4. IPv4

4.1. General Principles

~~4.1.1. Routability~~

~~Provider independent (portable) addresses issued directly from ARIN or other Regional Registries are not guaranteed to be globally routable. Therefore, ISPs should consider the following order of priority when requesting IP address space:~~

~~* Request IP address space from upstream provider~~
~~* Request IP address space from provider's provider~~
~~* Request IP address space from ARIN (not guaranteed to be globally routable)~~

~~4.1.2., 4.1.3., 4.1.4. [Section Number Retired]~~

~~4.1.5. Determination of IP address allocation size~~

~~Determination of IP address allocation size is the responsibility of ARIN.~~

4.1.1 Determination of resource requests

Determining the validity of the amount of requested IP address resources is the responsibility of ARIN.

4.1.2 ~~4.1.6.~~ Aggregation

In order to preserve aggregation, ARIN attempts to issue blocks of addresses on appropriate "CIDR-supported" bit boundaries. ARIN may reserve space to maximize aggregation possibilities until the implementation of section 10.4.2.2, at which time ARIN will make each allocation and assignment as a single continuous range of

addresses.

~~4.1.7. RFC 2050~~

~~ARIN takes guidance from allocation and assignment policies and procedures set forth in RFC 2050. These guidelines were developed to meet the needs of the larger Internet community in conserving scarce IPv4 address space and allowing continued use of existing Internet routing technologies.~~

4.1.3 ~~4.1.8.~~ Unmet requests

In the event that ARIN does not have a contiguous block of addresses of sufficient size to fulfill a qualified request, ARIN will provide the requesting organization with the option to specify the smallest block size they'd be willing to accept, equal to or larger than the applicable minimum size specified elsewhere in ARIN policy. If such a smaller block is available, ARIN will fulfill the request with the largest single block available that fulfills the request. If no such block is available, the organization will be provided the option to be placed on a waiting list of pre-qualified recipients, listing both the block size qualified for and the smallest block size acceptable.

Repeated requests, in a manner that would circumvent 4.1.6, are not allowed: an organization may only receive one allocation, assignment, or transfer every 3 months, but ARIN, at its sole discretion, may waive this requirement if the requester can document a change in circumstances since their last request that could not have been reasonably foreseen at the time of the original request, and which now justifies additional space. Qualified requesters whose request cannot be immediately met will also be advised of the availability of the transfer mechanism in section 8.3 as an alternative mechanism to obtain IPv4 addresses.

4.1.3.1 ~~4.1.8.1.~~ Waiting list

The position of each qualified request on the waiting list will be determined by the date it was approved. Each organization may have one approved request on the waiting list at a time.

4.1.3.2 ~~4.1.8.2.~~ Fulfilling unmet needs

As address blocks become available for allocation, ARIN will fulfill requests on a first-approved basis, subject to the size of each available address block and a timely re-validation of the original request. Requests will not be partially filled. Any requests met through a transfer will be considered fulfilled and removed from the waiting list.

4.1.4 ~~4.1.9.~~ Returned IPv4 Addresses

Until a global policy which clearly defines a mechanism for the re-allocation of IPv4 addresses returned to the IANA is adopted by all five regions and implemented at the IANA; all IPv4 addresses returned to, recovered, or revoked by ARIN will be made available for allocation or assignment in the ARIN region as quickly as practicable.

~~4.2. Allocations to ISPs (Requirements for Requesting Initial Address Space)~~

4.2 Resource Requirements

~~4.2.1. Principles~~

4.2.1 ~~4.2.1.1.~~ Purpose

~~ARIN allocates blocks of IP addresses to ISPs for the purpose of reassigning that space to their customers.~~

ARIN provides blocks of IP addresses to network operators for the purpose of using these resources on their network.

4.2.2 ~~4.2.1.2.~~ Annual Renewal

An annual fee for registered space is due by the anniversary date of the ISP's first allocation from ARIN. ISPs should take care to ensure that their annual renewal payment is made by their anniversary due date in accordance with the Registration Services Agreement. If not paid by the anniversary date, the address space may be revoked. Please review the Annual Renewal/Maintenance Fees Page for more details.

4.2.3 ~~4.2.1.3.~~ Utilization Rate

Utilization rate of address space is a key factor, among others, in determining address allocation.

~~4.2.1.4. Slow start~~

~~Because the number of available IP addresses on the Internet is limited, many factors must be considered in the determination of address space allocations. Therefore, IP address space is allocated to ISPs using a slow-start model. Allocations are based on justified need, not solely on a predicted customer base.~~

~~4.2.1.5. Minimum allocation~~

~~In general, ARIN allocates /20 and larger IP address prefixes to ISPs. If allocations smaller than /20 are needed, ISPs should request address space from their upstream provider. For multihomed ISPs, ARIN allocates /22 and larger IP address prefixes. If allocations smaller than /22 are needed, multihomed ISPs should request address space from their upstream provider.~~

4.2.4 ~~4.2.1.6.~~ Immediate need

If an ISP has an immediate need for address space, and can provide justification to show that the address space will be utilized within 30 days of the request, ARIN may

issue a block of address space, not larger than a /16 nor smaller than ARIN's customary minimum allocation, to that organization. These cases are exceptional.

~~4.2.2. Initial allocation to ISPs~~

~~4.2.2.1. Standard or non-multihomed~~

~~Organizations that do not meet the requirements described in the multihomed section below (Section 4.2.2.2) must satisfy the following requirements:~~

~~4.2.2.1.1. Use of /20~~

~~The efficient utilization of an entire previously allocated /20 from their upstream ISP. This /20 allocation may have been provided by an ISP's upstream provider(s), and does not have to be contiguous address space. The organization must meet the requirement of efficient use of 16 /24s. For example, if an organization holds a smaller allocation, such as 12 /24s, from its upstream provider, the organization would not meet the minimum utilization requirements of a /20.~~

~~4.2.2.1.2. Efficient utilization~~

~~Demonstrate efficient use of IP address space allocations by providing appropriate documentation, including assignment histories, showing their efficient use. ISPs must provide reassignment information on the entire previously allocated block(s) via SWIP or RWhois server for /29 or larger blocks. For blocks smaller than /29 and for internal space, ISPs should provide utilization data either via SWIP or RWhois server or by providing detailed utilization information.~~

~~4.2.2.1.3. Three months~~

~~Provide detailed information showing specifically how a /20 will be utilized within three months.~~

~~4.2.2.1.4. Renumber and return~~

~~ISPs receiving a new /20 may wish to renumber out of their previously allocated space. In this case, an ISP must use the new /20 to renumber out of that previously allocated block of address space and must return the space to its upstream provider.~~

~~4.2.2.2. Multihomed~~

~~When prefixes are allocated which are smaller than /20, they will be from a block reserved for that purpose. In order to receive an initial allocation from ARIN, organizations applying under the multihomed policy must:~~

~~* When requesting a /22, demonstrate the efficient utilization of a minimum contiguous or noncontiguous /23 (two /24s) from an upstream.~~
~~* When requesting a /21, demonstrate the efficient utilization of a minimum contiguous or noncontiguous /22 (four /24s) from an upstream.~~
~~* When requesting a /20, demonstrate the efficient utilization of a minimum contiguous or noncontiguous /21 (eight /24s) from an upstream.~~

~~4.2.2.2.1. Efficient utilization~~

~~Provide reassignment information for /29 and larger blocks using the Shared Whois Project (SWIP) or by providing the same information fields in an RWhois server. If additional address space is later requested, this information must be available at the time of the request. Utilization for blocks smaller than /29 can be documented via SWIP or RWhois server or by providing detailed utilization information.~~

~~4.2.2.2.2. Three months~~

~~Provide information showing that the requested IP address space will be utilized within three months and demonstrating an intent to announce the requested space in a multihomed fashion.~~

~~4.2.2.2.3. Renumber and return~~

~~Agree that the newly requested IP address space will be used to renumber out of the current addresses which will be returned to their upstream provider(s).~~

~~4.2.2.2.4. Additional requests following the initial allocation~~

~~To receive additional address space following the initial allocation, multihomed organizations must have returned the original IP address space to its provider in its entirety and must provide justification for a new allocation as described above in the section titled Requirements for Requesting Initial Address Space.~~

4.2.5 Minimum Size and Utilization

A /24 is the minimum sized block to be provided to a multi-homed network.

A /22 is the minimum sized block to be provided to a single-homed network.

Through appropriate documentation like reassignment information of blocks from an upstream provider, or other means requested by ARIN, it must be shown how an initial block would be 80% utilized within three months. It should be agreed upon that the newly requested IP address space will be used to renumber out of any current addresses, which will be returned to their upstream provider(s). Blocks smaller than the minimum should be obtained from an upstream provider.

4.2.6 Subsequent Requests

All previously received IP address resources must be efficiently utilized, and at least 80% of their most recent IP block(s) in order to obtain approval of receiving up to an additional 12-month supply of IP address resources.

4.2.7. Non-connected Networks (original text)

End-users not currently connected to an ISP and/or not planning to be connected to the Internet are encouraged to use private IP address numbers reserved for non-connected networks (see RFC 1918 </knowledge/rfc/rfc1918.txt>). When private, non-connected networks require interconnectivity and the private IP address numbers are ineffective, globally unique addresses may be requested and used to provide this interconnectivity.

4.2.8 ~~4.2.3.~~ Reassigning Address Space to Customers

4.2.8.1 ~~4.2.3.1.~~ Efficient utilization

ISPs are required to apply a utilization efficiency criterion in providing address space to their customers. To this end, ISPs should have documented justification available for each reassignment. ARIN may request this justification at any time. If justification is not provided, future receipt of allocations may be impacted.

4.2.8.2 ~~4.2.3.2.~~ VLSM

To increase utilization efficiency of IPv4 address space, ISPs reassigning IP address space to their customers should require their customers to use variable length subnet mask (VLSM) and classless technologies (CIDR) within their networks. ISPs should issue blocks smaller than /24 wherever feasible.

4.2.8.3 ~~4.2.3.3.~~ Contiguous blocks

IP addresses are allocated to ISPs in contiguous blocks, which should remain intact. Fragmentation of blocks is discouraged. To avoid fragmentation, ISPs are encouraged to require their customers to return address space if they change ISPs. Therefore, if a customer moves to another service provider or otherwise terminates a contract with an ISP, it is recommended that the customer return the network addresses to the ISP and renumber into the new provider's address space. The original ISP should allow sufficient time for the renumbering process to be completed before requiring the address space to be returned.

4.2.8.4 ~~4.2.3.4.~~ Downstream customer adherence

ISPs must require their downstream customers to adhere to the following criteria:

4.2.8.4.1 ~~4.2.3.4.1.~~ Utilization

Reassignment information for prior allocations must show that each customer meets the 80% utilization criteria and must be available via SWIP / RWhois prior to your issuing them additional space.

4.2.8.4.2 ~~4.2.3.4.2.~~ Downstream ISPs

Customers must follow ARIN policy for ISPs.

4.2.8.5 ~~4.2.3.5.~~ ARIN approval of reassignments/reallocations

4.2.8.5.1 ~~4.2.3.5.1.~~ /18

All extra-large ISPs making reassignments of a /18 or larger to a customer must first have these reassignments reviewed and approved by ARIN.

4.2.8.5.2 ~~4.2.3.5.2.~~ /19

Small to large ISPs making customer reassignments of a /19 or larger must first seek ARIN's approval.

4.2.8.5.3 ~~4.2.3.5.3.~~ Required documentation for pre-approval requests

* Network engineering plans - Network engineering plans including subnets, host counts, and hosts per subnet, with projected utilization rates and associated confidence levels of those projections for one and two years,
* Deployment schedule - Deployment schedule for the network, including major milestones for each subnet,
* Network topology diagrams.

4.2.8.6 ~~4.2.3.6.~~ Reassignments to multihomed downstream customers

Under normal circumstances an ISP is required to determine the prefix size of their reassignment to a downstream customer according to the guidelines set forth in RFC 2050. Specifically, a downstream customer justifies their reassignment by demonstrating they have an immediate requirement for 25% of the IP addresses being assigned, and that they have a plan to utilize 50% of their assignment within one year of its receipt. This policy allows a downstream customer's multihoming requirement to serve as justification for a /24 reassignment from their upstream ISP, regardless of host requirements. Downstream customers must provide contact information for all of their upstream providers to the ISP from whom they are requesting a /24. The ISP will then verify the customer's multihoming requirement and may assign the customer a /24, based on this policy. Customers may receive a /24 from only one of their upstream providers under this policy without providing additional justification. ISPs may demonstrate they have made an assignment to a downstream customer under this policy by supplying ARIN with the information they collected from the customer, as described above, or by identifying the AS number of the customer. This

information may be requested by ARIN staff when reviewing an ISP's utilization during their request for additional IP addresses space.

4.2.8.7 ~~4.2.3.7.~~ Registration

ISPs are required to demonstrate efficient use of IP address space allocations by providing appropriate documentation, including but not limited to assignment histories, showing their efficient use.

4.2.8.7.1 ~~4.2.3.7.1.~~ Reassignment Information

Each IPv4 assignment containing a /29 or more addresses shall be registered in the WHOIS directory via SWIP or a distributed service which meets the standards set forth in section 3.2. Reassignment registrations shall include each client's organizational information, except where specifically exempted by this policy.

4.2.8.7.2 ~~4.2.3.7.2.~~ Assignments visible within 7 days

All assignments shall be made visible as required in section 4.2.3.7.1 within seven calendar days of assignment.

4.2.8.7.3 ~~4.2.3.7.3.~~ Residential Subscribers

4.2.8.7.3.1 ~~4.2.3.7.3.1.~~ Residential Market Area

In most cases, ISPs that have residential subscribers assign address space to their access infrastructure to which their customers connect rather than to individual subscribers. This assignment information regarding each market area holding an address block should be entered via SWIP (or by using RWhois) with the network name used to identify each market area. Initial allocations are based on total number of homes that could purchase the service in a given market area.

Using SWIP or RWhois, residential access ISPs must show that they have reassigned at least 80% of their current address space, with a 50 to 80% utilization rate, in order to request additional addresses.

Each assignment to a specific end-user (if holding /29 and larger blocks) requires the submission of a SWIP or use of an RWhois server. Requesters will also be asked to provide detailed plans for use of the newly requested space.

4.2.8.7.3.2 ~~4.2.3.7.3.2.~~ Residential Customer Privacy

To maintain the privacy of their residential customers, an organization with downstream residential customers holding /29 and larger blocks may substitute that organization's name for the customer's name, e.g. 'Private Customer - XYZ Network', and the customer's street address may read 'Private Residence'. Each private downstream residential reassignment must have accurate upstream Abuse and Technical POCs visible on the WHOIS directory record for that block.

4.2.8.8 ~~4.2.3.8.~~ Reassignments for Third Party Internet Access (TPIA) over Cable

IP addresses reassigned by an ISP to an incumbent cable operator for use with Third Party Internet Access (TPIA) will be counted as fully used once they are assigned to equipment by the underlying cable carrier provided they meet the following requirements:

* initial assignments to each piece of hardware represent the smallest subnet reasonably required to deploy service to the customer base served by the hardware
* additional assignments to each piece of hardware are made only when all previous assignments to that specific piece of hardware are at least 80% used and represent a three month supply
* IP allocations issued through 4.2.3.8 are non-

transferable via section 8.3 and section 8.4 for a period of 36 months. In the case of a section 8.2 transfer the IP assignment must be utilized for the same purpose or needs based justification at a rate consistent with intended use.

~~4.2.4. ISP Additional Requests~~

~~4.2.4.1. Utilization percentage (80%)~~

~~ISPs must have efficiently utilized all previous allocations and at least 80% of their most recent allocation in order to receive additional space. This includes all space reassigned to their customers. Please note that until your prior utilization is verified to meet the 80% requirement, ARIN can neither process nor approve a request for additional addresses.~~

~~4.2.4.2. Return address space as agreed~~

~~Return prior address space designated for return as agreed.~~

~~4.2.4.3. Subscriber Members Less Than One Year~~

~~Provide detailed information showing specifically that the address space will be utilized within three months. Determination of the appropriate allocation to be issued is based on efficient utilization of space within this three-month time frame.~~

~~4.2.4.4. Subscriber Members After One Year~~

~~After an organization has been a subscriber member of ARIN for one year, they may choose to request up to a 12-month supply of IP addresses.~~

~~When ARIN receives its last /8, by IANA implementing section 10.4.2.2, the length of supply that an~~

organization may request will be reduced. An organization may choose to request up to a 3-month supply of IP addresses.

4.2.5. Web Hosting Policy

When an ISP submits a request for IP address space to be used for IP-based web hosting, it will supply (for informational purposes only) its technical justification for this practice. ARIN will analyze this data continuously, evaluating the need for future policy change.

4.2.6. [Section Number Retired]

4.3. End-users - Assignments to end-users

4.3.1. End-users

ARIN assigns blocks of IP addresses to end-users who request address space for their internal use in running their own networks, but not for sub-delegation of those addresses outside their organization. End-users must meet the requirements described in these guidelines for justifying the assignment of an address block.

4.3.2. Minimum assignment

4.3.2.1 Single Connection

The minimum block of IP address space assigned by ARIN to end-users is a /20. If assignments smaller than /20 are needed, end-users should contact their upstream provider.

4.3.2.2 Multihomed Connection

For multihomed end-users who demonstrate an intent to announce the requested space in a multihomed fashion to

two or more distinct ASNs not owned or controlled by the end-user, the minimum block of IP address space assigned is a /24. If assignments smaller than a /24 are needed, multihomed end-users should contact their upstream providers. When prefixes are assigned which are smaller than /20, they will be from a block reserved for that purpose so long as that is feasible.

4.3.3. Utilization rate

Utilization rate of address space is a key factor in justifying a new assignment of IP address space. Requesters must show exactly how previous address assignments have been utilized and must provide appropriate details to verify their one-year growth projection. The basic criteria that must be met are:

* A 25% immediate utilization rate, and
* A 50% utilization rate within one year.

A greater utilization rate may be required based on individual network requirements. Please refer to RFC 2050 for more information on utilization guidelines.

4.3.4. Additional considerations

End-users may qualify for address space under other policies such as Immediate need [4.2.1.6 <#four216>] or Micro-allocation [4.4 <#four4>].

4.3.5. Non-connected Networks

End-users not currently connected to an ISP and/or not planning to be connected to the Internet are encouraged to use private IP address numbers reserved for non-connected networks (see RFC 1918 </knowledge/rfc/rfc1918.txt>). When private, non-connected networks require interconnectivity and the private IP address numbers are ineffective, globally unique addresses may be requested and used to provide this interconnectivity.

~~4.3.6 Additional Assignments~~

~~4.3.6.1 Utilization Requirements for Additional Assignment~~

~~In order to justify an additional assignment, end-users must have efficiently utilized at least 80% of all previous assignments, and must provide ARIN with utilization details. The prefix size for an additional assignment is determined by applying the policies found in Section 4.3 of the NRPM.~~

4.3 ~~4.4.~~ Micro-allocation

ARIN will make IPv4 micro-allocations to critical infrastructure providers of the Internet, including public exchange points, core DNS service providers (e.g. ICANN-sanctioned root and ccTLD operators) as well as the RIRs and IANA. These allocations will be no smaller than a /24. Multiple allocations may be granted in certain situations.

Exchange point allocations MUST be allocated from specific blocks reserved only for this purpose. All other micro-allocations WILL be allocated out of other blocks reserved for micro-allocation purposes. ARIN will make a list of these blocks publicly available.

Exchange point operators must provide justification for the allocation, including: connection policy, location, other participants (minimum of two total), ASN, and contact information. ISPs and other organizations receiving these micro-allocations will be charged under the ISP fee schedule, while end-users will be charged under the fee schedule for end-users. This policy does not preclude exchange point operators from requesting address space under other policies.

ARIN will place an equivalent of a /16 of IPv4 address space in a reserve for Critical Infrastructure, as defined in section 4.4. If at the end of the policy term there is unused address space remaining in this pool,

ARIN staff is authorized to utilize this space in a manner consistent with community expectations.

ICANN-sanctioned gTLD operators may justify up to the equivalent of an IPv4 /23 block for each authorized new gTLD, allocated from the free pool or received via transfer, but not from the above reservation. This limit of a /23 equivalent per gTLD does not apply to gTLD allocations made under previous policy.

4.4 ~~4.5.~~ Multiple Discrete Networks

Organizations with multiple discrete networks desiring to request new or additional address space under a single Organization ID must meet the following criteria:

1. The organization shall be a single entity and not a consortium of smaller independent entities.
2. The organization must have compelling criteria for creating discrete networks. Examples of a discrete network might include:
    1. Regulatory restrictions for data transmission,
    2. Geographic distance and diversity between networks,
    3. Autonomous multihomed discrete networks.
3. The organization must keep detailed records on how it has allocated space to each location, including the date of each allocation.
4. When applying for additional internet address registrations from ARIN, the organization must demonstrate utilization greater than 50% of both the last block allocated and the aggregate sum of all blocks allocated from ARIN to that organization. If an organization is unable to satisfy this 50% minimum utilization criteria, the organization may alternatively qualify for additional internet address registrations by having all unallocated blocks of addresses smaller than ARIN's current minimum allocation size.
5. The organization may not allocate additional address space to a location until each of that location's address blocks are 80% utilized.
6. The organization should notify ARIN at the time of the request their desire to apply this policy to their account.

4.5 ~~4.6.~~ Amnesty and Aggregation Requests

4.5.1 ~~4.6.1~~ Intent of this policy

This policy is intended to allow the community and ARIN staff to work together with holders of address resources in the best interests of the community by facilitating the return of unused address space and the aggregation of existing space in a manner which is in the best interests of both parties.

All transactions under this policy must either create greater aggregation (a reduction in the number of prefixes) or the return of address space. Transactions should only be accepted under this policy if they are in the interests of the community (e.g. they improve aggregation or result in a net reclamation of space).

4.5.2 ~~4.6.2~~ No penalty for returning or aggregating

ARIN shall seek to make the return of address space as convenient and risk-free to the returning organization as possible. An organization with several non-contiguous blocks seeking to aggregate and return space at the same time should be accommodated if possible. If it is possible to expand one block, for example, to facilitate the return of other blocks, ARIN should do that.

4.5.3 ~~4.6.3~~ Return should not force renumbering

An organization shall be allowed to return a partial block of any size to ARIN. For any return larger than a /24, ARIN shall not require that the non-returned portion of the block be renumbered unless the returning organization wishes to do so.

4.5.4 ~~4.6.4~~ Timeframe for return

Any organization which is returning addresses under this policy shall negotiate with ARIN an appropriate timeframe in which to return the addresses after any new resources are received under this policy. In the case of a simple return, the timeframe shall be immediate. In the case where renumbering into new addresses out of existing addresses to be returned is required, the returning organization shall sign a contract with ARIN which stipulates a final return date not less than 6 months nor more than 18 months after the receipt of new addresses. If an organization misses this return date, but, ARIN believes the organization is working in good faith to complete the renumbering, ARIN may grant a single extension of 6-12 months as staff deems appropriate to the situation. Such an extension must be requested in writing (email to hostmaster@arin.net) by the organization at least 15 days prior to the original expiration date.

4.5.5 ~~4.6.5~~ RSA Required if new addresses received

Any organization which receives any additional addresses under this policy shall be required to sign an ARIN RSA which will apply to all new addresses issued and to any retained blocks which are expanded under this policy.

4.5.6 ~~4.6.6~~ Annual contact required

Any organization which participates in this policy shall be required to sign an agreement stipulating that ARIN will attempt contact at least once per year via the contact mechanisms registered for the organization in Whois. Should ARIN fail to make contact, after reasonable effort the organization shall be flagged as "unreachable" in Whois. After six months in "unreachable" status, the organization agrees that ARIN may consider all resources held by the organization to be abandoned and reclaim such resources. Should the organization make contact with ARIN prior to the end of the aforementioned six month period and update their contact information appropriately, ARIN shall remove the "unreachable" status and the annual contact cycle shall continue as normal. If the

organization pays annual fees to ARIN, the payment of annual fees shall
be considered sufficient contact.

4.6 ~~4.7.~~ Aggregation Requests

If an organization, whether a member or non-member, ISP or end-user, relinquishes a group of portable, non-aggregatable address blocks to ARIN, they shall be allowed to receive a block in exchange, /24 or larger, but no more than the largest block that could contain all of the returned blocks. Exchanged space shall be returned within 12 months. If the gain in the number of addresses is greater than 4096, the aggregation request must be evaluated by the ARIN in accordance with the current IPv4 allocation policy. If all of the previous address blocks were maintained in the ARIN database without maintenance fees, the replacement space shall be as well, but if any one of the returned blocks had associated maintenance fees, then the replacement block shall also be subject to maintenance fees.

~~4.8. [Section Number Retired]~~

~~4.9 Minimum Allocation in the Caribbean Region~~

~~The minimum IPv4 allocation size for ISPs from the Caribbean and North Atlantic Islands sector of the ARIN region is /22.~~

~~4.9.1. Allocation Criteria~~

~~* The requesting organization must show the efficient utilization of an entire previously allocated /22 from their upstream ISP. This allocation (/22) may have been provided by an ISP's upstream provider(s), and does not have to be contiguous address space. The organization must meet the requirement of efficient use of 4 /24s.~~
~~* Utilization Reporting and Justification. All other ARIN policies regarding the reporting of justification information for the allocation of IPv4 and IPv6 address~~

~~space will remain in effect.~~

4.7 ~~4.10~~ Dedicated IPv4 block to facilitate IPv6 Deployment

When ARIN receives its last /8 IPv4 allocation from IANA, a contiguous /10 IPv4 block will be set aside and dedicated to facilitate IPv6 deployment. Allocations and assignments from this block must be justified by immediate IPv6 deployment requirements. Examples of such needs include: IPv4 addresses for key dual stack DNS servers, and NAT-PT or NAT464 translators. ARIN staff will use their discretion when evaluating justifications.

This block will be subject to a minimum size allocation of /28 and a maximum size allocation of /24. ARIN should use sparse allocation when possible within that /10 block.

In order to receive an allocation or assignment under this policy:

1. the applicant may not have received resources under this policy in the preceding six months;
2. previous allocations/assignments under this policy must continue to meet the justification requirements of this policy;
3. previous allocations/assignments under this policy must meet the utilization requirements of end user assignments;
4. the applicant must demonstrate that no other allocations or assignments will meet this need;
5. on subsequent allocation under this policy, ARIN staff may require applicants to renumber out of previously allocated / assigned space under this policy in order to minimize non-contiguous allocations.