

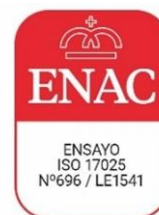
Certifikat o testiranju za
Test Certificate
AMARIX-RNG
Version 1.0.0

Proizvođač:	Amarix B.V.
<i>Manufacturer:</i>	
Broj certifikata:	TC_RNG.CRO.RES-OL.1001.01.01
<i>Test Certificate Number:</i>	
Broj izvješća:	RNG.CRO.RES-OL.1001.01.01
<i>Evaluation Report Number:</i>	
Broj dokumenta:	01
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BMM Spain Testlabs s.l.u

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Opće informacije General Information

Proizvođač & Adresa Proizvođača: <i>Client name & Address</i>	Amarix B.V. Schottegatweg Oost 10 Unit 1-9, Bon Bini Business Center, Curaçao a.christou@amarix.com
Referentni broj proizvođača: <i>Client Reference Number:</i>	Submission Letter Dated 30 th April 2024
Test Category	Category 0
Datumi testiranja: <i>Testing dates:</i>	Start date: 30th April 2024 End date: 6th June 2024
Opis proizvoda: <i>Product Description:</i>	RNG software
Naziv proizvoda: <i>Product Name:</i>	AMARIX-RNG Version 1.0.0
Preporučena jurisdikcija: <i>Jurisdictions Recommended:</i>	HRVATSKA Croatia
Tehnički standardi korišteni kod evaluacije: <i>Technical Standard used for Evaluation:</i>	Pravilnik o prostornim i tehničkim uvjetima za priređivanje igara na sreću u casinima, na automatima i uplatnim mjestima kladionica. Pravilnik je objavljen u službenom glasniku Republike Hrvatske 'Narodne novine' Br. 38/10, 130/10, 69/11, 15/12, 151/14, 36/20) - RNG odjeljci, članak 35. / <i>Ordinance on the spatial and technical conditions for organizing games of chance in casinos, slot machines and betting points. The Ordinance was published in the Official Gazette of the Republic of Croatia 'Official Gazette' No. 38/10, 130/10, 69/11, 15/12, 151/14, 36/20) - RNG sections, Article 35.</i>
Location where test was performed:	BMM Spain Testlabs, s.l.u. Edificio Vinson del Parque Empresarial Vallsolana Camí de Can Camps, 17-19 08174 Sant Cugat del Vallés Barcelona – Španjolska
Location where report was issued:	BMM Spain Testlabs, s.l.u. Edificio Vinson del Parque Empresarial Vallsolana Camí de Can Camps, 17-19 08174 Sant Cugat del Vallés Barcelona – Španjolska
Zaključak: <i>Conclusion:</i>	PASS
BMM referentni broj: <i>BMM Reference Number:</i>	RES-OL.1001
Korišteni metod / procedure <i>Method / Procedures used:</i>	EURSAM-SPA-MO-41 v3.0
Savjetnik(ci): <i>Consultant(s):</i>	Alexander Guerra

1. KARAKTERISTIKE PROIZVODA / PRODUCT CHARACTERISTICS

1.1. OPIS IGRE / PRODUCT DESCRIPTION

The software RNG in the system is the RNG service. It is hosted in a Kubernetes cluster on a virtual server in the data center. The RNG service is written in Java 17 and uses the `org.apache.commons:commons-rng-simple:1.5` library from the Maven Central repository.

When the service is launched, 64 random bytes are read from the source `/dev/urandom`, which are used as seeds for the ISAAC algorithm. With each request for a random number, the RNG service returns 32 random bytes generated by the ISAAC algorithm. This number is used as a seed to the next steps.

Each game also has a salt string specified in the configuration. The obtained bytes undergo the hash function: `hash sha256` in loops of 1000 iterations. The hash is combined with the `clientSeed` and `nonce` received from the player to obtain the random number. The result string is a 64-character hex string (256-bit) output to be used directly by the game logic to produce game outcomes.

2. RNG SASTAVNI DETALJ / RNG COMPONENT DETAIL

Product: AMARIX-RNG v1.0.0					
Naziv Datoteke / File Name	Verzija /Version	Položaj / Location	Funkcija / Function	Digitalni Potpis / Digital Signature Type	Digitalni Potpis / Digital Signature
rng-sbai-certified.jar	1.0.0	Server	RNG	SHA-1	98846A088426F85600EE 32DEF1AB6A6AE90B3916
rng-sbai-certified-sources.jar	1.0.0	Source	RNG source	SHA-1	8354EC44F14D0AC0FA12 05F75B7A665A1D9F08A7

3. SAŽETAK OCJENJENIH REZULTATA / SUMMARY OF TEST RESULTS EVALUATED

Referenca / Reference	RESULT
Ordinance on the spatial and technical conditions for organizing games of chance in casinos, slot machines and betting points. The Ordinance was published in the Official Gazette of the Republic of Croatia 'Official Gazette' No. 38/10, 130/10, 69/11, 15/12, 151/14, 36/20)	
RNG section, Article 35	PASS

4. DODATNE INFORMACIJE/ZAPAŽANJA / ADDITIONAL INFORMATION/OBSERVATIONS

N.A.

5. IZJAVA O SUKLADNOSTI / CONFORMITY STATEMENT

BMM Spain Testlabs, s.l.u. izjavljuje da je ovaj testni certifikat pojednostavljeno izvješće o rezultatima iz izvješća o evaluaciji RNG.CRO.RES-OL.1001.01.01 udovoljava relevantnim hrvatskim zahtjevima naznačenim i procijenjenim u odjeljku "3. SAŽETAK OCJENJENIH REZULTATA".

BMM Spain Testlabs, s.l.u. declares that this test certificate is a simplified report of the results from the evaluation report RNG.CRO.RES-OL.1001.01.01 complies with the relevant Croatians requirements indicated and evaluated in section "3. Summary of Test Results Evaluated".

S poštovanjem,
Yours sincerely,



BMM SPAIN TESTLABS S.L.U.

SVP Operations EURSAM
Rubén Baptista

¹ Rezultati uključeni u ovaj dokument odnose se isključivo na ispitani uzorak, kao što je opisano u odgovarajućem odjeljku.

¹ *The results included in this document are referred exclusively to the sample tested, such as it is described in the corresponding section.*

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