



ARSAT

Overview

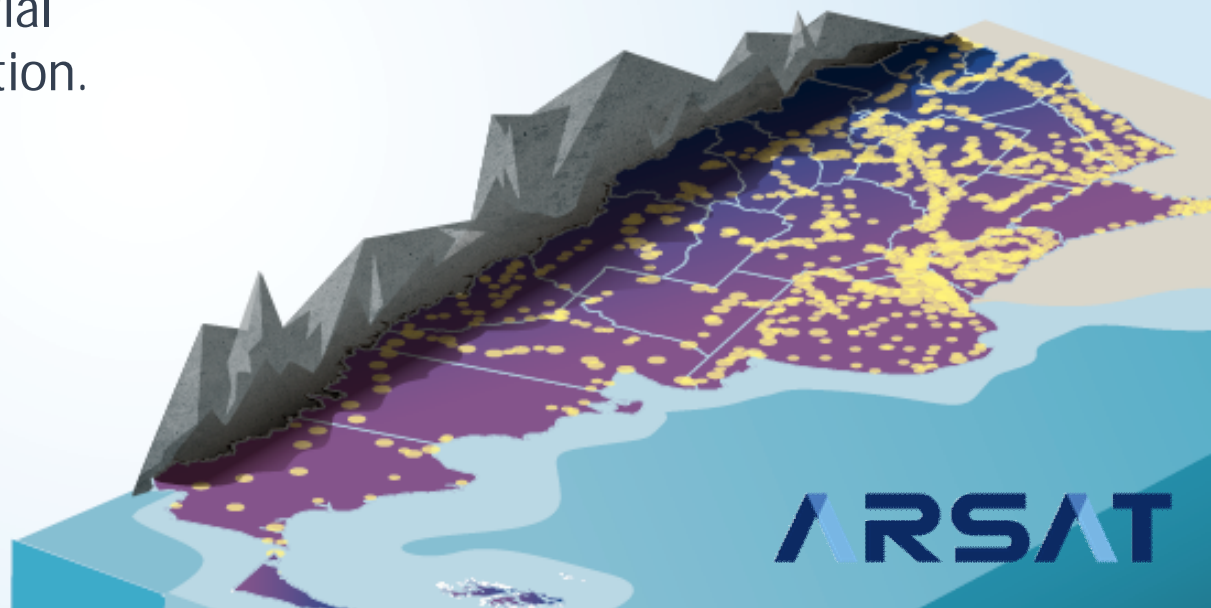
ARSAT

Company Overview

ARSAT

National carrier, responsible for providing telecom services through a combination of different land, air and space infrastructures.

High quality connectivity at reasonable and competitive prices for high potential improvement of the argentine population.



ARSAT

34,886 km

29 Millions

+1,300

17,000 km

48 fibers per cable

212 nodes

in commercial service



Decreasing the digital gap

ARSAT

Data Center

- **4,200** square meters, 50% in service
- **4 rooms** with capacity to install more than 600 racks, plus a maximum security vault room
- **ISO / IEC 27001 Certified:** 2013, International Standard for Security Information Management Systems

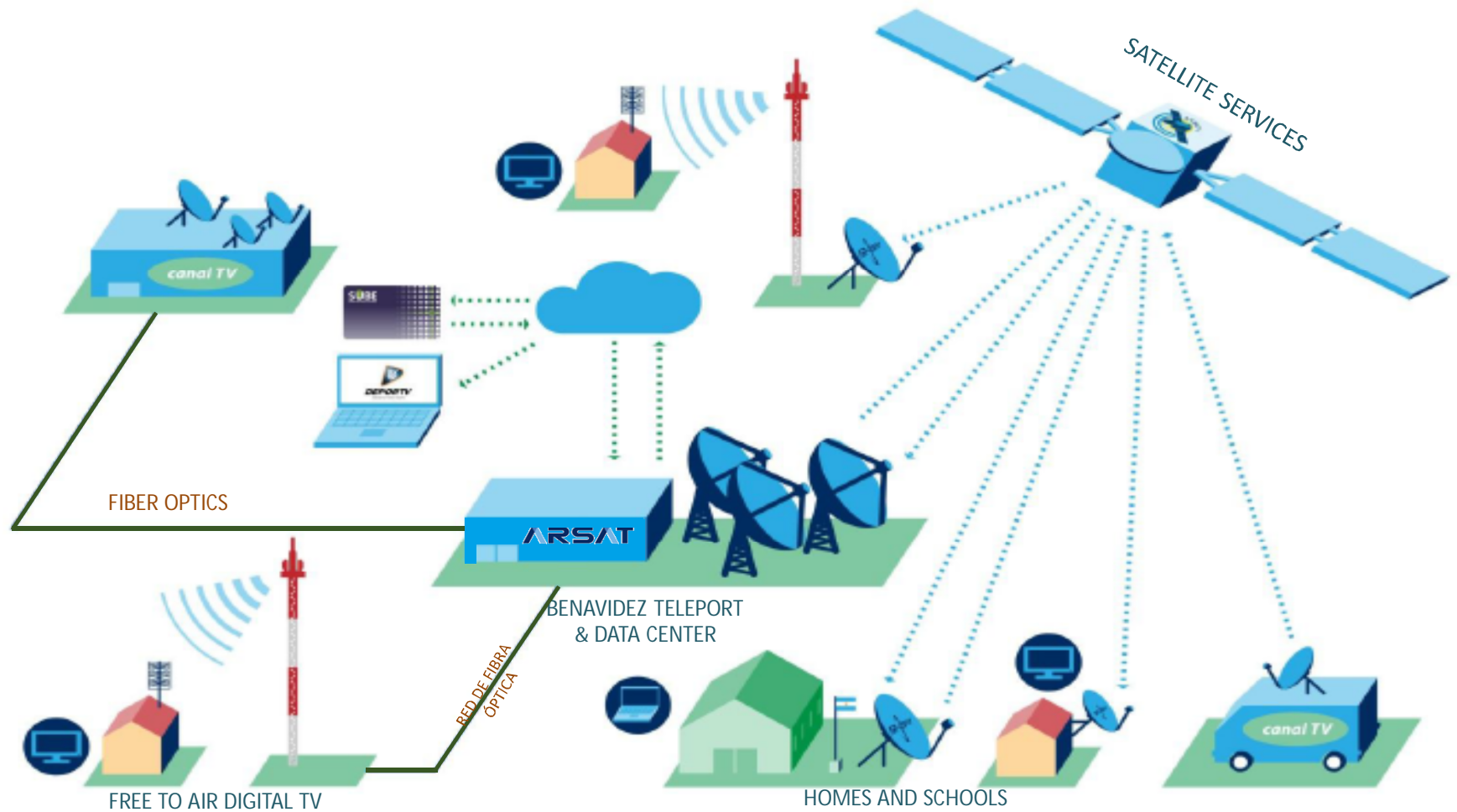
Free to Air TV Stations

- **88** TV stations deployed
- **82%** of population coverage with free to air service
- **1.200.000** homes



Decreasing the digital gap

ARSAT



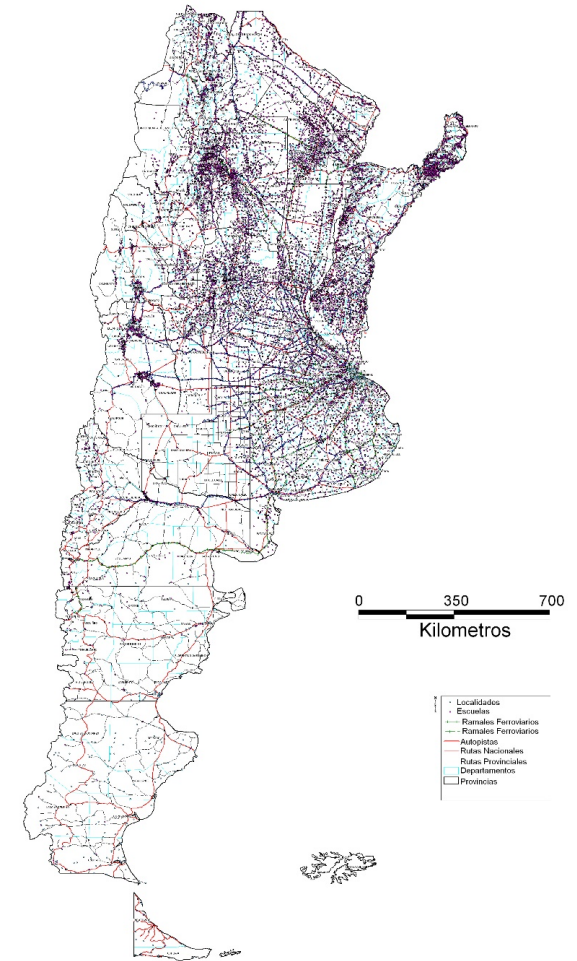
Satellite fleet – Key facts

ARSAT



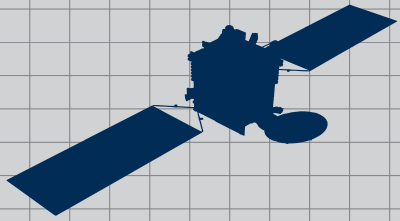
Rural Schools program

- +2300 schools connected throughout Argentina
- 2000 under installation in northern provinces
- +350 Mbps of dedicated bandwidth
- Long term target of reaching 100 Kbps per student



NATIONAL DESIGN AND MANUFACTURING

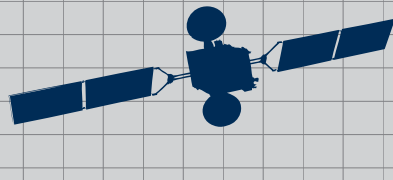
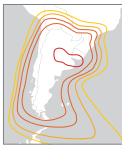
- 3 satellites
- 1 structural design; multiple configurations
- Additional services and coverage



ARSAT 1

KU-BAND GEO
SATELLITE

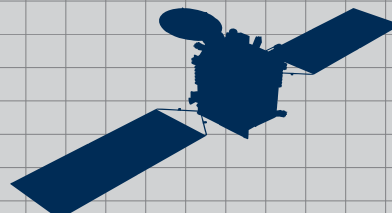
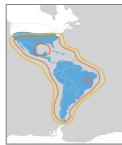
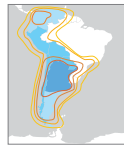
- Height: 3.925 mts
- Length: 16.416 mts
- Depth: 5.037 mts
- Weight: 3 Tn



ARSAT 2

KU-BAND AND C BAND
GEO SATELLITE

- Height: 4.533 mts
- Length: 16.321 mts
- Depth: 6.511 mts
- Weight: 3 Tn



ARSAT 3

KA-BAND GEO
SATELLITE

- Height: 3.925 mts
- Length: 16.416 mts
- Depth: 5.037 mts
- Weight: 3 Tn



- 2 geo satellites operating in excellent health
- ARSAT Satellite Program was awarded internationally
- +5000 VSAT in service, under multivendor platforms
- State of the art and most reliable Teleport in the región, located in Benavidez, Buenos Aires
- LEOP / IOT & satellite consulting

Satellite fleet – ARSAT-1

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**Best widebeam EIRP over
Argentina and Southern cone**

**Best coverage over most
Antartica peninsula**

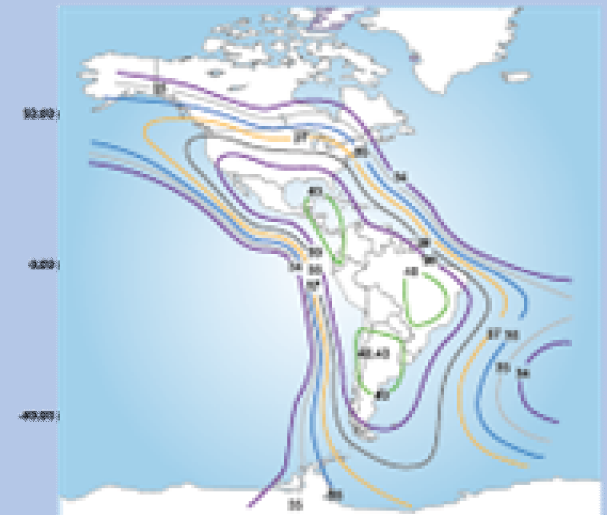
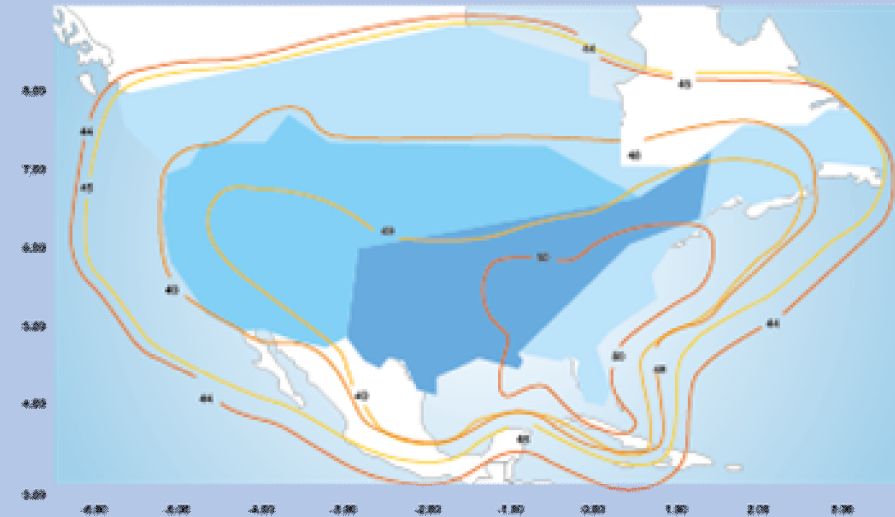
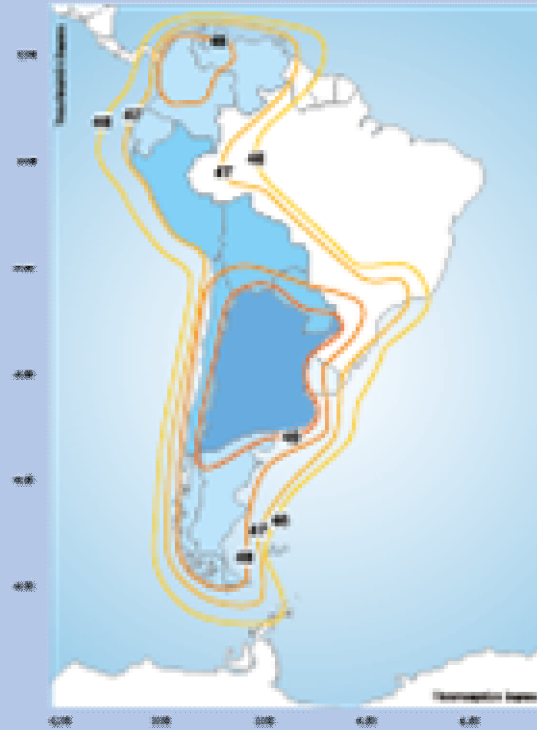
**In healthy operations since
november 2014**

18 years of estimated lifetime

Satellite fleet – ARSAT-2

ARSAT

Operating in perfect health with 100% service availability since november 2015



Excellent technical specs for mobility and other services

Best cost-effective choice for USA customers

Internet Broadband Market

ARSAT

HTS Global Market Share Current vs. Forecast

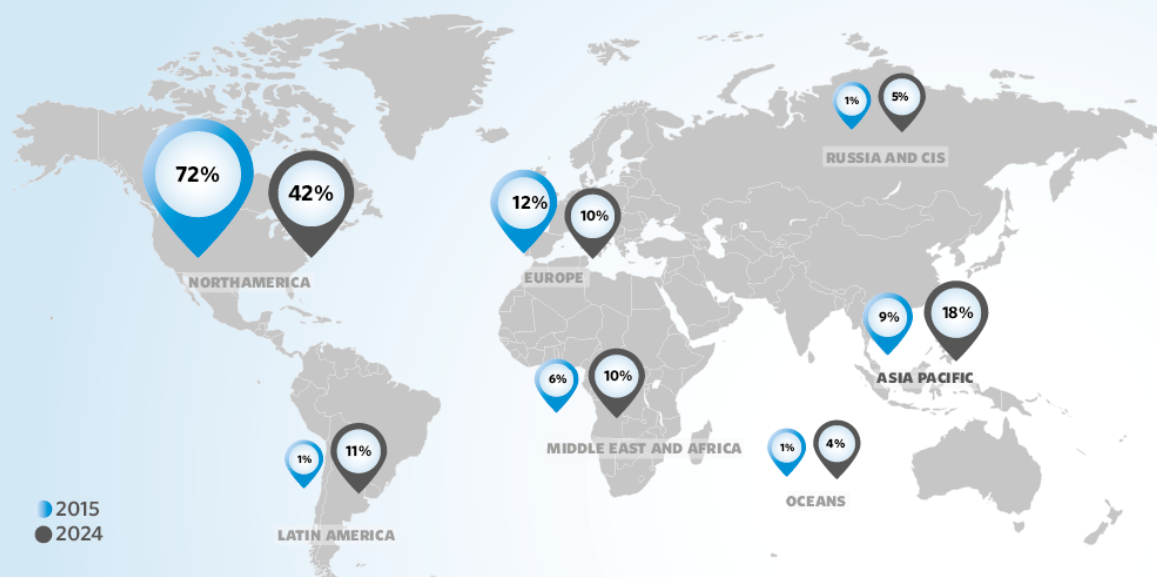
Market changing rapidly

Less distance to users

Operators under vertical integration
and new constellations on going

Competition is not only domestic

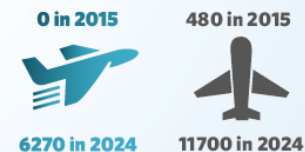
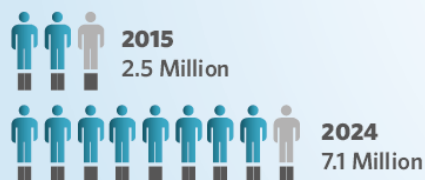
ARSAT's objective is to catalize market
investments to supply local users with
more and better bandwidth while
decreasing digital gap



Consumer Broadband Subscribers

Commercial ships

HTS Systems Launched



Source: Euroconsult

Satellite fleet – ARSAT-3

ARSAT



HTS Ka band coverage
Same proven platform

100% Southern Cone coverage

40 Gbps

More & better homes and schools
connected

Backhaul 4G

service until fiber is deployed

2020 launch

Lifetime of 15 years

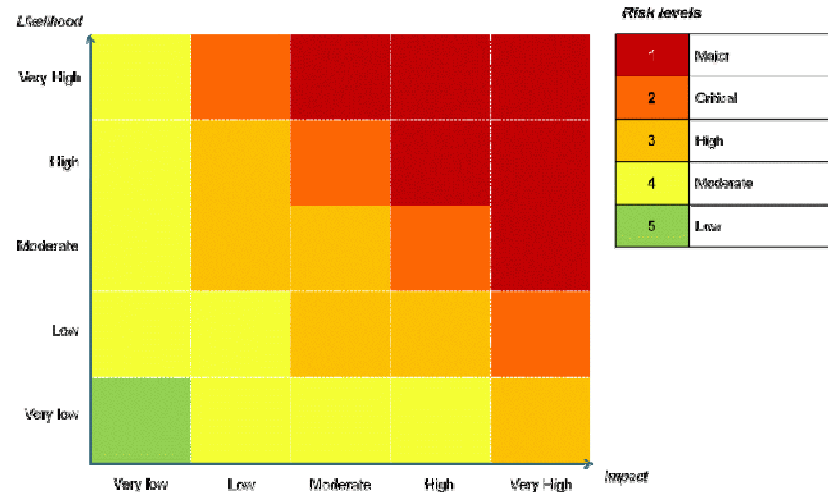
- **Project controlling since Mission Requirements and Design from ARSAT**
- **Standard Practices followed – focus on Quality Assurance System (NASA+ESA)**
- **System level Qualification Models**
 - STM: Structural Model. Qualification Campaign under ARSAT & also Arianespace approval
 - T-EQM: Thermal Engineering Qualification Model: For embedded Heatpipes communications module panels qualification
 - PEEM: Platform Electrical Engineering Model
- **Rigorous Project Management**
 - Resident Arsat staff at INVAP facilities (Satellite Prime) for permanent on-site monitoring
 - Internal Arsat project team down to S/S level
 - Direct contracts with major sub-contractors (CFEs)
 - Direct contracts with external audit teams
 - Direct contract with external consulting team to overview INVAP's platform development
- **External permanent consultancy**
 - Senior Experts (ex-Astrium staff) at Arsat Program Level
 - Thales Alenia Space at INVAP level for Platform Development (Platform Consulting Program)

- **At ARSAT level**

- Risk Mapping Analysis

- **At INVAP level**

- AIT Criticality Analysis
- Threat Analysis

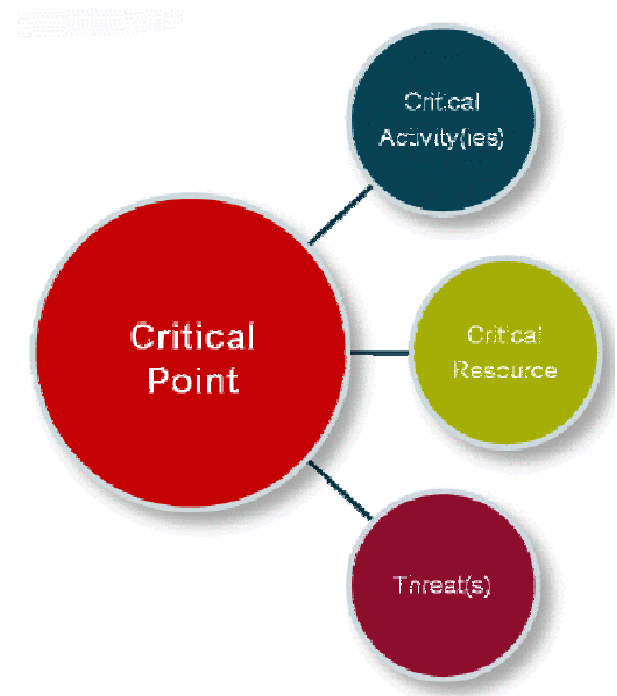


Likelihood is assessed using the following scale:

Very High	70% < Probability < 100%
High	50% < Probability < 70%
Moderate	30% < Probability < 50%
Low	1% < Probability < 30%
Very Low	Probability < 1%

- Risk management activities since the beginning of the program

Project Control Adherence to ERM Standards



The Future

ARSAT

ARSAT satellites are already in space and generating revenues with good fill rates.

ARSAT objectives of protecting and reaching to new frequencies and orbital slots are intact and on going.

Next steps are focused in resuming ARSAT-3 misión and working together with CONAE and INVAP in the setting up the cornerstone for a new full electric platform.

Argentina is also working with the rest of Latinamerica to create a regional satellite industry of goods and services.

First steps to develop satellite projects for the región were taken.

It is posible to promote local regional development by adding local capacities, abilities and connectivity needs in collaboration with all latinamerican countries and considering all local perspectives.





Thank you

www.arsat.com.ar
www.facebook.com/arsatsa

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