This document is prepared by Danphe Infotech Pvt. Ltd. to outline self-assessment of SmartKhata -- broker back-office and accounting system -- against the criteria provided by NEPSE for broker back office system.

**Technical Requirements**

|  |  |  |
| --- | --- | --- |
| **Requirement** | **Status** | **Remarks** |
| Web based hosted/ standalone system that allow managing business from any device connected to the internet. | Fulfilled. | The system is web-based (and therefore should be accessed via a web-browser). The system can be accessed from any device connected to the internet. As the server hosting the system is placed in the client’s office premises, it will still work inside the office (via local LAN), in the event the Internet link to the office premises is interrupted. |
| System to be hosted in trusted Data Center to ensure highest security and availability. | Fulfilled. | The system will be setup in client’s office premise providing highest security. Highest availability is ensured as the system will be reachable not only via Internet but also through local LAN. |
| Redundant dual network to the client for uninterrupted connectivity. | Fulfilled. | Currently, it is recommended that the system be installed in a server owned by the client and placed in either client’s office premises or in a data-center (whichever the client sees fit). In the case of former, the system will be configured such that it can be reached not only via Internet but also via Intranet (local LAN). Therefore, breakage in the internet pipeline will not hinder access to the system. |
| Virtual servers to segregate each of the brokers execute their system independently. | Fulfilled. | Currently, it is recommended that a server should serve no more than one SmartKhata system; this means each client should have their own server to install the system. However, virtualization in the server is recommended if the server will host client’s other applications to segregate |
| Modular and highly parameterizable/configurable system. | Fulfilled. | Proper software engineering practices have been implemented to make the system reasonably paramaterizable and configurable. |
| Relational Database Management System for database server. | Fulfilled. | PostgreSQL, one of the most advanced and robust relational database management systems, is used. |
| N-tier architecture | Fulfilled. | The system adheres to MVC (Model View Controller) architecture, which is a form of N-tier architecture. |
| Facility to interface with third-party system. |  |  |
| Flexible and scalable enough to accommodate both functional and technology add-ons in future. |  |  |

**Functional Requirements**

|  |  |  |
| --- | --- | --- |
| **Requirement** | **Status** | **Remarks** |
| Access Control and Administration | Complete. | The module allows the application administrator define roles and users, and set the permissions for roles and users. |
| Master setup and Maintenance | Complete. | The module allows maintenance of master(static) data like fee details, billing parameters, etc. |
| Client Administration | Complete. | The module allows maintenance of client details like unique NEPSE client code |
| Portfolio Management | Complete. | The module allows management of client portfolio, member portfolio, securities holdings. |
| Accounting Module | Complete. | The module allows calculation of tax, fees and commissions, interest calculations. |
| Mailing/SMS | Complete. | The module allows sending of SMS and email to clients for transactions’ notifications. |
| Import of Trading/Settlement File from NEPSE/CDSC | Complete. | The module allows importing various files from NEPSE/CDSC into the system. |
| Batch uploads facility. | Complete. | The module allows initial setup or migration through batch database population. |
| Funds Management | Future requirement. Work in progress. | The module supports the maintenance of the funds in form of cash, bank guarantee, fixed deposit, approved securities. |
| Risk Management | Future requirement. Work in progress. | The module performs position limit checks, margin calculation and validation against the available collateral for any given portfolio. |