



JUPITER NG₁₊₂

Risk Assessment according to IEC 62305 part 2
Complete R1, R2, R3 and R4 analysis
Comparative analysis between solutions
Several reports available

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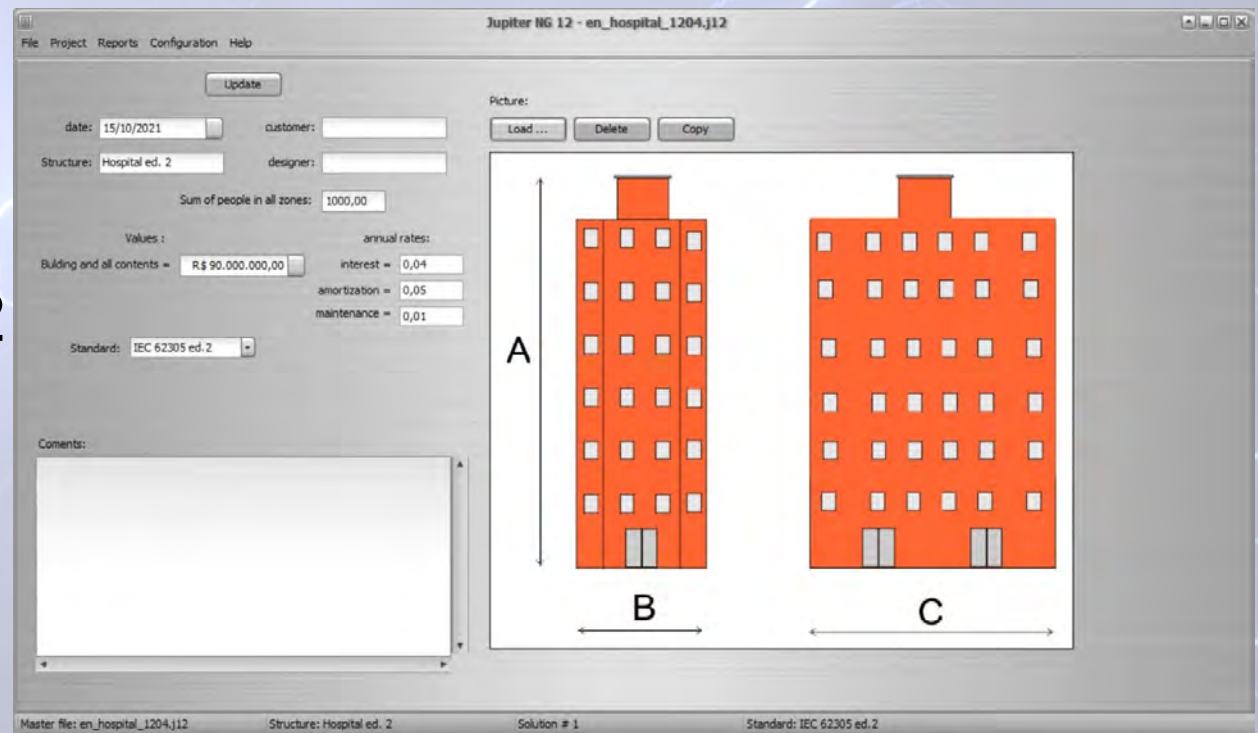
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Structure data

Complete structure data:

- structure picture
- project global data
- select standard ed. 1 or 2
- your comments



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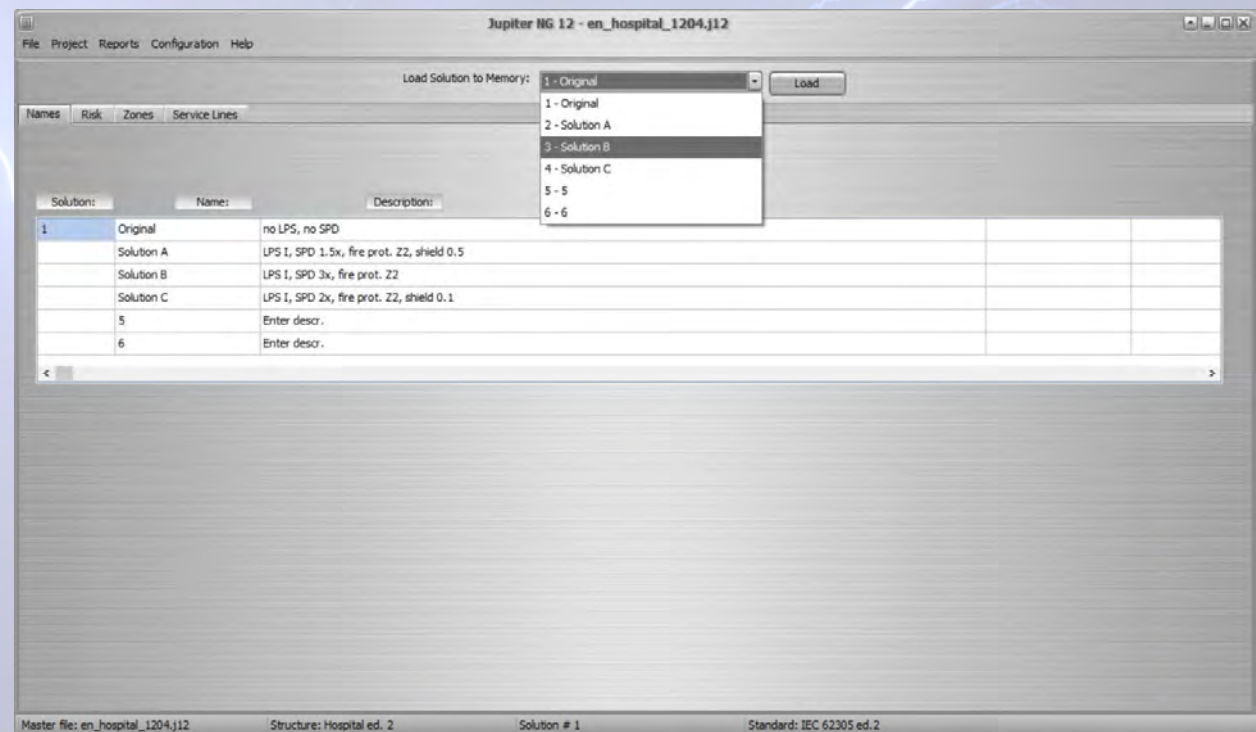


Up to 6 solutions
on each structure

Solutions data

Each solution can
contain:

- up to 16 zones
- up to 16 service lines
- combine any zone to any service line(s)



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Enter:

- exposition situation
- flash incidence
- structure dimensions

Incidence data

Software provides:

- collection area
- influence area
- strikes to and near the structure

The screenshot shows the Jupiter NG 12 software interface for lightning incidence calculation. The window title is "Jupiter NG 12 - en_hospital_1204.j12". The interface is divided into several sections:

- Environment:** A dropdown menu shows "Isolated structure: no other objects in the vicinity".
- Flash Incidence:** A text input field contains "4,0000" with the unit "flashes / km² / year".
- Sources for incidence data:** Three links are provided: "France: www.meteorage.com/solutions/evaluate", "World: ghrc.nasr.nasa.gov/lightning/dataset-info.html", and "Brasil: please see 'World' or the incidence maps on the NBR 5419 standard".
- Structure dimensions [m]:** A diagram shows two red building footprints labeled B and C. To the right, input fields are: "A - Height: 10,00 [m]", "B - Width: 50,00 [m]", and "C - Length: 150,00 [m]".
- Update:** A button labeled "Update" is present.
- Areas:** A table shows calculated areas:

Areas:	Real:	Value	Unit
Real:	7500,00	[m ²]	
Collection (Ad):	22327,43	[m ²]	
Influence (Am):	985398,16	[m ²]	
- Strikes:** Two text input fields show: "Strikes to the structure Nd = 0,08930973 /year" and "Strikes near the structure Nm = 3,94159265 /year".
- Incidence:** A text box contains instructions: "After setting the tolerable Risks, we can calculate how many flashes will hit the Location and its surroundings. Choose the appropriate environment - other buildings near the Location, and their relative height. The standard requires the lightning density in flashes/square kilometer/year, you can find the data on the internet links indicated. Then enter the overall dimensions of the structure and click on the 'Update' button to get the expected number of flashes to the structure and on its surroundings each year."
- Footer:** "Master file: en_hospital_1204.j12", "Structure: Hospital ed. 2", "Solution # 1 Original", "Standard: IEC 62305 ed.2".

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Enter:

- new lines (or edit)
- lines parameters
- line description
- adjacent structure (if any)

Software provides:

- collection area
- influence area
- strikes to and near the line
- adjacent structure results

Service lines data

Jupiter NG 12 - en_hospital_1204.j12

File Project Reports Configuration Help

Tolerable Incidence Services Zones Solutions Preview

Line:
Power original
Telecom original
Power SPD 1.5x
Telecom SPD 1.5x
Power SPD 3x

New
Edit
Copy to new
Delete

Service Lines:

Collection Area = 20000,00
Influence Area = 2000000,00
Adj. Area = 0,00

Strikes to service N = 0,004000
Strikes near the service N = 0,400000
Strikes to adj structure Nadj = 0,000000

Jupiter NG can use up to 16 Service lines for each structure
Any one of them can be used by one or more Zones.
Please note that, to be used by a Zone calculation, you must click on the button 'Update', above, after changing some parameter and before moving to another Service on the table.

Update

Incidence SPD Internal Injuries Line Type Protection cost Loss of Services

Installation: Buried factor CI:
Line type: HV power (with HV/LV transformer) factor CT:
Environment: Suburban factor CE:

Description: Copy

Master file: en_hospital_1204.j12 Structure: Hospital ed. 2 Solution # 1 Original Standard: IEC 62305 ed. 2

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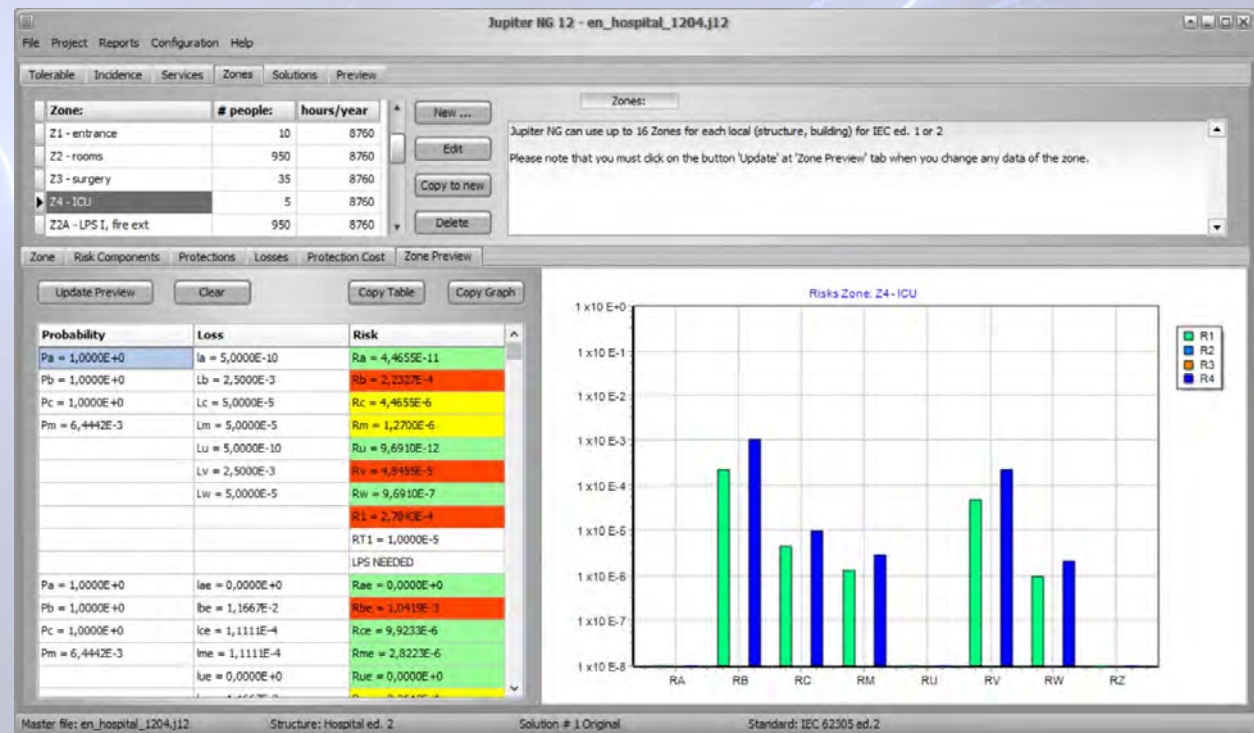
Enter:

- new zones (or edit)
- zones parameters
- zone description and picture
- adjacent structure (if any)

Software provides:

- preview of Zone risks

Zones data and preview



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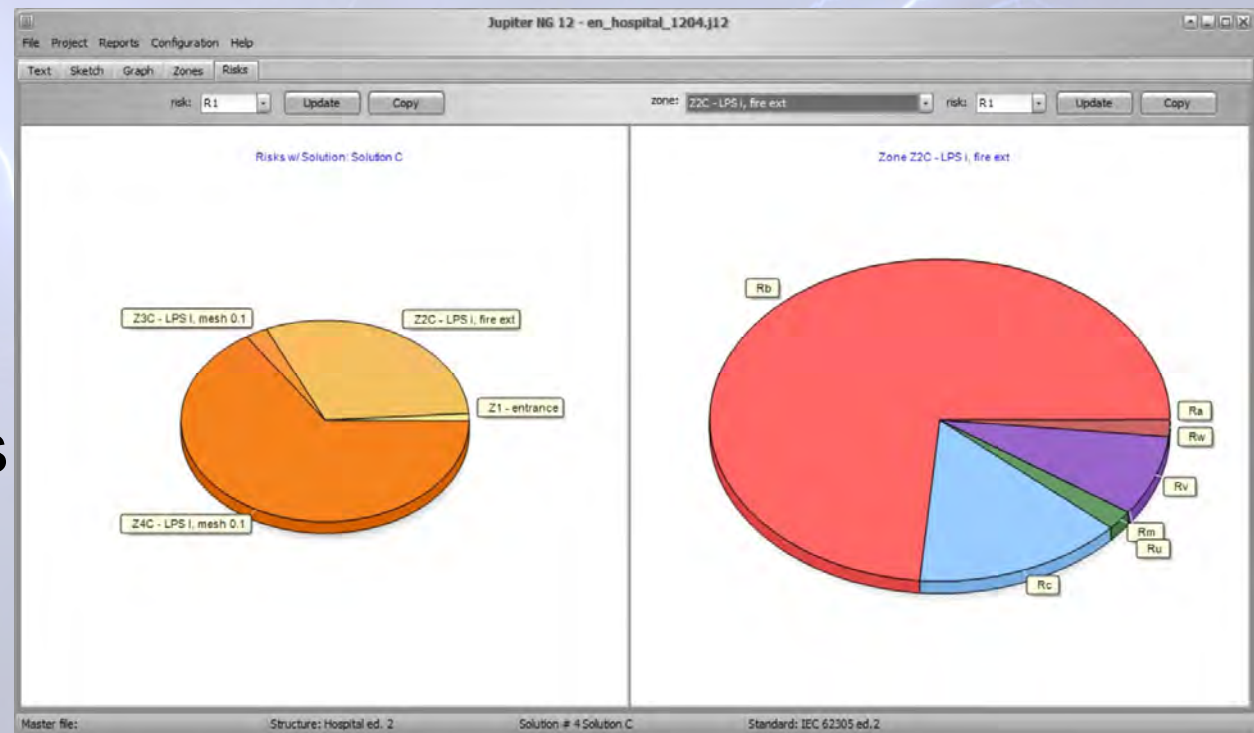


Zones Reports

Enter:

- select zone
- select chart
- select risks

Software provides:
preview of Zone risks



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Enter:

- select Solutions to compare

Solutions reports 1

Software provides:

- zones of each solution
- service lines
- preview of Solution risks
- comparative risks
- comparative costs

Jupiter NG 12 - en_hospital_1204.j12

Select:

Names Risk Zones Service Lines Compare Costs Compare Risks

Update Copy

Solution:	1	2	3	4	5	6
Name:	Original	Solution A	Solution B	Solution C	5	6
Zone: 1:	Z1 - entrance	Z1 - entrance	Z1 - entrance	Z1 - entrance	--	--
Zone: 2:	Z2 - rooms	--	--	--	--	--
Zone: 3:	Z3 - surgery	--	--	--	--	--
Zone: 4:	Z4 - ICU	--	--	--	--	--
Zone: 5:	--	Z2A - LPS I,	--	--	--	--
Zone: 6:	--	Z3A - LPS I,	--	--	--	--
Zone: 7:	--	Z4A - LPS I,	--	--	--	--
Zone: 8:	--	--	Z2B - LPS I,	--	--	--
Zone: 9:	--	--	Z3B - LPS I	--	--	--
Zone: 10:	--	--	Z4B - LPS I	--	--	--
Zone: 11:	--	--	--	Z2C - LPS I,	--	--
Zone: 12:	--	--	--	Z3C - LPS I,	--	--
Zone: 13:	--	--	--	Z4C - LPS I,	--	--

Master file: Structure: Hospital ed. 2 Solution # 3 Solution B Standard: IEC 62305 ed.2

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Enter:

- select Solutions to compare

Solutions reports 2

Software provides:

- zones of each solution
- service lines
- preview of Solution risks
- comparative risks
- comparative costs

Zone:	1	2	3	4	5	6	7	8	9	10
Name:	Z1 - entrance	Z2 - rooms	Z3 - surgery	Z4 - ICU	Z2A - LPS I,	Z3A - LPS I,	Z4A - LPS I,	Z2B - LPS I,	Z3B - LPS I	Z4B
Nz	10	950	35	5	950	35	5	950	35	5
Is	8760	8760	8760	8760	8760	8760	8760	8760	8760	8760
LPS installed:	Structure not	Structure not	Structure not	Structure not	Structure pro	Structure pro	Structure pro	Structure pro	Structure pro	Str:
Security measures										
Physical damages:	Hospital, hot	Hospital, hot	Hospital, hot	Hospital, hot	Hospital, hot	Hospital, hot	Hospital, hot	Hospital, hot	Hospital, hot	Hot
Internal systems:	Other parts c	Other parts c	Intensive car	Intensive car	Other parts c	Intensive car	Intensive car	Other parts c	Intensive car	Int-
Type of surface:	Agricultural, Asphalt, lino	Asphalt, lino	Asphalt, lino	Asphalt, lino	Asphalt, lino	Asphalt, lino	Asphalt, lino	Asphalt, lino	Asphalt, lino	Aspl
Provisions taken:										
Risk of fire / amount:	explosion / Z	explosion / Z	explosion / Z	explosion / Z	explosion / Z	explosion / Z	explosion / Z	explosion / Z	explosion / Z	exp-
Special hazard:	no special ha	Difficulty of	Difficulty of	Difficulty of	Difficulty of	Difficulty of	Difficulty of	Difficulty of	Difficulty of	Dif
Cultural value:	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000
Animals value:	0	0	0	0	0	0	0	0	0	0
Building value:	0	70000000	2000000	1000000	70000000	2000000	1000000	70000000	2000000	1000

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Enter:

- select Solutions to compare

Solutions reports 3

Software provides:

- zones of each solution
- service lines
- preview of Solution risks
- comparative risks
- comparative costs

The screenshot shows the Jupiter NG 12 software interface with a table comparing eight different lightning protection solutions. The table columns are numbered 1 through 8. The rows list various parameters such as Name, Installation, Line type, Environment, physical damage LF, failure of internal system, External line type / Connection, SPD, Type of internal wiring, Withstand voltage Uw, Protection level, FEB for "Better than I", Routing, shielding, bonding, and Line type.

Service:	1	2	3	4	5	6	7	8
Name:	Power origina	Telecom origi	Power SPD 1.5	Telecom SPD 1	Power SPD 3x	Telecom SPD 3	Power SPD 3x	Telecom SPD 3
Installation:	Buried	Buried	Buried	Buried	Buried	Buried	Buried	Buried
Line type:	HV power (wit	LV power, tel	HV power (wit	LV power, tel	HV power (wit	LV power, tel	HV power (wit	LV power, tel
Environment:	Suburban	Suburban	Suburban	Suburban	Suburban	Suburban	Suburban	Suburban
physical damage LF:	Gas, water,	TV, telecommu	Gas, water,	TV, telecommu	Gas, water,	TV, telecommu	Gas, water,	TV, telecommu
failure of internal system:	Gas, water,	TV, telecommu	Gas, water,	TV, telecommu	Gas, water,	TV, telecommu	Gas, water,	TV, telecommu
External line type / Connection:	Shielded buri	Shielded buri	Shielded buri	Shielded buri	Shielded buri	Shielded buri	Shielded buri	Shielded buri
SPD:	No coordinate	No coordinate	Other, lower	Other, lower	Other, lower	Other, lower	Other, lower	Other, lower
Type of internal wiring:	Unshielded ca	Unshielded ca	Unshielded ca	Unshielded ca	Unshielded ca	Unshielded ca	Unshielded ca	Unshielded ca
Withstand voltage Uw:	25	15	25	15	25	15	25	15
Protection level:	No SPD	No SPD	I	I	I	I	I	I
FEB for "Better than I*":								
Routing, shielding, bonding:	Shielded aeri	Shielded aeri	Shielded aeri	Shielded aeri	Shielded aeri	Shielded aeri	Shielded aeri	Shielded aeri
Line type:	Power line	Telecom line	Power line	Telecom line	Power line	Telecom line	Power line	Telecom line

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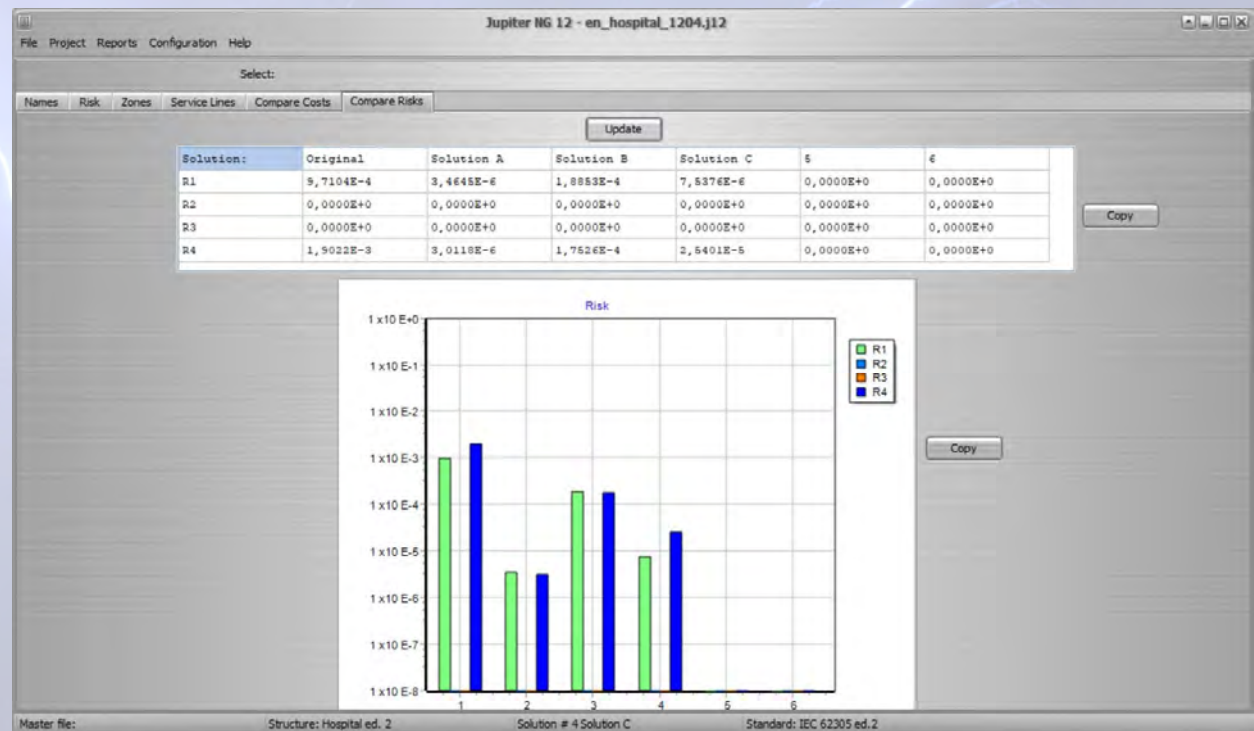
Enter:

- select Solutions to compare

Solutions reports 4

Software provides:

- zones of each solution
- service lines
- preview of Solution risks
- comparative risks
- comparative costs



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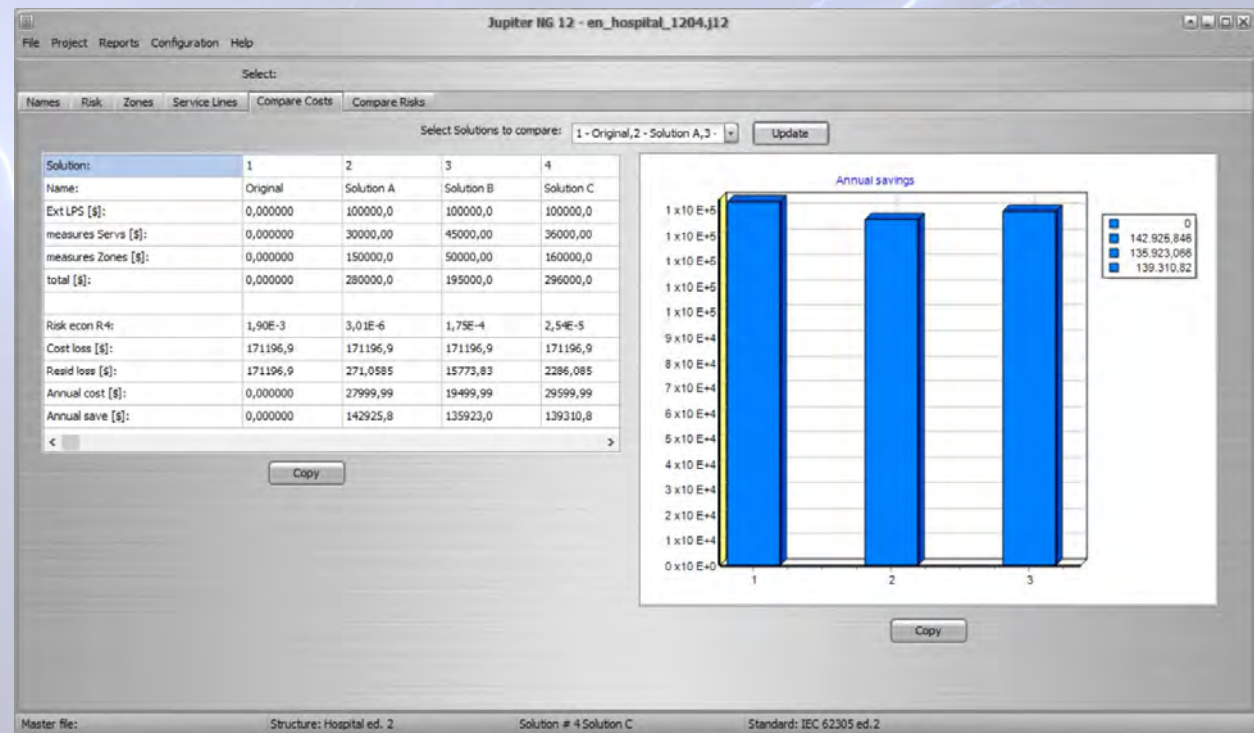
Enter:

- select Solutions to compare

Solutions reports 5

Software provides:

- zones of each solution
- service lines
- preview of Solution risks
- comparative risks
- comparative costs



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