OSEV Detailed Requirements
v1.2 2020-05-27

ID	Category	Topic	Primary Related Components	Requirement	Notes
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OSEV3	Election Configuration	Electoral Roll Voter Id	OSEV Check	The electoral roll imported into OSEV will have an identifier for each voter that is generated by Tiger and not the AEC identier. The AEC identifier will not be imported into OSEV.	
OSEV4	Election Configuration	Vote Encryption Key	OSEV Web Application	A RSA encryption key pair will be created by Elections ACT and the "public" key from the key pair will be configured in OSEV and the "private" key will be known only to appointed Election Officers at Elections ACT.	
OSEV5	Election Configuration	Tiger digital signature	OSEV Check	A digital signature key pair will be created for verifying data from Tiger when importing into OSEV and the "public" key from the key pair will be configured in OSEV and the "private" key will be configured in Tiger.	
OSEV6	Election Configuration	Osev digital signature	OSEV Check	A digital signature key pair will be created for verifying data from OSEV when importing into Tiger and the "public" key from the key pair will be configured in Tiger and the "private" key will be configured in OSEV.	
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OSEV8	Election Configuration	Electorates	OSEV Check	Suburb and electorate combinations and for Kambah, specific address and electorate combinations will be imported into OSEV so that the electorate of an applicant can be determined.	Only required where no match has been found to the electoral roll (OSEV23)
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OSEV11	Registration	Authentication Service	OSEV Web Application	The authentication service will be ?. Using either SAML or OpenID(OAuth) protocol. The user will be redirected to the auth service for identificaiton and authentication and redirected back to the OSEV web application when authenticated and the authentication service will provide the identity details to OSEV.	
OSEV12	Registration	Authentication Service	OSEV Web Application	The following data will be provided by the authentication service: email, mobile number, first name, last name, address, DoB	TBC - Needs to be confirmed through tests with the authentication service.
OSEV13	Registration	Single Registration	OSEV Web Application and OSEV Check	An identity provided by the authentication service will only be able to register once for OSEV in an election.	
OSEV14	Registration	Electoral Roll Check	OSEV Web Application and OSEV Check	The applicant's name, DoB and Address will be checked against the Certified Electoral Roll as exported from Tiger	
OSEV15	Registration	Exposure of Information	OSEV Web Application	During the registration process, besides what may be visible in the authentication system, OSEV will show the applicant's first name and whether their address matched the electoral roll but display no further personal information that was provided by the authentication system.	
OSEV16	Registration	Age	OSEV Web Application and OSEV Check	After an applicant is forwarded to OSEV from the authentication service, applicants date of birth will be checked for: if the applicant will be at least 18 years old on or before the election date, they may proceed. If too young, the user will be presented with a message explaining that they do not meet the age requireemnt to vote.	Also see OSEV14.
OSEV17	Registration	Address	OSEV Web Application and OSEV Check	An address will be provided by the authentication service and checked against the electorol roll.	Also see OSEV14.
OSEV18	Registration	Address	OSEV Web Application and OSEV Check	If the address, name and DoB combination is not found on the electoral roll then the applicant will have the option to provide an alternate address.	Where a match is not found because the name and DoB are not on the roll at all, OSEV will proceed with alternate address options anyway ending in the user being able to submit their vote regardless.

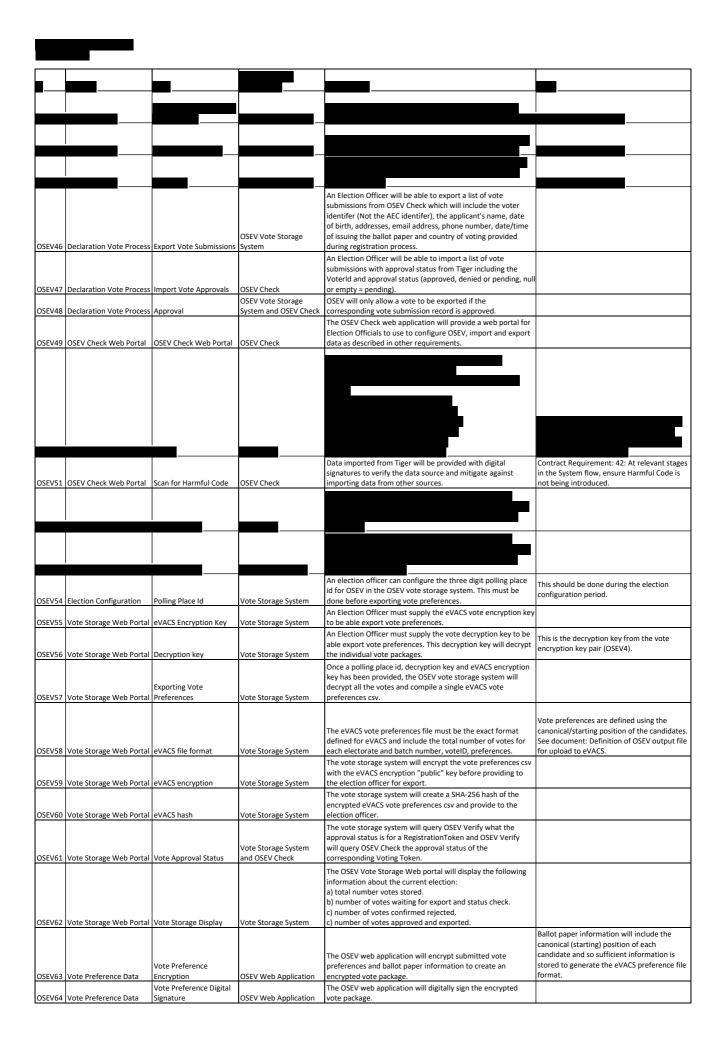| ID	Category	Topic	Primary Related Components	Requirement	Notes
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OSEV46	Declaration Vote Process	Export Vote Submissions	OSEV Vote Storage System	An Election Officer will be able to export a list of vote submissions from OSEV Check which will include the voter identifer (Not the AEC identifer), the applicant's name, date of birth, addresses, email address, phone number, date/time of issuing the ballot paper and country of voting provided during registration process.	
OSEV47	Declaration Vote Process	Import Vote Approvals	OSEV Check	An Election Officer will be able to import a list of vote submissions with approval status from Tiger including the VoterId and approval status (approved, denied or pending, null or empty = pending).	
OSEV48	Declaration Vote Process	Approval	OSEV Vote Storage System and OSEV Check	OSEV will only allow a vote to be exported if the corresponding vote submission record is approved.	
OSEV49	OSEV Check Web Portal	OSEV Check Web Portal	OSEV Check	The OSEV Check web application will provide a web portal for Election Officials to use to configure OSEV, import and export data as described in other requirements.	
OSEV51	OSEV Check Web Portal	Scan for Harmful Code	OSEV Check	Data imported from Tiger will be provided with digital signatures to verify the data source and mitigate against importing data from other sources.	Contract Requirement: 42: At relevant stages in the System flow, ensure Harmful Code is not being introduced.
OSEV54	Election Configuration	Polling Place Id	Vote Storage System	An election officer can configure the three digit polling place id for OSEV in the OSEV vote storage system. This must be done before exporting vote preferences.	This should be done during the election configuration period.
OSEV55	Vote Storage Web Portal	eVACS Encryption Key	Vote Storage System	An Election Officer must supply the eVACS vote encryption key to be able export vote preferences.	
OSEV56	Vote Storage Web Portal	Decryption key	Vote Storage System	An Election Officer must supply the vote decryption key to be able export vote preferences. This decryption key will decrypt the individual vote packages.	This is the decryption key from the vote encryption key pair (OSEV4).
OSEV57	Vote Storage Web Portal	Exporting Vote Preferences	Vote Storage System	Once a polling place id, decryption key and eVACS encryption key has been provided, the OSEV vote storage system will decrypt all the votes and compile a single eVACS vote preferences csv.	
OSEV58	Vote Storage Web Portal	eVACS file format	Vote Storage System	The eVACS vote preferences file must be the exact format defined for eVACS and include the total number of votes for each electorate and batch number, voteID, preferences.	Vote preferences are defined using the canonical/starting position of the candidates. See document: Definition of OSEV output file for upload to eVACS.
OSEV59	Vote Storage Web Portal	eVACS encryption	Vote Storage System	The vote storage system will encrypt the vote preferences csv with the eVACS encryption "public" key before providing to the election officer for export.	
OSEV60	Vote Storage Web Portal	eVACS hash	Vote Storage System	The vote storage system will create a SHA-256 hash of the encrypted eVACS vote preferences csv and provide to the election officer.	
OSEV61	Vote Storage Web Portal	Vote Approval Status	Vote Storage System and OSEV Check	The vote storage system will query OSEV Verify what the approval status is for a RegistrationToken and OSEV Verify will query OSEV Check the approval status of the corresponding Voting Token.	
OSEV62	Vote Storage Web Portal	Vote Storage Display	Vote Storage System	The OSEV Vote Storage Web portal will display the following information about the current election: a) total number votes stored. b) number of votes waiting for export and status check. c) number of votes confirmed rejected. c) number of votes approved and exported.	
OSEV63	Vote Preference Data	Vote Preference Encryption	OSEV Web Application	The OSEV web application will encrypt submitted vote preferences and ballot paper information to create an encrypted vote package.	Ballot paper information will include the canonical (starting) position of each candidate and so sufficient information is stored to generate the eVACS preference file format.
OSEV64	Vote Preference Data	Vote Preference Digital Signature	OSEV Web Application	The OSEV web application will digitally sign the encrypted vote package.	

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OSEV65	Vote Preference Data	Vote Preference Delivery	OSEV Web Application and OSEV Vote Storage System	The OSEV web application will push the encrypted vote package with the digital signature and the associated RegistrationToken to the OSEV vote storage system.	
OSEV66	Vote Preference Data	Vote Preference Storage	OSEV Vote Storage System	The Vote storage system will store the encrypted vote package and the digital signature and the associated RegistrationToken.	
OSEV67	Data Security	ApplicantIdentity	-	An identifier for an applicant provided by the third party authentication service will be stored in OSEV Check so that that person can be restricted to only a single registration and vote submission.	
OSEV68	Data Security	VoterToken	-	For each person identity provoded by the third party authentication service, a VoterToken will be generated by OSEV Check and stored in OSEV Check with the authentication ID and OSEV Verify.	
OSEV69	Data Security	VoterToken Seperation	-	The OSEV Web Application and Vote Storage System never have access to the VoterToken.	
OSEV70	Data Security	RegistrationToken	-	For each VoterToken stored in OSEV Verify, a Registration Token will be generated and stored in OSEV Verify with the VoterToken and in the Vote Storage System with the encrypted vote.	
OSEV71	Data Security	RegistrationToken Seperation	-	The OSEV Check applicaiton never have access to the RegistrationToken.	
OSEV72	Data Security	Personal Information	-	Personal information will be provided to the OSEV Web application from the authentication service and from the applicant through the web application. This personal information flows through the OSEV web application and OSEV Verify and is stored in OSEV Check.	
OSEV73	Data Security	Personal Information Seperation	-	The OSEV web application does not store personal information and the Vote Storage system never has access to the information.	
OSEV74	Data Security	Vote Preference Storage	-	Vote preferences are encrypted at the point of submission to the OSEV web application and are only stored by the Vote Storage System.	Encrypted with the OSEV vote encryption key (OSEV4) and done by the Web Application (OSEV63).
OSEV75	Data Security	Vote Preference Seperation	-	The OSEV web application does not store the vote preferences and OSEV Verify and OSEV Check never have access to the vote preferences.	
OSEV76	Data Security	Encryption in Transit	-	All connections between system components and all web interfaces include TLS encryption.	
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OSEV78	Data Security	Data transfer between OSEV and Tiger	-	All data transfered between Tiger and OSEV will be digitally signed by the source system and the signature verified by the destination system.	See Election Configuration requirements for key pair configuration (OSEV5, OSEV 6). Digital signatures used on importing ballot papers (OSEV1), importing the Electoral Roll (OSEV2), Export Vote Submissions (OSEV46), importing vote submission approvals (OSEV47), Electorate search information (OSEV 8, OSEV24 and OSEV 25).
OSEV79	Active Directory	User Roles	-	User Roles in OSEV: a) OSEV Check operator. Includes all OSEV check user functions including election configuration and declaration vote processing. b) OSEV vote storage operator. Includes all OSEV vote storage functions including providing keys and exporting vote preferences.	
OSEV80	Active Directory	Active Directory MFA	-	The active directory accounts for accessing OSEV Check and OSEV vote storages web portals must require multi-factor authentication.	
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OSEV86	Infastructure Management	Monitoring	-	The System to be monitored for intrusion attempts when live.	Contract Requirement.
OSEV87	Infastructure Management	DDoS	-	The system must be configured with protection mechanisms against DDoS attacks.	
OSEV88	Active Directory	Logging User Access	-	User access to OSEV systems will be logged.	