IES TECHNICAL REQUIREMENTS

Legend:

1. NYS technical Function: The technical functions as documented in the Target Technical Architecture to which the FRM requirements map to.
2. IES Req: The IES requirement number
   - IES_HH_BRS: Browser Services
   - IES_HH_RCS: Rich Client Services
   - IES_HH_MCS: Mobile Client Services
   - IES_HH_ECC: Enterprise Collaboration and Communication
   - IES_HH_WAS: Web Application Server Services
   - IES_HH_BID: BI and Data analytics Services
   - IES_HH_ECM: Enterprise Content Management (ECM)
   - IES_HH_BPM: Business Process Management Services
   - IES_HH_BRM: Business Rules Management Services
   - IES_HH_MRS: Messaging and Routing Services
   - IES_HH_DWR: Data Warehousing Services
   - IES_HH_CAS: Common Application Services
   - IES_HH_MDM: Master Data Management Services
   - IES_HH_SMS: Service Management Services
   - IES_HH_SPS: Security and Privacy Services
   - IES_HH_DTS: Data Services
   - IES_HH_IMS: Infrastructure Management Services
   - IES_HH_MNS: Monitoring services
   - IES_HH_SCS: Systems communication Services
3. Linked FRM requirements number: The column documents the requirements number of the FRM requirements that map to the rolled-up IES requirements
4. FRM Example: This column documents the related FRM requirement description for the linked FRM requirements.
5. IES Requirement: The IES requirement description.
6. Type: Depicts that these are technical requirements
7. Source: This column indicates the source of the requirement.

| | | | Prescribed IES Technology Framework Components | | | | | | | | [redacted] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NYS Technical Function | IES REQ # | IES High Level Requirement Description | Adobe E Signature | IBM BAW | IBM ODM | Informatica MDM | Elastic Search | Verizon VCC | IES Portal(Liferay/Adobe Forms/Angular/OpenShift) | IBM FileNet | | Custom (Yes/No) | L/M/H | [redacted] | EECM Workstream |
| Web Portal | IES_HH_BRS_001 | The system must have one portal both for the public and the worker. | | | | | | | X | | T s p | No | | W c s f w | x |
| | IES_HH_BRS_002 | The system must be available through different browsers and d fferent versions of the browsers, including (but not limited to) Google Chrome, Mozilla Firefox, Microsoft Edge, Microsoft Internet Explorer 11, and Apple Safari. | | | | | | | X | | T b in 1 b d | No | | W c s f w | x |
| | IES_HH_BRS_003 | The system portal must comply with New York State Web Browser Support Standard NYS-S15-004 which requires the front end portal to be guided by the emerging W3C specifications providing cross platform/device compat bil ty. | | | | | | | X | | T B v pl s | No | | W c s f w | x |
| | IES_HH_BRS_004 | The system must possess a fully responsive design. | | | | | | | X | | T fu | No | | W c s f w | x |
| | IES_HH_BRS_005 | The system must have a consistent, configurable look and feel. | | | | | | | X | | T p m | No | | W c s f w | x |
| | IES_HH_BRS_006 | The system must support the ab lity to capture and store a user language preference. | | | | | | | X | | T p la | No | | W c s f w | x |
| | IES_HH_BRS_007 | The system must support the ab lity for the user to set communication preferences (e.g., SMS, email, web portal). | | | | | | | X | | T a a | No | | W c s f w | x |

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| | IES_HH_BRS_008 | The system must support the ab lity to start and complete applications in separate sessions or channels. | | | | | | | X | | | No | | | x |
| Web Accessibil ty including Section 508 compliance | IES_HH_BRS_009 | The system must comply with New York State Enterprise IT Policy NYS-P08-005, Accessibility of Web-Based Information and Applications which requires that state agency web-based information and app ications are accessible to persons with disab lities. | | | | | | | X | | | No | | | x |
| Online Help | IES_HH_BRS_010 | The system should provide online help capability through the integrated client portal | | | | | | | X | | | No | | | x |
| Pagination | IES_HH_BRS_011 | The system must have capability to display limited number of resu ts on search engine resu ts pages to improve responsiveness. | | | | | | | X | | | No | | | x |
| Sorting/Filtering | IES_HH_BRS_012 | The system must have capability to sort through content and filter content. | | | | | | | X | | | No | | | x |
| Front End Validations | IES_HH_BRS_013 | The system must verify and validate data entered into the system using business rules, policy, etc. | | | X | | | | X | | | No | | | x |
| File Upload and Download | IES_HH_BRS_014 | The system must have capability to upload and download files directly using web browser. | | | | | | | X | X | | No | | | x |

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| Usab lity | IES_HH_BRS_015 | The system w ll speak the users' language, w th words, phrases and concepts fam liar to the user, rather than System-oriented terms e.g., drop down menus | | | | | | | X | | [redacted] | | No | | [redacted] | x |

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| | IES_HH_BRS_016 | The System will fo low standardized conventions and limit the use of words, s tuations, or actions that have multiple meanings | | | | | | | X | | [redacted] | No | | [redacted] | x |
| | IES_HH_BRS_017 | The system w ll make all necessary data and possible actions visible to the user (e.g., there will be no need remember transaction codes). | | | | | | | X | | | No | | | x |
| | IES_HH_BRS_018 | The system cursor wi l automatically advance to the next logical input field when the maximum allowed numbers of characters have been entered for the keyed field or when the user presses the "Enter" or "Tab" key | | | | | | | X | | | No | | | x |
| | IES_HH_BRS_019 | The system w ll notify the user when a source system is unavailable / inoperable and notify user that any available information about the subject being viewed is as of certain time and date | | | | | | | X | | | No | | | x |
| Archive | IES_HH_BRS_020 | The system must have ability to archive and track electronic information | | X | | | | | | X | | No | | | x |
| History | IES_HH_BRS_021 | The system must have ability to store, maintain and retrieve historical electronic information. | | | | | X | | X | | | No | | | x |
| Integrated App ication | IES_HH_BRS_022 | The new system should have capability to integrate application forms for all programs. | | X | | | | | X | | | No | | | x |

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| Inte ligent Question Set | IES_HH_BRS_023 | The system must be designed to utilize intelligent question sets that collects required data according to the program(s) /service (s) that the recipient applied for and the circumstances of the case. | | | | | | X | | | T P u a | | No | | x |

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| Search | IES_HH_BRS_024 | The new system must provide the ability to quickly search for a case, or an individual within a case. Users also need the abi ity to customize their searches. | | X | | | X | | X | X | [redacted] | No | | [redacted] | x |
| Federated Search | IES_HH_BRS_025 | The system must support federated search that allows the simultaneous search of multiple searchable resources. | | | | | X | | X | X | | No | | | x |
| Duplicate | IES_HH_BRS_026 | The system must not allow duplicate case records in the system. The system must inform worker(s) of the existence of possible name(s), address(es), sex, birth date(s) matches that would prevent/avoid/avert creation of duplicates | | | | X | | | | | | No | | | x |
| Language | IES_HH_BRS_027 | The web portal must be access ble in six languages that are identified in the Executive Order 26 and Local Law 73 | | | | | | X | X | | | No | | | x |
| Electronic Case Files | IES_HH_BRS_028 | The new system should provide workers/staff with electronic case files and the ability to customize files' organization; for all program areas. | | X | | | | | | X | | No | | | x |

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| Track Case Status | IES_HH_BRS_029 | The new system should be able to mon tor the progress and status of all cases and app ications, documents associated to the case and/or applications, correspondences, etc. | | X | | | | | | | [redacted] | No | | [redacted] | x |
| Automated Notification | IES_HH_BRS_030 | The system must have automated alerts and notification capability. | | X | | | | | | | | No | | | x |
| Capture Electronic Signature | IES_HH_BRS_031 | The system must have electronic signatures capability in accordance with the Electronic Signatures and Records Act (ESRA) Guidelines | X | | | | | | | | | No | | | x |

| | | | Prescribed IES Technology Framework Components | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NYS Technical Function | IES REQ # | IES High-Level Requirement Description | Verizon VCC | IES Portal(Liferay/ Adobe/Angular/OpenShift) | Mobile App (Xamarin) | IBM Data Ca | [redacted] | Custom (Yes/No) | L/M/H | [redacted] | EECM Workstream |
| Omni-Channel Accesibility | IES_HH_RCS_001 | The system must allow applicants/ clients access to application and/or case data through various channels such Web Portal, Kiosk, IVR, etc. | X | X | X | | | No | | W c s fu st e • • •I • w V ( | x |
| Scanning | IES_HH_RCS_002 | The system must have functionality that allows users to scan documents into the system real-time | | | | X | | No | | W c s fu st e • u s | x |
| Chat | IES_HH_RCS_003 | The system must provide online chat functionality to interact with worker regarding benefit delivery and case related information. | X | | | | | No | | W c s fu st e • w V (V | x |

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| IVR/Telephony | IES_HH_RCS_004 | The system must provide functionality to interact with worker through phone regarding benefit delivery and case related information. | X | | | | | No | | | x |
| Mobile Client services | IES_HH_RCS_005 | The system must have functionality to enable people with applying for and manage benefits using mobile devices. | | | X | | | No | | | x |
| Contact-us | IES_HH_RCS_006 | The system must provide a help desk (support) functionality that allows users to contact help desk staff through the web portal. | X | | | | | No | | | x |

| | Prescribed IES Technology Framework Components | | | | | | EECM Workstream |
|---|---|---|---|---|---|---|---|
| **IES High-Level Requirement Description** | **Mobile App (Xamarin)** | | | **Custom (Yes/No)** | **L/M/H** | | |
| The system must have functionality to enable people with applying for and managing benefits using mobile devices. All features of the application available on desktops must be available through mobile devices. | X | T b re c m m p d | | No | | f f • • • • | x |
| The system must have functionality that gives users clear sense of what users are able to see and do with the application. | X | T b re in c c in a | | No | | f f • • • • | x |
| The system must have functionality to ensure that the user provides necessary and properly formatted information needed to successfully complete an operation using mobile application. | X | T b re in c c in a | | No | | f f • • • • | x |

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| The system must have functionality to improve application user experiences as they allow the users to sort through the content to quickly get what they are looking for using mobile devices | X | [redacted] | No | | [redacted] | x |
| The system must have functionality to perform calculations using functions and formulas on mobile application. | X | | No | | | x |
| The system must have speech recognition program that converts spoken to written language on mobile devices. | X | | No | | | x |
| The System will allow for the request of or entry of data from "remote" (e.g., tablets), so long as security standards are met In compliance to the New York State Information Technology Standard: Bring Your Own Device (BYOD) NYS-S14-012 | X | | No | | | x |

| | | | Prescribed IES Technology Framework Components | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| NYS Technical Function | IES REQ # | IES High-Level Requirement Description | IES Portal(Liferay/Adobe Forms/Angular/OpenShift) | IBM BAW | | | Custom (Yes/No) | L/M/H | Pr | EECM Workstream |
| Session Management | ES_HH_WAS_001 | The system must have functionality to keep track of a user's activity across sessions of interaction within the application. | X | | T<br>u<br>s<br>f<br>u<br>s<br>E | | No | | We<br>con<br>solu<br>fun<br>we<br>•Ca<br>•Oh<br>•Io<br>•Ka | x |
| Transaction Management | ES_HH_WAS_002 | The system must have functionality to support and facilitate atomicity, consistency, isolation, and durability (ACID) of transactions with in the database, Middle ware, etc. | X | X | T<br>u<br>p<br>C<br>a<br>c<br>b<br>m<br>t | | No | | We<br>con<br>solu<br>fun<br>we<br>•Ca<br>•Oh<br>•Io<br>•Ka<br>•Te<br>Shi<br>(BC<br>wor | x |

| | | | Prescribed IES Technology Framework Components | | | | [redacted] | | | [redacted] | |
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| **NYS Technical Function** | **IES REQ #** | **IES High-Level Requirement Description** | **Mulesoft** | **Verizon VCC** | **Quadient** | **IES Portal (Liferay/Adobe Forms/Angular/Openshift)** | | **Custom (Yes/No)** | **L/M/H** | | **EECM Workstream** |
| Business Integration | IES_HH_ECC_001 | The system must have functionality that facilitates transfer and synchronization of transaction data from one entity to another, and from one system to another, according to the business requirements. | X | | | X | | No | | | x |
| Collaboration Tools | IES_HH_ECC_002 | The system must have functionality that provides collaborative tools to help facilitate SSD's working together over geographic distances to aid communication, collaboration. | | X | | X | | No | | | x |
| Communications Management | IES_HH_ECC_003 | The system must have functionality that manages and tracks communications to both internal and external parties. | | | X | X | | No | | | x |

| | | | Prescribed IES Technology Framework Components | | | | | | | |
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| NYS Technical Function | IES REQ # | IES High-Level Requirement Description | Synapse | Cognos | Tableau | [redacted] | Custom (Yes/No) | L/M/H | [redacted] | EECM Workstream |
| Ad-Hoc Queries | IES_HH_BID_001 | The system must have functionality to supports ad-hoc queries that are created to obtain information as the need arises. | X | X | | | No | | | X |
| | IES_HH_BID_002 | The system must be able to collect all programmatic data to meet state and federal requirements, such as TANF and child care reporting requirements | X | X | | | No | | | X |
| | IES_HH_BID_003 | The system must have ability for external individuals to access reports, such as involvements, benefit payments, and overpayment balance status | X | X | | | No | | | X |
| | IES_HH_BID_004 | The system must retain reports for a prescribed period. | X | X | | | No | | | X |
| Canned Reports | IES_HH_BID_005 | The system must have functionality for pre-defined reports in which clients define the requirement specification. | | X | | | No | | | X |
| Complex Reporting | IES_HH_BID_006 | The system must have functionality to enable many complex reporting functions. | | X | | | No | | | X |
| Dashboards | IES_HH_BID_007 | The system must have functionality that presents a range of different indicators on one page | | X | X | | No | | | X |

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| Simple Reporting | IES_HH_BID_008 | The system must have functionality that enables simple reporting functions. | X | X | | Th ex an pe | [redacted] | No | | c s f s e • | X |
| Data Mining | IES_HH_BID_009 | The system must have functionality that allows extracting data and transforming it into meaningful data for future use. | X | | | Th ex bu | | No | | c s f s e • | X |
| Statistical Analysis | IES_HH_BID_010 | The system must have functionality that allows for analyzing the existing data for statistical purposes. | X | | X | Th to bu | | No | | c s f s e • | X |
| Visualization | IES_HH_BID_011 | The system must have functionality that enables creation of visual and graphical images (charts, diagrams, graphs, etc.). | | | X | Th en di | | No | | c s f s e • T | X |

| | | | Prescribed IES Technology Framework Components | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NYS Technical Function | IES REQ # | IES High-Level Requirement Description | IBM Data Cap | IBM BAW | IBM Filenet | IES Portal(Liferay/Adobe Forms/Angular/Openshift) | IES Mobile App (Xamarin) | [redacted] | Custom (Yes/No) | L/M/H | EECM Workstream |
| Document Imaging | IES_HH_ECM_001 | The system must provide the ability to image all documents in real-time | X | | X | | | T l d th w | No | N/A | X |
| | IES_HH_ECM_002 | The system must have capability to retain documents and images for seven years online | | | X | | | T l d y | No | N/A | X |
| Document Management | IES_HH_ECM_003 | The system must have functionality to support storing and tracking electronic documents or images of paper documents. It associates the electronic files with the entity to which they relate (e.g., person, case, provider, agency, etc.). | | | X | | | T l a i w a fr | No | N/A | X |
| Document Workflow | IES_HH_ECM_004 | The system must have document workflow capability that tracks documents from the point of imaging making document images available as soon as possible and avail document images though out the application flow. | X | | X | | | T l d c d a fe a fl | No | N/A | X |
| | IES_HH_ECM_005 | The system must provide for the capture of copies of mailed in applications to reduce delays in program participation. | X | | X | | | T l w s a d E p d | No | N/A | X |
| Annotation Comments | IES_HH_ECM_006 | The system must provide ability to annotate scanned images. | | | X | | | T F c | No | N/A | X |

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| Immutability of Digital Files | IES_HH_ECM_007 | The system must have functionality that guarantees the immutability of digital files | | | X | | | T<br>Fi<br>im | [redacted] | No | N/A | [redacted] | X |
| Image Capture | IES_HH_ECM_008 | The system must have functionality that enables users to upload pictures from digital cameras or scanners which are either connected directly to the computer or the network. | | | X | X | X | T<br>p<br>fr<br>a<br>st<br>d | [redacted] | No | N/A | [redacted] | X |
| Link Management | IES_HH_ECM_009 | The system must provide the ability to seamlessly integrate different components of the application with imaged documents for retrieval. | | | X | | | T<br>IB<br>d<br>d<br>p<br>th<br>U<br>d<br>p<br>a<br>A | [redacted] | No | N/A | [redacted] | X |
| ECM Search | IES_HH_ECM_010 | The system must have functionality for finding information and its associated contexts within an ECM system. | | | X | | | T<br>IB<br>d<br>s<br>A<br>fi<br>a<br>E | [redacted] | No | N/A | [redacted] | X |
| Taxonomy | IES_HH_ECM_011 | The system must provide ability to Standardize state wide Indexing / Imaging of Documents so that all cases are indexed in the same manner. | | | X | | | T<br>IB<br>d<br>c<br>a<br>st<br>m<br>in | [redacted] | No | N/A | [redacted] | X |
| Version control | IES_HH_ECM_012 | The system must have ability to take the information used in the re-determination and recalculation process, but not overlay the existing historical record for the prior period(s). | | | X | | | T<br>IE<br>v<br>v<br>im | [redacted] | No | N/A | [redacted] | X |

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| | IES_HH_ECM_013 | The system must have ability to create an additional record or records, representing any adjustment or adjustments to any clients' existing eligibility and benefit record maintained on the database. | | X | X | | | [redacted] | No | N/A | t<br>f<br>s<br>•<br>•<br>•<br>•<br>f<br>[redacted]<br>f | X |

| | | | Prescribed IES Technology Framework Components | | | | | | | |
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| **NYS Technical Function** | **IES REQ #** | **IES High-Level Requirement Description** | **IBM BAW** | **IBM ODM** | **Mulesoft** | **OpenShift** | [redacted] | **Custom (Yes/No)** | **L/M/H** | **EECM Workstream** |
| Process Interfaces | IES_HH_BPM_001 | The system must have functionality to link multiple processes. | X | | X | | | No | | X |
| Process Routing and Rules | IES_HH_BPM_002 | The system must have functionality to model and control the workflow of activities as an end-to-end process in order to ultimately automate tasks as much as possible. | X | X | X | | | No | | X |
| Process State Management | IES_HH_BPM_003 | The system must have functionality to encompass the tracking of individual processes, so that information on their state can be easily seen, and statistics on the performance of one or more processes can be provided. | X | | | | | No | | X |
| User Role Management | IES_HH_BPM_004 | The system must have functionality for the assessment the dynamic behavior of processes over time, i.e. the development of process and resource performance in reaction to changes or fluctuations of certain environment or system parameters. | X | | X | X | | No | | X |

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| Workflow Engine | IES_HH_BPM_005 | The system must have functionality to enable users to access tasks in the universal work list (UWL) and to execute tasks within a BPM process. | X | | | | [redacted] | No | | [redacted] | | X |
| Workflow Engine | IES_HH_BPM_006 | The system must have the capability for systematic reconciliation of data provided by different sources (for example, CNNX and WMS replacement) and preventing mismatches upfront where possible to avoid billing and payment rejections. | X | | X | | [redacted] | No | | [redacted] | | X |

| | | | Prescribed IES Technology Framework Components | [redacted] | | | | |
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| **NYS Technical Function** | **IES REQ #** | **IES High-Level Requirement Description** | **IBM ODM** | | **Custom (Yes/No)** | **L/M/H** | | **EECM Workstream** |
| Rules Engine | IES_HH_BRM_001 | The system must have functionality to both serve as a documented repository of business logic as well as being an executable part of the overall architecture in the application of those rules within the architecture. | X | | No | | W co so fu we •C IB | X |
| Effective Dating | IES_HH_BRM_002 | The system must have functionality to provide an effective date specification that identifies that the ruleset is always active, or that the ruleset is restricted based on a time and date range, or a starting or ending time and date. | X | | No | | W co so fu we •C IB | X |

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| Rules Authoring and Configuration | IES_HH_BRM_003 | The system must have functionality to create the rule sets that can be deployed to a runtime environments. | X | [redacted] | No | | [redacted] | X |
| Rules Deployment | IES_HH_BRM_004 | The system must have functionality for deployment of a rule set to a controlled environment. | X | | No | | | X |
| Rules Processing | IES_HH_BRM_005 | The system must have functionality for execution of one or more business rules in a runtime production environment. | X | | No | | | X |
| Rules Storage | IES_HH_BRM_006 | The system must have functionality that stores the business rules defined by the business users in a database. | X | | No | | | X |
| Rules Storage | IES_HH_BRM_007 | The system must maintain a file of historic eligibility rules when changes are made.<br>The index of modified rules is needed when a worker has to take action for a period prior to the implementation of the new rule change. This can occur due to a fair hearing decision, a case action that overlaps two periods of different business rules or a retroactive budgeting change necessitated by court action, etc. | X | | No | | | X |

| | | | Prescribed IES Technology Framework Components | | | [redacted] | | | [redacted] | |
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| **NYS Technical Function** | **IES REQ #** | **IES High-Level Requirement Description** | **IBM MQ** | **Mulesoft / OpenShift** | **Kafka** | | **Custom (Yes/No)** | **L/M/H** | | **EECM Workstream** |
| Guaranteed Delivery | IES_HH_MRS_001 | The system must have functionality that uses a built-in data store (local storage disk space in a participant computer) to persist messages in each participant computer on which the messaging system is installed. | X | | X | | No | | | X |
| Message Correlation | IES_HH_MRS_002 | The system must have functionality to enable messages to be assigned a specific property, usually known as a correlation identifier, which is set to the same value in all related messages. | X | X | | | No | | | X |
| Message Enrichment | IES_HH_MRS_003 | The system must have functionality to provide supplemental data from external sources that is added to the message payload to address the issue of more data being required by the target system than the source system can provide. | | X | | | No | | | X |
| Message Exchange Patterns | IES_HH_MRS_004 | The system must have functionality as a network-oriented architectural pattern that describes how two different parts of a message passing system connect and communicate with each other. | X | X | X | | No | | | X |
| Message Parsing and Formatting | IES_HH_MRS_005 | The system must have functionality that translates between binary data and human-readable textual representations of these values. | | X | | | No | | | X |

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| Message Sequencing | IES_HH_MRS_006 | The system must have functionality that ensures that messages are delivered to the receiving application in a particular order. | X | | X | [redacted] | No | | [redacted] | X |
| Message Transformation | IES_HH_MRS_007 | The system must have functionality and patterns that define proven guidelines for transforming messages for additional processing or to match the expected document format of the service to which the message will be sent. | | X | | | No | | | X |
| Message Validation | IES_HH_MRS_008 | The system must have functionality that verifies type, length, format, or range of inputs. | X | X | X | | No | | | X |
| Message Routing | IES_HH_MRS_009 | The system must have functionality that defines proven guidelines for routing a message to its target endpoint(s). | | X | | | No | | | X |

| | | | Prescribed IES Technology Framework Components | | | | | | | | |
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| **NYS Technical Function** | **IES REQ #** | **IES High-Level Requirement Description** | **Informatica ETL** | **Synapse** | **IBM Filenet** | **IES Portal / Verizon VCC** | **Esri/GIS** | [redacted] | **Custom (Yes/No)** | **L/M/H** | [redacted] | **EECM Workstream** |
| Data Extract | IES_HH_DWR_001 | The system must have functionality where data is analyzed and crawled through to retrieve relevant information from data sources (like a database) in a specific pattern. | X | X | | | | Th us to an Sy pla | No | | | X |
| Extract, Transform and Load (ETL) | IES_HH_DWR_002 | The system must have functionality that provides extract, transform and load capabilities that allow data to be migrated from one system to another system. | X | X | | | | Th us to tra ca wit pla | No | | | X |
| GIS | IES_HH_DWR_003 | The system must have functionality that allows the capture, store, manage and analyze geographic data. | | | | | X | Th us to da da pu | No | | | X |
| Knowledge & FAQ | IES_HH_DWR_004 | The system must have functionality that supports the organization and management of content on various electronic media and associated metadata to support content classification and retrieval (e.g. videos and presentations for marketing and training purposes). | | | | X | | Th us pla ma me me kn ca tea ag Or Ma the | No | | | X |
| Data Extract | IES_HHS_DWR_005 | The system must be able to preserve an immutable copy for litigation hold purposes. If the document is a template, copies of the template, with the dates the template was in use, should be stored as an immutable copy, along with the business requirements of what data elements would populate same. | X | | X | | | Th us sto pr co pu da ex IT co im | No | | | X |

| | | | Prescribed IES Technology Framework Components | | | | | | | [redacted] | | | |
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| **NYS Technical Function** | **IES REQ #** | **IES High-Level Requirement Description** | **GitLab** | **Redis** | **Blueprint/HP ALM/Jira** | **ITS Managed File Transfer** | **ElasticSearch / SplunkS** | **IES Portal(Liferay/Adobe/Angular/O** | **Azure Synapse/IBM MQ/Kafka** | | **Custom (Yes/No)** | **L/M/H** | [redacted] | **EECM Workstream** |
| Caching | IES_HH_CAS_001 | The system must have functionality that transparently stores data so that future requests for that data can be served more quickly. | | X | | | | | | | No | N/A | | X |
| Configuration | IES_HH_CAS_002 | The system must have functionality for tracking and controlling changes in the software. Configuration Management practices include revision control and the establishment of baselines. | X | | X | | | | | | No | N/A | | X |
| Event Management | IES_HH_CAS_003 | The system must have functionality that provides real-time analysis of alerts (e.g. security alerts) generated by the application layer | | | | | X | | X | | No | N/A | | X |
| Exception Handling | IES_HH_CAS_004 | The system must have functionality for responding to the occurrence, during computation, of exceptions – anomalous or exceptional events requiring special processing – often changing the normal flow of program execution. | | | | | | X | | | No | N/A | | X |
| File Transfer | IES_HH_CAS_005 | The system must have functionality that supports the consumption of file transfer | | | | X | | | | | No | N/A | | X |
| Application Lifecycle Management | IES_HH_CAS_006 | The system must have functionality that manges the product lifecycle (governance, development, and maintenance) | | | X | | | | | | No | N/A | | X |

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| Localization and Internationalization | IES_HH_CAS_007 | The system must have functionality that provides the means of adapting computer software to different languages, regional differences and technical requirements of a target market. | | | | | | X | | [redacted] | No | N/A | [redacted] | X |
| Logging and Auditing | IES_HH_CAS_008 | The system must have functionality that integrates with enterprise SIEM products to produce audit logs that record user and system activities, exceptions, and information security events that are kept for an agreed-upon time period, to assist in future investigations and access control monitoring. | | | | | X | | X | | No | N/A | | X |

| | | | Prescribed IES Technology Framework Components | [redacted] | | | [redacted] | |
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| NYS Technical Function | IES REQ # | IES High-Level Requirement Description | Informatitac MDM | | Custom (Yes/No) | L/M/H | | EECM Workstream |
| Golden Record | ES_HH_MDM_001 | The system must have functionality to ensure authoritative data for a given entity from a master source from strategy, governance and implementation perspective. | X | Th<br>us<br>Id<br>se<br>IT<br>se | No | | | X |
| Records Linkage | ES_HH_MDM_002 | The system must have functionality for finding records in a data set that refer to the same entity across different data sources. | X | Th<br>us<br>M<br>fin<br>da | No | | | X |
| Reference Data | ES_HH_MDM_003 | The system must have functionality to provide data that defines the set of permissible values to be used by other data fields. | X | Th<br>us<br>M<br>re<br>da<br>th<br>se | No | | | X |
| Metadata Management | ES_HH_MDM_004 | The system must have functionality for metadata management to enable management of different metadata sets across components. | X | Th<br>us<br>M<br>pr<br>m | No | | | X |
| Master Person Registry | ES_HH_MDM_005 | The system must have functionality that matches and identifies clients as well as providers across multiple systems and ties them together via a composite index. | X | Th<br>us<br>M<br>id<br>pr<br>re<br>se | No | | | X |
| Records Management | ES_HH_MDM_006 | The system must have functionality that provides capabilities to help manage key data or reference data across systems from both data management and for the records management perspective | X | Th<br>us<br>M<br>m<br>m<br>pr<br>up<br>w<br>sh | No | | | X |

| | | | Prescribed IES Technology Framework Components | | | | | | |
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| NYS Technical Function | IES REQ # | IES High-Level Requirement Description | NY.gov/OKTA | IES Portal(Liferay/Adobe/Angular/OpenShift) | IES Common Services | [redacted] | Custom (Yes/No) | L/M/H | [redacted] | EECM Workstream |
| Access/Privilege Management | IES_HH_SPS_001 | The system must have functionality that provides capabilities to manage user access and privileges across application and infrastructure. | X | X | X | | No | | | X |
| Authentication | IES_HH_SPS_002 | The system must have functionality to provide capabilities to manage different methods for assuring the identity of a user. The service tracks identifying information including login and different verification factors. | X | | | | No | | | X |
| Authorization | IES_HH_SPS_003 | The system must have functionality that manages the membership of different individuals in groups and provides a mechanism for requesting applications to determine whether a user should have access to a resource. | X | X | X | | No | | | X |
| Digital Signatures | IES_HH_SPS_004 | The system must have functionality that provides the capability to encrypt information for purposes of secure transmission or non-repudiation. | | X | | | No | | | X |

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| Identification | IES_HH_SPS_005 | The system must have functionality to manage data that uniquely describes a person or a thing and contains information about the subject's relationships | | X | X | [redacted] | No | | [redacted] | X |

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| Nonrepudiation | IES_HH_SPS_006 | The system must have functionality to ensure that a transferred message has been sent and received by the parties claiming to have sent and received the message. Nonrepudiation is a way to guarantee that the sender of a message cannot later deny having sent the message and that the recipient cannot deny having received the message. | | X | | [redacted] | No | | [redacted] | X |
| Single Sign On (SSO) | IES_HH_SPS_007 | The system must have functionality to manage access control of multiple related, but independent software systems. With this service a user logs in once and gains access to all systems without being prompted to log in again at each of them. | X | | | | No | | | X |
| Audit | IES_HH_SPS_008 | The system must have functionality that audits transactions and activities in the system for data protection compliance. | | | X | | No | | | X |
| Logging | IES_HH_SPS_009 | The system must have functionality that offer information logging services. | | | X | | No | | | X |

| | | | Prescribed IES Technology Framework Components | [redacted] | | | [redacted] | |
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| NYS Technical Function | IES REQ # | IES High-Level Requirement Description | Mulesoft / Openshift Service Mesh | | Custom (Yes/No) | L/M/H | | ECM Workstream |
| Web Services SLA Management | IES_HH_SMS_001 | The system must have functionality to enable the SLA management for web services. | X | The use plat co Mul Ser the we | No | | | X |
| Discovery | IES_HH_SMS_002 | The system must have functionality for a client applica ion querying the central registry to learn of the location of services. | X | The use plat co Mul Ser the ser of s ser cap | No | | | X |
| Message Specification | IES_HH_SMS_003 | The system must have functionality to define contracts between consumers and producers of the message service. | X | The use plat co Mul Ser con con pro me sol with ext def stru spe inte des to i EE Mul | No | | | X |

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| Service Registry | IES_HH_SMS_004 | The system must have functionality to enable the process of a service registering its location in a central registry. | X | [redacted] | No | | [redacted] | X |
| Service Repository | IES_HH_SMS_005 | The system must have functionality to enable lifecycle management to track lifecycle, versions and availability of services. | X | | No | | | X |

| | | | Prescribed IES Technology Framework Components | [redacted] | | | [redacted] | |
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| NYS Technical Function | IES REQ # | IES High-Level Requirement Description | Oracle/SQL Server/ MongoDB / Informatica | | Custom (Yes/No) | L/M/H | | EECM Workstream |
| Data Archiving | ES_HH_DTS_001 | The system must have functionality for moving data that is no longer actively used to a separate data storage device for long-term retention. | X | T u D m lo s d r | No | | f | X |
| Data Access | ES_HH_DTS_002 | The system must have functionality related to storing, retrieving, or acting on data housed in a database. | X | T u D f t C e | No | | f | X |
| Data Synchronization | ES_HH_DTS_003 | The system must have functionality for establishing consistency among data from a source to a target data storage and vice versa and the continuous harmonization of the data over time. | X | T u D S m h o | No | | f | X |
| Data Indexing | ES_HH_DTS_004 | The system must have functionality that improves the speed of data retrieval operations on a database table through data indexing. | X | T u D in t D m a | No | | f | X |

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| Database Locking | ES_HH_DTS_005 | The system must have functionality to prevent data from being corrupted or invalidated when multiple users try to read while others write to the database. | X | [redacted] | No | | [redacted] | X |
| Metadata Management | ES_HH_DTS_006 | The system must have functionality that manages the end to-end process and governance framework for creating, controlling, enhancing, attributing, defining and managing a metadata schema, model or other structured aggregation system. | X | | No | | | X |
| Change Data Capture | ES_HH_DTS_008 | The system must have functionality for data integration that is based on the identification, capture and delivery of the changes made to enterprise data sources. | X | | No | | | X |
| Rejected Data Management | ES_HH_DTS_009 | The system must have functionality to manage the reject data records during data migration. This typically involves writing rejected records to a separate area and handled in a separated process. | X | | No | | | X |

| | | | Prescribed IES Technology Framework Components | [redacted] | | | | [redacted] | |
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| NYS Technical Function | IES REQ # | IES High-Level Requirement Description | ITS Managed Data Center (Azure/OnPrem) | | Custom (Yes/No) | L/M/H | | | EECM Workstream |
| Performance Monitoring | IES_HH_MNS_002 | The system must have functionality that monitors and manages performance and availability of software applications. | X | | No | | f | | X |
| Web Analytics | IES_HH_MNS_004 | The system must have functionality for the measurement, collection, analysis and repor ing of web data for purposes of understanding and optimizing web usage. | X | | No | | f | | X |
| Business Transaction Monitoring | IES_HH_MNS_005 | The system must have functionality for tracking the flow of transactions across IT infrastructure, in addi ion to detec ion, alerting, and correction of unexpected changes in business or technical conditions. | X | | No | | f | | X |

| | | | Prescribed IES Technology Framework Components | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| NYS Technical Function | IES REQ # | IES High-Level Requirement Description | DevOps Tools (IBM uDeploy/Jenkins/Container Registry/Artifactory) | MuleSoft | IES Portal(Liferay/Adobe/Angular/OpenShift) | [redacted] | Custom (Yes/No) | L/M/H | [redacted] | EECM Workstream |
| Automated Deployment | IES_HH_SCS_001 | The system must have functionality that masks the complexity of deployment through management processes and cross-platform packaging. | X | | | | No | | | X |
| Direct Data Access | IES_HH_SCS_002 | The system must have functionality providing a method of reading data from a computer file without reading through the file from the beginning as on a disk or drum. | N/A | N/A | N/A | | No | | t | X |
| Local Software and Resource Integration | IES_HH_SCS_003 | The system must have functionality providing integration with software and system resources in local computing environment. | N/A | N/A | N/A | | No | | t | X |
| Messaging Connectivity | IES_HH_SCS_004 | The system must have functionality that deals with establishing a connection between two different applications that need to communicate with one another to transfer information. | | X | X | | No | | | X |

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| Middleware Connectors | IES_HH_SCS_005 | The system must have functionality that knows how to interact with an underlying business application. | | X | X | [redacted] | No | | [redacted] | ed | X |

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| Object Component Access | IES_HH_SCS_006 | The system must have functionality that provides a formalized means of composing disparate components into a fully working application ready for use. e.g. Make a local Java method a remote procedure without having to deal with remote APIs. | | | X | [redacted] | No | | [redacted] | X |
| Offline | IES_HH_SCS_007 | The system must have functionality to enable applications to function without networks. When the application creates data or saves state, it stores that data locally while it is offline and synchronize it with the remote server once the network is back online. | N/A | N/A | Mobile Apps only | | No | | | X |
| Packaged Integration | IES_HH_SCS_008 | The system must have functionality that identifies complex but regular processes where there are numerous interactions through several touch points between disparate applications and provides a common integration solution out of box. | | x | X | | No | | | X |
| Partner Integration Management | IES_HH_SCS_009 | The system must have functionality that enables execution of the service level agreement with integration partner. This includes monitoring of activity, security, connectivity of the integration solution. | | X | X | | No | | | X |