

Physical

System Architecture Review (SAR)

|  |  |
| --- | --- |
| **Project Name** |  |

|  |  |  |
| --- | --- | --- |
|  | **Department /Agency** | **Organization** |
|  |  |  |

|  |  |  |
| --- | --- | --- |
|  | **Dept./Agency Code** | **Organization Code** |
|  |  |  |

|  |  |
| --- | --- |
| **Application Name (file System)** |  |
|  | |
| **Tactical Planning Tracking #** |  |

|  |  |
| --- | --- |
| **Estimated Production Date** |  |

#### **State of New Jersey**

#### **Physical System Architectural Review Document**

The purpose of this document is to help OIT evaluate the proposed solution within an architectural framework and help OIT plan for the stated needs in the New Jersey Shared IT Infrastructure (SITI) hosting environment. The information in this document will help OIT better understand your business requirements and technical needs.

This document is used for the Physical Architecture Review. While a copy of the document submitted for this review is kept on file as a permanent snapshot, it should be a living document, continually refined and revised to represent the known state of the project.

Please note that this is a different document format than was submitted for the Logical SAR. **The Technology Initiation Proposal (TIP) and Logical SAR documents should be updated and included with this document.** New information should be added as it is identified. Minor refinements to information approved at the TIP review or Logical SAR should be made as necessary (e.g. more accurate transaction counts within an order of magnitude of the original estimate, or a newer server model number). Information that is significantly different from the previously reviewed TIP and LSAR documents should be clearly noted (e.g. a change in scope, programming language, or a new network topology).

This document must adhere to the following standard naming convention for the SAR document file.  “Agency Initials-Tactical Plan Number-Project Name-yyyymmdd-SAR Type”.

Example: OIT-042a180006-Project Name-20180120-PSAR

The receipt of this completed document will trigger the Physical System Architecture Review meeting to which all interested parties will be invited to discuss the resources required to support this application. It will also confirm that the project was developed consistent with the previously reviewed Logical SAR. **Deviations from the logical design must undergo an additional logical system architecture review.** Once reviewed, this document will become part of the system documentation.

Once completed, this package should be submitted to: [sar@tech.nj.gov](mailto:sar@tech.nj.gov)

## Project Identification

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Business Owner:** | |  | | | |
| Name | |  | | | |
| Telephone # | |  | | | |
| Email Address | |  | | | |
|  | |  | | | |
| **Project Manager:** | |  | | | |
| Name | |  | | | |
| Telephone # | |  | | | |
| Email Address | |  | | | |
|  | |  | | | |
| **Vendor Information:** | |  | | | |
| Contact Person | |  | | | |
| Contact Telephone # | |  | | | |
| Contact Email Address | |  | | | |
|  | |  | | | |
| **OIT Affinity Group:** | |  | | | |
| Primary OIT Contact Person | |  | | | |
| OIT Contact Phone | |  | | | |
| OIT Contact Email | |  | | | |
| Secondary OIT Contact Person | |  | | | |
| OIT Contact Phone | |  | | | |
| OIT Contact Email | |  | | | |
|  | |  | | | |
| Date Document Completed | |  | | | |
| Up to date Technology Initiation Proposal (TIP) Document Attached? | | YES | NO |
| Up to date Logical SAR Document Attached? | | YES | NO |
| Any other Physical Design Documents Attached? | | YES | NO |

List any attached documentation:

## ACTION ITEMS

|  |  |  |
| --- | --- | --- |
|  | **Action Items from TIP and LSAR Meetings** | **Provide Resolution for all Action Items.**  **If not resolved, explain.** |
| 1 | For initiatives where Availability is either Essential or Critical, and partially or entirely hosted within OIT’s infrastructure, a Business Impact Analysis must be completed. |  |
| 2 | For initiatives requiring a Business Impact Analysis, discuss your Disaster Recovery requirements and build a recovery plan if your system/application is hosted within an OIT infrastructure. Contact [OIT-DR@tech.nj.gov](mailto:OIT-DR@tech.nj.gov) to begin the process. Submission of the BIA does **NOT** ensure system recovery. |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |
| 8 |  |  |
| 9 |  |  |
| 10 |  |  |

## The PSAR document is composed of several sections. Each question is labeled to indicate if it should be answered for Application (developing or replacing a new system), Technical (adding or replacing new hardware, middleware, infrastructure, access rules, or processes), or Both types of a project. Please respond to the questions in each section as completely as possible.

|  |  |
| --- | --- |
| Project Information | |
| B | Provide a detailed description of the project including the general purpose and scope: |
| B | What has happened on this project since the last SAR meeting? |
| A | 1. What is the estimated date to begin application development?   Has this changed since the Logical SAR meeting?  NO  YES, explain why: |
| B | 1. What is the estimated date to begin testing?   Has this changed since the Logical SAR meeting?  NO  YES, explain why: |
| B | 1. What is the estimated date to complete the project?   Has this changed since the Logical SAR meeting?  NO  YES, explain why: |
| B | 1. Have there been any significant**\*** changes to the scope of this project?   NO  YES, explain the change and the impact of the change: |
| B | 1. Have any new significant**\*** risks been identified that will hinder the successful completion of this project?   NO  YES, explain: |
| B | 1. What is the estimated cost for this project?   Has the estimated cost for this project changed since the last SAR?  NO  YES  If YES, Current FY: $       Current FY + 1: $       Current FY +2: $ |
| ***\**** *For example, the cost has increased by 10% AND/OR the schedule has increased by more than 10% from the last reported update.* | |

|  |  |
| --- | --- |
| Infrastructure | |
| B | 1. Attach a physical infrastructure diagram for this project if it has not been included as an attachment.  * Include all components, firewalls, functionally specific servers (email, eforms, etc.), * Include all Hardware and Software requirements, as well as a listing of network connections. * Indicate physical location of server if all are not located at the same site. * Indicate which elements exist and which need to be implemented. * Indicate how the client accesses the application * Indicate Data Flow and Data Storage encryption details * Contact Solution Architecture at [sa@tech.nj.gov](mailto:sa@tech.nj.gov) to obtain sample architecture diagrams   Sample architecture diagrams should be modified to represent the specific infrastructure needs of your initiative. |

**Insert diagram here:**

|  |  |
| --- | --- |
| Disaster Recovery Infrastructure – To be completed for any Mission Essential System with any component housed within the OIT Infrastructure | |
| B | 1. Attach a **Disaster Recovery** physical infrastructure diagram for this recovery site if it has not been included as an attachment.  * Include all components, firewalls, functionally specific servers (email, eforms, etc.), * Include all Hardware and Software requirements, as well as a listing of network connections. * Indicate physical location of server if all are not located at the same site. * Indicate which elements exist and which need to be implemented. * Indicate how the client accesses the application * Contact Solution Architecture at [sa@tech.nj.gov](mailto:sa@tech.nj.gov) to obtain sample architecture diagrams   Sample architecture diagrams should be modified to represent the specific infrastructure needs of your initiative. |

**Insert diagram here:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Server Placement (ISS Hosting, ISS) | | | | | | | | | | | | |
| B | | 1. For new and existing hardware in each environment ***(integration test, system test, training, production, disaster recovery etc***) provide the information requested in the charts below. | | | | | | | | | | |
| **Environment** | | | Role  (web, app, data, report server, etc) | Server Name  (if Role is data, also supply instance/db name) | Server Location  (HUB, RR, OARS, Agency, Vendor, Other) | Additional Server Information  (OIT/ESS input required for this section [OIT-CapacityPlanning@tech.nj.gov](mailto:OIT-CapacityPlanning@tech.nj.gov) | | | | | Administer By  (OIT, **A**gency, **V**endor, **O**ther) | New Software  **Y**ES or **N**O |
| New  or  Existing | Physical  or  Virtual | | Catalyst  or  Nexus fabric | |
| Select from Drop Down | | | | |
|  | | |  |  |  |  | |  | |  |  |  |
|  | | |  |  |  |  | |  | |  |  |  |
|  | | |  |  |  |  | |  | |  |  |  |
|  | | |  |  |  |  | |  | |  |  |  |
|  | | |  |  |  |  | |  | |  |  |  |
|  | | |  |  |  |  | |  | |  |  |  |
|  | | |  |  |  |  | |  | |  |  |  |
|  | | |  |  |  |  | |  | |  |  |  |
|  | | |  |  |  |  | |  | |  |  |  |
|  | | |  |  |  |  | |  | |  |  |  |
|  | | |  |  |  |  | |  | |  |  |  |
|  | | |  |  |  |  | |  | |  |  |  |
|  | | |  |  |  |  | |  | |  |  |  |
| B | 1. If YES for new software on existing hardware, provide the server name, software name, the name of the individual performing the software installation, and the date by which the installation needs to occur. | | | | | | | | | | | |
| B | 1. Is there new hardware to be installed?   Yes  No  If YES, complete question 12. | | | | | | | | | | | |

|  |  |
| --- | --- |
| B | 1. **New hardware.** Complete a separate entry for each new piece of hardware.   (List all environments – test, and production):  **New hardware installations require a change record** that includes the following information for each new server: hostname, IP address, serial number, make/model, specific bldg. location, specific rack.  **\*If located at an OIT data center (HUB & River Road (production), Hamilton (disaster recovery), you MUST complete this section.** |
| 1. Location **\***: |
| 1. Date Required: |
| 1. Has this been procured? |
| 1. Environment:   Integration/ Unit Test  System  Staging  Production  Migrations / Upgrades  Disaster Recovery  Other: |
| 1. Role (Web, App, Data, Reporting, Portal etc) : |
| 1. Tier:  Public  Secure  Core  Other: |
| 1. Administrated by:  OIT  Agency  Vendor  Other:   If more than one box is checked, please describe division of responsibilities: |
| 1. Indicate Make, Model, O/S, Sizing Specs: |
| 1. Is there software to be installed?   YES  NO  If YES, for **new software on new hardware**, provide the server name, (if known) software name, the name of the individual performing the software installation, and the date by which the installation needs to occur. |
| 1. Storage Requirements: |
|  | 1. Have you verified your capacity requirements with [oit-datacenter@tech.nj.gov](mailto:oit-datacenter@tech.nj.gov)?   YES – who did you speak with?  NO – when do you anticipate contacting [oit-datacenter@tech.nj.gov](mailto:oit-datacenter@tech.nj.gov): |
| 1. Does the data center have sufficient power for new hardware?  YES  NO |
| 1. Does the data center have sufficient network ports for the new hardware?  YES  NO |
| 1. Does the data center have sufficient SAN for the new hardware?  YES  NO |
| 1. If NO was answered for any of the above, indicate the projected length of time required to address the capacity constraints. |
| 1. Provide the name and contact number of the person who answered this section in the event that follow up action is necessary: |

|  |  |
| --- | --- |
| Network Services (ASET, Infrastructure Security, ISS Hosting, WAN) | |
| B | 1. Are there new firewall rules that will need to be implemented in test or production in order for this system to properly function?   YES  NO  If YES, Have the appropriate documents been submitted?  YES  NO |
| A | 1. Does this system require connection to be more than transactionally persistent?   YES  NO  If YES, identify the needs:  Client to Web Server  Web to Application Server  Application to Database Server |
| B | 1. Denote the physical location(s) (destination/end points) from where the application will be accessed.   HUB  RIVER ROAD  OARS  HAMILTON  GSN  Internet to Internet (accessed from clients home) |
| A | 1. Provide Bandwidth requirements.   For assistance contact Dave Surro at 609-530-6088. |

|  |  |
| --- | --- |
| System Monitoring Responsibilities (PMG) | |
| B | Has all hardware to be monitored by the Performance Management Group (PMG) been identified along with the appropriate monitoring or endpoint agents? Yes  No  N/A |
| B | 1. Have all the appropriate PMG thresholds been established for this hardware?   Yes  No  N/A |
| A | 1. Has the OIT Performance Management Group at [OIT-PMGSARinfo@tech.nj.gov](mailto:OIT-PMGSARinfo@tech.nj.gov)been contacted to create the Playbook (\*) described in the LSAR for this project?   Yes  No If NO, explain:  **(\*) Note: Any system that touches the State infrastructure must have a Playbook created** |

|  |  |
| --- | --- |
| Application Service Level Monitoring (End User Experience Monitoring) | |
| A | If the application requires “Application Response Time” Service Level Monitoring, has the application been fully documented as described in the Logical SAR? YES  NO  N/A  Attach all details for the application. |

|  |  |
| --- | --- |
| OIT Operational Services | |
| B | Is NCC/SCC support required for this project upon implementation? YES  NO  N/A  If YES, what operational support documentation will be provided for this application and where is it located? |

|  |  |
| --- | --- |
| Pre-deployment Application Analysis and Testing (GSN) | |
| Pre-deployment testing includes end to end application flow, network behavioral analysis, performance base-lining, response time analysis, URL or web component load sequencing, SQL database call performance and other related real-time and historical trending analysis. For all application environments deployed at the HUB and River Road Data Centers for Production, Systems or User Acceptance Testing, NJOIT can monitor application performance. | |
| A | Has this application undergone a comprehensive Pre-Deployment Analysis using NJOIT Application Service Level Monitoring and Analysis toolsets? YES  NO   1. If NO, will the application stakeholders agree to schedule a Pre-Deployment Assessment before this application is made operational in the production environment?   YES  NO  If NO, explain: |

**ENTERPRISE SERVICES**

|  |  |
| --- | --- |
| Disaster Recovery | |
| A | Was a BIA required? YES  NO  If YES, on what date was it provided  If "No", skip to the next section.   1. Have you begun discussions with the DR team to build your recovery plan?   YES  NO  If YES, on what date was it provided  If NO, be advised that a Disaster Recovery Plan is required in order to ensure system recovery by OIT. To begin discussions, email [OIT-DR@tech.nj.gov](mailto:oars@oit.nj.gov) |

|  |  |
| --- | --- |
| Portal Services (ASET) | |
| A | 1. Does this application use the State of New Jersey Portal?   YES  NO  If YES, has the portal team been contacted to establish user roles and provisioning?  YES  NO |

|  |  |
| --- | --- |
| Performance Assessment (QOS) | |
| A | 1. Explain how and when this application will be stress tested, and who will be participating. |
| A | 1. Explain how and when this application will be network tested, and who will be participating. |
| A | 1. What URLs are associated with this application?   Web URL:  App URL: |

|  |  |
| --- | --- |
| 1. **Security Assessment -**  Cybersecurity and Communications Integration Cell (NJCCIC) | |
| B | 1. Have potential security weaknesses found through vulnerability assessment been reviewed, prioritized, and mitigated prior to production of this infrastructure, host, or application?   **NOTE:** Requests for security and scanning assessments of applications, hosts, devices or networks should be processed through OIT solutions management and entered into Service Desk. Questions regarding security scans inquire at [RiskAssessments@cyber.nj.gov](mailto:RiskAssessments@cyber.nj.gov)  YES  NO  If an assessment has not yet been performed, explain why not:   1. Have security risks been identified and mitigated?   YES  NO  If an assessment has not yet been performed, explain why not:  **NOTE**: Use the Risk Management Remediation Report Template.  <http://www.nj.gov/it/ps/0166_Risk_Management_Remediation_Report%20Template.xls>   1. Have you established the appropriate audit logging to track and identify user, system and service access in accordance with federal and/or state retention policies?   YES  NO  N/A  If NO explain:  How often will these logs be reviewed?  Provide the name and contact number of the person who answered this section in the event that follow up action is necessary:     1. Have the application and system been configured to forward email to only the State’s email relay and content inspection system?   YES  NO  N/A  If NO explain:   1. Have privacy and disclaimer statements been added to the application’s banner?   YES  NO  N/A  If NO explain:  <http://www.nj.gov/it/ps/14-04-NJOIT_Disclaimer_Policy.pdf> |

|  |  |
| --- | --- |
| Data Management Services | |
| A | 1. Have the data objects of the project been properly classified as to confidentiality, integrity, and availability? See the Data Management Section of <http://www.nj.gov/it/ps/Shared_IT_Architecture.pdf>   YES  NO  N/A  If NO, explain: |
| A | 1. Will data with a high level of confidentiality be encrypted at the database level?   YES  NO  N/A  If NO*,* explain: |
| A | 1. Have changes in the Physical Data Model been properly mapped back to the Logical Data Model?   YES  NO  N/A  If NO*,* explain: |
| A | If you anticipate that this will replace an existing system that requires data conversion has it been completed? YES  NO  When can the data (old/discontinued/legacy) be removed? |

|  |  |  |
| --- | --- | --- |
| Production Deployment Requirements | | |
| B | 1. Provide the Change Record number and reason for any changes that have been moved to production or that are pending a move to production. Change Management Guidelines is located at:<http://highpoint.state.nj.us/intranets/oit/services/servicectr/ChangeGuidelines.doc> | |
| Change Record # | Reason |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| A | 1. Have you developed an ‘Out of Service’ page, controlled by your application, for planned and unplanned outages?   YES  NO  N/A  If YES, please provide the URL to access this page:  If NO*,* explain: | |
| B | 1. Has a risk assessment been performed to determine the level of risk associated with deploying to this to production?   YES  NO  N/A  If YES, what is the risk level?  LOW  MEDIUM  HIGH  If NO, see the Change Management Guidelines to determine the risk level located at <http://highpoint.state.nj.us/intranets/oit/services/servicectr/ChangeGuidelines.doc> | |
| B | 1. In the event of a planned or unplanned outage of any of the component hosting data centers, what would be the impact to this business service if:   HUB components become unavailable?       River Rd components become unavailable?       Hamilton components become unavailable?       If other (please describe) components become unavailable?       If multiple-site components become unavailable? | |

|  |  |
| --- | --- |
| 1. **Other Enterprise Services** | |
| A | 1. Did you plan for the following:  |  |  |  |  | | --- | --- | --- | --- | |  | YES | NO | N/A | | 1. Batch or scheduled processes |  |  |  | | 1. Bulk printing services |  |  |  | | 1. Special printing stock or form design needs |  |  |  | | 1. Workflow |  |  |  | | 1. e-Commerce/Payment Services |  |  |  | | 1. e-mail |  |  |  | | 1. Storage of any non-database files |  |  |  | | 1. File Transfer services |  |  |  | | 1. Media Serving (video, audio etc.) |  |  |  | | 1. Telephony (ex: IVR) services |  |  |  | | 1. SSL certificates |  |  |  |  1. If a Conceptual Design Document was required by the Automated Records Management Systems Committee (ARMS) has it been approved?   YES  NO  N/A  If NO*,* explain:  If YES, date: |

|  |  |
| --- | --- |
| Next Steps | |
| B | With regard to the SAR, at the appropriate time in the process (*at least two weeks before production deployment*) the Implementation Review must be completed and submitted to [**sar@TECH.nj.gov**](mailto:sar@TECH.nj.gov)**.**  Continue to have the detailed technical discussions that are required to deploy.   1. Please indicate any other anticipated next steps? |

|  |  |
| --- | --- |
| stop | Verify that your Technology Initiation Proposal (TIP) and Logical SAR documents are up to date and all Action Items identified at previous meetings have been addressed.  Submit updated documents along with this PSAR document to:  [**sar@TECH.nj.gov**](mailto:sar@TECH.nj.gov) |