Please read before using this template...
This template is intended to be used as the main source of Technical Design Documentation (TDD) for waterfall projects and enhancements. It is expected to be adopted and used by all IT teams. Some contents are general in nature and are applicable to all IT teams; however, each team, if deemed necessary, could make the appropriate decision as to which sections are relevant to their work expectations. If a section deemed irrelevant, then note “N/A” under its title – but DO NOT remove any section form the template. Template guidelines can be found here - TDD FAQ & Guidelines

Before utilizing the template, please remove this introduction box as well as the descriptive comments under each title which are enclosed in “<>” symbols.

[TITLE] [Mandatory]
<Title should include the application(s), service or interface name>

Technical Design Document

PREPARED BY

[NAME OF AUTHOR]

<responsible individual gathering the content and/or research>

INFORMATION TECHNOLOGY, WELLCARE HEALTH PLANS, INC.
**Table of Contents**

1. **Introduction** ........................................................................................................... 6
   1.1 Definitions, Acronyms andAbbreviations [If Applicable - Optional] ................................. 6
   1.2 Purpose of the Document [Mandatory] ........................................................................... 6
   1.3 FSD References [Mandatory] ......................................................................................... 6
   1.4 Scope of the System [Mandatory] ..................................................................................... 6
   1.5 Out of Scope [Mandatory] ............................................................................................. 7
   1.6 Intended Audience [Mandatory] ...................................................................................... 7
   1.7 Conventions and Standards Followed [If Applicable - Optional] .................................... 7
   1.8 Assumptions, Dependencies, Risk & Risk Mitigations [Mandatory] ................................. 7
   1.9 SYSTEM OVERVIEW: [Mandatory] ............................................................................... 8

2. **Resources/System Affected [Mandatory]** ........................................................................ 8
   2.1 Internal Resources/Systems/Databases [Mandatory] ........................................................ 8
   2.2 External Resources/Systems [If Applicable - Optional] .................................................. 8

3. **Process Flow [If Applicable - Optional]** ........................................................................ 8
   3.1 **Current Process diagram/flow/presentation** [If Applicable - Optional] ........................... 8
   3.2 **Future Process diagram/flow/presentation** [Mandatory if Process Flow is provided] ...... 8
   3.3 **Decisions Points / Expected Directions / Set Goals** [If Applicable - Optional] ............ 8

4. **APPLICATION DESIGN [If Applicable - Optional]** .................................................... 8
   4.1 Application Design Overview [Mandatory if “APPLICATION DESIGN” is provided] ......... 8
   4.2 UI Design and Flow [If Applicable - Optional] ................................................................ 8
   4.3 System Application Architecture Overview [If Applicable - Optional] ........................... 9
   4.4 UML Diagrams [If Applicable - Optional] ................................................................. 9
   4.5 Database Design [If Applicable - Optional] ................................................................. 9
   4.6 Data Mapping [If Applicable - Optional] ....................................................................... 9
   4.7 Reports Design [If Applicable - Optional] ..................................................................... 10
   4.8 Batch Jobs Design [If Applicable - Optional] ............................................................... 10
   4.9 **Web Service Design** [If Applicable - Optional] ......................................................... 10

5. **Security Architecture [If Applicable - Optional]** .......................................................... 10
   5.1 Security Model (file content like SFTP) – flow diagram of file structure [Mandatory if “Security Architecture” is provided] ................................................................................................. 11
5.2 Authentication / Authorization Mechanisms [Mandatory if “Security Architecture” is provided] ........................................... 11
5.3 Access Control [Mandatory if “Security Architecture” is provided] .......................................................................................... 11
5.4 Integration Design with WellCare System (e.g. Files, Documents, LDAP, MQ, Vendor System etc.) [If Applicable - Optional] ................................................................................................................. 12
6 Vendor Changes [If Applicable - Optional] ................................................................................................................................. 12
7 Configuration Changes [If Applicable - Optional] .......................................................................................................................... 12
8 Technology Stack (Environments) [If Applicable - Optional] .......................................................................................................... 12
9 Cross- Cutting Concerns [If Applicable - Optional] .......................................................................................................................... 13
9.1 Logging [If Applicable - Optional] ............................................................................................................................................. 13
9.2 Auditing [If Applicable - Optional] ........................................................................................................................................... 13
9.3 Exception Handling [If Applicable - Optional] .......................................................................................................................... 13
9.4 Caching [If Applicable - Optional] ............................................................................................................................................ 13
9.5 Transaction [If Applicable - Optional] ........................................................................................................................................ 13
9.6 Session Management [If Applicable - Optional] ........................................................................................................................ 13
9.7 Compliance [If Applicable - Optional] ..................................................................................................................................... 13
9.8 Data Access Control Matrix [If Applicable - Optional] ............................................................................................................ 13
9.9 Component Access Control Matrix [If Applicable - Optional] ................................................................................................. 13
10 Deployment Architecture [If Applicable - Optional] ..................................................................................................................... 14
11 Unit Testing Framework [If Applicable - Optional] ......................................................................................................................... 14
11.1 Acceptance Criteria [Mandatory if “Unit Testing Framework” is provided] .................................................................................. 14
12 Infrastructure Management [If Applicable - Optional] ................................................................................................................. 15
12.1 Technologies [If Applicable - Optional] .................................................................................................................................. 15
12.2 System Design Information: [If Applicable - Optional] ........................................................................................................... 15
12.3 Server Design- Specs per server (DEV, UAT and PROD): [If Applicable - Optional] ................................................................. 15
12.4 Network Design: [If Applicable - Optional] ............................................................................................................................... 15
12.5 Visio Design: [If Applicable - Optional] ................................................................................................................................... 15
12.6 Business Continuity (DR) Design: [If Applicable - Optional] ..................................................................................................... 16
12.7 Database Design [If Applicable - Optional] ............................................................................................................................. 16
12.8 Database Link / Server Link [If Applicable - Optional] ............................................................................................................... 16
12.9 Monitoring / Tool [If Applicable - Optional] .......................................................................................................................... 16
12.10 Application Availability [If Applicable - Optional] .................................................................................................................. 17
12.11 Log file Monitoring: [If Applicable - Optional] ................................................................. 17
12.12 Backup Schedule, Retention and exception list [If Applicable - Optional] ..................... 17
13 Scheduler [If Applicable - Optional] ................................................................................... 18
14 Non-functional Requirements [If Applicable - Optional] .................................................... 18
15 Traceability Matrix [If Applicable - Optional] ..................................................................... 18
16 References [If Applicable - Optional] .................................................................................. 19
17 Appendices [If Applicable - Optional] ................................................................................ 19
### Document History [Document Utility – To be provided and updated as needed]

Tracking of version modifications per Intake. Initial version should start with version 0.1 and gets incremented with decimal until approved. Approved version should be 1.0 (‘Header’ information section must match the final version).

<table>
<thead>
<tr>
<th>Intake</th>
<th>Version</th>
<th>Date</th>
<th>Author</th>
<th>Reason for Change</th>
<th>Section(s) Changed/Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>123456</td>
<td>0.1</td>
<td>2/22/18</td>
<td>John Doe</td>
<td>Initial Draft</td>
<td></td>
</tr>
</tbody>
</table>

### Peer Review [Document Utility – To be provided and updated as needed]

Individual(s) validating the content for consistency.

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Confirmation</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jane Doe</td>
<td>Sr. / Lead / Group etc.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Document Approvals [Document Utility – To be provided and updated as needed]

The department(s) identified below has reviewed the Technical Design Document to the best of our ability and agree with the following statements about the functional specifications identified and requested in this document:

List of approvers per involved team in the project – not all the approvers listed below may participate in a project. For excluded approvers, note N/A. It is the responsibility of the author of the Technical Design Document to gather all the required approvals needed.

If approving behalf of any of the below listed roles, please specify.

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Title</th>
<th>Approval</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Enterprise Architect (Optional)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Network (Optional)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>App Dev Manager (Required)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Info Sec (Optional)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infra Sec (Optional)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infrastructure/Servers (Optional)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DBA (Optional)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Director Information Technology (Optional)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Client Review (Remove)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QA Manager (remove)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TDM (remove) |  |  |  
Environment (Optional) |  |  |  
IT Client Services (Optional) |  |  |  

Document Reviewers [Document Utility – To be provided and updated as needed]
<Teams that need to be aware of the content but not necessarily have any contribution in its creation>

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Title</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead Developer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Introduction

1.1 Definitions, Acronyms and Abbreviations [If Applicable - Optional]
<List of terminologies and abbreviations including their brief description used in this document.>

<table>
<thead>
<tr>
<th>Word/Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.2 Purpose of the Document [Mandatory]
<Identify the project or enhancement whose detail design requirements are specified in this document, including the revision or release number. Describe the scope of the enhancement that is covered by this TDD, particularly if this TDD describes only part of the system or a single subsystem.>

1.3 FSD References [Mandatory]
<Which FSD(s), has been referenced as the source for this TDD (Title of the FSD and Intake/ITSM)>

1.4 Scope of the System [Mandatory]
<Provide a short description of the application being specified and its purpose, including relevant benefits, objectives, and goals. Relate the application to corporate goals or business strategies. If a separate vision and scope document is available, refer to it rather than duplicating its contents here. Reference all FSDs which are included in this design. A TDD that specifies the next release of
1.5 Out of Scope [Mandatory]

<Describe any deliverables, systems, areas not funded or specific requests determined to be excluded from the scope or requirements gathering>

1.6 Intended Audience [Mandatory]

<Describe the different types of reader that the document is intended for, such as developers, project managers, marketing staff, users, testers, and documentation writers. Describe what the rest of this TDD contains and how it is organized. Suggest a sequence for reading the document, beginning with the overview sections and proceeding through the sections that are most pertinent to each reader type.>

1.7 Conventions and Standards Followed [If Applicable - Optional]

<Describe any standards or typographical conventions that were followed when writing this TDD, such as fonts or highlighting that have special significance. For example, state whether priorities for higher-level requirements are assumed to be inherited by detailed requirements, or whether every requirement statement is to have its own priority.>

1.1 Assumptions, Dependencies, Risk & Risk Mitigations [Mandatory]

<List any assumed factors (as opposed to known facts) that could affect the requirements stated in the TDD. These could include third-party or commercial components that you plan to use, issues around the development or operating environment, or constraints. The project could be affected if these assumptions are incorrect, are not shared, or change. Also identify any dependencies the project has on external factors, such as software components that you intend to reuse from another project, unless they are already documented elsewhere (for example, in the vision and scope document or the project plan).>

1.1.1 Assumptions [Mandatory]

1.1.2 Dependencies [Mandatory]

1.1.3 Risk & Risk Mitigations [Mandatory]
1.2 SYSTEM OVERVIEW: [Mandatory]

<Provide high-level system architecture diagram and show integration touch points with external systems if any. Do not explain the interfaces in detail as it will be explained in Resources/Systems Affected (section 2) and will become redundant.>

2 Resources/Systems Affected [Mandatory]

<Describe all of the system interfaces with other systems. Include both external and internal applications.>

2.1 Internal Resources/Systems/Databases [Mandatory]

2.2 External Resources/Systems [If Applicable - Optional]

3 Process Flow [If Applicable - Optional]

<Process Flow should be explained in pictorial format (e.g. flow chart, activity diagram). It should include both current state and proposed new state (if applicable) to help user to understand the impact.>

3.1 Current Process diagram/flow/presentation [If Applicable - Optional]

3.2 Future Process diagram/flow/presentation [Mandatory if Process Flow is provided]

3.3 Decisions Points / Expected Directions / Set Goals [If Applicable - Optional]

4 APPLICATION DESIGN [If Applicable - Optional]

4.1 Application Design Overview [Mandatory if “APPLICATION DESIGN” is provided]

<Describe the application design and the rationale behind the design. Include the major design decisions, considerations, and any advantages over other alternatives and risks.>

4.1.1 Pseudo code / Code changes [If Applicable - Optional]

4.2 UI Design and Flow [If Applicable - Optional]

<Create UI wireframes using design tools so that it can be reused. Provide GUI framework to be used e.g. Struts, JSF etc. Include standard messages that should be displayed on GUI after given
operation is performed e.g. “Saved successfully”. Include any logic that is needed to support the functionality of the GUI.

4.2.1 Wire Frame/Mockup [If Applicable - Optional]

4.3 System Application Architecture Overview [If Applicable - Optional]
<Describe application architecture in lowest level of design granularity in the system. Include your design principle, design and integration patterns.>

4.3.1 Impacted applications [Mandatory if “System Application Architecture Overview” is provided]

4.3.2 Application interactions [If Applicable - Optional]

4.4 UML Diagrams [If Applicable - Optional]
<Provide only those UML diagrams that will convey the important aspects of the solution.>

4.5 Database Design [If Applicable - Optional]
<Use designer tools to create Logical and Physical diagrams(ER). Specify Tables, Constraints, Indexes, Triggers and its purpose. Need to mention data access technology like ORM, ODBC/JDBC, and data services etc. Document the archival process under a separate section with list of tables to be archived with retention period and purpose. Identify potential performance bottlenecks and provide design solutions. Perform DB sizing and describe parameters used for database sizing.>

4.5.1 Impacted databases [Mandatory if “Database Design” is provided]

4.5.2 Schema / Table changes / Column Additions / Indexes [If Applicable - Optional]

4.5.3 DLL Changes [If Applicable - Optional]

4.5.4 ERD [If Applicable - Optional]

4.6 Data Mapping [If Applicable - Optional]

4.6.1 Data Possibilities/Configurations [If Applicable - Optional]
4.7 Reports Design [If Applicable - Optional]

<List the following information: 1) graphical representation of reporting framework/components; 2) the scheduled and ad-hoc reports separately; 3) report layout with data source mapping; 4) specify format and mechanism of report generation e.g. Print a report, Export an extract. 5) how reports will be delivered to user e.g. Email, FTP, Hard Copy etc.>

4.8 Batch Jobs Design [If Applicable - Optional]

<List the jobs to be scheduled with time and any ad-hoc jobs. Also alert mechanism for job success and failure has to be included.>

4.8.1 Scheduler [Mandatory if “Batch Jobs Design” is provided]

4.9 Web Service Design [If Applicable - Optional]

<Include graphical representation of web service framework. Specify various factors that were considered for Web Service design e.g. Asynchronous/Synchronous communication, data formats/protocols, Service Interfaces/contracts, message types etc. Specify WSDL and explain each services and its purpose. Please call out any web service security vulnerabilities.>

4.9.1 Business Logic [If Applicable - Optional]

4.9.2 Web Services Method (Method Name): [Mandatory if “Web Service Design” is provided]

<table>
<thead>
<tr>
<th>Description: Intended functionality: Request Elements: Request</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attribute Name</td>
</tr>
<tr>
<td>Request Elements: Request</td>
</tr>
<tr>
<td>Attribute Name</td>
</tr>
<tr>
<td>Response Elements: Response</td>
</tr>
<tr>
<td>Attribute Name</td>
</tr>
</tbody>
</table>

Acceptance Criteria:

Web services WSDL (URL):

External URL:

5 Security Architecture [If Applicable - Optional]

<Describe security architecture in lowest level of design granularity in the system with detailed diagram.>
5.1 Security Model (file content like SFTP) – flow diagram of file structure [Mandatory if “Security Architecture” is provided]

<A role based security model should be described here and the roles enumerated. If the security model is not role based, describe it here.>

5.2 Authentication / Authorization Mechanisms [Mandatory if “Security Architecture” is provided]

<Specify Authentication and Authorization Mechanisms>

5.3 Access Control [Mandatory if “Security Architecture” is provided]

<Identify any special security considerations beyond infrastructure standards.>

5.3.1 Internal Models [If Applicable - Optional]

5.3.2 Vendor Interactions [If Applicable - Optional]

5.3.3 Data classification (PHI / PII etc.) [If Applicable - Optional]

5.3.4 Encryption and Key Management [If Applicable - Optional]

<Describe how the system will use encryption and how it will manage encryption keys, secrets, salts, cryptographic random numbers, etc.>

5.3.5 Service Accounts [If Applicable - Optional]

<Describe any required service accounts for backend application functionality and their specific access requirements.>

5.3.6 Single Sign On [If Applicable - Optional]

<Describe any required integration with ADFS or other SSO technology for user authentication.>
5.3.7 Files (SFTP) [If Applicable - Optional]

5.3.7.1 Output file locations (Path) [Mandatory if “Files (SFTP)” is provided]

5.3.7.2 File maintenance instruction [If Applicable - Optional]

5.3.7.3 File Owners Files [Mandatory if “Files (SFTP)” is provided]

5.3.8 Audit requirements (HIPAA, PCI, SOX) [If Applicable - Optional]

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
<th>DC0 (Unclassified)</th>
<th>DC1 (Internal Use)</th>
<th>DC2 (Restricted Distribution)</th>
<th>DC3 (Secret)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.4 Integration Design with WellCare System (e.g. Files, Documents, LDAP, MQ, Vendor System etc.) [If Applicable - Optional]

<Internal and external systems specified in Section 3 must be included here. Specify integration mode e.g. Batch mode, Real time. Provide details on request and response format while integration with internal/external system and integration protocols e.g. SOAP, REST etc. Include detailed pictorial representation of interface between the system.>

6 Vendor Changes [If Applicable - Optional]

7 Configuration Changes [If Applicable - Optional]

8 Technology Stack (Environments) [If Applicable - Optional]

<Describe the environment in which the software will operate, including the hardware platform, operating system and versions, and any other software components or applications with which it must peacefully coexist.>

<table>
<thead>
<tr>
<th>Stack(s)</th>
<th>Environment(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development</td>
<td></td>
</tr>
<tr>
<td>QA (Quality Assurance)</td>
<td></td>
</tr>
</tbody>
</table>
9 Cross-Cutting Concerns [If Applicable - Optional]

<Cross-cutting concerns are aspects of a program that affect other concerns. These concerns often cannot be cleanly decomposed from the rest of the system in both the design and implementation, and can result in either code duplication, significant dependencies between systems, or both. Define various transaction attributes like transaction boundaries, isolation & propagation levels etc. Explain logging framework. Specify Caching framework. Please include any open source or commercial off the shelf product to be used.>

9.1 Logging [If Applicable - Optional]

9.2 Auditing [If Applicable - Optional]

9.3 Exception Handling [If Applicable - Optional]

9.4 Caching [If Applicable - Optional]

9.5 Transaction [If Applicable - Optional]

9.6 Session Management [If Applicable - Optional]

<Describe how the system will manage sessions. Discuss the use of cookies, server side state, client side state, and vulnerabilities.>

9.7 Compliance [If Applicable - Optional]

9.8 Data Access Control Matrix [If Applicable - Optional]

<Provide the details of the data access control design. The following is a hypothetical example of a data access control matrix in a role based security model. You may use this format or create your own based on the control design being used.>

<table>
<thead>
<tr>
<th>Role</th>
<th>Data</th>
<th>Password</th>
<th>PHI</th>
<th>Claim Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member</td>
<td>Own</td>
<td>Own, Create</td>
<td>Own, Create</td>
<td></td>
</tr>
</tbody>
</table>
## 9.9 Component Access Control Matrix [If Applicable - Optional]

<Provide the details of the component access control design. The following is a hypothetical example of a component access control matrix in a role based security model. You may use this format or create your own based on the component design being used.>

<table>
<thead>
<tr>
<th>Role</th>
<th>Component</th>
<th>Member Portal</th>
<th>Claim System</th>
<th>Membership System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member</td>
<td></td>
<td>- manage password</td>
<td>No access</td>
<td>No access</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- create/update profile</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- submit claim</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- view claim status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrator</td>
<td></td>
<td>- manage user passwords</td>
<td>- manage user passwords</td>
<td>- manage user password</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- update portal pages</td>
<td>- perform system backup</td>
<td>- perform system backup</td>
</tr>
<tr>
<td>Claim Rep</td>
<td></td>
<td>No Access</td>
<td>- read member claim (if assigned)</td>
<td>- read member profile (if assigned)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- update member claim (if assigned)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- approve member claim (if assigned)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- issue member payment (if assigned)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- issue provider payment (if assigned)</td>
<td></td>
</tr>
</tbody>
</table>
12 Infrastructure Management [If Applicable - Optional]

12.1 Technologies [If Applicable - Optional]

*Please provide a summary of the technologies utilized for this project (OS, DB, Storage, Load balancing, etc.)*

12.2 System Design Information: [If Applicable - Optional]

*Detail Information on IT Infrastructure*

12.3 Server Design- Specs per server (DEV, UAT and PROD): [If Applicable - Optional]

- Server Hardware Information: [If Applicable - Optional]
  - Cisco UCS
    - Domain Name:
    - Blade Information:
    - ESX Cluster name:
  - IBM Hardware:
    - IBM Host Name:
    - VIO Information:
      - Physical NIC and vNIC names:
      - Physical FC and vFC names
- OS Type and Version: [If Applicable - Optional]
  - Version: AIX, Windows 2008 SP2 or RHEL6
  - Hostname:
  - IP Addresses:
  - Number of CPUs:
  - Memory (GB):
  - Storage Information: VMAX, VNX, Celerra
- ESX cluster name: [If Applicable - Optional]
- Specialized hardware (Dongles, NICs, etc.): [If Applicable - Optional]
- Additional server software information (IIS, Apache, etc.): [If Applicable - Optional]

12.4 Network Design: [If Applicable - Optional]

- Network security segment information (PNW, PW, NPNW, NPW):
- Load balancer information:
- External vendor access information (Client VPN, B2B VPN):
- Firewall port Information: List all inbound and outbound TCP/UDP ports in use by the application
- Network connectivity information
  - Type (1Gbs Ethernet, 10Gbs Ethernet, 8Gbs FC):
  - Quantity:

12.5 Visio Design: [If Applicable - Optional]

*Visio diagram of the infrastructure environment*
12.6 Business Continuity (DR) Design: [If Applicable - Optional]

- DR design:
- BCP design:

12.7 Database Design [If Applicable - Optional]

<DBMS technology required (Oracle, MS SQL, Greenplum):>

**MSSQL (DEV, UAT and PROD): [If Applicable - Optional]**

- Version of MSSQL (SQL 2008/2012/2014):
- Database Instance name:
- Storage layout (Data, Log, Temp):
- Database backup and recovery design:
- Replication design (Logshipping/Mirroring/Transactional/AlwaysOn):
- Specific database features information (Partitioning/Columnstore/AlwaysOn/OnlineIndex):
- HA and DR design (Clustering/AlwaysOn/Mirroring):
- Service Accounts:

**Oracle (DEV, UAT and PROD): [If Applicable - Optional]**

- Version of Oracle RDBMS and Client required
  - Database Instance name:
- Storage layout (Data, Log, Temp):
- Database backup and recovery design:
- Database Category (OLTP or Data Warehouse)
- Specific database features design information (RAC, Partitioning, Compression, DataGuard):
- Service Accounts:

**Greenplum: [If Applicable - Optional]**

- Data sources (Oracle, SQL*Server), and table listing :
- Replication – Full Refresh and/or Change Data Capture:
- Database Size:

**Data Center Facilities: [If Applicable - Optional]**

- Rack Location:

12.8 Database Link / Server Link [If Applicable - Optional]

<Identify any additional system monitoring requirements.>

- Syslog
- SCOM
- Nagios
- Ganglia

12.9 Monitoring / Tool [If Applicable - Optional]
12.10 Application Availability [If Applicable - Optional]

*Identify the best method(s) to verify application availability.*

<table>
<thead>
<tr>
<th>Monitor</th>
<th>Description</th>
<th>Escalation Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.11 Log file Monitoring: [If Applicable - Optional]

*List log files that need to be monitored*

<table>
<thead>
<tr>
<th>Log file</th>
<th>Search Strings (Warning or Alarm)</th>
<th>Escalation Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.12 Backup Schedule, Retention and exception list [If Applicable - Optional]

12.12.1 Describe server:

*List servers that need to be backed up*

<table>
<thead>
<tr>
<th>Server Name (FQDN)</th>
<th>Operating System</th>
<th>APP or DB</th>
<th>Physical or VM</th>
<th>Raw Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*List any file systems that need to be backed up*

<table>
<thead>
<tr>
<th>File System Name</th>
<th>Path</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.12.2 Exception List:

*List file type or directories that need to be excluded from backed up*

<table>
<thead>
<tr>
<th>Server Name (FQDN)</th>
<th>Exception List</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.12.3 Backup Schedule:

WellCare Health Plans, Inc. standard backup window

*List any required changes to Backup Schedule*

<table>
<thead>
<tr>
<th>Server Name (FQDN)</th>
<th>Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.12.4 Retention:

WellCare Health Plans, Inc. standard retention policy
<List any changes to retention policy>

<table>
<thead>
<tr>
<th>Server Name (FQDN)</th>
<th>Retention</th>
</tr>
</thead>
</table>

12.12.5 Storage Management

Development/Production Database Services File System layouts [If Applicable - Optional]

Development:

<table>
<thead>
<tr>
<th>Unix File System</th>
<th>SAN Lun sizes</th>
</tr>
</thead>
</table>

Production:

<table>
<thead>
<tr>
<th>Unix File System</th>
<th>SAN Lun sizes</th>
</tr>
</thead>
</table>

13 Scheduler [If Applicable - Optional]

13.1.1 Schedule/Frequency

13.1.2 Job Dependencies/Order

14 Non-functional Requirements [If Applicable - Optional]

< Explain how the Non-functional requirements outlined in the FSDs included in this design are being addressed with the respective design decisions.>

14.1.1 Performance

14.1.2 Scalability

14.1.3 Usability

14.1.4 Capacity (Current & Forecast)

15 Traceability Matrix [If Applicable - Optional]

<The matrix should be a mapping of the FSD requirements which are realized by this design. If only portions of requirements are realized, be sure to include those along with a description of which TDD contains the remaining portion of the functionality to satisfy the requirement. Any requirement not satisfied by this TDD should be shown and labeled as not satisfied.>
16 References [If Applicable - Optional]

<List any other documents or Web addresses to which this TDD refers to with a hyperlink to their location. These may include user interface style guides, contracts, standards, system requirements specifications, use case documents, or a vision and scope document. Provide enough information so that the reader could access a copy of each reference, including title, author, version number, date, and source or location.>

<table>
<thead>
<tr>
<th>Title</th>
<th>Hyperlink</th>
<th>Description</th>
<th>Date</th>
<th>Version</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17 Appendices [If Applicable - Optional]

[Screen shots and wire frames are examples of what may be included here. Appendices are not required and should only apply where pertinent.]