

## User Acceptance form for AI Panini Services on Meghraj Cloud

Section 1: AI Panini – Text Translation API Based Services Contact Officials' details		
<b>1.1</b>	<b>Details of <i>Head of Division (Artificial Intelligence Resource Division, NIC)</i></b>	
	Name of the HOD	Sh. Mrityunjaya Singh
	Designation	Scientist F
	Ministry/ Department/ Organization/ Institution	National Informatics Centre
	Postal Address	National Informatics Centre. A-Block, Lodhi Road, CGO Complex New Delhi-110003
	Phone	011-24305505
	Email Id	mrityunjaya.s@nic.in
<b>1.2</b>	<b>Details of the <i>Contact Person for AI Panini</i></b>	
	Name	Sh. Usman
	Designation	Scientist B
	Ministry/ Department/ Organization/ Institution	NIC (MIETY)
	Postal Address	National Informatics Centre. A-Block, Lodhi Road, CGO Complex, New Delhi-110003
	Phone	011-24305747
	Email Id	Usman.94@nic.in
<b>1.3</b>	<b>Details of the <i>NIC Officer of Project Implementation Department integrating the API Services to the frontend application</i></b>	
	Name	
	Designation	
	Ministry/ Department/ Office/ Establishment	
	Postal Address	
	Phone	
	Email Id	
	Mobile	
<b>1.4</b>	<b>Details of the <i>key officer of Project Implementation Department to contact for Business Continuity Management</i></b>	
	Name	
	Designation	
	Ministry/ Department/ Office/ Establishment	
	Postal Address	
	Phone	
	Mobile	
	Email Id	

## Section 2: Category of the Organisation, Project Title, Project Start date etc.

### 2.1 Category of Organisation where Service is being Deployed

[Please select (✓) one of the boxes below to indicate category of the project for which the service request is being submitted.]

- ☐ eGovernance Project of **Central Government Ministries / Departments / Autonomous Institutions/PSUs**
- ☐ eGovernance Project of **State Government Ministries/Departments/ Autonomous Institutions of State Government or Union Territories**
- ☐ eGovernance Project of **Local Government entities - Districts / ULBs (City Corporations), Panchayats**
- ☐ eGovernance Project of **Supreme Court**
- ☐ eGovernance Project of **High Courts**
- ☐ eGovernance Project of **District Courts**
- ☐ **Parliament**

### 2.2 AI Service Title

#### AI Panini – Text Translation Services

To be made available on <https://dev.napix.gov.in/nic/ai/> on NAPIX (National API Exchange)

### 2.3 Brief Details of this AI Initiative

'Panini' (पाणिनि) is Text Translation as a Service' (TTaaS). Any user can avail this service by onboarding through Meghraj Cloud Service of NIC. This is a service for automatic translation of text from any of the below mentioned 22 scheduled Indic languages to English and vice versa. These are :

Assamese, Bengali, Bodo, Dogri, Konkani, Gujarati, Hindi, Kannada, Kashmiri (Arabic), Kashmiri (Devanagari), Maithili, Malayalam, Marathi, Manipuri (Bengali), Manipuri (Meitei), Nepali, Oriya, Punjabi, Sanskrit, Santali, Sindhi (Arabic), Sindhi (Devanagari), Tamil, Telugu

Additionally Text Translation Services can be augmented with Text Transliteration Services in any of the 20 Indic Languages (Assamese, Bengali, Bodo, Konkani, Gujarati, Hindi, Kannada, Kashmiri, Maithili, Malayalam, Marathi, Manipuri, Manipuri, Nepali, Oriya, Punjabi, Sanskrit, Sindhi, Tamil, Telugu, Urdu) to help user edit the content in that language using a English keyboard.

In addition to this, there is also provision for Translating from English to Braille for Visually Impaired citizens. So Text from any of the 22 mentioned Indic languages can be converted to English & then to Braille seamlessly through API based Services.

API Documentation for integration is being made available for Panini along with this manual. No text are stored in our servers.

### 2.4 Project Name, Details & URL where the AI service is being deployed

## 2.5 Text Translation Services Language Options for Panini that is required to be facilitated (Optional)

[Please select (✓) one of the boxes below to indicate category for which the service request is being submitted.]

- ☐ Assamese
- ☐ Bengali
- ☐ Bodo
- ☐ Dogri
- ☐ Konkani
- ☐ Gujarati
- ☐ Hindi
- ☐ Kannada
- ☐ Kashmiri
- ☐ Maithili
- ☐ Malayalam
- ☐ Marathi
- ☐ Manipuri
- ☐ Nepali
- ☐ Oriya
- ☐ Punjabi
- ☐ Sanskrit
- ☐ Santali
- ☐ Sindhi
- ☐ Tamil
- ☐ Telugu
- ☐ Urdu

## 2.7 AI Service Start date (Month and Year) of formal deployment in the Project

## 2.8 VM IPs of Frontend application to avail DC & DR & BCP facility (NICNET only VMs)

## Section 3: AI Service Overview

### 3.1 Brief overview of the AI service in terms of Objectives, Intended benefits and Current status

#### Objective

- To provide state of the art **Text Translation services** to various applications in different relevant domains.
- To Promote AI led governance.
- To develop suitable model pipelines for Text Translation/ Text Transliteration/ Text Transcription services
- To design suitable APIs to provide Text Translation and other related services and facilitate deployment in e-Governance application through service mode.
- To identify suitable use-cases to solve various problems using Text Translation and other related services.
- To design, develop and deploy various AI enabled solutions based on Text Translation to solve different e-Governance problems.

#### Benefits

1. Introduction of Cloud based AI Panini API services brings automation and helps in bringing efficiency in workflow and communication for augmenting decision making.

#### Current Status

- Translation API based backend AI Services are currently available over Meghraj cloud of NIC

### 3.2 Software environment for AI Panini API based Services backend including third party tools (HW, SW, Middleware), packages-integrated / deployed including name of Database etc.

#### HW:

Nvidia T4 Server: AI accelerator GPU server  
Virtual Machine: Ubuntu 500GB/16GB

#### SW:

NAPIX (National API exchange)  
Python web frameworks  
Deep learning frameworks- Pytorch, tensorflow etc.  
Analytics library  
Nvidia Triton Server  
Postgres DB  
Uvicorn web server  
Nginx  
Android

### 3.3 Formal certification with respect to Cyber Security & details of certifying agency

Cleared NIC Security Audit (Reference ID: NIC/CSD/IA/17914 ) dated : 21/07/2022  
Certifying agency: National Informatics Centre (NIC)

### 3.4 Strategy in place for Disaster Recovery and service continuity

**Multi-region deployment.**

Multi Node setup at NIC Delhi & West Bengal data center with service delivery via Kubernetes technology.

**Micro-service Architecture**

Services are independently manageable services. It can enable more and more services as the need arises. It minimizes the impact on existing service

**Containerized Environments**

Each service is run in isolated environment in replicas so that no other service is affected due to disruption in one service/replica

**Scaling Up and Down.**

Using container orchestration tools, service is automatically scaled up and down on demand

## Terms of Use

### [These terms of use need to be accepted by the user]

1. **Written Communication:** The user department should specify its requirements about requirement of AI Services / AI enabled solution for IT Applications preferably by formal communication in detail. The user department should provide feedback on the adopted models, documents, demonstrative systems, presentations etc., made by NIC.
2. **Default Clause:** In the absence of written feedback, it shall be presumed that the User has accepted the system designed by, NIC, and to save time and cost overruns no further feedback shall be considered.
3. **Data and Business Process Ownership:** AI inference process of NIC does not store user data, rather provides probabilistic inference on user input / data on the fly.
4. **Efficacy of AI Services:** AI based services are probabilistic in nature. The final output may vary due to quality and quantity of sample datasets used for AI model training or due to environmental conditions, as the case may be. NIC will not be held responsible for any damage or loss due to use of the AI services / AI enabled IT applications by the end user. End users are advised to plan the AI enabled IT solution keeping this aspect in mind.
5. **No Data Access to NIC:** NIC will not keep access right to the actual data inserted/generated in the AI Service / AI enabled IT Application of the User Department. The real-time actual implementation and operation of the IT Application will be the prime responsibility of the user department. The User Department shall nominate an officer who has complete and exclusive access to the stored data. This officer can be trained by the NIC Project Team for this purpose.
6. **Technical Artefact Ownership:**
  - i. NIC will own/hold the Intellectual Property Rights to and associated with all the artifacts developed/produced under this project and shall have the full right to modify the technical artifacts for own use and/or use by other Departments at all levels of Government.
  - ii. NIC shall have the rights to publicize and build its own brand image, to claim award(s)/felicitation(s) and submit related technical papers for its intellectual property..
  - iii. User will not have any rights or claims to change the artefacts by themselves, or any third party appointed by them.
7. **RTI queries:** All RTI queries related to use of the AI Service / AI enabled IT Application, and decision therefrom are to be answered by the User department. If any technical queries are there, NIC may provide inputs to the Nominated/ designated officer of the department, as technically feasible.
8. **Queries from law enforcement, auditing, and Regulatory Functionaries:** All queries from Government law enforcement, auditing, and regulatory agencies related to the use of AI service / AI enabled IT Application are to be answered by the User department. NIC shall not be responsible to answer any such queries. The User department should envisage the reports and output required from the AI enabled IT Application in advance, which will become part of the IT Application. NIC may help in the preparation of exceptional reports in the IT Application to answer such queries by the Nominated/ designated official of the User Department.
9. **Cleaning of Sample/test Data:** The NIC uses sample/test data for AI enabled IT Application engineering activities, it is the responsibility of the User to clean the sample data before go-live so that there will not be any harm or legal issues due to sample data.
10. **Indemnification:** NIC should be indemnified from all legal and associated consequences arising due to the usage of the AI enabled IT application.
11. **Sensitization of Govt. Laws. Acts/ Rules and Regulations:** The user department should give due consideration to sensitize themselves with existing various Government Laws/Acts/ Rules and Regulations such as IT Act 2000, IT Act 2008 (Amendment), IT Rules 2011, Aadhaar Act 2016, Digital Personal Data Protection Act 2023, Cyber Security Laws, Role of Cert-in, Sensitive Personal Data Information Rules and Privacy of Personal Data etc. issued by Government of India from time to time.

I, .....  
 designation ..... hereby declare on behalf of  
 Department/Organization.....  
 Ministry/State.....that I have gone through  
 the clauses mentioned herein i.e. Terms of Use (ToU) for using NIC AI / NIC ICT Services and in the  
 capacity of Project-in-charge/Nodal Officer undertake to abide by the above clauses i.e. 1 to 11 with  
 best of my belief and knowledge for the NIC AI Service / AI enabled IT Application  
 .....

**(Signature of Project In-charge/ Nodal Officer)**

**Official Stamp**

**Name:**

**Email ID:**

**Telephone:**

**Mobile No:**

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