Solution Design #2018-0007

**Aplikasi** *“Email Login & Go Live PIS”*

Ver.1.0.0

**Hint: Ver.X.Y.Z**

**X: penambahan modul**

**Y: penambahan fitur**

**Z: bug fixing**

**Version number diisi oleh Fungsi ADS**

Document Classification: ~~Low~~/ Medium/ ~~High~~

|  |  |
| --- | --- |
| Fungsi | No Kodifikasi |
| Business Demand | 2019-256 |
|  |
|  |
| IT Solution | 2018-0007 |

|  |  |
| --- | --- |
| Katalog Proses Bisnis Pertamina | No. Kategori Proses |
| Value Chain | 5.2.4.3, 5.2.4.5, 11.6.1.1, 11.6.1.3, 11.6.1.8, 11.6.1.10 |
| Application Lanscape | **3.2.1, 3.2.2, 6.2.2.1** |

|  |  |  |  |
| --- | --- | --- | --- |
| Entitas | | Jabatan | Nama |
| PT PERTAMINA | Application Requestor | Mgr. Business System Operation | Ahmad Jaelani |
|  |  |
| CICT- Business Demand | Lead Coordinator | Anindya Diwasasri |
| CICT- IT Solution | PM | Dedy Wijarnako |
| Analyst 1 | Tonny Budiman |
| Analyst 2 | - |
| Integration Lead | Mukhammad Miftakhuddin |
| ERP Lead | - |
| CICT ASP | Lead Architect | Isa Antariksa |
| CICT-IT Operation | Data Center Lead | Muh Bagus Budiyanto |
| Network Lead | Mukhammad Miftakhuddin |
| Authorization Lead | Mohamad Amar Amrullah |
| PT Master System Indonesia | | PM | Alfian Arief Pranoto |
| System Analyst | Martinus |
| Programmer #1 | Rizky Pratama Putra |
| QA #1 | Stanley Natanael |
| TW #1 | Yohana Melinda |

# REVISION HISTORY

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Revision Date** | **Revision Key** | **Summary Of Changes** | **Changes Marked** |
| 1. | 30.04.2019 | 1.0 | Initial Document | Martinus |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**Hint: Rev X.Y**

**X = Penambahan/ Revisi Struktur Dokumen**

**Y = Penambahan/ Revisi Konten Dokumen**

# PERSETUJUAN DOKUMEN

**Dokumen ini dibuat sebagai dasar pengembangan Aplikasi. Jika ada perubahan dari kesepakatan waktu yang telah disetujui sebelumnya, maka lingkup perubahan dan tata waktu pekerjaan tersebut akan ditinjau kembali antara tim pengembang dengan customer aplikasi.**

**Tata Waktu:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Aktifitas** | **Tata Waktu** | | **Status** | **Deliverable** |
| **Mulai** | **Selesai** |
| 1 | Initiation | **3 Sep 2018** | **3 Sep 2018** |  |  |
| 2 | Planning | **12 Nov 2018** | **11 Jan 2019** |  |  |
| 3 | Execution | **4 Dec 2018** | **4 Feb 2019** |  |  |
| 4 | Testing | **6 Feb 2019** | **4 Mar 2019** |  |  |
| 5 | Training | **4 Mar 2019** | **13 Mar 2019** |  |  |
| 6 | Closing | **5 Mar 2019** | **19 Mar 2019** |  |  |

**Cost Estimate:**

|  |  |
| --- | --- |
| **Project Code** | **Amount (IDR)** |
|  |  |

|  |  |
| --- | --- |
| **Solution Design Sign-Off** | |
| **Ast. Manager SAP & Security Author.Adm** | **Ast. Manager Enterprise Application Dev** |
|  |  |
| **Mohamad Amar Amrullah** | **Dedy Wijanarko** |
| **[Perwakilan User]** | **[Perwakilan Pengembangan Aplikasi]** |

**Diverifikasi Oleh**

|  |  |
| --- | --- |
| **Business Demand** | **Architecture, Security & Policy** |
|  |  |
| **Anindya Diwasasri** | **Isa Antariksa** |
| **[UCRM]** | **[Lead Architecture]** |

|  |  |
| --- | --- |
| **Network Support** | **Data Center & OC** |
|  |  |
| **Mukhammad Miftakhuddin** | **Muh Bagus Budiyanto** |

# DAFTAR ISI

|  |
| --- |
| [REVISION HISTORY 2](#_Toc4570680)  [PERSETUJUAN DOKUMEN 3](#_Toc4570681)  [DAFTAR ISI 4](#_Toc4570682)  [1. DESKRIPSI APLIKASI 5](#_Toc4570683)  [2. APPLICATION DEV SYSTEM TYPE : ERP [ ] NON ERP [X] 5](#_Toc4570684)  [3. INFORMASI DEMOGRAFI APLIKASI 5](#_Toc4570685)  [4. SYSTEM REQUIREMENT 6](#_Toc4570686)  [5. HOW TO ACCESS 6](#_Toc4570687)  [6. INFRASTRUCTURE & CAPACITY PLANNING 6](#_Toc4570688)  [7. APPLICATION SECURITY – Check Point [6] & [7] 7](#_Toc4570689)  [8. ARSITEKTUR dan FLOW ALUR APLIKASI 7](#_Toc4570690)  [9. APPLICATION FEATURES REQUIREMENT 8](#_Toc4570691)  [10. FITUR APLIKASI 8](#_Toc4570692)  [10.1. Ubah halaman master user ( checklist need OTP or not) 8](#_Toc4570693)  [10.2. Halaman login ditambah input OTP 10](#_Toc4570694)  [10.3. Membuka posting date ketika ingin melakukan un-realese SA 12](#_Toc4570695)  [11. TECHNICAL GUIDELINES 12](#_Toc4570696)  [12. KONFIGURASI SISTEM 12](#_Toc4570697)  [13. SYSTEM MAINTENANCE, STORAGE GROWTH ANALYSIS, DATA ARCHIEVING & BACK-UP SYSTEM, TROUBLESHOOTING 16](#_Toc4570698) |

# DESKRIPSI APLIKASI

|  |
| --- |
| Aplikasi P2P adalah aplikasi untuk transaksi proses procurement di Pertamina  Point enhancement aplikasi ini di tahun 2019 ini yaitu:   1. Ditambahkan notifikasi email ketika user login. 2. Persiapan Go Live (Config SAP) untuk PIS (Pertamina International Shipping). |

# APPLICATION DEV SYSTEM TYPE : ERP [ ] NON ERP [X]

# INFORMASI DEMOGRAFI APLIKASI

|  |  |  |  |
| --- | --- | --- | --- |
| No | Subject | Uraian | Remark |
| 1 | Business Requestor | IT Operation |  |
| 2 | Business User | IT Operation |  |
| 3 | Projected User Number | 600 user |  |
| 4 | Value Enhancement | Mengurangi potensi fraud sejumlah transaksi invoice yang dilakukan via aplikasi P2P di Pertamina (Persero) |  |
| 5 | Application Coverage Area | **Internal : please specify**  [ x ]Kantor Pusat  [ x ] Refinery Unit  [ x ] MOR  [ x ] Subsidiary [AP Pertamina pengguna P2P] |  |
| **External: please specify**  [ ] Vendor :………….  [ ] Customer :………….  [ ] Others :…………. |  |
| 7 | Collaboration Profile | SAP, Datablink |  |
| 8 | Technology Capability | 1. Transactional Application   [YES/~~NO~~]   1. Analytical Application 2. Report: [YES/~~NO~~] 3. Dashboard: [~~YES~~/NO] 4. Mobile [~~YES~~/NO] 5. Media/Multimedia    1. Upload Document [YES/~~NO~~]    2. Download Document   [YES/~~NO~~]   * 1. Multimedia   [ ] Audio  [ ] Video |  |

Tabel 1 Informasi Demografi Aplikasi

# SYSTEM REQUIREMENT

|  |  |  |  |
| --- | --- | --- | --- |
| No | System Requirement | Uraian | Remark |
| 1 | Operating System (OS) | Windows Server 2012 R2 |  |
| 2 | User Management | Active Directory [~~YES~~/NO] | User Internal |
| Non Active Directory [YES/~~NO~~] | User External |
| 2 | Data Base (BD) | SQL Server 2012 |  |
| 3 | Programming Language | .NET |  |
| 4 | RunTime Platform |  |  |
| 1. Server Runtime | IIS, .NET 4.5 |  |
| 1. EndPoint RunTime | Javascript |  |
| 5 | Browser Compatibility | IE 11, Chrome, Firefox |  |

Tabel 2. System Requirement

# HOW TO ACCESS

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **How to Access** | **Deskripsi** | **Remarks** |
| 1 | Internal | YES/~~NO~~ | The Application can be accessed by internal users |
| 2 | External | ~~YES~~/NO | The Application can’t be accessed by external users |

Tabel 3. How TO Access

# INFRASTRUCTURE & CAPACITY PLANNING

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Resouces** | **Remark** | |
| 1 | Infrastructure Technology Requirement | [ X ] On-Premise or  [ ] Cloud Base, if checked, please select alt below:  a. [ ] IAAS  b. [ ] PAAS  c . [ ] SAAS  [ ] Others, please specify…………………………………….. | |
| 2 | Network | [Min Bandwidh requirement], 3 Mbps (Receive dan Send) | |
| 3 | Data Center | [Min Resources],   1. CPU:: Quad Core 2. RAM:: 8 GB 3. STORAGE [C:/]:: 200GB 4. STORAGE [D:/]:: 200GB | |
| 4 | URL | Development | http://ptmkpwa12dev03.pertamina.com/procuretopay |
| QA | - |
| Production | http://ptmkpwab61.pertamina.com/procuretopay |
|  |  | Reverse Proxy | <https://apps.pertamina.com/procuretopay> |
| 5 | DB | Development | ptmkpsql12dev03.pertamina.com\sql12dev03 |
| Production | ptmkpsqlb61.pertamina.com\sqlb61 |
| 6 | Web Service | Development | <https://172.20.1.157:9090/ws/wsdatablinkrequest?wsdl> |
| QA | - |
| Production | - |
| 7 | Team Foundation Server | Location | ptmkptfsdev.pertamina.com:80 |
| Project Name | ProcureToPay |

Tabel 4. Infrastructure & Capacity Planning

# APPLICATION SECURITY – Check Point [6] & [7]

|  |  |  |
| --- | --- | --- |
| **No** | **Check List** | **Remark** |
| 1 | Penetration Test | [~~y~~] [n] |
| 2 | Secure Coding Practice | ~~[y]~~ [n] |
| 3 | Reverse Proxy | [y] [~~n~~] |

Tabel 5. Application Security

# ARSITEKTUR dan FLOW ALUR APLIKASI

|  |
| --- |
| Gambar 1. Arsitektur dan Flow Alur Aplikasi |

# APPLICATION FEATURES REQUIREMENT

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Fitur Aplikasi** | **Deskripsi Fitur** | **Remark** |
| 1 | Notifikasi Email | Ditambahkannya notifikasi berupa email ketika user melakukan login | 10.1. |
| 2 | Config SAP untuk PIS | Perubahan config dimana awalnya P2P hanya mempunyai config ke 170,180 dan 100 saja. Akan ditambahkan juga ke client 111 untuk PIS. | 10.2. |

Tabel 6. Application Features Requirement

# FITUR APLIKASI

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Halaman login ditambah Notifikasi Email Untuk Login user akan di kirimkan email jika berhasil / pun gagal login. Flownya sebagai berikut :    Gambar 2. Flow Login  Tampilannya akan seperti di bawah.   1. Tampilan awal     Gambar 3. Form tampilan awal login   1. Tampilan ketika user di check membutuhkan OTP     Gambar 4. Tampilan insert OTP   1. Tampilan ketika berhasil log-in.     Gambar 5. Tampilan berhasil log-in  Untuk template email sebagai berikut.  Notification Succcess :  Terima kasih Anda telah menggunakan fasilitas P2P. Berikut ini adalah informasi transaksi yang telah Anda lakukan:   |  |  | | --- | --- | | Waktu | : 29/04/2019 06:23:22 WIB | | Aktivitas | : Login | | Status | : Sukses |   Jika Anda merasa tidak melakukan aktivitas ini atau memiliki pertanyaan mengenai transaksi Anda, silahkan hubungi kami melalui email: Servicedesk@pertamina.com  Terima kasih.  Notification Failed :  Terima kasih Anda telah menggunakan fasilitas P2P. Berikut ini adalah informasi transaksi yang telah Anda lakukan:   |  |  | | --- | --- | | Waktu | : 29/04/2019 06:23:22 WIB | | Aktivitas | : Login | | Status | : Gagal |   Jika Anda merasa tidak melakukan aktivitas ini atau memiliki pertanyaan mengenai transaksi Anda, silahkan hubungi kami melalui email: Servicedesk@pertamina.com  Terima kasih. Config SAP untuk PIS Perubahan untuk akses client 111   1. Function Commons.GetConnectionString(string CompanyCode)     Gambar 6. Function GetConnectionString  Ditambahkan juga di web config  Gambar 7. WebConfig |

# TECHNICAL GUIDELINES

|  |
| --- |
| Menggunakan SMTP untuk Sent email dan client 111 untuk PIS |

KONFIGURASI SISTEM

1. **LOGICAL CONFIGURATION (Data Flow Diagram)**

|  |
| --- |
| 1. LEVEL 0 DFD     Gambar 8. Level 0 DFD   1. LEVEL 1 DFD       Gambar 9. Level 1 DFD |

1. **PHYSICAL CONFIGURATION**

|  |
| --- |
| Gambar 10. Phiysical Configuration |

1. **Entity Flow Diagram (EFD)**

|  |
| --- |
| Tidak ada perubahan |

1. **Team Project Member & Task List**

|  |
| --- |
|  |

1. **Bisnis Process Flow Diagram**

|  |
| --- |
| Gambar 11. Proses Bisnis Enhancement |

1. **Design Integrasi Diagram**

|  |
| --- |
| Gambar 12. Integration Diagram |

# SYSTEM MAINTENANCE, STORAGE GROWTH ANALYSIS, DATA ARCHIEVING & BACK-UP SYSTEM, TROUBLESHOOTING

1. **SYSTEM MAINTENANCE**

|  |
| --- |
| * Memerlukan backup code sebelumnya |

1. **STORAGE GROWTH ANALYSIS**

|  |
| --- |
| +/- 100 MB / Month |

1. **DATA ARCHIEVING & BACK-UP SYSTEM PROCEDURE**

|  |
| --- |
| Data transaksi/log yg disimpan di database, perlu dilakukan archiving/backup pertahun. Adapun mekanisme backup nya bisa dilakukan dengan Copy atau Storage Back up |

**DAFTAR PUSTAKA**

1. Memo No. 028/H30330/2018-S0 perihal Permintaan Enhancment Aplikasi P2P dengan Sistem Otentikasi Dua Faktor