



IP ALLOCATION AND USAGE POLICY FOR NETWORK SPACE FROM INTEGRA TELECOM

Introduction

This site is intended for additional allocations of IP addresses to current customers only and is unable to track circuit installs. We are not able to pre-assign IP networks to potential customers. All IP customers by default receive an initial IP allocation. Please understand that Integra Telecom is required to maintain the justification of IP assignments so that the [American Registry of Internet Numbers \(ARIN\)](#) may verify Integra Telecom is meeting public Internet policy. IP addresses are not owned by Integra Telecom, or any other access provider. They are allocated and/or assigned to customers based upon documented justification. We will make every effort to make this process happen as quickly as possible. **Ordinarily requests are processed within 3 business days.** Please understand that we may have questions clarifying your request, which may delay an assignment. Requests that are pending a customer response for more than 30 days will be closed.

New installs

Integra new install policy is to allow a new T1 or larger customer to be assigned up to a /29 without an IP Justification during install only. To help preserve and utilize our IP addresses efficiently, we do not automatically assign the /29 to the customer without the customer's specific request for it. (Meaning: when someone is turning up the customer and they have no need for Public LAN IP's or may only need a /30 for LAN IP's).

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I. Overview and Purpose

This document details **Integra Telecom's** policy concerning the allocation and assignment of non-portable IP addresses to its customers. Our policies are based upon [RFC2050](#), which details IP allocation guidelines. The current IP addressing system (IPv4) is rapidly depleting its availability of unused IP space. The [IETF](#) is working on a new IP addressing system (IPv6) that will resolve this issue by moving the Internet from a 32-bit to a 128-bit IP addressing scheme, which will allow considerably more address space. Until that time, it is imperative that the IPv4 space is efficiently utilized so that everyone is able to use the Internet. **Integra Telecom** (and every other ISP's) ability to obtain further IP allocations for use in assignment to customers is based upon our enforcement of the policies set forth by [ARIN](#) and [RFC2050](#).

An excerpt from RFC2050 in 2.1.7 reads, "While it is understood that the use of static addressing may ease some aspects of administration, the current rate of consumption of the remaining unassigned IPv4 address space does not permit the assignment of addresses for administrative ease. Organizations considering the use of static IP address assignment are expected to investigate and implement dynamic assignment technologies whenever possible."

Some examples of requests for IP addresses that should use available technology rather than IP addresses.

1. Each web site having its own IP address. The [HTTP/1.1](#) specification allows for numerous web sites with only one IP address, unless a technical reason prohibits this such as SSL.
2. Ethernet switch management/administrative interface. For instance, first connect to a server attached to a switch. From there, Telnet to an internal private LAN such as 192.168.0.0/16, that has printers and management Ethernet switch IPs.
3. Multiple security cameras with embedded TCP/IP capabilities. For instance, configure your firewall to use 1 IP address to host 5,000 cameras by using NAT/PAT.
4. Personal Computers that are always connected to the Internet via publically routable IP addresses but do not provide an essential service such as SMTP. This presents a security risk and would be better served by using either Network Address Translation (NAT) and/or a Virtual Private Network (VPN).
5. PC Anywhere/Carbon Copy/Timbuktu/VNC are peer to peer applications not servers (meaning, they do not allow multiple clients to connect). A proxy host should be used. That is, multiple clients could connect to the proxy host and from that host, connect to the workstation peer applications.
6. A dialup connection that runs a game server. Applications exist that have the ability to post the presently assigned IP address in use. Should you desire to run a dedicated game server, you should have a dedicated connection.

In general our practice is to assign IP addresses to devices, which have multiple clients, simultaneously connecting to them on a consistent basis from the Internet. Where ubiquitous IP technology exists that can be used without impacting performance or security, those technologies are expected to be used to conserve IPv4 address space.

II. Usage of Networks

Integra Telecom recommends a policy of strict subnetting to all of its customers. Subnetting ensures the most efficient use of address space and secures a valid justification for additional address space when the time comes. This is especially important for ISPs as they are responsible for assigning their customers an appropriate amount of address space. You agree to be bound by [Integra's Acceptable Use Policy](#), if you accept an IP assignment from Integra Telecom.



III. Issues of Portability

All network space assigned to Integra Telecom customers is non-portable. This means if a customer should ever cancel service with Integra Telecom, these addresses must be returned to Integra Telecom at the actual service termination date. All registered hosts on Integra's address space will also be removed from the ARIN WHOIS database and all root name servers. Integra Telecom recommends that a customer take steps to transition these hosts prior to service termination.

IV. Procedure for Obtaining Addresses

1. You must have a product service request in our systems. We cannot process requests of potential customers.
2. Determine your currently assigned IP network address(es).
3. Determine your current utilization of your addresses. You must have efficiently utilized 80% of your currently assigned IP network space before Integra Telecom will be able to make another IP assignment.
4. Estimate your IP network needs for the next three months. Integra Telecom cannot provide IP network space beyond your three-month needs.
5. Document exactly how you will use this new space in the next three months.
6. Request PTR Records for any Reverse DNS.

V. Examples of Acceptable Request Reasons:

1. **We require a /29 network**

Justification:

1. **FTP/DNS server**
2. **Web server (We are using name-based hosting for all websites on this server)**
3. **Web site that requires SSL (www.example.com)**
4. **Mail server (SMTP/POP3/IMAP4)**
5. **A firewall which needs two IP addresses for workstations/VPN services**

We have a total of 4 servers/devices with a total of 9 services requiring 6 distinct IP addresses.

We will be implementing all these services within one month of receiving the requested IP block.

Our present block of 127.0.0.0/30 on Circuit #3939213533 is presently 100% utilized and we will return this once the new block is configured.

This request would be accepted without any delay.



2. We require a /30 network

Justification:

- 1. Firewall**
- 2. Mail (SMTP/POP3/IMAP4) server**

We have a total of 2 servers/devices with a total of 4 services requiring 2 distinct IP addresses.

XYZ Companies is a new Integra Telecom customer and will implement these services the day our DSL is installed.

This request would be accepted without any delay.

VI. Examples of Unacceptable Request Reasons: (Actual reasons received from customers)

1. We require a /27 network

Our 4 Star Hotel Guests require actual Internet IP addresses for a number of IP services in addition to I.S.'s use.

This request does not give individual IP justification and does not take [RFC2050](#) into account. They also do not state any existing IPs or that they are a new customer. This was not approved.

2. We require a /27 network

16 on our Email server and 2 Web Pages not yet designed.

This request appears to request 16 IPs for a single email server and 2 IPs for web pages, which are not servers or services. This customer was eventually given 1 IP for their mail server and one for their web server using virtual hosting; however there was a delay to communicate back and forth the actual needs and information.

3. XY Corporation Tech Support Group requires PC Anywhere on each workstation for remote support.

The policy above specifically does not allow IPs to be assigned to workstations for administrative ease. Additionally, this does not have any information about current services, etc. This request was not accepted.

4. Please give us 8 IP addresses for our eight security cameras.

The firewall or router should be configured with 1 IP address that will put each camera on a different TCP/IP port. Each TCP/IP port will then use static ingress NAT to reach an internal IP network such as 192.168.0.0/16 ([RFC1918](#)).