

ID	Rule	CNL	Reference	Complexity Group
1	Controllers must use Services.	Every Controller must use a Service.	Layered Architecture	Group 1
2	Services can only be used by Controllers or other Services.	Every Service can only beUsedBy a Controller or beUsedBy a Service.	Layered Architecture	Group 2
3	Controllers are not allowed to access data access objects.	No Controller can access a DataAccessObject.	Layered Architecture	Group 1
4	Controllers cannot be accessed by other entities.	Nothing can access a Controller.	Layered Architecture	Group 1
5	Each host transaction component must only be included once in a module.	Every HostTransactionComponent can beIncludedIn exactly one Module.	Weinreich, Rainer, and Georg Buchgeher. "Automatic reference architecture conformance checking for soa-based software systems." Software Architecture (WICSA), 2014 IEEE/IFIP Conference on. IEEE, 2014.	Group 1
6	Host transaction components must not have outgoing connections.	No HostTransactionComponent can dependOn anything.	Weinreich, Rainer, and Georg Buchgeher. "Automatic reference architecture conformance checking for soa-based software systems." Software Architecture (WICSA), 2014 IEEE/IFIP Conference on. IEEE, 2014.	Group 1
7	The name of a batch bean must start with „Bat“.	Every BatchBean must haveName equal-to "Bat*".	https://github.com/lsyFact/isyfact-jqassistant-plugin/blob/master/src/main/resources/META-INF/jqassistant-rules/batch.xml	Group 1

8	The application core calls methods defined by the MBean. The other direction (Mbean reads from the application core) is not allowed, since this could cause performance problems.	No MBean can call a Method that (isDefinedIn an ApplicationCore).	https://github.com/IsyFact/isyfact-jqassistant-plugin/blob/master/src/main/resources/META-INF/jqassistant-rules/ueberwachung.xml	Group 1
9	The primary key of an entity can only consist of a single attribute. This also means that no composite keys are allowed for primary keys.	No Entity can define a CompositePrimaryKey. Every PrimaryKey can consistOf exactly 1 Attribute.	https://github.com/IsyFact/isyfact-jqassistant-plugin/blob/master/src/main/resources/META-INF/jqassistant-rules/persistence.xml	Group 1
10	If an application requires exceptions, then each application exception must implement one of the three predefined exceptions: BusinessException, TechnicalException, TechnicalRuntimeException.	Every ApplicationException must implement a BusinessException or implement a TechnicalException or implement a TechnicalRuntimeException.	https://github.com/IsyFact/isyfact-jqassistant-plugin/blob/master/src/main/resources/META-INF/jqassistant-rules/fehlerbehandlung.xml	Group 1
11	All public methods in the controller layer must return API response wrappers.	Every Method that (hasModifier equal-to "public" and isLocatedIn a ControllerLayer) must return an APIResponseWrapper.	https://github.com/TNG/ArchUnit/blob/master/archunit-example/example-junit5/src/test/java/com/tngtech/archunit/example/test/junit5/MethodReturnTypeTest.java	Group 3
12	The type of generation (i.e. the strategy) provided by the @GeneratedValue annotation that is defined for a field must be set to „AUTO“.	Every GeneratedValueAnnotation that (annotates a Field) must define a Strategy that (hasValue equal-to "AUTO").	https://github.com/IsyFact/isyfact-jqassistant-plugin/blob/master/src/main/resources/META-INF/jqassistant-rules/persistence.xml	Group 2

13	Aggregates must provide a method for allowing access on an Aggregate Id that is defined in this aggregate so that it can be accessed by other entities.	Every Aggregate that (defines an AggregateId) must provide a Method that (returns an AggregateId).	Domain Driven Design	Group 2
14	Fields that represent a Logger must be declared with „private static final“	Every Field that (represents a Logger) must haveModifier equal-to "private" and haveModifier equal-to "static" and haveModifier equal-to "final".	https://github.com/IsyFact/isyfact-jqassistant-plugin/blob/master/src/main/resources/META-INF/jqassistant-rules/logging.xml	Group 3
15	In case an exception is thrown when calling a service method, this exception must be an exception that is part of the service interface. No exception of the application core is thrown.	Every Exception that (isThrownBy a ServiceMethod) must be a ServiceException. No ServiceMethod can throw an Exception that (isDefinedIn an ApplicationCore).	https://github.com/IsyFact/isyfact-jqassistant-plugin/blob/master/src/main/resources/META-INF/jqassistant-rules/fehlerbehandlung.xml	Group 2
16	For every exception that is part of the exception facade, a correlation ID must be set. This id is provided by a specific annotation („@LoggingContext“ Annotation). This means that every method that is defined by the exception facade must be annotated with this annotation.	Every Method (that isPartOf an ExceptionFacade) must beAnnotatedWith a LoggingContextAnnotation.	https://github.com/IsyFact/isyfact-jqassistant-plugin/blob/master/src/main/resources/META-INF/jqassistant-rules/service.xml	Group 2

17	Service methods can only have transfer objects or primitive data types as a return or a parameter type.	Every ServiceMethod can only return a TransferObject or return a PrimitiveType. Every ServiceMethod can only declare a Parameter that (hasType a TransferObject) or declare a Parameter that (hasType a PrimitiveType).	Herold, S. (2011). Architectural Compliance in Component-Based Systems (Doctoral dissertation, Clausthal University of Technology).	Group 3
18	Classes that have a field annotated with @Payload should only be accessed by @Secured methods.	Every Class that (declares a Field that (isAnnotatedWith a PayloadAnnotation)) can only beAccessedBy a Method that (isAnnotatedWith a SecuredAnnotation).	https://github.com/TNG/ArchUnit/blob/master/archunit-example/example-junit5/src/test/java/com/tngtech/archunit/example/test/junit5/ControllerRulesTest.java	Group 2
19	Stateless session beans cannot have state. This means, fields in this bean cannot be accessed outside the constructor or a method that is annotated with @PostConstruct of this session bean.	Every Field that (isDefinedIn StatelessSessionBean X) can only beAccessedBy a Constructor that (isDefinedIn StatelessSessionBean X) or beAccessedBy a PostConstructMethod that (isDefinedIn StatelessSessionBean X).	https://github.com/TNG/ArchUnit/blob/master/archunit-example/example-junit5/src/test/java/com/tngtech/archunit/example/test/junit5/SessionBeanRulesTest.java	Group 4
20	The first parameter of every Method defined in the Remote Bean interface must have the type „AufrufKontextTO“ or „ClientAufrufKontextTO“.	Every Parameter that (hasPosition equal-to 1 and isDefinedBy a Method that (isDefinedBy a RemoteBeanInterface)) must haveType a AufrufKontextTo or haveType a ClientAufrufKontextTo.	https://github.com/IsyFact/isyfact-jqassistant-plugin/blob/master/src/main/resources/META-INF/jqassistant-rules/service.xml	Group 3
21	Applications can only access components of the service layer of another application.	Every Application that (accesses Application X) can only access a ServiceLayer that (belongsTo Application X).	Weinreich, Rainer, and Georg Buchgeher. "Automatic reference architecture conformance checking for soa-based software systems." Software Architecture (WICSA), 2014 IEEE/IFIP Conference on. IEEE, 2014.	Group 3

22	Services within one module must communicate via local EJBs.	Every Service that (hasName equal-to A and isLocatedIn Module X and uses a Service that (hasName equal-to B and isLocatedIn Module X)) must communicateVia a LocalEJBCommunication that (hasSource a Service that (hasName equal-to A) and hasDestination a Service that (hasName equal-to B)).	Weinreich, Rainer, and Georg Buchgeher. "Automatic reference architecture conformance checking for soa-based software systems." Software Architecture (WICSA), 2014 IEEE/IFIP Conference on. IEEE, 2014.	Group 4
23	Services of different domains must communicate via web services.	Every Service that (isLocatedIn Domain X and uses a Service that (isLocatedIn Domain Y)) must use a WebserviceCommunication that (hasSource a Service that (isLocatedIn Domain X) and hasDestination a Service that (isLocatedIn Domain Y)).	Weinreich, Rainer, and Georg Buchgeher. "Automatic reference architecture conformance checking for soa-based software systems." Software Architecture (WICSA), 2014 IEEE/IFIP Conference on. IEEE, 2014.	Group 4
24	Services within one application (but in different modules) must communicate via local EJBs.	Every Service that (isLocatedIn Application A and isLocatedIn Module X and uses a Service that (isLocatedIn Application A and isLocatedIn Module Y)) must communicateVia a LocalEJBCommunication that (hasSource a Service that (isLocatedIn Application A and isLocatedIn Module X) and hasDestination a Service that (isLocatedIn Application A and isLocatedIn Module Y)).	Weinreich, Rainer, and Georg Buchgeher. "Automatic reference architecture conformance checking for soa-based software systems." Software Architecture (WICSA), 2014 IEEE/IFIP Conference on. IEEE, 2014.	Group 4

25	Business logic services must only use data access components, host access components and host transaction components if they belong to the same module.	Every BusinessLogicService that (isLocatedIn Module X and uses a DataAccessComponent) can only use a DataAccessComponent that (isLocatedIn Module X) or use a HostAccessComponent that (isLocatedIn Module X) or use a HostTransactionComponent that (isLocatedIn Module X).	Weinreich, Rainer, and Georg Buchgeher. "Automatic reference architecture conformance checking for soa-based software systems." Software Architecture (WICSA), 2014 IEEE/IFIP Conference on. IEEE, 2014.	Group 4
26	Different applications should communicate via web services or remote EJBs.	Every Application that (hasName equal-to X and communicatesWith an Application that (hasName equal-to Y)) can only use a WebserviceCommunication that (hasSource an Application that (hasName equal-to X) and hasDestination an Application that (hasName equal-to Y)) or use a RemoteEJBCommunication that (hasSource an Application that (hasName equal-to X) and hasDestination an Application that (hasName equal-to Y)) .	Weinreich, Rainer, and Georg Buchgeher. "Automatic reference architecture conformance checking for soa-based software systems." Software Architecture (WICSA), 2014 IEEE/IFIP Conference on. IEEE, 2014.	Group 4