

Abilene ITN Documentation

Version 1.3
28 September 2000

1.0 Introduction

This document references the document "International Transit Networks (ITN) Service and Policy" v1.1 dated 27 September 2000. It is intended to provide specific information about the policies and implementation of ITN service by one ITN provider (Abilene).

2.0 Abilene ITN Service Policy

As a participating ITN provider, the Abilene ITN Policy allows any of Abilene's non-US peer networks to transit the Abilene network to any other of Abilene's non-US peer networks. To become an Abilene peer network, a National Research Network (NRN) must serve a community that is engaged in Internet2 under the cover of a Memorandum of Understanding (MoU), and the NRN must complete an Interconnection Agreement with Abilene. For example, APAN has a MoU with Internet2, and TransPAC/APAN and Abilene have completed an Interconnection Agreement to serve the APAN community.

3.0 Abilene ITN Service Reach

3.0.1 NRNs eligible to participate in Abilene ITN Service

NRNs eligible to participate in Abilene ITN Service have signed an Abilene Interconnection Agreement *and* connect with Abilene at the STAR TAP ATM service, at an Abilene Router Node, or via an Abilene Connector (e.g., CalREN2, the South Florida gigaPoP).

3.0.2 NRNs reachable via the Abilene ITN Service

NRNs reachable via the Abilene ITN Service have signed an Interconnection Agreement with Abilene *and* participate in the Abilene ITN Service. NRNs reachable via the Abilene ITN Service need not be connected directly to Abilene via an Abilene Router Node, through an Abilene Connector or via the STAR TAP ATM switch. For example, a NRN connected to CANet3 that has signed an Interconnection Agreement with Abilene and participates in CANet3's ITN Service would be reachable via the ITN Service as provided by Abilene and CANet3.

A current list of Abilene peer networks is kept at <http://www.internet2.edu/abilene/html/peernetworks.html>. After 16 October 2000 (the deadline by which all current Abilene peers must notify the Abilene NOC if they wish not to participate in Abilene's ITN Service) a list will be kept at the same site that indicates which Abilene peer networks are participating in - and are therefore reachable via - the ITN service.

4.0 Abilene ITN Service Implementation

4.0.1 NRNs eligible to participate in Abilene ITN Service

NRNs eligible to participate in the Abilene ITN Service (see 3.0.1) will notify the Abilene NOC (noc@abilene.iu.edu) whether or not they wish to participate in the Abilene ITN Service by 16

October 2000. If no notification is received, the peer network will be designated as a participant in Abilene's ITN service.

The Abilene NOC will color routes of NRNs participating in Abilene's ITN service with the BGP community tag 11537:2501. Routes from Abilene peers who notify the NOC that they will not participate in Abilene's ITN service will be tagged with 11537:2500.

NRNs that choose to participate in Abilene's ITN Service will receive announcements from:

- all NRNs tagged by Abilene with 11537:2501
- all NRNs tagged by CANet3 with 6509:2501 that also have Interconnection Agreements with Abilene
- all NRNs tagged by the STAR TAP router with 10764:2501 that also have Interconnection Agreements with Abilene** (see section 5.0.1)

NRNs that choose to participate in Abilene's ITN Service will have their routes announced to:

- all NRNs tagged by Abilene with 11537:2501
- all NRNs tagged by CANet3 with 6509:2501 that also have Interconnection Agreements with Abilene
- all NRNs tagged by the STAR TAP router with 10764:2501 that also have Interconnection Agreements with Abilene** (see section 5.0.1)

Abilene peers that notify the Abilene NOC that they do not wish to participate in Abilene's ITN Service will only have their routes announced to Abilene participants and only receive announcements from Abilene participants (i.e., no change).

4.0.2 Abilene efforts to coordinate with other ITN providers

As described in the ITN document, Abilene will work to coordinate processes for notifying and being notified by other ITN providers about which NRNs are reachable on Abilene and via other ITN providers. Abilene will notify both CANet3 and STAR TAP about new NRNs with whom it has signed Interconnection Agreements and whether that NRN chooses to participate in the Abilene ITN Service. Likewise, Abilene will be notified by STAR TAP and CANet3 about their new peers and, if appropriate, work to put in place an Interconnection Agreement between Abilene and those new peers in order that they may both reach Abilene ITN Service participants and be reachable by Abilene ITN Service participants.

Clearly, it will not be necessary to have direct connectivity to the Abilene network in order to sign an Interconnection Agreement with Abilene. Interconnection Agreements signed by NRNs using direct access via STAR TAP or CANet3 will indicate such in Appendix C of the Interconnection Agreement.

5.0 Other Notifications regarding Abilene ITN Service

***5.0.1 Abilene peering policy with the STAR TAP router*

Because Abilene strongly prefers to establish direct peering with NRNs present at STAR TAP via VC over the STAR TAP ATM switch, Abilene does not, generally, peer with the STAR TAP router. Therefore, NRNs choosing to participate in the STAR TAP ITN service and achieve

connectivity to Abilene may be asked to utilize the STAR TAP ATM switch instead of the STAR TAP router to access Abilene. At that point, the NRN would be considered an Abilene peer and could choose to participate in the Abilene ITN Service in order to reach other Abilene non-US peer networks.

5.0.2 ITN reach to Abilene's US NRN peers (ESNET, NISN, NREN, DREN, vBNS)

In the initial phase, US-based NRNs have not been included in the ITN transit service policy and implementation. However, we are continuing discussions with these networks to determine their interest in participation and we expect this policy may change in the future.