vuBJM^{TM} - Business Journey Monitoring

Real-time unified visibility into business transactions to transform IT ops data into actionable insights

An AI-first platform that not only **monitors your business transactions** to manage IT operations in real-time but also provides an end-to-end **customer journey view** to make critical business decisions and elevate your customer experience for on-premise, SaaS or hybrid environments
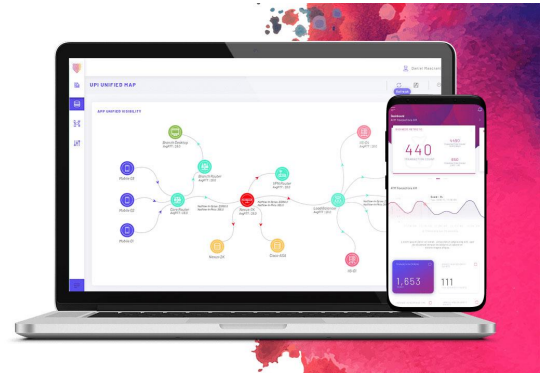
KEY BENEFITS

A disruptive, all-in-one platform that truly connects your customer experience and business transactions to your applications, infrastructure and IT operations

Monitor at a massive scale
vuBJM platform has been used to monitor the world's largest transaction volume of **2.5 Billion transactions** a month. That is 10% of India's real-time payments! The platform is architected for scale and can ingest streaming TBs of data

Detect anomalies to predict issues
vuBJM's AI-first platform with a **built-in ML model** monitors key logs, metrics and traces and proactively detects anomalies that helps you to find and fix issues even before they affect users. It helps you to create **better KPIs** to predict future incidents

Resolve issues in as low as a few seconds
vuBJM's platform can ingest and correlate data from legacy applications to new age **micro services**. With complete monitoring coverage, unified transaction maps, operational KPIs, granular drill downs, quicker RCA and auto remediation, **incident resolution can be done in seconds!**

Business Journey Monitoring – vuBJM^{TM} Features

#	Feature	Description
Unified Visibility		
1	Full stack Observability	vuBJM provides a deep-visibility into systems, devices, applications, services, microservices, noSQL databases, serverless deployments and more. With such an extensive coverage of monitoring, the platform enables **deeper troubleshooting and root cause analysis** to understand the performance of business applications.
2	Business Transaction Monitoring for Distributed Architecture Service	vuBJM helps to monitor **business transactions of applications** hosted in a **distributed** environment - across multiple monolithic application instances, across multiple services instances (microservices), across multiple deployment architectures like active-passive, active-active. The platform performs transaction monitoring in near real-time through near real-time ingestion of application logs, traces and related metrics and presents it in a single unified view with a deep visibility into your **business transactions**.
3	Business Journey Visibility	vuBJM helps to monitor business transactions across different **enterprise applications** that **come together to service a user transaction**. Trace the financial transaction journey from API Gateway/Load balancer all the way to Core enterprise applications like Core Banking System (CBS).
4	Prepackaged Templates for Business Journeys	The platform provides an interactive, customizable dashboard with a view of the most minute metric data and **pre-packaged templates for creating dashboards** for financial applications such as UPI, ACS, IMPS, Payment Gateway, Internet Banking applications with minimal integration effort. This helps in faster time-to-value. Solutioning services can be used for supporting proprietary applications.
Transaction Visibility		
5	Microtransaction View	vuBJM provides real-time view into business transactions by cutting across the **legs of transaction** for every touch point. The entire customer journey is divided into multiple sub-transaction legs like Auth, Request, Response etc. and the platform allows monitoring of key metrics like status, TAT etc.
6	Deep Transaction Visibility	vuBJM monitors status of **individual user transactions** in near real-time, goes in depth of each transaction to obtain failure reason, leg-wise TAT etc. The platform provides premium support for VIP customers, responding to queries from regulators with detailed status and data.

	Journey Maps	
7	Unified Transaction Map	UTM is used to display **application dependency and service path** using a **graph with nodes and links**. It provides an intuitive visualization of business journey monitoring that aids in easy identification of issues and troubleshooting.
8	Customer Journey Map	vuBJM platform provides a comprehensive, **real-time business journey map** of your customer's transaction. It provides an **end-to-end view of a business transaction** by correlating the telemetry across all **touchpoints** in the transaction, including IT infrastructure, applications, cloud and other resources that complete the transaction journey. It provides a microtransaction view derived from logs. It acts as a great tool in elevating customer experience. Users can add different stages of a business journey and configure the metrics for each step. Users can also add emoticons to represent the outcome of a metric. This is a powerful visualization, which can give teams and department heads a high level view of the overall status of their business process.
	Business KPIs	
9	Configurable Business KPIs	vuBJM allows customers to view their user's transaction journey with a more detailed view on the **performance of each touchpoint** involved in the journey. Key KPIs are Volume,TAT, Failures,Conversion Rate at each touch point application.
10	Business Impact Visibility	Using vuBJM, you can translate **real business outcomes** such as user experience to IT operations data. Our built-in ML models compute KPIs in real-time such as **User Experience Index** (UEI) that provides the end user experience of business services or applications, **Operations Performance Index** (OPI) that provides the robustness of current operations and can be used to predict the possibility of failure in an application or deterioration of a service. The ML-driven platform correlates UEI to OPI to provide **insights** about your end user customer experience correlated to system performance. This helps you prioritize the key customer interactions that impact your business to maximize performance.
	Data Sources and Enrichment	
11	vuAgent Support	**Synthetic agents** at fixed locations/ hosts for business workflows and Synthetic Agents (URL, Latency, Web load, Service Heartbeat) and Integration with Google Analytics and Heartbeat Analysis and Trace path Analysis. End to end trace path analysis for internal / external network analysis, includes 3rd party app calls and ISP link performance.
12	vuBlock Support	vuBlocks are data adapters enabled by a powerful **data model architecture**. It makes data more contextual by enriching it in real-time with business, domain, semantic, syntax and environment context. The modular structure lets each vuBlock encompass the power of

		information, enrichments, KPIs, storyboards and alerts for every single data type from compute, network, storage to logs, transactions and applications. Customers can create their own vuBlocks with vuBlockSDK Kit.
13	Data pipeline with dynamic data enrichment	The platform's built-in pipelines help to ingest, clean, validate log and metrics data from diverse formats and enrich it with business and domain context using a combination of **static, dynamic enrichment**, ETL and meta tagging before feeding it to data-centric AI models. This makes the data in the dashboard, reports, alerts and notifications more **meaningful**.
14	Data summarization, retention, storage (Operational Data Lake)	Long term retention of operational/monitoring data for compliance and analytics, long term analysis and decision making. Operational data available for analytics (**> 5 years data**). Historical data retention with indexing (**hot, warm and cold index**) and horizontal scalability for expansion. All your data is automatically and permanently deleted at the end of your retention period. Data summarization is done on the fly with the usage of a Kafka streaming plugin to aggregate and store Top K flow of Netflow directly in the streaming data layer instead of indexing and aggregating. This could yield a reduction in data summaries from 200GB per day to 4GB per day.
OOTB Visualization		
11	Interactive Storyboard	The platform provides an interactive, customizable dashboard with a view of the most minute metric data. The dashboard can be used to get unified visibility into device performance, resource availability & utilization, operational health of elements through proactive monitoring logs, events and metrics. The platform provides **pre-packaged templates** for creating dashboards for UPI, Payment Gateway, Internet Banking **applications**. Users can dynamically generate dashboards, export it as image, PDF, XLS or CSV and apply custom widgets.
Alerts		
16	Alert Management	vuBJM provides **real-time simple and compound alerts**, prepackaged compound alerts based on meta tags - topology, availability zones, DC etc. supports temporal and ML-based alert noise reduction and a fault management console. The feature can be used for escalation mechanisms through integration with other tools, automated ticket creation, run book automation, BOTs integration and more. It provides alert notifications via multiple channels such as email, SMS, WhatsApp, Microsoft Teams. The platform provides **automation hooks** to integrate views and alerts with automation scripts.
17	Total incident integration	The platform provides alert **integration APIs** to ITSM, Ticketing, Automation systems, allows bi-directional ticket integration, cloud ticket tool integration for Cloud Watch, Azure Event Hub and more, integration with Google Analytics. The platform allows data integration

		from existing tools and systems like inventory management, HRMS etc. It allows you to create a **library of run book** execution playbooks and provides alert APIs for automation runbooks (for repetitive and guided tasks).
Reports	
18	Automated in-built reports	With an intuitive UI and **pre-built library of tools**, users can customize or create their own reports. Automated inbuilt reports are available for unified dashboards. Reports can be created for capacity utilization, server/network performance utilization, application / branch performance, compliance with Windows event logs, etc.
Enterprise Security	
19	Enterprise grade security	The platform provides additional security features to **mask personal identity information** during data sharing and configurations to send encrypted logs and metrics on the wire. The platform encrypts the configuration data. Additional auditing ensures full transparency and traceability to the source ensuring a secure, trusted usage across the organisation.
20	Authentication Methods	The platform works on standard authentication methods & uses **HTTPS based authentication**, supports **LDAP** integration and single sign-on. The platform enables **2-factor authentication** for the mobile app.
21	Role Based Access Control (RBAC)	The platform provides RBAC to ensure **selective authorization** of access to a specific functionality, resource or information based on the user role. The platform has a predefined list of permissions where each permission exists on its own and defines a set of operations. Each user role has a set of permissions attached to it. By default, **Vunet Admin** user role has all permissions and can create new roles and assign permissions to it. Some of the recommended user roles are Platform Admin, User Manager, Datasource Manager, Analytics Team, Operations Team, etc.
22	Fault tolerant monitoring system	The platform allows to deploy in Active-Active and Active-Standby modes for **PR and DR** sites with data redundancy, real-time data replication for standby system, distributed, redundant data storage for a horizontally scalable system, load balancing and high availability for all components in the system and provides a central console for monitoring multiple data centers
Advanced ML Features	
23	Intelligent alerts	The platform provides real-time **contextual and correlated alerts** with slice & dice and granular data to get context across usage patterns, uptime, downtime, and many more metrics across multiple dimensions such as business/peak hours, time, geo, business impact, etc. It also provides **static and dynamic alerts** with threshold with support for alert suppression, deduplication, unified KPI views, etc.

		In case of unusually **high transaction failures or longer turnaround time**, alerts will provide contextual information on the journey components and signals that may be resulting in service deterioration.
24	Anomaly detection	Our built-in ML model detects anomalous behavior considering seasonality, past trends, user feedback, inter-metric correlations that identify **anomalous points in real-time**, eliminating the need to configure static rule-based alerts. This can be used to detect abnormal conditions in TAT for user transactions, transaction decline percentage, TAT for individual components in a transaction journey, transaction volumes etc. In addition, anomaly detection can be used for all **application and infrastructure level metrics** like database wait time, queue size in middlewares, socket connection errors and more to **detect abnormal behaviours across the transaction journey**. Anomaly detection can be done at aggregate level and at granular dimensions to understand root cause of issues, for eg. anomaly detection done for transaction volume for each merchant separately and at an aggregate level to understand abnormal patterns at the overall volumes, and to understand particular set of merchants that may be contributing to it.
25	Event Correlation (Compound Alerts)	The platform allows to aggregate, normalize, correlate and analyse event log data from a myriad of devices. It supports **temporal and topology correlation** along with alert suppression, alert deduplication to create high fidelity events and reduce alert fatigue
26	Automated Insights (Insight Cards)	Our built-in ML model provides automated data insights through statistical rules, Machine Learning and Natural Language Processing. Actionable insights and recommendations are displayed on the dashboard without having the user navigate through TBs of data.
27	ML-driven KPIs	The platform has a customized ML-model built out and packaged in containers that provide features such as automated data insights, anomaly detection, ML-driven KPIs such as User Experience Index (UEI), Operations Performance Index (OPI), Current Health Index (CHI).
a	UEI	**UEI indicates the end user experience of business services** (scores 0-10) can be used for: ● **Services** provided by a business application such as **fund transfers**, where UEI is calculated for each transaction and is rolled up to the service or application ● Measuring **user experience of an entire business application** such as internet banking, payment gateway ● Understanding **quality of service** provided by internal and external API services (eg. Authentication service, APIs used with NPCI)
b	OPI	**OPI indicates the robustness of current operations** (scores 0-10) and can be used to measure how well the component will perform in near future and possibilities of errors from the component. It can be applied

		to a specific application or service to get the possibility of failure in an application or deterioration of service. It can be applied to: ● Application components like business application (eg. internet banking app, ecommerce app, core banking system) ● Generic application components like databases, web servers, middlewares Coupled with UEI for the services provided by the business application, OPI can be used for proactive **root cause analysis**. In case of signs of user experience deterioration, aggregate OPI for the application can be rolled down to locate component level and metric level OPI that may be contributing to the service impact.
c	CHI	**CHI indicates the current state of a signal** and can be rolled up to a component or service. It can be applied to all components in a similar fashion as OPI. CHI gives a standardized way to measure how individual components and metrics within them are behaving in the context of a business service. In case of signs of user experience deterioration, aggregate CHI for the application can be rolled down to locate component level and metric level OPI that may be contributing to the service impact.
28	Predictive analytics	Our built-in ML model computes KPIs such as: ● Operations Performance Index (**OPI**) that indicates the robustness of current operations, with a score between 0-10 ● User Experience Index (**UEI**) that indicates the end user experience of business services, with a score between 0-10 The platform offers predictive analysis using UEI along with OPI that can result in better capacity planning and can prepare the teams for seasonal trends.