

# DOMAIN NAME SYSTEM



Central DNS  
Management  
Portal  
Document

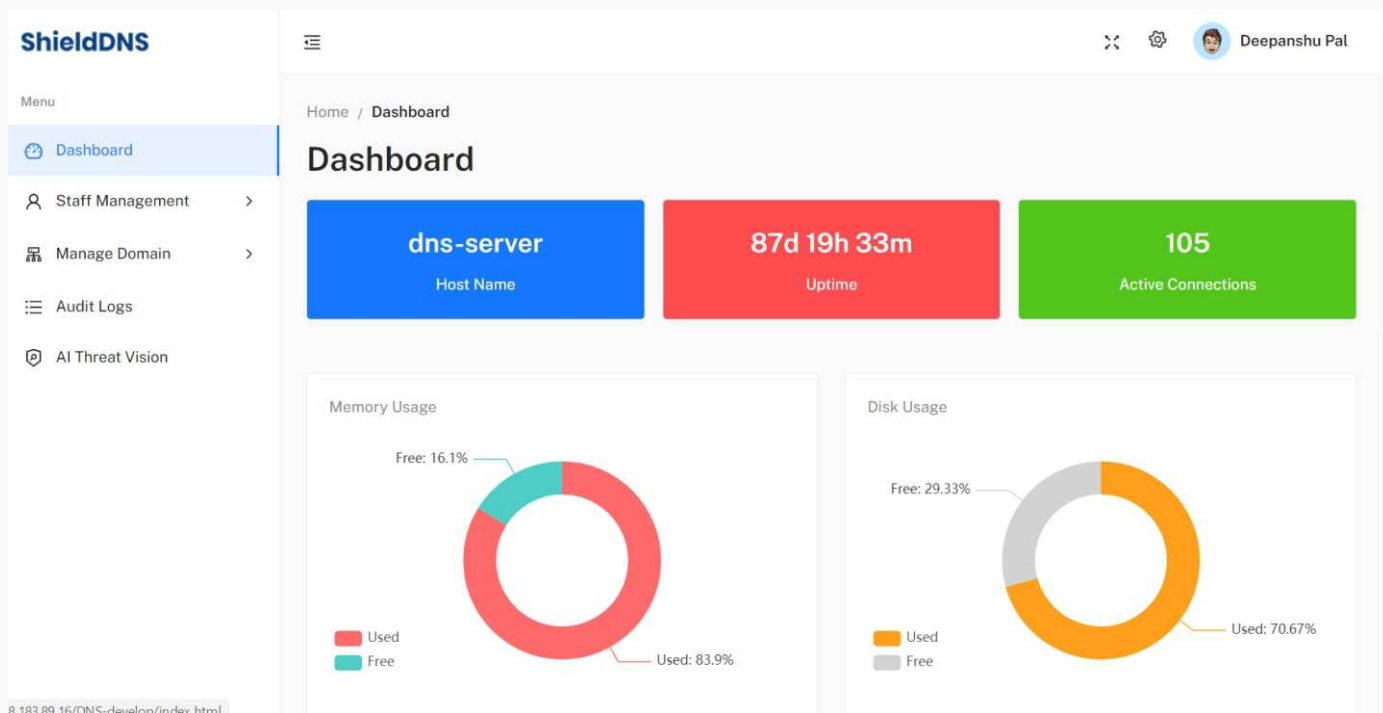


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## 1. FRONT-END DNS MANAGEMENT SOLUTION

The proposed DNS platform includes a comprehensive front-end solution that acts as the single pane of glass for all DNS management activities performed by authorized users. This web-based portal abstracts underlying infrastructure complexity and exposes only the validated workflows required for day-to-day operations such as zone administration, record management, policy configuration and monitoring.



## 2. COMPREHENSIVE FRONT-END TOOL

The front-end solution enables administrators and application owners to perform all required DNS management tasks through an intuitive GUI without direct access to the underlying appliances. From the portal, users can add, modify and delete domains and sub-domains, manage associated resource records, review system dashboards, examine audit logs and trigger operational workflows like backup or synchronization. All changes made via the front-end are validated, versioned and then propagated to the DNS service layer using secure APIs, ensuring consistency and traceability across the environment.

ShieldDNS
Deepanshu Pal

Menu

- Dashboard
- Staff Management
- Users
- Roles
- Password Policy
- Manage Domain
- Audit Logs
- AI Threat Vision

### User Management

Refresh Search + Add User

NAME	Role	MOBILE	Creation Date	ACTIONS
<b>BB</b> Bruce Banner hulksmash@gmail.com	Sales	9654566896	17-10-2025 05:00	<a href="#">Edit</a> <a href="#">Delete</a>
<b>DP</b> Deepanshu Pal deepansu.pal@advantal.net	SuperAdmin	9717825125	06-10-2025 07:40	<a href="#">Edit</a> <a href="#">Delete</a>
<b>DR</b> Desh Raj deshraj123@gmail.com	Admin	9856985695	14-10-2025 09:02	<a href="#">Edit</a> <a href="#">Delete</a>
<b>RS</b> Rahul Sharma deepkir.adva.net	SuperAdmin	9878676768	11-12-2025 05:29	<a href="#">Edit</a> <a href="#">Delete</a>
<b>RP</b> Ram Pal pansu.pal@advantaL.net	Manager	8978675456	11-12-2025 06:31	<a href="#">Edit</a> <a href="#">Delete</a>
<b>SR</b> Steave Rogers captainamerica@gmail.com	SuperAdmin	7896586325	17-10-2025 05:03	<a href="#">Edit</a> <a href="#">Delete</a>

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### User Information

First Name

Last Name

Mobile Number

Role

Email

Password

Submit Cancel

ShieldDNS
Deepanshu Pal

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- Manage Domain
- Domain
- Sub Domain
- Audit Logs
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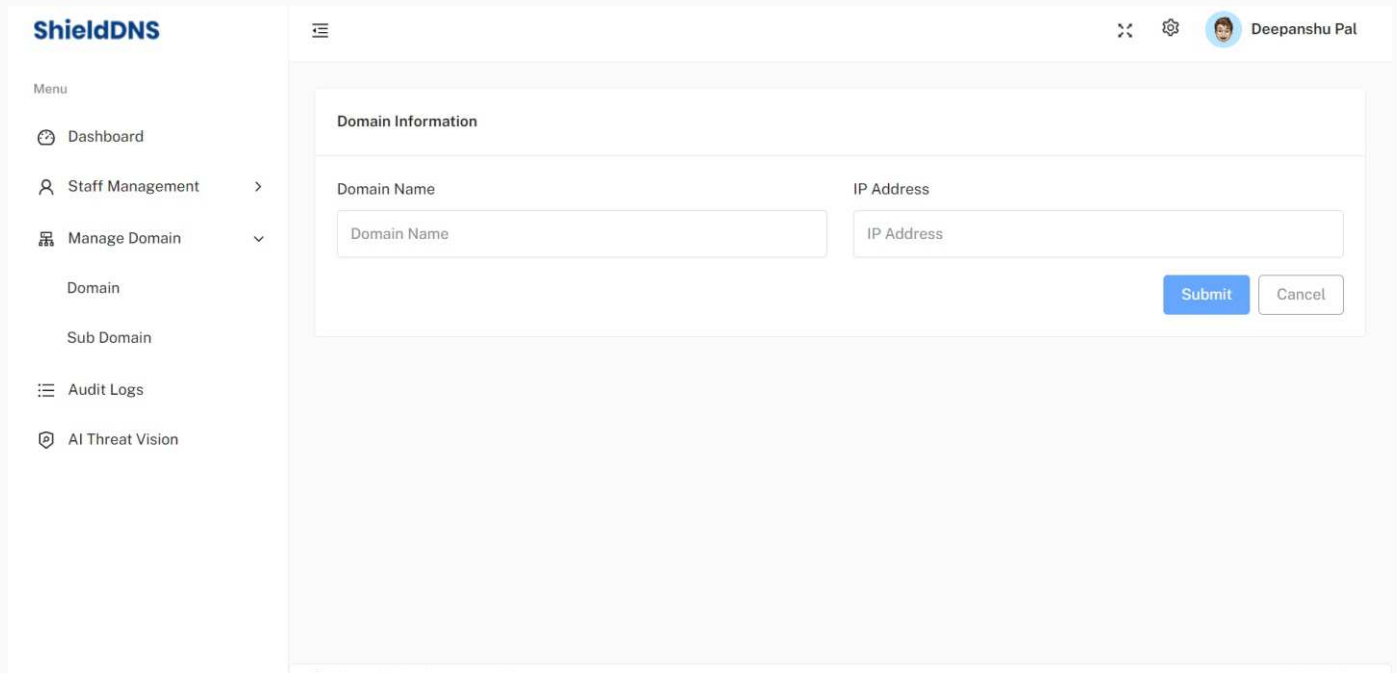
### DOMAIN

Refresh + Add Domain

DOMAIN NAME	IP ADDRESS	Sub Domain Count	ACTIONS
db.mahaconnect.bank.in	68.178.163.171	1	<a href="#">Edit</a> <a href="#">Delete</a>
advantal.org	10.12.12.12	7	<a href="#">Edit</a> <a href="#">Delete</a>

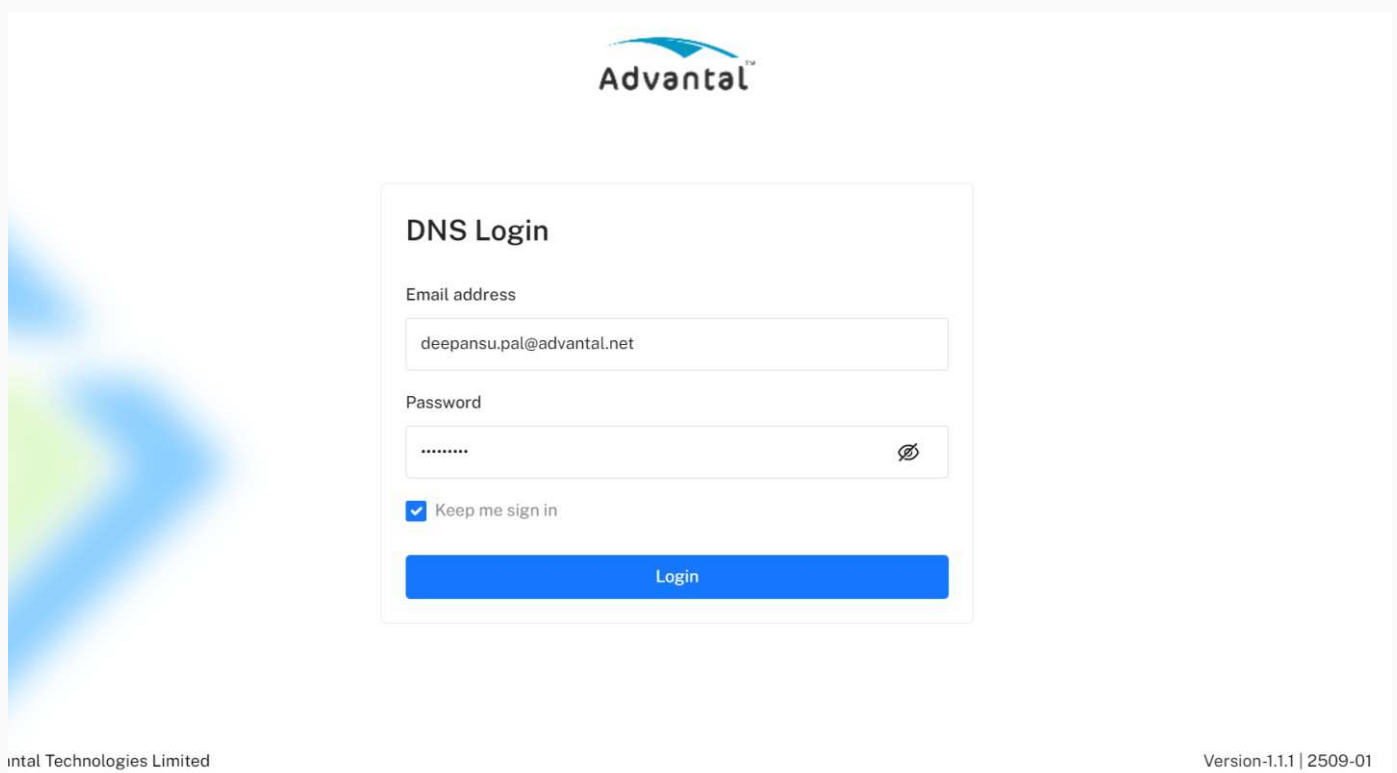
Showing 1 to 2 of 2 rows

10 rows per page



### 3. ACCESS CONTROL AND MFA

Strong access control is enforced through centrally managed user accounts, roles and permissions within the portal. Each user is authenticated using credentials that comply with configurable password policies, and authorization is governed by role-based access control so that users see and act only on objects they are explicitly allowed to manage. Multi-Factor Authentication (MFA) is supported for all interactive logins, combining passwords with a second factor such as time-based one-time passwords (TOTP), push notifications or hardware tokens to protect against credential theft.



## 4. USER, SERVICE AND ROLE MANAGEMENT

The solution provides integrated capabilities to manage users, services and role-based privileges from a dedicated “Staff Management” section. Administrators can create, edit, disable or delete user accounts; assign or change roles; and define fine-grained access rights to different functional modules including domain management, reporting, configuration and auditing. Roles can be tailored to operational responsibilities, such as full administrators, DNS operators, application owners and read-only viewers, ensuring adherence to the principle of least privilege.

**ShieldDNS**

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- Dashboard
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  - Users
  - Roles
  - Password Policy
- Manage Domain
- Audit Logs
- AI Threat Vision

User Information

First Name:

Last Name:

Mobile Number:

Role:

Email:

Password:

**ShieldDNS**

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Role Information

Role:

Select Modules

#	Module Name	Read	Write	Update	Delete
<input checked="" type="checkbox"/>	Auditlogs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Configuration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Dashboard	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Domian Configuration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Network	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Password Policy	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## 5. LOGICAL GROUPING OF DNS RECORDS

To simplify operations in a large banking environment, the front-end supports logical grouping of DNS records based on business and technical dimensions such as departments, user groups, applications and locations. Domains and sub-domains can be organized and tagged according to owning business unit or application, allowing administrators to filter and view records per department (e.g., Retail Banking, Corporate Banking), per environment (e.g., Production, UAT) or per site (e.g., DC-A, DC-B, DC-C). These logical groupings make it easier to delegate control to the right teams, run targeted change operations and generate focused reports for specific segments of the DNS namespace.

The screenshot shows the 'Sub-Domain' management page in the ShieldDNS application. The interface includes a sidebar menu with options like Dashboard, Staff Management, Manage Domain, Audit Logs, and AI Threat Vision. The main content area displays a table of sub-domain records with columns for Sub-Domain, Domain, IP Address, Record Type, and Actions. The table contains several entries, including 'mahatest' with IP 12.02.0.8 and 'sadasd' with IP 5.33.21.3. There are 'Refresh' and 'Add Sub Domain' buttons at the top right of the table.

SUB DOMAIN	DOMAIN	IP ADDRESS	Record Type	ACTIONS
mahatest	db.mahaconnect.bank.in	12.02.0.8	A	<a href="#">Edit</a> <a href="#">Delete</a>
sadasd	advantal.org	5.33.21.3	AAAA	<a href="#">Edit</a> <a href="#">Delete</a>
test	advantal.org	10.12.105.24	A	<a href="#">Edit</a> <a href="#">Delete</a>
test	advantal.org	123.345.12.11	CNAME	<a href="#">Edit</a> <a href="#">Delete</a>
test1	advantal.org	"10.12.205.24"	TXT	<a href="#">Edit</a> <a href="#">Delete</a>
test1	advantal.org	advantal.org	CNAME	<a href="#">Edit</a> <a href="#">Delete</a>

The screenshot shows the 'Sub-Domain Information' form in the ShieldDNS application. The form is used to add or update sub-domain records. It includes input fields for 'Sub Domain Name' and 'IP Address', and dropdown menus for 'Record Type' and 'Select Domain'. There are 'Submit' and 'Cancel' buttons at the bottom right of the form.

Sub-Domain Information

Sub Domain Name:

IP Address:

Record Type:

Select Domain:

## 6. CONTINUOUS SYNCHRONIZATION OF RESOURCE RECORDS

The front-end solution maintains an always-current view of all DNS resource records by continuously synchronizing with the underlying DNS servers. When zones and records are created or modified through the portal, the changes are pushed to the DNS cluster in real time and their status is reflected back in the UI once applied. In addition, periodic reconciliation jobs fetch and list all existing records from the DNS infrastructure, detecting and resolving any drift so that the portal remains an authoritative management view for the entire DNS environment.

Performed By	Module	Activity Description	Outcome	Ever
deepansu.pal@advantal.net	Domain	User accessed domain name listing and se...	Success	12-1
deepansu.pal@advantal.net	Subdomain	User accessed subdomain listing and sear...	subdomain list retrieved successfully.	12-1
deepansu.pal@advantal.net	Subdomain	User accessed subdomain listing and sear...	subdomain list retrieved successfully.	12-1
deepansu.pal@advantal.net	Domain	User accessed domain name listing and se...	Success	12-1
deepansu.pal@advantal.net	Subdomain	User accessed subdomain listing and sear...	subdomain list retrieved successfully.	12-1
deepansu.pal@advantal.net	Domain	User accessed domain name listing and se...	Success	12-1
deepansu.pal@advantal.net	PasswordPolicy	User initiated viewing of password polic...	Success	12-1
deepansu.pal@advantal.net	User	User initiated login to the DNS system	logged in Successfully.	12-1

## EXPERIENCE ADVANTAL DNS IN ACTION

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### Advantal Technologies Limited (Make In India OEM)

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