Acceptable Usage Policy determines the conditions under which use of PERN for academic and research purposes may be considered as acceptable and unacceptable.

Acceptable Usage Policy

Pakistan Education & Research Network (PERN)

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1 GENERAL

Pakistan Education and Research Network (PERN) is a part of the overall vision and objectives of IT Action Plan of Government of Pakistan which was launched by the then Minister of Science & Technology. At the time of its inception, the project was jointly financed by the Ministry of Science & Technology, Government of Pakistan and PTCL (Pakistan Telecommunication Company Limited) Research & Development Funds. The network was designed by PTCL and handed over to NTC (National Telecommunication Corporation) for operations and maintenance, however it was managed by Higher Education Commission of Pakistan.

PERN focuses on collaborative research, knowledge sharing, resource sharing and distance learning by connecting people through the use of intranet and internet resources. It offers true packet switched network which is required for research and collaboration in areas like VoIP, grid computing, high energy physics, telemedicine, research related video and image exchange, enterprise level video conferencing.

PERN is a highly resilient network and the availability is ensured through a dedicated NOC which provides network operations and services on 24x7x365 basis. PERN provides special services like dedicated R&E link, 1Gbps intranet connectivity to each university/ institute, MPLS Layer3 VPN, MPLS Layer2 VPN (VLL-PWE3), VPLS, IPv4 Multicast, IPv6 Multicast, Transit AS and also ordinary services like Internet, IPv4, IPv6, Reverse DNS, Network Monitoring Services etc.

2 BACKGROUND

The project is aimed towards establishing an integral part of the overall education system of the country and is designed to interlink all public/ private sector higher education institutes (HEIs) registered with Higher Education Commission, Pakistan and other organizations/ institutes having relevance to education and research. The interconnectivity of all these organizations/ institutes will empower its users in establishing integrated data banks, collaboration for research and development, and uplifting the overall standard of teaching, learning, and research across the country as per the international norms.

Initially, the network was comprised of a backbone network connecting main hub locations in Islamabad, Lahore and Karachi. From these main hub, radial spur circuits were extended to numerous higher education institutes throughout the country. However in 2006, second phase of the project was launched by Higher Education Commission as "PERN 2" with an aim to transform the network as per international practices; whereby the network is designed, developed, operated, maintained, and managed by the partner institutions. For this, the PERN2 was designed to establish PoPs (Point of Presence) within the selected higher education institutions across the country and other institutions in vicinity are served through these PoPs in radial spurs. Moreover, in metro cities and per the needs, the network comprise of more than one PoP connected through fiber ring.

3   DEFINITIONS

3.1   **PERN** is the acronym of the **Pakistan Education & Research Network**. The revolutionary Pakistan Education & Research Network (PERN) is a nationwide educational communicational network connecting premier education and research institutes; and providing high-speed R&E, intranet as well as internet bandwidth across the country and to international networks.

3.2   **PERN Principal** is referred as the Higher Education Commission of Pakistan being the custodian of PERN.

3.3   **PERN services** are all those network and application services available to partner organizations on PERN infrastructure.

3.4   **PERN resources** are all those tangible and intangible assets, hardware equipment and software tools, as well as human workforce, involved in operating the PERN infrastructure and PERN services.

3.5   **NRENs** are National Research & Education Networks of countries around the world, e.g. MyREN (Malaysia), KOREN (Korea), UKERNA (UK), AARNET (Australia), Internet2 (USA), etc.

3.6   **Consortium of NRENs** is a network of NRENs interconnected to form a large community for collaboration for education and research, e.g. TEIN (TransEurasia Information Network), GEANT (Pan-European Advanced Network), etc.

3.7   **Partner Organization** refers to all organizations getting R&E services from PERN and contributing towards sustainability of this network.

3.8   **HEIs** refer to higher education institutions both public and private sector universities, centers of excellence, affiliated colleges, degree/ postgraduate colleges, etc.

3.9   **Last Mile Connection** is a connectivity between organization and nearest circuit termination point to take the traffic further to PERN aggregation points or host organization.

3.10   **International traffic** is the traffic between the PERN and any other international Public network (Internet).

3.11   **R&E traffic** of the NRENs is the traffic between the PERN and any other NRENs or network of NRENs of the world.

3.12   **Packaged Digital Resources** are a set of services provided by PERN to its users for example digital library, Video conferencing etc.

4   PURPOSE OF DOCUMENT

The Acceptable Usage Policy (AUP) document determines what are considered acceptable and unacceptable use of the national and international academic and research network, and/ or any other network through PERN.

This AUP is applicable to and so shall be taken into consideration by all users of the PERN resources. It is the responsibility of the users of the PERN resources and user communities of the PERN that the PERN resources are utilized in an acceptable manner and in accordance with this AUP.

It is the responsibility of NRENs to ensure that members of their own user communities access PERN resources in an acceptable manner and in accordance with this AUP. As far as the coverage of the involved rules and regulations are concerned, this AUP shall be applicable in case of all types of digital traffic as referred above.

5   TRAFFIC CATEGORIZATION

5.1   In view of this document, the following PERN traffic categories are taken into consideration

   a) **Research and Education (R&E) traffic** is any digital traffic directly related to research and/or education, and flowing between research and education organizations or between NRENs or Consortium of NRENs.
   b) **Commodity Traffic** is any digital traffic directly related to research and/or education, and flowing between a research and/or education organization and a non-research and/or education organization.
   c) **Commercial Traffic** is any digital traffic not belonging to the categories of R&E traffic or commodity traffic. Any traffic is practically considered commercial traffic if it is flowing between organizations that are neither research nor education in nature.
   d) **High Performance Research and Education (HP-R&E)** traffic is R&E traffic between/ among a small subset of research and education organizations requiring high performance network services.

6   USERS CLASSIFICATION

6.1   **Users of the PERN resources** are both the users of the Partner Organizations connected to the PERN, and the individual users of any outside networks accessing the network services offered by PERN.

   6.1.1   Users of the Partner Organization are further classified based on the level of national security concerns relating to Partner Organization.

   6.1.2   Partner Organizations are categorized in three (03) levels with respect to network and information security sensitivity, i.e.

a) Category – A: Organizations identified as strategic organizations;

b) Category – B: Organizations to ensure advanced level security;

c) Category – C: Organizations to maintain minimum recommended security.

6.2 **User communities of the PERN** are the communities consisting of users relating to the research, education, and public digital collection sectors; and possibly are non-profit organizations.

6.3 For the purpose of this AUP, following PERN users' classifications are defined;

   a) Users of higher education institutions (i.e. universities, colleges, etc.) networks.
   b) Users of public sector research and education organizations' network.
   c) Users of Networks of ministries and public organizations directly related to education and research, e.g. Ministries of Education, Science & Technology, IT &Telecom, etc.
   d) Users of networks of public digital collections/ archives, libraries, as well as research and development departments of other not-for-profit organizations.

7 ACCEPTABLE USE

The purpose of PERN is to support interworking, teaching, learning and research within the PERN community and to serve the user communities of the PERN in their activities related to research and education, as well as to their management, administration, and information oriented tasks. Following are considered amongst the acceptable use of PERN;

7.1 Using the PERN resources and generating traffic so that that usage and traffic are serving the purpose of the academic and research activities over PERN.

7.2 Any user of the PERN resources may use the PERN infrastructure and services for the purpose of generating R&E traffic and HP-R&E traffic with other users within the PERN user communities and with the organizations attached to networks that are reachable via networking agreements operated by PERN.

7.3 Use of PERN infrastructure for generating commodity traffic is also acceptable, provided;

   a) such traffic is permissible as per rules and policies defined by Government of Pakistan through Pakistan Telecommunication Authority, Ministry of IT & Telecom;
   b) provisions for such commodity traffic are duly made by the PERN and the related NRENs;
   c) such traffic is agreed by the related user communities outside the PERN.

7.4 The use of the PERN and generating internet traffic and traffic of/ to NRENs are accepted for any applications with an exception for those as explicitly identified as "Unacceptable Use" in this document.

7.5 Users accessing any other network through the PERN infrastructure and/ or services by

using the services of such other service provider, shall also be considered acceptable.

7.6   PERN resources may be used for any legally acceptable and valid activities that are in furtherance of PERN, and the aims and objectives of PERN user communities.

8   UNACCEPTABLE USE

8.1   It is not permitted to resell any of the bandwidth from PERN to any other organization(s).

8.2   It is not allowed to run or practice businesses like selling products, services, and advertising over the PERN infrastructure, except those which are indigenously developed or offered by the Organization and have in possession of legal rights to sell them.

8.3   Providing PERN infrastructure and services as Transit network is not permissible.

8.4   It is not permitted to use the PERN infrastructure for commercial traffic, i.e. to transfer data of which both the originator and the receiver are commercial entities and/ or non-eligible networks or their foreign counterparts.

8.5   The PERN infrastructure must not be used for any of the following:

a) Activities being in contradiction with the law of Pakistan and of PERN;
b) Transit traffic between users not belonging to the PERN user community;
c) Activities contradicting the rules and regulations of any national or international networks if receiving traffic from the PERN infrastructure, provided that these activities do affect these networks;
d) Forwarding services of the PERN infrastructure towards users outside the PERN user community;
e) Extensive utilization of PERN resources for personal/ private purposes;
f) Direct commercial activities for profit making, including any kinds of advertising material either to other users, or to organizations connected to PERN infrastructure or any NRENs, except those legally permissible;
g) Disturbing or obstructing, without any established reason, and in more than a minor extent, the work of any other users (e.g. spamming);
h) Activities hurting the personal rights of anybody; activities aiming at collecting forbidden income; hurting intellectual rights; consciously illegal distribution of software;
i) Any activity hurting or disturbing anybody, e.g. hurting the religious, ethnic, political or any other kinds of beliefs, characteristics, opinions, feelings, etc. of any other users;
j) The creation or transmission (other than for properly supervised and lawful research purposes) of any offensive, obscene or indecent images, data or other material, or any data capable of being resolved into obscene or indecent images or material;
k) The creation or transmission of material that is designed or likely to cause annoyance, inconvenience or needless anxiety;

l) The creation or transmission of defamatory material;

m) The transmission of material such that it infringes the copyright of another person or entity;

8.6 Deliberate activities with any of the following characteristics are also prohibited:

a) Activities disturbing or threatening normal operation of the PERN infrastructure;

b) Wasting staff effort or networked resources, including time on end systems accessibility via PERN infrastructure, and/ or the effort of staff involved in support of those systems;

c) Illegal accessing and/or illegal exploitation of PERN resources or any information accessible through the network;

d) Dissemination of any information or software being dangerous to the safety and security of the PERN infrastructure or any other network or entity or individual;

e) Any activity towards illegal alteration, damage or destroying PERN resources or any information accessible through the PERN infrastructure

f) Corrupting or destroying other users' data;

g) Violating the privacy of other users;

h) Disrupting the work of other users;

i) Any activity utilizing the network so that it causes extensive traffic burden to the infrastructure, without any well-established reason to such an extensive traffic level;

j) Using the PERN infrastructure in a way that denies service to other users (for example, deliberate or reckless overloading of access links or switching equipment, etc.);

k) Continuous use of any software, tools or hardware which has been identified and restricted by PERN being prohibited as causing distruption to proper functioning of PERN infrastructure or services, under this policy, or as per law/ rules/ policy of Government of Pakistan and/ or Security Agencies.

l) Other misuse of the PERN infrastructure or network resources, such as introduction of "viruses";

m) Any other activity which is considered as breach to network and information security of a network.

9 COMPLIANCE AND NON-CONFORMITY CLAUSES

9.1 It is the responsibility of Users of the PERN resources, User communities of the PERN and NRENs to ensure that their members use PERN resources in an acceptable manner and in accordance with this AUP; to take all reasonable steps to ensure compliance with the conditions set out in this AUP; and to ensure that unacceptable use of the PERN infrastructure and resources does not occur.

9.2 The Organization shall comply and ensure to avoid any such activities that may cause harm or damage to the PERN infrastructure and/or the PERN users or the country in general, and

to minimize the consequences of such harmful actions.

9.3 The Organization shall ensure to prevent accessing by non-authenticated users those information that are communicated or accessible through the network. For this, the PERN or PERN Principal cannot take liability for an eventuality, like with respect to any harm or damage due to the lack of satisfactory technical means. Thus the PERN users should store and/or transmit information through the network by taking into consideration the reasonable security measures.

9.4 Partner Organizations shall conform the minimum staff requirement corresponding to their category in context of network and information security as determined and recommended by PERN or as advised by relevant government organization or national security agencies.

9.5 It shall be the responsibility of the Partner Organization to properly maintain the logs of all kind of traffic and users access PERN resources through their network, in order to produce and provide the necessary information as requested by or through PERN.

9.6 In case of violation of the AUP, the PERN have the right, after proper formal warning, to suspend the connection of the offending network, until the later conforms to the policy.

9.7 Conscious, intentional and/or major violation of the AUP regulations shall be sanctioned by temporary or final disqualification of the related user(s), that is, exclusion from the PERN infrastructure.

9.8 In case of minor violation or in case of unconsciousness, the related user is to be warned and informed about the AUP rules and regulations. If after such a warning a repeated violation follows, this should be considered an intentional or malicious violation.

9.9 In case of any suspicion of violations to the AUP regulations, if necessary, the PERN Principal should turn, through PERN, to the involved partner organization, by asking them to investigate the issue and to take appropriate necessary action(s) and measures to overcome the issue. In investigating the eventual problems, the PERN Principal and the management of partner organizations shall co-operate.

9.10 Where violation of these conditions is illegal, or results in loss or damage to the PERN resources or the resources of a PERN or any other users outside the PERN user communities, the matter may be referred for legal action. If necessary, the PERN Principal may initiate such legal action(s).

10 REVISION IN POLICY

This policy shall be regularly reviewed for possible revision, if deem necessary, in any eventuality in PERN infrastructure, resources and services. Amended texts shall be approved by the PERN Principal and shall be made publically available.