/Priority 3 – Low to intermittent packet loss, some errors on the circuit, moderate latency. Service is working, with occasional performance issues resulting in minor impact to end users.	3	Within 30 minutes	24 Business Hours	24 Business Hours	Within 24 Business Hours: <ol style="list-style-type: none"> 1. Hawaiian Telcom will work to isolate and remediate the trouble. 2. As necessary, on-island technicians will troubleshoot. 3. If neither the NOC nor the on-island technicians can correct the issue, Hawaiian Telcom will initiate travel arrangements for a technician to fly from Oahu or Maui to Molokai or Lanai.

- 2.2.1.3 The Offeror must employ a minimum of five (5) support technicians residing in Hawaii and support all islands where service is offered.

Comply.

Hawaiian Telcom's network team consists of over 240 field technicians. Behind our technicians, Hawaiian Telcom has the support of engineers and technical support staff across all Hawaiian Islands. The average years of experience of our technical and support staff is 10 plus years. The technical staff's experience dates back to the traditional TDM network to the next generation carrier grade Multi Protocol Label Switching (MPLS) network.

- 2.2.1.4 Offeror shall be responsible for continually monitoring and tracking the outage until it is resolved. Offeror shall provide a final status update after resolution.

Comply.

Hawaiian Telcom continually monitors and tracks outages until service is restored. We have developed a proven repair and maintenance process that we continually evaluate and improve. The trouble is isolated, and after remote troubleshooting, a technician is dispatched if necessary. Hawaiian Telcom's policy is the Technician who clears the trouble will follow up with the customer and advise the customer of the final status.

2.2.2 Meets the Reliability Requirements

- 2.2.2.1 Offeror shall be able to provide circuit reliability that meets or exceeds 99.99% availability over the past two years for each offered service.

Comply.

Hawaiian Telcom offers an array of services with target availability of 99.99% and higher. Service levels are continuously monitored and studied utilizing enhanced management tools for internal end of month score card reporting at a platform level available for the past two years.

2.2.3 Provides Basic Required Services

- 2.2.3.1 At a minimum, Offeror shall be able to provide Broadband Ethernet to the islands of Oahu, Kauai, Maui, and the island of Hawaii

Comply.

Hawaiian Telcom offers broadband Ethernet services to all of Hawaii's major islands including Oahu, Maui, Kauai, the Island of Hawaii, Molokai and Lanai.

Or

Internet Service Provider (ISP) service to Oahu of at least 300Mbps.

Comply.

Hawaiian Telcom offers ISP services for 300Mbps and up to 1,000 Mbps on Oahu or more on a custom basis.

2.2.3.2 All neighbor island services must be able to terminate on Oahu.

Comply.

Hawaiian Telcom's network consists of over 62,000 miles of fiber and 2.6 million miles of copper infrastructure that spans the entire state of Hawaii. Both our legacy TDM network and our next generation data network can provide interconnection from all major Hawaiian Islands to Oahu.

2.2.4 Ownership of Network Infrastructure

2.2.4.1 Offeror shall be directly responsible for the monitoring, management and maintenance of its telecommunication infrastructure and its associated network equipment. Offeror must have direct control of the management and maintenance of its network backbone infrastructure.

Comply.

Hawaiian Telcom manages, monitors and maintains our statewide network and associated network systems through advanced Element Management Systems (EMS) and proprietary processes and procedures to ensure seamless network integration and lifecycle support.

Hawaiian Telcom owns and maintains an extensive network throughout the State of Hawaii including the associated cable plant and network electronics. All core components of this network including our MPLS core routers, MPLS access switches, frame relay equipment, DSL access devices, fiber optic transmission devices, and associated support equipment such as environmental controls and power subsystems are monitored 24x7x365 from our Enhanced Network Operations Center (eNOC) located in downtown Honolulu.

2.2.5 Existing Installation in the State of Hawaii

2.2.5.1 Offeror shall be an experienced provider of the proposed telecommunication services with existing installations in the State of Hawaii.

Comply.

Hawaiian Telcom has been serving the people of Hawaii since 1883. Hawaiian Telcom is Hawaii's oldest and largest provider of telecommunications and data network services. Our existing installations support a wide range of commercial, residential, and government customers throughout the State of Hawaii.

Hawaiian Telcom provides broadband layer 2 and layer 3 services, digital subscriber line, frame relay, point to point dedicated line, direct internet access, ISDN PRI, Business-All-in-One, and Managed Services to customers across the State of Hawaii. Our customer base encompasses the smallest businesses to the largest enterprise customers.

2.3 TELECOMMUNICATION SERVICES

This section describes the desired technology solutions to be provided from Offerors. As identified in Section 2.2.3.1, Offerors are required to provide a minimum of Broadband Ethernet service or Internet Service Provider services.

2.3.1 Broadband Ethernet

- 2.3.1.1 Broadband Ethernet service shall be offered as a routed (layer 3) and/or non-routed (layer 2) service. Routed services shall offer the ability to support Virtual Private Networks (VPNs) that can provide logical separation of traffic on a single physical connection.

Comply.

Hawaiian Telcom's MPLS backbone offers a Layer 2 service called Enhanced IP Data Service (EIPDS) and a Layer 3 service called Routed Network Service (RNS.) Both services allow customers to connect and transmit data and time sensitive applications such as voice or video. Optional Internet access via Virtual LAN (VLAN), Quality of Service (QoS) capabilities, and multiple VLANs are also offered on both services.

Enhanced IP Data Service (EIPDS) is a Layer 2 (data link) level, multipoint wide area network (WAN) data service that utilizes Hawaiian Telcom's owned and operated Multi Protocol Label Switching (MPLS) network. EIPDS provides customers with an Ethernet hand-off and connect using bandwidths beginning at 1.5 Mbps up to 1,000 Mbps. EIPDS is easy to implement and supports multiple customer sites and configurations with plug-and-play flexibility. As a Layer 2 service, the customer maintains full control of routing, making interworking simple.

Routed Network Service (RNS) is a provider-based IP Virtual Private Network (VPN) implemented on a high performance, Hawaiian Telcom-owned and operated Multi Protocol Label Switching (MPLS) network. Routing decisions are made at the Layer 3 (network) level, which allows RNS to support any-to-any access independent connectivity. This gives customers the flexibility of accessing the service via Ethernet (via fiber or copper), DSL, Frame Relay, or Private Line access protocols.

These two offerings give the customer the flexibility to choose from a Layer 2 or Layer 3 service and can also take into consideration any-to-any connections using Hawaiian Telcom's legacy services.

2.3.1.2 Offeror shall provide encryption services as part of the VPN service.

Does Not Comply.

Hawaiian Telcom's EIPDS at Layer 2 allows all encryption to traverse the private MPLS network. RNS at Layer 3 allows customers to create VPN tunnels via their CPE routers through the network to allow for proprietary encrypted packets. Hawaiian Telcom's default Maximum Transmission Unit (MTU) size is 1,500 bytes; we can increase the MTU size to 1,600 bytes if requested to allow for larger encrypted packets. In addition, Hawaiian Telcom offers CPE WAN/LAN equipment and configuration services by fully certified Cisco Data Engineers as an option to provide encryption services. To provide ongoing support for a CPE based solution, with an advanced encryption configuration such as Cisco's GET VPN or DMVPN, Hawaiian Telcom's Managed Network and Cyber Security Services can provide the expertise and tools to manage such a solution.

Alternatively, Hawaiian Telcom's Managed Services team is exploring an alternative "Service Based Solution" which requires no capital expenditure. As there is currently no standard pricing available, this can be priced on an individual case basis.

2.3.1.3 Offeror shall support quality of service/ class of service (QoS/CoS) capabilities necessary to support delay-sensitive and drop-sensitive traffic such as voice and video. Offeror shall detail its pricing structure if QoS/CoS is an additional cost item, along with discounts that will be provided.

Comply.

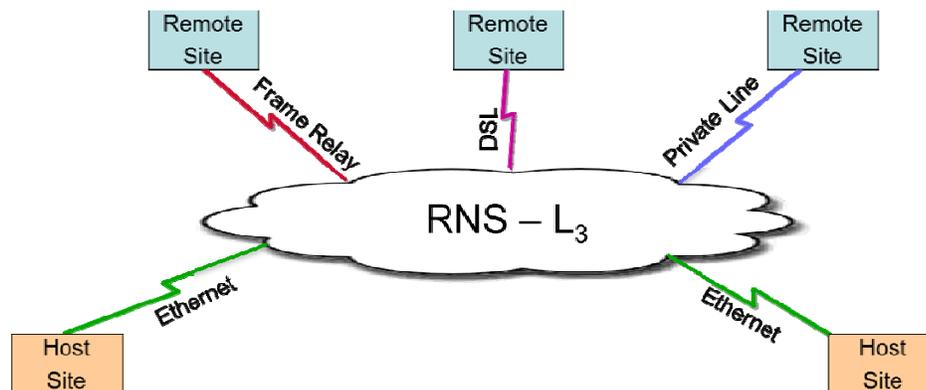
Hawaiian Telcom's EIPDS (L2) and RNS (L3) services offer Quality of Service (QoS) using either Differentiated Services Code Point (DSCP) or dot1p protocols on either service. Hawaiian Telcom's EIPDS and RNS data packets recognize either the dot1p (L2) or the DSCP (L3) protocols if QoS is ordered with the service. This allows our customers to realize end-to-end QoS beginning in the customer's LAN/WAN with QoS'd packets honored within the Hawaiian Telcom MPLS cloud. See Pricing Schedules for QoS costs. Reference table below for QoS values.

Traffic Type	DSCP	dot1p
Real Time	EF	5
Interactive	AF21	3
Business Priority	AF11	2
Business Best Effort	CS1	1

2.3.1.4 Offeror shall be able to provide Layer 3 any-to-any connectivity between the offered Broadband Ethernet service and other offered services.

Comply.

Hawaiian Telcom's RNS service allows for the interconnection of legacy services including Private Line, Frame Relay and DSL to Ethernet ready sites. This any-to-any connectivity gives Hawaiian Telcom's customers the flexibility to convert to Ethernet when ready or stay with their Hawaiian Telcom legacy service until the proper equipment/applications/locations are Ethernet ready. Connecting legacy services through the RNS cloud will require Hawaiian Telcom to move the circuit from the legacy cloud to the MPLS cloud, yet allowing for the customer's end to remain the same. Any-to-any connectivity mitigates the customer's migration concerns if they are not ready for Ethernet. The network diagram below shows how a customer can connect Ethernet ready sites with Hawaiian Telcom legacy sites (Frame Relay, DSL & Private Line) together via RNS.



2.3.1.5 Offeror shall identify all supported routing protocols.

Comply.

Hawaiian Telcom's EIPDS service (Layer 2) supports all dynamic routing protocols, including Cisco's EIGRP. RNS service (Layer 3) allows for Static, BGP and RIPv2 protocols.

- 2.3.1.6 Offeror shall be able to provide up to 100Mbps of bandwidth per circuit or greater.

Comply.

Hawaiian Telcom's MPLS Ethernet services scale from 1.5 Mbps up to 1,000 Mbps per circuit where facilities exist. Fiber facilities are required for bandwidths of 25 Mbps and up; additional charges for fiber builds will be handled on a location-by-location basis.

2.3.2 Digital Subscriber Line (xDSL)

- 2.3.2.1 Offeror's providing Digital Subscriber Line service shall provide a minimum of 1.5Mbps download and 384Kbps upload.

Comply.

Several DSL packages are being offered by Hawaiian Telcom all of which meet this minimum requirement.

- 2.3.2.2 xDSL circuits should allow for the direct termination into the State's private network.

Comply.

Hawaiian Telcom's DSL Transport services allow connection to the State's existing DS-3 Frame Relay network.

- 2.3.2.3 Line charges for specific speeds shall be consistent across all supported islands.

Comply.

All prices are the same state wide. A prequalification check will verify the maximum package that each line qualifies for. The customer can then choose which package they wish to order.

2.3.3 Frame Relay

- 2.3.3.1 Frame Relay service must include the ability to provide fractional T-1, T-1, and DS-3 circuits.

Comply.

Hawaiian Telcom's Frame Relay Service provides high speed throughput over digital facilities at speeds of 56/64 Kbps, 128 Kbps, 256 Kbps, 384 Kbps, 1.536 Mbps, or 44.736 Mbps. Physical access to the Frame Relay network is provided via a User-to-Network Interface (UNI) Port with Access Line Connection or via either a UNI Port Only Connection or an Network-to-Network Interface (NNI) Port Only Connection with a digital transmission facility.

A 56 Kbps Digital Data Service, DS1, or a DS3 rated Special Access Line (SAL) may be used as the UNI Port Only Connection transport link. A DS1 or DS3 rated SAL may be used as the NNI Port Only

Connection transport link. When available, DS1 transport must be equipped with both B8ZS capability and Extended Super Frame (ESF).

A High Capacity Digital DS3 (44.736 Mbps) rated SAL may be used as the 44.736 Mbps UNI Port Only or 44.736 Mbps NNI Port Only Connection dedicated access link to a DS3 Frame Relay Service Packet Switch at a transmission speed of 44.736 Mbps. Special transport mileage applies, as appropriate.

- 2.3.3.2 Frame Relay service must offer various levels of Committed Information Rates (CIR) as an option.

Comply.

Permanent Virtual Circuits (PVC) are the end-to-end logical channels defined in software tables that connect UNIs and NNIs in the Company Frame Relay network as requested by Customer. In order to establish a PVC, Committed Information Rate (CIR), BE (Burst Excess) and at least two Data Link Connection Identifier (DLCIs) must be specified.

Committed Information Rate (CIR) is the maximum information rate at which Customer's traffic will be admitted to the Frame Relay network without being designated eligible for discard. No PVC can have a CIR greater bit rate than the lower of the two port speeds connected by the PVC segment.

CIR provides Customer with a mechanism for prioritizing data on a per PVC basis across a given UNI/NNI. A CIR allows a sustained throughput at a chosen rate without having any frames designated "discard eligible" under normal operating conditions.

- 2.3.3.3 Frame relay circuits should allow for the direct termination into the State's private network.

Comply.

Frame relay circuits will allow for direct termination into the State's private network. However, it shall be the responsibility of the customer to configure CPE to allow the Frame Relay direct termination into the State's private network.

- 2.3.3.4 Line charges for specific speeds shall be consistent across all supported islands.

Comply.

Line charges are uniform across the state of Hawaii.

2.3.4 Point-to-Point Dedicated Line

Point-to-Point Dedicated Line service shall be offered in various fractional T-1 speeds in addition to T-1, DS-3, and OC-3.

Comply.

Private Line services provide connectivity between two points as a Point-to-Point service or multipoint service (three or more customer sites). Hawaiian Telcom offers private line services via the following speeds:

- Fractional T1 (N x 56 Kbps or N x 64Kbps, where N = 2,4,6)
- DS1 (1.544 Mbps)
- DS3 (44.736 Mbps)
- OC3 (155.52 Mbps)

2.3.5 Internet Service Provider (ISP)

2.3.5.1 Offeror shall provide a physical Ethernet interface.

Comply.

The physical handoff for internet connectivity at 1.5, 3, 5 & 10 Mbps is an RJ45 ethernet interface. Internet connectivity at 25, 50, 75, 100, 250, 500, 750, 1000 Mbps is an SC optical ethernet interface.

2.3.5.2 Offeror shall provide ISP connectivity up to 1Gbps or more.

Comply.

Internet connectivity is available up to 1 Gbps or more.

2.3.5.3 ISP shall optionally offer a 1Gbps physical interface for speeds less than 1Gbps if the customer is obtaining services of 50Mbps or more.

Comply.

An optional feature for Gbps interface is included for bandwidths 50, 75 & 100. A Gbps interface, SC connector, is included in connections of 250, 500, 750 & 1000 Mbps.

2.3.5.4 ISP must provide a minimum of 10 class C IP version 4 (IPv4) subnets.

Comply.

Hawaiian Telcom will provide 10 class C IP version 4 subnets with our 100 Mbps (or greater) Dedicated Internet Access service, at the rates shown in Schedule A.

Please note Hawaiian Telcom cannot guarantee contiguous block assignments. The network blocks assigned by Hawaiian Telcom are non-portable and upon expiration or termination of the service agreement, Hawaiian Telcom reserves the right to retrieve and transfer ownership of assigned public addresses back to Hawaiian Telcom.

Requests for additional IPv4 subnets must be justified and meet Hawaiian Telcom's IP Address policy which is in accordance with the American Registry for Internet Numbers (ARIN).

2.3.6 Other Services

Offer can list additional telecommunications services that is not listed above but would be of value to the State.

Comply.

Hawaiian Telcom is involved in developing new services on our MPLS network on an ongoing basis. New configurations of voice/data transport services which complement EIPDS, RNS, Internet and other MPLS services are currently being created in our technology labs. These services will be offered to the State as both bundled and unbundled services as they become available. Hawaiian Telcom's ongoing development of new offerings gives the State the largest selection of services, including legacy, next generation and proactive Managed Services to choose from.

Business-All-in-One

Business All-in-One, a solution based on voice over IP (VoIP) technology, unifies all of your communications services on a single IP infrastructure. Using Hawaiian Telcom's state-of-the-art network, one converged connection delivers both telephony and data services.

Previously, businesses had to purchase voice and data services separately. The cost and complexity of choosing the right service, matching it with the proper equipment, and managing it over time could be daunting. With Business All-in-One, you can select a simple, packaged solution that delivers all of your communications needs.

Included:

- **High-Speed Internet Access** - Users have their choice of 7 or 11 Mbps download speeds, email, and mobile WiFi access at Hawaiian Telcom hot spots.
- **IP Phone Service** - Includes unlimited local and domestic long distance calling, individual phone numbers for each user, and a host of standard business class features.
- **Advanced Business Features** - Voicemail-to-email, Find Me / Follow Me, Remote Office and other advanced applications are included for every user. A simple web portal gives each employee an easy way to access these features, regardless of location.

- **Standardized Hardware** - A router and LAN switch are included with the service, eliminating the need to purchase separate internet-working hardware. Individual users can also choose from a variety of IP phones to meet their business needs.
- **24x7 Maintenance and Disaster Recovery** - Let Hawaiian Telcom focus on your network while you focus on your business. Calls can be automatically re-routed to alternate numbers in disaster scenarios.

Benefits:

- **Lower Capital Outlay** – There is no need to purchase a router, LAN switch or phone equipment like a key system or PBX. This allows customers to stop budgeting for equipment obsolescence.
- **Efficiency** – Add users as you need them, without having to analyze your current services, hardware, and capacities.
- **Improved Productivity** – A host of advanced features can dramatically improve employee productivity.
- **Voicemail-to-Email** – Send all of your business voicemail messages to the email address of your choice. Retrieve them from your phone, the web, or any mobile device capable of playing a .wav attachment.
- **Find Me / Follow Me** – Allow incoming calls to ring simultaneously on your desk, mobile and/or other devices. Each user can individually set up their forwarding rules based upon time of day.
- **Remote Office** – Work from anywhere while still using your business number. Simply log into the web portal, enter the phone number you are currently at, and Remote Office will route your calls to you. When you place an outbound call, your business number is preserved.
- **Reliability** – All services are delivered from the cloud over a high-performance, policy-based network which prioritizes your voice traffic over Internet data.

Summary

With Business All-in-One, Hawaiian Telcom offers a simple, comprehensive communications package for all business customers. A single offering combines the services, hardware, and business applications you need to stay connected in this increasingly challenging market.

ISDN PRI

ISDN PRI Service is a central office based service arrangement that is an alternative for individual access services, such as Direct Inward Dialing (DID),

Direct Outward Dialing (DOD), and local business trunks. ISDN PRI is provisioned on a clear channel 1.544 megabits per second (Mbps) facility which is used to connect digital private branch exchanges or other channel controlling devices to the Public Switched Telephone Network. It provides the customer with the capabilities of simultaneous access, transmission and switching of voice, data, and imaging services via channelized transport.

Based on the customer's equipment and business needs, the customer may select an appropriate PRI arrangement from the following options:

- 23 B Channels + 1 D Channel
- 23 B Channels + 1 Back-up D Channel
- 24 B Channels

Session Initiated Protocol (SIP)

Hawaiian Telcom's current Product Roadmap includes plans to introduce SIP trunking. SIP trunking solutions will be released to support customers with either legacy TDM or IP-based PBX platforms. Compatibility with legacy TDM platforms will be offered through the use of a PRI interface. Native SIP integration will be used where a customer's platform is SIP compatible and the customer requirements are best met with a native IP connection.

SIP trunking solutions will allow State customers to bundle voice, data and unified communications services on a single MPLS-based IP connection. This will allow the State to minimize/reduce equipment costs, space, power and cooling. Additionally, the State can use the enhanced SIP functionality to improve disaster recovery, ensure service availability, and deploy over-the-top unified communications solutions such as unified messaging, collaboration, and mobility.

State customers interested in SIP trunking and UC solutions should contact their Hawaiian Telcom Account Manager.

Hawaiian Telcom Wireless Services and Devices

Hawaiian Telcom is the only locally based wireless service provider in the State of Hawaii that provides nationwide wireless services via the Sprint 3G Wireless network. Recently Hawaiian Telcom launched faster mobile data services on the local 4G networks covering the islands of Oahu and Maui. Network coverage is considered on par with other national service providers.

100% of customer service and support is provided through Hawaiian Telcom. Our local sales and support teams are available for on premise support and are accustomed to dealing on a face-to-face basis as needed. We are local people who understand you and the needs of your organization.

Hawaiian Telcom provides a wide array of advanced wireless devices including 4G Android and Blackberry handsets. A purchaser should first determine the type of phone or mobile hotspot that best fits their needs. Next, determine the approximate amount of voice airtime minutes that will meet the groups shared use. A data plan will need to be added to a smartphone, Blackberry or Hotspot device. Finally, determine which handsets will need texting capability.

To simplify the process we have a dedicated sales team that can walk you through the process to ensure you are satisfied with the service and selection. State customers interested in wireless services and devices should contact their Hawaiian Telcom Account Manager. Detailed descriptions of wireless services, devices, and a coverage map can be viewed at <http://www.hawaiiantel.com/wireless>

2.4 MANAGED SERVICES

Offeror shall describe optional managed network services that can be offered, such as security, network, connectivity, and device monitoring and management.

Comply.

Standard Solutions

Network Connectivity Management

This service is offered to support our customers' IP networks to include EIPDS, RNS, DIA, Frame Relay and Point-to-Point circuits. The service utilizes ICMP and SNMP monitoring of WAN termination devices to detect circuit trouble. It includes 24x7 remote monitoring from the Hawaiian Telcom Network Operations Center, notifications to a predefined list of customer escalation contacts, proactive response to circuit outages, and a web-portal view of WAN circuit utilization and availability data. For private networks, we utilize an out-of-band management DSL connection (included with the service) to provide connectivity to our management servers.

Managed Network and Cyber Security Services

Customer Owned CPE Based Solutions

Hawaiian Telcom offers three tiers of managed network and security solutions for the customer's current or newly purchased hardware (CPE-Based Solution). These services enhance our customers' broadband networks by providing network and security engineering expertise, end-to-end event monitoring, correlation, and incident response capabilities to ensure that IP networks are secure and threats to that security are detected and acted upon in real time.

SERVICE LEVEL	SHORT DESCRIPTION
<p>BASIC</p> <p>Device Availability and Performance Monitoring</p>	<ul style="list-style-type: none"> • 24x7 ICMP and SNMP Monitoring by Hawaiian Telcom’s NOC <ul style="list-style-type: none"> ○ ICMP Monitoring (Availability, Ping Loss) ○ SNMP Monitoring (Power Supply, Fan, Heat, Bandwidth Utilization, Memory Utilization, CPU Utilization, WAN Interface Status) • Out-of-Band Monitoring, optional for additional security • 24x7 Notifications of Out-of-Service or Critical Performance Conditions • 24x7 Email and Phone Notifications • Immediate Troubleshooting of Hawaiian Telcom Circuits • Customer Portal
<p>STANDARD</p> <p>Device Configuration Management</p>	<ul style="list-style-type: none"> • Includes BASIC features • On-Boarding Assessment of Devices • Backup and Disaster Recovery <ul style="list-style-type: none"> ○ Weekly and “On-Change” Backups of Configuration Files ○ 24x7 Support to Restore Configuration Files to Restore Services • Software Patches and Upgrades; Hardware Maintenance <ul style="list-style-type: none"> ○ Applications of Critical Patches as Necessary ○ Upgrades of Firmware and Software Quarterly or Per Customer Maintenance Schedule ○ 24x7 Support for Open, Follow-Up and Close Tickets with Vendors to Resolve issues ○ Support to Replace Covered Hardware and Components • Hawaiian Telcom executes Configuration Management and Policy Changes • Cyber Security Devices (Firewalls, IPS, Unified Threat Management) <ul style="list-style-type: none"> ○ Monitor Device to Validate Vendor Signatures are Up-to-Date and Apply the Latest Signatures ○ Monitor and Configure Device to Ensure Default Vendor Signatures are Active and Operating
<p>PREMIUM</p> <p>Cyber Security Monitoring and Management</p>	<ul style="list-style-type: none"> • Includes BASIC and STANDARD features. • 24x7 Monitoring and Analysis of Device Security logs and alerts. • Out-of-Band connection is standard (MAHSI) • Correlated Alerts Analyzed to determine whether to rate HIGH, MEDIUM, LOW or FALSE POSITIVE • 24x7 Notification by Phone and Email of HIGH Alerts • Log Collector provided at no charge and installed at Customer's premises • Annual Review, Consultation and Report on Recommended Network and Security Design to Address Best Practices and Latest Security Threats • Customer Portal to View Alerts and Reports • Weekly Emailed Reports

Managed Network and Cyber Security Services

Service Based Solutions

Multi-Threat Security Bundle (MTSB)

In addition to our portfolio of Managed Network and Cyber Security Services, Hawaiian Telcom offers a bundled offering (Service-Based Solution) for networks with up to 100 users. This is a cost-effective solution for small departments to implement strong and multi-disciplinary defenses against multiple cyber security threats. This offering, our Multi-Threat Security Bundle (MTSB), includes a Unified Threat Management (UTM) device, Managed Network and Cyber Security Services, installation, and on-site repair service for one monthly charge.

BASIC	PREMIUM
Firewall Intrusion Protection (looks deeper into network traffic) Web Content and URL Filtering Anti-Malware Application Control	Firewall Intrusion Protection (looks deeper into network traffic) Web Content and URL Filtering Anti-Malware Application Control Data Loss Prevention VPN 24x7 Security Monitoring and Support

Custom Solutions

Network and Security Professional Services

For customized services outside of the scope of our standard Managed Services offerings, Hawaiian Telcom offers the following categories of professional services:

Network

Assessment: Services include architecture/design, documentation, configuration, and network performance reviews to validate current network design against industry best practices, requirements for planned upgrades, network management best practices. The Professional Services team may utilize automated tools as needed to gather network performance data. The deliverable at the end of these engagements is a report of findings, risks, and recommendations. Scope is tailored to the needs and budget of the customer requesting the assessment and must be negotiated prior to the start of the engagement.

Engineering: Services include network engineering and network management tasks in support of network implementation, reconfigurations, and ongoing operations. Deliverables may include developing design documentation, preparing configuration templates, implementing network management systems, performance of ongoing network management services not covered by our standard Managed Services offerings, and related activities. Scope is tailored to the needs and budget of the customer requesting network engineering services and must be negotiated prior to the start of the engagement.

Incident Response: Services include urgent response to troubleshoot and isolate network outages and performance issues that are not part of the Hawaiian Telcom infrastructure. Scope is tailored to the needs and budget of the customer requesting the incident response services and must be negotiated prior to the start of the engagement. SLAs are provided for prepaid blocks of incident response hours.

- Basic: Includes an 8x5 Next Business Day Response SLA
- Premium: Includes 24x7 4 Hour Response SLA

Security

Assessment: Services include security architecture/design, documentation, and policy reviews as well as internal or external vulnerability testing and penetration testing to validate current network security posture against industry best practices, compliance requirements. The Professional Services team may utilize automated tools to identify security vulnerabilities as defined within the scope of the engagement. The deliverable at the end of these engagements is a report of findings, risks, and recommendations. Scope is tailored to the needs and budget of the customer requesting the assessment and must be negotiated prior to the start of the engagement.

Engineering: Services include security engineering and security management tasks in support of network security device implementation, reconfiguration, and ongoing operations. Deliverables may include developing design documentation, assisting in drafting security policies, preparing configuration templates, implementing security solutions, performance of ongoing security management services not covered by our standard Managed Security Services offerings, and related activities. Scope is tailored to the needs and budget of the customer requesting security engineering services and must be negotiated prior to the start of the engagement.

Incident Response: Services include urgent response in the event of a security incident such as malware infection, data breach, or network attack. This may include forensic services such as analysis of log data or malware behavior, and threat containment, mitigation, and removal procedures. Services also include response to outages or performance issues that are isolated to the security components of the network to ensure that the issue is remediated in a way that maintains the security posture of the network. Scope is tailored to the needs and budget of the customer requesting the incident response services and must be negotiated prior to the start of the engagement. SLAs are provided for prepaid blocks of incident response hours.

- 2.4.1 Offeror shall allow a potential customer to try the service for 30 days without charge.

Comply.

Hawaiian Telcom will offer a free 1-month trial period for monthly recurring Managed Services offerings once a contract has been signed. Due to the extensive level of effort required to establish services, the trial will not be offered without a contract during this period. The customer may cancel the service in writing and will not be billed for

termination. Upon completion of the 30-day trial period, Hawaiian Telcom will begin billing per the contract.

- 2.4.2 Offeror shall ensure that all confidential information including network configurations, network diagrams, and IP addresses remain confidential and is only used to provide monitoring and management support.

Comply.

Hawaiian Telcom's Managed Services team takes the confidentiality of customer data seriously. Access to servers that are used to store sensitive customer data is restricted to those involved in provisioning and operation of our Managed Services offerings. In order to validate the security of the systems used to provide Managed Services, Hawaiian Telcom's Information Security team conducts regular internal assessments of the systems. Additionally, Hawaiian Telcom contracts a 3rd party to conduct annual penetration testing against the systems to detect any security vulnerabilities. We are also currently in the process of obtaining SSAE16 certification of our systems.

2.5 PROVIDER NETWORK

2.5.1 Industry Standards

Offeror shall meet and be in compliance with the following industry standards:

- Telecommunication Industry Association/ Electronics Industry Association (TIA/EIA)
- Internet Engineering Task Force (IETF)
- International Telecommunication Union (ITU)
- American National Standards Institute (ANSI)
- Building Industry Consulting Service International (BICSI)
- Institute of Electrical and Electronic Engineers (IEEE)

Comply.

As a normal business practice in delivering Hawaiian Telcom services, Hawaiian Telcom solutions adhere to and follow the identified Industry Standards listed above.

2.5.2 Interisland Network (for Offerors providing services on islands other than Oahu)

- 2.5.2.1 Offeror shall provide a diagram of its interisland fiber network and Point of Presence (POP) switch locations.

Comply.

Please see the "Interisland Fiber Network" diagram filed under Confidential Information.

- 2.5.2.2 Offeror shall explain what parts (of the fiber network and switches) it owns and leases and what parts are owned by partner carriers.

Comply.

Hawaiian Telcom owns the vast majority of its fiber network and equipment in the State. However, in order to diversify critical inter-island paths, we have partnered with other carriers to provide path and carrier diversity. Please see the "Interisland Fiber Network" diagram filed under Confidential Information.

2.5.2.3 Offeror shall describe its POP switch type and switch capacity.

Comply.

Hawaiian Telcom utilizes Alcatel Lucent 7X50 Service Routers at its POP locations. This platform has capacity ranging from 90 Gbs to 2 Tbs. Please see the "Alcatel-Lucent 7750 SR" datasheet for more details of this platform filed under Confidential Information.

2.5.3 Interstate Network (for Offerors providing ISP services)

2.5.3.1 Offeror shall explain its interstate fiber network and identify the network redundancies in place.

Comply.

Hawaiian Telcom leases 10G IRU's from each cable system (AAG and J-US) between Hawaii and 1 Wilshire, Los Angeles, California. All terrestrial facilities connecting the cable landing stations to Hawaiian Telcom's POP are served via protected SONET systems riding on fully diverse fiber paths. Please see the "Transpacific Cable and Landings – Pacific Region" diagram and "Transpacific Cables and Landings – Oahu" diagram the filed under Confidential Information.

2.5.3.2 Offeror shall provide diagrams of its interstate fiber network and switch locations.

Comply.

Please see the following diagrams filed under Confidential Information:
Transpacific Cable and Landings – Pacific Region
Transpacific Cables and Landings – Oahu
Internet Peering

2.5.3.3 Offeror shall explain what parts it owns and leases and what parts are owned by partner carriers.

Comply.

Please see the following diagrams filed under Confidential Information:
Transpacific Cables and Landings – Oahu
Internet Peering

2.5.3.4 Offeror shall explain how it is connected to its international fiber network.

Comply.

Hawaiian Telcom has co-location space at all major cable landing stations which allows interconnections with any international carrier present at cable landings.

- 2.5.3.5 Offeror shall provide a diagram showing how Internet traffic is routed from the State

Comply.

Please see the "Internet Peering" diagram filed under Confidential Information.

2.5.4 Network Design Objectives

- 2.5.4.1 Offeror must describe the design objectives used to minimize "over subscription" conditions on its network and the procedures used to insure these objectives are met. Offeror must provide its current performance including substantiating documentation.

Comply.

The primary design methodologies implemented to ensure over subscription conditions do not impede the service performance guaranteed through Hawaiian Telcom's Service Level Agreements are core link capacity management, and more importantly service queue management. The Hawaiian Telcom core network is managed and capacity planned to ensure adequate link capacity is available for full service restorations in the event of a link failure condition. In addition, Hawaiian Telcom's network is a multi-queue Quality of Service architecture with a combination of Strict Priority Queues and Weight Fair Queue mechanisms tailored to the performance characteristics of the applications running across the network. All core network links are performance managed both on capacity growth trends and queue usage trends. This is to ensure there are no discard events with the multi-queue domains with sufficient trending analysis to trigger capacity augmentations at key metric points.

Hawaiian Telcom has a dedicated team of qualified and certified capacity planners whose full time responsibilities are to manage our network and provide relief to ensure we are meeting targeted network objectives. In-house reports are generated frequently to ensure proper visibility into traffic utilization, network and queue capacity, and trending forecasts. When trigger points are reached, appropriate network relief is initiated to reach pre-defined network baselines.

- 2.5.4.2 Offeror must describe its design objectives for transmission quality and reliability, as well as, procedures to insure these objectives are met.

Comply.

Hawaiian Telcom has design objectives established for each of our service offerings for transmission quality and reliability that basically

ensures a network reliability of 99.99% and greater. Procedures include regular network assessments and monitoring and internal monthly score card reporting measured against established metrics to insure objectives are being met and maintained.

- 2.5.4.3 Offeror must describe the scalability of the proposed telecommunication services.

Comply.

Offeror shall include descriptions of their methodologies on how the proposed services address the following:

Ubiquity – Offeror’s ability to provide services throughout the State.

Comply.

Hawaiian Telcom’s MPLS Ethernet services have employed industry leading technologies allowing telephone companies to bond multiple pairs of copper wire used to provide our legacy services onto a proprietary Network Interface Device (NID) presenting the customer with an Ethernet interface. Bandwidth speeds of 1.5, 3, 5, and 10 Mbps can be achieved depending on the distance to the Central Office (CO) gauge of the wire and resistance on the line. A preliminary facilities inquiry is performed by Hawaiian Telcom for each location that the customer identifies prior to the sale. Hawaiian Telcom will advise the customer of the maximum bandwidth attainable using this Ethernet over Copper (EoC) bonding technique. Other techniques, such as Ethernet over Fiber (EoF), Ethernet over Time Division Multiplexing (EoTDM), or our legacy services can be offered as alternatives if EoC is not available. Additional charges or customer requirements such as electrical grounding and additional rack space may be required.

Interoperability – the ability to deliver services that interconnect and communicate on open established standards.

Comply.

Hawaiian Telcom’s MPLS network uses industry standard Ethernet as the main interface for its services. Using Ethernet allows for the scalability between 1.5 Mbps up to 100 Mbps. 1,000 Mbps connections are used for circuits larger than 100 Mbps. In addition, our RNS service utilizes industry standard CSU/DSU interfaces for our Frame Relay and Private Line services and standard Ethernet for DSL access.

Scalability – the ability to increase delivery of services in number and/or size in a reasonable timeframe.

Comply.

Customers switching to Ethernet services will enjoy the flexibility and scalability of Hawaiian Telcom’s MPLS services. Unlike some legacy networks which offer only 1.5 and 45 Mbps choices, Hawaiian Telcom’s Ethernet bandwidths are detailed in the table below. Hawaiian Telcom has the ability to increase delivery of services in number and/or size in a reasonable timeframe because of software and the pre-sizing of bandwidths.

1.5 Mbps	Ethernet RJ45
3 Mbps	Ethernet RJ45
5 Mbps	Ethernet RJ45
10 Mbps	Ethernet RJ45
25 Mbps	Fast Ethernet RJ45
50 Mbps	Fast Ethernet RJ45
75 Mbps	Fast Ethernet RJ45
100 Mbps	Fast Ethernet RJ45
250 Mbps	GigE - Fiber
500 Mbps	GigE - Fiber
750 Mbps	GigE - Fiber
1,000 Mbps	GigE - Fiber

Survivability – the ability to continue to operate or quickly restore services in the face of unanticipated incidents or disasters.

Comply.

All of our Central Office network equipment is housed in Hawaiian Telcom owned and operated facilities. Back-up battery and emergency generators are available at each Central Office and monitored by our eNOC 24X7X365. In instances where catastrophic disasters occur, Hawaiian Telcom would develop contingency plans to reroute traffic around affected areas via our fiber networks to re-establish service.

Hawaiian Telcom has extensive safeguards and procedures in place to protect its network, maintain services to customers, and quickly repair any damage to its network infrastructure and facilities during failures, emergencies, manmade or natural. Operational readiness is constantly monitored, tested and refined.

Interoffice and interisland facilities are designed to be fully redundant. Synchronous Optical Network (SONET) rings automatically reroute traffic to alternate facilities if a fault is detected.

- 2.5.4.4 Offeror must describe the resiliency of the proposed telecommunication services to guarantee service level agreements in case of network outages or failures.

Comply.

Hawaiian Telcom has architected our next generation data network to be fully resilient and fault tolerant. At the core of the network we have full meshed logical connections with multiple diverse paths and fast reroute capabilities.

Our statewide Central Offices all have battery back-up and emergency generators to ensure communication services are uninterrupted during commercial power outages.

Hawaiian Telcom has also made significant investments in a Network Operations Center (NOC) and an Element Management System (EMS) to ensure critical network components such as Central Offices, Network Nodes, Power Plant and other network infrastructure are available and running at optimal peak performance.

Hawaiian Telcom employs 1,300+ employees that understand critical roles and have the depth of expertise to support network services. Section 2.2.1.2 details Hawaiian Telcom's response priority based on the type of trouble experienced on a customer's network.

2.5.5 Network Security

- 2.5.5.1 The State expects the Offeror to follow stringent security standards and commit to the following:

- Current state-of-the-art security standards that is current within the industry for the proposed services.
- Security Administration.
- Physical site security.

Comply.

As the telecommunications provider to Hawaii's largest corporations and organizations, Hawaiian Telcom understands the need to ensure physical, logical, and operational levels of security of its network.

Hawaiian Telcom's network infrastructure includes its Central Office (CO) facilities, which are company owned and operated. Physical entry to CO facilities statewide is controlled via cardkey access. All access requests to company COs are screened and approved by the Central Office Manager and controlled by Hawaiian Telcom Security. Entry into CO facilities is continuously logged and audited.

Additional physical site security management is as follows:

- Prior approval is required before access is granted to facilities
- Access control systems are tracked
- Some locations are monitored by cameras and alarm systems
- Some locations are guarded by private security
- Identification cards are required within the facility
- Regular security checks of the facility are conducted
- The concepts of Crime Prevention Through Environmental Design (CPTED) are followed

System access by technicians for programming requires a user name and password for access via the Corporate Local Area Network (LAN). The list of authorized users is kept current in all of the systems. Access controls are enforced based on the user's required access level.

2.5.5.2 Offeror shall describe its network infrastructures physical, logical and operation levels of security.

Comply.

Hawaiian Telcom adheres to industry standards with regards to securing its MPLS network, and associated entry points, including securing the command-and-control interfaces from unauthorized use. Depending upon the nature of the service, customers may be segmented off into dedicated links to avoid cross-channel eavesdropping. All Hawaiian Telcom services support additional layers of security that the customer may choose to implement to further ensure the security and privacy of their transmissions. Hawaiian Telcom leverages a wide variety of technical controls to manage the security of its various networks, including firewalls, intrusion detection/preventions systems, host-based intrusion detection, and file integrity monitoring.

Hawaiian Telcom operates a 24x7x365 network operations center (NOC) that constantly monitors the health of the network. Additionally, Hawaiian Telcom offers a Managed Network and Cyber Security service that will leverage Hawaiian Telcom's 24x7 Network and Security Operations Center (N/SOC) to monitor security elements at the customer's premises. Hawaiian Telcom leverages this 24-hour security monitoring function to monitor critical network elements within its own network, including the health of firewalls and other technical controls.

All Hawaiian Telcom personnel have undergone thorough background checks. Administrative actions to designated network elements are

monitored and recorded. A vigorous change management program manages the changes being made to critical network elements during maintenance windows.

Due to the public nature of the RFP process, specific details about the placement of various security controls cannot be disclosed in this forum.

- 2.5.5.3 Offer shall describe how its network infrastructure delivers reliable communication and how it provides data security and integrity.

Comply.

Besides emergency generators, and full meshed logical connections with multiple diverse paths and fast reroute capabilities, Hawaiian Telcom has a fault and performance management system located in our Network Operations Center (NOC) which is manned 24X7X365. Central Offices are monitored by NOC personnel 24X7X365. Heartbeat messages and status alarms will indicate any faults in the network.

The core network that provides Internet service and other Hawaiian Telcom services is based on an MPLS ring that is fault tolerant by its very nature. Hawaiian Telcom maintains relationships with multiple peering partners over disparate links to the mainland. Should one partner experience trouble, traffic can be dynamically moved to another partner to ensure a reliable connection. The health of our various peering uplinks is monitored by our network operations center on a 24x7 basis. Hawaiian Telcom's network supports redundancy all the way to the customer's premises, if required.

Hawaiian Telcom also fully supports various security technologies that can be layered on top of the connection to further secure the data being transmitted. VPN technologies of the customer's choosing can bolster both security and integrity of the data, ensuring that not even Hawaiian Telcom personnel can read the contents of the transmissions sent between the various entities.

2.5.6 Interface Requirements

- 2.5.6.1 The telecommunication services provided by Offerors must interface with existing State telecommunications systems in a transparent manner that does not negatively impact State users or the existing network infrastructure.

Comply.

All of the services provided by Hawaiian Telcom, including legacy and next generation services are designed and built to industry standard specifications. Being the incumbent, Hawaiian Telcom can provide the State an easy migration path from their current legacy network services to our next generation network services. Our RNS service provides any-to-any connectivity with our legacy services. Customers can either choose to keep the same network interface and have us migrate the

network connection to our MPLS network, or switch to next generation Ethernet services in whole.

- 2.5.6.2 Offeror shall indicate what interface requirements are needed to support the proposed telecommunication services.

Comply.

All of the services being offered use industry standard interfaces including Ethernet RJ-45 connections, Frame Relay/Private Line CSU/DSUs, and industry standard GigE interfaces. Should the State require a non-industry standard interface, then Hawaiian Telcom will address that on a case-by-case basis.

- 2.5.6.3 In cases where network wiring is required to complete a connection, the Offeror shall provide such wiring.

Comply.

Hawaiian Telcom will furnish, install and maintain all wiring necessary to provide service up to the demarcation point. The demarcation point identifies where Hawaiian Telcom's facilities end and where Customer-provided facilities begin. Prior to the installation of EIPDS/RNS/DIA installations which take up multiple copper pairs, Hawaiian Telcom will visit each site and advise the customer if any additional support structures, equipment space and power are required to provide Hawaiian Telcom a suitable environment and path to run the necessary cabling.

- 2.5.6.4 Offeror shall identify all network equipment that is not considered part of the agreement in which the State will need to provide the equipment and support.

Comply.

Hawaiian Telcom will for every installation, identify all network equipment that is not considered part of the agreement in which the State will need to provide the equipment and support. In general, Hawaiian Telcom will ask the State to provide:

- Environmental conditions in regards to space and temperature control
- Power
- Cross-connects

2.5.7 Offeror Responsibility

It is the Offeror's responsibility to provide:

- Solution architecture
- Required telecommunication services
- Installation and provisioning of the telecommunication services
- Network connectivity
- Final Testing
- Management, maintenance and support services

Comply.

As a market leader in Hawaii, Hawaiian Telcom incorporates a superior customer experience in our offering providing an end-to-end solution. We are totally responsible to ensure end-to-end connectivity and our authorized personnel have direct hands-on control of the solutions. Hawaiian Telcom has developed proven project management, implementation and maintenance processes that we continually evaluate and improve.

Upon implementation and acceptance, maintenance and repair is coordinated by our eCare - Customer Care, IP SG – IP Support Group who will work directly with our Field Technicians. Dependant on the type of network service, customers will contact eCare or IP SG. A detailed matrix of network services and the groups that support the different services is provided under Section 2.9.1.4.

Added to the management, maintenance and support of a network is optional Managed Services that provide proactive maintenance and monitoring of circuits. Qualified Managed Services Technicians work with our Network Operations Center and our Field Technicians. Managed Services is the customer advocate moving the trouble ticket through the different support groups so the customer does not have to do so.

2.6 NETWORK PERFORMANCE & SERVICE LEVELS

2.6.1 Circuit Parameters

Offeror shall describe its service level commitments for Annual Network Availability.

Comply.

Hawaiian Telcom offers an array of services with target availability of 99.99% and higher. Service levels are continuously monitored and studied utilizing enhanced management tools for internal end of month score card reporting at a platform level.

Offeror shall provide equal or better Annual Network Availability than 99.99% (Percentage of time that the service is operational.).

Comply.

Hawaiian Telcom offers an array of services with target availability of 99.99% and higher. Service levels are continuously monitored and studied utilizing enhanced management tools for internal end of month score card reporting at a platform level.

2.7 TERMS

2.7.1 Multiple Terms

2.7.1.1 Services shall be available with multiple terms of 1 year, 3 year, and 5 year terms.

Comply.

Hawaiian Telcom will offer 1, 3 & 5 year terms on our services.

2.7.1.2 Larger discounts should be applied to longer terms.

Comply.

Longer terms will have larger discounts.

2.8 BILLING

2.8.1 Start of Billing

2.8.1.1 Billing of all circuits must not begin until the circuit has been declared operational by the customer.

Comply.

Billing of all circuits will not begin until circuits are accepted by the customer.

2.8.2 Monthly Invoices

2.8.2.1 The Offeror shall prepare monthly invoices as directed by State departments, agencies, branches of government, and counties as stand alone accounts or parent and child accounts. State departments usually require separate billing by department, division, or branch.

Comply.

Monthly billing invoices are handled by Hawaiian Telcom's Call Center and prepared as directed by State Departments and Agencies. For network services, Hawaiian Telcom will bill the network installation and monthly recurring charge on one invoice. The invoice will separate the network installation charge from the monthly recurring charge.

Invoices will be prepared as directed by State departments, agencies, branches of government, and counties as stand alone accounts or parent and child accounts.

2.8.2.2 The billing period must be from the first of the month to the end of the month or a mutually agreeable period.

Comply.

Hawaiian Telcom's billing period is from the first of the month to the end of the month. However, within the billing month, the customer will be assigned a bill date. Example: If the customer is assigned a bill date of the 3rd day of the month, every month thereafter, the billing invoice date will be the 3rd day of the month.

- 2.8.2.3 Billing for all services must be on a monthly basis with bills rendered within 15 days after the end of the billing period.

Comply.

- 2.8.2.4 The Offeror shall prepare monthly invoices in two (2) copies for each billing account.

Comply.

- 2.8.2.5 All monthly invoices must at a minimum identify the customer being billed, billing address, billing phone number, billing account number, billing circuit number, the type of service being billed, regulatory taxes/fees/charges, and the amount billed.

Comply.

All monthly invoices will have the billing address, billing phone number, if the account has a phone number, or circuit number if the account is a circuit. The invoice will include a description of the network service and the monthly charge. The invoice will also include regulated taxes, fees and surcharges. Finally, the invoice will summarize the total amount billed.

- 2.8.2.6 Invoices shall be simple in format and easy for the customer to understand. If the Offeror uses company or industry specific wording (for example Universal Service Order Codes) on invoices, the Offeror shall provide definitions of the entries either on the monthly detailed invoice or on a separate document that defines the entries. Also, the use of codes in place of product descriptions will not be acceptable.

Comply.

2.8.3 Late Payment Charge

Contractors are reminded that the State, from the date of receipt of an invoice (not the date billed or mailed), has 30 calendar days to process and pay the bill without a late charge by State law (Hawaii Revised Statutes §103-10). The Contractor must not send out late payment letters or assess late charges until the 30 days has passed.

Comply.

2.8.4 Education Discount

The Offeror shall participate in the FCC e-Rate discount program for schools and libraries.

Comply.

Hawaiian Telcom participates in the FCC e-Rate discount program for schools and libraries. Hawaiian Telcom has a full time employee who is the administrator for the e-Rate program to ensure e-Rate compliance.

It is anticipated that some services obtained under this procurement may be eligible for E-rate discounts which the Hawaii Department of Education (DOE) intends to apply for. Under the program, providers receive the full amount they contract for, however payment for the eligible goods and services is split between the DOE and the Universal Service Fund (USF).

The Offeror shall refer to the Eligible Services List (FCC Docket No. 96-45) at the Schools and Libraries website at www.usac.org/sl. The Offeror is responsible for ensuring that all submissions are on the Eligible Services List, or if not, are so noted and priced separately.

Comply.

Hawaiian Telcom can indicate perceived eligibility of each proposed service based on the Eligible Services List, but will not guarantee such eligibility. USAC ultimately determines eligibility/ineligibility at the time of funding application. Eligibility can vary depending on the use to which a service is applied.

2.8.4.1 Any Offeror wishing to provide E-rate qualifying services to the DOE shall:

- Possess a Service Provider Identification Number and provide it with the bid proposal. Call the Schools and Libraries Division at 888-203-8100 for additional information.

Comply.

Hawaiian Telcom's Service Provider Identification Number is 143002709.

- Agree that the DOE's portion of the contract is subject to the availability of the discount to the DOE schools on a year-by-year basis.

Comply.

In the event a school or library does not apply for, or is denied funding, they will be responsible for full payment of the service.

- Agree to invoice the Schools and Libraries Corporation for the discount amount using the SLD approved forms and procedures.

Comply.

- Agree to invoice the DOE only for the after-discount amount.

Comply.

- Agree to assist the DOE in resolving any administrative issues that arise from the USF program.

Comply.

The Department of Education normally retains and has available Hawaiian Telcom invoices to provide to USAC if requested. Otherwise, Hawaiian Telcom can assist in providing invoice copies.

- Agree that the order may be canceled, at the DOE's option, if the DOE does not receive the anticipated discounts.

Comply.

DOE orders can be canceled by the DOE without incurring non-recurring or minimum monthly recurring charges as long as service has not been provisioned and/or a Technician has not been dispatched. Non-recurring charges and minimum monthly recurring charges vary by type of network service.

Hawaiian Telcom is of the understanding that schools and libraries do not process orders with Hawaiian Telcom until they receive the E-rate discount approval for the desired service.

- Not assess additional surcharges related to e-Rate processing for non-DOE agencies.

Comply.

Hawaiian Telcom does not assess additional surcharges related to e-Rate processing for non-DOE agencies.

Hawaiian Telcom applies a Federal Universal Service Fee (FUSF) to network services. The FUSF is a fee that is calculated quarterly

by the Federal Communications Commission (FCC). This fee is used by the Federal Government to pay for some telecommunications services to include e-Rate programs and products for schools, libraries, rural health care providers, and low-income families.

2.9 CUSTOMER SERVICE

2.9.1 Network Support

- 2.9.1.1 Offeror must have a full-time network operations center, preferably located in the State of Hawaii, who are ready to take trouble and technical assistance phone calls 24 hours a day, 7 days per week, as the State has workers on shifts, flex time, and overtime who may report a problem. Prompt response to problems is required.

Comply.

Hawaiian Telcom's Network Operation Center (NOC) is located in downtown Honolulu, operating on a 24x7x365 basis.

Also operational 24X7X365 is Hawaiian Telcom's eCare (Enhanced Care) and IP SG (Internet Protocol Support Group) centers. One state-wide toll free number will be established to report initial trouble for all network services. Hawaiian Telcom will provide prompt response to reported problems.

- 2.9.1.2 Identify other problem reporting methods such as email submissions.

Comply.

Trouble reporting via one state-wide toll free number will be established to report initial trouble for all network services. This is the preferred method as this will ensure that the trouble call is properly documented and will allow Hawaiian Telcom the ability to track history should there be a situation of continuing and/or intermittent problem on a line or circuit.

In addition, Hawaiian Telcom does have a business portal for trouble reporting on its roadmap. Although a specific date has not yet been established, when the portal to report trouble is rolled out, Hawaiian Telcom will notify the State to incorporate the portal process as an alternative reporting method.

- 2.9.1.3 Omitted in Addendum 02.

2.9.1.4 Identify problem escalation process. Offeror shall outline its problem escalation process beyond Tier 1 support.

Comply.

Hawaiian Telcom will establish one state-wide toll free number to report trouble on all network services. Because of multiple network services and the different expertise of technical support needed, the toll free number will be front-ended with an auto attendant feature.

When reporting trouble, the customer will be asked the following questions to locate the service in the Hawaiian Telcom database. We will ask that the customer provide the following information:

- Department name, service address, customer account number.
- Reported by: name and telephone number of the person reporting the trouble.
- On-site contact (if different from above): name, telephone number and access hours.
- Circuit identification number or network Telephone number
- Detailed description of the problem, date and time of trouble occurrence.

The Repair Representative will provide a trouble ticket number and a commitment time on when the repair activity should be completed. For status on an existing trouble ticket, the customer should contact the state-wide toll free number and provide the trouble ticket number or circuit identification number.

Please be assured that Hawaiian Telcom is committed to serving you and will work with you to resolve any trouble reports as quickly as possible.

One state-wide toll free number will be established to report initial trouble for all network services. However, provided for reference is the Repair Contact and Escalation matrix. Also provided for reference is our Sales Contact and Escalation information.

Offeror must describe the escalation procedure available to the State in the event the State deems progress on problem resolution to be unsatisfactory.

Comply.

The initial contact shall be via the state-wide toll free number. As shown in the chart on the next page, the 1st level escalation is presented on a product-by-product basis. The respective 2nd, 3rd, and 4th level escalations are the same across all product lines.

(Continued on next page.)

Repair Contact and Escalation

Repair Services	Contact	Levels	Telephone Numbers
Frame Relay, Point to Point Dedicated Line, & ISDN PRI	eCare (Enhanced Care) 24 Hour Repair	Initial Contact	<i>Toll Free Number to Report all Network Services.</i>
Transport DSL	eCare 24 Hour Repair	Initial Contact	<i>Toll Free Number to Report all Network Services.</i>
Business High Speed Internet	eCare 24 Hour Repair	Initial Contact	<i>Toll Free Number to Report all Network Services.</i>
	ECare On Duty Supervisor (24X7X365)	1 st Escalation	808-777-2242
	Alternate eCare Contact – Glenn Kobashigawa, Senior Manager	1st Escalation	Office: 808-546-6118 Cell: 808-778-1027
Enhanced IP Data Service/Routed Network Service (Broadband Ethernet Layer 2 & Layer 3)	IP SG (IP Support Group) 24 Hour Repair	Initial Contact	<i>Toll Free Number to Report all Network Services.</i>
Dedicated Internet Access	IP SG 24 Hour Repair	Initial Contact	<i>Toll Free Number to Report all Network Services.</i>
	IP SG Contact – Marc de Costal, Manager IP Services	1 st Escalation	Office: 808-546-1596 Cell: 808-372-7471
Managed Services	Managed Services	Initial Contact	<i>Toll Free Number to Report all Network Services.</i>
	Managed Services Contact – Matthew Freeman, Manager, Managed Services Operations	1 st Escalation	Office: 808-546-2092 Cell: 808-258-7378
eCare, IP SG & Managed Services	Ben Morgan, Director, Customer Care	2 nd Escalation	Office: 808-546-3177 Cell: 206-228-5414
eCare, IP SG & Managed Services	Michael Czerwinski, Sr. VP Customer Operations	3rd Escalation	Office: 808-546-1275 Cell: 808-781-0557
eCare, IP SG & Managed Services	Kurt Hoffman, Chief Operating Officer	4 th Escalation	Office: 808-546-7889

Sales Contact and Escalation

Sales	Contact/Email	Levels	Telephone Numbers
Government Account Manager	Phyllis Morihara phyllis.morihara@hawaiiantel.com	Initial Contact	Office: 808-546-8736, zero to cell
Government Account Manager	Kevin Uyeda kevin.uyeda@hawaiiantel.com	Initial Contact	Office: 808-546-1514, zero to cell
Sales Associate	Jaylene Pilgrim jaylene.pilgrim@hawaiiantel.com	Initial Contact	Office: 808-546-1865, zero to cell
Sales Associate	Sammy Lam sammy.lam@hawaiiantel.com	Initial Contact	Office: 808-546-7675, zero to cell
Senior Manager Government Sales	Jane Kikawa jane.kikawa@hawaiiantel.com	1st Escalation	Office: 808-546-8170, zero to cell
Director, Business Sales	Sisi Takaki sisi.takaki@hawaiiantel.com	2 nd Escalation	Office: 808-546-1596, zero to cell
Executive Director Business & Consumer Sales	Jason Fujita Jjason.fujita@hawaiiantel.com	3 rd Escalation	Office: 808-546-2386, zero to cell
Senior Vice President, Sales	Craig Inouye craig.inouye@hawaiiantel.com	4 th Escalation	Office: 808-546-8646, zero to cell
Chief Operating Officer	Kurt Hoffman kurt.hoffman@hawaiiantel.com	5 th Escalation	Office: 808-546-7889

2.9.1.5 Monitoring and Reporting

2.9.1.5.1 Network Operations Center (NOC)

Offeror shall describe how its NOC will provide technical assistance and 24x7 network monitoring.

Comply.

The Network Operations Center provides 24x7x365 support based on services provided in multi-layer functions.

Hawaiian Telcom's enhanced Network Operations Center (eNOC) provides 24x7x365 network monitoring of all Hawaiian Telcom core network equipment via an alert aggregation system. Specialists with expertise in the various technologies proactively monitor these alerts.

Analysts who are trained in first-line isolation and customer support provide technical support to customers who call in trouble to the eNOC. Issues that cannot be resolved by the Analysts are escalated to the appropriate Specialists and Tier 2 Engineers or dispatched to field technicians. For customers who purchase Managed Services, dedicated Managed Services Specialists coordinate troubleshooting end-to-end between customer technical staff and appropriate Hawaiian Telcom personnel, escalating when necessary.

Offeror shall provide toll-free telephone access to the NOC 24x7.

Comply.

Trouble reporting via one state-wide toll free number will be established to report initial trouble for all network services, including access to the NOC 24x7.

Phone support is necessary. Online trouble ticket creation and monitoring is desired, but not required.

Comply.

Contact numbers are available based on services provided. Please see Section 2.9.1.4 for ticket creation phone support.

Please see Section 2.9.1.4 for the Sales and Repair Escalation Contacts information.

Hawaiian Telcom does have a business portal for trouble reporting on its roadmap. Although a specific date has not yet been established, when the portal to report trouble is rolled out, Hawaiian Telcom will notify the State to incorporate the portal process as an alternative reporting method.

2.9.1.5.2 Offeror shall take immediate corrective action to resolve any network failure, such as rerouting traffic, utilizing a redundant facility, dispatching technicians, and all other steps required for the immediate re-instituting of services to the State.

Comply.

All restoration activities are performed in line with PUC and FCC guidelines.

Hawaiian Telcom has extensive safeguards and procedures in place to protect its network, maintain services to customers, and quickly repair any damage to

its network infrastructure and facilities during failures, emergencies, manmade or natural. Operational readiness is constantly monitored, tested and refined. Interoffice and interisland facilities are designed to be fully redundant. Synchronous Optical Network (SONET) rings automatically reroute traffic to alternate facilities if a fault is detected.

Please see Section Section 2.2.1.2 for trouble reporting procedures as well as Section 2.9.1.4 for the repair escalation contacts information.

- 2.9.1.5.3 For individual trouble reports, a verbal report of trouble clearance with the report number shall be furnished within one (1) hour to the customer that reported the trouble.

Comply.

Once trouble is reported, a report number is given to the customer. Trouble is isolated, and after remote troubleshooting, a technician is dispatched if necessary. Hawaiian Telcom's policy is the Technician who clears the trouble will give the customer a verbal report of the trouble clearance. If the trouble is cleared without dispatching a Technician, a verbal report of trouble clearance can be furnished to the customer if requested. A notation will be made on the trouble ticket to contact the customer when the trouble is cleared.

- 2.9.1.5.4 Web Portal. Offeror shall optionally provide web portal access that allows for network monitoring, real time traffic analysis, and reporting functionality with a minimum of twelve (12) months' worth of historical data.

Comply.

Included with the monthly recurring charge of Hawaiian Telcom's optional Managed Services offerings, specifically, Network Connectivity Management and any level of Managed Network and Cyber Security Services on WAN edge devices, Hawaiian Telcom will provide a web portal that provides real-time statistics including availability and bandwidth utilization. This portal includes historical data for the last 12 months with a customizable time scale.

2.9.2 Management Reports

- 2.9.2.1 Contractor shall provide annual reports to the Contract Administrator (preferably at the end of the calendar year or beginning twelve (12) months from the Contract Start Date), which summarizes the circuit type, Department, Location, Speed, and Cost. One report will be a

consolidated report for the State and the other reports will be by department or agency.

Comply.

Hawaiian Telcom can provide an annual report/extract to the Contract Administrator which summaries the circuit type, department, location, speed, and cost. A fee is associated with the preparation of an extract.

- 2.9.2.2 After giving forty-five (45) days notice, the Contract Administrator may request the Contractor to provide a list of State customers, account numbers, billing addresses, and circuits on each account. It is desirable that the Contractor be able to provide the physical address where service is provided to each account.

Comply.

Hawaiian Telcom can provide a list of State customers with account numbers, billing addresses and circuit numbers. An extract will be prepared based on billing codes and customer name. A fee is associated with the preparation of an extract.

- 2.9.2.3 Offeror shall identify and include samples of all available management reports regarding billing analysis, traffic studies, and usage.

Comply.

Hawaiian Telcom can provide billing data for analysis and traffic studies on services that go through our public switched network. Alternatively, studies on network (bandwidth) that carry customer data can be monitored and managed through our managed services offering.

Following Section Two Technical Requirements, a sample of a bill extract and managed services report are provided. A typical billing extract report will contain data such as, customer name, billing name, billing address, customer account number, service type, service address, product description, quantity and billing of service amount.

2.9.3 Circuit Downtime

- 2.9.3.1 Contractor shall provide a credit for circuit outages and problems with transmission quality that affects connectivity.

Comply.

Outage credits are on a pro-rated basis based on the actual number of days in the month. For example, if the outage is for a total of five days, and there are 30 days in a month, the monthly recurring charge will be divided by 30 and multiplied by 5 to determine the exact amount of credit for the outage.

2.9.3.2 Offeror shall explain how it will handle credits.

Comply.

Credit vouchers for Hawaiian Telcom caused out of service adjustments are processed through eCare. When trouble is reported, an automated ticket is prepared and an out of service indicator is checked. When a technician is dispatched, and the trouble is cleared, the technician must close the ticket confirming the out of service to receive a billing credit. A report of out of service tickets is uploaded to Hawaiian Telcom Billing. Billing will process credits for out of service.

2.10 IMPLEMENTATION / MIGRATION PLAN

2.10.1 Upon request, the Contractor shall submit an Implementation/Migration Plan that describes the major tasks, personnel proposed to perform each task, estimated hours to perform each task, costs, and a schedule for any purchased services.

Comply.

Legacy services defined as Frame Relay, DSL and Point-to-Point Dedicated Line follow standard implementation procedures. Hawaiian Telcom follows a proven service order processing path that flows from provisioning to installation for legacy services.

Hawaiian Telcom has developed end-to-end standard procedures to implement all of our MPLS networks. MPLS network services are EIPDS, RNS, DIA and Business-All-in-One. MPLS network installs require additional layers of coordination to include facility checks for Ethernet services and provisioning by our IP Specialists. Customized implementation/migration plans for MPLS networks will be developed upon request.

Below is an example of the preparation and planning for MPLS services:

- 1) Hawaiian Telcom Account Manager & Sales Engineer(s) - Product Presentation. Hawaiian Telcom will present product overviews, interview customers, develop and propose a network design and pricing for any individual State department that expresses interest. This process will give the customer the necessary information required to make a decision on which Hawaiian Telcom network is best suited to their needs. These presentations can take place at the customer's offices, or via conference call/Webex sessions for the Neighbor Islands.
- 2) Facilities Inquiry Check (Sales Engineer) - The facilities inquiry check is a free service and will require that the customer provide Hawaiian Telcom street addresses and working Hawaiian Telcom telephone numbers. We will use that information to determine if we can provide Ethernet services to each location and if any additional costs will be required.

- 3) OSP Site Check (Access Planning, Network & Field Operations) - The OSP (Outside Plant) site check is a free service where a Hawaiian Telcom OSP engineer will visit each site. The engineer will work with the customer to identify adequate support structures, conduits, adequate rack space and power and advise the customer of any additional work or responsibilities needed from them required for installation of their network.
- 4) The Planning Session (Account Manager, Sales Engineer, Project Manager, Network & Field Operations & Access Planning) - The planning session is a Hawaiian Telcom internal meeting of all of the departments that are involved in the planning/implementation of the circuit. The planning session will determine the milestone & delivery dates of the circuits. From this point, a Hawaiian Telcom Network Project Manager (PM) will be assigned to take over the monitoring of the project and update the customer with frequent status updates.
- 5) The Network PM will be responsible for submitting to the customer an implementation plan which describes major tasks and milestone dates. The PM is responsible for coordination of the plan and the duties below:
 - a. Order confirmation from Sales/Business Office
 - b. Project worksheet for all sites to include:
 - i. Service Address
 - ii. Point of Contact (POC)
 - iii. Plant Test Date (PTD)/Due Date (DD)
 - iv. Circuit Identification (ID)
 - v. IP Address(es) as appropriate
 - vi. Customer Support Structure Requirements, as appropriate
 - c. Tracks milestone dates
 - d. Updates customer as appropriate
 - e. Resolves/Escalate known jeopardies
 - f. Coordinates hand-off between customer and IPSTG – ensure connectivity of circuit
 - g. Provides to customer – Bandwidth test results
 - h. Send customer final worksheet and close project

- 2.10.2 The Contractor shall identify potential risks associated with implementation/migration and recommend strategies for managing those risks.

Comply.

The Project Manager will be responsible to identify potential risks associated with implementation/migration and recommend strategies for managing those risks.

- 2.10.3 It is essential that there be a seamless migration of services to a new service or Contractor.

Comply.

Hawaiian Telcom recommends parallel service for a seamless migration for services. Customers may request after hour cutover and migration. Customer paid overtime will be quoted. Upon completion of successful migration to the new service, customer will be asked to contact Hawaiian Telcom to disconnect any legacy TDM services.

Being the incumbent, Hawaiian Telcom can provide the State an easy migration path from their current legacy network services to our next generation network services. Our RNS service provides any-to-any connectivity with our legacy services – customers can either choose to keep the same network interface and have us migrate the network connection to our MPLS network, or switch to next generation Ethernet services in whole.

- 2.10.4 The Implementation/Migration Plan will be reviewed by the requesting Department prior to starting installation.

Comply.

On large projects with multiple locations, the Account Manager and the Network Sales Engineer will provide an implementation/migration plan to the Department for review. Hawaiian Telcom will ask the State Department to designate a member that will be the Department focal on the coordination team. A handoff will be made to the Hawaiian Telcom Project Manager (PM) by the Account Manager and the Network Sales Engineer. The PM will be the overall coordinator updating, escalating and providing resolution for all team members to include the State Department focal.

On implementation/migration of smaller (example single locations) the PM will provide a worksheet with an implementation/migration plan after gathering information from the Customer, Account Manager, Network Sales Engineer, and others involved in the migration plan. Prior to the start of the installation/project the PM will submit the implementation/migration plan to the Department for review.

2.11 ACCEPTANCE TESTING

2.11.1 After completion of any portion of the system, the Contractor shall conduct acceptance tests for performance and reliability. The Contractor shall provide all test equipment and accessories required to perform tests and to record test results. The Contractor must ensure that all associated costs (e.g. travel), for the participation at all acceptance testing, are included within its total proposal cost. The Contractor shall notify the State prior to conducting any testing. The State reserves the right to witness any or all testing. If, during the conduct of testing, test items fail to meet performance requirements, the Contractor shall correct the deficiencies and repeat testing of all affected items. The Contractor shall submit the Acceptance Test Reports to the requesting Department showing the Contractor's functional specifications and the test results.

Comply.

Hawaiian Telcom will provide all test equipment and accessories required to perform tests and record test results. Hawaiian Telcom corrects all deficiencies and repeats testing until objectives are met.

Hawaiian Telcom follows RFC 2544 testing parameters for testing broadband layer 2 and 3 services. The tests include throughput, frame loss and latency. We utilize RFC 2544 pre-defined frame sizes to simulate traffic conditions. Testing is accomplished using test sets. Hawaiian Telcom utilizes JDSU HST 3000 and QT 600 test equipment and accompanying software.

Although Hawaiian Telcom tests all services before turning it over to the customer, test results are often not captured in writing. Therefore, customer must advise Hawaiian Telcom prior to installation if a test report is desired.

There is no requirement specified for tariffed legacy circuits. Hawaiian Telcom utilizes test sets that can furnish test data, however, to capture test results would be a manual effort. Though there is no documentation, our standard is a customer may witness the test prior to handing over the circuit.

2.11.2 Acceptance of the system shall be granted after all items have passed the acceptance tests and has been approved by the requesting Department.

Comply.

2.12 TRANSITION PERIODS

2.12.1 Transition at Beginning of Contract

The Contractor shall work with the existing telecommunications provider to insure a seamless transition at no cost to the State.

Comply.

2.12.2 Transition at End of Contract

Monthly cost to continue existing service will be at the current rate of the existing agreement or better on a month-to-month basis, but not to exceed 12 months or there is a cancellation of service or a new multi-year agreement is executed.

Comply.

2.13 OTHER CHARGES

2.13.1 There will be no service charge to the State for changing service types or increasing bandwidth speed when the monthly cost of the new service is equal to or higher than the existing service and the contractor does not change. For example, moving from lower cost Frame Relay to more costly Broadband Ethernet or moving from 10Mbps Broadband Ethernet to 25Mbps Broadband Ethernet. This shall also apply to circuits procured prior to the start of this contract.

Comply.

2.13.2 Cancellation of Service

There will be no charge to the State for the cancellation of service due to the completion of a term/agreement.

Comply.

2.13.3 Early Termination Fees

2.13.3.1 There will be no early termination fees for one (1) year agreements.

Comply. There will be no early termination fees for one (1) year agreements.

2.13.3.2 Three (3) and five (5) year agreements will have a termination fee equal to 25% or less of the remaining balance on the existing agreement.

Comply.

Three (3) and five (5) year agreements will have a termination fee equal to 25% or less of the remaining balance on the existing agreement.

Point-to-Point Dedicated Lines and ISDN PRI and DID service will not incur early termination charges. Reference P.U.C. Tariff 20, Section 1, 1.29.7.

2.13.3.3 Offeror shall provide the termination fee percentage for both three (3) and five (5) year agreements.

Comply.

A termination fee percentage for both three (3) and five (5) year agreements are provided in our pricing except for tariffed services that are covered by a termination fee waiver.

2.13.3.4 There will be no early termination fees if the Contractor does not meet the Annual Network Availability requirements in Section 2.6.1.

Comply.

2.13.4 Any new regulatory fees, regulatory charges, and taxes or any changes (increases and decreases) to these during the contract period or extensions, shall be submitted with an explanation to the Contract Administrator, at least fifteen (15) days prior to the effective date. If the Contractor fails to provide fifteen (15) days notice prior to the effective date for billing, the Contractor shall not bill for the item until the 15-day period has elapsed.

Comply.

2.13.5 Late submittals will be allowed if it can be shown that the agency granting the change does not announce the change more than thirty (30) days prior to the effective date. If a tax, fee, or charge changes regularly, the Contractor and the Contract Administrator may agree to streamline the process and reduce the fifteen (15) day notice period on a case-by-case basis.

Comply.

2.13.6 Non-recurring costs to provide services (such as cabling infrastructure, labor costs, etc.) shall not exceed actual costs.

Comply.

As a regulated service provider, Hawaiian Telcom must comply with the rate and cost development requirements specified in the Hawaii Administrative Rules. From this perspective, for the special construction of cabling and/or infrastructure on non-private property, the non-recurring charges shall not exceed the regulated cost floor of the special construction, with a calculated variance of not more than \$100.

2.14 CLIENT EXPERIENCE, REFERENCES, AND LICENSES

2.14.1 Experience

Offeror shall have a minimum of five (5) years experience in providing telecommunications services in the State of Hawaii. Offeror shall enter this information on the Offeror Qualifications form found in Section Six - Attachments.

Award shall not be made to any Offeror not meeting this qualification requirement.

Comply.

Please see Section Six Attachments, Offeror Qualifications, Number 1. (See Tab 4 of Hawaiian Telcom's HePS submission).

It is the Offeror's responsibility to provide the necessary professional staff and support personnel to guarantee a completely functional and fully supported solution that is in compliance with this RFP.

Comply.

Headed by Hawaiian Telcom's Government team, our professional staff and support personnel will guarantee completely functional and fully supported solutions.

Hawaiian Telcom's support team behind the Government team will be our Project Manager, Sales Engineering, Network Engineering, IP Operations, Managed Services and Field Operations that will cover solutions for all islands.

Offeror shall employ experienced and qualified staff such as:

- Project Manager
- Infrastructure Design and Coordination Staff
- Circuit Design Engineers
- Installation Technicians
- Operation and Support Personnel

Comply.

Hawaiian Telcom has 1,300+ qualified employees. Our team is made up of experienced and qualified staff in Account Management, Project Management, Sales Engineering, Network Engineering, IP Operations, Managed Services and Field Operations. Key personnel and associated resumes are filed under RFP Section Six Attachments, Offeror Qualifications, Number 2 (See Tab 4 of Hawaiian Telcom's HePS submission).

Offeror shall list the number of years Offeror has been in business in Hawaii and the number of years Offeror has performed the proposed network and telecommunication services.

Comply.

As the State's largest full service provider of telecommunications services, our offering include local phone service, long distance service, high-speed digital subscriber line (DSL) service, internet service, voice and data networks, VoIP solutions, video conferencing, direct internet service and broadband layer 2 and

layer 3 services. Our depth of expertise also covers the design, implementation and support of these services.

Hawaiian Telcom is the leading provider and supports our legacy services to include Point to Point Dedicated Line, Frame Relay, Digital Subscriber Line, and ISDN PRI.

Hawaiian Telcom constantly strives to be the State of Hawaii's telecommunications leader. We've enjoyed successful roll outs of Direct Internet Access in 2005, the Managed Services suite in 2007, and Business-All-in-One in 2009.

Hawaiian Telcom's Multi Protocol Label Switching (MPLS) network was established in 2007. We have been providing our Layer 2 Ethernet Service, Enhanced IP Data Service (EIPDS) over our MPLS network since 2007.

Hawaiian Telcom has been providing our Layer 3 Ethernet Service, Routed Network Service (RNS) since 2008.

Please see Section Six Attachments, Offeror Qualifications, Number 1. (See Tab 4 of Hawaiian Telcom's HePS submission).

Offeror shall include a list of key personnel and associated resumes for those who will be dedicated to this contract. Throughout the term of the contract, an updated list of personnel and resumes shall be provided if requested by the State.

Comply.

Please see Section Six Attachments, Offeror Qualifications, Number 2 and attached resumes, (See Tab 4 of Hawaiian Telcom's HePS submission).

Offeror shall include a list of subcontractors and associated resumes for those who will be dedicated to this contract.

Comply.

Hawaiian Telcom does not have a subcontractor dedicated to this contract. Hawaiian Telcom will use its own employees.

2.14.2 Client References

Offeror shall list on the Offeror Qualifications Form (SECTION SIX ATTACHMENTS), three (3) Client References who presently use the same or similar services to those being proposed. The clients used for reference purpose should be paying customers external to the Offeror's organization. Offeror shall include this information in its Proposal submittal. The State may contact any of the listed Client References to inquire about the Offeror's performance.

Comply.

Please see Section Six Attachments, Offeror Qualifications, Number 4, (See Tab 4 of Hawaiian Telcom's HePS submission).

OFFER PAGE (BAFO – Addendum 4)

To Furnish, Deliver, Install, and Manage Network and Telecommunications Services
For Hawaii State Government
RFP-12-006-SW

Procurement Officer
State Procurement Office
State of Hawaii
Honolulu, Hawaii 96813

Dear Procurement Officer:

The undersigned has carefully read and understands the terms and conditions specified in the Specifications and Special Provisions attached hereto, and included by reference, the SPO General Provisions, dated 8/5/09, and the AG General Conditions, Form AG-008, dated 4/15/09; and hereby submits the following offer to perform the work specified herein, all in accordance with the true intent and meaning thereof. The undersigned further understands and agrees that by submitting this offer, 1) Offeror is declaring that offer is not in violation of Chapter 84, Hawaii Revised Statutes, concerning prohibited State contracts, and 2) Offeror is certifying that the price(s) submitted was (were) independently arrived at without collusion.

Offeror is:

- Sole Proprietor
- Partnership
- Corporation
- Joint Venture
- Other _____

State of incorporation: HAWAII

Hawaii General Excise Tax License I.D. No. W20269406-01

Payment address (other than street address below): P.O. Box 30770

City, State, Zip Code: Honolulu, Hawaii 96820-0770

Business address (street address): 1177 Bishop Street

City, State, Zip Code: Honolulu, Hawaii 96813

June 8, 2012

Date:

(808) 546-8736

Telephone No.:

(808) 546-8288

Fax No.:

phyllis.morihara@hawaiiantel.com

E-mail Address:

Respectfully submitted:
(x) 

Authorized (Original) Signature

Kurt Hoffman – Chief Operating Officer

Name and Title (Please Type or Print)

* Hawaiian Telcom, Inc.

Exact Legal Name of Company (Offeror)



* If Offeror is a "dba" or a "division" of a corporation, furnish the exact legal name of the corporation under which the awarded contract will be executed:

Offeror: Hawaiian Telcom, Inc.
Name of Company

OFFEROR QUALIFICATIONS

Offeror must provide information on experience in providing telecommunications services and key personnel and subcontractors who will be dedicated to this contract (See Section 2.15.1).

1. Offeror shall have a minimum of five (5) years' experience in providing telecommunications services in the State of Hawaii. Award shall not be made to any Offeror not meeting this qualification requirement.

List the number of years Offeror has been in business in Hawaii and the number of years Offeror has performed the proposed network and telecommunication services.

Comply.

As a market leader in Hawaii, Hawaiian Telcom incorporates a superior customer experience in offering end-to-end solutions. We are totally responsible to ensure end-to-end connectivity and our authorized personnel have direct hands-on control of solutions.

Hawaiian Telcom has achieved a rich history of providing telephone services in the island for more than 128 years. Our beginnings date back to 1883 when Mutual Telephone Company was chartered to provide telephone service to the Kingdom of Hawaii.

As the State's largest full service provider of telecommunications services, our offering include local phone service, long distance service, high-speed digital subscriber line (DSL) service, internet service, voice and data networks, VoIP solutions, video conferencing, direct internet service and broadband layer 2 and layer 3 services. Our depth of expertise also covers the design, implementation and support of these services.

Hawaiian Telcom is the leading provider and supports our legacy services to include Point to Point Dedicated Line, Frame Relay, Digital Subscriber Line, and ISDN PRI.

Hawaiian Telcom constantly strives to be the State of Hawaii's telecommunications leader. We've enjoyed successful roll outs of Direct Internet Access in 2005, the Managed Services suite in 2007, and Business-All-in-One in 2009.

Hawaiian Telcom's Multi Protocol Label Switching (MPLS) network was established in 2007. We have been providing our Layer 2 Ethernet Service, Enhances IP Data Service (EIPDS) over our MPLS network since 2007.

Hawaiian Telcom has been providing our Layer 3 Ethernet Service, Routed Network Service (RNS) since 2008.

2. List Key Personnel and provide associated resumes.

Comply.

Hawaiian Telcom has over 1,300 employees across the State of Hawaii to support Hawaii State Government's request to furnish, deliver, install, and manage network and telecommunications services.

Below is a list of key personnel who will support Hawaii State Government. Resumes are provided in this section for key personnel.

Offeror: Hawaiian Telcom, Inc.
Name of Company

Account Manager (AM) - Phyllis Morihara

The Government Account Manager is Hawaii State Government's primary point of contact. The AM supports State of Hawaii customers providing them with outstanding customer service while making a difference in their work environment via technological enhancements. Phyllis Morihara's resume is provided at the end of this section.

Account Manager (AM) – Kevin Uyeda

The Government Account Manager is Hawaii State Government's primary point of contact. The AM supports State of Hawaii customers providing them with outstanding customer service while making a difference in their work environment via technological enhancements. Kevin Uyeda's resume is provided at the end of this section.

Sales Engineer Network (SE) – Tracy Soenksen

The Sales Engineer provides sales support to our sales forces. The SE is engaged in fact finding customer's network needs, development, design and presentation of solutions to customers. Tracy Soenksen's resume is provided at the end of this section.

Sales Engineer Managed Services (SE) – David Morris & Vince Hoang

The Sales Engineer Managed Services is responsible for developing, proposing and implementing managed services solutions for our customers. David Morris's & Vince Hoang's resumes are provided at the end of this section.

Project Manager (PM) – Katherine Kainoa Chang-Garcia

The Project Manager is the focal point for all customer contact during implementation, escalation and problem resolution. The PM is responsible for moving the team in a forward direction and keeping the customer informed of installation/conversion progress. Katherine Chang-Garcia's resume is provided at the end of this section.

Network Planning Engineer – Brandon Onishi

The Network Planning Engineer is responsible for the development of long term network strategy for Hawaiian Telcom's circuit, packet and IP multimedia core and access networks. Our Network Planning Engineer will be part of the team the AM, SE and PM will consult for solution strategy for the State of Hawaii. Brandon Onishi's resume is provided at the end of this section.

Director Network Planning – Daniel Masutomi

The Director of Network Planning is responsible for developing the short and long term network evolution plans and capacity relief of Hawaiian Telcom's network. Our Director Network Planning will be part of the team the AM, SE and PM will consult for solution strategy for the State of Hawaii. Daniel Masutomi's resume is provided at the end of this section.

Lead Engineer Systems Support – Travis Hamada

The Lead Engineer Systems Support is responsible for operating systems support and technologies to support inventory, activation, and service assurance of Hawaiian Telcom's Next-Gen HIS, EIPDS, RNS, BAIO VoIP, and HTTPV. The Lead Engineer will be consulted when Hawaiian Telcom's AM, SE, and PM has escalations on inventory, activation and service assurance of our network services to the State of Hawaii. Travis Hamada's resume is provided at the end of this section.

Offeror: Hawaiian Telcom, Inc.
Name of Company

Lead Planner Access Planning – Kevin Ayano

The Lead Planner Access Planning is responsible for planning and engineering customer access facilities and design to provide voice, data, and video. The Lead Planner Access Planning will provide support to the AM, SE, and PM for network topology issues. Kevin Ayano's resume is provided at the end of this section.

Specialist IP Services – Scott Erwin

The Specialist IP Services is responsible for configuration, troubleshooting and restoring IP/MPLS based internet services, managed VPN and VoIP/QoS Technology. The Specialist configures DIA, EIPDS and VoIP. The Specialist will provide support to the AM, SE and PM for MPLS network configuration questions/support. Scott Erwin's resume is provided at the end of this section.

Network and Systems Specialist Engineer – Travis Sayegusa

The Network and Systems Specialist Engineer is responsible for administering and augmenting IP network devices providing visibility and monitoring of Hawaiian Telcom's network. The Network and Systems Specialist Engineer is a resource to the Managed Services SE and AM to provide consultative information in regards to Hawaiian Telcom's Managed Services capabilities. Travis Sayegusa's resume is provided at the end of this section.

The following Field and Network Operations Groups will support installation and repair. There are over 250 employees from Technicians to Managers in the groups. Though individuals in the groups are not part of the dedicated Hawaii State Government team, these individuals support all of Hawaiian Telcom's network services.

Senior Manager Field Operations, Oahu – Denise Kahakui

Senior Manager Network /Field Operations, Big Island & Kauai – Bryan Lindsay

Senior Manager Network Field Operations, Maui (Molokai & Lanai) – Val Ogata

Senior Manager Network Operations, Oahu & Kauai – Les Koshi

The Network/Field Operations Senior Managers oversee Technicians who are responsible for the provisioning, installation, repair and maintenance of the network equipment and circuits that provide various transport, switching and data services.

Network/Field Operations Technicians on Oahu, Kauai, Big Island and Maui (Molokai & Lanai)

The Technicians are responsible for the provisioning, installation, repair and maintenance for various transport, switching and data services in the customer's network serving central offices and at the customer premises. Below describes job responsibilities of the different groups.

Offeror: Hawaiian Telcom, Inc.
Name of Company

Job Title: Station Technician

Job Responsibility description:

Station technicians provide telephone services to residential and business customers. They install station equipment and associated lines for plain old telephone service (POTS) and high speed internet access equipment and associated lines for xDSL services, repair and/or replace damaged lines.

Station technicians also install lines for low speed data communications, e.g., 2 wire/4 wire, TTY, data circuits, and alarm circuits.

Job Title: Customer Zone Technician 1 (CZT I)

Job Responsibility description:

CZT I technicians install, maintains and repairs a variety of complex network communications equipment and systems. Systems include Class 4 and 5 switching equipment, SONET/DWDM transport equipment and systems, and MPLS router systems. Services supported include but not limited to, ISDN PRI, digital and analog special service circuits, fiber optic systems including DWDM, microwave and associated equipment, and Hawaiian Telcom IP services such as EIPDS (Enhanced IP Data Services) and RNS (Remote Network Service)

The CZT I is also responsible for performing various network operations and maintenance functions or switching facilities from centralized operations work centers.

Job Title: Customer Service Technician (CST)

Job Responsibility description:

CST technicians install and maintain Centrex, single site VoIP systems such as Hawaiian Telcom's BAIO (Business All in One) service, data and ancillary equipment. They also install structured wiring (CAT5/CAT6) for high speed data communications applications.

Job Title: Customer Service Specialist (CSS)

Job Responsibility description:

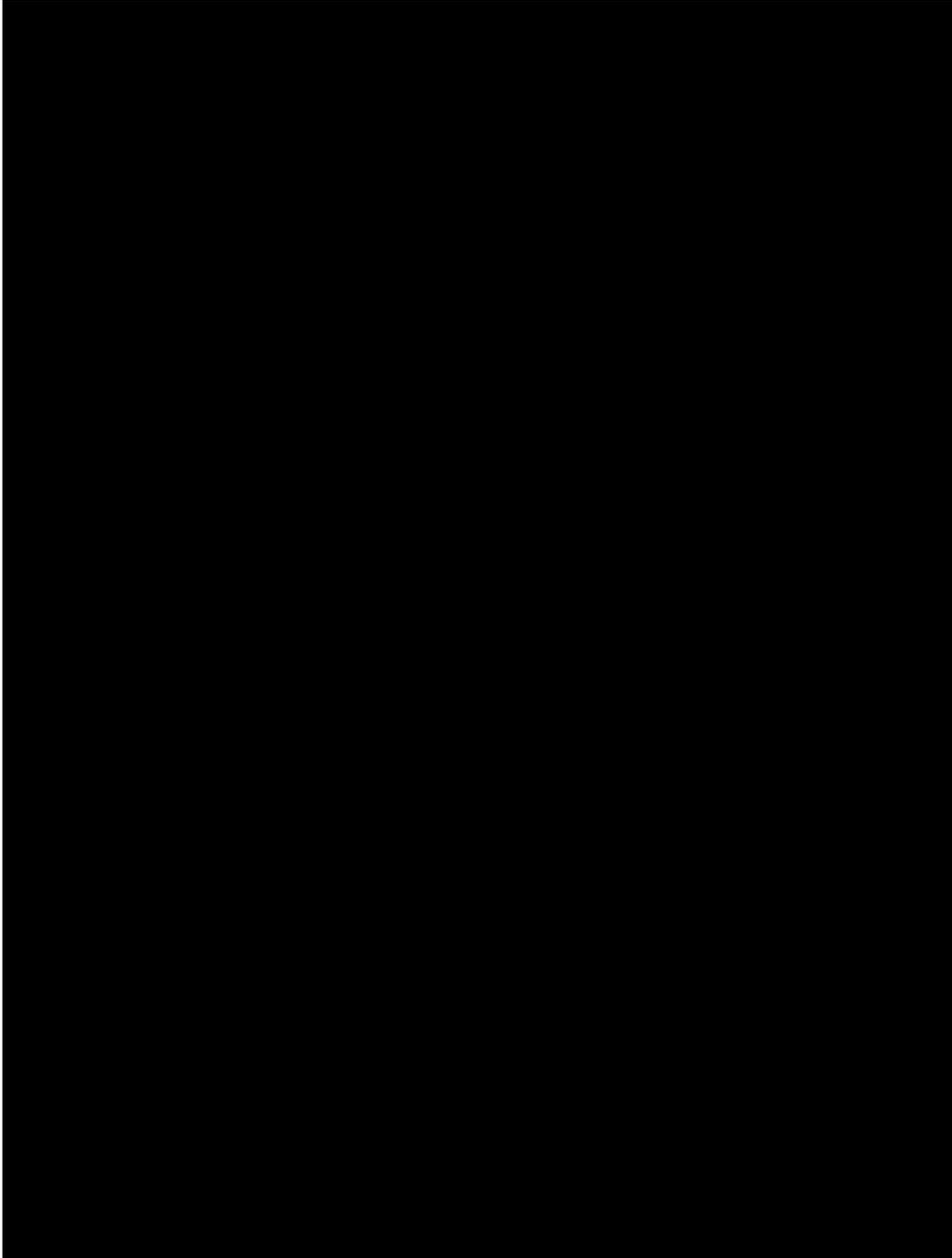
CSS technicians install and maintain PBX/PABX/EPABX systems, Data/LAN systems, VoIP systems such as Cisco Call Manager, Centrex, and other complex business systems and ancillary equipment. They also install structured wiring (CAT5/CAT6) for high speed data communications applications.

3. **List Subcontractors and provide associated resumes.**

N/A. Hawaiian Telcom will not use subcontractors. We are a full service provider.

Offeror: Hawaiian Telcom, Inc.
Name of Company

4. Client References: Offeror is required to supply the State with names, addresses, and telephone numbers of three (3) companies or entities which the Offeror has supplied telecommunication and network services, of similar size and usage requirements to those being requested in this RFP. As part of the evaluation, State personnel may call the customers whose names you furnish to inquire about Offeror's services, performance, equipment, and degree of customer satisfaction. (See Section 2.15.2 Client References)



**WAGE CERTIFICATE
FOR SERVICE CONTRACTS**
(See Special Provisions)

Subject: RFP No.: RFP-12-006-SW (BAFO – Addendum 4)

Title of RFP: To Furnish, Deliver, Install, and Manage Network and
Telecommunications Services for Hawaii State Government

Pursuant to Section 103-55, Hawaii Revised Statutes (HRS), I hereby certify that if awarded the contract in excess of \$25,000, the services to be performed will be performed under the following conditions:

1. All applicable laws of the federal and state governments relating to workers' compensation, unemployment compensation, payment of wages, and safety will be fully complied with; and
2. The services to be rendered shall be performed by employees paid at wages or salaries not less than the wages paid to public officers and employees for similar work, with the exception of professional, managerial, supervisory, and clerical personnel who are not covered by Section 103-55, HRS.

I understand that failure to comply with the above conditions during the period of the contract shall result in cancellation of the contract, unless such noncompliance is corrected within a reasonable period as determined by the procurement officer. Payment in the final settlement of the contract or the release of bonds, if applicable, or both shall not be made unless the procurement officer has determined that the noncompliance has been corrected; and

I further understand that all payments required by Federal and State laws to be made by employers for the benefit of their employees are to be paid in addition to the base wage required by Section 103-55, HRS.

Offeror Hawaiian Telcom, Inc.

Signature 

Title Kurt Hoffman, Chief Operating Officer

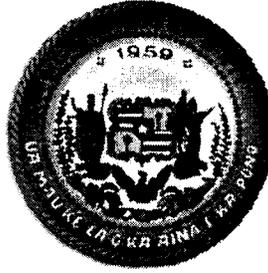
Date June 8, 2012

Offeror: Hawaiian Telcom, Inc.
Name of Company

OFFER PAGE

RFP-12-006-SW

Approved
as to form
LEGAL DEPT.
By 
Date 6/11/12



STATE OF HAWAII
STATE PROCUREMENT OFFICE

CERTIFICATE OF VENDOR COMPLIANCE

This document presents the compliance status of the vendor identified below on the issue date with respect to certificates required from the Hawaii Department of Taxation (DOTAX), the Internal Revenue Service, the Hawaii Department of Labor and Industrial Relations (DLIR), and the Hawaii Department of Commerce and Consumer Affairs (DCCA).

Vendor Name: HAWAIIAN TELCOM, INC.

DBA/Trade Name: HAWAIIAN TELCOM, INC. or " HAWAIIAN TELCOM"

Issue Date: 06/01/2012

Status: Compliant

Hawaii Tax#: W20269406-01
FEIN/SSN#: XX-XXX9500
UI#: XXXXXX3986
DCCA FILE#: 61

Status of Compliance for this Vendor on issue date:

Form	Department(s)	Status
A-6	Hawaii Department of Taxation	Compliant
	Internal Revenue Service	Compliant
COGS	Hawaii Department of Commerce & Consumer Affairs	Compliant
LIR27	Hawaii Department of Labor & Industrial Relations	Compliant

Status Legend:

Status	Description
Exempt	The entity is exempt from this requirement
Compliant	The entity is compliant with this requirement or the entity is in agreement with agency and actively working towards compliance
Pending	The entity is compliant with DLIR requirement
Submitted	The entity has applied for the certificate but it is awaiting approval
	The entity is not in compliance with the requirement and should contact the issuing agency for more information

DSL Transport Circuits									
Monthly Recurring Charge (MRC) for:									
-RNS (IP VPN) - Layer 3									
-Any-to-Any Connectivity									
3M/768k (up to) DSL Transport Circuit	\$79.00	5%	\$75.05	\$69.00	10%	\$62.10	\$59.00	15%	\$50.15
7M/1M (up to) DSL Transport Circuit	\$119.00	10%	\$107.10	\$109.00	15%	\$92.65	\$99.00	20%	\$79.20
11M/1M (up to) DSL Transport Circuit	\$149.00	15%	\$126.65	\$139.00	20%	\$111.20	\$129.00	25%	\$96.75
Quality of Service (QoS) (EIPDS and RNS)									
DSCP or dot1p									
Package A - 100% Best Effort (Included) (Used when data does not have to be prioritized over other data)	standard	-	standard	standard	-	standard	standard	-	standard
Package B (Ethernet, Private Line & DSL) (per circuit)									
- 50% Real Time (For Real Time applications such as VoIP)									
- 50% Best Effort (Used when data does not have to be prioritized over other data)									
1.5 Mbps Ethernet Pkg B QoS	\$15.00	25%	\$11.25	\$15.00	25%	\$11.25	\$15.00	25%	\$11.25
3 Mbps Ethernet Pkg B QoS	\$30.00	25%	\$22.50	\$30.00	25%	\$22.50	\$30.00	25%	\$22.50
5 Mbps Ethernet Pkg B QoS	\$50.00	25%	\$37.50	\$50.00	25%	\$37.50	\$50.00	25%	\$37.50
10 Mbps Ethernet Pkg B QoS	\$100.00	25%	\$75.00	\$100.00	25%	\$75.00	\$100.00	25%	\$75.00
25 Mbps Ethernet Pkg B QoS	\$250.00	50%	\$125.00	\$250.00	50%	\$125.00	\$250.00	50%	\$125.00
50 Mbps Ethernet Pkg B QoS	\$500.00	50%	\$250.00	\$500.00	50%	\$250.00	\$500.00	50%	\$250.00
75 Mbps Ethernet Pkg B QoS	\$750.00	50%	\$375.00	\$750.00	50%	\$375.00	\$750.00	50%	\$375.00
100 Mbps Ethernet Pkg B QoS	\$1,000.00	50%	\$500.00	\$1,000.00	50%	\$500.00	\$1,000.00	50%	\$500.00
250 Mbps Ethernet Pkg B QoS	\$2,500.00	50%	\$1,250.00	\$2,500.00	50%	\$1,250.00	\$2,500.00	50%	\$1,250.00
500 Mbps Ethernet Pkg B QoS	\$5,000.00	50%	\$2,500.00	\$5,000.00	50%	\$2,500.00	\$5,000.00	50%	\$2,500.00
750 Mbps Ethernet Pkg B QoS	\$7,500.00	50%	\$3,750.00	\$7,500.00	50%	\$3,750.00	\$7,500.00	50%	\$3,750.00
1,000 Mbps Ethernet Pkg B QoS	\$10,000.00	50%	\$5,000.00	\$10,000.00	50%	\$5,000.00	\$10,000.00	50%	\$5,000.00
128 Kbps Private Line Pkg B QoS	\$15.00	0%	\$15.00	\$15.00	0%	\$15.00	\$15.00	0%	\$15.00
256 Kbps Private Line Pkg B QoS	\$15.00	0%	\$15.00	\$15.00	0%	\$15.00	\$15.00	0%	\$15.00
384 Kbps Private Line Pkg B QoS	\$15.00	0%	\$15.00	\$15.00	0%	\$15.00	\$15.00	0%	\$15.00
1.5 Mbps Private Line Pkg B QoS	\$15.00	0%	\$15.00	\$15.00	0%	\$15.00	\$15.00	0%	\$15.00
3M/768k (up to) DSL Transport Pkg B QoS	\$10.00	0%	\$10.00	\$10.00	0%	\$10.00	\$10.00	0%	\$10.00
7M/1M (up to) DSL Transport Pkg B QoS	\$10.00	0%	\$10.00	\$10.00	0%	\$10.00	\$10.00	0%	\$10.00
11M/1M (up to) DSL Transport Pkg B QoS	\$10.00	0%	\$10.00	\$10.00	0%	\$10.00	\$10.00	0%	\$10.00

Package C (Ethernet & Private Line only) (per circuit)										
- 25% Real Time (Real Time Applications such as VoIP)										
- 25% Interactive (Real Time Applications such as Video)										
- 50% Best Effort (Data does not need to be prioritized over other data)										
1.5 Mbps Ethernet Pkg C QoS	\$11.25	25%	\$8.44	\$11.25	25%	\$8.44	\$11.25	25%	\$8.44	
3 Mbps Ethernet Pkg C QoS	\$22.50	25%	\$16.88	\$22.50	25%	\$16.88	\$22.50	25%	\$16.88	
5 Mbps Ethernet Pkg C QoS	\$37.50	25%	\$28.13	\$37.50	25%	\$28.13	\$37.50	25%	\$28.13	
10 Mbps Ethernet Pkg C QoS	\$75.00	25%	\$56.25	\$75.00	25%	\$56.25	\$75.00	25%	\$56.25	
25 Mbps Ethernet Pkg C QoS	\$187.50	50%	\$93.75	\$187.50	50%	\$93.75	\$187.50	50%	\$93.75	
50 Mbps Ethernet Pkg C QoS	\$375.00	50%	\$187.50	\$375.00	50%	\$187.50	\$375.00	50%	\$187.50	
75 Mbps Ethernet Pkg C QoS	\$562.50	50%	\$281.25	\$562.50	50%	\$281.25	\$562.50	50%	\$281.25	
100 Mbps Ethernet Pkg C QoS	\$750.00	50%	\$375.00	\$750.00	50%	\$375.00	\$750.00	50%	\$375.00	
250 Mbps Ethernet Pkg C QoS	\$1,875.00	50%	\$937.50	\$1,875.00	50%	\$937.50	\$1,875.00	50%	\$937.50	
500 Mbps Ethernet Pkg C QoS	\$3,750.00	50%	\$1,875.00	\$3,750.00	50%	\$1,875.00	\$3,750.00	50%	\$1,875.00	
750 Mbps Ethernet Pkg C QoS	\$5,625.00	50%	\$2,812.50	\$5,625.00	50%	\$2,812.50	\$5,625.00	50%	\$2,812.50	
1,000 Mbps Ethernet Pkg C QoS	\$7,500.00	50%	\$3,750.00	\$7,500.00	50%	\$3,750.00	\$7,500.00	50%	\$3,750.00	
128 Kbps Private Line Pkg C QoS	\$16.00	0%	\$16.00	\$16.00	0%	\$16.00	\$16.00	0%	\$16.00	
256 Kbps Private Line Pkg C QoS	\$16.00	0%	\$16.00	\$16.00	0%	\$16.00	\$16.00	0%	\$16.00	
384 Kbps Private Line Pkg C QoS	\$16.00	0%	\$16.00	\$16.00	0%	\$16.00	\$16.00	0%	\$16.00	
1.5 Mbps Private Line Pkg C QoS	\$16.00	0%	\$16.00	\$16.00	0%	\$16.00	\$16.00	0%	\$16.00	
Package D (Ethernet, Private Line & DSL)(per circuit)										
- 25% Real Time (Real Time Applications such as VoIP)										
- 75% Best Effort (Data does not need to be prioritized over other data)										
1.5 Mbps Ethernet Pkg D QoS	\$7.50	25%	\$5.63	\$7.50	25%	\$5.63	\$7.50	25%	\$5.63	
3 Mbps Ethernet Pkg D QoS	\$15.00	25%	\$11.25	\$15.00	25%	\$11.25	\$15.00	25%	\$11.25	
5 Mbps Ethernet Pkg D QoS	\$25.00	25%	\$18.75	\$25.00	25%	\$18.75	\$25.00	25%	\$18.75	
10 Mbps Ethernet Pkg D QoS	\$50.00	25%	\$37.50	\$50.00	25%	\$37.50	\$50.00	25%	\$37.50	
25 Mbps Ethernet Pkg D QoS	\$125.00	50%	\$62.50	\$125.00	50%	\$62.50	\$125.00	50%	\$62.50	
50 Mbps Ethernet Pkg D QoS	\$250.00	50%	\$125.00	\$250.00	50%	\$125.00	\$250.00	50%	\$125.00	
75 Mbps Ethernet Pkg D QoS	\$375.00	50%	\$187.50	\$375.00	50%	\$187.50	\$375.00	50%	\$187.50	
100 Mbps Ethernet Pkg D QoS	\$500.00	50%	\$250.00	\$500.00	50%	\$250.00	\$500.00	50%	\$250.00	
250 Mbps Ethernet Pkg D QoS	\$1,250.00	50%	\$625.00	\$1,250.00	50%	\$625.00	\$1,250.00	50%	\$625.00	
500 Mbps Ethernet Pkg D QoS	\$2,500.00	50%	\$1,250.00	\$2,500.00	50%	\$1,250.00	\$2,500.00	50%	\$1,250.00	

750 Mbps Ethernet Pkg D QoS	\$3,750.00	50%	\$1,875.00	\$3,750.00	50%	\$1,875.00	\$3,750.00	50%	\$1,875.00
1,000 Mbps Ethernet Pkg D QoS	\$5,000.00	50%	\$2,500.00	\$5,000.00	50%	\$2,500.00	\$5,000.00	50%	\$2,500.00
128 Kbps Private Line Pkg D QoS	\$8.00	0%	\$8.00	\$8.00	0%	\$8.00	\$8.00	0%	\$8.00
256 Kbps Private Line Pkg D QoS	\$8.00	0%	\$8.00	\$8.00	0%	\$8.00	\$8.00	0%	\$8.00
384 Kbps Private Line Pkg D QoS	\$8.00	0%	\$8.00	\$8.00	0%	\$8.00	\$8.00	0%	\$8.00
1.5 Mbps Private Line Pkg D QoS	\$8.00	0%	\$8.00	\$8.00	0%	\$8.00	\$8.00	0%	\$8.00
3M/768k (up to) DSL Transport Pkg D QoS	\$5.00	0%	\$5.00	\$5.00	0%	\$5.00	\$5.00	0%	\$5.00
7M/1M (up to) DSL Transport Pkg D QoS	\$5.00	0%	\$5.00	\$5.00	0%	\$5.00	\$5.00	0%	\$5.00
11M/1M (up to) DSL Transport Pkg D QoS	\$5.00	0%	\$5.00	\$5.00	0%	\$5.00	\$5.00	0%	\$5.00

Package E (Ethernet & Private Line only) (per circuit) - 25% Interactive (Real Time Applications such as Video) - 75% Best Effort (Data does not need to be prioritized over other data)									
1.5 Mbps Ethernet Pkg E QoS	\$3.75	25%	\$2.81	\$3.75	25%	\$2.81	\$3.75	25%	\$2.81
3 Mbps Ethernet Pkg E QoS	\$7.50	25%	\$5.63	\$7.50	25%	\$5.63	\$7.50	25%	\$5.63
5 Mbps Ethernet Pkg E QoS	\$12.50	25%	\$9.38	\$12.50	25%	\$9.38	\$12.50	25%	\$9.38
10 Mbps Ethernet Pkg E QoS	\$25.00	25%	\$18.75	\$25.00	25%	\$18.75	\$25.00	25%	\$18.75
25 Mbps Ethernet Pkg E QoS	\$62.50	50%	\$31.25	\$62.50	50%	\$31.25	\$62.50	50%	\$31.25
50 Mbps Ethernet Pkg E QoS	\$125.00	50%	\$62.50	\$125.00	50%	\$62.50	\$125.00	50%	\$62.50
75 Mbps Ethernet Pkg E QoS	\$187.50	50%	\$93.75	\$187.50	50%	\$93.75	\$187.50	50%	\$93.75
100 Mbps Ethernet Pkg E QoS	\$250.00	50%	\$125.00	\$250.00	50%	\$125.00	\$250.00	50%	\$125.00
250 Mbps Ethernet Pkg E QoS	\$625.00	50%	\$312.50	\$625.00	50%	\$312.50	\$625.00	50%	\$312.50
500 Mbps Ethernet Pkg E QoS	\$1,250.00	50%	\$625.00	\$1,250.00	50%	\$625.00	\$1,250.00	50%	\$625.00
750 Mbps Ethernet Pkg E QoS	\$1,875.00	50%	\$937.50	\$1,875.00	50%	\$937.50	\$1,875.00	50%	\$937.50
1,000 Mbps Ethernet Pkg E QoS	\$2,500.00	50%	\$1,250.00	\$2,500.00	50%	\$1,250.00	\$2,500.00	50%	\$1,250.00
128 Kbps Private Line Pkg E QoS	\$4.00	0%	\$4.00	\$4.00	0%	\$4.00	\$4.00	0%	\$4.00
256 Kbps Private Line Pkg E QoS	\$5.00	0%	\$5.00	\$5.00	0%	\$5.00	\$5.00	0%	\$5.00
384 Kbps Private Line Pkg E QoS	\$5.00	0%	\$5.00	\$5.00	0%	\$5.00	\$5.00	0%	\$5.00
1.5 Mbps Private Line Pkg E QoS	\$8.00	0%	\$8.00	\$8.00	0%	\$8.00	\$8.00	0%	\$8.00

Package F (Ethernet & Private Line only) (per circuit) - 25% Business Priority (Data applications that need to be prioritized over other data) - 75% Best Effort (Data does not need to be prioritized over other data)									
1.5 Mbps Ethernet Pkg F QoS	\$1.88	25%	\$1.41	\$1.88	25%	\$1.41	\$1.88	25%	\$1.41
3 Mbps Ethernet Pkg F QoS	\$3.75	25%	\$2.81	\$3.75	25%	\$2.81	\$3.75	25%	\$2.81

5 Mbps Ethernet Pkg F QoS	\$6.25	25%	\$4.69	\$6.25	25%	\$4.69	\$6.25	25%	\$4.69
10 Mbps Ethernet Pkg F QoS	\$12.50	25%	\$9.38	\$12.50	25%	\$9.38	\$12.50	25%	\$9.38
25 Mbps Ethernet Pkg F QoS	\$31.25	50%	\$15.63	\$31.25	50%	\$15.63	\$31.25	50%	\$15.63
50 Mbps Ethernet Pkg F QoS	\$62.50	50%	\$31.25	\$62.50	50%	\$31.25	\$62.50	50%	\$31.25
75 Mbps Ethernet Pkg F QoS	\$93.75	50%	\$46.88	\$93.75	50%	\$46.88	\$93.75	50%	\$46.88
100 Mbps Ethernet Pkg F QoS	\$125.00	50%	\$62.50	\$125.00	50%	\$62.50	\$125.00	50%	\$62.50
250 Mbps Ethernet Pkg F QoS	\$312.50	50%	\$156.25	\$312.50	50%	\$156.25	\$312.50	50%	\$156.25
500 Mbps Ethernet Pkg F QoS	\$625.00	50%	\$312.50	\$625.00	50%	\$312.50	\$625.00	50%	\$312.50
750 Mbps Ethernet Pkg F QoS	\$937.50	50%	\$468.75	\$937.50	50%	\$468.75	\$937.50	50%	\$468.75
1,000 Mbps Ethernet Pkg F QoS	\$1,250.00	50%	\$625.00	\$1,250.00	50%	\$625.00	\$1,250.00	50%	\$625.00
128 Kbps Private Line Pkg F QoS	\$2.00	0%	\$2.00	\$2.00	0%	\$2.00	\$2.00	0%	\$2.00
256 Kbps Private Line Pkg F QoS	\$2.00	0%	\$2.00	\$2.00	0%	\$2.00	\$2.00	0%	\$2.00
384 Kbps Private Line Pkg F QoS	\$2.00	0%	\$2.00	\$2.00	0%	\$2.00	\$2.00	0%	\$2.00
1.5 Mbps Private Line Pkg F QoS	\$2.00	0%	\$2.00	\$2.00	0%	\$2.00	\$2.00	0%	\$2.00

Dedicated Internet Bandwidth via VLAN - Requires Ethernet Access - VLAN maximum 50% of circuit speed - Includes /29 public IP address subnet - See DIA for optional features									
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1.5 Mbps Internet VLAN	\$105.00	0%	\$105.00	\$105.00	0%	\$105.00	\$105.00	0%	\$105.00
3 Mbps Internet VLAN	\$210.00	0%	\$210.00	\$210.00	0%	\$210.00	\$210.00	0%	\$210.00
5 Mbps Internet VLAN	\$350.00	0%	\$350.00	\$350.00	0%	\$350.00	\$350.00	0%	\$350.00
10 Mbps Internet VLAN	\$700.00	25%	\$525.00	\$700.00	25%	\$525.00	\$700.00	25%	\$525.00
25 Mbps Internet VLAN	\$1,750.00	25%	\$1,312.50	\$1,750.00	25%	\$1,312.50	\$1,750.00	25%	\$1,312.50
50 Mbps Internet VLAN	\$3,500.00	50%	\$1,750.00	\$3,500.00	50%	\$1,750.00	\$3,500.00	50%	\$1,750.00
75 Mbps Internet VLAN	\$5,250.00	50%	\$2,625.00	\$5,250.00	50%	\$2,625.00	\$5,250.00	50%	\$2,625.00
100 Mbps Internet VLAN	\$7,000.00	50%	\$3,500.00	\$7,000.00	50%	\$3,500.00	\$7,000.00	50%	\$3,500.00
250 Mbps Internet VLAN	\$17,500.00	75%	\$4,375.00	\$17,500.00	75%	\$4,375.00	\$17,500.00	75%	\$4,375.00
500 Mbps Internet VLAN	\$35,000.00	75%	\$8,750.00	\$35,000.00	75%	\$8,750.00	\$35,000.00	75%	\$8,750.00

Additional Service Instance (VLAN) -Requires Ethernet Access -First service instance (VLAN) is included -Applies to each additional service instance (VLAN)									
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Additional VLAN, each, MRC	\$25.00	0%	\$25.00	\$25.00	0%	\$25.00	\$25.00	0%	\$25.00
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Non-Recurring Charges (NRC)									
- One time installation/change charges									
Upgrade Bandwidth on Circuit	\$75.00	100%	\$0.00	\$75.00	100%	\$0.00	\$75.00	100%	\$0.00
Downgrade Bandwidth on Circuit	\$500.00	0%	\$500.00	\$500.00	0%	\$500.00	\$500.00	0%	\$500.00
Add/Change Feature (Major)	\$250.00	0%	\$250.00	\$250.00	0%	\$250.00	\$250.00	0%	\$250.00
Add/Change Feature (Minor)	\$75.00	0%	\$75.00	\$75.00	0%	\$75.00	\$75.00	0%	\$75.00
Additional VLAN, per occurrence									
- Establish Additional Service Instance									
-Add/Change/Remove Service Instance	\$75.00	0%	\$75.00	\$75.00	0%	\$75.00	\$75.00	0%	\$75.00

Termination Liability for 3-Year and 5-Year terms:

If Customer cancels an order in whole or in part or terminates this Service at any time during the Service Period, Customer shall either pay to Hawaiian Telcom a termination charge equal to twenty-five percent (25%) of the applicable monthly rate for the terminated Service multiplied by the number of months remaining in the unexpired portion of the Service Period, or the amount negotiated per the State of Hawaii's General Terms & Conditions, Section 14. Termination for Convenience, d. Compensation section, whichever is greater.

Any such termination liability charge shall be due and payable in one lump sum within thirty (30) days of billing.

If Customer terminates an order subsequent to the execution of this Agreement by the Parties but prior to the in-service date, Customer shall pay to Hawaiian Telcom all costs incurred by Hawaiian Telcom for order and service preparation.

Rates are provided on a "Where Facilities Exist Basis," subject to availability, on the day an order is placed. "Existing facilities" means a Service that is provisioned entirely on Hawaiian Telcom's existing network facilities. Any "special construction" required to provision Service to a particular location will be priced separately on an individual case basis and assessed to the Customer on a one-time non-recurring or monthly recurring basis.

The customer is responsible for providing all space, power and environmental controlled requirements for the equipment at the customer location(s).

The customer is responsible for providing all support structures within the Customer Premises.

Bandwidth upgrades and/or changes to access are subject to availability and may require Special Construction charges and/or a change to the hand-off interface.

- For example: A bandwidth upgrade from 100 Mbps delivered over FastEthernet to 250 Mbps will require a GigE hand-off.

Pricing does not include applicable taxes and surcharges.

Hawaiian Telcom reserves the right to offer the State any future eligible promotions/discounts that would be advantageous to the State. All Hawaiian Telcom terms and conditions of the promotion/discounts will apply.

Technology Category	1 YEAR AGREEMENT			3 YEAR AGREEMENT			5 YEAR AGREEMENT		
	List Price	Discount (%)	Total Price	List Price	Discount (%)	Total Price	List Price	Discount (%)	Total Price
Point-to-Point Dedicated Line									
Monthly Recurring Charge (MRC-Tariff):									
Fractional T1 Service									
2 x 56 or 2 x 64 Kbps Special Access Line	\$120.00	0%	\$120.00	\$108.00	0%	\$108.00	\$96.00	0%	\$96.00
4 x 56 or 4 x 64 Kbps Special Access Line	\$130.00	0%	\$130.00	\$117.00	0%	\$117.00	\$104.00	0%	\$104.00
6 x 56 or 6 x 64 Kbps Special Access Line	\$140.00	0%	\$140.00	\$126.00	0%	\$126.00	\$112.00	0%	\$112.00
Special Transport Termination, On-Island 2 x 56 or 2 x 64 Kbps	\$12.00	0%	\$12.00	\$12.00	0%	\$12.00	\$12.00	0%	\$12.00
Special Transport Termination, On-Island 4 x 56 or 4 x 64 Kbps	\$18.00	0%	\$18.00	\$18.00	0%	\$18.00	\$18.00	0%	\$18.00
Special Transport Termination, On-Island 6 x 56 or 6 x 64 Kbps	\$24.00	0%	\$24.00	\$24.00	0%	\$24.00	\$24.00	0%	\$24.00
Special Transport Termination, Interisland 2 x 56 or 2 x 64 Kbps	\$115.00	0%	\$115.00	\$115.00	0%	\$115.00	\$115.00	0%	\$115.00
Special Transport Termination, Interisland 4 x 56 or 4 x 64 Kbps	\$140.00	0%	\$140.00	\$140.00	0%	\$140.00	\$140.00	0%	\$140.00
Special Transport Termination, Interisland 6 x 56 or 6 x 64 Kbps	\$165.00	0%	\$165.00	\$165.00	0%	\$165.00	\$165.00	0%	\$165.00
Special Transport, per Airline Mile, On-Island 2 x 56 or 2 x 64 Kbps	\$5.50	0%	\$5.50	\$5.50	0%	\$5.50	\$5.50	0%	\$5.50
Special Transport, per Airline Mile, On-Island 4 x 56 or 4 x 64 Kbps	\$6.50	0%	\$6.50	\$6.50	0%	\$6.50	\$6.50	0%	\$6.50
Special Transport, per Airline Mile, On-Island 6 x 56 or 6 x 64 Kbps	\$7.50	0%	\$7.50	\$7.50	0%	\$7.50	\$7.50	0%	\$7.50
Special Transport, per Airline Mile, Interisland 2 x 56 or 2 x 64 Kbps	N/A	-	N/A	N/A	-	N/A	N/A	-	N/A
Special Transport, per Airline Mile, Interisland 4 x 56 or 4 x 64 Kbps	N/A	-	N/A	N/A	-	N/A	N/A	-	N/A
Special Transport, per Airline Mile, Interisland 6 x 56 or 6 x 64 Kbps	N/A	-	N/A	N/A	-	N/A	N/A	-	N/A
DS1 Private Line									
DS1 Special Access Line (per termination)	\$404.00	0%	\$404.00	\$364.00	0%	\$364.00	\$323.55	0%	\$323.55
Clear Channel Capability (per termination)	\$25.83	0%	\$25.83	\$25.83	0%	\$25.83	\$25.83	0%	\$25.83
DS1 On-Island Special Transport (per Airline Mile)	\$19.80	0%	\$19.80	\$19.80	0%	\$19.80	\$19.80	0%	\$19.80
DS1 On-Island Special Transport Termination (per termination)	\$56.66	0%	\$56.66	\$56.66	0%	\$56.66	\$56.66	0%	\$56.66
DS1 Inter-Island Special Transport Termination (per termination)	\$786.86	0%	\$786.86	\$786.86	0%	\$786.86	\$786.86	0%	\$786.86
DS3 Private Line									
DS3 Special Access Line (per termination)	\$1,500.00	0%	\$1,500.00	\$1,250.00	0%	\$1,250.00	\$1,150.00	0%	\$1,150.00
DS3 On-Island Special Transport (per Airline Mile)	\$65.00	0%	\$65.00	\$65.00	0%	\$65.00	\$65.00	0%	\$65.00
DS3 On-Island Special Transport Termination (On-Island) (per termination)	\$250.00	0%	\$250.00	\$225.00	0%	\$225.00	\$200.00	0%	\$200.00
DS3 On-Island Special Transport Termination (Inter-Island) (per termination)	\$3,500.00	0%	\$3,500.00	\$1,950.00	0%	\$1,950.00	\$1,800.00	0%	\$1,800.00

Non-Recurring Charges (NRC):									
Order Charge	\$65.98	0%	\$65.98	\$65.98	0%	\$65.98	\$65.98	0%	\$65.98
Clear Channel Capability (per termination)	\$76.00	0%	\$76.00	\$76.00	0%	\$76.00	\$76.00	0%	\$76.00

If Customer cancels an order in whole or in part or terminates this Service at any time during the Service Period, Customer shall either pay to Hawaiian Telcom a termination charge equal to twenty-five percent (25%) of the applicable monthly rate for the terminated Service multiplied by the number of months remaining in the unexpired portion of the Service Period, or the amount negotiated per the State of Hawaii's General Terms & Conditions, Section 14. Termination for Convenience, d. Compensation section, whichever is greater.

Any such termination liability charge shall be due and payable in one lump sum within thirty (30) days of billing.

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The customer is responsible for providing all support structures within the Customer Premises.

Bandwidth upgrades and/or changes to access are subject to availability and may require Special Construction charges and/or a change to the hand-off interface.

- For example: A bandwidth upgrade from 100 Mbps delivered over FastEthernet to 250 Mbps will require a GigE hand-off.

Pricing does not include applicable taxes and surcharges.

Hawaiian Telcom reserves the right to offer the State any future eligible promotions/discounts that would be advantageous to the State. All Hawaiian Telcom terms and conditions of the promotion/discounts will apply.

Technology Category	1 YEAR AGREEMENT			3 YEAR AGREEMENT			5 YEAR AGREEMENT		
	List Price	Discount (%)	Total Price	List Price	Discount (%)	Total Price	List Price	Discount (%)	Total Price
Business High Speed Internet Monthly Recurring Charge (MRC): -Includes static (1) or dynamic IP address -Installed on POTS line									
Lite (up to 3 Mbps up/up to 1 Mbps down) -Limited Availability	39.99	0%	39.99	39.99	10%	35.99	39.99	10%	35.99
Basic (up to 7 Mbps up/up to 1 Mbps down)	59.99	0%	59.99	59.99	10%	53.99	59.99	18%	48.99
Advantage (up to 11 Mbps up/up to 1 Mbps down)	79.99	0%	79.99	79.99	10%	71.99	79.99	16%	66.99
Premium (up to 15 Mbps up/up to 1 Mbps down)	99.99	0%	99.99	99.99	10%	89.99	99.99	15%	84.99
Extreme (up to 20 Mbps up/up to 3 Mbps down)	199.00	0%	199.00	199.00	10%	179.10	199.00	20%	159.10
Ultimate (up to 25 Mbps up/up to 3 Mbps down)	249.00	0%	249.00	249.00	10%	224.10	249.00	18%	204.10
Elite (up to 50 Mbps up/up to 3 Mbps down)	299.00	0%	299.00	299.00	10%	269.10	299.00	17%	249.10
Business Stand Alone Monthly Recurring Charge (MRC): High Speed Internet -Includes static (1) or dynamic IP address -No POTS line requirement									
Basic (up to 7 Mbps up/up to 1 Mbps down)	\$64.99	0%	\$64.99	\$64.99	10%	\$58.49	\$64.99	18%	\$53.49
Advantage (up to 11 Mbps up/up to 1 Mbps down)	\$84.99	0%	\$84.99	\$84.99	10%	\$76.49	\$84.99	16%	\$71.49
Premium (up to 15 Mbps up/up to 1 Mbps down)	\$104.99	0%	\$104.99	\$104.99	10%	\$94.49	\$104.99	15%	\$89.49
Extreme (up to 20 Mbps up/up to 3 Mbps down)	\$229.00	0%	\$229.00	\$229.00	10%	\$206.10	\$229.00	19%	\$186.10
Ultimate (up to 25 Mbps up/up to 3 Mbps down)	\$279.00	0%	\$279.00	\$279.00	10%	\$251.10	\$279.00	17%	\$231.10
Elite (up to 50 Mbps up/up to 3 Mbps down)	\$329.00	0%	\$329.00	\$329.00	10%	\$296.10	\$329.00	16%	\$276.10
DSL Transport									
- DSL Transport up to 3M/768k	\$44.99	0%	\$44.99	\$44.99	0%	\$44.99	\$44.99	0%	\$44.99

Non-Recurring Charges (NRC) - Charged per occurrence									
Service Activation	\$60.00	0%	\$60.00	\$60.00	0%	\$60.00	\$60.00	0%	\$60.00
Content Provider Change	\$60.00	0%	\$60.00	\$60.00	0%	\$60.00	\$60.00	0%	\$60.00
Termination Liability for 3-Year and 5-Year terms:									
<p>If Customer cancels an order in whole or in part or terminates this Service at any time during the Service Period, Customer shall either pay to Hawaiian Telcom a termination charge equal to twenty-five percent (25%) of the applicable monthly rate for the terminated Service multiplied by the number of months remaining in the unexpired portion of the Service Period, or the amount negotiated per the State of Hawaii's General Terms & Conditions, Section 14. Termination for Convenience, d. Compensation section, whichever is greater.</p> <p>Any such termination liability charge shall be due and payable in one lump sum within thirty (30) days of billing.</p> <p>If Customer terminates an order subsequent to the execution of this Agreement by the Parties but prior to the in-service date, Customer shall pay to Hawaiian Telcom all costs incurred by Hawaiian Telcom for order and service preparation.</p>									
<p>Rates are provided on a "Where Facilities Exist Basis," subject to availability, on the day an order is placed. "Existing facilities" means a Service that is provisioned entirely on Hawaiian Telcom's existing network facilities. Any "special construction" required to provision Service to a particular location will be priced separately on an individual case basis and assessed to the Customer on a one-time non-recurring or monthly recurring basis.</p>									
<p>The customer is responsible for providing all space, power and environmental controlled requirements for the equipment at the customer location(s).</p>									
<p>The customer is responsible for providing all support structures within the Customer Premises.</p>									
<p>Bandwidth upgrades and/or changes to access are subject to availability and may require Special Construction charges and/or a change to the hand-off interface. - For example: A bandwidth upgrade from 100 Mbps delivered over FastEthernet to 250 Mbps will require a GigE hand-off.</p>									
<p>Pricing does not include applicable taxes and surcharges.</p>									
<p>Hawaiian Telcom reserves the right to offer the State any future eligible promotions/discounts that would be advantageous to the State. All Hawaiian Telcom terms and conditions of the promotion/discounts will apply.</p>									

Technology Category	1 Year Agreement			3 Year Agreement			5 Year Agreement		
	List Price	Discount (%)	Total Price)	List Price	Discount (%)	Total Price)	List Price	Discount (%)	Total Price)
Frame Relay Service (FCC):									
Frame Relay UNI Port and Access									
Monthly Recurring Charge (MRC-Tariff):									
56 Kbps	\$155.00	0%	\$155.00	\$140.00	0%	\$140.00	\$130.00	0%	\$130.00
128 Kbps	\$280.00	0%	\$280.00	\$270.00	0%	\$270.00	\$260.00	0%	\$260.00
256 Kbps	\$345.00	0%	\$345.00	\$335.00	0%	\$335.00	\$330.00	0%	\$330.00
384 Kbps	\$355.00	0%	\$355.00	\$350.00	0%	\$350.00	\$340.00	0%	\$340.00
1.544 Mbps	\$510.00	0%	\$510.00	\$480.00	0%	\$480.00	\$450.00	0%	\$450.00
45 Mbps	\$1,935.00	0%	\$1,935.00	\$1,640.00	0%	\$1,640.00	\$1,475.00	0%	\$1,475.00
Permanent Virtual Circuit Committed Information Rate (PVC CIR), per PVC									
Monthly Recurring Charge (MRC-Tariff):									
4 Kbps	\$4.00	0%	\$4.00	\$4.00	0%	\$4.00	\$4.00	0%	\$4.00
8 Kbps	\$5.00	0%	\$5.00	\$5.00	0%	\$5.00	\$5.00	0%	\$5.00
16 Kbps	\$6.00	0%	\$6.00	\$6.00	0%	\$6.00	\$6.00	0%	\$6.00
28 Kbps	\$7.00	0%	\$7.00	\$7.00	0%	\$7.00	\$7.00	0%	\$7.00
32 Kbps	\$8.00	0%	\$8.00	\$8.00	0%	\$8.00	\$8.00	0%	\$8.00
42 Kbps	\$11.00	0%	\$11.00	\$11.00	0%	\$11.00	\$11.00	0%	\$11.00
48 Kbps	\$13.00	0%	\$13.00	\$13.00	0%	\$13.00	\$13.00	0%	\$13.00
64 Kbps	\$15.00	0%	\$15.00	\$15.00	0%	\$15.00	\$15.00	0%	\$15.00
96 Kbps	\$22.00	0%	\$22.00	\$22.00	0%	\$22.00	\$22.00	0%	\$22.00
128 Kbps	\$27.00	0%	\$27.00	\$27.00	0%	\$27.00	\$27.00	0%	\$27.00
192 Kbps	\$36.00	0%	\$36.00	\$36.00	0%	\$36.00	\$36.00	0%	\$36.00
256 Kbps	\$42.00	0%	\$42.00	\$42.00	0%	\$42.00	\$42.00	0%	\$42.00
288 Kbps	\$48.00	0%	\$48.00	\$48.00	0%	\$48.00	\$48.00	0%	\$48.00
384Kbps	\$54.00	0%	\$54.00	\$54.00	0%	\$54.00	\$54.00	0%	\$54.00
512 Kbps	\$60.00	0%	\$60.00	\$60.00	0%	\$60.00	\$60.00	0%	\$60.00
576 Kbps	\$65.00	0%	\$65.00	\$65.00	0%	\$65.00	\$65.00	0%	\$65.00
678 Kbps	\$70.00	0%	\$70.00	\$70.00	0%	\$70.00	\$70.00	0%	\$70.00
1152 Kbps	\$80.00	0%	\$80.00	\$80.00	0%	\$80.00	\$80.00	0%	\$80.00
1.536 Mbps	\$90.00	0%	\$90.00	\$90.00	0%	\$90.00	\$90.00	0%	\$90.00
2 Mbps	\$95.00	0%	\$95.00	\$95.00	0%	\$95.00	\$95.00	0%	\$95.00
3 Mbps	\$100.00	0%	\$100.00	\$100.00	0%	\$100.00	\$100.00	0%	\$100.00
4 Mbps	\$120.00	0%	\$120.00	\$120.00	0%	\$120.00	\$120.00	0%	\$120.00
5 Mbps	\$142.00	0%	\$142.00	\$142.00	0%	\$142.00	\$142.00	0%	\$142.00
6 Mbps	\$164.00	0%	\$164.00	\$164.00	0%	\$164.00	\$164.00	0%	\$164.00
7 Mbps	\$186.00	0%	\$186.00	\$186.00	0%	\$186.00	\$186.00	0%	\$186.00
8 Mbps	\$207.00	0%	\$207.00	\$207.00	0%	\$207.00	\$207.00	0%	\$207.00
9 Mbps	\$229.00	0%	\$229.00	\$229.00	0%	\$229.00	\$229.00	0%	\$229.00
10 Mbps	\$250.00	0%	\$250.00	\$250.00	0%	\$250.00	\$250.00	0%	\$250.00
11 Mbps	\$266.00	0%	\$266.00	\$266.00	0%	\$266.00	\$266.00	0%	\$266.00
12 Mbps	\$282.00	0%	\$282.00	\$282.00	0%	\$282.00	\$282.00	0%	\$282.00
13 Mbps	\$298.00	0%	\$298.00	\$298.00	0%	\$298.00	\$298.00	0%	\$298.00
14 Mbps	\$314.00	0%	\$314.00	\$314.00	0%	\$314.00	\$314.00	0%	\$314.00
15 Mbps	\$330.00	0%	\$330.00	\$330.00	0%	\$330.00	\$330.00	0%	\$330.00
16 Mbps	\$345.00	0%	\$345.00	\$345.00	0%	\$345.00	\$345.00	0%	\$345.00

17 Mbps	\$362.00	0%	\$362.00	\$362.00	0%	\$362.00	\$362.00	0%	\$362.00
18 Mbps	\$378.00	0%	\$378.00	\$378.00	0%	\$378.00	\$378.00	0%	\$378.00
19 Mbps	\$394.00	0%	\$394.00	\$394.00	0%	\$394.00	\$394.00	0%	\$394.00
20 Mbps	\$410.00	0%	\$410.00	\$410.00	0%	\$410.00	\$410.00	0%	\$410.00
21 Mbps	\$426.00	0%	\$426.00	\$426.00	0%	\$426.00	\$426.00	0%	\$426.00
22 Mbps	\$442.00	0%	\$442.00	\$442.00	0%	\$442.00	\$442.00	0%	\$442.00
Non-Recurring Charges (NRC-Tariff)									
45 Mbps , DS3 Access	\$1,000.00	0%	\$1,000.00	\$1,000.00	0%	\$1,000.00	\$1,000.00	0%	\$1,000.00
Termination Liability for 3-Year and 5-Year terms:									
<p>If Customer cancels an order in whole or in part or terminates this Service at any time during the Service Period, Customer shall either pay to Hawaiian Telcom a termination charge equal to twenty-five percent (25%) of the applicable monthly rate for the terminated Service multiplied by the number of months remaining in the unexpired portion of the Service Period, or the amount negotiated per the State of Hawaii's General Terms & Conditions, Section 14. Termination for Convenience, d. Compensation section, whichever is greater.</p> <p>Any such termination liability charge shall be due and payable in one lump sum within thirty (30) days of billing.</p> <p>If Customer terminates an order subsequent to the execution of this Agreement by the Parties but prior to the in-service date, Customer shall pay to Hawaiian Telcom all costs incurred by Hawaiian Telcom for order and service preparation.</p>									
Rates are provided on a "Where Facilities Exist Basis," subject to availability, on the day an order is placed.									
The customer is responsible for providing all space, power and environmental controlled requirements for the equipment at the customer location(s).									
The customer is responsible for providing all support structures within the Customer Premises.									
Bandwidth upgrades and/or changes to access are subject to availability and may require Special Construction charges and/or a change to the hand-off interface.									
- For example: A bandwidth upgrade from 100 Mbps delivered over FastEthernet to 250 Mbps will require a GigE hand-off.									
Pricing does not include applicable taxes and surcharges.									
Hawaiian Telcom reserves the right to offer the State any future eligible promotions/discounts that would be advantageous to the State. All Hawaiian Telcom terms and conditions of the promotion/discounts will apply.									

Technology Category	1 Year Agreement			3 Year Agreement			5 Year Agreement		
	List Price	Discount (%)	Total Price	List Price	Discount (%)	Total Price	List Price	Discount (%)	Total Price
Frame Relay Service (PUC):									
Frame Relay UNI Port and Access, Monthly Recurring Charge (MRC-Tariff):									
56 Kbps	\$93.00	0%	\$93.00	\$83.00	0%	\$83.00	\$73.00	0%	\$73.00
128 Kbps	\$195.00	0%	\$195.00	\$180.00	0%	\$180.00	\$175.00	0%	\$175.00
256 Kbps	\$250.00	0%	\$250.00	\$235.00	0%	\$235.00	\$220.00	0%	\$220.00
384 Kbps	\$345.00	0%	\$345.00	\$335.00	0%	\$335.00	\$320.00	0%	\$320.00
1.544 Mbps	\$510.00	0%	\$510.00	\$320.00	0%	\$320.00	\$470.00	0%	\$470.00
Permanent Virtual Circuit Committed Information Rate (PVC CIR), per PVC, Monthly Recurring Charge (MRC-Tariff):									
0 - 32 Kbps CIR	\$8.00	0%	\$8.00	\$8.00	0%	\$8.00	\$8.00	0%	\$8.00
33 - 64 Kbps CIR	\$15.00	0%	\$15.00	\$15.00	0%	\$15.00	\$15.00	0%	\$15.00
65 - 96 Kbps CIR	\$22.00	0%	\$22.00	\$22.00	0%	\$22.00	\$22.00	0%	\$22.00
97 - 128 Kbps CIR	\$27.00	0%	\$27.00	\$27.00	0%	\$27.00	\$27.00	0%	\$27.00
129 - 192 Kbps CIR	\$36.00	0%	\$36.00	\$36.00	0%	\$36.00	\$36.00	0%	\$36.00
193 - 256 Kbps CIR	\$42.00	0%	\$42.00	\$42.00	0%	\$42.00	\$42.00	0%	\$42.00
257 - 320 Kbps CIR	\$48.00	0%	\$48.00	\$48.00	0%	\$48.00	\$48.00	0%	\$48.00
321 - 384 Kbps CIR	\$54.00	0%	\$54.00	\$54.00	0%	\$54.00	\$54.00	0%	\$54.00
385 - 512 Kbps CIR	\$60.00	0%	\$60.00	\$60.00	0%	\$60.00	\$60.00	0%	\$60.00
513 - 768 Kbps CIR	\$70.00	0%	\$70.00	\$70.00	0%	\$70.00	\$70.00	0%	\$70.00
769 - 1152 Kbps CIR	\$80.00	0%	\$80.00	\$80.00	0%	\$80.00	\$80.00	0%	\$80.00
1153 - 1536 Kbps CIR	\$90.00	0%	\$90.00	\$90.00	0%	\$90.00	\$90.00	0%	\$90.00
Non-Recurring Charges (NRC-Tariff):									
Order Charge	\$65.98	0%	\$65.98	\$65.98	0%	\$65.98	\$65.98	0%	\$65.98
56 Kbps	\$295.00	0%	\$295.00	\$295.00	0%	\$295.00	\$295.00	0%	\$295.00
128 Kbps	\$395.00	0%	\$395.00	\$395.00	0%	\$395.00	\$395.00	0%	\$395.00
256 Kbps	\$395.00	0%	\$395.00	\$395.00	0%	\$395.00	\$395.00	0%	\$395.00
384 Kbps	\$395.00	0%	\$395.00	\$395.00	0%	\$395.00	\$395.00	0%	\$395.00
1.544 Mbps	\$395.00	0%	\$395.00	\$395.00	0%	\$395.00	\$395.00	0%	\$395.00
Subsequent Order	\$20.00	0%	\$20.00	\$20.00	0%	\$20.00	\$20.00	0%	\$20.00
Termination Liability for 3-Year and 5-Year terms:									
<p>If Customer cancels this order in whole or in part or terminates this Service at any time during the Service Period, Customer shall either pay to Hawaiian Telcom a termination charge equal to twenty-five percent (25%) of the applicable monthly rate for the terminated Service multiplied by the number of months remaining in the unexpired portion of the Service Period, or the amount negotiated per the State of Hawaii's General Terms & Conditions, Section 14. Termination for Convenience, d. Compensation section, whichever is greater.</p> <p>Any such termination liability charge shall be due and payable in one lump sum within thirty (30) days of billing.</p> <p>If Customer terminates an order subsequent to the execution of this Agreement by the Parties but prior to the in-service date, Customer shall pay to Hawaiian Telcom all costs incurred by Hawaiian Telcom for order and service preparation.</p>									

Rates are provided on a "Where Facilities Exist Basis," subject to availability, on the day an order is placed.
The customer is responsible for providing all space, power and environmental controlled requirements for the equipment at the customer location(s).
The customer is responsible for providing all support structures within the Customer Premises.
Bandwidth upgrades and/or changes to access are subject to availability and may require Special Construction charges and/or a change to the hand-off interface. - For example: A bandwidth upgrade from 100 Mbps delivered over FastEthernet to 250 Mbps will require a GigE hand-off.
Pricing does not include applicable taxes and surcharges.
Hawaiian Telcom reserves the right to offer the State any future eligible promotions/discounts that would be advantageous to the State. All Hawaiian Telcom terms and conditions of the promotion/discounts will apply.

Technology Category	1 Year Agreement			3 Year Agreement			5 Year Agreement		
	List Price	Discount (%)	Total Price)	List Price	Discount (%)	Total Price)	List Price	Discount (%)	Total Price)
ISDN-Primary Rate Interface (PRI) and Direct Inward Dialing (DID) Service									
Monthly Recurring Charge (MRC-Promotional):									
ISDN PRI Service (per system)									
ISDN PRI Service	\$375.00	0%	\$375.00	\$285.00	0%	\$285.00	\$285.00	0%	\$285.00
Caller ID with Name	\$0.00	0%	\$0.00	\$0.00	0%	\$0.00	\$0.00	0%	\$0.00
Interstate Access Port Charge	\$10.00	0%	\$10.00	\$10.00	0%	\$10.00	\$10.00	0%	\$10.00
Interstate Access Line Charge	\$40.75	0%	\$40.75	\$40.75	0%	\$40.75	\$40.75	0%	\$40.75
Direct Inward Dial Service									
DID Service, per number	\$0.10	0%	\$0.10	\$0.10	0%	\$0.10	\$0.10	0%	\$0.10
ISDN PRI Long Distance Plan (per system)									
Hawaiian Telcom Business 3K Long Distance Call Plan	\$115.00	0%	\$115.00	\$105.00	0%	\$105.00	\$95.00	0%	\$95.00
Hawaiian Telcom Business 5K Long Distance Call Plan	\$120.00	0%	\$120.00	\$115.00	0%	\$115.00	\$110.00	0%	\$110.00
Rate Per Minute for Usage in Excess of Alloted Minutes	\$0.04	0%	\$0.04	\$0.04	0%	\$0.04	\$0.04	0%	\$0.04
Non-Recurring Charges (NRC-Promotional):									
One time installation	\$0.00			\$0.00			\$0.00		
Change Charge (per system)	\$200.00			\$200.00			\$200.00		
SIP with PRI Interface			* ICB			* ICB			* ICB
SIP with Native Interface			* ICB			* ICB			* ICB
<p>If Customer cancels this Agreement in whole or in part or terminates this Service at any time during the Service Period, Customer shall either pay to Hawaiian Telcom a termination charge equal to twenty-five percent (25%) of the applicable monthly rate for the terminated Service multiplied by the number of months remaining in the unexpired portion of the Service Period, or the amount negotiated per the State of Hawaii's General Terms & Conditions, Section 14. Termination for Convenience, d. Compensation section, whichever is greater.</p> <p>Any such termination liability charge shall be due and payable in one lump sum within thirty (30) days of billing.</p> <p>If Customer terminates this order subsequent to the execution of this Agreement by the Parties but prior to the in-service date, Customer shall pay to Hawaiian Telcom all costs incurred by Hawaiian Telcom for contract and service preparation.</p>									
<p>Rates are provided on a "Where Facilities Exist Basis," subject to availability, on the day an order is placed.</p> <p>The customer is responsible for providing all space, power and environmental controlled requirements for the equipment at the customer location(s).</p> <p>The customer is responsible for providing all support structures within the Customer Premises.</p> <p>Bandwidth upgrades and/or changes to access are subject to availability and may require Special Construction charges and/or a change to the hand-off interface.</p> <p>- For example: A bandwidth upgrade from 100 Mbps delivered over FastEthernet to 250 Mbps will require a GigE hand-off.</p> <p>Pricing does not include applicable taxes and surcharges.</p>									
<p>Hawaiian Telcom reserves the right to offer the State any future eligible promotions/discounts that would be advantageous to the State. All Hawaiian Telcom terms and conditions of the promotion/discounts will apply.</p>									
<p>* ICB or Individual Case Basis - customized pricing.</p>									

Feature: BGP Routing									
Non-Recurring Charge (NRC)									
-Establish BGP Routing									
BGP Setup Charge	500.00	0%	500.00	500.00	0%	500.00	500.00	0%	500.00
BGP Modification Charge	500.00	0%	500.00	500.00	0%	500.00	500.00	0%	500.00
Non-Recurring Charge (NRC)									
- Applies to any additions or modifications									
Upgrade Bandwidth on Circuit	75.00	100%	-	75.00	100%	-	75.00	100%	-
Downgrade Bandwidth on Circuit	500.00	0%	500.00	500.00	0%	500.00	500.00	0%	500.00
Add/Change Feature (Major)	250.00	0%	250.00	250.00	0%	250.00	250.00	0%	250.00
Add/Change Feature (Minor)	75.00	0%	75.00	75.00	0%	75.00	75.00	0%	75.00

Termination Liability for 3-Year and 5-Year terms:

If customer cancels an order in whole or in part or terminates this Service at any time during the Service Period, Customer shall either pay to Hawaiian Telcom a termination charge equal to twenty-five percent (25%) of the applicable monthly rate for the terminated Service multiplied by the number of months remaining in the unexpired portion of the Service Period, or the amount negotiated per the State of Hawaii's General Terms & Conditions, Section 14. Termination for Convenience, d. Compensation section, whichever is greater.

Any such termination liability charge shall be due and payable in one lump sum within thirty (30) days of billing.

If customer terminates an order subsequent to the execution of this Agreement by the Parties but prior to the in-service date, Customer shall pay to Hawaiian Telcom all costs incurred by Hawaiian Telcom for order and service preparation.

Rates are provided on a "Where Facilities Exist Basis," subject to availability, on the day an order is placed. "Existing facilities" means a Service that is provisioned entirely on Hawaiian Telcom's existing network facilities. Any "special construction" required to provision Service to a particular location will be priced separately on an individual case basis and assessed to the Customer on a one-time non-recurring or monthly recurring basis.

The customer is responsible for providing all space, power and environmental controlled requirements for the equipment at the customer location(s).

The customer is responsible for providing all support structures within the Customer Premises.

Bandwidth upgrades and/or changes to access are subject to availability and may require Special Construction charges and/or a change to the hand-off interface.

For example: A bandwidth upgrade from 100 Mbps delivered over FastEthernet to 250 Mbps will require a GigE hand off.

Pricing does not include applicable taxes and surcharges.

Hawaiian Telcom may offer the State any future eligible promotions/discounts that would be advantageous to the State. All Hawaiian Telcom terms and conditions of the promotion/discounts will apply.

Technology Category	1 YEAR AGREEMENT			3 YEAR AGREEMENT			5 YEAR AGREEMENT		
	List Price	Discount (%)	Total Price	List Price	Discount (%)	Total Price	List Price	Discount (%)	Total Price
Point-to-Point Dedicated Line									
Monthly Recurring Charge (MRC-Tariff)									
OC-3									
Point-to-Point Fiber Optic-CDL Connect OC-3 (per termination)	\$1,850.00	0%	\$1,850.00	\$1,850.00	0%	\$1,850.00	\$1,650.00	0%	\$1,650.00
Point-to-Point Fiber Optic Transport - 155 Mbps (On Island)(per circuit)	\$2,410.00	0%	\$2,410.00	\$2,410.00	0%	\$2,410.00	\$2,200.00	0%	\$2,200.00
Non-Recurring Charges (NRC-Tariff)									
- One time installation/change charges									
Service Order Charge	\$65.98	0%	\$65.98	\$65.98	0%	\$65.98	\$65.98	0%	\$65.98
Activations - Additional, Each	\$120.00	0%	\$120.00	\$120.00	0%	\$120.00	\$120.00	0%	\$120.00
Termination Liability for 3-Year and 5-Year terms:									
If Customer cancels an order in whole or in part or terminates this Service at any time during the Service Period, Customer shall either pay to Hawaiian Telcom a termination charge equal to twenty-five percent (25%) of the applicable monthly rate for the terminated Service multiplied by the number of months remaining in the unexpired portion of the Service Period, or the amount negotiated per the State of Hawaii's General Terms & Conditions, Section 14. Termination for Convenience, d. Compensation section, whichever is greater.									
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Pricing does not include applicable taxes and surcharges.									
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Hawaiian Telcom Wireless Voice Airtime Charges				
Shared Minutes	MRC	MRC Charge Per User Line	2 Year Discount to Apply	3 Year Discount to Apply
5000	\$ 200.00	\$ 10	15%	18%
10000	\$ 350.00	\$ 10	15%	18%
12500	\$ 425.00	\$ 10	15%	18%
15000	\$ 500.00	\$ 10	15%	18%
20000	\$ 650.00	\$ 10	15%	18%
25000	\$ 800.00	\$ 10	15%	18%
30000	\$ 950.00	\$ 10	15%	18%
40000	\$ 1,250.00	\$ 10	15%	18%
50000	\$ 1,550.00	\$ 10	15%	18%
55000	\$ 1,700.00	\$ 10	15%	18%
60000	\$ 1,850.00	\$ 10	15%	18%
65000	\$ 2,000.00	\$ 10	15%	18%
70000	\$ 2,150.00	\$ 10	15%	18%
75000	\$ 2,300.00	\$ 10	15%	18%
80000	\$ 2,450.00	\$ 10	15%	18%
85000	\$ 2,600.00	\$ 10	15%	18%
90000	\$ 2,750.00	\$ 10	15%	18%
95000	\$ 2,900.00	\$ 10	15%	18%
100000	\$ 3,050.00	\$ 10	15%	18%

Smartphone Data				
Per GB	MRC	Extra GB	2 Year Discount	3 Year Discount
2	\$ 29.99	\$ 15.00	15%	18%
5	\$ 59.99	\$ 15.00	15%	18%
HotSpot and Aircard Data				
Per GB	MRC	Extra GB	2 Year Discount	3 Year Discount
2	\$ 39.99	\$ 15.00	15%	18%
5	\$ 74.99	\$ 15.00	15%	18%
Text Messaging				
Per Text	MRC	Additional text	2 Year Discount	3 Year Discount
Unlimited	\$ 14.99	N/A	30%	40%
Activation Fee				
Per Line	MRC		2 Year Discount	3 Year Discount
\$ 35.00	\$ 35.00		Waived	Waived

Business Voice Plans includes voicemail, caller ID, call waiting, 3-way calling and domestic long distance (airtime applies).
 Overage charged at \$.45 per minute. Rates do not include off-network roaming. Off-network roaming charged at \$.49 per minute.
 Number of users does not include users on other rate plan types (i.e. Business Flat Rate Plans or Anytime Minute Rate plans).
 Shared minute rate plans can only be combined across individual cost center, department or office groups, whichever is least in size.
 Discounts are based on 2 or 3 year Hawaiian Telcom Service Subscriber Agreements only.
 Voice airtime rates include "Unlimited" In-Account and Mobile to Mobile calls.

Wireless Device Pricing			
Device Type	Retail Price with No Service Agreement	2 Year Service Subscriber Agreement Price	3 Year Service Subscriber Agreement Price
Premium Smartphone	\$ 550.00	\$ 150.00	\$ 50.00
Smartphone	\$ 375.00	\$ 50.00	Free
Blackberry	\$ 375.00	\$ 50.00	Free
Feature phone	\$ 150.00	Free	Free
Basic phone	\$ 50.00	Free	Free
Hotspots and AirCards	\$ 170.00	\$ 30.00	Free

Prices are per Device and require 2 or 3 year Hawaiian Telcom Service Subscriber Agreement. Smartphones, hotspots/aircards and blackberry devices require subscription to the corresponding monthly data rate plans. Pricing discounts are based on retail values up to the amount listed per phone type. Devices with a retail price over \$550 will be quoted on an individual basis. 2 or 3 year contract pricing requires the execution of a Hawaiian Telcom Service Subscriber Agreement. An Early termination fee of \$200 applies. Availability and selection of devices will vary over time.

SCHEDULE B – MANAGED SERVICES

Provide the hourly rate for Managed Services.

The State understands that there is 24x7 monitoring with managed services. The hourly rate is for the actual amount of time each month spent analyzing/responding/dealing with the actual services/devices for the customer.

For example: Based on an analysis of customer devices and services required, 5 hours per month of monitoring per month will be needed. The quoted rate is \$100 per hour, thus the monthly rate is \$500.

If an hourly rate is not appropriate, describe in the space provided below how Managed Services are charged.

Hawaiian Telcom’s Managed Services Team offers a broad portfolio of Managed Services offerings that ensure a high degree of availability, security, and stability for our customers’ broadband networks:

Standard Solutions

Network Connectivity Management

This service is offered to support our customers’ IP networks to include EIPDS, RNS, DIA, Frame Relay and Point-to-Point circuits. The service utilizes ICMP and SNMP monitoring of WAN termination devices to detect circuit trouble. It includes 24x7 remote monitoring from the Hawaiian Telcom Network Operations Center, notifications to a predefined list of customer escalation contacts, proactive response to circuit outages, and a web-portal view of WAN circuit utilization and availability data. For private networks, we utilize an out-of-band management DSL connection (included with the service) to provide connectivity to our management servers.

Service Description	Set Up Fee Non-Recurring			1 Year Agreement Monthly Recurring			3 Year Agreement Monthly Recurring			5 Year Agreement Monthly Recurring		
	List Price	Discount (%)	Total Price	List Price	Discount (%)	Total Price	List Price	Discount (%)	Total Price	List Price	Discount (%)	Total Price
Connectivity Management <i>(Per Circuit)</i>	\$50	100%	WAIVED	\$50	0%	\$50	\$50	5%	\$47.50	\$50	10%	\$45

Note: The following termination liability charges apply to all Managed Services offerings, per the requirements of this RFP.

- 1 Year Agreements: 0% of Remaining Contract Charges
- 3/5 Year Agreements: 25% of Remaining Contract Charges
-

Note: Pricing shown does not include charges for the Hawaii State General Excise Tax and applicable County Surcharge Taxes which will be added to the prices shown at a rate of 4.712% on Oahu and 4.166% on Neighbor Islands.

Managed Network and Cyber Security Services

Hawaiian Telcom offers three tiers of managed network and security solutions for the customer's current or newly purchased hardware (CPE-Based Solution). In addition, Hawaiian Telcom offers the Multi-Threat Security Bundle which provides a fully packaged solution where hardware is provided along with managed services at one monthly charge (Service-Based Solution).

Customer Owned Equipment (CPE) Based Solution

With Device Availability and Performance Monitoring (BASIC), connectivity is established to the customer's CPE to allow Hawaiian Telcom's 24x7 Network Operations Center to monitor its availability and performance round-the-clock. If critical or high issues are detected, Hawaiian Telcom's 24x7 Network Operations Center analysts will notify the customer and assist with troubleshooting.

The next tier, Device Configuration Management (STANDARD) adds full configuration management of the devices to relieve the customer of the day-to-day maintenance of network and cyber security devices. With STANDARD service, Hawaiian Telcom's analysts perform assessments of the customer's device configuration to determine optimal performance and security, implement configuration changes upon request to meet business needs, backup and disaster recovery and execute the software patching and upgrades as necessary.

The final tier, Cyber Security Monitoring and Management (PREMIUM), adds proactive analysis and correlation of the logs from network devices (i.e. routers, switches) and security alerts/events from security devices (i.e. IPS, Firewall, Unified Threat Management Devices, Web Content Filtering) to detect and respond to cyber security attacks against the customer's network. With PREMIUM service, Hawaiian Telcom's cyber security analysts operate 24x7 and will issue Cyber Security Incident Reports to the customer (by email and voice communications) when significant threats are detected. See the short descriptions below for more information on these three tiers.

SERVICE LEVEL	SHORT DESCRIPTION
<p style="text-align: center;">BASIC</p> <p>Device Availability and Performance Monitoring</p>	<ul style="list-style-type: none"> • 24x7 ICMP and SNMP Monitoring by Hawaiian Telcom’s NOC <ul style="list-style-type: none"> ○ ICMP Monitoring (Availability, Ping Loss) ○ SNMP Monitoring (Power Supply, Fan, Heat, Bandwidth Utilization, Memory Utilization, CPU Utilization, WAN Interface Status) • Out-of-Band Monitoring, optional for additional security • 24x7 Notifications of Out-of-Service or Critical Performance Conditions • 24x7 Email and Phone Notifications • Immediate Troubleshooting of Hawaiian Telcom Circuits • Customer Portal
<p style="text-align: center;">STANDARD</p> <p>Device Configuration Management</p>	<ul style="list-style-type: none"> • Includes BASIC features • On-Boarding Assessment of Devices • Backup and Disaster Recovery <ul style="list-style-type: none"> ○ Weekly and “On-Change” Backups of Configuration Files ○ 24x7 Support to Restore Configuration Files to Restore Services • Software Patches and Upgrades; Hardware Maintenance <ul style="list-style-type: none"> ○ Applications of Critical Patches as Necessary ○ Upgrades of Firmware and Software Quarterly or Per Customer Maintenance Schedule ○ 24x7 Support for Open, Follow-Up and Close Tickets with Vendors to Resolve issues ○ Support to Replace Covered Hardware and Components • Hawaiian Telcom executes Configuration Management and Policy Changes • Cyber Security Devices (Firewalls, IPS, Unified Threat Management) <ul style="list-style-type: none"> ○ Monitor Device to Validate Vendor Signatures are Up-to-Date and Apply the Latest Signatures ○ Monitor and Configure Device to Ensure Default Vendor Signatures are Active and Operating
<p style="text-align: center;">PREMIUM</p> <p>Cyber Security Monitoring and Management</p>	<ul style="list-style-type: none"> • Includes BASIC and STANDARD features. • 24x7 Monitoring and Analysis of Device Security logs and alerts. • Out-of-Band connection is standard (MAHSI) • Correlated Alerts Analyzed to determine whether to rate HIGH, MEDIUM, LOW or FALSE POSITIVE • 24x7 Notification by Phone and Email of HIGH Alerts • Log Collector provided at no charge and installed at Customer's premises • Annual Review, Consultation and Report on Recommended Network and Security Design to Address Best Practices and Latest Security Threats • Customer Portal to View Alerts and Reports • Weekly Emailed Reports

With respect to pricing, Hawaiian Telcom charges a monthly recurring charge (MRC). The amount of the MRC is dependent upon the “LEVEL” of the device as assigned by Hawaiian Telcom. The Level is assigned based on the bandwidth and number of ports to be supported by the

device, complexity of the configuration, expected security log events per second (EPS) and general expertise required to manage and maintain the device.

PRICING					
DISCOUNT LEVELS		N/A	5%	10%	15%
Service Level	Set Up Fee	List Price	1 Year	3 Years	5 Years
BASIC					
Level B1	WAIVED	\$59.00	\$56.05	\$53.10	\$50.15
Level B2	WAIVED	\$82.00	\$77.90	\$73.80	\$69.70
Level B3	WAIVED	\$114.00	\$108.30	\$102.60	\$96.90
Level B4	WAIVED	\$158.00	\$150.10	\$142.20	\$134.30
STANDARD					
Level S1	WAIVED	\$99.00	\$94.05	\$89.10	\$84.15
Level S2	WAIVED	\$158.00	\$150.10	\$142.20	\$134.30
Level S3	WAIVED	\$236.00	\$224.20	\$212.40	\$200.60
Level S4	WAIVED	\$354.00	\$336.30	\$318.60	\$300.90
Level S5	WAIVED	\$530.00	\$503.50	\$477.00	\$450.50
PREMIUM					
Level P1	WAIVED	\$129.00	\$122.55	\$116.10	\$109.65
Level P2	WAIVED	\$180.00	\$171.00	\$162.00	\$153.00
Level P3	WAIVED	\$288.00	\$273.60	\$259.20	\$244.80
Level P4	WAIVED	\$460.00	\$437.00	\$414.00	\$391.00
Level P5	WAIVED	\$736.00	\$699.20	\$662.40	\$625.60
Level P6	WAIVED	\$1,176.00	\$1,117.20	\$1,058.40	\$999.60

Note: The following termination liability charges apply to all Managed Services offerings, per the requirements of this RFP.

- 1 Year Agreements: 0% of Remaining Contract Charges
- 3/5 Year Agreements: 25% of Remaining Contract Charges
-

Note: Pricing shown does not include charges for the Hawaii State General Excise Tax and applicable County Surcharge Taxes which will be added to the prices shown at a rate of 4.712% on Oahu and 4.166% on Neighbor Islands.

Device Type	Small	Medium	Large	X-Large
Network Devices: Routers, L2 Switches, L3 Switches	B1/S1/P1	B2/S1/P1	B3/S2/P2	B4/S3/P3
Stand-Alone Security Point Solutions: Firewall/VPN, Intrusion Prevention, Content Filter, Security Routers	B1/S1/P2	B2/S2/P3	B3/S3/P4	B4/S4/P5
Multi-Threat Security Solutions: Combined Firewall/IPS, Unified Threat Management, Next Generation Firewall	B1/S2/P3	B2/S3/P4	B3/S4/P5	B4/S5/P6

Examples: The following examples are general guidelines and actual price will depend on an evaluation of network size, configuration complexity, and features that are being leveraged. This list is not all-inclusive of our supported devices.

Size	Network Devices	Stand-Alone Security Point Solutions	Multi-Threat Security Solutions
Small	Cisco 800/1900 Series Routers, Layer 2 Switches Up to 28 Ports, Layer 3 Switches Up to 20 Ports	Cisco ASA 5505, Cisco SR520/800 Series Security Routers, Deployed on Networks < 50 Users	Cisco ASA5505 w/IPS, Fortinet 60C/80C, Deployed on Networks < 50 Users
Medium	Cisco 2900/3900 Series Routers, Layer 2/3 Switches Up to 50 Ports	Cisco ASA 5510, Cisco IPS 4240, Cisco 1900/2900/3900 Security Router, Deployed on Networks <200 Users	Cisco ASA 5510 w/IPS, Fortinet 100/200/300 Series, Deployed on Networks <250 Users
Large	ASR1001/1002/1004, Cisco 6503/6504 Cisco 4503 3750 Stack up to 3 Switches	Cisco ASA 5520/5540, Cisco IPS 4255/4345, Cisco 6503/6504 w/FWSM or IPS Module, Deployed on Networks < 800 Users	Fortinet 600/1200 Series, Deployed on Networks < 750 Users
X-Large	Cisco ASR 1006/1013, Cisco 6506/6509/6513, Cisco 4506/4507/4510, 3750 Stack > 3 Switches	Cisco ASA 5580/5585X, Cisco IPS 4260/4270/4360, Cisco 6506/6509/6513 w/FWSM or IPS Module, Deployed on Large Networks	Cisco ASA 5580/5585X w/IPS, Fortinet 1200/3400, 6506/6509/6513 w/Multiple Security Modules, Deployed on Large Networks

Notes: The “Out-of-Band Connection” known as a Management Access High Speed Interconnect (MAHSI) requires one Layer 3 Ethernet interface capable of performing Network Address Translation (NAT) in order to connect this line. Additionally, in order to deliver the services described above, Hawaiian Telcom will need SNMPv2/3, SDEE, SSH, and other credentials as applicable for each of the devices to be managed. Additionally, routing must be configured to direct management traffic through the MAHSI line. To support the Premium service, Hawaiian Telcom will install a 1RU server with a log collection application that receives logs from monitored devices and forwards them to the Hawaiian Telcom Managed Security Services back-end platform. Customer must provide space, 120/240VAC power, and appropriate environmental conditions for a server. Additionally, this server must be placed on an isolated VLAN separated by firewall or ACL.

Managed Network and Cyber Security Services

Service-Based Solutions

Multi-Threat Security Bundle (MTSB)

In addition to our standard portfolio of Managed Security Services, Hawaiian Telcom offers a bundled offering for networks with up to 100 users. This is a cost-effective solution for small departments to implement strong and multi-disciplinary defenses against multiple cyber security threats. This offering, our Multi-Threat Security Bundle (MTSB), includes a Unified Threat Management (UTM) device, Managed Security Service, installation, and on-site repair service. MTSB is offered in two packages, BASIC and PREMIUM with the following features.

BASIC	PREMIUM
Firewall Intrusion Protection (looks deeper into network traffic) Web Content and URL Filtering Anti-Malware Application Control	Firewall Intrusion Protection (looks deeper into network traffic) Web Content and URL Filtering Anti-Malware Application Control Data Loss Prevention VPN 24x7 Security Monitoring and Support

Term	MTM	1 Year	2 Years	3 Years	5 Years
Months Free	None	1 Month	1 Month	3 Months	3 Months
Discount	None	None	5%	10%	15%
MTSB Basic 10 MRC	\$ 99.99	\$ 99.99	\$ 94.99	\$ 89.99	\$ 84.99
MTSB Basic 25 MRC	\$ 149.99	\$ 149.99	\$ 142.49	\$ 134.99	\$ 127.49
MTSB Basic 100 MRC	\$ 299.99	\$ 299.99	\$ 284.99	\$ 269.99	\$ 254.99
MTSB Premium 10 MRC	\$ 249.99	\$ 249.99	\$ 237.49	\$ 224.99	\$ 212.49
MTSB Premium 25 MRC	\$ 319.99	\$ 319.99	\$ 303.99	\$ 287.99	\$ 271.99
MTSB Premium 100 MRC	\$ 569.99	\$ 569.99	\$ 541.49	\$ 512.99	\$ 484.49

Note: The following termination liability charges apply to all Managed Services offerings, per the requirements of this RFP.

- 1 Year Agreements: 0% of Remaining Contract Charges
- 3/5 Year Agreements: 25% of Remaining Contract Charges

Note: Pricing shown does not include charges for the Hawaii State General Excise Tax and applicable County Surcharge Taxes which will be added to the prices shown at a rate of 4.712% on Oahu and 4.166% on Neighbor Islands.

Custom Solutions

Professional Services

For customized services outside of the scope of our standard Managed Services offerings, Hawaiian Telcom offers the following categories of professional services:

Network

Assessment: Services include architecture/design, documentation, configuration, and network performance reviews to validate current network design against industry best practices, requirements for planned upgrades, network management best practices. The Professional Services team may utilize automated tools as needed to gather network performance data. The deliverable at the end of these engagements is a report of findings, risks, and recommendations. Scope is tailored to the needs and budget of the customer requesting the assessment and must be negotiated prior to the start of the engagement.

Engineering: Services include network engineering and network management tasks in support of network implementation, reconfigurations, and ongoing operations. Deliverables may include developing design documentation, preparing configuration templates, implementing network management systems, performance of ongoing network management services not covered by our standard Managed Services offerings, and related activities. Scope is tailored to the needs and budget of the customer requesting network engineering services and must be negotiated prior to the start of the engagement.

Incident Response: Services include urgent response to troubleshoot and isolate network outages and performance issues that are not part of the Hawaiian Telcom infrastructure. Scope is tailored to the needs and budget of the customer requesting the incident response services and must be negotiated prior to the start of the engagement. SLAs are provided for prepaid blocks of incident response hours.

- Basic: Includes an 8x5 Next Business Day Response SLA
- Premium: Includes 24x7 4 Hour Response SLA

Security

Assessment: Services include security architecture/design, documentation, and policy reviews as well as internal or external vulnerability testing and penetration testing to validate current network security posture against industry best practices, compliance requirements. The Professional Services team may utilize automated tools to identify security vulnerabilities as defined within the scope of the engagement. The deliverable at the end of these engagements is a report of findings, risks, and recommendations. Scope is tailored to the needs and budget of the customer requesting the assessment and must be negotiated prior to the start of the engagement.

Engineering: Services include security engineering and security management tasks in support of network security device implementation, reconfiguration, and ongoing operations. Deliverables may include developing design documentation, assisting in drafting security policies,

preparing configuration templates, implementing security solutions, performance of ongoing security management services not covered by our standard Managed Security Services offerings, and related activities. Scope is tailored to the needs and budget of the customer requesting security engineering services and must be negotiated prior to the start of the engagement.

Incident Response: Services include urgent response in the event of a security incident such as malware infection, data breach, or network attack. This may include forensic services such as analysis of log data or malware behavior, and threat containment, mitigation, and removal procedures. Services also include response to outages or performance issues that are isolated to the security components of the network to ensure that the issue is remediated in a way that maintains the security posture of the network. Scope is tailored to the needs and budget of the customer requesting the incident response services and must be negotiated prior to the start of the engagement. SLAs are provided for prepaid blocks of incident response hours.

- Basic: Includes an 8x5 Next Business Day Response SLA
- Premium: Includes 24x7 4 Hour Response SLA

Service Category	Hourly Rates
Assessment	\$150
Engineering	\$150
Incident Response – Basic	\$175
Incident Response – Premium	\$225

Note: Pricing shown does not include charges for the Hawaii State General Excise Tax and applicable County Surcharge Taxes which will be added to the prices shown at a rate of 4.712% on Oahu and 4.166% on Neighbor Islands.

SCHEDULE C – Hawaiian Telcom (BAFO) MINIMUM QUALIFICATIONS

Item No.	Qualifications – Section 2.2 describes minimum qualifications required for participation.	Comply, Does Not Comply, Exception	Explanation
2.2.1	Meets the Technical Support Requirements		
2.2.1.1	Offeror shall be provide toll free telephone support via a technical support center which is staffed 24 hours a day, 7 days a week, 365 days a year (24x7x365).	Comply	Hawaiian Telcom offers free telephone and online support, backed by a Network Operations Center (NOC) in downtown Honolulu that is staffed with certified engineers and technicians on a 24x7x365 basis.
2.2.1.2	Offeror shall initiate troubleshooting within 30 minutes of receiving a call and if necessary, deploy technicians onsite within two Business Hours of problem determination on Oahu and four Business Hours on the neighbor islands.	Comply	<p>Hawaiian Telcom trouble shooting begins with customer initiation of a trouble ticket. When a customer trouble call is first received, Hawaiian Telcom will work with the customer to identify their Hawaiian Telcom service and obtain facts about the trouble.</p> <p>Upon receipt of the trouble report, customer care advocates will immediately perform a series of front line troubleshooting to attempt a One Touch resolution. If unable to resolve, the trouble ticket routes to Hawaiian Telcom's network support to perform remote diagnostics. Remote diagnostics allows Hawaiian Telcom to perform</p>

			<p>trouble isolation before a Hawaiian Telcom technician is dispatched so that if necessary an appropriate technician can be dispatched with the appropriate tools. Using remote diagnostics, Hawaiian Telcom can often clear a trouble without dispatching a technician onsite. Especially for Hawaiian Telcom's IP services, on site dispatch may often be unnecessary because trouble isolation and repair may be accomplished within Hawaiian Telcom's NOC rather than at the customer's premise.</p> <p>Hawaiian Telcom will initiate troubleshooting within 30 minutes of receiving a call and if necessary, deploy technicians onsite as follows:</p> <p><u>Critical/Priority 1 trouble</u> (No connectivity, out of service resulting in critical impact to end users.): If necessary, Hawaiian Telcom will respond onsite within two business hours on Oahu and four business hours on the islands of Kauai, Maui and the Big Island outages. While Hawaiian Tel has a larger staff of technicians on Oahu, Maui, and Kauai, we have two (2) technicians stationed on Molokai and one (1) technician stationed on Lanai. For a Critical/Priority 1 trouble on Molokai or Lanai Hawaiian Telcom will commit to do the following 3 steps within four (4) hours:</p> <ol style="list-style-type: none">1. Hawaiian Telcom's NOC will work to isolate and remediate the trouble remotely;2. As necessary, on-island technicians will troubleshoot the issue; and3. If neither the NOC nor the on-island technicians can resolve the trouble, then Hawaiian Telcom will initiate
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			<p>travel arrangements for a technician to fly from Oahu or Maui to Molokai or Lanai to continue trouble resolution. As flights to Molokai and Lanai are limited, Hawaiian Telcom cannot commit to a specific time when the Oahu or Maui technician will arrive on Molokai or Lanai.</p> <p><u>Major/Priority 2 trouble</u> (Moderate to frequent packet loss, excessive errors on the circuit and latency issues. Service is available, but performance is degraded resulting in major impact to end users.): If necessary, Hawaiian Telcom will respond onsite within eight business hours on Oahu and eight business hours on the islands of Kauai, Maui and the Big Island outages. For the islands of Molokai and Lanai, Hawaiian Telcom will commit to doing steps 1, 2, and 3 noted under Critical/Priority 1 trouble above within 8 hours.</p> <p><u>Minor/Priority 3 trouble</u> (Low to intermittent packet loss, some errors on the circuit, moderate latency. Service is working, with occasional performance issues resulting in minor impact to end users.): If necessary, Hawaiian Telcom will respond onsite within twenty-four business hours on Oahu and twenty-four business hours on the island of Kauai, Maui and the Big Island outages. For the islands of Molokai and Lanai, Hawaiian Telcom will commit to doing steps 1, 2, and 3 noted under Critical/Priority 1 trouble above within 24 hours.</p> <p>Hawaiian Telcom's technician will provide the customer a final status update after the outage is resolved.</p>
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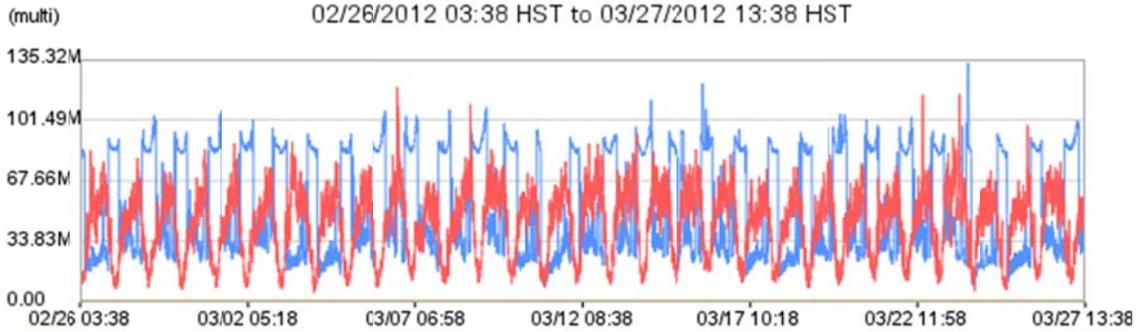
2.2.1.3	The Offeror must employ a minimum of five (5) support technicians residing in Hawaii and support all islands where service is offered.	Comply	Hawaiian Telcom's network team consists of over 240 field technicians. Behind our technicians, Hawaiian Telcom has the support of engineers and technical support staff across all Hawaiian Islands. The average years of experience of our technical and support staff is 10 plus years. The technical staff's experience dates back to the traditional TDM network to the next generation carrier grade Multi Protocol Label Switching (MPLS) network.
2.2.2	Meets the Reliability Requirements		
2.2.2.1	Offeror shall provide circuit reliability that meets or exceeds 99.99% availability over the past two years for each offered service.	Comply	Hawaiian Telcom offers an array of services with target availability of 99.99% and higher. Service levels are continuously monitored and studied utilizing enhanced management tools for internal end of month score card reporting at a platform level available for the past two years.
2.2.3	Provides Basic Required Services		
2.2.3.1	At a minimum, Offeror shall provide Broadband Ethernet to the islands of Oahu, Kauai, Maui, and the island of Hawaii Or Internet Service Provider (ISP) service to Oahu and at least one other island of at least 300Mbps.	Comply	Hawaiian Telcom offers broadband Ethernet services to all of Hawaii's major islands including Oahu, Maui, Kauai, the Island of Hawaii, Molokai and Lanai. Or Hawaiian Telcom offers ISP services for 300Mbps and up to 1,000 Mbps on Oahu or more on a custom basis.

2.2.3.2	All neighbor island services must be able to terminate on Oahu.	Comply	Hawaiian Telcom's network consists of over 62,000 miles of fiber and 2.6 million miles of copper infrastructure that spans the entire state of Hawaii. Both our legacy TDM network and our next generation data network can provide interconnection from all major Hawaiian Islands to Oahu.
2.2.4	Ownership of Network Infrastructure		
2.2.4.1	Offeror shall be directly responsible for the monitoring, management and maintenance of its telecommunication infrastructure and its associated network equipment. Offeror must have direct control of the management and maintenance of its network backbone infrastructure.	Comply	<p>Hawaiian Telcom manages, monitors and maintains our statewide network and associated network systems through advanced Element Management Systems (EMS) and proprietary processes and procedures to ensure seamless network integration and lifecycle support.</p> <p>Hawaiian Telcom owns and maintains an extensive network throughout the State of Hawaii including the associated cable plant and network electronics. All core components of this network including our MPLS core routers, MPLS access switches, frame relay equipment, DSL access devices, fiber optic transmission devices, and associated support equipment such as environmental controls and power subsystems are monitored 24x7x365 from our Enhanced Network Operations Center (eNOC) located in downtown Honolulu.</p>
2.2.5	Existing Installation in the State of Hawai'i		

2.2.5.1	Offeror shall be an experienced provider of the proposed telecommunication services with existing installations in the State of Hawaii.	Comply	<p>Hawaiian Telcom has been serving the people of Hawaii since 1883.</p> <p>Hawaiian Telcom is Hawaii's oldest and largest provider of telecommunications and data network services. Our existing installations support a wide range of commercial, residential, and government customers throughout the State of Hawaii.</p> <p>Hawaiian Telcom provides broadband layer 2 and layer 3 services, digital subscriber line, frame relay, point to point dedicated line, direct internet access, ISDN PRI, Business-All-in-One, and Managed Services to customers across the State of Hawaii. Our customer base encompasses the smallest businesses to the largest enterprise customers.</p>
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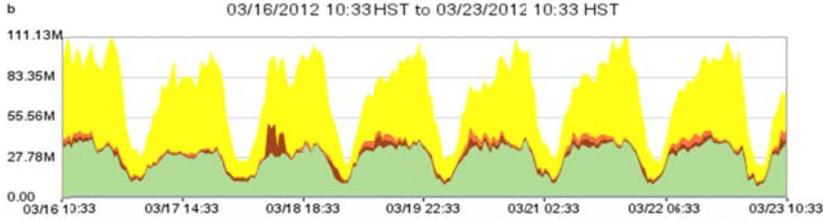
SAMPLE CAPACITY MANAGEMENT REPORT

Sample Link Utilization Report



Indicator	Freq	Last	Average	Peak	Total	Units
■ HNLL7750 - 1/1/14 - 1/1/14, 10/100/Gig Ethernet SFP, LAG 12 Link 3 CKT ID: [REDACTED] - HC In Octets	300s	40.39M	52.95M	135.32M	139.12T	b
■ HNLL7750 - 1/1/14 - 1/1/14, 10/100/Gig Ethernet SFP, LAG 12 Link 3 CKT ID: [REDACTED] - HC Out Octets	300s	44.14M	43.77M	121.36M	115.02T	b
■ HNLL7750 - 1/1/14 - 1/1/14, 10/100/Gig Ethernet SFP, LAG 12 Link 3 CKT ID: [REDACTED] In Discards	300s	0.00	0.00	0.00	0.00	Number
■ HNLL7750 - 1/1/14 - 1/1/14, 10/100/Gig Ethernet SFP, LAG 12 Link 3 CKT ID: [REDACTED] Out Discards	300s	0.00	0.00	0.00	0.00	Number

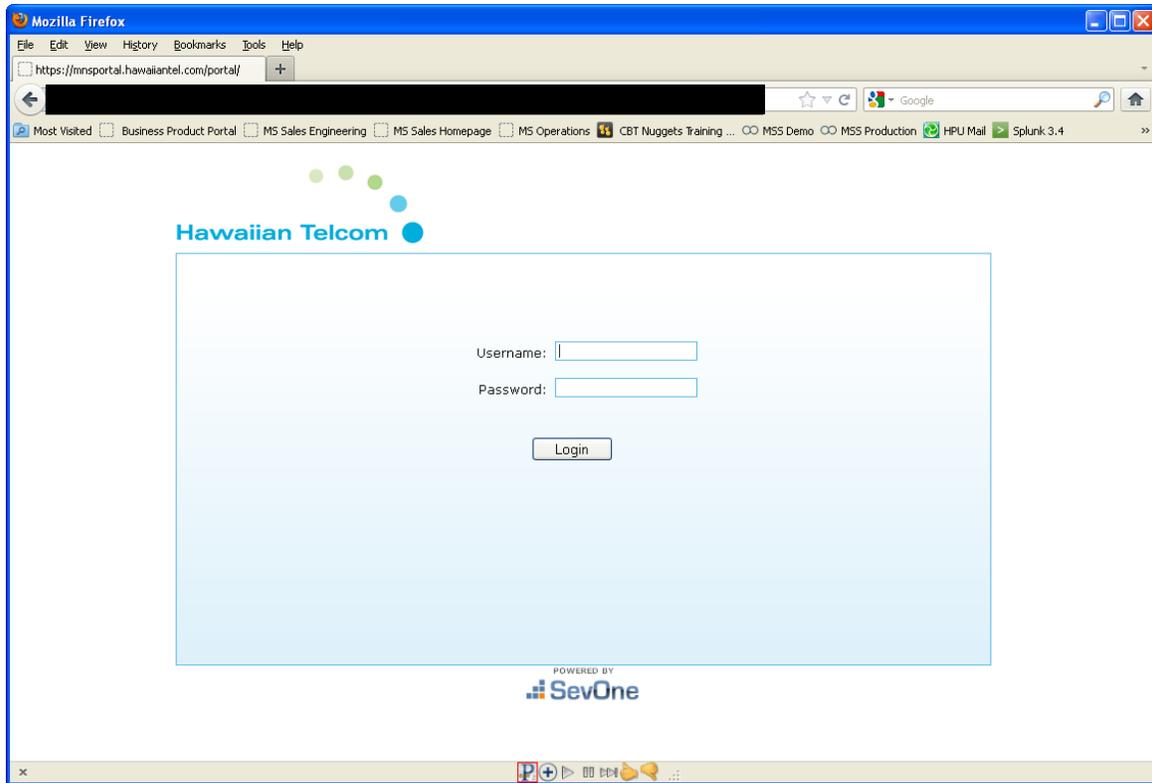
Sample Quality of Service (QoS) Profile Report



Indicator	Freq	Last	Average	Peak	Total	Units
HNLL7750 - Egress Network Queue 2/2/8 - Network Control - LAG 12 LINK 2 CKT ID [REDACTED] - Network Control - Network Egress Forward Octets In	300s	2.53K	2.69K	3.45K	1.63G	b
HNLL7750 - Egress Network Queue 2/2/8 - Network Control - LAG 12 LINK 2 CKT ID [REDACTED] - Network Control - Network Egress Forward Octets Out	300s	0.00	0.00	0.00	0.00	b
HNLL7750 - Egress Network Queue 2/2/8 - VoIP - LAG 12 LINK 2 CKT ID [REDACTED] - VoIP - Network Egress Forward Octets In	300s	37.55M	26.37M	39.94M	15.95T	b
HNLL7750 - Egress Network Queue 2/2/8 - VoIP - LAG 12 LINK 2 CKT ID [REDACTED] - VoIP - Network Egress Forward Octets Out	300s	0.00	0.00	0.00	0.00	b
HNLL7750 - Egress Network Queue 2/2/8 - VoD - LAG 12 LINK 2 CKT ID [REDACTED] - VoD - Network Egress Forward Octets In	300s	0.00	0.00	0.00	0.00	b
HNLL7750 - Egress Network Queue 2/2/8 - VoD - LAG 12 LINK 2 CKT ID [REDACTED] - VoD - Network Egress Forward Octets Out	300s	0.00	0.00	0.00	0.00	b
HNLL7750 - Egress Network Queue 2/2/8 - Unicast Broadcast TV - LAG 12 LINK 2 CKT ID [REDACTED] - Unicast Broadcast TV - Network Egress Forward Octets In	300s	749.51	759.50	765.54	459.32M	b
HNLL7750 - Egress Network Queue 2/2/8 - Unicast Broadcast TV - LAG 12 LINK 2 CKT ID [REDACTED] - Unicast Broadcast TV - Network Egress Forward Octets Out	300s	0.00	0.00	0.00	0.00	b
HNLL7750 - Egress Network Queue 2/2/8 - Business Intermediate - LAG 12 LINK 2 CKT ID [REDACTED] - Business Intermediate - Network Egress Forward Octets In	300s	0.84	0.73	1.08	444.15K	b
HNLL7750 - Egress Network Queue 2/2/8 - Business Intermediate - LAG 12 LINK 2 CKT ID [REDACTED] - Business Intermediate - Network Egress Forward Octets Out	300s	0.00	0.00	0.00	0.00	b
HNLL7750 - Egress Network Queue 2/2/8 - Business Bulk - LAG 12 LINK 2 CKT ID [REDACTED] - Business Bulk - Network Egress Forward Octets In	300s	969.33	876.81	1.12K	530.26M	b
HNLL7750 - Egress Network Queue 2/2/8 - Business Bulk - LAG 12 LINK 2 CKT ID [REDACTED] - Business Bulk - Network Egress Forward Octets Out	300s	0.00	0.00	0.00	0.00	b
HNLL7750 - Egress Network Queue 2/2/8 - Business BE - LAG 12 LINK 2 CKT ID [REDACTED] - Business BE - Network Egress Forward Octets In	300s	4.21M	2.50M	22.33M	1.51T	b
HNLL7750 - Egress Network Queue 2/2/8 - Business BE - LAG 12 LINK 2 CKT ID [REDACTED] - Business BE - Network Egress Forward Octets Out	300s	49.27K	52.92K	96.85K	32.01G	b
HNLL7750 - Egress Network Queue 2/2/8 - Internet BE - LAG 12 LINK 2 CKT ID [REDACTED] - Internet BE - Network Egress Forward Octets In	300s	5.56M	2.10M	6.80M	1.27T	b
HNLL7750 - Egress Network Queue 2/2/8 - Internet BE - LAG 12 LINK 2 CKT ID [REDACTED] - Internet BE - Network Egress Forward Octets Out	300s	28.50M	40.34M	76.64M	24.39T	b

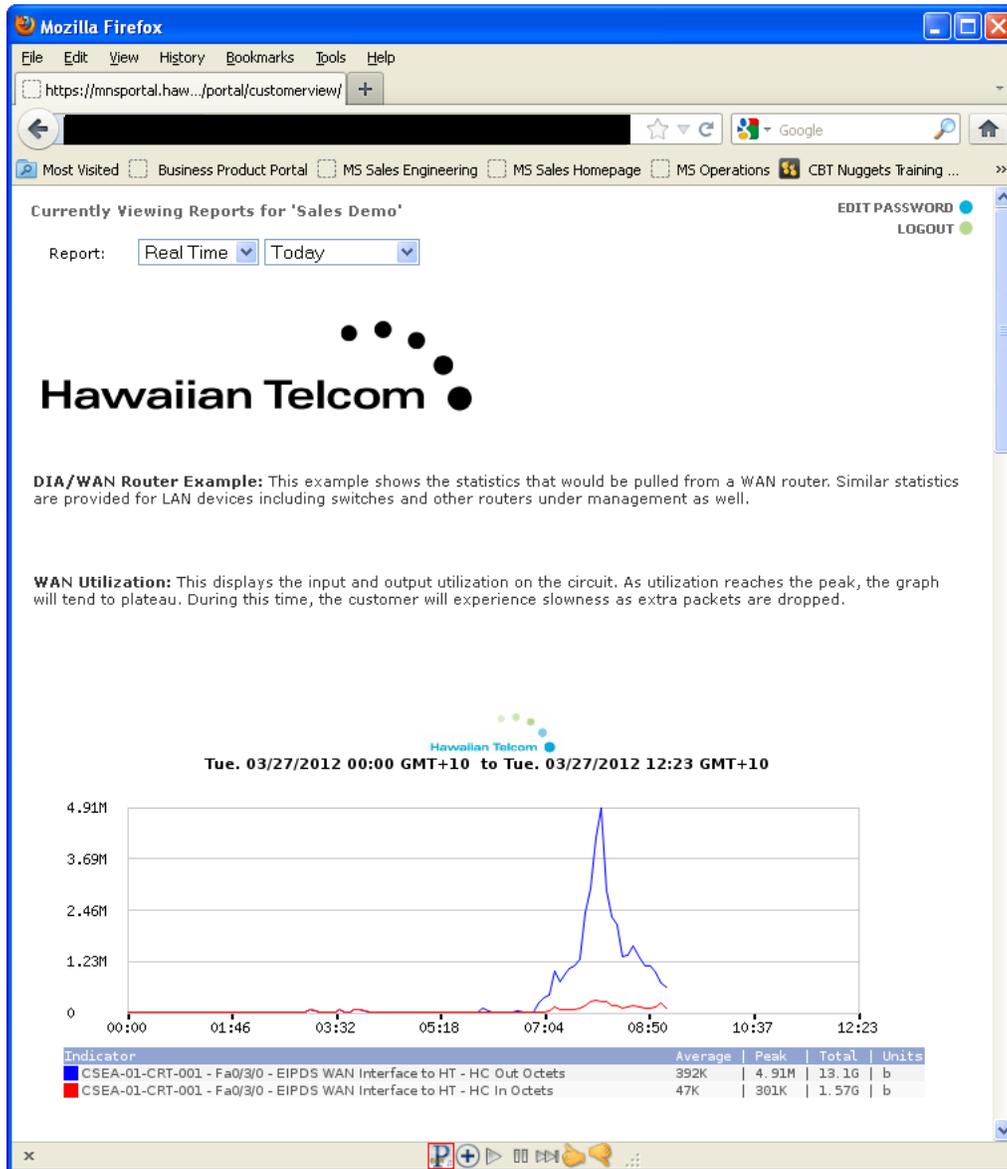
MNS - CUSTOMER PORTAL

Hawaiian Telcom Managed Network Services



Customer Portal

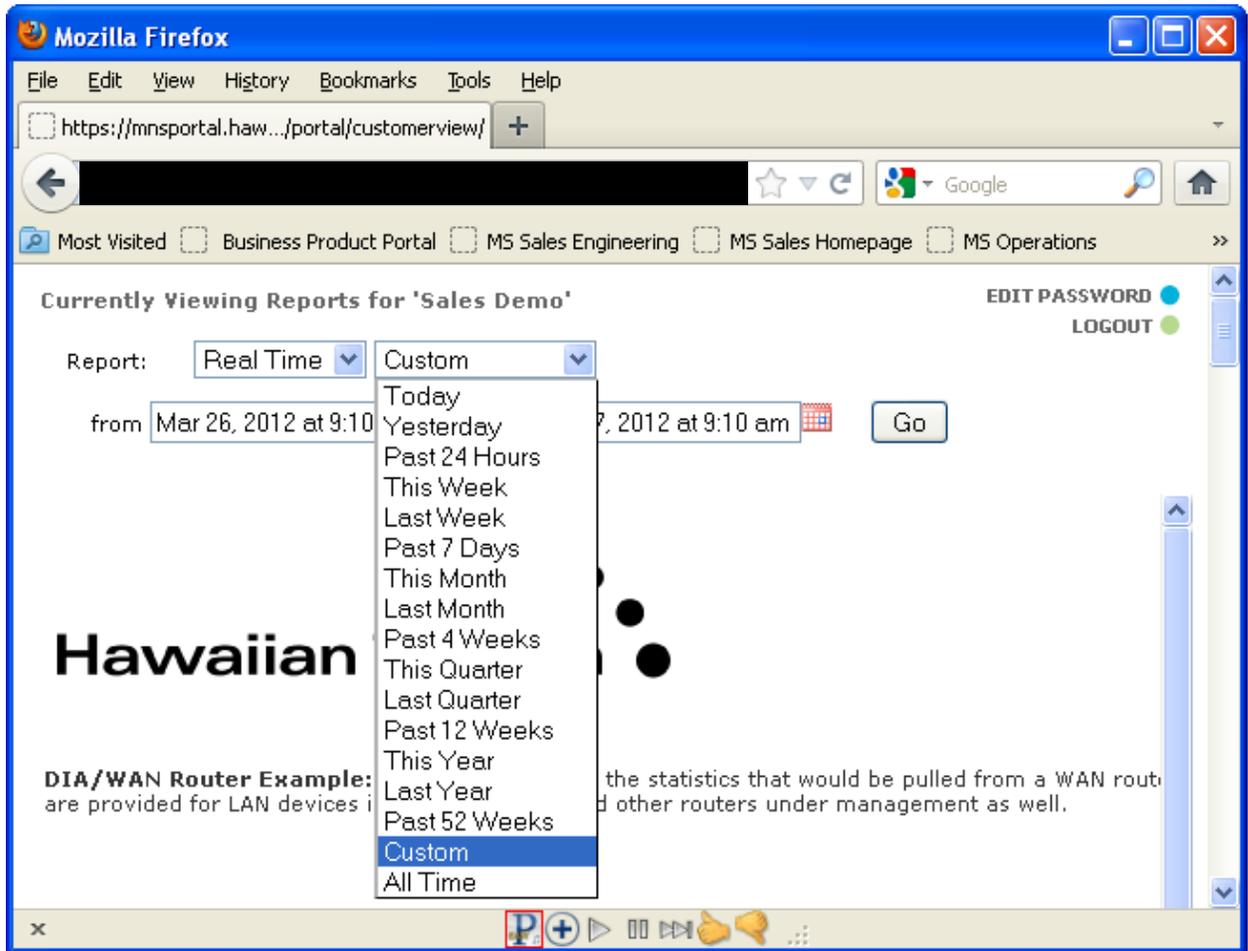
REAL TIME REPORTING



METRICS DEFINED BY SNMP CAPABILITIES AND MAY INCLUDE:

- WAN Circuit Utilization
- Availability
- CPU/Memory Utilization
- Circuit Errors
- More...

CUSTOMIZABLE REPORTING TIMEFRAME

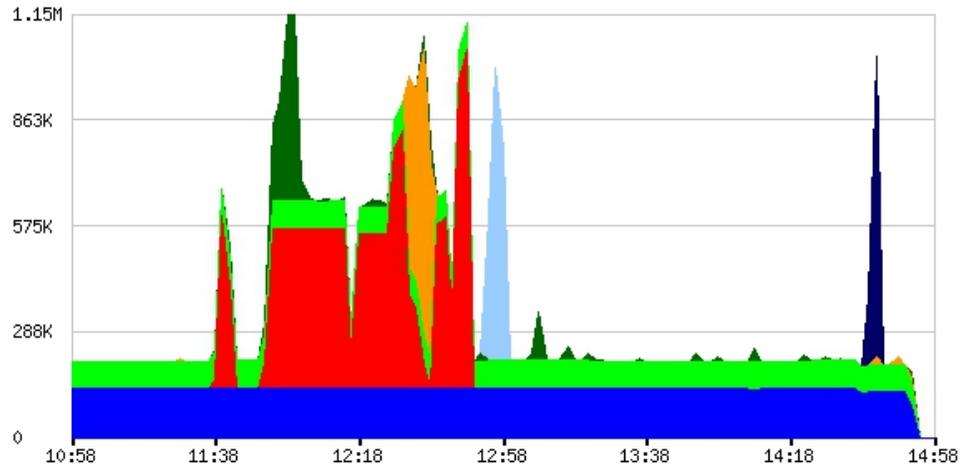
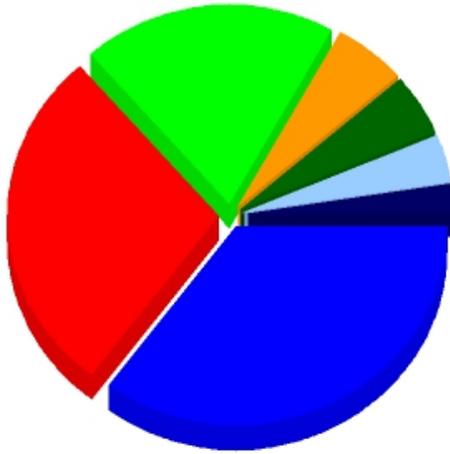


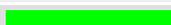
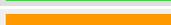
DATA RETAINED FOR A MINIMUM OF 12 MONTHS.

MNS – TROUBLESHOOTING NETFLOW REPORT

Top Talkers with Applications

Thu. 03/08/2012 10:58 HST to Thu. 03/08/2012 14:58 HST



	Source IP	Application Port	Bandwidth	Packets
	unknown.ord.scnet.net	http	1.87 Gb	212 K
	a173-223-52-26.deploy.akamaitechnologies.com	http	1.5 Gb	137 K
	a72-246-103-154.deploy.akamaitechnologies.com	macromedia-fcs	1.04 Gb	298 K
	72.21.81.253	http	290.32 Mb	26 K
	4.26.252.126	http	258.9 Mb	25 K
	173.194.26.114	http	211.03 Mb	18.89 K
	173.194.26.113	http	121.08 Mb	11.7 K
	Total Traffic		5.3 Gb	729 K

MSS – SAMPLE INCIDENT REPORT

David Morris

Subject: FW: <HIGH> - INITIAL CSIR - SQL Injection Attempt

Importance: High

From: Managed Services

Sent: Wednesday, August 31, 2011 11:53 PM

To: xxxxxxxx

Cc: xxxxxxxx; xxxxxxxx; xxxxxxxx

Subject: <HIGH> - INITIAL CSIR - SQL Injection Attempt

Importance: High

EMAIL SUBJECT: HIGH - INITIAL CSIR - SQL Injection Against

CYBER SECURITY INCIDENT REPORT (CSIR) - INITIAL

DATE: 31 AUG 2011

SHORT DESCRIPTION

At 10:27pm on 31 AUG 2011, the CISCO IPS (IP: 10.1.70.252, xxxx-xxxx-xxxx) generated several General SQL Injection alerts originating from a Russian registered IP at: 91.122.102.156 (ppp91-122-102-156<.>pppoe<.>avangarddsl<.>ru, which targeted the xxxxxxxx IP at: xx.xx.xx.xx. This xxxxx IP is identified as "xxxxxxx<.>xxxxxxx<.>com" with a public IP address of: xx.xxx.xx.xxx. The web application hosted at that address is xxxxxxxxxxxxxxxxxxxxxx.

THREAT ASSESSMENT

HIGH - This threat is rated high due to the fact that the target xxxxxxxx web application may host sensitive account and financial information of customers. In addition, the activity indicates some sophistication in its attack. Earlier in the day between 2:26am and 9:36pm, the same server was one of several servers scanned by four different IPs:

109.203.96.174
210.0.216.246
210.72.88.217
89.107.226.162
67.227.130.171

After the last scan, the SQL Injection attempts occurred. This server has been identified by the reconnaissance as a viable target and will likely be targeted again. The SQL Injection attempts that triggered the alerts were as follows:

èÛGET /BuyPath/Default.aspx?productCode=999999.9+union+all+select
uyPath/Default.aspx?productCode=MYCONNECT_0001_PRD+and%28select+1+from%28select+count%28*%29%2Cco
ncat%28%28select+%28select+concat%280x7e%2C0x27%2Cunhex%28Hex%28cast%28database%28%29+as+char%
29%29%29%2C0x27%2C0x7e%29%29+from+%60information_schema%60.table

Translated to:

MYCONNECT_0001_PRD and(select 1 from(select count(*),concat((select (select
concat(0x7e,0x27,unhex(Hex(cast(database() as char))),0x27,0x7e)) from `information_schema`.table

?½?GET

/BuyPath/Default.aspx?productCode=999999.9+union+all+select+0x31303235343830303536%2C0x3130323534383030
3536%2C0x313

Translated to:

?½?GET /BuyPath/Default.aspx?productCode=999999.9 union all select
0x31303235343830303536,0x31303235343830303536,0x313

??GET
/BuyPath/Default.aspx?productCode=999999.9%27+union+all+select+0x31303235343830303536%2C0x3130323534383
0303536

Translated to:

??GET /BuyPath/Default.aspx?productCode=999999.9' union all select
0x31303235343830303536,0x31303235343830303536

iÛGET
/BuyPath/Default.aspx?productCode=MYCONNECT_0001_PRD%3B+if+%281%3D1%29+waitfor+delay+%2700%3A

Translated to:

iÛGET /BuyPath/Default.aspx?productCode=MYCONNECT_0001_PRD; if (1=1) waitfor delay '00:

(Indicator of a Time-Based Bline SQL Injection attempt)

Lastly, the source of the SQL Injection activity was a Russian IP which is generally an anomalous IP to be accessing Hawaiian Telcom resources and whose root domain has been associated with malware based on open source research.

RECOMMENDED COURSE OF ACTION

Review the logs and source code of the Web Server and Web Application to ensure that the code for the website has not been changed. In addition, review the web server operating system and file system to ensure malware has not been installed and that all software is updated to the latest patches. Lastly, review the data in the database to ensure no corruption has occurred on the injection of malicious code. Some indicators include Javascript or Server-side executable code in a field that does not normally handle that data, defacement data, or any unauthorized data, IFRAME URLs, unauthorized images and anomolous executable code that could be rendered on the browser without the user's consent or knowledge.

In addition, implement IP blocks of the following IPs:

91.122.102.156
109.203.96.174
210.0.216.246
210.72.88.217
89.107.226.162
67.227.130.171

TECHNICAL DETAILS

See attached report.

ATTACK IPS

canonical name ppp91-122-102-156.pppoe.avangarddsl.ru.

aliases

addresses 91.122.102.156

Domain Whois record

Queried whois.ripn.net with "avangarddsl.ru"...

% By submitting a query to RIPN's Whois Service
% you agree to abide by the following terms of use:
% <http://www.ripn.net/about/servpol.html#3.2> (in Russian)
% <http://www.ripn.net/about/en/servpol.html#3.2> (in English).

domain: AVANGARDDSL.RU
nserver: ns.avangarddsl.ru. 212.48.193.41
nserver: ns.dslavangard.ru.
state: REGISTERED, DELEGATED, VERIFIED
org: Peterburgskij branch of OJSC "Rostelekom"
phone: +7 812 7199674
phone: +7 812 7199492
fax-no: +7 812 7199171
e-mail: dnsmaster@spbtlg.ru
e-mail: wold@spbtlg.ru
e-mail: dnsmaster@avangard-dsl.ru
registrar: RU-CENTER-REG-RIPN
created: 2005.12.22
paid-till: 2011.12.22
source: TCI

Last updated on 2011.09.01 13:00:46 MSK/MSD

Network Whois record

Queried whois.ripe.net with "-B 91.122.102.156"...

% Information related to '91.122.102.0 - 91.122.103.255'

inetnum: 91.122.102.0 - 91.122.103.255
netname: RU-AVANGARD-DSL
descr: "St.Petersburg Telephone Network"
descr: branch of the JSC "North-West Telecom" (St.Petersburg)
descr: 24,Bolshaya Morskaya str.191186 St-Petersburg,Russia
country: RU
admin-c: RCR3-RIPE
tech-c: RCR3-RIPE
status: ASSIGNED PA
mnt-by: AS8997-MNT
mnt-lower: AS8997-MNT
mnt-domains: AS8997-MNT
mnt-routes: AS8997-MNT
changed: ip-box@nic.ru 20070322
source: RIPE

role: ru.spbnit Contact role
address: OJSC North-West Telecom
address: 14/26 Gorokhovaya str. (26 Bolshaya Morskaya str.)
address: 191186, St.-Petersburg
address: Russia
phone: +7 812 595 45 56
e-mail: lir@dtd.ptn.ru

remarks: -----
admin-c: IS111-RIPE
admin-c: AS9061-RIPE
tech-c: IS111-RIPE
tech-c: MTSV-RIPE

```

tech-c:      AA728-RIPE
tech-c:      ES1680-RIPE
nic-hdl:     RCR3-RIPE
remarks:     -----
remarks:     Spam & Abuse:      abuse@ptn.ru
remarks:     General questions:  noc(at)dtd.ptn.ru
remarks:     Routing & peering:    peering(at)dtd.ptn.ru
remarks:     -----
abuse-mailbox: abuse@ptn.ru
mnt-by:      AS8997-MNT
source:      RIPE
changed:     lir@dtd.ptn.ru 20091220
changed:     lir@dtd.ptn.ru 20100125

```

% Information related to '91.122.0.0/16AS8997'

```

route:       91.122.0.0/16
descr:       OJSC "North-West Telecom"
origin:      AS8997
notify:      aiz@spbnet.ru
changed:     ip-box@nic.ru 20061003
mnt-by:      AS8997-MNT
source:      RIPE

```

% Information related to '91.122.0.0/17AS8997'

```

route:       91.122.0.0/17
descr:       OJSC "North-West Telecom"
origin:      AS8997
changed:     lir@dtd.ptn.ru 20100924
mnt-by:      AS8997-MNT
source:      RIPE

```

DNS records

name	class	type	data	time to live
ppp91-122-102-156.pppoe.avangarddsl.ru	IN	A	91.122.102.156	3600s (01:00:00)
avangarddsl.ru	IN	SOA	server: ns2.spbtlg.ru email: dnsmaster.telegraph.spb.ru serial: 2009092100 refresh: 28800 retry: 3600 expire: 604800 minimum ttl: 86400	3600s (01:00:00)
avangarddsl.ru	IN	NS	ns.spbnit.ru	3600s (01:00:00)
avangarddsl.ru	IN	NS	ns2.spbtlg.ru	3600s (01:00:00)
avangarddsl.ru	IN	NS	ns.dslavangard.ru	3600s (01:00:00)
avangarddsl.ru	IN	NS	ns.avangarddsl.ru	3600s (01:00:00)

```

avangarddsl.ru          IN      A      212.48.192.132          3600s (01:00:00)
avangarddsl.ru          IN      MX      preference:              10 3600s (01:00:00)
                        exchange:                mx.spbnit.ru
156.102.122.91.in-addr.arpa  IN      PTR     ppp91-122-102-          3600s (01:00:00)
                        156.pppoe.avangarddsl.ru

```

Traceroute

Tracing route to ppp91-122-102-156.pppoe.avangarddsl.ru [91.122.102.156]...

hop	rtt	rtt	rtt	ip address	fully qualified domain name
1	1	0	0	70.84.211.97	61.d3.5446.static.theplanet.com
2	0	0	0	70.87.254.1	po101.dsr01.dllstx5.networklayer.com
3	1	0	0	70.85.127.105	po51.dsr01.dllstx3.networklayer.com
4	0	0	0	70.87.255.33	e4-2.ibr04.dllstx3.networklayer.com
5	1	1	0	63.218.23.121	ge6-6.br02.dal01.pccwbtn.net
6	106	106	106	63.218.52.94	rostelecom.tenge12-3.br02.ldn01.pccwbtn.net
7	160	160	160	95.167.92.78	
8	162	162	177	188.254.44.10	
9	156	160	156	212.48.198.237	ae2.20g.t1600-1-mmt.nwtelecom.ru
10	*	*	*		
11	166	165	164	91.122.102.156	ppp91-122-102-156.pppoe.avangarddsl.ru

Trace complete

Service scan

```

FTP - 21      Error: TimedOut
SMTP - 25    Error: TimedOut
HTTP - 80    Error: TimedOut
POP3 - 110   Error: TimedOut
IMAP - 143   Error: TimedOut

```

-- end --

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TARGET IPS

Internal IP:

10.1.66.41

```
C:\Users\mike>nslookup 10.1.66.41
Server: xxxxxxxxxxxxxxxxxxx.com
Address: 10.1.67.34
Name: xxxxxxxxxxxxxxxxxxx.com
Address: 10.1.66.41
```

Public IP Address

canonical name xxxxxxxxxxxxxxxxxxx.com.

aliases

addresses xxxxxxxxxxxxxxxxxxx

Domain Whois record

Queried whois.internic.net with "dom xxxxxxxxxxx.com"...

```
Domain Name: xxxxxxxxxxxxxxxxxxx
Registrar: GODADDY.COM, INC.
Whois Server: whois.godaddy.com
Referral URL: http://registrar.godaddy.com
Name Server: NS1. xxxxxxxxxxxxxxxxxxx.COM
Name Server: NS2. xxxxxxxxxxxxxxxxxxx.COM
Name Server: NS3. xxxxxxxxxxxxxxxxxxx.COM
Status: clientDeleteProhibited
Status: clientRenewProhibited
Status: clientTransferProhibited
Status: clientUpdateProhibited
Updated Date: 19-apr-2011
Creation Date: 21-may-2004
Expiration Date: 15-may-2013
```

>>> Last update of whois database: Thu, 01 Sep 2011 08:41:28 UTC <<<

Queried whois.godaddy.com with " xxxxxxxxxxxxxxxxxxx.com"...

Registrant:

```
xxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxx
```

Registered through: GoDaddy.com, Inc. (<http://www.godaddy.com>)

```
Domain Name: xxxxxxxxxxxxxxxxxxx
Created on: 21-May-04
Expires on: 15-May-13
Last Updated on: 19-Apr-11
```

Administrative Contact:

```
xxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxx
United States
xxxxxxxxxxxxxxxxxxxxxxxx Fax --
```

Technical Contact:

```
xxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxx
United States
xxxxxxxxxxxxxxxxxxxxxxxx Fax --
```

Domain servers in listed order:

NS1.xxxxxxxxxxxxxx.COM
NS2.xxxxxxxxxxxxxx.COM
NS3.xxxxxxxxxxxxxx.COM

Network Whois record

Whois query for 72.253.67.41 failed: **TimedOut**

Queried whois.arin.net with "n ! NET-72-253-0-0-1"...

NetRange: xx.xx.0.0 - xx.xx.255.255
CIDR: xx.xx.0.0/16
OriginAS:
NetName: xxxxxxxxxxxxxxxxxxxxxxxx
NetHandle: NET-xx-xx-0-0-1
Parent: NET-xx-0-0-0-0
NetType: Direct Allocation
RegDate: 2006-08-28
Updated: 2007-09-21
Ref: <http://whois.arin.net/rest/net/NET-xxxxxxxxxx>

OrgName: xx.
OrgId: xxxxxxxxx
Address: xxxxxxxxxxxxxxxxxxxxxxxx.
City: xxxxxxxxxxxxxxxx
StateProv: HI
PostalCode: 96713
Country: US
RegDate: 2005-07-19
Updated: 2011-07-29
Comment: FOR ABUSE, SECURITY, SPAM -- EMAIL xxxxxxxxxxxxxxxx ONLY
Comment: DO NOT SEND E-MAIL TO xxxxxxxxxxxxxxxx AS IT WILL NOT BE READ OR ANSWERED.
Comment: Include IP address, time/date, message header and attack logs.
Ref: <http://whois.arin.net/rest/org/HAWAI-3>

ReferralServer: rwhois://rwhois.xxxxxxxxxxx.net:4321

OrgTechHandle: xxxxxxxxxxxxxxxx
OrgTechName: xxxxxxxxxxxxxxxx
OrgTechPhone: xxxxxxxxxxxxxxxx
OrgTechEmail: xxxxxxxxxxxxxxxx
OrgTechRef: xxxxxxxxxxxxxxxx

OrgAbuseHandle: xxxxxxxxxxxxxxxx
OrgAbuseName: xxxxxxxxxxxxxxxx
OrgAbusePhone: xxxxxxxxxxxxxxxx
OrgAbuseEmail: xxxxxxxxxxxxxxxx
OrgAbuseRef: xxxxxxxxxxxxxxxx

DNS records

DNS query for 41.67.253.72.in-addr.arpa returned an error from the server: **NameError**

name	class	type	data	time to live
xxxxxx.xxxxxxxxxxxx.com	IN	A	xxxx.xxx.xx.xxx	86400s (1.00:00:00)
xxxxxxxxxxx.com	IN	SOA	server: xxxxxxxxxxxxxx.com	86400s (1.00:00:00)

```

email:          xxxx.xxxxxxxx.com
serial:         2011083001
refresh:        86400
retry:          3600
expire:         2592000
minimum ttl:    3600

xxxxxxx.com    IN  NS  xxxxx.xxxxxxxx.com    86400s (1.00:00:00)
xxxxxxx.com    IN  NS  xxxxx.xxxxxxxx.com    86400s (1.00:00:00)
xxxxxxx.com    IN  NS  xxxx.xxxxxxxx.com     86400s (1.00:00:00)
xxxxxxx.com    IN  A   xx.xxx.xx.xx          86400s (1.00:00:00)
xxxxxxx.com    IN  MX  preference:           20 86400s (1.00:00:00)
                exchange:  xxxx.xxxxxxxx.com
xxxxxxx.com    IN  MX  preference:           10 86400s (1.00:00:00)
                exchange:  xxxx.xxxxxxxx.com
xxxxxxx.com    IN  MX  preference:           10 86400s (1.00:00:00)
                exchange:  xxxx.xxxxxxxx.com

```

Traceroute

Tracing route to vcroe.xxxxxxxx.com [72.253.67.41]...

hop	rtt	rtt	rtt	ip address	fully qualified domain name
1	1	1	1	70.84.211.97	61.d3.5446.static.theplanet.com
2	1	0	0	70.87.254.5	po101.dsr02.dllstx5.networklayer.com
3	156	2	1	70.85.127.109	po52.dsr02.dllstx3.networklayer.com
4	10	0	0	70.87.253.25	e3-2.ibr04.dllstx3.networklayer.com
5	1	1	0	206.223.118.37	10gigabitethernet3-1.core1.dal1.he.net
6	27	27	27	72.52.92.253	10gigabitethernet1-2.core1.phx1.he.net
7	36	43	36	72.52.92.249	10gigabitethernet2-2.core1.lax1.he.net
8	37	43	36	72.52.92.122	10gigabitethernet1-3.core1.lax2.he.net
9	103	100	100	64.71.145.46	hawaiian-telcom-svcs--co--inc.gigabitethernet4-6.core1.lax2.he.net
10	99	99	99	xxx.xxx.xxx.xx	
11	98	99	98	xxx.xxx.xxx.xxx	
12	102	97	97	xxx.xxx.xxx.xxx	

Trace complete

Service scan

FTP - 21 Error: TimedOut

SMTP - 25 Error: TimedOut

HTT HTTP/1.1 301 Moved Permanently

P - 80 Content-Length: 216

Content-Type: text/html

Location:

<http://www.aaaaaaaaaaaa.com/Support/ResidentialSupport/SupportTicketing/tabid/272/Default.aspx>

Server: Microsoft-IIS/6.0

X-Powered-By: ASP.NET

Date: Thu, 01 Sep 2011 09:03:25 GMT

Connection: keep-alive

POP3 - 110 Error: TimedOut

IMAP - 143 Error: TimedOut

-- end --

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[REDACTED]

MSS – SAMPLE MONTHLY REPORT

**Hawaiian Telcom
Managed Security Services**



Sample Monthly Reports

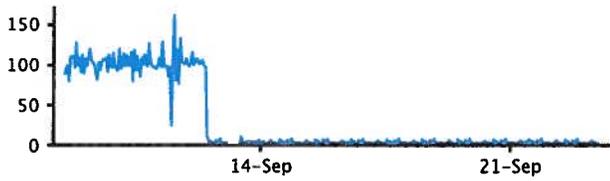
Time Range: 9/8/11 11:32:24 AM to 9/23/11 11:32:23 AM

User Notes

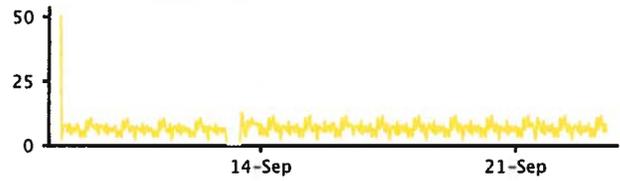
Generated: 9/23/11 11:43:41 AM

Description: Ranks the event severities by count

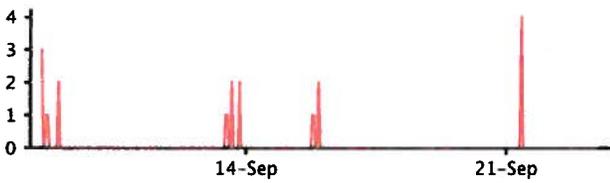
COUNT(Matched Events) for: HIGH



COUNT(Matched Events) for: MEDIUM



COUNT(Matched Events) for: LOW



Records found: 3

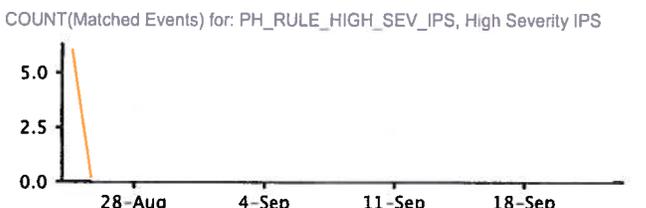
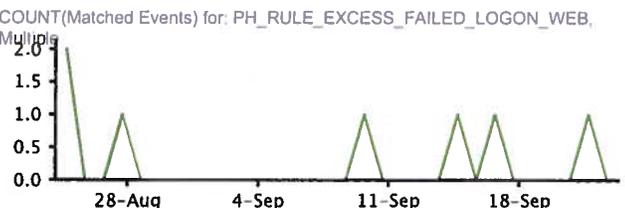
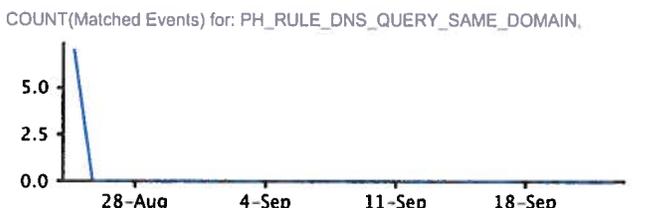
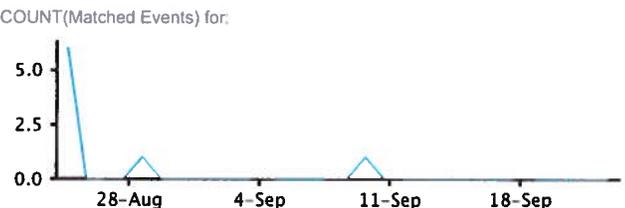
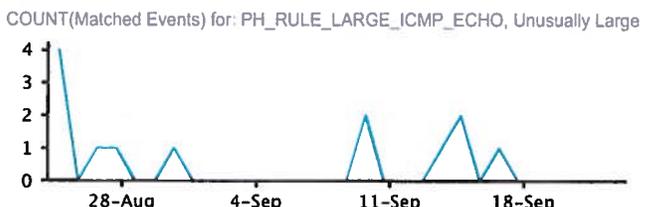
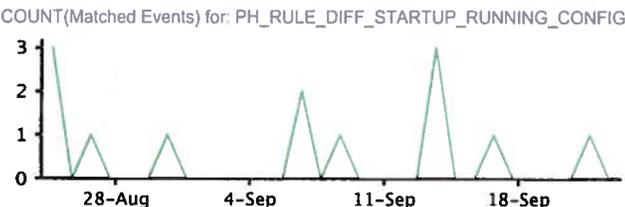
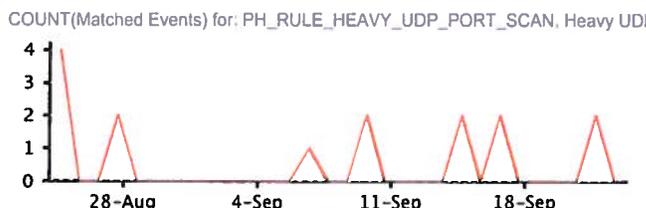
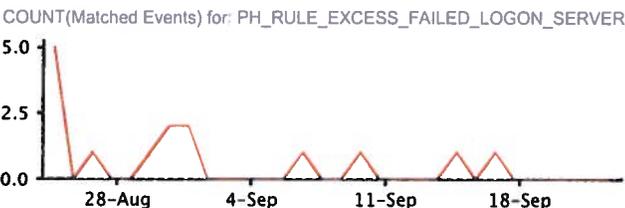
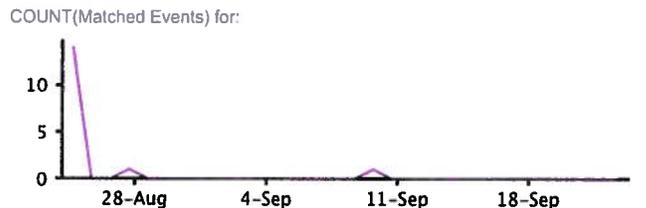
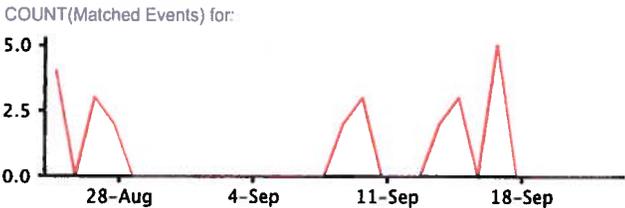
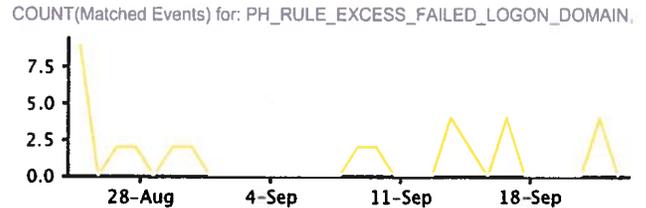
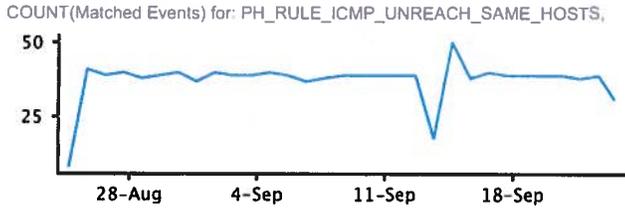
Rank	Event Severity Category	COUNT(*)
1	HIGH	10,769
2	MEDIUM	2,442
3	LOW	21

Time Range: 8/24/11 1:42:07 PM to 9/23/11 1:42:06 PM

User Notes

Generated: 9/23/11 1:42:15 PM

Description: Ranks the security related incidents by first their severity and then by their count



Records found: 24

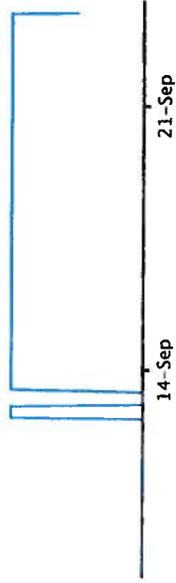
Rank	Event Type	Event Severity Category	Event Name	COUNT(*)
1	PH_RULE_ICMP_UNREACH_SAME_HOSTS	MEDIUM	Excessive ICMP unreachables: same hosts	1,159
2	PH_RULE_EXCESS_FAILED_LOGON_DOM	LOW	Multiple Logon Failures: Domain	35
3	PH_RULE_SUSPICIOUS_FAILED_LOGON_NO_SUCCESS	MEDIUM	Suspicious Logon Failure: no following successful login	24
4	PH_RULE_STAT_HIGH_TRAFFIC_FROM_SRC_FIXED_PORT	HIGH	Traffic Anomaly From Host On Fixed Port	16
5	PH_RULE_EXCESS_FAILED_LOGON_SERVER	MEDIUM	Multiple Logon Failures: Server	15
6	PH_RULE_HEAVY_UDP_PORT_SCAN	MEDIUM	Heavy UDP Port Scan: Single Host	15
7	PH_RULE_DIFF_STARTUP_RUNNING_CONFIG	HIGH	Difference in Running and Startup Config	13
8	PH_RULE_LARGE_ICMP_ECHO	HIGH	Unusually Large ICMP Echo Packets	13
9	PH_RULE_STAT_HIGH_TRAFFIC_SRC_DEST_FIXED_PORT	HIGH	Traffic Anomaly Between Two Hosts on Fixed Port	8
10	PH_RULE_DNS_QUERY_SAME_DOMAIN	MEDIUM	Excessive Repeated DNS Queries To Same Domain	7
11	PH_RULE_EXCESS_FAILED_LOGON_WEB	MEDIUM	Multiple Logon Failures: Web Server	7
12	PH_RULE_HIGH_SEV_IPS	HIGH	High Severity IPS Exploit	6
13	Suspicious_Logon_Failure_following_successful_login_02_24_2011	HIGH	Suspicious_Logon_Failure_following_successful_login_02_24_2011	6
14	Virus_found_Could_Not_Be_Cleaned_Quarantined	MEDIUM	Virus_found_Could_Not_Be_Cleaned_Quarantined	5
15	PH_RULE_EXCESS_DNS_QUERY	MEDIUM	Excessive End User DNS Queries	2
16	PH_RULE_MULTIPLE_SCAN_IPS_SAME_SRC	MEDIUM	Multiple IPS Scans From Same Src	2
17	PH_RULE_UNAUTH_DNS_QUERY	MEDIUM	End User DNS Queries to Unauthorized DNS Servers	2
18	PH_RULE_ACCOUNT_LOCKOUT_SERVER	HIGH	Account Lockout: Server	1
19	PH_RULE_EXCESS_DENY_DNS_QUERY	MEDIUM	Excessive Denied DNS Queries	1
20	PH_RULE_HEAVY_ICMP_PING_SWEEP	MEDIUM	Heavy ICMP Ping sweep	1
21	PH_RULE_HIGH_SEV_SCANNER	HIGH	Scanner found severe vulnerability	1
22	PH_RULE_MULTIPLE_IPS_SAME_SRC	HIGH	Multiple IPS Events From Same Src	1
23	PH_RULE_SCAN_IPS_SAME_SRC	MEDIUM	IPS detected network scan from same source	1
24	PH_RULE_UNCOMMON_DNS_QUERY	MEDIUM	Excessive Uncommon DNS Queries	1

Range: 9/8/11 11:27:20 AM to 9/23/11 11:27:19 AM

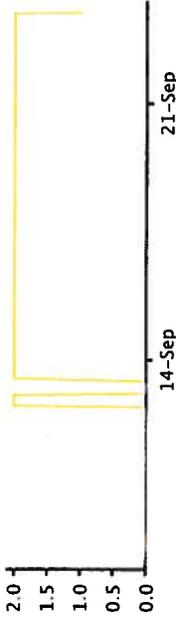
Generated: 9/23/11 11:28:12 AM

Description: Ranks the network attacks blocked by network IPS

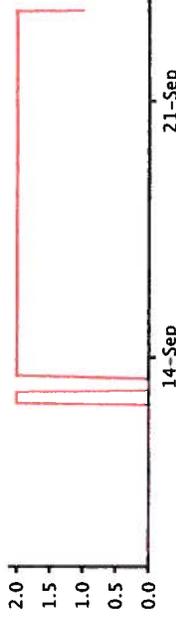
ATT (Matched Events) for: 172.16.1.2, 172.16.10.15, QA-V-WIN03-ADS,



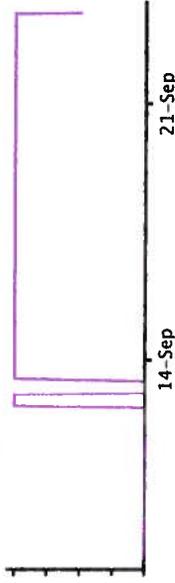
COUNT (Matched Events) for: 172.16.1.2, 69.36.187.33, PAN-OS-THREAT-



COUNT (Matched Events) for: 172.16.1.2, 192.168.64.8, images.softwareab.



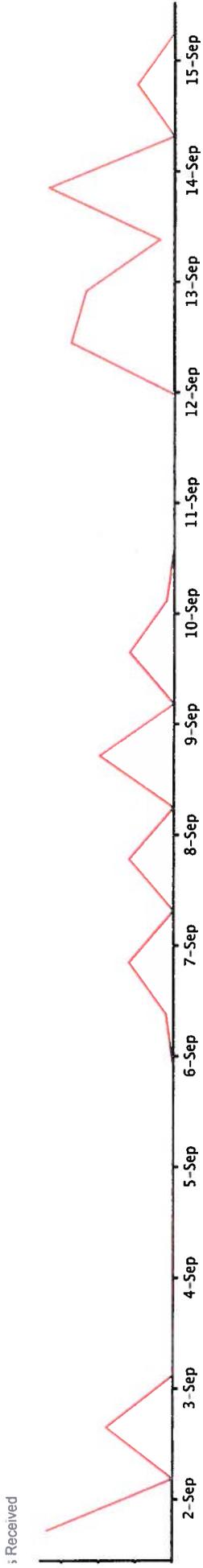
ATT (Matched Events) for: 172.16.1.2, 192.168.64.8, images.softwareab.



rds found: 4

Reporting IP	Source IP	Source Host Name	Event Type	Event Name	Event Severity	COUNT(*)
172.16.1.2 (PA-500)	172.16.10.15	QA-V-WIN03-ADS	PAN-OS-THREAT-ur-9999-deny	URL inspected traffic denied	1	996
172.16.1.2 (PA-500)	69.36.187.33		PAN-OS-THREAT-virus-100000-deny	Eicar Virus threat denied	5	498
172.16.1.2 (PA-500)	192.168.64.8 (images)	images.softwareab.net	PAN-IDP-30082	phpBB viewtopic.php highlighting Feature Arbitrary PHP Code Execution	9	498
172.16.1.2 (PA-500)	192.168.64.8 (images)	images.softwareab.net	PAN-IDP-30444	Microsoft IIS Escaped Characters Decoding Command Execution Vulnerability	9	498

Range: 9/1/11 5:57:44 AM to 9/15/11 5:57:44 AM
Generated: 9/15/11 10:36:52 PM
Description:



records found: 127

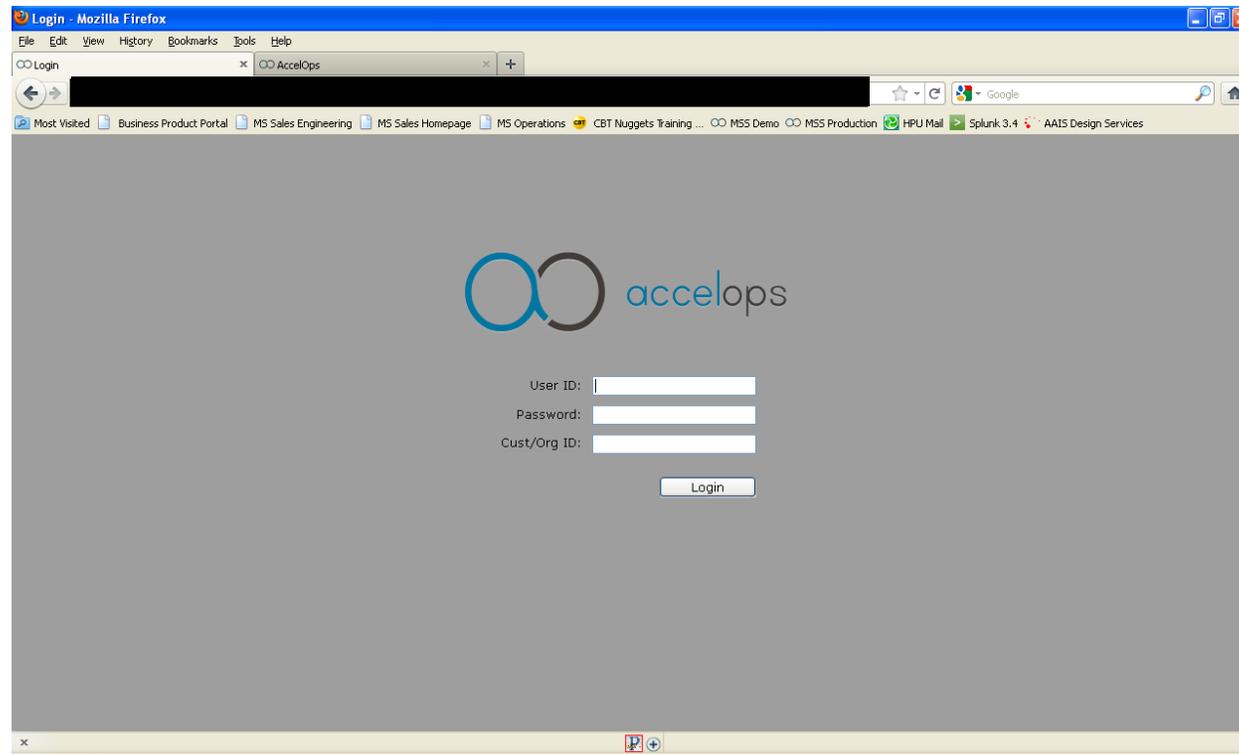
Incident ID	Incident First Occurrence	Incident Last Occurrence	Event Name	Incident Cleared Time	Incident Cleared Reason	Incident Comments	Incident Cleared User
33,984	7/27/11 8:44:00 AM	9/8/11 2:43:00 PM	CISCO_Incidents	9/8/11 4:13:22 PM	RETIRED INCIDENT		mmiranda(su)
39,202	8/15/11 2:22:00 PM	9/8/11 4:02:00 PM	CISCO_Incidents	8/15/11 2:34:27 PM	FALSE POSITIVE	<p>SHORT DESCRIPTION</p> <ul style="list-style-type: none"> > As of 14:24:10 08/15/2011, Cisco IPS has detected an NBT session service failed login > THREAT ASSESSMENT > This incident is a False Positive because this happens during normal network activity within a Windows network. > RECOMMENDED COURSE OF ACTION > Although it's a benign activity, I recommend to scan the workstations since there is a malware that initiates connections using high ports. 	igarcia3(su)
39,269	8/15/11 5:52:00 PM	9/8/11 2:22:00 PM	CISCO_Incidents	8/15/11 6:14:08 PM	FALSE POSITIVE	<p>SHORT DESCRIPTION</p> <p>At 17:51 08/15/2011, the CISCO IPS has detected an SQL request query embedded in the HTTP request from 192.168.16.34 to [REDACTED] to 98.135.43.115 (Yahoo, Inc.).</p> <p>RECOMMENDED COURSE OF</p>	igarcia3(su)

Incident ID	Incident First Occurrence	Incident Last Occurrence	Event Name	Incident Cleared Time	Incident Cleared Reason	Incident Cleared User
39,407	8/16/11 6:30:00 AM	9/8/11 4:13:00 PM	CISCO_Incidents	8/16/11 6:35:54 AM	False Positive	kbalbin(su)
<p>Incident Comments</p> <p><u>ACTION</u></p> <p>This is a benign activity since the YQL is consistent base from the previous reports and considering the traffic is outbound. We will continue to monitor this for activity outside of this baseline.</p> <p><u>SHORT DESCRIPTION</u></p> <p>As of 06:28:29 08/16/2011 CISCO IPS detected that an attempt has been made to access the LSARPC service on a Windows system.</p> <p><u>THREAT ASSESSMENT</u></p> <p>This incident is a False Positive because this happens during normal network activity within a Windows network.</p> <p><u>RECOMMENDED COURSE OF ACTION</u></p> <p>Although it's a benign activity, I recommend scanning the workstation since there is a malware that initiates connections using high ports.</p>						
42,745	8/25/11 8:30:00 AM	9/6/11 10:06:00 AM	Multiple_Admin_Login_Failures_	9/6/11 11:50:49 AM	false positive	mreal
<p>Incident Comments</p> <p><u>SHORT DESCRIPTION</u></p> <p>> At 10:06:00 09/06/2011, Cisco IPS has detected an NBT session service failed login.</p> <p><u>THREAT ASSESSMENT</u></p> <p>This incident is a False Positive because this happens during normal network activity within a Windows network.</p>						
42,856	8/25/11 12:23:00 PM	9/8/11 2:44:00 PM	CISCO_Incidents	8/25/11 12:40:30 PM	False Positive	alozano(su)
<p>Incident Comments</p> <p><u>SHORT DESCRIPTION</u></p> <p>As of 12:23 08/25/2011, Cisco IPS has detected that an SQL request query embedded in http requests from 192.168.16.34 and 10 [REDACTED] to 98.139.43.115 (Yahoo inc.) service on a windows system.</p> <p><u>RECOMMENDED COURSE OF ACTION</u></p> <p>This is a benign activity since the YQL is consistent base from the previous reports and considering the traffic is outbound. We will continue to monitor this activity outside of this baseline.</p>						

Incident ID	Incident First Occurrence	Incident Last Occurrence	Event Name	Incident Cleared Time	Incident Cleared Reason	Incident Cleared User
52,350	9/7/11 10:20:00 AM	9/7/11 10:20:00 AM	High Risk Rating Cisco IPS Exploit	9/7/11 10:43:19 AM	LOW	<p>192.168.16.34 to 98.139.43.115 (Yahoo, Inc.).</p> <p>RECOMMENDED COURSE OF ACTION</p> <p>This is a benign activity since the YQL is consistent base from the previous incidents. We will continue to monitor this activity outside of this baseline.</p> <p>SHORT DESCRIPTION As of 10:14:49 09/07/2011, Cisco IPS detected an attempt to exploit a memory corruption vulnerability in Internet Explorer when handling elements from 65.54.75.173 (Microsoft Corp. WA) to 192.168.16.113, workstation.</p> <p>THREAT ASSESSMENT The vulnerability is documented in CVE-2011-40035.</p> <p>RECOMMENDED COURSE OF ACTION Apply the appropriate updates: http://www.microsoft.com/technet/security/bulletin/MS11-003.mspx Advise users not to open e-mail messages from suspicious or unrecognized sources.</p>
52,462	9/7/11 1:58:00 PM	9/7/11 1:58:00 PM	High Risk Rating Cisco IPS Exploit	9/7/11 2:14:15 PM	LOW	<p>As of 13:52:52 09/07/2011, Cisco IPS detected an attempt to exploit a memory corruption vulnerability in Internet Explorer when handling elements from 65.54.75.112 (Microsoft Corp. WA) to 192.168.16.24, workstation.</p> <p>THREAT ASSESSMENT The vulnerability is documented in CVE-2011-40035.</p> <p>RECOMMENDED COURSE OF ACTION Apply the appropriate updates: http://www.microsoft.com/technet/security/bulletin/MS11-003.mspx Advise users not to open e-mail messages from suspicious or unrecognized sources.</p>
52,488	9/7/11 3:09:00 PM	9/7/11 3:11:00 PM	High Risk Rating Cisco IPS Exploit	9/7/11 3:18:09 PM	LOW	<p>As of 15:09:45 09/07/2011, Cisco IPS (192.168.16.7) detected an attempt to exploit</p>

MSS – CUSTOMER PORTAL

Hawaiian Telcom Managed Security Services



Customer Portal

INCIDENT SUMMARY DASHBOARD

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- Security Dashboard
- Biz Svc Dashboard
- Dashboard By Function
- My Dashboard

Table View Fishbone View Topology View Calendar View

Incident View - Last 2 hrs

Filter By: ID IP Advanced Group By: None (Details with Time) Severity: All Function: All Incident Status: Active Ticket Status: All Time Selection: Last 2 hrs

Refresh History Columns updated at 03:27:33

E..	Last Seen	First Seen	Incident Name	Incident Source	Incident Target	Incident Detail	Status	Ticket ...	Biz Service Name	Notification...	C...
	03:27:00 09/16/...	03:27:00 09/16/...	Excessive ICMP unreachable...	192.168.20.64	192.168.64.6 (HOST-...		Active	None			1
	03:27:00 09/16/...	03:27:00 09/16/...	Excessive ICMP unreachable...	192.168.20.64	192.168.64.7 (HOST-...		Active	None			1
	03:27:00 09/16/...	01:43:00 02/11/...	High Severity IPS Exploit	172.16.20.140 (Pre-S...		Component Event Ty...	Active	None			897
	03:26:00 09/16/...	07:28:00 09/13/...	LMN_Server_CPU_Warning_0...		192.168.1.23 (QA-V...	CPU Util: 75.00	Active	None			655
	03:26:00 09/16/...	07:26:00 09/13/...	UPS Battery metrics critical		10.3.5.78 (Channel_A...	UPS Output Frequenc...	Active	None			1,...
	03:26:00 09/16/...	07:28:00 09/13/...	Server CPU Warning		192.168.1.23						634
	03:26:00 09/16/...	07:49:00 09/13/...	Server Hardware Critical Alert		192.168.0.14						1,...
	03:26:00 09/16/...	14:45:00 11/04/...	Service_Degraded_Slow_Res...		172.16.20.16						1,...
	03:26:00 09/16/...	07:48:00 09/13/...	Service_Degraded_Slow_Res...		192.168.0.40 (FILER)	Application Port: 80,S...	Active	None	Accounting System,...		335
	03:25:00 09/16/...	03:20:00 09/16/...	Excessive ICMP unreachable...	192.168.21.206 (suns)	192.168.16.1 (HOST-...		Active	None			2
	03:25:00 09/16/...	12:07:00 07/27/...	Multiple Logon Failures: Server	192.168.64.181	172.16.22.100 (WIN-...	Triggered Event Coun...	Active	New			2,...
	03:24:00 09/16/...	07:26:00 09/13/...	FPC Current THD high		10.3.5.82 (Liebert)	Output Ix THD: 11.00,...	Active	None			1,...
	03:24:00 09/16/...	03:08:00 09/16/...	Virtual Machine CPU Warning		172.16.10.15 (branch...	Physical Machine IP: ...	Active	None	PCI Service		3
	03:24:00 09/16/...	07:47:00 09/13/...	Server Hardware Critical Alert		192.168.25.10 (Watc...	Hardware Componen...	Active	None	Accounting System,...		227

IP Address: 192.168.1.23
Host Name: QA-V-Win03-Orcl.softwareAB.net
Device Type: Microsoft Windows
hostIpAddr:192.168.1.23, hostName:QA-V-WIN03-ORCL, ...

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Dashboard > Security Dashboard

General VM V

- Incident Dashboard
- Exec Summary
- Summary Dashboards
- Availability/Performance
- Hardware Summary
- Storage Summary
- Avail/Perf Widgets
- Application Summary
- Security Dashboard**
- Biz Svc Dashboard
- Dashboard By Function
- My Dashboard

Firewall Deny: Top Firewalls By Denies (last 30 minutes updated@03:17:44)

Reporting IP	COUNT(Matched Events)
172.16.3.10	126
172.16.255.18	5
172.16.0.1	3
172.16.1.2	2

Top Security Event Categories By Count (last 1 hour updated@03:17:41)

- Logon Success
- Buffer Overflow
- Suspicious Traffic
- Logon Failure
- Command Exec
- Info Leak
- Malware
- Reconn
- Proto Anomaly

Top Security Event Categories By Count (last 8 hours u...)

Logon Success	782,520
Buffer Overflow	322,882
Suspicious Traffic	303,024
Logon Failure	12,042
Reconn	280
Command Exec	76
Proto Anomaly	60
Malware	50
Info Leak	47
Policy Violation	17

Top Audit Event Categories B...

Logon Success	
Database Change	
Logon Failure	
App Restart	
App Down	
File Change	
Hardware Issue	

Router Permit: Top Protocols By Bytes (last 1 hour upd...)

IP Protocol	Dest TCP/UDP Po	SUM(Total Bytes)
UDP(17)	SYSLOG(514)	149.11 MB
UDP(17)	SNMP(161)	33.73 MB
TCP(6)	HTTPS(443)	10.31 MB
UDP(17)	2055	3.46 MB
TCP(6)	NETBIOS-SSN(...	1.47 MB
TCP(6)	TCP-5480(5480)	936.53 KB
TCP(6)	TELNET(23)	781.58 KB
ICMP(1)	0	726.77 KB
UDP(17)	DOMAIN(53)	716.13 KB
TCP(6)	SSH(22)	523.71 KB

Firewall Permit: Top Firewalls By High Ports Bytes (last...)

Reporting IP	SUM(Total Bytes)
172.16.0.1	0 B

Router Permit: Top Source IPs By Bytes (last 30 minut...)

Source IP	Source Host	SUM(Total B	COUNT(Mat
192.168.1...	c-router-3...	105.58 MB	11
192.168.2...	Main-Cor...	23.16 MB	51
192.168.2...		20.19 MB	39,930
192.168.0...	SJ-Dev-S...	16.16 MB	100
192.168.1.2		5.13 MB	1

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HISTORICAL AND REAL-TIME LOG SEARCHES AND REPORTING

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Router Permit: Top Conversations By Bytes Time Range: Last 1 Day - 03:22:22 09/15/2011 to 03:22:21 09/16/2011

Filter Criteria: Simple Structured Load Template Show: Display Fields: Time: Last 1 Day Run

reptDevIpAddr IN (Group@PH_SYS_DEVICE_ROUTER_SWITCH) AND eventType IN srcIpAddr,srcName,destIpAddr,destName,SUM(totB)

Chart for: SUM(Total Bytes) Interval: 15 minutes

phRecvTime,reptDevIpAddr,rawEventMsg,eventType,eventSeverity,srcIpAddr,destIpAddr

Chart	Source IP	Source Host Name	Dest IP	Dest Host Name	SUM(Total Bytes)
1	192.168.19.1	c-router-3560_1.softwareab.net	192.168.21.206		3.45 GB
2	192.168.24.133		192.168.20.17		3.39 GB
3	192.168.24.11		192.168.20.130		2.99 GB
4	192.168.20.59		192.168.64.106		1.96 GB
5	192.168.20.90		192.168.0.30		1.84 GB
6	192.168.24.12	HOST-192.168.24.12	192.168.20.130		1.50 GB

Page 1 of 400 Go Total Lines: 10000

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CONFIGURATION MANAGEMENT DATABASE

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CMDB > Devices > Network Device > Router/Switch

Inventory Topo Performance

Device View

Topology

- Devices
 - Network Device
 - Network Segment
 - Server
 - Workstation
 - Storage
 - Environmental
 - Ungrouped
 - Applications
 - Users
 - Biz/IT Service
 - Port/Protocol
 - EventTypes
 - Networks
 - Malware Domains

New Delete Edit (17 of 17) Refresh Maintenance Approve Analysis Export

Name	IP Address	Type	Version	Last Updated Time	Last Updated Method	Approval Status	Description	Maintenance
c-router-3560_1.softwareab.net	192.168.19.1	Cisco IOS (WS-C3560G-4...	12.2(25)SEE4	11:00:48 09/17/2010	SNMP	Pending	Cisco IOS Softwan	
c-router-3560_2.softwareab.net	192.168.19.82	Cisco IOS (WS-C3560G-4...	12.2(25)SEE4	18:07:08 09/13/2010	SNMP	Pending	Cisco IOS Softwan	
HOST-172.16.255.65	172.16.255.65	Foundry Ironware	ANY	18:36:16 11/03/2010	LOG	Pending		
HOST-192.168.19.50	192.168.19.50	Cisco						
HQ-IOS-Router-01	192.168.19.18	Cisco						
juniperfw	172.16.255.70	Junip						
Main-Core-Cat-Switch	192.168.20.1	Cisco						
SH-Core-IOS.softwareab.net.in	10.1.0.254	Cisco						
SH-QA-Cor-Srv.softwareab.net	192.168.19.14	Cisco						
SI-Br-JuniperOffice	172.16.3.2	Cisco						

Configuration Diff

Rev# 360 Sep 28, 2010 7:33 PM running-config

```

Interface GigabitEthernet6/45
switchport
switchport access vlan 9
no ip address
!
Interface GigabitEthernet6/46
switchport
switchport access vlan 9
no ip address
!
Interface GigabitEthernet6/47
switchport
no ip address
!
Interface GigabitEthernet6/48
description Uplink to Cisco 3560: 192.168.19.1
switchport
no ip address
spanning-tree portfast
spanning-tree bpdudfilter disable
!

```

Rev# 316 Sep 17, 2010 3:05 PM running-config

```

Interface GigabitEthernet6/45
switchport
switchport access vlan 9
no ip address
!
Interface GigabitEthernet6/46
switchport
switchport access vlan 9
no ip address
!
Interface GigabitEthernet6/47
switchport
no ip address
!
Interface GigabitEthernet6/48
switchport
no ip address
spanning-tree portfast
spanning-tree bpdudfilter disable
!
Interface Vlan1

```

Summary Health Contact Interfaces Software

Diff... Enter text to find

Rev#	Date	Type	discoverTime 1284
360	16:33:51 09/...	running-config	! Last configuration
358	16:33:44 09/...	startup-config	! NVRAM config la
317	12:05:56 09/...	running-config	! upgrade fpd auto
316	12:05:20 09/...	running-config	! version 12.2
295	10:01:32 09/...	running-config	! service timestamp

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Close

SAMPLE CUSTOMER BILL DETAIL

SAMPLE TRUNK USAGE

Customer Name	Site	Trunk Group	Number of Customer / Totals	Date	Busy Hour	Call Atts	Busys	% Busys	Min of Use	Total Day	% Busy Hour Min/Trunk	Qty Req	5 High Days
Valued Customer	hanahicods0	9	14 Address	2/5/2012	10:00	4	0	0	7	28	23.5	0	2
Valued Customer	hanahicods0	9	14 Address	2/6/2012	14:00	50	0	0	107	573	18.6	8	6 (+)
Valued Customer	hanahicods0	9	14 Address	2/7/2012	14:00	60	0	0	113	508	22.3	8	7 (+)
Valued Customer	hanahicods0	9	14 Address	2/8/2012	11:00	45	0	0	120	643	18.7	9	7 (+)
Valued Customer	hanahicods0	9	14 Address	2/9/2012	13:00	41	0	0	92	535	17.1	7	6 (+)
Valued Customer	hanahicods0	9	14 Address	2/10/2012	14:00	29	0	0	118	490	24.1	8	7 (+)
Valued Customer	hanahicods0	9	14 Address	2/11/2012	9:00	16	0	0	37	77	47.8	3	4
Valued Customer	hanahicods0	9	14 Address			45	0	0	110	550	20.2	8	7
Valued Customer	hnllhimnds1	9	12 Address	2/5/2012	7:00	5	0	0	3	15	22.2	0	2
Valued Customer	hnllhimnds1	9	12 Address	2/6/2012	11:00	29	0	0	95	625	15.2	8	6 (+)
Valued Customer	hnllhimnds1	9	12 Address	2/7/2012	8:00	42	0	0	82	463	17.6	7	6 (+)
Valued Customer	hnllhimnds1	9	12 Address	2/8/2012	12:00	45	0	0	97	560	17.3	8	6 (+)
Valued Customer	hnllhimnds1	9	12 Address	2/9/2012	10:00	38	0	0	120	580	20.7	10	7 (+)
Valued Customer	hnllhimnds1	9	12 Address	2/10/2012	10:00	37	0	0	92	627	14.6	8	6 (+)
Valued Customer	hnllhimnds1	9	12 Address	2/11/2012	5:00	1	0	0	2	5	33.3	0	1
Valued Customer	hnllhimnds1	9	12 Address			38	0	0	97	571	17.1	8	6
Valued Customer	kailhicods1	9	50 Address	2/5/2012	14:00	9	0	0	12	40	29.2	0	3
Valued Customer	kailhicods1	9	50 Address	2/6/2012	9:00	269	0	0	413	3395	12.2	8	15 (+)
Valued Customer	kailhicods1	9	50 Address	2/7/2012	14:00	224	0	0	382	3202	11.9	8	14 (+)
Valued Customer	kailhicods1	9	50 Address	2/8/2012	12:00	220	0	0	417	3122	13.3	8	15 (+)
Valued Customer	kailhicods1	9	50 Address	2/9/2012	13:00	238	0	0	502	3328	15.1	10	17 (+)
Valued Customer	kailhicods1	9	50 Address	2/10/2012	9:00	190	0	0	433	2605	16.6	9	15 (+)
Valued Customer	kailhicods1	9	50 Address	2/11/2012	16:00	13	0	0	12	53	21.9	0	3
Valued Customer	kailhicods1	9	50 Address			228	0	0	429	3130	13.8	9	15
Valued Customer	kaimhicods1	9	50 Address	2/5/2012	12:00	16	0	0	75	365	20.5	2	5
Valued Customer	kaimhicods1	9	50 Address	2/6/2012	10:00	277	0	0	728	5045	14.4	15	22 (+)
Valued Customer	kaimhicods1	9	50 Address	2/7/2012	9:00	346	0	0	762	5382	14.2	15	23 (+)
Valued Customer	kaimhicods1	9	50 Address	2/8/2012	10:00	308	0	0	745	5252	14.2	15	22 (+)
Valued Customer	kaimhicods1	9	50 Address	2/9/2012	10:00	363	0	0	822	5722	14.4	16	24 (+)
Valued Customer	kaimhicods1	9	50 Address	2/10/2012	14:00	388	0	0	797	5413	14.7	16	23 (+)
Valued Customer	kaimhicods1	9	50 Address	2/11/2012	11:00	17	0	0	42	233	17.9	1	4
Valued Customer	kaimhicods1	9	50 Address			336	0	0	771	5363	14.4	15	23
Valued Customer	khluhicods1	9	57 Address	2/5/2012	18:00	12	0	0	12	28	41.2	0	3
Valued Customer	khluhicods1	9	57 Address	2/6/2012	10:00	246	0	0	445	3395	13.1	8	15 (+)
Valued Customer	khluhicods1	9	57 Address	2/7/2012	14:00	308	0	0	452	3242	13.9	8	16 (+)
Valued Customer	khluhicods1	9	57 Address	2/8/2012	10:00	219	0	0	522	3597	14.5	9	17 (+)
Valued Customer	khluhicods1	9	57 Address	2/9/2012	11:00	215	0	0	468	3378	13.9	8	16 (+)
Valued Customer	khluhicods1	9	57 Address	2/10/2012	10:00	236	0	0	400	2922	13.7	7	14 (+)
Valued Customer	khluhicods1	9	57 Address	2/11/2012	21:00	54	0	0	33	142	23.5	1	4
Valued Customer	khluhicods1	9	57 Address			245	0	0	457	3307	13.8	8	16
Valued Customer	khouchicods1	9	50 Address	2/5/2012	11:00	18	0	0	13	88	15.1	0	3
Valued Customer	khouchicods1	9	50 Address	2/6/2012	9:00	880	0	0	1102	7530	14.6	22	30 (+)
Valued Customer	khouchicods1	9	50 Address	2/7/2012	15:00	563	0	0	1087	8648	12.6	22	30 (+)
Valued Customer	khouchicods1	9	50 Address	2/8/2012	9:00	682	0	0	1160	7830	14.8	23	31 (+)
Valued Customer	khouchicods1	9	50 Address	2/9/2012	10:00	467	0	0	1002	7215	13.9	20	28 (+)
Valued Customer	khouchicods1	9	50 Address	2/10/2012	9:00	596	0	0	888	6770	13.1	18	25 (+)
Valued Customer	khouchicods1	9	50 Address	2/11/2012	12:00	23	0	0	30	160	18.8	1	4
Valued Customer	khouchicods1	9	50 Address			638	0	0	1048	7599	13.8	21	29
Valued Customer	kihehicods1	9	15 Address	2/5/2012	10:00	5	0	0	7	15	44.4	0	2
Valued Customer	kihehicods1	9	15 Address	2/6/2012	9:00	91	0	0	193	1287	15	13	9 (+)
Valued Customer	kihehicods1	9	15 Address	2/7/2012	10:00	143	0	0	245	1637	15	16	10 (+)
Valued Customer	kihehicods1	9	15 Address	2/8/2012	8:00	114	0	0	243	1532	15.9	16	10 (+)

Valued Customer	kihehicods1	9	15 Address		2/9/2012	11:00	96	0	0	203	1620	12.6	14	9 (+)
Valued Customer	kihehicods1	9	15 Address		2/10/2012	14:00	131	0	0	210	1203	17.5	14	9 (+)
Valued Customer	kihehicods1	9	15 Address		2/11/2012	14:00	7	0	0	23	107	21.9	2	3
Valued Customer	kihehicods1	9	15 Address	5 High Day			115	0	0	219	1456	15.2	15	9
Valued Customer	klhihicods1	9	20 Address		2/5/2012	11:00	1	0	0	18	32	57.9	1	3
Valued Customer	klhihicods1	9	20 Address		2/6/2012	9:00	71	0	0	115	792	14.5	6	7 (+)
Valued Customer	klhihicods1	9	20 Address		2/7/2012	14:00	106	0	0	128	718	17.9	6	7 (+)
Valued Customer	klhihicods1	9	20 Address		2/8/2012	14:00	45	0	0	97	808	12	5	6 (+)
Valued Customer	klhihicods1	9	20 Address		2/9/2012	14:00	126	0	0	110	720	15.3	6	7 (+)
Valued Customer	klhihicods1	9	20 Address		2/10/2012	9:00	23	0	0	98	597	16.5	5	6 (+)
Valued Customer	klhihicods1	9	20 Address		2/11/2012	9:00	4	0	0	5	15	33.3	0	2
Valued Customer	klhihicods1	9	20 Address	5 High Day			74	0	0	110	727	15.2	5	7
Valued Customer	kluihicods1	9	40 Address		2/5/2012	15:00	41	0	0	18	125	14.7	0	3
Valued Customer	kluihicods1	9	40 Address		2/6/2012	9:00	389	0	0	803	5530	14.5	20	24 (+)
Valued Customer	kluihicods1	9	40 Address		2/7/2012	14:00	554	0	0	807	5917	13.6	20	24 (+)
Valued Customer	kluihicods1	9	40 Address		2/8/2012	9:00	500	0	0	830	5520	15	21	24 (+)
Valued Customer	kluihicods1	9	40 Address		2/9/2012	9:00	418	0	0	760	5578	13.6	19	23 (+)
Valued Customer	kluihicods1	9	40 Address		2/10/2012	9:00	366	0	0	678	4863	13.9	17	21 (+)
Valued Customer	kluihicods1	9	40 Address		2/11/2012	9:00	36	0	0	48	262	18.5	1	4
Valued Customer	kluihicods1	9	40 Address	5 High Day			445	0	0	776	5482	14.2	19	23
Valued Customer	konahicods1	9	50 Address		2/5/2012	18:00	19	0	0	22	158	13.7	0	3
Valued Customer	konahicods1	9	50 Address		2/6/2012	9:00	572	0	0	1250	8578	14.6	25	33 (+)
Valued Customer	konahicods1	9	50 Address		2/7/2012	9:00	569	0	0	1268	8692	14.6	25	34 (+)
Valued Customer	konahicods1	9	50 Address		2/8/2012	9:00	497	0	0	1028	7883	13	21	28 (+)
Valued Customer	konahicods1	9	50 Address		2/9/2012	8:00	555	0	0	960	7675	12.5	19	27 (+)
Valued Customer	konahicods1	9	50 Address		2/10/2012	9:00	550	0	0	1235	7258	17	25	33 (+)
Valued Customer	konahicods1	9	50 Address		2/11/2012	14:00	10	0	0	78	312	25.1	2	6
Valued Customer	konahicods1	9	50 Address	5 High Day			549	0	0	1148	8017	14.3	23	31
Valued Customer	kwlnhicods1	9	35 Address		2/5/2012	22:00	19	0	0	43	383	11.3	1	4
Valued Customer	kwlnhicods1	9	35 Address		2/6/2012	15:00	502	0	0	803	6275	12.8	23	24 (+)
Valued Customer	kwlnhicods1	9	35 Address		2/7/2012	14:00	383	0	0	767	5940	12.9	22	23 (+)
Valued Customer	kwlnhicods1	9	35 Address		2/8/2012	8:00	366	0	0	703	4950	14.2	20	21 (+)
Valued Customer	kwlnhicods1	9	35 Address		2/9/2012	11:00	316	0	0	700	5180	13.5	20	21 (+)
Valued Customer	kwlnhicods1	9	35 Address		2/10/2012	9:00	299	0	0	712	5392	13.2	20	22 (+)
Valued Customer	kwlnhicods1	9	35 Address		2/11/2012	12:00	40	0	0	42	300	13.9	1	4
Valued Customer	kwlnhicods1	9	35 Address	5 High Day			373	0	0	737	5547	13.3	21	22
Valued Customer	lhnahicods1	9	25 Address		2/5/2012	10:00	5	0	0	18	70	26.2	1	3
Valued Customer	lhnahicods1	9	25 Address		2/6/2012	9:00	175	0	0	275	2185	12.6	11	11 (+)
Valued Customer	lhnahicods1	9	25 Address		2/7/2012	10:00	174	0	0	315	2428	13	13	12 (+)
Valued Customer	lhnahicods1	9	25 Address		2/8/2012	9:00	164	0	0	317	2273	13.9	13	12 (+)
Valued Customer	lhnahicods1	9	25 Address		2/9/2012	14:00	165	0	0	338	2217	15.3	14	13 (+)
Valued Customer	lhnahicods1	9	25 Address		2/10/2012	9:00	157	0	0	280	2152	13	11	11 (+)
Valued Customer	lhnahicods1	9	25 Address		2/11/2012	14:00	10	0	0	17	80	20.8	1	3
Valued Customer	lhnahicods1	9	25 Address	5 High Day			167	0	0	305	2251	13.6	12	12
Valued Customer	mkwohicods1	9	55 Address		2/5/2012	5:00	7	0	0	7	37	18.2	0	2
Valued Customer	mkwohicods1	9	55 Address		2/6/2012	14:00	310	0	0	487	3718	13.1	9	16 (+)
Valued Customer	mkwohicods1	9	55 Address		2/7/2012	14:00	271	0	0	580	2820	20.6	11	19 (+)
Valued Customer	mkwohicods1	9	55 Address		2/8/2012	13:00	345	0	0	542	3202	16.9	10	18 (+)
Valued Customer	mkwohicods1	9	55 Address		2/9/2012	9:00	213	0	0	418	3243	12.9	8	15 (+)
Valued Customer	mkwohicods1	9	55 Address		2/10/2012	11:00	207	0	0	512	3478	14.7	9	17 (+)
Valued Customer	mkwohicods1	9	55 Address		2/11/2012	16:00	9	0	0	38	135	28.4	1	4
Valued Customer	mkwohicods1	9	55 Address	5 High Day			269	0	0	508	3292	15.6	9	17
Valued Customer	nanahicods1	9	50 Address		2/5/2012	11:00	24	0	0	45	175	25.7	1	4

Valued Customer	nanahicods1	9	50 Address	2/6/2012	14:00	855	0	0	927	7012	13.2	19	26 (+)
Valued Customer	nanahicods1	9	50 Address	2/7/2012	14:00	733	0	0	1103	7395	14.9	22	30 (+)
Valued Customer	nanahicods1	9	50 Address	2/8/2012	10:00	484	0	0	845	6432	13.1	17	24 (+)
Valued Customer	nanahicods1	9	50 Address	2/9/2012	10:00	521	0	0	803	6360	12.6	16	24 (+)
Valued Customer	nanahicods1	9	50 Address	2/10/2012	14:00	721	0	0	910	6360	14.3	18	26 (+)
Valued Customer	nanahicods1	9	50 Address	2/11/2012	13:00	30	0	0	27	185	14.4	1	3
Valued Customer	nanahicods1	9	50 Address 5 High Day			663	0	0	918	6712	13.6	18	26
Valued Customer	ploahicods1	9	35 Address	2/5/2012	12:00	9	0	0	7	47	14.3	0	2
Valued Customer	ploahicods1	9	35 Address	2/6/2012	14:00	353	0	0	597	4747	12.6	17	19 (+)
Valued Customer	ploahicods1	9	35 Address	2/7/2012	10:00	304	0	0	722	4712	15.3	21	22 (+)
Valued Customer	ploahicods1	9	35 Address	2/8/2012	10:00	332	0	0	553	4470	12.4	16	18 (+)
Valued Customer	ploahicods1	9	35 Address	2/9/2012	14:00	333	0	0	500	4270	11.7	14	17 (+)
Valued Customer	ploahicods1	9	35 Address	2/10/2012	10:00	345	0	0	620	4615	13.4	18	19 (+)
Valued Customer	ploahicods1	9	35 Address	2/11/2012	11:00	28	0	0	17	107	15.6	0	3
Valued Customer	ploahicods1	9	35 Address 5 High Day			333	0	0	598	4563	13.1	17	19
Valued Customer	prcvhicods1	9	15 Address	2/5/2012	9:00	3	0	0	3	5	66.7	0	2
Valued Customer	prcvhicods1	9	15 Address	2/6/2012	13:00	23	0	0	90	200	45	6	6 (+)
Valued Customer	prcvhicods1	9	15 Address	2/7/2012	10:00	11	0	0	27	138	19.3	2	3 (+)
Valued Customer	prcvhicods1	9	15 Address	2/8/2012	9:00	13	0	0	25	127	19.7	2	3 (+)
Valued Customer	prcvhicods1	9	15 Address	2/9/2012	11:00	18	0	0	37	170	21.6	2	4 (+)
Valued Customer	prcvhicods1	9	15 Address	2/10/2012	9:00	16	0	0	35	183	19.1	2	4 (+)
Valued Customer	prcvhicods1	9	15 Address	2/11/2012	15:00	4	0	0	5	13	37.5	0	2
Valued Customer	prcvhicods1	9	15 Address 5 High Day			16	0	0	43	164	24.9	3	4
Valued Customer	wkkihicods1	9	15 Address	2/5/2012	0:00	0	0	0	0	0	0	0	1
Valued Customer	wkkihicods1	9	15 Address	2/6/2012	14:00	20	0	0	15	55	27.3	1	3 (+)
Valued Customer	wkkihicods1	9	15 Address	2/7/2012	9:00	7	0	0	12	52	22.6	1	3 (+)
Valued Customer	wkkihicods1	9	15 Address	2/8/2012	6:00	1	0	0	7	30	22.2	0	2 (+)
Valued Customer	wkkihicods1	9	15 Address	2/9/2012	16:00	2	0	0	55	150	36.7	4	5 (+)
Valued Customer	wkkihicods1	9	15 Address	2/10/2012	10:00	7	0	0	57	157	36.2	4	5 (+)
Valued Customer	wkkihicods1	9	15 Address	2/11/2012	15:00	1	0	0	2	2	100	0	1
Valued Customer	wkkihicods1	9	15 Address 5 High Day			7	0	0	29	89	29	2	4
Valued Customer	wlkuhimn2gt	9	1 Address	2/5/2012	0:00	0	0	0	0	0	0	0	1 (+)
Valued Customer	wlkuhimn2gt	9	1 Address	2/6/2012	0:00	0	0	0	0	0	0	0	1 (+)
Valued Customer	wlkuhimn2gt	9	1 Address	2/7/2012	0:00	0	0	0	0	0	0	0	1 (+)
Valued Customer	wlkuhimn2gt	9	1 Address	2/8/2012	0:00	0	0	0	0	0	0	0	1 (+)
Valued Customer	wlkuhimn2gt	9	1 Address	2/9/2012	0:00	0	0	0	0	0	0	0	1 (+)
Valued Customer	wlkuhimn2gt	9	1 Address	2/10/2012	0:00	0	0	0	0	0	0	0	1
Valued Customer	wlkuhimn2gt	9	1 Address	2/11/2012	0:00	0	0	0	0	0	0	0	1
Valued Customer	wlkuhimn2gt	9	1 Address 5 High Day			0	0	0	0	0	0	0	1
Valued Customer	wphuhicods1	9	45 Address	2/5/2012	12:00	17	0	0	53	515	10.4	1	5
Valued Customer	wphuhicods1	9	45 Address	2/6/2012	14:00	351	0	0	452	3660	12.3	10	16 (+)
Valued Customer	wphuhicods1	9	45 Address	2/7/2012	14:00	357	0	0	530	4205	12.6	12	17 (+)
Valued Customer	wphuhicods1	9	45 Address	2/8/2012	9:00	195	0	0	422	3220	13.1	9	15 (+)
Valued Customer	wphuhicods1	9	45 Address	2/9/2012	14:00	302	0	0	423	3492	12.1	9	15 (+)
Valued Customer	wphuhicods1	9	45 Address	2/10/2012	14:00	274	0	0	448	3583	12.5	10	15 (+)
Valued Customer	wphuhicods1	9	45 Address	2/11/2012	8:00	32	0	0	60	360	16.7	1	5
Valued Customer	wphuhicods1	9	45 Address 5 High Day			296	0	0	455	3632	12.5	10	16