



**BHADALE GROUP OF COMPANIES
- IT AND REAL ESTATE**



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Engineering Services Catalogue for Azure datacenter-detailed

Bhadale IT Developers Pvt. Ltd CIN: TBD | Bhadale Real Estate Developers Pvt. Ltd CIN: TBD

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Bhadale Group of Companies

Bhadale Group of Companies consists of Bhadale IT Developers Pvt. Ltd and Bhadale Real Estate Developers Pvt. Ltd.

1. **Bhadale IT Developers Pvt. Ltd** is an IT and Computer Engineering company

This company provides consultation in areas of cutting edge technologies, research outsourcing, and software consultation related to data center and related engineering practices

2. **Bhadale Real Estate Developers Pvt. Ltd** is a Real estate company

This company provides development of commercial, residential and farm based developments. It manages the renting and lease of the real estate properties

Bhadale Group of Companies has aggressive programs in place to serve the niche market. Below are the programs and service offerings for **IT Division**

Bhadale IT Developers Pvt. Ltd Programs and Services

IT Division programs – specific to Microsoft Azure technologies

- 1 Cloud Architecture- Azure Cloud
- 2 AI – Azure AI and ML
- 3 Digital – Azure Digital Enterprise platforms
- 4 Automation - Azure automation
- 5 R&D services- Azure research areas
- 6 Engineering services – Azure engineering board reviews, audit, diagrams, approvals
- 7 Data center services – Azure datacenter setup
- 8 Outsourcing – Outsource your Azure jobs like remote help, tutor

There are various services offered under each program, details are described below

IT Division program related services

Cloud Architecture – Microsoft Azure specific

- Cloud Enterprise Architecture – Azure Enterprise platform / frameworks, & processes
- Cloud Business Architecture – Azure business tools, & frameworks
- Cloud Information / Website data Architecture – Azure webapps/ mobile apps, Bing maps, & Sharepoint website design
- Cloud Solution Architecture – Azure Solutions as per your needs
- Data center Virtualization and Cloud services (IaaS) – Hyper-V, Containers, Desktop/ Network, & Storage virtualizations
- Cloud Technical Architecture – Project specific – Best practices , design patterns based on MSDN
- Cloud ERP Solutions (SaaS, PaaS) – Office365, CRM, ERP packages , & integration
- Cloud Strategy and Transformation – Workshops, roadmaps and strategy
- Cloud Systems Integration and consolidation – Salesforce, Google, SAP, MS CRM , & LOB systems
- Cloud Project Management – Agile, TFS, Scrum templates, & PMP based techniques

- Cloud Pre sales support - Assist in design of material for presales deals, bid documents, & client meetings
- Business Needs (RFI/RFQ/RFP assistance)- Documents with Azure and alliances specific details for inventory, pricing, RoI, & Management
- Cloud Quality Initiatives – SLA, OLA, performance, cost optimizations, Corporate standards, ethics, & values
- Cloud Business Analysis – Analysis as per BABOK and MSFT/ partner tools for BA
- Cloud Infrastructure Planning – hardware , network, storage , backup (IaaS, PaaS)- Datacenter IT systems design, provisioning, commissioning and planning for future growth
- Cloud business portfolio assessment services (workshops) – Assess, enrich and support your portfolio of services as related to Azure and allied technologies

AI Azure

- Artificial intelligence and advanced machine learning - Azure AI Compute, Data science, Azure ML , Cognitive intelligence, AI Infra, AI tools and AI Services platform , & Deep Learning
- Intelligent applications, Intelligent things - Azure AI for IoT , & DataLakes
- Conversational systems – BOT Framework
- Mesh app and service architecture – Azure Service bus, Azure Service fabric, Micro-services, Smart grid, Gateways, & Enterprise Integration
- Adaptive security architecture- Deep Learning and predictive analysis, forecasting using tools, & algos.

Digital –Azure

- Virtual reality and augmented reality: VR, AR and Mixed reality(MR) from Microsoft; Hololens for MR; VR headset, VR ready PCs, Unity SDK, & VR SDK
- Digital twins – Azure IoT , MSFT Cognitive platform, Big compute, Analytics, Mixed reality & related SDK
- Blockchains and distributed ledgers – Azure hosting, SQL/No SQL DB, Security, Bitcoin mining, serverless computing, BizTalk services, Business partner exchange, Integration with Accounting ERPs, I/O remittances, claims settlements, & AI based fraud detections.
- Digital technology platforms – Azure private/ public, hybrid clouds, Solutions, Cloud best practices, Ready to use base VM and Containers as per domain, business and industry needs

Automation - Azure

- Robotic Process Automation – Blue Prism intelligent automation powered by Azure AI
- IoT - Azure SaaS for IoT(IoT Central), IoT Edge, IoT Services, Windows 10 IoT, & SDK for Raspberry PI
- Manufacturing robots - IoT solutions for Manufacturing robots
- BPO call center robots – Runbooks based VM solutions for BPO domain for backoffice automation, AI based chatbots for CRM, RPA for form filling, taking orders, notifications, & help desk automation etc
- Chatbots –AI based chat bots with SDK, interfaces to CRM, Cloud, industry / domain specific interfacing with expert systems to offer clients better results, good search, filtering and rollups of results, & use of hadoop for unstructured content like voice
- Remote workers - Azure IoT hub, IoT Edge integration, wireless communications, control using mixed reality to accomplish the remote task, AI and ML to correct any errors and fatigue related omissions.
- Hazardous jobs robots(Mine bombs, nuclear waste, underwater, space etc) - Uses same technologies as remote worker, however will have rugged parts, fit for jobs in odd places like nuclear plants, fire, underwater, collapsed buildings and where humans dare to risk their life.

R&D services – Azure based

- PHD mentor, buddy - for thesis support projects using Azure technology
- BPO - Outsourced work in areas of research areas related to IT and Computer Engineering - mainly for offloading research work related to azure for cost effective valued added- returns

Engineering services (Only Engg) – for Azure solutions

- Engineering services for Data centers – Datacenter layouts based on business and Azure needs, Server engineering, cable layouts, rack provisioning, power cables, routing boards, patch panes, fans, motherboard systems engineering, failover mechanisms, fire, plant safety, fire exits, & backup power / UPS
- Engineering services for IT Departments - Private cloud installation needs of premise, IT equipments, hardware-software interfaces, admin consoles, emergency management, IT failure management, quality certification, hardware level security, OS hardening, network firewalls, & premise management
- Engineering architectures, drawings, road ways, town house planning, parking, safety, outdoor maintenance, lighting etc - Datacenter external environment , landscaping, parking, restrooms, food court, licenses, audits, & approvals
- All other aspects of engineering: Civil, electrical, water and sewage, safety and mechanical motors, pumps, refrigeration, cooling – Civil bylaws, Electrical quality and proper metrics, levels, HVAC, waste water management, safety, workers laws, factory bylaws, corporate laws, fencing, & legality support

Data center services (Engg + IT) – for Azure

- Data center Engineering services – Same as above
- Data Center IT Services - IT software licenses for Azure OS, Windows, devices, SDK / tools, laptops, & server boxes
- Data center Security services – as per Microsoft recommendations, SDLC, threats, AI for preventive measures
- Data Center QA services- Certifications for datacenter like ISO, Green, & Energy saver
- Datacenter Cloud services – Provisioning of tenants for internal / external service offerings, SLA, OLA, metering, white labeling , custom domains, SSL, & cross- datacenter connectivity
- Datacenter compliances services- mainly related to audit, certification, & maturity management
- Data center based business solutions – assisting clients get loans, offer great service and obtain RoI in less time using various management and business techniques

Outsourcing

- Insourcing – Helping clients in in-sourcing of off-shored Azure operations and business units
- Outsourcing – help clients to reduce internal load and offloading to low cost centers
- Near sourcing – helps clients to gain max profit and benefits of other types of resourcing
- Cloud sourcing – Remote work done
- BPO services – using help desk, RPA, & Chatbot based automation
- IT specific services - Any client specific IT services as per request
- Engineering specific services – Offshored engineering works like drawing, layout planning, & security
- Training specific services – being part of your partner team, help clients to offer our services to their local clients

IT Division programs – Engineering Services – Azure (Only Engg)



Image Courtesy (The web)

CATALOG OF Azure engineering services - extension of generic cloud offerings adapted to Azure

Service No	Service Name	Services offered
1	Engineering services for Azure Data centers/ Azure stack/ private cloud	<p>Design of various layouts, models and configurations like super computer, hyper scale cloud systems, Shared- nothing, NUMA and parallel processing units that work with large big data sets; algorithms that have short compute time and scale well</p> <p>Azure Datacenter layouts based on business and Azure needs, Server engineering, cable layouts, rack provisioning, power cables, routing boards, patch panes, fans, motherboard systems engineering, failover mechanisms, fire, plant safety, fire exits, & backup power / UPS</p> <p>These are based on datacenter frameworks, guidelines as prescribed by Open Compute's ProjectOlympus and top Institutes like IDCA(Infinity Paradigm®) , ISO , Electrical standards , NIST, IEEE, IEC etc</p> <p>Our services include analysis of your engineering needs(specific to Data Center) like the plant layout, security needs, electric supply rooms and providing you a tailor made solution to your needs that will speed up your job in making a successful leap towards your intended data center.</p> <p>Installation, configuration of hardware equipments(servers, racks, cables, power, HVAC); calibration, setup of protocols and layer level monitoring, auditing and telemetry, cable cross connects, termination, HMI control and admin support for</p>

		<p>farm level monitoring, sub unit level instrumentation, and logging</p> <p>Installation of wired/ wireless devices, configuration, calibration and testing for any errors. Leveraging on best practices offered by hardware vendors like Dell, Intel, Cisco</p> <p>Design of Failure tree analysis, reliability block diagrams, modeling and simulation (PLC/Relax, Etap, etc), server cooling trends, modeling tools, CFD analysis and simulations. Research and define strategies and requirements for continuous improvement in operational telemetry and metrics spanning datacenter and IT infrastructure Operations: Develop operational improvement strategies across hyperscale runtime environments, maintenance and repair workflow and control plane processes.</p> <p>We have recently designed prototype model for a retail store private datacenter in Canada</p>
2	Engineering services for IT Departments - Azure servers, storage	<p>Private cloud installation, requirements analysis of premise, IT equipments, hardware-software interfaces, admin consoles, emergency management, IT failure management, quality certification, hardware level security, OS hardening, network firewalls, & premise management, DMZ, inter-server, inter-rack, inter-datacenter communications, health tests, signal analysis at various layers like Layer 1, 2 for spectrum, space; signal strengths, signal leaks, signal losses and instrumentation</p> <p>These are based on Engineering framework, guidelines as prescribed by Institutes like ISO, Cisco, Dell-EMC and newer alliances standards and protocols from NIST, IEEE and Security.</p> <p>Our services include analysis of your Engineering needs (IT Dept in-house requirements), and providing you a tailor made solution to your needs that will speed up in making your job a successful leap towards your intended goal.</p> <p>Installation of client workstation related cabling, connectivity to the last mile or local server downstream feeds, testing of signal strength, data transfer rates, throughputs, router configuration for wired/ wireless/optical devices, LAN and WAN session management, traffic analysis, S/N ratios, local internal telecom devices setup like IP phones, voice and video cameras.</p> <p>OS level hardening, hardware, mother board settings for I/O and, memory mapped data transfers, board level security features, Windows Server 2013, Windows 10 setup for gateways, cross-connects, IP V6 config, network testing for LAN machines, resource pools, electrical and telecom standards. Specifications as specified by Open Compute Project Olympus data sheet</p> <p>We have recently provided server room design, rack cabling, power supply, cooling for the server racks for a retail store</p>

3	<p>Engineering architectures, drawings, road ways, town house planning, parking, safety, outdoor maintenance, lighting etc - for Azure specific installations</p>	<p>As required for perimeter safety, auto cad designs, virtual landscape design, and datacenter standards like ISO. Design of PAN and LAN/ campus networks that are well integrated with the datacenter network, safe parking, anti-theft features, anti-noise and anti-earthquake related safety measures. Intelligent lighting, auto-off features, auto-lock features and ambient based control measures can be offered.</p> <p>Datacenter external environment , landscaping, parking, restrooms, food court, licenses, audits, & approvals</p> <p>These are based on country and municipal specific frameworks, standards and common international standards. We follow Indian, North American and European standards.</p> <p>Our services include providing guidance, assistance and first level designs for the loan / grant approvals. Our team and external suppliers have appropriate licenses and skills to provide you an integrated and comprehensive engineering infrastructure plan with first level drawings (Auto CAD), first level engineering metrics, material estimates, cost estimates for the intended mini-town/ special economic zone. We offer you licensed engineers in their domain.</p> <p>QA audits, awareness camps, for ISO/IEC 27001/27018, SOC 1, SOC 2, CSA, PCI DSS, HIPPA, Azure Compliance Manager based improvements</p> <p>Configuring of Trusted Execution Environments (TEE) using technologies such as enclaves, Intel Secure Guard Extensions (SGX)</p> <p>We have recently provided a demo of our internal real estate project 'Bhadale pride' with first level project report.</p>
4	<p>All other aspects of engineering: Civil, electrical, water and sewage, safety and mechanical motors, pumps, refrigeration, cooling - for Azure specific installations</p>	<p>As required by MS Azure datacenter requirements and engineering needs</p> <p>Civil bylaws, Electrical quality and proper metrics, levels, HVAC, waste water management, safety, workers laws, factory bylaws, corporate laws, fencing, & legality support</p> <p>These are based on country and municipal specific frameworks, standards and common international standards. We follow Indian, North American and European standards.</p> <p>Our services include assisting you in getting the first level of all the engineering activities, material, costs, and static views of the various industrial and specific zonal requirements to bring up the infrastructure and mature architectural engineering plant that will have less operations cost, less wastage, in time services and related safety of the occupants</p> <p>We have recently provided a demo of our internal real estate project 'Bhadale</p>

		pride' with first level project report that can host up to 40 small scale industrial units along with 8 residential units.
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For more information, please contact us.

Bhadale IT Developers Pvt. Ltd

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