



**UNIVERSIDADE FEDERAL DA FRONTEIRA SUL  
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CURSO DE CIÊNCIA DA COMPUTAÇÃO**

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**DESEMPENHO DO RMLSA EM TOPOLOGIAS DEFINIDAS POR HEURÍSTICA  
PARA O PROBLEMA QUADRÁTICO DE ALOCAÇÃO, EM CENÁRIOS DE REDES  
ÓPTICAS ELÁSTICAS DE TELECOMUNICAÇÕES**

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Trabalho de conclusão de curso apresentado como requisito para obtenção do grau de Bacharel em Ciência da Computação da Universidade Federal da Fronteira Sul.  
Orientador: Prof. Dr. Claunir Pavan

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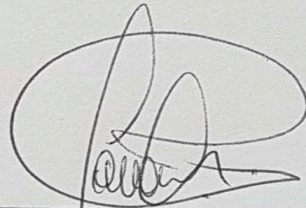
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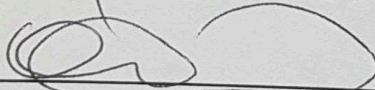
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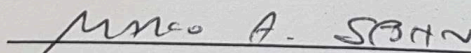
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## RESUMO

Com a popularização de serviços de internet, o tráfego nas redes de telecomunicações está em constante crescimento. Esse crescimento implica no desenvolvimento de novas tecnologias capazes de suportar mais e maiores demandas, sem penalizar significativamente o custo por bit transmitido. A topologia da rede também influencia no desempenho de algoritmos e nos custos de operação. Neste trabalho tratamos o problema do roteamento, nível de modulação e atribuição de espectro (RMLSA) em redes ópticas elásticas de Telecomunicações. Utilizamos como base um conjunto de 27 topologias de redes reais que, após processamento através de um algoritmo genético para o tratamento do problema quadrático de atribuição, produziu um conjunto de 658 mapeamentos que minimizam a soma do comprimento dos enlaces. Após a aplicação do RMLSA proposto nas topologias mapeadas, medimos a taxa de bloqueio e a fragmentação de espectro para cada topologia. Adicionalmente, propusemos uma expressão de custo/benefício para classificar os mapeamentos topológicos considerando a soma do comprimento dos enlaces, a taxa de bloqueio e a fragmentação. Os resultados das simulações mostram que 24 das 27 redes podem ser otimizadas quando seguido o RMLSA e a expressão propostas.

**Palavras-chave:** Redes ópticas elásticas. Roteamento e Alocação de Espectro. Roteamento, Nível de Modulação e Alocação de Espectro. Redes de telecomunicações. Problema Quadrático de Atribuição.





## ABSTRACT

With the popularization of internet services, traffic in telecommunications networks is constantly growing. This growth implies the development of new technologies capable of supporting more and greater demands without significantly penalizing the cost per bit transmitted. The network topology also influences the performance algorithms and operating costs. In this paper we treat the routing, modulation level and spectrum allocation (RMLSA) problem in elastic optical telecommunication networks. We used as a base a set of 27 real network topologies that, after processing through a genetic algorithm to treat the quadratic assignment problem, produced a set of 658 mappings that minimize the sum of the length of the links. After applying the proposed RMLSA in the mapped topologies, we measured the blocking rate and the fragmentation of the spectrum for each topology. In addition, we proposed a cost / benefit expression to classify the topological mappings by considering the sum of link length, blocking rate, and fragmentation. The results of the simulations show that 24 of the 27 networks can be optimized by following the RMLSA and the proposed expression.

**Keywords:** Elastic Optical Networking. Routing and Spectrum Allocation. Routing, Modulation Level and Spectrum Allocation. Telecommunications Networks. Quadratic Assignment Problem.



## LISTA DE ILUSTRAÇÕES

Figura 1 – Taxa de crescimento anual de dados na Internet . . . . .	19
Figura 2 – Larguras espectrais . . . . .	20
Figura 3 – Continuidade e contiguidade do espectro. . . . .	21
Figura 4 – Exemplo de roteamento e alocação de espectro. . . . .	22
Figura 5 – Distribuição de Erlang. . . . .	28
Figura 6 – Distribuição de Poisson. . . . .	29
Figura 7 – Fluxograma do programa. . . . .	32
Figura 8 – Redes x Ganho (%). . . . .	38



## LISTA DE TABELAS

Tabela 1 – Formatos de modulação . . . . .	20
Tabela 2 – Parâmetros das redes utilizadas nas simulações . . . . .	25
Tabela 3 – Parâmetros da metodologia . . . . .	27
Tabela 4 – Distribuição de Erlang . . . . .	28
Tabela 5 – Distribuição de Poisson . . . . .	30
Tabela 6 – Parâmetros utilizados na ferramenta de simulação. . . . .	35
Tabela 7 – Resultado dos custos da modulação fixa - CesNet. . . . .	36
Tabela 8 – Resultado dos pesos da modulação fixa - CesNet. . . . .	36
Tabela 9 – Resultado dos custos da múltipla modulação - CesNet. . . . .	36
Tabela 10 – Resultado dos pesos da múltipla modulação - CesNet. . . . .	37
Tabela 11 – Comparação dos custos original e melhor custo x benefício - CesNet. . . . .	37
Tabela 12 – Comparação dos pesos original e melhor custo x benefício - CesNet. . . . .	37
Tabela 13 – Resultados do RSA para a rede Arnes . . . . .	44
Tabela 14 – Resultados do RMLSA para a rede Arnes . . . . .	44
Tabela 15 – Comparação da topologia original e a melhor C.B. para a rede Arnes . . . . .	45
Tabela 16 – Resultados do RSA para a rede Arpanet . . . . .	47
Tabela 17 – Resultados do RMLSA para a rede Arpanet . . . . .	49
Tabela 18 – Comparação da topologia original e a melhor C.B. para a rede Arpanet . . . . .	52
Tabela 19 – Resultados do RSA para a rede Austria . . . . .	53
Tabela 20 – Resultados do RMLSA para a rede Austria . . . . .	60
Tabela 21 – Comparação da topologia original e a melhor C.B. para a rede Austria . . . . .	67
Tabela 22 – Resultados do RSA para a rede Canarie . . . . .	69
Tabela 23 – Resultados do RMLSA para a rede Canarie . . . . .	76
Tabela 24 – Comparação da topologia original e a melhor C.B. para a rede Canarie . . . . .	83
Tabela 25 – Resultados do RSA para a rede CesNet . . . . .	85
Tabela 26 – Resultados do RMLSA para a rede CesNet . . . . .	85
Tabela 27 – Comparação da topologia original e a melhor C.B. para a rede CesNet . . . . .	86
Tabela 28 – Resultados do RSA para a rede CoxUsa . . . . .	87
Tabela 29 – Resultados do RMLSA para a rede CoxUsa . . . . .	92
Tabela 30 – Comparação da topologia original e a melhor C.B. para a rede CoxUsa . . . . .	97
Tabela 31 – Resultados do RSA para a rede Eon . . . . .	99
Tabela 32 – Resultados do RMLSA para a rede Eon . . . . .	99
Tabela 33 – Comparação da topologia original e a melhor C.B. para a rede Eon . . . . .	100
Tabela 34 – Resultados do RSA para a rede Geant2 . . . . .	101
Tabela 35 – Resultados do RMLSA para a rede Geant2 . . . . .	147
Tabela 36 – Comparação da topologia original e a melhor C.B. para a rede Geant2 . . . . .	194
Tabela 37 – Resultados do RSA para a rede Germany . . . . .	195

Tabela 38 – Resultados do RMLSA para a rede Germany . . . . .	195
Tabela 39 – Comparação da topologia original e a melhor C.B. para a rede Germany . . .	196
Tabela 40 – Resultados do RSA para a rede Internet2Usa . . . . .	197
Tabela 41 – Resultados do RMLSA para a rede Internet2Usa . . . . .	197
Tabela 42 – Comparação da topologia original e a melhor C.B. para a rede Internet2Usa	198
Tabela 43 – Resultados do RSA para a rede Italy . . . . .	201
Tabela 44 – Resultados do RMLSA para a rede Italy . . . . .	201
Tabela 45 – Comparação da topologia original e a melhor C.B. para a rede Italy . . . . .	202
Tabela 46 – Resultados do RSA para a rede LambdaRailUsa . . . . .	205
Tabela 47 – Resultados do RMLSA para a rede LambdaRailUsa . . . . .	205
Tabela 48 – Comparação da topologia original e a melhor C.B. para a rede LambdaRailUsa	206
Tabela 49 – Resultados do RSA para a rede MemorexEurope . . . . .	209
Tabela 50 – Resultados do RMLSA para a rede MemorexEurope . . . . .	209
Tabela 51 – Comparação da topologia original e a melhor C.B. para a rede MemorexEurope	210
Tabela 52 – Resultados do RSA para a rede MetronaUK . . . . .	211
Tabela 53 – Resultados do RMLSA para a rede MetronaUK . . . . .	211
Tabela 54 – Comparação da topologia original e a melhor C.B. para a rede MetronaUK .	212
Tabela 55 – Resultados do RSA para a rede Mzima . . . . .	215
Tabela 56 – Resultados do RMLSA para a rede Mzima . . . . .	215
Tabela 57 – Comparação da topologia original e a melhor C.B. para a rede Mzima . . .	216
Tabela 58 – Resultados do RSA para a rede NewNet . . . . .	217
Tabela 59 – Resultados do RMLSA para a rede NewNet . . . . .	217
Tabela 60 – Comparação da topologia original e a melhor C.B. para a rede NewNet . . .	218
Tabela 61 – Resultados do RSA para a rede NsfNet . . . . .	219
Tabela 62 – Resultados do RMLSA para a rede NsfNet . . . . .	221
Tabela 63 – Comparação da topologia original e a melhor C.B. para a rede NsfNet . . .	224
Tabela 64 – Resultados do RSA para a rede OmnicomEurope . . . . .	225
Tabela 65 – Resultados do RMLSA para a rede OmnicomEurope . . . . .	226
Tabela 66 – Comparação da topologia original e a melhor C.B. para a rede OmnicomEurope	228
Tabela 67 – Resultados do RSA para a rede Pioner . . . . .	229
Tabela 68 – Resultados do RMLSA para a rede Pioner . . . . .	229
Tabela 69 – Comparação da topologia original e a melhor C.B. para a rede Pioner . . . .	230
Tabela 70 – Resultados do RSA para a rede Portugal . . . . .	231
Tabela 71 – Resultados do RMLSA para a rede Portugal . . . . .	241
Tabela 72 – Comparação da topologia original e a melhor C.B. para a rede Portugal . . .	251
Tabela 73 – Resultados do RSA para a rede Renater . . . . .	253
Tabela 74 – Resultados do RMLSA para a rede Renater . . . . .	253
Tabela 75 – Comparação da topologia original e a melhor C.B. para a rede Renater . . .	254
Tabela 76 – Resultados do RSA para a rede RNPBrazil . . . . .	255

Tabela 77 – Resultados do RMLSA para a rede RNPBrazil . . . . .	257
Tabela 78 – Comparação da topologia original e a melhor C.B. para a rede RNPBrazil .	260
Tabela 79 – Resultados do RSA para a rede Sanet . . . . .	263
Tabela 80 – Resultados do RMLSA para a rede Sanet . . . . .	263
Tabela 81 – Comparação da topologia original e a melhor C.B. para a rede Sanet . . . .	264
Tabela 82 – Resultados do RSA para a rede Spain . . . . .	265
Tabela 83 – Resultados do RMLSA para a rede Spain . . . . .	267
Tabela 84 – Comparação da topologia original e a melhor C.B. para a rede Spain . . . .	269
Tabela 85 – Resultados do RSA para a rede UsaGde . . . . .	271
Tabela 86 – Resultados do RMLSA para a rede UsaGde . . . . .	299
Tabela 87 – Comparação da topologia original e a melhor C.B. para a rede UsaGde . . .	327
Tabela 88 – Resultados do RSA para a rede VBSN . . . . .	329
Tabela 89 – Resultados do RMLSA para a rede VBSN . . . . .	329
Tabela 90 – Comparação da topologia original e a melhor C.B. para a rede VBSN . . . .	330
Tabela 91 – Resultados do RSA para a rede VDCN . . . . .	333
Tabela 92 – Resultados do RMLSA para a rede VDCN . . . . .	333
Tabela 93 – Comparação da topologia original e a melhor C.B. para a rede VDCN . . .	334





## LISTA DE ABREVIATURAS E SIGLAS

EON	<i>Elastic Optical Networking</i>
ITU	International Telecommunication Union
OFDM	<i>Orthogonal frequency-division multiplexing</i>
PP	<i>Pseudo-Partition</i>
QAP	<i>Quadratic Assignment Problem</i>
RMLSA	<i>Routing, Modulation Level and Spectrum Allocation</i>
RSA	<i>Routing and Spectrum Allocation</i>
SCE	Soma do Comprimento dos Enlaces
TB	Taxa de Bloqueio
UT	Unidade de Tempo
WDM	<i>Wavelength Division Multiplexing</i>



## SUMÁRIO

<b>1</b>	<b>INTRODUÇÃO</b> . . . . .	<b>19</b>
1.1	DIMENSIONAMENTO EM REDES ÓPTICAS ELÁSTICAS . . . . .	21
<b>1.1.1</b>	<b>Roteamento, Nível de Modulação e Alocação de Espectro</b> . . . . .	<b>22</b>
1.2	TRABALHOS RELACIONADOS . . . . .	22
<b>2</b>	<b>METODOLOGIA</b> . . . . .	<b>25</b>
2.1	COLETA DE DADOS . . . . .	25
2.2	ENTRADA . . . . .	26
<b>2.2.1</b>	<b>Requisições</b> . . . . .	<b>27</b>
2.3	SIMULADOR . . . . .	29
<b>2.3.1</b>	<b>Atualização de informações da simulação</b> . . . . .	<b>30</b>
<b>2.3.2</b>	<b>Alocação de requisição</b> . . . . .	<b>30</b>
2.4	PARÂMETROS DA SIMULAÇÃO . . . . .	33
<b>3</b>	<b>RESULTADOS E DISCUSSÃO</b> . . . . .	<b>35</b>
3.1	NORMALIZAÇÃO DOS RESULTADOS . . . . .	35
<b>4</b>	<b>CONSIDERAÇÕES FINAIS</b> . . . . .	<b>39</b>
	<b>Bibliografia</b> . . . . .	<b>41</b>
<b>A</b>	<b>APÊNDICE</b> . . . . .	<b>43</b>



## 1 INTRODUÇÃO

O tráfego na internet sofreu um rápido crescimento devido à popularização de serviços de Internet, tais como transmissão de vídeo, computação em nuvem, redes sociais, gerenciamento de grandes bancos de dados, jogos on-line, dentre outros. Esse crescimento na demanda de tráfego nas redes atuais, implica na necessidade de novas tecnologias capazes de suportar maiores taxas de dados no meio de transmissão (10). Segundo a Cisco (3), a estimativa de dados na rede é de 24 % maior em 2021 com relação ao ano de 2016 conforme é indicado na figura 1.

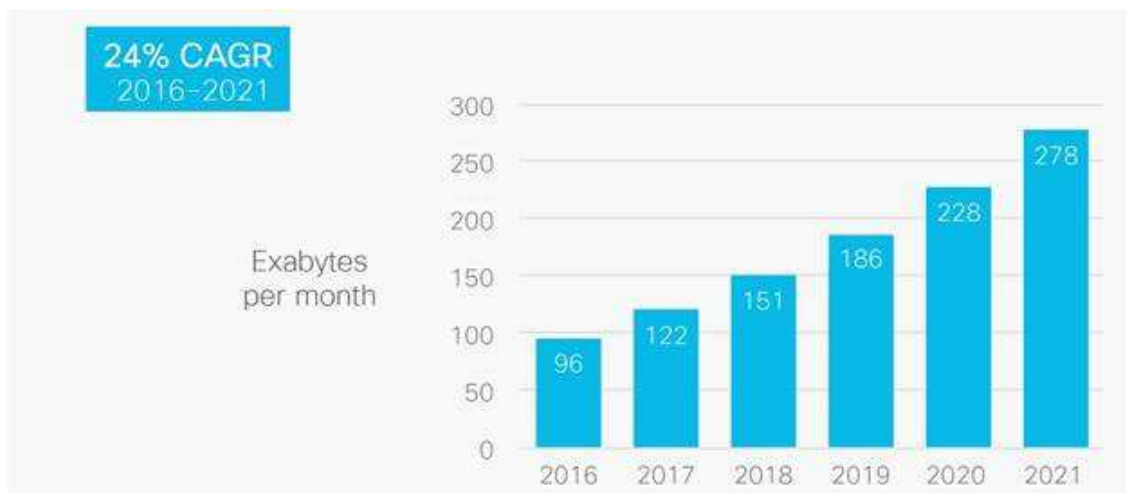


Figura 1 – Taxa de crescimento anual de dados na Internet. Fonte: Cisco (3).

As redes tradicionais baseadas em Multiplexação por Divisão em Comprimentos de Onda (*Wavelength Division Multiplexing* (WDM)) dividem o espectro em slots. O espaço entre os slots é fixado em 50 GHz ou 100 GHz, que é especificado pela International Telecommunication Union (ITU), ao longo do espectro de frequência (2). Esta definição é compatível com canais de transmissão de até 100 Gb/s (13).

Para enfrentar esta limitação, Jinho (9) apresenta o conceito de Redes Ópticas Elásticas, do inglês *Elastic Optical Networking* (EON), onde o espaçamento dos slots é flexível, de forma a suportar diferentes larguras de banda conforme a necessidade. Na figura 2 é possível ver a diferença no uso do espectro nas redes EON, utilizando o espectro de forma otimizada, suportando slots de até 1 Tb/s de transmissão.

Nas redes EON, com base na demanda requisitada e a distância requerida é possível escolher o formato de modulação compatível com a distância, assim minimizando a largura espectral utilizada pelo caminho óptico (5). A tabela 1 exibe um conjunto de formatos de modulação com seus respectivos bits por símbolo, capacidade e alcance, considerando um slot de 12.5 GHz.

A topologia da rede, portanto, pode influenciar significativamente nos custos de implantação e operação da tecnologia de EON. Neste contexto, pesquisadores têm apresentado estudos para a otimização das topologias de forma a minimizar variáveis importantes nos custos de

rede. A minimização do comprimento dos enlaces é uma das variáveis importantes, já que em enlaces menores pode-se utilizar um formato de modulação que garanta maior capacidade de transmissão com uso mais eficiente do espectro.

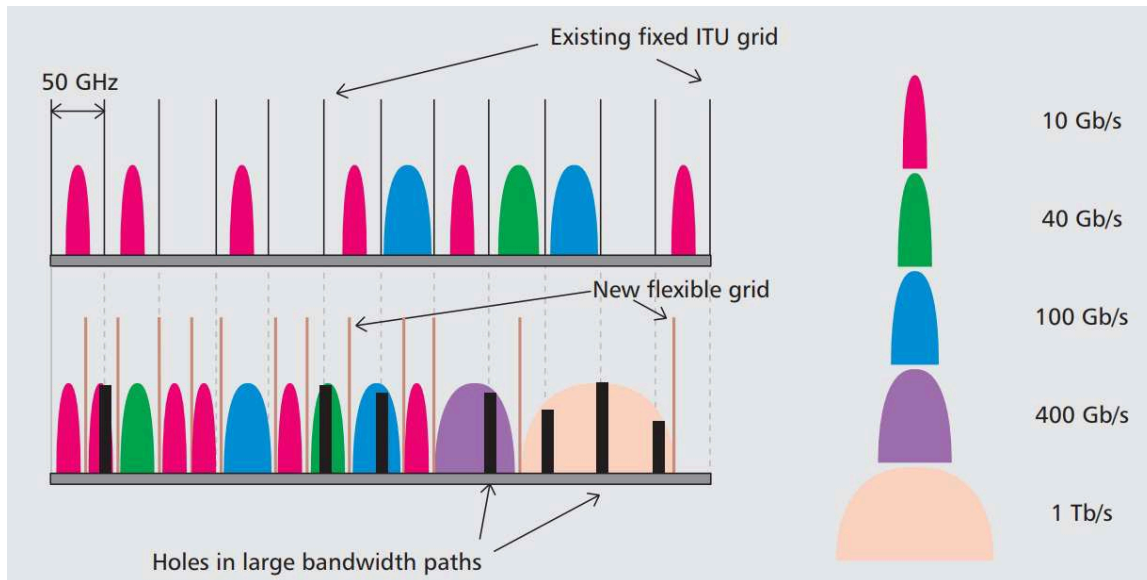


Figura 2 – Larguras espectrais de diferentes taxas de bits em relação à grade da ITU (para um determinado formato de modulação). Fonte: Gerstel (5).

Tabela 1 – Comparação entre formatos de modulação. Adaptado de: López (11).

Modulação	Bits por símbolo	Capacidade (Gb/s)	Alcance (km)
BPSK	1	12,5	4.000
QPSK	2	25,0	2.000
8-QAM	3	37,5	1.000
16-QAM	4	50,0	500
32-QAM	5	62,5	250
64-QAM	6	75,0	125

As topologias de redes de telecomunicações são, em geral, representadas por grafos e seguem um conjunto de características que as diferem de grafos aleatórios (e.g. grau médio dos nós, conectividade, etc..) (14). Isto posto, um dos problemas de engenharia de redes é: dado um grafo com  $N$  nós e  $L$  enlaces, como encontrar um grafo isomorfo que diminua a soma dos comprimentos dos enlaces (SCE)? Este problema é conhecido na área matemática como Problema Quadrático de Atribuição, ou *Quadratic Assignment Problem (QAP)*.

Em seu estudo, Néris (13) apresenta uma heurística para a solução do QAP. Para validar a rede obtida através do algoritmo genético, ele considerou o Roteamento e Alocação de Espectro, ou *Routing and Spectrum Allocation (RSA)*. O autor concluiu que nem sempre ao minimizar o custo da rede, neste caso, minimizar a SCE, reduziu-se a taxa de bloqueio (TB) e a fragmentação. Porém ele não levou em conta o formato de modulação em seus experimentos e isso pode ter forte impacto na utilização do espectro.

## 1.1 DIMENSIONAMENTO EM REDES ÓPTICAS ELÁSTICAS

Em redes ópticas de telecomunicações, um dos desafios existentes é o dimensionamento da demanda de tráfego sobre a mesma, trata-se de um problema de engenharia de tráfego. A possibilidade de flexibilizar as faixas de frequência do espectro, com o uso das redes elásticas, amplia o poder para ocupar de forma mais eficiente o espectro disponível para transmissão de dados, aumentando assim sua capacidade de transporte. Esta tarefa pode ser realizada através do roteamento e alocação de espectro, o RSA. O RSA consiste em encontrar para cada demanda, um caminho e a alocação de faixas de frequência, slots, nos enlaces pertencentes ao caminho, buscando uma melhor utilização dos recursos e ampliando a capacidade de fluxo de tráfego de dados (1).

Para que o RSA funcione, é preciso que ele respeite as restrições de contiguidade e continuidade de espectro. A contiguidade define que os slots necessários para atender uma determinada demanda, sejam alocados de forma adjacente em todos os enlaces do caminho. A continuidade define que da origem da demanda até o seu destino, seja utilizado a mesma frequência de sinal no caminho óptico. A figura 3 ilustra estas duas condições.

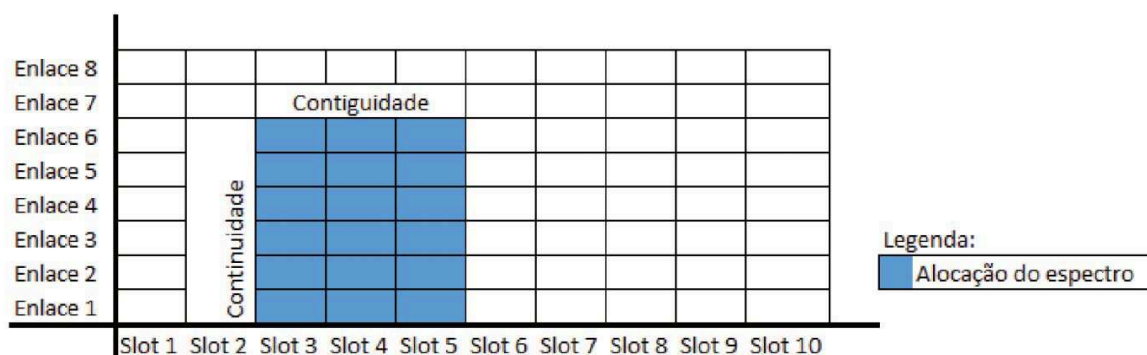


Figura 3 – Exemplo de Continuidade e contiguidade do espectro. Fonte: Bonassi (1).

Para exemplificar este processo, tomamos como rede o grafo da figura 4 (a) e as demandas já existentes na rede na figura 4 (b). Para uma quarta demanda que ocupe 2 slots da origem F para o destino D, passará pelos enlaces  $E \leftarrow F$  e  $D \leftarrow E$ , ela poderia ser alocada no Slot1 e Slot2 no enlace  $E \leftarrow F$ . Porém ao verificar a continuidade podemos ver que o Slot1 e o Slot2 do enlace  $D \leftarrow E$  já estão ocupados, logo a primeira posição vaga de slot dos enlaces  $E \leftarrow F$  e  $D \leftarrow E$  é o Slot4. Para essa situação ao tentar alocar a demanda a partir do Slot4, também não é possível, pois é necessário 2 slots contíguos. Sendo assim, para que as condições de continuidade e contiguidade sejam atendidas, esta demanda teria que ser alocada no Slot6 e no Slot7.

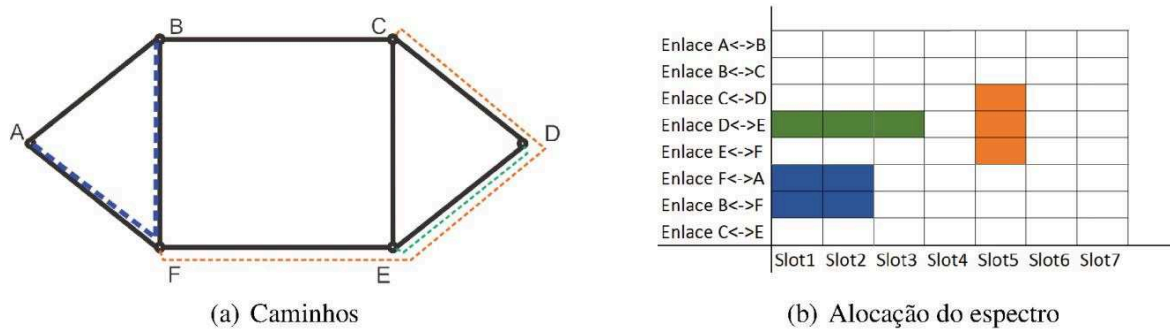


Figura 4 – Exemplo de roteamento e alocação de espectro. Fonte: Bonassi (1).

### 1.1.1 Roteamento, Nível de Modulação e Alocação de Espectro

Nas redes EON, por utilizar a tecnologia *Orthogonal frequency-division multiplexing* (OFDM), o problema RSA evoluiu para o chamado *Routing, Modulation Level and Spectrum Allocation* (RMLSA) (4), onde é possível selecionar a modulação mais adequada para cada demanda no caminho óptico.

Ao transmitir 100 Gb/s de dados utilizando a modulação BPSK em uma distância de 1.000 km, é necessário utilizar 8 slots, porém, se observarmos a tabela 1, essa mesma taxa de transferência pode ser conseguida utilizando o formato de modulação 8 - QAM, ocupando 3 slots, ou seja, pela distância da transmissão e a escolha de modulação adequada, houve a redução de 5 slots, podendo estes, serem alocadas para outras demandas.

## 1.2 TRABALHOS RELACIONADOS

Em Nérís (13) são apresentados mapeamentos topológicos de redes de telecomunicações, obtidos através de um algoritmo genético proposto pelo autor. Como forma de validar os ganhos na redução da SCE, foi executado o RSA para uma dada matriz de tráfego e medida a fragmentação e taxa de bloqueio. O autor destacou que houve casos em que ao reduzir a SCE, a fragmentação e/ou a taxa de bloqueio aumentou, revelando um custo adicional na operação da rede. Porém não foi levado em consideração diferentes políticas de alocação de espectro e formatos de modulação nos testes.

Em Júnior (10) é apresentado um estudo sobre técnicas para prevenção da fragmentação de espectro, onde o método de alocação de espectro *Pseudo-Partition* (PP) se mostrou mais eficiente dentre as outras políticas estudadas.

Em Tessinari (16) é apresentado uma ferramenta para permitir testes de roteamento, modulação, alocação de espectro, algoritmos de desfragmentação, parâmetros e topologias. As requisições nesta ferramenta seguem a distribuição de Poisson para determinar a taxa de chegada das requisições. Em Helix (6) é apresentado o uso da distribuição de Erlang, onde é utilizada para indicar o tempo de uso dos recursos divididos por um intervalo de tempo total,



determinando assim o tempo médio do uso de um recurso.

O presente trabalho, utilizou as redes otimizadas através do algoritmo genético de Néris (13). Por se tratar de redes de telecomunicações que precisam suportar falhas, o roteamento foi conduzido conforme o algoritmo de Suurballe (15), que retorna dois caminhos disjuntos por enlace entre cada par de nós origem e destino. Para a alocação de espectro foi utilizado o método Pseudo-Partition. Também foram considerados os níveis de modulações apresentada na tabela 1, ou seja, o problema será tratado novamente, considerando o RMLSA. Para determinar a taxa de demanda das requisições que entraram na rede foi utilizado a distribuição de Poisson e para o tempo de permanência das requisições na rede foi utilizada a distribuição de Erlang.



## 2 METODOLOGIA

Com o conhecimento do funcionamento do algoritmo do RSA e a saída do algoritmo genético de Néris (13), foi possível construir uma ferramenta de simulação para o RMLSA, onde explicarei o funcionamento dessa ferramenta nas próximas sessões.

### 2.1 COLETA DE DADOS

Para gerar as topologias otimizadas pelo algoritmo genético proposto por Néris (13), foram realizadas varias rodadas do programa, alterando os parâmetros de índice de igualdade da topologia, percentual de cruzamento dos indivíduos, percentual de mutação, tamanho máximo do enlace, número máximo de iteração, número de iterações sem alterações, além de fornecer uma topologia inicial em alguns casos, para gerar o máximo de topologias possíveis. O critério para salvar as topologias geradas é sempre que houver redução na SCE. As topologias geradas incluem a topologia original de rede, bem como as otimizadas em relação a SCE. A tabela 2 mostra a rede, número de nós, número de enlaces, número de topologias encontradas e o número total de requisições para a rede. Mais detalhes sobre o total de requisições serão fornecidos no capítulo 2.4.

Tabela 2 – Parâmetros das redes utilizadas nas simulações

<b>Rede</b>	<b># Nós</b>	<b># Enlaces</b>	<b># Topologias</b>	<b># Total de requisições</b>
Arnes	17	20	4	680
Arpanet	20	32	16	1.280
Austria	15	22	84	660
Canarie	19	26	54	988
CesNet	12	19	3	456
CoxUsa	24	40	36	1.920
Eon	19	37	1	1.406
Geant2	32	52	249	3.328
Germany	17	26	1	884
Internet2Usa	56	61	1	6.832
Italy	14	29	5	812
LambdaRailUsa	19	23	3	874
MemorexEurope	19	24	1	912
MetronaUK	33	41	2	2.706
Mzima	15	19	1	570
NewNet	26	31	1	1.612
NsfNet	14	21	28	588

*Continua na próxima página*

Tabela 2 – Parâmetros de simulação das redes

Rede	# Nós	# Enlaces	# Topologias	# Total de requisições
OmnicomEurope	38	54	7	4.104
Pioner	21	25	1	1.050
Portugal	26	36	76	1.872
Renater	27	35	1	1.890
RNPBrazil	10	12	30	240
Sanet	25	28	1	1.400
Spain	17	28	20	952
UsaGde	100	171	54	34.200
VBNS	12	17	4	408
VDCN	9	12	1	216

## 2.2 ENTRADA

As entradas para a ferramenta são dois arquivos que possuem informações da rede, essas informações serão modeladas para um grafo no programa. O primeiro arquivo possui o conjunto de dados de latitude e longitude. Estes valores são as posições geográficas de cada nó da rede. Com este arquivo é possível definir o tamanho da matriz (linhas e colunas) que irá representar o grafo no programa. O segundo arquivo possui o conjunto de pares de nós representando as ligações entre estes pares de nós, os enlaces. Também é possível fornecer o formato da topologia da rede, informando a topologia original, bem como a topologia otimizada como foi apresentado por Nérís (13).

O comprimento dos enlaces é calculado através da fórmula de Haversine (8):

$$2R_e \arcsin \left( \sqrt{\sin^2\left(\frac{\phi_1 - \phi_2}{2}\right) + \cos(\phi_2) \sin^2\left(\frac{\lambda_1 - \lambda_2}{2}\right)} \right) \quad (2.1)$$

onde  $R_e$  representa o raio da Terra, nesse trabalho  $R_e$  corresponde a 6.373 km, o mesmo valor utilizado por Nérís (13), o termo  $\phi$  representa a latitude dos nós do enlace e o termo  $\lambda$  representa a longitude dos nós do enlace.

Com estas informações, nós e enlaces, é representado na matriz  $M$ , o grafo da rede. Com a matriz  $M$  criada, é construído uma outra matriz  $E$ , onde as linhas da matriz representam os enlaces do grafo e as colunas da matriz representam os slots descritos no capítulo 1.1.

Para fins didáticos vou assumir os pares  $\langle \text{parametro}, \text{valor} \rangle$  da tabela 3, onde são apresentados os parâmetros e seus respectivos valores, que utilizarei de exemplo ao decorrer da explicação do trabalho.

Tabela 3 – Parâmetros do exemplo da metodologia

Parâmetro	Valor
# total requisições	500
# iterações	15

Faço uma ressalva que a iteração é a unidade de tempo (UT) da simulação, onde uma iteração equivale a uma unidade de tempo.

### 2.2.1 Requisições

As requisições que irão trafegar na rede possuem tamanhos de 40 Gb, 100 Gb, 400 Gb e 1.000 Gb. As requisições são indicadas com tamanho, nó de origem, nó destino e o tempo de permanência na rede. Os nós de origem e destino são sorteados aleatoriamente. Todas as requisições são criadas antes de iniciar a simulação.

Para uma escolha uniforme dos tamanhos das requisições, foi utilizado a distribuição de Poisson, que é dada seguinte forma:

$$f(k; \lambda) = \frac{e^{-\lambda} \lambda^k}{k!}, k > 0, \lambda > 0 \quad (2.2)$$

onde  $k$  é o número da ocorrência e  $\lambda$  é o número esperado de ocorrências que ocorrem num dado intervalo de tempo. Utilizando  $\lambda = 1$ , para o tamanho de 40 Gb, o valor de  $k$  é igual a 1, assumindo assim a proporção de 58,2 % correspondente a iteração um, do somatório da distribuição, para o tamanho de 100 Gb, o valor de  $k$  é igual a 2, assumindo a proporção de 29,1 %, para o tamanho de 400 Gb, o valor de  $k$  é igual a 3, assumindo a proporção de 9,7 % e para o tamanho de 1.000 Gb é assumido o restante do percentual, 3 %, totalizando os 100 % da distribuição de Poisson. As requisições com tamanhos menores possuem a maior parte do total das requisições.

O tempo de permanência de uma requisição na rede é dada pela distribuição de Erlang:

$$f(t) = \frac{(\alpha/h)^\alpha}{(\alpha - 1)!} t^{\alpha-1} e^{-\alpha t/h}, h > 0, \alpha > 0 \quad (2.3)$$

onde  $t$  representa a iteração, o  $h$  representa o tempo médio do uso de um recurso e o  $\alpha$  representa uma randomização na distribuição, quando  $\alpha = 1$  a distribuição é equivalente a distribuição exponencial negativa. Para exemplificar o uso da distribuição de Erlang para escolher o tempo de permanência da requisição na rede, utilizaremos o número total de requisições e o número de iterações conforme a tabela 3, assumimos também os valores  $h = 7,5$  e  $\alpha = 1$ . Com isso, ao aplicar estes valores na distribuição de Erlang, temos o gráfico da figura 5.

Para cada iteração é feito, o cálculo da distribuição de Erlang naquela iteração e verificado o seu percentual em relação ao somatório de todas as iterações. Esse percentual é multiplicado

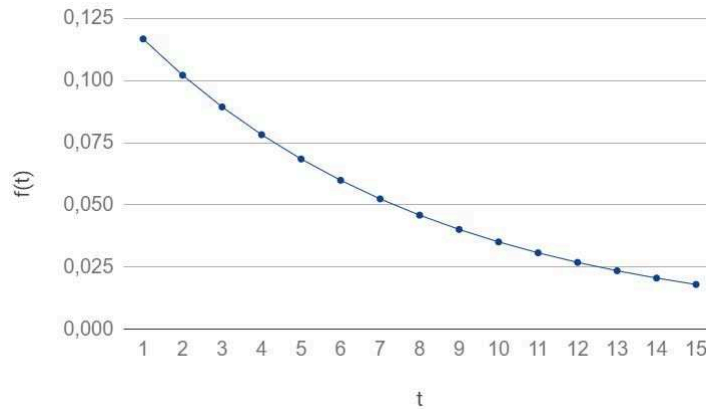


Figura 5 – Distribuição de Erlang com  $\alpha = 1$  e  $h = 7,5$ .

pelo número total de requisições e o resultado indica quantas requisições irão possuir o tempo de permanência com o valor da iteração. Ex.: A iteração 1, representa 14,4 % em relação ao somatório do total das 15 iterações. Das 500 requisições que serão criadas, 14,4 % terão 1 UT, ou seja, 72 requisições. Para a iteração 2 que possui 12,6 % do somatório das 15 iterações, 63 requisições terão 2 UT. Assim, sucessivamente até atingir a 15ª iteração, que possui 2,2 % do somatório do total das 15 iterações, resultando num total de 12 requisições com 15 UT. A tabela 4 mostra como ficaria o número de requisições, o resultado da distribuição de Erlang em cada iteração, o percentual do resultado da iteração em relação ao somatório dos resultados e suas respectivas UT. As requisições podem ser de tamanhos diferentes, a distribuição de Erlang garante a UT para todas as requisições.

Tabela 4 – Resultados por iteração da distribuição de Erlang para  $\alpha = 1$  e  $h = 7,5$ .

Iteração (UT)	Resultado	%	# Requisições
1	0,116690	14,4	72
2	0,102124	12,6	63
3	0,089376	11,1	55
4	0,078219	9,7	48
5	0,068456	8,5	42
6	0,059911	7,4	37
7	0,052432	6,5	32
8	0,045887	5,7	28
9	0,040159	5,0	25
10	0,035146	4,3	22
11	0,030759	3,8	19
12	0,026920	3,3	17
13	0,023559	2,9	15
14	0,020618	2,6	13
15	0,018045	2,2	12
<b>Total</b>	<b>0,808301</b>	<b>100,0</b>	<b>500</b>

## 2.3 SIMULADOR

Com os dados da entrada prontos (as requisições e as matrizes), é dado o início da simulação. Definimos que um slot possui a granularidade de 12.5 GHz. A simulação irá percorrer o número de iterações parametrizadas e então para. As demandas de requisições da simulação é dada pela distribuição de Poisson 2.2. O processo da demanda de requisições para entrarem na rede é feita com base na iteração da simulação, o gráfico da figura 6 ilustra o comportamento da demanda na rede.

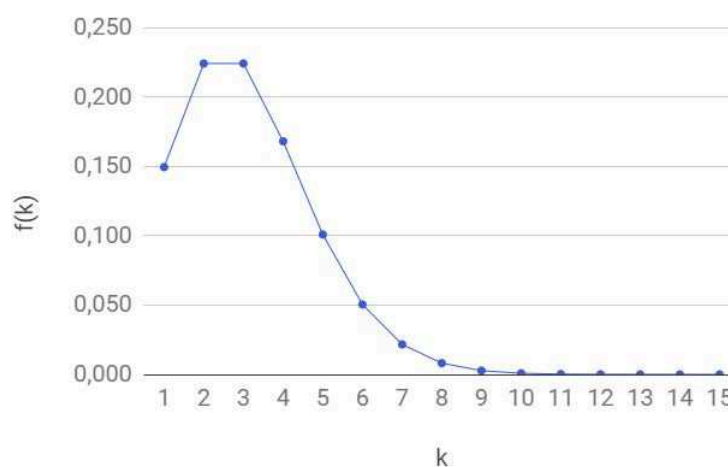


Figura 6 – Distribuição de Poisson com  $\lambda = 3$ .

Para cada iteração da simulação é aplicado o cálculo da distribuição de Poisson, utilizando a iteração como parâmetro  $k$  da distribuição e o resultado é o percentual daquela iteração em relação ao total das iterações. Esse percentual é multiplicado pelo número total de requisições e o resultado indica quantas requisições irão tentar ser alocadas na rede, naquela iteração. Ex.: Assumindo  $k = \text{iteracao}$  e  $\lambda = 3$ , a iteração 1 equivale a 15,7 % em relação ao somatório da distribuição de Poisson do total de iterações, resultando em 79 requisições que entraram na primeira iteração, para a iteração 2 que possui 23,6 % do somatório, resulta em 118 requisições que entram na segunda iteração e assim sucessivamente até atingir o total de iterações. A tabela 5 mostra a iteração, o resultado do valor da distribuição de Poisson assumindo  $k = \text{iteracao}$ , o percentual do resultado da iteração em relação ao somatório dos resultados e o número de requisições que serão feita as tentativas de alocação de espectro na rede naquela iteração.

Ao selecionar as requisições para entrarem na rede, elas são removidas do montante de requisições, para que não haja repetição de requisições, desta maneira assume-se que todas as requisições são únicas. A seleção das requisições para entrarem na rede é de forma aleatória, podendo haver requisições com diferentes tamanhos, tempo de vivência, nós de origem e destino, mas garantindo que toda a requisição criada é feita a tentativa de alocação na rede.

Tabela 5 – Resultado por iteração da distribuição de Poisson com  $\lambda = 3$ .

<b>Iteração</b>	<b>Resultado</b>	<b>%</b>	<b># Requisições</b>
1	0,1493612	15,7	79
2	0,2240418	23,6	118
3	0,2240418	23,6	118
4	0,1680314	17,7	88
5	0,1008188	10,6	53
6	0,0504094	5,3	27
7	0,0216040	2,3	11
8	0,0081015	0,9	4
9	0,0027005	0,2	1
10	0,0008102	0,1	1
11	0,0002210	0,0	0
12	0,0000552	0,0	0
13	0,0000127	0,0	0
14	0,0000027	0,0	0
15	0,0000005	0,0	0
<b>Total</b>	<b>0,9502127</b>	<b>100,0</b>	<b>500</b>

### 2.3.1 Atualização de informações da simulação

Conforme explicado no capítulo 2.2, cada iteração equivale a uma unidade de tempo (UT). Durante a simulação, a cada iteração é atualizada a matriz  $E$  que contém as informações dos enlaces e seus slots. Essa atualização, passa de enlace por enlace e para cada requisição que está na rede é decrementado em uma UT o tempo de permanência da requisição. Quando o tempo de permanência da requisição chegar a zero, ela é removida da rede, liberando os slots para o uso de outra requisição.

### 2.3.2 Alocação de requisição

Conforme descrito no capítulo 2.3 cada iteração terá uma carga de requisições de acordo com a distribuição de Poisson parametrizada para a simulação. Seguindo o exemplo do capítulo 2.3, na primeira iteração entrará 79 requisições, porém, só serão alocadas as requisições que respeitarem as regras de continuidade e contiguidade apresentados no capítulo 1.1 e por se tratarem de redes de telecomunicações, é necessário que a requisição seja alocada em dois caminhos disjuntos, só após respeitar essas restrições a requisição é considerada alocada na rede, atualizando os enlaces e slots da matriz  $E$  com a informação da requisição alocada.

Para retornar o caminho do nó origem para o nó destino da requisição, a busca do caminho utiliza a matriz  $M$  que contém as informações da topologia da rede, em um grafo. O algoritmo de Suurballe (15) retorna dois caminhos disjuntos de um nó origem para um nó destino. O caminho mais curto, em relação a soma do comprimento dos enlaces, vamos chamar de caminho principal, o segundo caminho retornado, geralmente é mais longo que o



caminho principal, vamos chamar de caminho secundário. Para cada caminho, é feito o cálculo da distância total que a requisição irá percorrer e então o programa aplica a modulação mais adequada para esta distância. Ao aplicar a modulação adequada sobre a requisição, há uma compressão dos dados da requisição no canal óptico conforme a tabela 1, minimizando o uso de espectro nos enlaces do caminho conforme exemplificado no capítulo 1.1.1. Somente após alocar a requisição nos dois caminhos (principal e secundário), será feita a busca da próxima requisição para entrar na rede.

Na escolha da modulação adequada para a requisição, assume-se que o nível de modulação mais baixo, o BPSK, é atingível a qualquer distância no grafo, podendo passar os 4.000 km descritos na tabela 1.

Caso a requisição seja alocada no caminho principal e não seja possível alocar a requisição no caminho secundário, a requisição é considerada bloqueada. Quando a requisição é bloqueada, ela é descartada, não havendo a possibilidade da requisição tentar entrar na rede novamente.

Caso não houver mais requisições, é feito o passo para a próxima iteração e o processo se repete, verificando as requisições que vão entrar na próxima iteração, atualizando as informações da simulação e fazendo a tentativa de alocar das requisições da próxima iteração até que seja atingindo o número de iterações parametrizadas na simulação. O fluxograma do processo pode ser observado na figura 7.

No momento em que a simulação parar, é realizado os cálculos da taxa de bloqueio e fragmentação. O cálculo da fragmentação pode ser expressa por (7):

$$Fragmentacao = 1 - \frac{MaiorBlocoLivre}{TotalDeBlocosLivres} \quad (2.4)$$

onde a eficiência espectral será medida pelo grau de fragmentação da rede, que após a inclusão e remoção de um conjunto de requisições na rede é verificada a incapacidade de uso de espectro livre, devido a pequenos blocos descontínuos, que não possuem a capacidade suficiente de espectro para atender a futuras requisições (13).

O cálculo da taxa de bloqueio pode ser expressa por (12):

$$TaxaDeBloqueio = \frac{NumeroDeRequisicoesBloqueadas}{NumeroTotalDeRequisicoes} \quad (2.5)$$

onde a taxa de bloqueio será calculada através da divisão do número de requisições bloqueadas pelo número total de requisições (13).

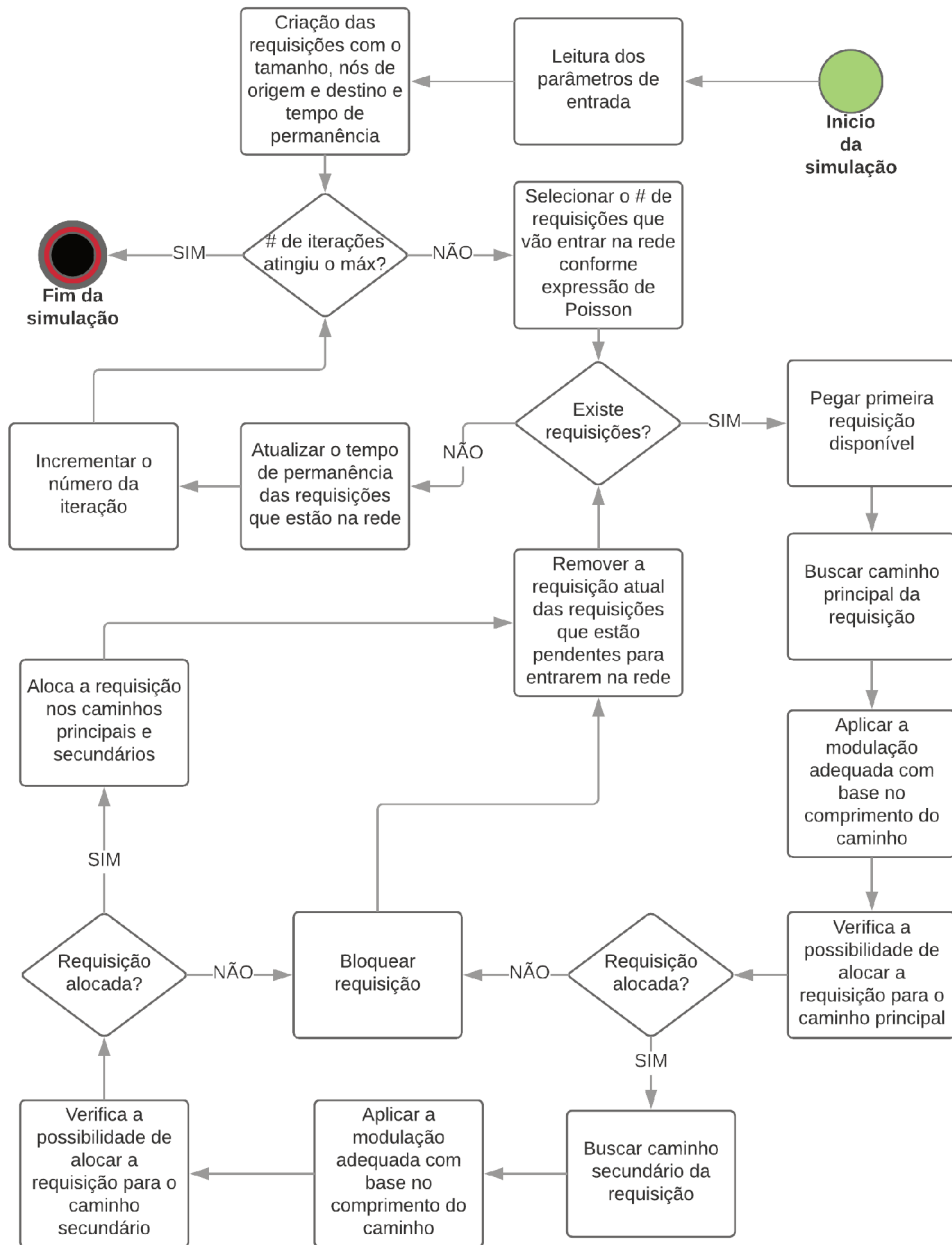


Figura 7 – Fluxograma do programa desenvolvido para a simulação das redes.

## 2.4 PARÂMETROS DA SIMULAÇÃO

Das simulações realizadas, para cada rede foram parametrizadas diferentes número de requisições, assumindo assim um equilíbrio para o tamanho da rede em relação ao número de requisições, seguindo a expressão:

$$\text{NumeroTotalDeRequisicoes} = 2 * \text{NumeroDeNos} * \text{NumeroDeVerties} \quad (2.6)$$

É possível verificar o número total de requisições para cada rede, pela tabela 2, onde na última coluna é mostrado o resultado da expressão 2.6.

Para cada topologia encontrada com o trabalho de Nérís (13), foram feitas cinco rodadas de simulação, com sementes de randomização diferentes para cada rodada. Mesmo com topologias diferentes, o conjunto de requisições são iguais, garantindo que a primeira rodada para uma topologia seja igual a primeira rodada da segunda topologia. Ao final das cinco rodadas para cada topologia, foi feito a média aritmética da taxa de bloqueio e a fragmentação, assumindo esses valores como o valor final da taxa de bloqueio e fragmentação para a topologia.



### 3 RESULTADOS E DISCUSSÃO

Mesmo com ferramentas de simulação diferentes, deste trabalho e o trabalho de Né-riz (13), ambos chegamos aos mesmos resultados, onde ao utilizar uma modulação fixa e não adequada para as topologias (originais e as otimizadas pelo QAP), não houve a redução na taxa de bloqueio e/ou fragmentação.

As simulações realizadas foram rodadas em todas as topologias de todas as redes, utilizando a modulação fixa, assume-se aqui que o termo modulação fixa, corresponde ao nível mais baixo de modulação, o BPSK, e a múltipla modulação, onde houve a escolha da modulação adequada em relação a soma do comprimento dos enlaces por onde a requisição passará.

Os parâmetros da simulação são iguais para todos as redes executadas no programa, alterando para utilizar a modulação fixa e múltipla modulação. A tabela 6 mostra todos os parâmetros utilizados na ferramenta.

Tabela 6 – Parâmetros utilizados na ferramenta de simulação.

<b>Parâmetro</b>	<b>Valor</b>
Iterações	15
# de requisições	Calculado automaticamente
Algoritmo de Busca do Caminho	Suurballe
# de slots	320
Política de Alocação de Espectro	Pseudo-Partition
Tamanho Bloco Grande - PP	5
$\lambda$ demanda de requisição	3
$\lambda$ formato de requisição	1
Função do Tempo de Permanência na Rede	Erlang
Parâmetros da Função do Tempo de Permanência na Rede	$h = 5, \alpha = 1$

#### 3.1 NORMALIZAÇÃO DOS RESULTADOS

Com o fim da simulação, foi possível quantificar os dados utilizando o custo em distância (resultado do QAP, a soma do comprimento dos enlaces (SCE)), a taxa de bloqueio e a fragmentação. Foi atribuído o peso de 40 % para a SCE, 40 % para a taxa de bloqueio e 20 % para a fragmentação. Desta maneira, estes mesmos pesos foram aplicados para todas as simulações com modulação fixa e múltipla modulação. Todas as comparações partiram da topologia original da rede. Havendo casos onde se obteve ganho nos três itens, bem como casos onde não houve ganho em nada e até mesmo casos onde a topologia original ficou com resultados melhores que as topologias otimizadas. A expressão construída para normalizar os dados é dada por:

$$Resultado = \frac{V * 100}{C} * PesoEmPercentual \quad (3.1)$$

onde  $V$  é o valor a ser verificado o ganho, podendo ser referente ao custo em relação a SCE, taxa de bloqueio e fragmentação,  $C$  é o valor da topologia original referente à  $V$  e  $PesoEmPercentual$  é o valor do peso do parâmetro.

Tomamos como exemplo os resultados da rede *CesNet*, onde na tabela 7 mostra a topologia, a soma do comprimento dos enlaces (SCE) em km, a taxa de bloqueio (TB) e a fragmentação para a modulação fixa.

Tabela 7 – Resultados dos custos utilizando modulação fixa para a rede *CesNet*.

<b>Topologia</b>	<b>SCE (km)</b>	<b>TB</b>	<b>Fragmentação</b>
0,1,2,3,4,5,6,7,8,9,10,11	1.841,95	0,465351	0,768917
0,1,2,11,4,5,6,7,9,8,10,3	1.835,40	0,492544	0,775790
0,1,2,3,4,5,6,7,9,8,10,11	1.821,28	0,486404	0,771924

Aplicando a expressão 3.1, é construída a tabela 8 onde consta os ganhos conforme os pesos de cada coluna da tabela 7. Repare que a topologia original possui os melhores resultados.

Tabela 8 – Resultados dos pesos aplicados para a modulação fixa da rede *CesNet*.

<b>Topologia</b>	<b>SCE (%)</b>	<b>TB (%)</b>	<b>Fragmentação (%)</b>	<b>Total (%)</b>
0,1,2,3,4,5,6,7,8,9,10,11	40,00	40,00	20,00	100,00
0,1,2,11,4,5,6,7,9,8,10,3	39,86	42,34	20,18	102,37
0,1,2,3,4,5,6,7,9,8,10,11	39,55	41,81	20,08	101,44

Na tabela 9 é apresentado os resultados referentes a tabela 7, porém foi utilizado a múltipla modulação.

Tabela 9 – Resultados dos custos utilizando múltipla modulação para a rede *CesNet*.

<b>Topologia</b>	<b>SCE (km)</b>	<b>TB</b>	<b>Fragmentação</b>
0,1,2,3,4,5,6,7,8,9,10,11	1.841,95	0,065351	0,847045
0,1,2,11,4,5,6,7,9,8,10,3	1.835,40	0,069737	0,838667
0,1,2,3,4,5,6,7,9,8,10,11	1.821,28	0,066228	0,836572

Aplicando a expressão 3.1, é construída a tabela 10 onde consta os ganhos conforme os pesos de cada coluna da tabela 9. Repare que para a última topologia realmente obteve-se ganho.

Quero reforçar aqui, que os resultados da tabela 8 foram comparados com a topologia original que utilizou a modulação fixa. Os resultados da tabela 10 foram comparados com a topologia original que utilizou a múltipla modulação. A tabela 11 mostra a diferença entre a topologia original utilizando a modulação fixa e a topologia que mais obteve ganho de múltipla modulação.

Tabela 10 – Resultados dos pesos aplicados para a múltipla modulação da rede CesNet.

Topologia	SCE (%)	TB (%)	Fragmentação (%)	Total (%)
0,1,2,3,4,5,6,7,8,9,10,11	40,00	40,00	20,00	100,00
0,1,2,11,4,5,6,7,9,8,10,3	39,86	42,68	19,80	102,34
0,1,2,3,4,5,6,7,9,8,10,11	39,55	40,54	19,75	99,84

Tabela 11 – Comparação dos custos da topologia Original x Melhor Custo x Benefício da rede CesNet.

Tipo	Topologia	SCE (km)	TB	Fragmentação
Original	0,1,2,3,4,5,6,7,8,9,10,11	1.841,95	0,465351	0,768917
Melhor C.B.	0,1,2,3,4,5,6,7,9,8,10,11	1.821,28	0,066228	0,836572
	<b>Diferença</b>	20,68	0,399123	-0,067655

Ao aplicar a expressão 3.1 para as colunas de custo, taxa de bloqueio e fragmentação da tabela 11 é possível comparar o uso da múltipla modulação aplicado neste trabalho, com o uso da modulação fixa aplicado no trabalho de Nérís (13). Porém a comparação da topologia que obteve-se o melhor custo x benefício utilizando múltipla modulação, será em cima da topologia original que utilizou modulação fixa. A tabela 12 mostra os pesos aplicados em cada uma das colunas e também mostra a diferença de ganho em cada coluna, bem como o ganho total, em relação ao utilizar a topologia original sem otimização nenhuma e a topologia otimizada com o melhor custo benefício, segundo a expressão 3.1.

Tabela 12 – Comparação entre a topologia Original e o Melhor Custo x Benefício aplicando os pesos para a rede CesNet.

Tipo	Topologia	SCE (%)	TB (%)	Fragmentação (%)	Total (%)
Original	0,1,2,3,4,5,6,7,8,9,10,11	40,00	40,00	20,00	100,00
Melhor C.B.	0,1,2,3,4,5,6,7,9,8,10,11	39,55	5,69	21,76	67,00
	<b>Diferença</b>	0,45	34,31	-1,76	33,00

Observe que a topologia com o melhor custo x benefício, utilizando múltipla modulação, mesmo com a fragmentação pouco superior a topologia original, a redução em custo e a redução significativa na taxa de bloqueio, onde os pesos dos campos juntos equivalem a 80 % da equação, fez com que se obteve um ganho de 33 %.

Estas comparações foram feitas para todas as redes e topologias da tabela 2, mantendo os mesmos pesos, para o custo, taxa de bloqueio e fragmentação, citados no início do capítulo 3.1. A rede *Austria* foi onde se obteve o maior ganho, atingindo 39,27 % de ganho utilizando múltipla modulação em relação a topologia original com modulação fixa. A rede *Canarie* apresentou apenas ganho na redução na soma do comprimento dos enlaces, a taxa de bloqueio e fragmentação se mantiveram as mesmas para a modulação fixa e a múltipla modulação. Para a rede *Geant2* obteve-se 248 topologias com a otimização na soma do comprimento dos enlaces e após aplicar a expressão 3.1 foi obtido o ganho de 7,42 %. Para a rede *UsaGde*, é a maior rede utilizada na simulação, obteve-se um ganho de apenas 1,95 %. A rede *Internet2Usa* que mesmo

ao utilizar a múltipla modulação, diminuiu pouco a taxa de bloqueio, porém teve um aumento significativo na fragmentação, resultando uma perda de 1,61 %.

Na figura 8 podemos ver o resultado da comparação da topologia original com modulação fixa e a topologia com o melhor custo x benefício utilizando a múltipla modulação de todas as redes simuladas, ordenadas pelo número de nós e depois pelo número de enlaces. Das 27 redes testadas, 24 obteve-se ganho ao utilizar a topologia com o melhor custo x benefício da múltipla modulação. Para as redes que não houve ganho, é possível verificar que o aumento da fragmentação teve impacto nos resultados.

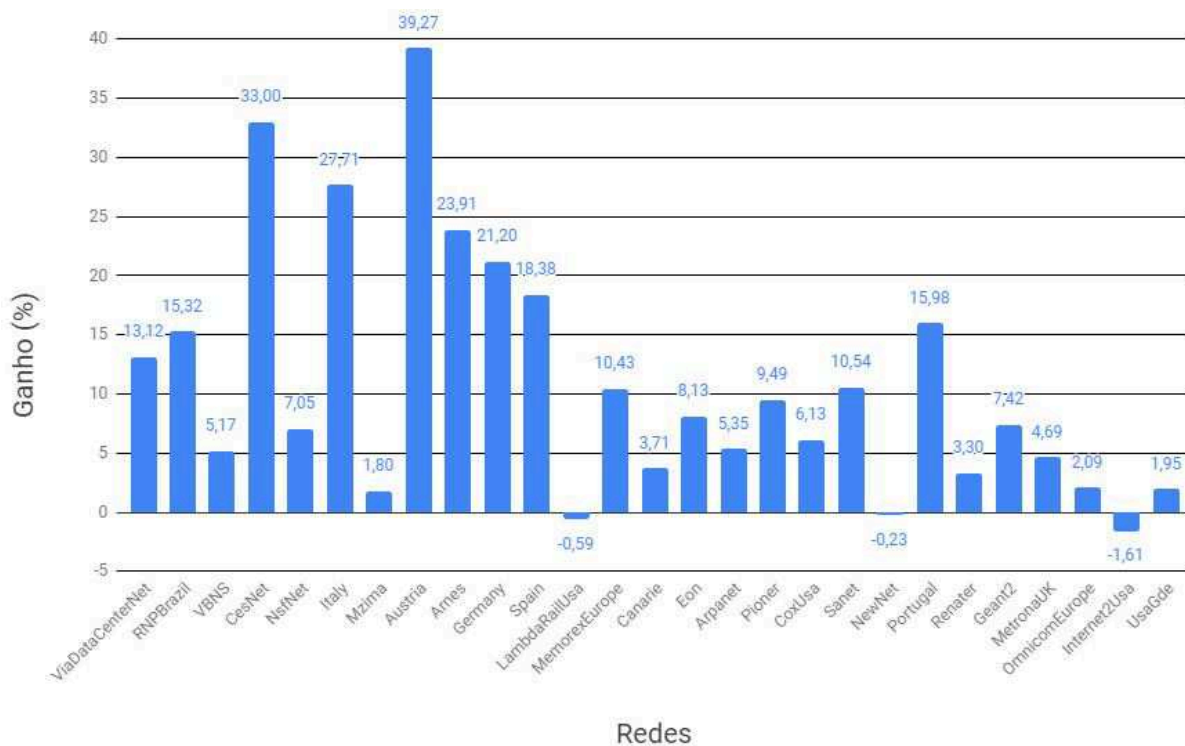


Figura 8 – Redes x Ganho (%).



#### 4 CONSIDERAÇÕES FINAIS

Ao final do trabalho foi possível verificar que o uso de uma modulação adequada para cada requisição permite utilizar o espectro de forma mais eficiente, quando consideradas a taxa de bloqueio e a fragmentação. Também é possível afirmar que reduzindo a soma do comprimento dos enlaces, como proposto por Nérís (13), e com o uso da múltipla modulação é possível economizar recursos, como a instalação de cabos de fibra óptica, devido a redução na soma do comprimento dos enlaces, e melhor manutenção da rede, devido ao uso da múltipla modulação, reduzindo a taxa de bloqueio das requisições que trafegam pela rede. Também foi possível mensurar o custo de implantação e manutenção da rede, considerando o peso de cada variável estudada (soma do comprimento dos enlaces, taxa de bloqueio e fragmentação), entregando uma topologia válida para uma carga de tráfego distribuída uniformemente para toda a rede.

Para as três redes onde não se obteve ganho, mesmo utilizando múltipla modulação, acredito que pela forma de realizar a simulação, atingindo todas as iterações, fez com que mais requisições saíssem da rede, aumentando a fragmentação da rede. Na expressão proposta neste trabalho, a fragmentação possuía o peso de 20 % e isso impactou nos resultados. Os pesos utilizados na expressão proposta para validar a rede, com o custo em km, taxa de bloqueio e fragmentação, foram decididas com o conhecimento empírico, onde não foi o foco do trabalho.

Para trabalhos futuros, proponho novas simulações com valores de parâmetros diferentes, por exemplo, ao terminar as requisições, parar a simulação, utilizar diferentes  $\lambda$  de demanda de requisições e verificar se o comportamento da simulação apresenta os mesmos resultados. Novas implementações para a alocação de espectro, tanto para evitar o bloqueio das requisições, bem como para diminuir a fragmentação do espectro. Acredito que um estudo sobre os custos de implantação de uma rede seja de relevância, mensurando os valores de instalação da fibra óptica (variável de custo da soma do comprimento dos enlaces), custo em equipamento para atender todas as possíveis modulações (variáveis de taxa de bloqueio e fragmentação), aproximando assim os custos reais de implantação de uma rede. Acho válido também um estudo de simulação com modulações fixas, no sentido de utilizar, por exemplo, apenas as modulações BPSK, 8 - QAM e 32 - QAM, verificando o impacto na rede por possuir esta limitação, seja por tecnologia do equipamento para a transmissão dos dados ou pelo custo de um equipamento que possa transmitir apenas nestas modulações.



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## A APÊNDICE

Lista das redes testadas com a topologia, soma do comprimento dos enlaces (SCE), taxa de bloqueio (TB), fragmentação, Total(%), SCE(%), TB(%) e Fragmentação(%). As tabelas estão na ordem de primeiro os resultados com modulação fixa de mais baixo nível, em segundo os resultados com múltipla modulação e em terceiro a comparação da topologia original de modulação fixa e a topologia de melhor custo x benefício utilizando a múltipla modulação. Também está disponível no link <https://doi.org/10.5281/zenodo.1937261>.

Tabela 13 – Resultados do RSA para a rede Arnes

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	730,11	0,725588	0,767476	100,00	40,00	40,00	20,00
	0, 3, 2, 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	702,38	0,724412	0,761612	98,26	38,48	39,94	19,85
	0, 4, 6, 5, 3, 1, 2, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	702,38	0,724118	0,749264	97,92	38,48	39,92	19,53
	0, 3, 2, 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 13, 15, 16	718,90	0,727353	0,758590	99,25	39,39	40,10	19,77
Melhor custo x benefício	0, 4, 6, 5, 3, 1, 2, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	702,38	0,724118	0,749264	97,92			

Tabela 14 – Resultados do RMLSA para a rede Arnes

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	730,11	0,240882	0,935277	100,00	40,00	40,00	20,00
	0, 3, 2, 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	702,38	0,240882	0,933453	98,44	38,48	40,00	19,96

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Tabela 14 – Resultados do RMLSA para a rede Arnes

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 4, 6, 5, 3, 1, 2, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	702,38	0,241765	0,937068	98,67	38,48	40,15	20,04
	0, 3, 2, 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 13, 15, 16	718,90	0,242353	0,935682	99,64	39,39	40,24	20,01
Melhor custo x benefício	0, 3, 2, 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	702,38	0,240882	0,933453	98,44			

Tabela 15 – Comparação da topologia original e a melhor C.B. para a rede Arnes

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	730,11	0,725588	0,767476	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	0, 3, 2, 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	702,38	0,240882	0,933453	76,09	38,48	13,28	24,33
	Diferença	27,73	0,484706	-0,165977	23,91	1,52	26,72	-4,33





Tabela 16 – Resultados do RSA para a rede Arpanet

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	26.626,88	0,657969	0,797333	100,00	40,00	40,00	20,00
	0, 5, 4, 3, 2, 1, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	26.226,36	0,662969	0,791135	99,55	39,40	40,30	19,84
	0, 2, 3, 4, 5, 7, 6, 1, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	26.153,61	0,660313	0,751336	98,28	39,29	40,14	18,85
	0, 2, 3, 4, 5, 7, 6, 1, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 17	26.110,26	0,651875	0,761395	97,95	39,22	39,63	19,10
	0, 2, 3, 4, 5, 7, 6, 1, 8, 9, 14, 11, 12, 13, 10, 15, 16, 18, 19, 17	25.840,95	0,658281	0,757395	97,84	38,82	40,02	19,00
	0, 5, 4, 3, 2, 1, 7, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	26.481,17	0,663906	0,803002	100,28	39,78	40,36	20,14
	0, 2, 3, 4, 5, 7, 6, 1, 8, 9, 14, 11, 12, 13, 10, 15, 16, 17, 19, 18	26.090,07	0,661875	0,818968	99,97	39,19	40,24	20,54
	0, 2, 3, 4, 5, 7, 6, 1, 8, 9, 14, 11, 12, 13, 10, 15, 16, 17, 18, 19	26.013,67	0,660781	0,804273	99,42	39,08	40,17	20,17

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Tabela 16 – Resultados do RSA para a rede Arpanet

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 5, 4, 3, 2, 1, 6, 7, 8, 9, 14, 11, 12, 13, 10, 15, 16, 18, 19, 17	26.088,44	0,659531	0,810361	99,61	39,19	40,09	20,33
	0, 5, 4, 3, 2, 1, 6, 7, 8, 19, 17, 11, 12, 13, 14, 15, 16, 10, 18, 9	26.498,70	0,666875	0,775547	99,80	39,81	40,54	19,45
	0, 5, 4, 3, 2, 1, 6, 7, 8, 9, 14, 11, 12, 13, 10, 15, 16, 17, 18, 19	26.261,15	0,661875	0,792677	99,57	39,45	40,24	19,88
	0, 5, 4, 3, 2, 1, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 17	26.183,02	0,656719	0,785547	98,96	39,33	39,92	19,70
	0, 2, 3, 4, 5, 7, 6, 1, 8, 9, 14, 11, 12, 13, 10, 15, 16, 18, 17, 19	26.082,35	0,657656	0,804353	99,34	39,18	39,98	20,18
	0, 2, 3, 4, 5, 7, 6, 1, 8, 9, 14, 10, 12, 13, 11, 15, 16, 18, 19, 17	26.014,43	0,658750	0,763459	98,28	39,08	40,05	19,15
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 14, 11, 12, 13, 10, 15, 16, 18, 19, 17	26.488,96	0,656719	0,774766	99,15	39,79	39,92	19,43
	0, 2, 3, 4, 5, 7, 6, 1, 8, 9, 14, 11, 12, 13, 10, 16, 15, 18, 19, 17	25.987,09	0,656875	0,798642	99,01	39,04	39,93	20,03

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Tabela 16 – Resultados do RSA para a rede Arpanet

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Melhor custo x benefício	0, 2, 3, 4, 5, 7, 6, 1, 8, 9, 14, 11, 12, 13, 10, 15, 16, 18, 19, 17	25.840,95	0,658281	0,757395	97,84			

Tabela 17 – Resultados do RMLSA para a rede Arpanet

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	26.626,88	0,608281	0,816278	100,00	40,00	40,00	20,00
	0, 5, 4, 3, 2, 1, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	26.226,36	0,611563	0,812351	99,52	39,40	40,22	19,90
	0, 2, 3, 4, 5, 7, 6, 1, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	26.153,61	0,610938	0,801115	99,09	39,29	40,17	19,63
	0, 2, 3, 4, 5, 7, 6, 1, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 17	26.110,26	0,600625	0,791032	98,10	39,22	39,50	19,38

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Tabela 17 – Resultados do RMLSA para a rede Arpanet

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 2, 3, 4, 5, 7, 6, 1, 8, 9, 14, 11, 12, 13, 10, 15, 16, 18, 19, 17	25.840,95	0,601563	0,822078	98,52	38,82	39,56	20,14
	0, 5, 4, 3, 2, 1, 7, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	26.481,17	0,607344	0,802192	99,37	39,78	39,94	19,65
	0, 2, 3, 4, 5, 7, 6, 1, 8, 9, 14, 11, 12, 13, 10, 15, 16, 17, 19, 18	26.090,07	0,603438	0,820638	98,98	39,19	39,68	20,11
	0, 2, 3, 4, 5, 7, 6, 1, 8, 9, 14, 11, 12, 13, 10, 15, 16, 17, 18, 19	26.013,67	0,601250	0,761357	97,27	39,08	39,54	18,65
	0, 5, 4, 3, 2, 1, 6, 7, 8, 9, 14, 11, 12, 13, 10, 15, 16, 18, 19, 17	26.088,44	0,605313	0,831154	99,36	39,19	39,80	20,36
	0, 5, 4, 3, 2, 1, 6, 7, 8, 19, 17, 11, 12, 13, 14, 15, 16, 10, 18, 9	26.498,70	0,620156	0,780286	99,71	39,81	40,78	19,12
	0, 5, 4, 3, 2, 1, 6, 7, 8, 9, 14, 11, 12, 13, 10, 15, 16, 17, 18, 19	26.261,15	0,606250	0,731246	97,23	39,45	39,87	17,92
	0, 5, 4, 3, 2, 1, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 17	26.183,02	0,603906	0,801294	98,68	39,33	39,71	19,63

*Continua na próxima página*

Tabela 17 – Resultados do RMLSA para a rede Arpanet

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 2, 3, 4, 5, 7, 6, 1, 8, 9, 14, 11, 12, 13, 10, 15, 16, 18, 17, 19	26.082,35	0,608125	0,767198	97,97	39,18	39,99	18,80
	0, 2, 3, 4, 5, 7, 6, 1, 8, 9, 14, 10, 12, 13, 11, 15, 16, 18, 19, 17	26.014,43	0,601719	0,788891	97,98	39,08	39,57	19,33
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 14, 11, 12, 13, 10, 15, 16, 18, 19, 17	26.488,96	0,601406	0,771147	98,23	39,79	39,55	18,89
	0, 2, 3, 4, 5, 7, 6, 1, 8, 9, 14, 11, 12, 13, 10, 16, 15, 18, 19, 17	25.987,09	0,599219	0,800533	98,06	39,04	39,40	19,61
Melhor custo x benefício	0, 5, 4, 3, 2, 1, 6, 7, 8, 9, 14, 11, 12, 13, 10, 15, 16, 17, 18, 19	26.261,15	0,606250	0,731246	97,23			

Tabela 18 – Comparação da topologia original e a melhor C.B. para a rede Arpanet

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	26.626,88	0,657969	0,797333	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	0, 5, 4, 3, 2, 1, 6, 7, 8, 9, 14, 11, 12, 13, 10, 15, 16, 17, 18, 19	26.261,15	0,606250	0,731246	94,65	39,45	36,86	18,34
	Diferença	365,72	0,051719	0,066087	5,35	0,55	3,14	1,66

Tabela 19 – Resultados do RSA para a rede Austria

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.669,81	0,476364	0,747127	100,00	40,00	40,00	20,00
	4, 0, 2, 1, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.582,48	0,483333	0,763221	99,71	38,69	40,59	20,43
	4, 0, 2, 1, 3, 5, 6, 7, 11, 10, 9, 8, 12, 13, 14	2.559,71	0,483333	0,763221	99,37	38,35	40,59	20,43
	4, 5, 3, 1, 2, 0, 7, 6, 8, 9, 10, 11, 12, 13, 14	2.349,94	0,486970	0,741439	95,95	35,21	40,89	19,85
	4, 5, 3, 1, 2, 0, 7, 6, 11, 10, 9, 8, 12, 13, 14	2.339,88	0,488485	0,734334	95,73	35,06	41,02	19,66
	4, 5, 3, 1, 0, 2, 7, 6, 8, 9, 10, 11, 12, 13, 14	2.259,05	0,475152	0,787189	94,82	33,85	39,90	21,07
	5, 4, 3, 0, 1, 2, 7, 6, 8, 9, 10, 11, 12, 13, 14	2.258,50	0,468788	0,795509	94,50	33,84	39,36	21,30
	5, 4, 3, 6, 7, 0, 2, 1, 11, 10, 9, 8, 12, 13, 14	2.220,35	0,470303	0,773810	93,47	33,27	39,49	20,71
	5, 4, 3, 6, 7, 2, 0, 1, 8, 9, 10, 11, 12, 13, 14	2.201,88	0,468182	0,761299	92,68	32,99	39,31	20,38
	5, 4, 3, 6, 7, 0, 1, 2, 11, 10, 9, 8, 12, 13, 14	2.191,49	0,479394	0,809309	94,75	32,83	40,25	21,66
	4, 5, 3, 6, 7, 0, 2, 1, 11, 10, 9, 8, 12, 13, 14	2.171,92	0,481818	0,747339	93,00	32,54	40,46	20,01
	5, 4, 3, 6, 7, 0, 1, 2, 10, 11, 9, 8, 12, 13, 14	2.170,27	0,482727	0,758662	93,36	32,52	40,53	20,31
	5, 4, 3, 10, 11, 0, 1, 2, 7, 6, 9, 8, 12, 13, 14	2.168,64	0,482424	0,738443	92,77	32,49	40,51	19,77

*Continua na próxima página*

Tabela 19 – Resultados do RSA para a rede Austria

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	5, 4, 3, 6, 7, 0, 1, 2, 10, 11, 9, 8, 12, 14, 13	2.162,40	0,482727	0,758662	93,24	32,40	40,53	20,31
	5, 4, 3, 10, 11, 0, 1, 2, 7, 6, 9, 8, 12, 14, 13	2.160,76	0,482424	0,738443	92,65	32,37	40,51	19,77
	4, 5, 3, 6, 7, 0, 2, 1, 11, 10, 8, 9, 12, 13, 14	2.160,76	0,481818	0,747339	92,84	32,37	40,46	20,01
	3, 1, 2, 0, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.565,90	0,466364	0,813349	99,38	38,44	39,16	21,77
	0, 4, 3, 1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.447,86	0,479394	0,766186	97,44	36,67	40,25	20,51
	4, 3, 2, 1, 0, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.295,46	0,486364	0,778001	96,06	34,39	40,84	20,83
	4, 11, 10, 9, 8, 1, 2, 5, 0, 3, 6, 7, 12, 14, 13	2.294,86	0,480606	0,747958	94,76	34,38	40,36	20,02
	4, 3, 2, 1, 0, 5, 7, 6, 11, 10, 9, 8, 12, 13, 14	2.283,01	0,486364	0,778001	95,87	34,20	40,84	20,83
	4, 11, 10, 2, 1, 5, 6, 7, 3, 0, 8, 9, 12, 13, 14	2.217,96	0,479697	0,791587	94,70	33,23	40,28	21,19
	4, 11, 10, 8, 9, 7, 6, 5, 3, 0, 2, 1, 12, 13, 14	2.167,70	0,473636	0,789882	93,39	32,48	39,77	21,14
	4, 11, 10, 2, 1, 7, 6, 5, 0, 3, 8, 9, 12, 13, 14	2.157,30	0,474545	0,741601	92,02	32,32	39,85	19,85
	4, 11, 10, 1, 2, 7, 6, 5, 0, 3, 8, 9, 12, 13, 14	2.145,17	0,474545	0,741601	91,84	32,14	39,85	19,85
	4, 11, 10, 0, 3, 7, 6, 5, 1, 2, 8, 9, 12, 13, 14	2.145,17	0,474545	0,741601	91,84	32,14	39,85	19,85

*Continua na próxima página*



Tabela 19 – Resultados do RSA para a rede Austria

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	3, 6, 2, 5, 7, 8, 9, 4, 0, 1, 10, 11, 12, 13, 14	2.489,27	0,486364	0,778001	98,96	37,30	40,84	20,83
	5, 4, 3, 2, 1, 0, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.347,75	0,486667	0,785910	97,08	35,17	40,87	21,04
	6, 4, 7, 5, 3, 2, 1, 0, 8, 9, 10, 11, 12, 13, 14	2.328,60	0,475152	0,795023	96,07	34,89	39,90	21,28
	4, 5, 6, 3, 7, 2, 1, 0, 8, 9, 10, 11, 12, 13, 14	2.247,56	0,461818	0,746956	92,45	33,67	38,78	20,00
	4, 5, 3, 6, 7, 2, 1, 0, 8, 9, 10, 11, 12, 13, 14	2.202,44	0,472727	0,785038	93,71	33,00	39,69	21,01
	4, 5, 3, 6, 7, 2, 1, 0, 11, 10, 9, 8, 12, 13, 14	2.192,37	0,467879	0,796651	93,46	32,85	39,29	21,33
	4, 5, 3, 6, 7, 2, 1, 0, 11, 10, 8, 9, 12, 13, 14	2.181,22	0,467879	0,796651	93,29	32,68	39,29	21,33
	5, 4, 3, 7, 6, 0, 1, 2, 8, 9, 10, 11, 12, 13, 14	2.179,79	0,482727	0,758662	93,50	32,66	40,53	20,31
	5, 4, 3, 7, 6, 0, 1, 2, 8, 9, 10, 11, 12, 14, 13	2.171,92	0,482727	0,758662	93,38	32,54	40,53	20,31
	9, 1, 2, 3, 4, 5, 6, 7, 8, 0, 10, 11, 12, 13, 14	2.547,81	0,486364	0,778001	99,84	38,17	40,84	20,83
	1, 3, 4, 2, 0, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.480,08	0,479091	0,798086	98,75	37,16	40,23	21,36
	1, 3, 4, 2, 0, 7, 5, 6, 8, 9, 10, 11, 12, 13, 14	2.426,67	0,479091	0,798086	97,95	36,36	40,23	21,36
	3, 4, 1, 2, 0, 7, 5, 6, 8, 9, 10, 11, 12, 13, 14	2.262,84	0,479091	0,769437	94,73	33,90	40,23	20,60

*Continua na próxima página*

Tabela 19 – Resultados do RSA para a rede Austria

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	3, 4, 0, 1, 2, 7, 5, 6, 8, 9, 11, 10, 12, 13, 14	2.187,08	0,482727	0,787338	94,38	32,77	40,53	21,08
	4, 11, 10, 1, 2, 6, 5, 7, 8, 9, 0, 3, 12, 13, 14	2.170,20	0,476667	0,764208	93,00	32,51	40,03	20,46
	4, 11, 10, 0, 3, 7, 5, 6, 1, 2, 8, 9, 12, 13, 14	2.145,94	0,479697	0,791587	93,62	32,15	40,28	21,19
	7, 6, 5, 4, 3, 2, 1, 0, 8, 9, 10, 11, 12, 13, 14	2.531,73	0,463939	0,711746	95,94	37,93	38,96	19,05
	7, 6, 5, 4, 3, 0, 2, 1, 8, 9, 10, 11, 12, 13, 14	2.468,92	0,462727	0,720945	95,14	36,99	38,85	19,30
	5, 7, 6, 3, 4, 2, 1, 0, 8, 9, 10, 11, 12, 13, 14	2.431,96	0,462727	0,808363	96,93	36,44	38,85	21,64
	6, 5, 7, 4, 3, 0, 2, 1, 8, 9, 10, 11, 12, 13, 14	2.313,75	0,458788	0,817704	95,08	34,67	38,52	21,89
	5, 6, 7, 4, 3, 0, 2, 1, 8, 9, 10, 11, 12, 13, 14	2.297,14	0,463030	0,797810	94,65	34,42	38,88	21,36
	4, 6, 5, 3, 7, 0, 2, 1, 8, 9, 10, 11, 12, 13, 14	2.273,10	0,479697	0,789946	95,48	34,06	40,28	21,15
	4, 6, 5, 3, 7, 0, 2, 1, 8, 9, 11, 10, 12, 13, 14	2.245,51	0,480000	0,735811	93,65	33,64	40,31	19,70
	4, 5, 3, 6, 7, 0, 2, 1, 8, 9, 11, 10, 12, 13, 14	2.160,76	0,481818	0,747339	92,84	32,37	40,46	20,01
	0, 4, 2, 1, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.501,57	0,486364	0,778001	99,15	37,48	40,84	20,83
	11, 1, 4, 9, 8, 7, 6, 5, 3, 2, 10, 0, 12, 13, 14	2.422,35	0,478182	0,754365	96,64	36,29	40,15	20,19

*Continua na próxima página*

Tabela 19 – Resultados do RSA para a rede Austria

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	4, 9, 8, 1, 3, 7, 5, 6, 2, 0, 10, 11, 12, 13, 14	2.283,30	0,479697	0,775599	95,25	34,21	40,28	20,76
	4, 3, 1, 8, 9, 7, 5, 6, 2, 0, 10, 11, 12, 13, 14	2.245,66	0,481515	0,725717	93,50	33,65	40,43	19,43
	3, 4, 1, 8, 9, 7, 5, 6, 11, 10, 0, 2, 12, 13, 14	2.207,53	0,479091	0,772243	93,98	33,07	40,23	20,67
	3, 4, 0, 8, 9, 7, 5, 6, 11, 10, 1, 2, 12, 13, 14	2.187,08	0,479091	0,772243	93,67	32,77	40,23	20,67
	4, 11, 10, 9, 8, 7, 6, 5, 3, 0, 1, 2, 12, 13, 14	2.184,94	0,478788	0,801083	94,38	32,74	40,20	21,44
	4, 11, 10, 0, 3, 7, 5, 6, 8, 9, 1, 2, 12, 14, 13	2.157,43	0,476667	0,764208	92,81	32,32	40,03	20,46
	4, 11, 10, 0, 3, 7, 5, 6, 8, 9, 1, 2, 12, 13, 14	2.145,94	0,476667	0,764208	92,63	32,15	40,03	20,46
	11, 4, 10, 9, 8, 7, 5, 6, 3, 0, 2, 1, 12, 14, 13	2.145,17	0,472424	0,780785	92,71	32,14	39,67	20,90
	4, 11, 10, 0, 3, 7, 6, 5, 8, 9, 1, 2, 12, 13, 14	2.145,17	0,473636	0,815737	93,75	32,14	39,77	21,84
	4, 3, 1, 5, 0, 2, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.374,54	0,482424	0,782209	97,02	35,58	40,51	20,94
	4, 3, 1, 0, 2, 5, 6, 7, 8, 9, 11, 10, 12, 13, 14	2.345,87	0,482121	0,756000	95,87	35,15	40,48	20,24
	4, 3, 1, 0, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.340,73	0,482424	0,782209	96,52	35,07	40,51	20,94
	3, 4, 1, 0, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.268,26	0,476364	0,747127	93,98	33,98	40,00	20,00

*Continua na próxima página*

Tabela 19 – Resultados do RSA para a rede Austria

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	4, 5, 3, 1, 0, 2, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.260,69	0,467879	0,777181	93,96	33,87	39,29	20,80
	5, 4, 2, 7, 6, 0, 3, 1, 8, 9, 10, 11, 12, 14, 13	2.201,72	0,472727	0,798148	94,05	32,99	39,69	21,37
	5, 4, 2, 7, 6, 0, 3, 1, 10, 11, 9, 8, 12, 13, 14	2.198,43	0,472727	0,798148	94,00	32,94	39,69	21,37
	4, 11, 10, 9, 8, 7, 6, 5, 1, 2, 0, 3, 12, 14, 13	2.186,03	0,478788	0,801083	94,40	32,75	40,20	21,44
	4, 5, 3, 6, 7, 0, 2, 1, 8, 9, 10, 11, 12, 13, 14	2.181,98	0,480606	0,765179	93,53	32,69	40,36	20,48
	4, 5, 3, 7, 6, 0, 2, 1, 8, 9, 11, 10, 12, 14, 13	2.170,27	0,481818	0,747339	92,98	32,52	40,46	20,01
	5, 4, 3, 7, 6, 0, 1, 2, 10, 11, 9, 8, 12, 14, 13	2.160,76	0,482727	0,758662	93,22	32,37	40,53	20,31
	4, 11, 10, 0, 3, 6, 7, 5, 1, 2, 8, 9, 12, 13, 14	2.148,69	0,474545	0,741601	91,89	32,19	39,85	19,85
	4, 11, 10, 8, 9, 7, 5, 6, 1, 2, 0, 3, 12, 13, 14	2.145,94	0,477879	0,781143	93,19	32,15	40,13	20,91
	0, 1, 2, 3, 4, 5, 7, 6, 8, 9, 10, 11, 12, 13, 14	2.669,42	0,482424	0,779998	101,38	39,99	40,51	20,88
	3, 4, 5, 2, 1, 0, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.483,44	0,492727	0,785714	99,61	37,21	41,37	21,03
	5, 4, 6, 2, 0, 3, 1, 7, 8, 9, 10, 11, 12, 13, 14	2.387,62	0,474242	0,813479	97,37	35,77	39,82	21,78
	4, 3, 0, 5, 6, 2, 1, 7, 8, 9, 10, 11, 12, 13, 14	2.353,70	0,470000	0,743207	94,62	35,26	39,47	19,90

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Tabela 19 – Resultados do RSA para a rede Austria

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	5, 4, 3, 2, 0, 1, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.315,91	0,482121	0,786343	96,23	34,70	40,48	21,05
	5, 4, 6, 0, 3, 2, 1, 7, 8, 9, 10, 11, 12, 13, 14	2.262,45	0,473333	0,791438	94,83	33,90	39,75	21,19
	5, 4, 3, 6, 7, 0, 1, 2, 8, 9, 10, 11, 12, 13, 14	2.181,43	0,482727	0,758662	93,53	32,68	40,53	20,31
	5, 4, 3, 6, 7, 0, 1, 2, 8, 9, 10, 11, 12, 14, 13	2.173,56	0,482727	0,758662	93,41	32,57	40,53	20,31
	4, 11, 10, 0, 3, 7, 5, 6, 2, 1, 8, 9, 12, 13, 14	2.158,07	0,479697	0,791587	93,80	32,33	40,28	21,19
	4, 11, 10, 1, 2, 7, 5, 6, 3, 0, 8, 9, 12, 13, 14	2.156,34	0,479697	0,791587	93,78	32,31	40,28	21,19
Melhor custo x benefício	4, 11, 10, 1, 2, 7, 6, 5, 0, 3, 8, 9, 12, 13, 14	2.145,17	0,474545	0,741601	91,84			

Tabela 20 – Resultados do RMLSA para a rede Austria

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.669,81	0,083333	0,884863	100,00	40,00	40,00	20,00
	4, 0, 2, 1, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.582,48	0,078788	0,880923	96,42	38,69	37,82	19,91
	4, 0, 2, 1, 3, 5, 6, 7, 11, 10, 9, 8, 12, 13, 14	2.559,71	0,078182	0,891895	96,04	38,35	37,53	20,16
	4, 5, 3, 1, 2, 0, 7, 6, 8, 9, 10, 11, 12, 13, 14	2.349,94	0,070000	0,886959	88,86	35,21	33,60	20,05
	4, 5, 3, 1, 2, 0, 7, 6, 11, 10, 9, 8, 12, 13, 14	2.339,88	0,068485	0,887414	87,99	35,06	32,87	20,06
	4, 5, 3, 1, 0, 2, 7, 6, 8, 9, 10, 11, 12, 13, 14	2.259,05	0,062424	0,874582	83,58	33,85	29,96	19,77
	5, 4, 3, 0, 1, 2, 7, 6, 8, 9, 10, 11, 12, 13, 14	2.258,50	0,061818	0,899639	83,84	33,84	29,67	20,33
	5, 4, 3, 6, 7, 0, 2, 1, 11, 10, 9, 8, 12, 13, 14	2.220,35	0,058182	0,887874	81,26	33,27	27,93	20,07
	5, 4, 3, 6, 7, 2, 0, 1, 8, 9, 10, 11, 12, 13, 14	2.201,88	0,058485	0,893005	81,25	32,99	28,07	20,18
	5, 4, 3, 6, 7, 0, 1, 2, 11, 10, 9, 8, 12, 13, 14	2.191,49	0,062424	0,876576	82,61	32,83	29,96	19,81
	4, 5, 3, 6, 7, 0, 2, 1, 11, 10, 9, 8, 12, 13, 14	2.171,92	0,064242	0,883271	83,34	32,54	30,84	19,96
	5, 4, 3, 6, 7, 0, 1, 2, 10, 11, 9, 8, 12, 13, 14	2.170,27	0,062121	0,904102	82,77	32,52	29,82	20,43
	5, 4, 3, 10, 11, 0, 1, 2, 7, 6, 9, 8, 12, 13, 14	2.168,64	0,064242	0,887666	83,39	32,49	30,84	20,06

*Continua na próxima página*

Tabela 20 – Resultados do RMLSA para a rede Austria

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	5, 4, 3, 6, 7, 0, 1, 2, 10, 11, 9, 8, 12, 14, 13	2.162,40	0,062121	0,904102	82,65	32,40	29,82	20,43
	5, 4, 3, 10, 11, 0, 1, 2, 7, 6, 9, 8, 12, 14, 13	2.160,76	0,064242	0,887666	83,27	32,37	30,84	20,06
	4, 5, 3, 6, 7, 0, 2, 1, 11, 10, 8, 9, 12, 13, 14	2.160,76	0,064545	0,883271	83,32	32,37	30,98	19,96
	3, 1, 2, 0, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.565,90	0,069091	0,894487	91,82	38,44	33,16	20,22
	0, 4, 3, 1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.447,86	0,074848	0,885444	92,62	36,67	35,93	20,01
	4, 3, 2, 1, 0, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.295,46	0,067273	0,889730	86,79	34,39	32,29	20,11
	4, 11, 10, 9, 8, 1, 2, 5, 0, 3, 6, 7, 12, 14, 13	2.294,86	0,060303	0,889844	83,44	34,38	28,95	20,11
	4, 3, 2, 1, 0, 5, 7, 6, 11, 10, 9, 8, 12, 13, 14	2.283,01	0,068788	0,878213	87,07	34,20	33,02	19,85
	4, 11, 10, 2, 1, 5, 6, 7, 3, 0, 8, 9, 12, 13, 14	2.217,96	0,060909	0,895996	82,72	33,23	29,24	20,25
	4, 11, 10, 8, 9, 7, 6, 5, 3, 0, 2, 1, 12, 13, 14	2.167,70	0,056970	0,893179	80,01	32,48	27,35	20,19
	4, 11, 10, 2, 1, 7, 6, 5, 0, 3, 8, 9, 12, 13, 14	2.157,30	0,056667	0,892544	79,70	32,32	27,20	20,17
	4, 11, 10, 1, 2, 7, 6, 5, 0, 3, 8, 9, 12, 13, 14	2.145,17	0,056061	0,895195	79,28	32,14	26,91	20,23
	4, 11, 10, 0, 3, 7, 6, 5, 1, 2, 8, 9, 12, 13, 14	2.145,17	0,056667	0,895499	79,58	32,14	27,20	20,24

Continua na próxima página

Tabela 20 – Resultados do RMLSA para a rede Austria

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	3, 6, 2, 5, 7, 8, 9, 4, 0, 1, 10, 11, 12, 13, 14	2.489,27	0,072121	0,881190	91,83	37,30	34,62	19,92
	5, 4, 3, 2, 1, 0, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.347,75	0,066061	0,892448	87,06	35,17	31,71	20,17
	6, 4, 7, 5, 3, 2, 1, 0, 8, 9, 10, 11, 12, 13, 14	2.328,60	0,069394	0,892573	88,37	34,89	33,31	20,17
	4, 5, 6, 3, 7, 2, 1, 0, 8, 9, 10, 11, 12, 13, 14	2.247,56	0,060000	0,905013	82,93	33,67	28,80	20,46
	4, 5, 3, 6, 7, 2, 1, 0, 8, 9, 10, 11, 12, 13, 14	2.202,44	0,057576	0,892497	80,81	33,00	27,64	20,17
	4, 5, 3, 6, 7, 2, 1, 0, 11, 10, 9, 8, 12, 13, 14	2.192,37	0,056970	0,895742	80,44	32,85	27,35	20,25
	4, 5, 3, 6, 7, 2, 1, 0, 11, 10, 8, 9, 12, 13, 14	2.181,22	0,057273	0,892536	80,34	32,68	27,49	20,17
	5, 4, 3, 7, 6, 0, 1, 2, 8, 9, 10, 11, 12, 13, 14	2.179,79	0,063939	0,889303	83,45	32,66	30,69	20,10
	5, 4, 3, 7, 6, 0, 1, 2, 8, 9, 10, 11, 12, 14, 13	2.171,92	0,063939	0,889303	83,33	32,54	30,69	20,10
	9, 1, 2, 3, 4, 5, 6, 7, 8, 0, 10, 11, 12, 13, 14	2.547,81	0,077576	0,877679	95,25	38,17	37,24	19,84
	1, 3, 4, 2, 0, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.480,08	0,074848	0,876904	92,90	37,16	35,93	19,82
	1, 3, 4, 2, 0, 7, 5, 6, 8, 9, 10, 11, 12, 13, 14	2.426,67	0,074545	0,880190	92,03	36,36	35,78	19,89
	3, 4, 1, 2, 0, 7, 5, 6, 8, 9, 10, 11, 12, 13, 14	2.262,84	0,064545	0,890761	85,02	33,90	30,98	20,13

*Continua na próxima página*



Tabela 20 – Resultados do RMLSA para a rede Austria

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	3, 4, 0, 1, 2, 7, 5, 6, 8, 9, 11, 10, 12, 13, 14	2.187,08	0,061515	0,885114	82,30	32,77	29,53	20,01
	4, 11, 10, 1, 2, 6, 5, 7, 8, 9, 0, 3, 12, 13, 14	2.170,20	0,061515	0,882904	82,00	32,51	29,53	19,96
	4, 11, 10, 0, 3, 7, 5, 6, 1, 2, 8, 9, 12, 13, 14	2.145,94	0,057576	0,899160	80,11	32,15	27,64	20,32
	7, 6, 5, 4, 3, 2, 1, 0, 8, 9, 10, 11, 12, 13, 14	2.531,73	0,062121	0,885844	87,77	37,93	29,82	20,02
	7, 6, 5, 4, 3, 0, 2, 1, 8, 9, 10, 11, 12, 13, 14	2.468,92	0,062727	0,892855	87,28	36,99	30,11	20,18
	5, 7, 6, 3, 4, 2, 1, 0, 8, 9, 10, 11, 12, 13, 14	2.431,96	0,064242	0,893470	87,47	36,44	30,84	20,19
	6, 5, 7, 4, 3, 0, 2, 1, 8, 9, 10, 11, 12, 13, 14	2.313,75	0,056061	0,889246	81,67	34,67	26,91	20,10
	5, 6, 7, 4, 3, 0, 2, 1, 8, 9, 10, 11, 12, 13, 14	2.297,14	0,062424	0,888561	84,46	34,42	29,96	20,08
	4, 6, 5, 3, 7, 0, 2, 1, 8, 9, 10, 11, 12, 13, 14	2.273,10	0,069394	0,888028	87,44	34,06	33,31	20,07
	4, 6, 5, 3, 7, 0, 2, 1, 8, 9, 11, 10, 12, 13, 14	2.245,51	0,069394	0,873286	86,69	33,64	33,31	19,74
	4, 5, 3, 6, 7, 0, 2, 1, 8, 9, 11, 10, 12, 13, 14	2.160,76	0,063333	0,886312	82,81	32,37	30,40	20,03
	0, 4, 2, 1, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.501,57	0,078485	0,881936	95,09	37,48	37,67	19,93
	11, 1, 4, 9, 8, 7, 6, 5, 3, 2, 10, 0, 12, 13, 14	2.422,35	0,075152	0,887370	92,42	36,29	36,07	20,06

*Continua na próxima página*

Tabela 20 – Resultados do RMLSA para a rede Austria

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	4, 9, 8, 1, 3, 7, 5, 6, 2, 0, 10, 11, 12, 13, 14	2.283,30	0,059697	0,886696	82,91	34,21	28,65	20,04
	4, 3, 1, 8, 9, 7, 5, 6, 2, 0, 10, 11, 12, 13, 14	2.245,66	0,064848	0,892339	84,94	33,65	31,13	20,17
	3, 4, 1, 8, 9, 7, 5, 6, 11, 10, 0, 2, 12, 13, 14	2.207,53	0,064848	0,875416	83,99	33,07	31,13	19,79
	3, 4, 0, 8, 9, 7, 5, 6, 11, 10, 1, 2, 12, 13, 14	2.187,08	0,063636	0,886042	83,34	32,77	30,55	20,03
	4, 11, 10, 9, 8, 7, 6, 5, 3, 0, 1, 2, 12, 13, 14	2.184,94	0,059697	0,883383	81,36	32,74	28,65	19,97
	4, 11, 10, 0, 3, 7, 5, 6, 8, 9, 1, 2, 12, 14, 13	2.157,43	0,058485	0,889569	80,50	32,32	28,07	20,11
	4, 11, 10, 0, 3, 7, 5, 6, 8, 9, 1, 2, 12, 13, 14	2.145,94	0,058485	0,889569	80,33	32,15	28,07	20,11
	11, 4, 10, 9, 8, 7, 5, 6, 3, 0, 2, 1, 12, 14, 13	2.145,17	0,054545	0,897036	78,60	32,14	26,18	20,28
	4, 11, 10, 0, 3, 7, 6, 5, 8, 9, 1, 2, 12, 13, 14	2.145,17	0,056061	0,899401	79,38	32,14	26,91	20,33
	4, 3, 1, 5, 0, 2, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.374,54	0,066061	0,887722	87,35	35,58	31,71	20,06
	4, 3, 1, 0, 2, 5, 6, 7, 8, 9, 11, 10, 12, 13, 14	2.345,87	0,067576	0,902912	87,99	35,15	32,44	20,41
	4, 3, 1, 0, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.340,73	0,065455	0,889288	86,59	35,07	31,42	20,10
	3, 4, 1, 0, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.268,26	0,063030	0,893863	84,44	33,98	30,25	20,20

*Continua na próxima página*

Tabela 20 – Resultados do RMLSA para a rede Austria

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	4, 5, 3, 1, 0, 2, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.260,69	0,061212	0,887045	83,30	33,87	29,38	20,05
	5, 4, 2, 7, 6, 0, 3, 1, 8, 9, 10, 11, 12, 14, 13	2.201,72	0,058485	0,890575	81,19	32,99	28,07	20,13
	5, 4, 2, 7, 6, 0, 3, 1, 10, 11, 9, 8, 12, 13, 14	2.198,43	0,058485	0,885921	81,03	32,94	28,07	20,02
	4, 11, 10, 9, 8, 7, 6, 5, 1, 2, 0, 3, 12, 14, 13	2.186,03	0,056667	0,904763	80,40	32,75	27,20	20,45
	4, 5, 3, 6, 7, 0, 2, 1, 8, 9, 10, 11, 12, 13, 14	2.181,98	0,062424	0,890538	82,78	32,69	29,96	20,13
	4, 5, 3, 7, 6, 0, 2, 1, 8, 9, 11, 10, 12, 14, 13	2.170,27	0,063333	0,886406	82,95	32,52	30,40	20,03
	5, 4, 3, 7, 6, 0, 1, 2, 10, 11, 9, 8, 12, 14, 13	2.160,76	0,061515	0,898159	82,20	32,37	29,53	20,30
	4, 11, 10, 0, 3, 6, 7, 5, 1, 2, 8, 9, 12, 13, 14	2.148,69	0,056364	0,900232	79,59	32,19	27,05	20,35
	4, 11, 10, 8, 9, 7, 5, 6, 1, 2, 0, 3, 12, 13, 14	2.145,94	0,057576	0,890263	79,91	32,15	27,64	20,12
	0, 1, 2, 3, 4, 5, 7, 6, 8, 9, 10, 11, 12, 13, 14	2.669,42	0,081515	0,884205	99,11	39,99	39,13	19,99
	3, 4, 5, 2, 1, 0, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.483,44	0,073939	0,879632	92,58	37,21	35,49	19,88
	5, 4, 6, 2, 0, 3, 1, 7, 8, 9, 10, 11, 12, 13, 14	2.387,62	0,062424	0,892371	85,91	35,77	29,96	20,17
	4, 3, 0, 5, 6, 2, 1, 7, 8, 9, 10, 11, 12, 13, 14	2.353,70	0,063030	0,889451	85,62	35,26	30,25	20,10

*Continua na próxima página*

Tabela 20 – Resultados do RMLSA para a rede Austria

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	5, 4, 3, 2, 0, 1, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.315,91	0,063333	0,890038	85,21	34,70	30,40	20,12
	5, 4, 6, 0, 3, 2, 1, 7, 8, 9, 10, 11, 12, 13, 14	2.262,45	0,063030	0,893561	84,35	33,90	30,25	20,20
	5, 4, 3, 6, 7, 0, 1, 2, 8, 9, 10, 11, 12, 13, 14	2.181,43	0,064848	0,892514	83,98	32,68	31,13	20,17
	5, 4, 3, 6, 7, 0, 1, 2, 8, 9, 10, 11, 12, 14, 13	2.173,56	0,064848	0,892514	83,87	32,57	31,13	20,17
	4, 11, 10, 0, 3, 7, 5, 6, 2, 1, 8, 9, 12, 13, 14	2.158,07	0,056667	0,896237	79,79	32,33	27,20	20,26
	4, 11, 10, 1, 2, 7, 5, 6, 3, 0, 8, 9, 12, 13, 14	2.156,34	0,058485	0,892691	80,56	32,31	28,07	20,18
Melhor custo x benefício	11, 4, 10, 9, 8, 7, 5, 6, 3, 0, 2, 1, 12, 14, 13	2.145,17	0,054545	0,897036	78,60			

Tabela 21 – Comparação da topologia original e a melhor C.B. para a rede Austria

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	2.669,81	0,476364	0,747127	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	11, 4, 10, 9, 8, 7, 5, 6, 3, 0, 2, 1, 12, 14, 13	2.145,17	0,054545	0,897036	60,73	32,14	4,58	24,01
	Diferença	524,64	0,421818	-0,149910	39,27	7,86	35,42	-4,01



Tabela 22 – Resultados do RSA para a rede Canarie

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	17.423,61	0,721862	0,624965	100,00	40,00	40,00	20,00
	0, 1, 3, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	17.403,00	0,721862	0,624965	99,95	39,95	40,00	20,00
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 11, 14, 15, 16, 17, 18	17.222,92	0,728340	0,586575	98,67	39,54	40,36	18,77
	0, 1, 2, 3, 4, 5, 6, 7, 12, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18	16.969,48	0,727733	0,663378	100,51	38,96	40,33	21,23
	0, 1, 2, 3, 4, 5, 6, 7, 13, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18	16.662,85	0,723684	0,621606	98,25	38,25	40,10	19,89
	0, 1, 2, 3, 4, 5, 6, 7, 11, 8, 9, 10, 14, 12, 13, 15, 16, 17, 18	16.580,07	0,727935	0,602159	97,67	38,06	40,34	19,27
	0, 1, 5, 4, 3, 2, 6, 7, 11, 8, 9, 10, 14, 12, 13, 15, 16, 17, 18	16.569,97	0,727126	0,614472	98,00	38,04	40,29	19,66
	0, 1, 5, 4, 3, 2, 6, 7, 11, 8, 9, 10, 13, 12, 14, 15, 16, 17, 18	16.545,22	0,727126	0,614472	97,94	37,98	40,29	19,66

*Continua na próxima página*

Tabela 22 – Resultados do RSA para a rede Canarie

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 8, 11, 7, 9, 10, 14, 12, 13, 15, 16, 18, 17	16.453,84	0,724494	0,629961	98,08	37,77	40,15	20,16
	1, 0, 5, 4, 3, 2, 6, 7, 11, 8, 9, 10, 13, 12, 14, 15, 16, 17, 18	16.434,25	0,731174	0,614571	97,91	37,73	40,52	19,67
	0, 1, 2, 3, 4, 5, 6, 8, 11, 7, 9, 10, 14, 12, 13, 15, 16, 17, 18	16.412,87	0,724494	0,629961	97,99	37,68	40,15	20,16
	0, 1, 5, 4, 3, 2, 6, 8, 13, 7, 9, 10, 11, 14, 12, 15, 16, 17, 18	16.294,04	0,723482	0,719145	100,51	37,41	40,09	23,01
	1, 0, 4, 5, 3, 2, 6, 8, 13, 7, 9, 10, 11, 14, 12, 15, 16, 17, 18	16.262,89	0,722672	0,609929	96,90	37,34	40,04	19,52
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 10, 11, 14, 12, 15, 16, 18, 17	16.193,28	0,723482	0,722168	100,38	37,18	40,09	23,11
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 10, 11, 14, 12, 15, 16, 17, 18	16.183,07	0,722672	0,609929	96,72	37,15	40,04	19,52
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 11, 10, 14, 12, 15, 16, 17, 18	16.153,39	0,724899	0,628325	97,36	37,08	40,17	20,11

*Continua na próxima página*



Tabela 22 – Resultados do RSA para a rede Canarie

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 12, 10, 14, 11, 15, 16, 18, 17	16.150,92	0,723279	0,598010	96,29	37,08	40,08	19,14
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 12, 10, 14, 11, 15, 16, 17, 18	16.140,71	0,725304	0,604018	96,58	37,05	40,19	19,33
	1, 3, 2, 0, 4, 5, 6, 7, 12, 8, 9, 10, 13, 11, 14, 15, 16, 17, 18	17.339,39	0,736842	0,635387	100,97	39,81	40,83	20,33
	0, 1, 5, 4, 3, 2, 6, 7, 12, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18	16.959,39	0,724291	0,750943	103,10	38,93	40,13	24,03
	0, 1, 2, 3, 4, 5, 6, 7, 12, 8, 9, 10, 13, 11, 14, 15, 16, 17, 18	16.672,22	0,725911	0,608353	97,97	38,28	40,22	19,47
	1, 0, 5, 4, 3, 2, 6, 7, 12, 8, 9, 10, 13, 11, 14, 15, 16, 17, 18	16.551,15	0,726316	0,599488	97,43	38,00	40,25	19,18
	1, 0, 5, 4, 3, 2, 6, 7, 11, 8, 9, 10, 14, 12, 13, 15, 16, 17, 18	16.459,00	0,731174	0,614571	97,97	37,79	40,52	19,67
	1, 0, 5, 4, 3, 2, 6, 7, 13, 8, 9, 11, 10, 14, 12, 15, 16, 17, 18	16.340,65	0,728340	0,613209	97,50	37,51	40,36	19,62

*Continua na próxima página*

Tabela 22 – Resultados do RSA para a rede Canarie

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	1, 0, 5, 4, 3, 2, 6, 8, 11, 7, 9, 10, 14, 12, 13, 15, 16, 17, 18	16.291,80	0,723684	0,729831	100,86	37,40	40,10	23,36
	0, 1, 2, 3, 4, 5, 6, 8, 13, 7, 9, 12, 10, 14, 11, 15, 16, 17, 18	16.261,78	0,723684	0,607893	96,89	37,33	40,10	19,45
	1, 0, 4, 5, 3, 2, 6, 8, 13, 7, 9, 11, 10, 14, 12, 15, 16, 17, 18	16.233,22	0,724899	0,628325	97,54	37,27	40,17	20,11
	1, 0, 4, 5, 3, 2, 6, 8, 13, 7, 9, 12, 10, 14, 11, 15, 16, 17, 18	16.220,53	0,725304	0,604018	96,76	37,24	40,19	19,33
	0, 1, 3, 2, 4, 5, 6, 7, 8, 9, 10, 12, 13, 11, 14, 15, 16, 17, 18	17.202,31	0,728340	0,586575	98,62	39,49	40,36	18,77
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 12, 14, 15, 16, 17, 18	17.086,78	0,720850	0,621331	99,05	39,23	39,94	19,88
	0, 1, 5, 4, 3, 2, 6, 7, 8, 9, 10, 11, 13, 12, 14, 15, 16, 17, 18	17.076,69	0,720648	0,614765	98,81	39,20	39,93	19,67
	0, 1, 3, 2, 4, 5, 6, 7, 9, 8, 10, 11, 14, 12, 13, 15, 16, 17, 18	16.974,48	0,731174	0,589079	98,34	38,97	40,52	18,85

*Continua na próxima página*

Tabela 22 – Resultados do RSA para a rede Canarie

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 3, 2, 4, 5, 6, 7, 9, 8, 10, 11, 13, 12, 14, 15, 16, 17, 18	16.935,09	0,731174	0,589079	98,25	38,88	40,52	18,85
	0, 1, 5, 4, 3, 2, 6, 7, 13, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18	16.652,76	0,724089	0,620786	98,22	38,23	40,12	19,87
	0, 1, 2, 3, 4, 5, 6, 7, 11, 8, 9, 10, 13, 12, 14, 15, 16, 17, 18	16.555,32	0,727935	0,602159	97,61	38,01	40,34	19,27
	0, 1, 3, 2, 4, 5, 6, 7, 11, 8, 9, 10, 13, 12, 14, 15, 16, 17, 18	16.534,71	0,727935	0,602159	97,57	37,96	40,34	19,27
	0, 1, 3, 2, 4, 5, 6, 8, 13, 7, 9, 10, 11, 12, 14, 15, 16, 17, 18	16.454,99	0,727126	0,596089	97,14	37,78	40,29	19,08
	0, 1, 3, 2, 4, 5, 6, 8, 11, 7, 9, 10, 13, 12, 14, 15, 16, 17, 18	16.367,51	0,724494	0,629961	97,88	37,58	40,15	20,16
	0, 1, 3, 2, 4, 5, 6, 8, 13, 7, 9, 10, 11, 14, 12, 15, 16, 17, 18	16.283,53	0,724494	0,601784	96,79	37,38	40,15	19,26
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 10, 11, 14, 12, 15, 18, 17, 16	16.260,26	0,728138	0,758475	101,95	37,33	40,35	24,27

*Continua na próxima página*

Tabela 22 – Resultados do RSA para a rede Canarie

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 13, 8, 9, 10, 12, 11, 14, 15, 16, 17, 18	16.769,21	0,724899	0,604789	98,02	38,50	40,17	19,35
	0, 1, 3, 2, 4, 5, 6, 7, 13, 8, 9, 10, 12, 11, 14, 15, 16, 17, 18	16.748,60	0,724899	0,604789	97,97	38,45	40,17	19,35
	0, 1, 2, 3, 4, 5, 6, 7, 13, 8, 9, 10, 11, 14, 12, 15, 16, 17, 18	16.491,39	0,729150	0,613451	97,90	37,86	40,40	19,63
	0, 1, 3, 2, 4, 5, 6, 7, 13, 8, 9, 10, 11, 14, 12, 15, 16, 17, 18	16.470,78	0,729150	0,613451	97,85	37,81	40,40	19,63
	1, 0, 5, 4, 3, 2, 6, 7, 13, 8, 9, 10, 11, 14, 12, 15, 17, 16, 18	16.445,26	0,728947	0,605136	97,51	37,75	40,39	19,37
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 10, 11, 12, 14, 15, 16, 17, 18	16.354,53	0,723279	0,712382	100,42	37,55	40,08	22,80
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 10, 11, 14, 12, 15, 17, 16, 18	16.258,01	0,722672	0,609929	96,89	37,32	40,04	19,52
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 11, 10, 14, 12, 15, 16, 18, 17	16.163,61	0,724494	0,726462	100,50	37,11	40,15	23,25

*Continua na próxima página*

Tabela 22 – Resultados do RSA para a rede Canarie

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 11, 13, 15, 16, 17, 18	17.192,05	0,728340	0,586575	98,60	39,47	40,36	18,77
	0, 1, 2, 3, 4, 5, 6, 7, 9, 8, 10, 11, 13, 12, 14, 15, 16, 17, 18	16.955,70	0,731174	0,589079	98,29	38,93	40,52	18,85
	0, 1, 2, 3, 4, 5, 6, 7, 12, 8, 9, 10, 14, 11, 13, 15, 16, 17, 18	16.626,71	0,725911	0,608353	97,86	38,17	40,22	19,47
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 10, 11, 12, 14, 15, 17, 18, 16	16.388,12	0,723279	0,712382	100,50	37,62	40,08	22,80
	1, 0, 5, 4, 3, 2, 6, 8, 11, 7, 9, 10, 13, 12, 14, 15, 16, 18, 17	16.308,02	0,723684	0,729831	100,90	37,44	40,10	23,36
	0, 1, 2, 3, 4, 5, 6, 8, 13, 7, 9, 10, 11, 14, 12, 15, 16, 17, 18	16.304,13	0,724494	0,601784	96,83	37,43	40,15	19,26
Melhor custo x benefício	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 12, 10, 14, 11, 15, 16, 18, 17	16.150,92	0,723279	0,598010	96,29			

Tabela 23 – Resultados do RMLSA para a rede Canarie

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	17.423,61	0,721862	0,624965	100,00	40,00	40,00	20,00
	0, 1, 3, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	17.403,00	0,721862	0,624965	99,95	39,95	40,00	20,00
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 11, 14, 15, 16, 17, 18	17.222,92	0,728340	0,586575	98,67	39,54	40,36	18,77
	0, 1, 2, 3, 4, 5, 6, 7, 12, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18	16.969,48	0,727733	0,663378	100,51	38,96	40,33	21,23
	0, 1, 2, 3, 4, 5, 6, 7, 13, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18	16.662,85	0,723684	0,621606	98,25	38,25	40,10	19,89
	0, 1, 2, 3, 4, 5, 6, 7, 11, 8, 9, 10, 14, 12, 13, 15, 16, 17, 18	16.580,07	0,727935	0,602159	97,67	38,06	40,34	19,27
	0, 1, 5, 4, 3, 2, 6, 7, 11, 8, 9, 10, 14, 12, 13, 15, 16, 17, 18	16.569,97	0,727126	0,614472	98,00	38,04	40,29	19,66
	0, 1, 5, 4, 3, 2, 6, 7, 11, 8, 9, 10, 13, 12, 14, 15, 16, 17, 18	16.545,22	0,727126	0,614472	97,94	37,98	40,29	19,66

*Continua na próxima página*

Tabela 23 – Resultados do RMLSA para a rede Canarie

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 8, 11, 7, 9, 10, 14, 12, 13, 15, 16, 18, 17	16.453,84	0,724494	0,629961	98,08	37,77	40,15	20,16
	1, 0, 5, 4, 3, 2, 6, 7, 11, 8, 9, 10, 13, 12, 14, 15, 16, 17, 18	16.434,25	0,731174	0,614571	97,91	37,73	40,52	19,67
	0, 1, 2, 3, 4, 5, 6, 8, 11, 7, 9, 10, 14, 12, 13, 15, 16, 17, 18	16.412,87	0,724494	0,629961	97,99	37,68	40,15	20,16
	0, 1, 5, 4, 3, 2, 6, 8, 13, 7, 9, 10, 11, 14, 12, 15, 16, 17, 18	16.294,04	0,723482	0,719145	100,51	37,41	40,09	23,01
	1, 0, 4, 5, 3, 2, 6, 8, 13, 7, 9, 10, 11, 14, 12, 15, 16, 17, 18	16.262,89	0,722672	0,609929	96,90	37,34	40,04	19,52
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 10, 11, 14, 12, 15, 16, 18, 17	16.193,28	0,723482	0,722168	100,38	37,18	40,09	23,11
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 10, 11, 14, 12, 15, 16, 17, 18	16.183,07	0,722672	0,609929	96,72	37,15	40,04	19,52
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 11, 10, 14, 12, 15, 16, 17, 18	16.153,39	0,724899	0,628325	97,36	37,08	40,17	20,11

Continua na próxima página

Tabela 23 – Resultados do RMLSA para a rede Canarie

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 12, 10, 14, 11, 15, 16, 18, 17	16.150,92	0,723279	0,598010	96,29	37,08	40,08	19,14
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 12, 10, 14, 11, 15, 16, 17, 18	16.140,71	0,725304	0,604018	96,58	37,05	40,19	19,33
	1, 3, 2, 0, 4, 5, 6, 7, 12, 8, 9, 10, 13, 11, 14, 15, 16, 17, 18	17.339,39	0,736842	0,635387	100,97	39,81	40,83	20,33
	0, 1, 5, 4, 3, 2, 6, 7, 12, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18	16.959,39	0,724291	0,750943	103,10	38,93	40,13	24,03
	0, 1, 2, 3, 4, 5, 6, 7, 12, 8, 9, 10, 13, 11, 14, 15, 16, 17, 18	16.672,22	0,725911	0,608353	97,97	38,28	40,22	19,47
	1, 0, 5, 4, 3, 2, 6, 7, 12, 8, 9, 10, 13, 11, 14, 15, 16, 17, 18	16.551,15	0,726316	0,599488	97,43	38,00	40,25	19,18
	1, 0, 5, 4, 3, 2, 6, 7, 11, 8, 9, 10, 14, 12, 13, 15, 16, 17, 18	16.459,00	0,731174	0,614571	97,97	37,79	40,52	19,67
	1, 0, 5, 4, 3, 2, 6, 7, 13, 8, 9, 11, 10, 14, 12, 15, 16, 17, 18	16.340,65	0,728340	0,613209	97,50	37,51	40,36	19,62

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Tabela 23 – Resultados do RMLSA para a rede Canarie

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	1, 0, 5, 4, 3, 2, 6, 8, 11, 7, 9, 10, 14, 12, 13, 15, 16, 17, 18	16.291,80	0,723684	0,729831	100,86	37,40	40,10	23,36
	0, 1, 2, 3, 4, 5, 6, 8, 13, 7, 9, 12, 10, 14, 11, 15, 16, 17, 18	16.261,78	0,723684	0,607893	96,89	37,33	40,10	19,45
	1, 0, 4, 5, 3, 2, 6, 8, 13, 7, 9, 11, 10, 14, 12, 15, 16, 17, 18	16.233,22	0,724899	0,628325	97,54	37,27	40,17	20,11
	1, 0, 4, 5, 3, 2, 6, 8, 13, 7, 9, 12, 10, 14, 11, 15, 16, 17, 18	16.220,53	0,725304	0,604018	96,76	37,24	40,19	19,33
	0, 1, 3, 2, 4, 5, 6, 7, 8, 9, 10, 12, 13, 11, 14, 15, 16, 17, 18	17.202,31	0,728340	0,586575	98,62	39,49	40,36	18,77
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 12, 14, 15, 16, 17, 18	17.086,78	0,720850	0,621331	99,05	39,23	39,94	19,88
	0, 1, 5, 4, 3, 2, 6, 7, 8, 9, 10, 11, 13, 12, 14, 15, 16, 17, 18	17.076,69	0,720648	0,614765	98,81	39,20	39,93	19,67
	0, 1, 3, 2, 4, 5, 6, 7, 9, 8, 10, 11, 14, 12, 13, 15, 16, 17, 18	16.974,48	0,731174	0,589079	98,34	38,97	40,52	18,85

Continua na próxima página

Tabela 23 – Resultados do RMLSA para a rede Canarie

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 3, 2, 4, 5, 6, 7, 9, 8, 10, 11, 13, 12, 14, 15, 16, 17, 18	16.935,09	0,731174	0,589079	98,25	38,88	40,52	18,85
	0, 1, 5, 4, 3, 2, 6, 7, 13, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18	16.652,76	0,724089	0,620786	98,22	38,23	40,12	19,87
	0, 1, 2, 3, 4, 5, 6, 7, 11, 8, 9, 10, 13, 12, 14, 15, 16, 17, 18	16.555,32	0,727935	0,602159	97,61	38,01	40,34	19,27
	0, 1, 3, 2, 4, 5, 6, 7, 11, 8, 9, 10, 13, 12, 14, 15, 16, 17, 18	16.534,71	0,727935	0,602159	97,57	37,96	40,34	19,27
	0, 1, 3, 2, 4, 5, 6, 8, 13, 7, 9, 10, 11, 12, 14, 15, 16, 17, 18	16.454,99	0,727126	0,596089	97,14	37,78	40,29	19,08
	0, 1, 3, 2, 4, 5, 6, 8, 11, 7, 9, 10, 13, 12, 14, 15, 16, 17, 18	16.367,51	0,724494	0,629961	97,88	37,58	40,15	20,16
	0, 1, 3, 2, 4, 5, 6, 8, 13, 7, 9, 10, 11, 14, 12, 15, 16, 17, 18	16.283,53	0,724494	0,601784	96,79	37,38	40,15	19,26
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 10, 11, 14, 12, 15, 18, 17, 16	16.260,26	0,728138	0,758475	101,95	37,33	40,35	24,27

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Tabela 23 – Resultados do RMLSA para a rede Canarie

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 13, 8, 9, 10, 12, 11, 14, 15, 16, 17, 18	16.769,21	0,724899	0,604789	98,02	38,50	40,17	19,35
	0, 1, 3, 2, 4, 5, 6, 7, 13, 8, 9, 10, 12, 11, 14, 15, 16, 17, 18	16.748,60	0,724899	0,604789	97,97	38,45	40,17	19,35
	0, 1, 2, 3, 4, 5, 6, 7, 13, 8, 9, 10, 11, 14, 12, 15, 16, 17, 18	16.491,39	0,729150	0,613451	97,90	37,86	40,40	19,63
	0, 1, 3, 2, 4, 5, 6, 7, 13, 8, 9, 10, 11, 14, 12, 15, 16, 17, 18	16.470,78	0,729150	0,613451	97,85	37,81	40,40	19,63
	1, 0, 5, 4, 3, 2, 6, 7, 13, 8, 9, 10, 11, 14, 12, 15, 17, 16, 18	16.445,26	0,728947	0,605136	97,51	37,75	40,39	19,37
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 10, 11, 12, 14, 15, 16, 17, 18	16.354,53	0,723279	0,712382	100,42	37,55	40,08	22,80
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 10, 11, 14, 12, 15, 17, 16, 18	16.258,01	0,722672	0,609929	96,89	37,32	40,04	19,52
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 11, 10, 14, 12, 15, 16, 18, 17	16.163,61	0,724494	0,726462	100,50	37,11	40,15	23,25

Continua na próxima página

Tabela 23 – Resultados do RMLSA para a rede Canarie

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 11, 13, 15, 16, 17, 18	17.192,05	0,728340	0,586575	98,60	39,47	40,36	18,77
	0, 1, 2, 3, 4, 5, 6, 7, 9, 8, 10, 11, 13, 12, 14, 15, 16, 17, 18	16.955,70	0,731174	0,589079	98,29	38,93	40,52	18,85
	0, 1, 2, 3, 4, 5, 6, 7, 12, 8, 9, 10, 14, 11, 13, 15, 16, 17, 18	16.626,71	0,725911	0,608353	97,86	38,17	40,22	19,47
	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 10, 11, 12, 14, 15, 17, 18, 16	16.388,12	0,723279	0,712382	100,50	37,62	40,08	22,80
	1, 0, 5, 4, 3, 2, 6, 8, 11, 7, 9, 10, 13, 12, 14, 15, 16, 18, 17	16.308,02	0,723684	0,729831	100,90	37,44	40,10	23,36
	0, 1, 2, 3, 4, 5, 6, 8, 13, 7, 9, 10, 11, 14, 12, 15, 16, 17, 18	16.304,13	0,724494	0,601784	96,83	37,43	40,15	19,26
Melhor custo x benefício	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 12, 10, 14, 11, 15, 16, 18, 17	16.150,92	0,723279	0,598010	96,29			

Tabela 24 – Comparação da topologia original e a melhor C.B. para a rede Canarie

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	17.423,61	0,721862	0,624965	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	1, 0, 5, 4, 3, 2, 6, 8, 13, 7, 9, 12, 10, 14, 11, 15, 16, 18, 17	16.150,92	0,723279	0,598010	96,29	37,08	40,08	19,14
	Diferença	1.272,69	-0,001417	0,026955	3,71	2,92	-0,08	0,86



Tabela 25 – Resultados do RSA para a rede CesNet

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1.841,95	0,465351	0,768917	100,00	40,00	40,00	20,00
	0, 1, 2, 11, 4, 5, 6, 7, 9, 8, 10, 3	1.835,40	0,492544	0,775790	102,37	39,86	42,34	20,18
	0, 1, 2, 3, 4, 5, 6, 7, 9, 8, 10, 11	1.821,28	0,486404	0,771924	101,44	39,55	41,81	20,08
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1.841,95	0,465351	0,768917	100,00			

Tabela 26 – Resultados do RMLSA para a rede CesNet

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1.841,95	0,065351	0,847045	100,00	40,00	40,00	20,00
	0, 1, 2, 11, 4, 5, 6, 7, 9, 8, 10, 3	1.835,40	0,069737	0,838667	102,34	39,86	42,68	19,80
	0, 1, 2, 3, 4, 5, 6, 7, 9, 8, 10, 11	1.821,28	0,066228	0,836572	99,84	39,55	40,54	19,75

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Tabela 26 – Resultados do RMLSA para a rede CesNet

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 9, 8, 10, 11	1.821,28	0,066228	0,836572	99,84			

Tabela 27 – Comparação da topologia original e a melhor C.B. para a rede CesNet

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1.841,95	0,465351	0,768917	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	0, 1, 2, 3, 4, 5, 6, 7, 9, 8, 10, 11	1.821,28	0,066228	0,836572	67,00	39,55	5,69	21,76
	Diferença	20,68	0,399123	-0,067655	33,00	0,45	34,31	-1,76



Tabela 28 – Resultados do RSA para a rede CoxUsa

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	26.942,62	0,738125	0,855836	100,00	40,00	40,00	20,00
	9, 11, 8, 10, 7, 6, 5, 4, 3, 2, 1, 0, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	26.904,00	0,737604	0,846725	99,70	39,94	39,97	19,79
	8, 9, 10, 11, 7, 6, 5, 4, 3, 2, 1, 0, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	26.677,87	0,746354	0,833105	99,52	39,61	40,45	19,47
	8, 9, 11, 6, 7, 10, 5, 4, 3, 2, 1, 0, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	26.434,01	0,756354	0,793695	98,78	39,24	40,99	18,55
	11, 10, 8, 6, 7, 9, 5, 4, 3, 2, 1, 0, 12, 13, 14, 16, 15, 17, 18, 19, 20, 21, 22, 23	26.229,29	0,753125	0,847832	99,57	38,94	40,81	19,81
	11, 10, 8, 6, 7, 9, 5, 4, 3, 2, 1, 0, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	26.163,36	0,751875	0,838235	99,18	38,84	40,75	19,59
	7, 8, 9, 6, 11, 10, 5, 3, 2, 1, 0, 4, 12, 13, 14, 16, 15, 17, 18, 19, 20, 21, 22, 23	26.146,48	0,741146	0,786127	97,35	38,82	40,16	18,37
	11, 10, 8, 6, 7, 9, 5, 3, 2, 1, 0, 4, 12, 13, 14, 16, 15, 17, 18, 19, 20, 21, 22, 23	25.866,55	0,751667	0,834927	98,65	38,40	40,73	19,51

*Continua na próxima página*

Tabela 28 – Resultados do RSA para a rede CoxUsa

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	6, 10, 9, 11, 7, 8, 5, 3, 2, 1, 0, 4, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	25.486,26	0,740625	0,823912	97,23	37,84	40,14	19,25
	6, 10, 9, 7, 11, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 16, 15, 17, 18, 19, 20, 21, 22, 13	25.430,10	0,738750	0,795842	96,39	37,75	40,03	18,60
	6, 9, 10, 11, 7, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 16, 15, 17, 18, 19, 20, 21, 22, 13	25.361,05	0,741875	0,826185	97,16	37,65	40,20	19,31
	6, 9, 10, 11, 7, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.295,12	0,743646	0,824296	97,12	37,55	40,30	19,26
	2, 1, 0, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	26.741,53	0,728437	0,798079	97,83	39,70	39,48	18,65
	2, 1, 0, 3, 4, 5, 6, 11, 10, 9, 8, 7, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	26.504,43	0,727083	0,807310	97,62	39,35	39,40	18,87
	7, 8, 9, 11, 10, 6, 5, 3, 4, 0, 1, 2, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	26.461,41	0,757917	0,807739	99,23	39,29	41,07	18,88
	7, 6, 10, 11, 9, 8, 5, 3, 4, 0, 1, 2, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	26.132,69	0,757500	0,764198	97,71	38,80	41,05	17,86

*Continua na próxima página*

Tabela 28 – Resultados do RSA para a rede CoxUsa

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	6, 7, 10, 11, 9, 8, 5, 3, 4, 0, 1, 2, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.889,45	0,757604	0,769499	97,47	38,44	41,06	17,98
	6, 7, 10, 11, 9, 8, 5, 3, 2, 1, 0, 4, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	25.887,32	0,749375	0,804512	97,84	38,43	40,61	18,80
	7, 9, 10, 11, 6, 8, 5, 3, 4, 0, 1, 2, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.823,80	0,746667	0,794360	97,37	38,34	40,46	18,56
	6, 7, 9, 10, 11, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.642,15	0,743333	0,805173	97,17	38,07	40,28	18,82
	6, 7, 10, 11, 9, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.634,36	0,757604	0,769499	97,10	38,06	41,06	17,98
	7, 9, 10, 11, 6, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.568,71	0,746667	0,794360	96,99	37,96	40,46	18,56
	6, 11, 10, 9, 7, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.512,87	0,740625	0,812105	96,99	37,88	40,14	18,98
	2, 1, 0, 3, 4, 5, 11, 10, 9, 8, 7, 6, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	26.740,42	0,731250	0,817390	98,43	39,70	39,63	19,10

Continua na próxima página

Tabela 28 – Resultados do RSA para a rede CoxUsa

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	2, 1, 0, 3, 4, 5, 6, 10, 9, 8, 7, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	26.641,07	0,727084	0,854785	98,93	39,55	39,40	19,98
	6, 10, 9, 11, 7, 8, 5, 4, 3, 0, 1, 2, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.817,10	0,737813	0,834511	97,81	38,33	39,98	19,50
	6, 10, 9, 11, 7, 8, 5, 4, 3, 2, 1, 0, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.683,73	0,738438	0,839550	97,77	38,13	40,02	19,62
	6, 10, 9, 11, 7, 8, 5, 3, 4, 0, 1, 2, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.576,09	0,737813	0,834511	97,46	37,97	39,98	19,50
	6, 9, 10, 11, 7, 8, 5, 3, 2, 0, 1, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.555,86	0,743646	0,824296	97,50	37,94	40,30	19,26
	11, 10, 9, 7, 6, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.468,60	0,745208	0,847541	98,00	37,81	40,38	19,81
	11, 9, 10, 6, 7, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.326,05	0,755938	0,810347	97,50	37,60	40,97	18,94
	11, 10, 8, 6, 7, 9, 5, 3, 2, 1, 0, 4, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	25.800,62	0,753542	0,833595	98,62	38,30	40,84	19,48

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Tabela 28 – Resultados do RSA para a rede CoxUsa

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	11, 10, 8, 6, 7, 9, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.635,36	0,750729	0,808055	97,63	38,06	40,68	18,88
	11, 10, 9, 6, 7, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 16, 15, 17, 18, 19, 20, 21, 22, 13	25.512,15	0,743542	0,852690	98,10	37,88	40,29	19,93
	11, 10, 9, 6, 7, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.446,22	0,744479	0,847882	97,94	37,78	40,34	19,81
	6, 10, 9, 11, 7, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.321,00	0,737813	0,834511	97,08	37,59	39,98	19,50
Melhor custo x benefício	6, 10, 9, 7, 11, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 16, 15, 17, 18, 19, 20, 21, 22, 13	25.430,10	0,738750	0,795842	96,39			

Tabela 29 – Resultados do RMLSA para a rede CoxUsa

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	26.942,62	0,692188	0,868556	100,00	40,00	40,00	20,00
	9, 11, 8, 10, 7, 6, 5, 4, 3, 2, 1, 0, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	26.904,00	0,676250	0,874429	99,16	39,94	39,08	20,14
	8, 9, 10, 11, 7, 6, 5, 4, 3, 2, 1, 0, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	26.677,87	0,682396	0,863929	98,93	39,61	39,43	19,89
	8, 9, 11, 6, 7, 10, 5, 4, 3, 2, 1, 0, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	26.434,01	0,691667	0,845868	98,69	39,24	39,97	19,48
	11, 10, 8, 6, 7, 9, 5, 4, 3, 2, 1, 0, 12, 13, 14, 16, 15, 17, 18, 19, 20, 21, 22, 23	26.229,29	0,677396	0,869045	98,10	38,94	39,15	20,01
	11, 10, 8, 6, 7, 9, 5, 4, 3, 2, 1, 0, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	26.163,36	0,681146	0,867281	98,18	38,84	39,36	19,97
	7, 8, 9, 6, 11, 10, 5, 3, 2, 1, 0, 4, 12, 13, 14, 16, 15, 17, 18, 19, 20, 21, 22, 23	26.146,48	0,672708	0,821912	96,62	38,82	38,87	18,93
	11, 10, 8, 6, 7, 9, 5, 3, 2, 1, 0, 4, 12, 13, 14, 16, 15, 17, 18, 19, 20, 21, 22, 23	25.866,55	0,679583	0,865734	97,61	38,40	39,27	19,94

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Tabela 29 – Resultados do RMLSA para a rede CoxUsa

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	6, 10, 9, 11, 7, 8, 5, 3, 2, 1, 0, 4, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	25.486,26	0,670938	0,864335	96,51	37,84	38,77	19,90
	6, 10, 9, 7, 11, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 16, 15, 17, 18, 19, 20, 21, 22, 13	25.430,10	0,668438	0,851396	95,99	37,75	38,63	19,60
	6, 9, 10, 11, 7, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 16, 15, 17, 18, 19, 20, 21, 22, 13	25.361,05	0,674271	0,843076	96,03	37,65	38,96	19,41
	6, 9, 10, 11, 7, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.295,12	0,674688	0,846311	96,03	37,55	38,99	19,49
	2, 1, 0, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	26.741,53	0,680104	0,863127	98,88	39,70	39,30	19,87
	2, 1, 0, 3, 4, 5, 6, 11, 10, 9, 8, 7, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	26.504,43	0,677604	0,864492	98,41	39,35	39,16	19,91
	7, 8, 9, 11, 10, 6, 5, 3, 4, 0, 1, 2, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	26.461,41	0,690417	0,847370	98,70	39,29	39,90	19,51
	7, 6, 10, 11, 9, 8, 5, 3, 4, 0, 1, 2, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	26.132,69	0,689063	0,838528	97,93	38,80	39,82	19,31

Continua na próxima página

Tabela 29 – Resultados do RMLSA para a rede CoxUsa

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	6, 7, 10, 11, 9, 8, 5, 3, 4, 0, 1, 2, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.889,45	0,686042	0,837048	97,36	38,44	39,64	19,27
	6, 7, 10, 11, 9, 8, 5, 3, 2, 1, 0, 4, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	25.887,32	0,679688	0,846074	97,19	38,43	39,28	19,48
	7, 9, 10, 11, 6, 8, 5, 3, 4, 0, 1, 2, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.823,80	0,679271	0,841495	96,97	38,34	39,25	19,38
	6, 7, 9, 10, 11, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.642,15	0,671875	0,851961	96,51	38,07	38,83	19,62
	6, 7, 10, 11, 9, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.634,36	0,685313	0,839823	97,00	38,06	39,60	19,34
	7, 9, 10, 11, 6, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.568,71	0,679688	0,841518	96,62	37,96	39,28	19,38
	6, 11, 10, 9, 7, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.512,87	0,671146	0,841143	96,03	37,88	38,78	19,37
	2, 1, 0, 3, 4, 5, 11, 10, 9, 8, 7, 6, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	26.740,42	0,681563	0,878959	99,33	39,70	39,39	20,24

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Tabela 29 – Resultados do RMLSA para a rede CoxUsa

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	2, 1, 0, 3, 4, 5, 6, 10, 9, 8, 7, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	26.641,07	0,675625	0,862444	98,45	39,55	39,04	19,86
	6, 10, 9, 11, 7, 8, 5, 4, 3, 0, 1, 2, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.817,10	0,671042	0,849811	96,68	38,33	38,78	19,57
	6, 10, 9, 11, 7, 8, 5, 4, 3, 2, 1, 0, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.683,73	0,667813	0,861217	96,55	38,13	38,59	19,83
	6, 10, 9, 11, 7, 8, 5, 3, 4, 0, 1, 2, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.576,09	0,670729	0,861684	96,57	37,97	38,76	19,84
	6, 9, 10, 11, 7, 8, 5, 3, 2, 0, 1, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.555,86	0,676563	0,836817	96,31	37,94	39,10	19,27
	11, 10, 9, 7, 6, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.468,60	0,670729	0,878043	96,79	37,81	38,76	20,22
	11, 9, 10, 6, 7, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.326,05	0,682917	0,868427	97,06	37,60	39,46	20,00
	11, 10, 8, 6, 7, 9, 5, 3, 2, 1, 0, 4, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	25.800,62	0,678750	0,873330	97,64	38,30	39,22	20,11

Continua na próxima página

Tabela 29 – Resultados do RMLSA para a rede CoxUsa

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	11, 10, 8, 6, 7, 9, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.635,36	0,676458	0,875065	97,30	38,06	39,09	20,15
	11, 10, 9, 6, 7, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 16, 15, 17, 18, 19, 20, 21, 22, 13	25.512,15	0,669063	0,877414	96,74	37,88	38,66	20,20
	11, 10, 9, 6, 7, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.446,22	0,670313	0,873891	96,64	37,78	38,74	20,12
	6, 10, 9, 11, 7, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 15, 16, 17, 18, 19, 20, 21, 22, 13	25.321,00	0,670313	0,855931	96,04	37,59	38,74	19,71
Melhor custo x benefício	6, 10, 9, 7, 11, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 16, 15, 17, 18, 19, 20, 21, 22, 13	25.430,10	0,668438	0,851396	95,99			

Tabela 30 – Comparação da topologia original e a melhor C.B. para a rede CoxUsa

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23	26.942,62	0,738125	0,855836	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	6, 10, 9, 7, 11, 8, 5, 3, 2, 1, 0, 4, 12, 23, 14, 16, 15, 17, 18, 19, 20, 21, 22, 13	25.430,10	0,668438	0,851396	93,87	37,75	36,22	19,90
	Diferença	1.512,53	0,069687	0,004440	6,13	2,25	3,78	0,10



Tabela 31 – Resultados do RSA para a rede Eon

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	23.729,11	0,606970	0,791591	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	23.729,11	0,606970	0,791591	100,00			

Tabela 32 – Resultados do RMLSA para a rede Eon

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	23.729,11	0,455192	0,865615	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	23.729,11	0,455192	0,865615	100,00			

Tabela 33 – Comparação da topologia original e a melhor C.B. para a rede Eon

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	23.729,11	0,606970	0,791591	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	23.729,11	0,455192	0,865615	91,87	40,00	30,00	21,87
	Diferença	0,00	0,151778	-0,074024	8,13	0,00	10,00	-1,87

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	33.523,96	0,810250	0,848675	100,00	40,00	40,00	20,00
	0, 1, 2, 3, 4, 23, 6, 7, 27, 9, 10, 11, 12, 13, 14, 15, 16, 26, 18, 19, 20, 21, 22, 17, 24, 25, 5, 8, 28, 29, 30, 31	33.101,61	0,805375	0,852174	99,34	39,50	39,76	20,08
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 19, 18, 8, 20, 21, 22, 23, 24, 25, 17, 27, 28, 29, 30, 31	32.880,20	0,809750	0,861658	99,51	39,23	39,98	20,31
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 27, 18, 8, 20, 21, 17, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.824,44	0,810250	0,867384	99,61	39,17	40,00	20,44
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 21, 10, 20, 18, 27, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.550,95	0,808688	0,873275	99,34	38,84	39,92	20,58
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 21, 8, 20, 18, 27, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.506,64	0,808750	0,864800	99,09	38,79	39,93	20,38

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Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 19, 20, 18, 27, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.477,58	0,806813	0,874357	99,19	38,75	39,83	20,61
	13, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 8, 20, 18, 27, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.418,43	0,806313	0,868528	98,95	38,68	39,81	20,47
	13, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 29, 14, 15, 16, 17, 21, 8, 20, 18, 27, 23, 24, 25, 22, 19, 28, 0, 30, 31	32.398,26	0,804063	0,873130	98,93	38,66	39,69	20,58
	13, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 29, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 22, 8, 28, 0, 30, 31	32.254,48	0,804313	0,865785	98,60	38,49	39,71	20,40
	13, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 7, 8, 28, 29, 30, 31	32.190,99	0,806688	0,872267	98,79	38,41	39,82	20,56
	13, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 29, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 7, 8, 28, 0, 30, 31	32.170,82	0,805250	0,867474	98,58	38,39	39,75	20,44

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Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 4, 7, 8, 28, 29, 30, 31	32.077,04	0,803563	0,852686	98,04	38,27	39,67	20,09
	0, 11, 2, 3, 13, 5, 6, 27, 22, 9, 26, 1, 14, 12, 25, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.817,72	0,810438	0,848858	97,98	37,96	40,01	20,00
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.635,91	0,802313	0,852369	97,44	37,75	39,61	20,09
	13, 11, 2, 3, 0, 5, 6, 27, 22, 9, 26, 1, 14, 12, 25, 15, 28, 17, 21, 19, 20, 18, 10, 23, 24, 30, 7, 8, 16, 29, 4, 31	31.621,81	0,805813	0,847320	97,48	37,73	39,78	19,97
	0, 11, 2, 3, 13, 5, 6, 27, 22, 9, 26, 1, 14, 12, 25, 15, 28, 17, 21, 19, 20, 18, 10, 23, 24, 30, 7, 8, 16, 29, 4, 31	31.390,76	0,807563	0,846311	97,27	37,45	39,87	19,94

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Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 21, 19, 20, 18, 10, 23, 24, 30, 7, 8, 16, 29, 4, 31	31.208,95	0,801313	0,845428	96,72	37,24	39,56	19,92
	13, 11, 2, 3, 0, 5, 6, 27, 22, 9, 26, 1, 14, 12, 25, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.659,98	0,803375	0,849197	96,26	36,58	39,66	20,01
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.261,78	0,799688	0,854738	95,73	36,11	39,48	20,14
	0, 1, 25, 3, 28, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 13, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.203,40	0,800125	0,869993	96,04	36,04	39,50	20,50
	0, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.004,18	0,803625	0,870984	96,00	35,80	39,67	20,53

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 26, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 25, 22, 27, 28, 29, 30, 31	33.202,88	0,811313	0,836737	99,39	39,62	40,05	19,72
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 25, 22, 27, 28, 29, 30, 31	32.932,24	0,810625	0,850295	99,35	39,29	40,02	20,04
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 22, 27, 28, 29, 30, 31	32.852,27	0,810250	0,848675	99,20	39,20	40,00	20,00
	13, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 22, 27, 28, 29, 30, 31	32.764,07	0,806313	0,876853	99,56	39,09	39,81	20,66
	13, 1, 2, 3, 4, 5, 6, 22, 8, 9, 26, 11, 12, 29, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 7, 27, 28, 0, 30, 31	32.748,57	0,803063	0,870416	99,23	39,07	39,65	20,51
	28, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 29, 14, 15, 16, 17, 18, 19, 20, 21, 27, 23, 24, 25, 22, 8, 0, 13, 30, 31	32.617,63	0,808313	0,843732	98,71	38,92	39,90	19,88

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 27, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.496,75	0,807375	0,874681	99,25	38,77	39,86	20,61
	13, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 8, 20, 21, 27, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.437,60	0,806625	0,858503	98,76	38,70	39,82	20,23
	0, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.382,02	0,810625	0,850671	98,70	38,64	40,02	20,05
	13, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.293,82	0,805875	0,861050	98,61	38,53	39,78	20,29
	13, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 29, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 22, 8, 28, 0, 30, 31	32.273,64	0,804938	0,872469	98,81	38,51	39,74	20,56
	13, 21, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 29, 14, 15, 16, 17, 18, 19, 20, 1, 10, 23, 24, 25, 7, 8, 28, 0, 30, 31	32.267,42	0,803813	0,868775	98,66	38,50	39,68	20,47

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 26, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 8, 27, 28, 29, 30, 31	33.488,51	0,811313	0,836737	99,73	39,96	40,05	19,72
	0, 1, 2, 3, 4, 5, 6, 7, 26, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 8, 28, 29, 30, 31	33.349,08	0,811313	0,836737	99,56	39,79	40,05	19,72
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 8, 27, 28, 29, 30, 31	33.217,87	0,810625	0,850295	99,69	39,63	40,02	20,04
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 28, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 8, 13, 29, 30, 31	33.093,79	0,810625	0,850295	99,54	39,49	40,02	20,04
	28, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 25, 22, 27, 13, 29, 30, 31	32.914,69	0,808875	0,854856	99,35	39,27	39,93	20,15

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 25, 22, 27, 28, 29, 30, 31	32.844,03	0,807375	0,874681	99,66	39,19	39,86	20,61
	0, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 13, 14, 15, 20, 17, 21, 19, 16, 18, 10, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.770,39	0,805438	0,855106	99,01	39,10	39,76	20,15
	13, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 0, 14, 15, 20, 17, 21, 19, 16, 18, 10, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.667,52	0,804250	0,880979	99,44	38,98	39,70	20,76
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 27, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.584,95	0,810625	0,850295	98,94	38,88	40,02	20,04
	0, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 28, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 22, 8, 13, 29, 30, 31	32.460,02	0,810625	0,850671	98,80	38,73	40,02	20,05
	13, 1, 2, 3, 4, 5, 6, 22, 27, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 7, 8, 28, 29, 30, 31	32.298,49	0,803188	0,862842	98,52	38,54	39,65	20,33

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	28, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 7, 8, 13, 29, 30, 31	32.261,65	0,808188	0,839849	98,18	38,49	39,90	19,79
	13, 1, 30, 3, 2, 5, 6, 27, 22, 9, 26, 11, 25, 29, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 12, 7, 8, 28, 0, 4, 31	32.166,21	0,797500	0,885809	98,63	38,38	39,37	20,88
	0, 1, 30, 3, 2, 5, 6, 27, 22, 9, 26, 11, 25, 13, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 12, 7, 8, 28, 29, 4, 31	32.092,05	0,804625	0,883764	98,84	38,29	39,72	20,83
	0, 1, 30, 3, 2, 5, 6, 27, 22, 9, 26, 11, 25, 13, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 12, 7, 8, 28, 29, 4, 31	32.090,47	0,803625	0,860009	98,23	38,29	39,67	20,27
	0, 1, 2, 3, 12, 5, 6, 27, 22, 9, 26, 11, 25, 13, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	32.054,69	0,805938	0,845771	97,97	38,25	39,79	19,93
	0, 1, 2, 3, 12, 5, 6, 27, 22, 9, 26, 11, 25, 13, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	32.053,10	0,806688	0,869213	98,55	38,25	39,82	20,48

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 30, 3, 14, 5, 6, 27, 22, 9, 26, 11, 13, 2, 25, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 12, 7, 8, 28, 29, 4, 31	31.918,03	0,808813	0,864172	98,38	38,08	39,93	20,37
	0, 1, 12, 3, 14, 5, 6, 27, 22, 9, 26, 11, 13, 2, 25, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.478,52	0,804750	0,855150	97,44	37,56	39,73	20,15
	0, 1, 12, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 2, 25, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.454,71	0,803125	0,867932	97,63	37,53	39,65	20,45
	0, 1, 12, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 25, 2, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.426,31	0,806750	0,870141	97,83	37,50	39,83	20,51
	29, 1, 12, 3, 28, 5, 6, 27, 22, 9, 26, 11, 14, 25, 2, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 13, 0, 4, 31	31.422,87	0,805063	0,879990	97,97	37,49	39,74	20,74

*Continua na próxima página*



Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 12, 3, 28, 5, 6, 27, 22, 9, 26, 11, 14, 25, 2, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 13, 29, 4, 31	31.410,82	0,804188	0,868936	97,66	37,48	39,70	20,48
	0, 1, 12, 3, 28, 5, 6, 27, 10, 9, 26, 11, 13, 25, 2, 15, 16, 17, 21, 19, 20, 18, 22, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.809,71	0,801813	0,865795	96,75	36,76	39,58	20,40
	0, 1, 12, 3, 13, 5, 6, 27, 22, 9, 26, 11, 28, 25, 2, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.667,39	0,804125	0,865361	96,68	36,59	39,70	20,39
	0, 1, 12, 3, 28, 5, 6, 27, 22, 9, 26, 11, 13, 25, 2, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.579,78	0,803563	0,870136	96,66	36,49	39,67	20,51
	29, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 25, 2, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 14, 0, 4, 31	30.556,06	0,802000	0,875000	96,67	36,46	39,59	20,62

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 25, 2, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.532,68	0,802250	0,852783	96,13	36,43	39,61	20,10
	29, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 16, 25, 2, 15, 28, 17, 21, 19, 13, 18, 8, 23, 24, 30, 7, 10, 14, 0, 4, 31	30.487,94	0,802563	0,861053	96,29	36,38	39,62	20,29
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 16, 25, 2, 15, 28, 17, 21, 19, 13, 18, 8, 23, 24, 30, 7, 10, 14, 29, 4, 31	30.452,98	0,802563	0,860465	96,23	36,34	39,62	20,28
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 16, 25, 2, 15, 13, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.377,16	0,802125	0,868574	96,31	36,25	39,60	20,47
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 16, 25, 2, 15, 28, 17, 18, 19, 13, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.348,58	0,804500	0,870179	96,43	36,21	39,72	20,51

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 26, 18, 19, 20, 21, 22, 17, 24, 25, 23, 27, 28, 29, 30, 31	33.181,27	0,809438	0,846939	99,51	39,59	39,96	19,96
	13, 1, 2, 3, 4, 23, 6, 7, 8, 9, 10, 11, 12, 0, 14, 15, 16, 26, 18, 19, 20, 21, 22, 17, 24, 25, 5, 27, 28, 29, 30, 31	32.775,54	0,806188	0,871601	99,45	39,11	39,80	20,54
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 27, 23, 24, 25, 22, 10, 28, 29, 30, 31	32.540,99	0,810250	0,848675	98,83	38,83	40,00	20,00
	13, 1, 2, 3, 4, 5, 6, 22, 8, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 27, 23, 24, 25, 7, 10, 28, 29, 30, 31	32.457,45	0,803250	0,872160	98,94	38,73	39,65	20,55
	0, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 25, 22, 10, 28, 29, 30, 31	32.418,02	0,810625	0,850671	98,75	38,68	40,02	20,05

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 4, 5, 6, 27, 8, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 7, 10, 28, 29, 30, 31	32.359,13	0,804563	0,875013	98,95	38,61	39,72	20,62
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 26, 18, 19, 20, 21, 22, 23, 24, 25, 17, 27, 28, 29, 30, 31	33.341,68	0,810313	0,862054	100,10	39,78	40,00	20,32
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 19, 11, 12, 13, 14, 15, 16, 26, 18, 10, 20, 21, 22, 23, 24, 25, 17, 27, 28, 29, 30, 31	33.300,77	0,810313	0,862054	100,05	39,73	40,00	20,32
	13, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 0, 14, 15, 16, 26, 18, 19, 20, 21, 22, 23, 24, 25, 17, 27, 28, 29, 30, 31	33.253,47	0,806000	0,870526	99,98	39,68	39,79	20,51
	13, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 29, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 22, 27, 28, 0, 30, 31	32.743,90	0,806813	0,882930	99,71	39,07	39,83	20,81

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 10, 20, 21, 27, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.570,11	0,810625	0,858682	99,12	38,86	40,02	20,24
	29, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 22, 8, 28, 0, 30, 31	32.455,40	0,809438	0,853458	98,80	38,73	39,96	20,11
	13, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 7, 8, 28, 29, 30, 31	32.192,58	0,805500	0,852810	98,27	38,41	39,77	20,10
	13, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 29, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 7, 8, 28, 0, 30, 31	32.172,40	0,803813	0,868775	98,54	38,39	39,68	20,47
	29, 1, 2, 3, 28, 5, 6, 27, 22, 9, 26, 11, 13, 4, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 7, 8, 12, 0, 30, 31	32.010,36	0,805875	0,858268	98,20	38,19	39,78	20,23
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 28, 4, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 7, 8, 30, 29, 12, 31	31.659,33	0,806188	0,856056	97,75	37,78	39,80	20,17

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	29, 1, 2, 3, 28, 5, 6, 27, 22, 9, 26, 11, 13, 4, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 7, 8, 30, 0, 12, 31	31.594,19	0,803563	0,847403	97,34	37,70	39,67	19,97
	0, 1, 2, 3, 28, 5, 6, 27, 22, 9, 26, 11, 13, 4, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 7, 8, 30, 29, 12, 31	31.566,66	0,806750	0,855157	97,64	37,66	39,83	20,15
	0, 1, 2, 3, 28, 5, 6, 27, 22, 9, 26, 11, 13, 4, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 7, 8, 30, 29, 12, 31	31.565,07	0,805938	0,842236	97,30	37,66	39,79	19,85
	0, 1, 2, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 4, 14, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 25, 7, 8, 30, 29, 12, 31	31.524,04	0,806063	0,865587	97,81	37,61	39,79	20,40
	0, 1, 2, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 30, 14, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 25, 7, 8, 4, 29, 12, 31	31.514,97	0,805563	0,879943	98,11	37,60	39,77	20,74
	0, 1, 2, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 4, 14, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 25, 7, 8, 30, 29, 12, 31	31.513,63	0,809188	0,862790	97,88	37,60	39,95	20,33

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 30, 14, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 25, 7, 8, 4, 29, 12, 31	31.504,56	0,808250	0,857864	97,71	37,59	39,90	20,22
	0, 1, 2, 3, 14, 5, 6, 27, 22, 9, 26, 11, 13, 4, 30, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 25, 7, 8, 20, 29, 12, 31	31.351,54	0,804625	0,861647	97,44	37,41	39,72	20,31
	0, 1, 2, 3, 14, 5, 6, 27, 22, 9, 26, 11, 13, 4, 25, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 29, 12, 31	31.342,07	0,804188	0,852506	97,19	37,40	39,70	20,09
	14, 1, 2, 3, 0, 5, 6, 27, 22, 9, 26, 11, 13, 12, 25, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.631,21	0,802563	0,864447	96,54	36,55	39,62	20,37
	0, 1, 2, 3, 14, 5, 6, 27, 22, 9, 26, 11, 13, 12, 25, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.389,79	0,805875	0,838996	95,82	36,26	39,78	19,77
	0, 1, 25, 3, 13, 5, 6, 22, 27, 9, 26, 11, 14, 12, 2, 15, 28, 17, 18, 19, 16, 21, 8, 23, 24, 30, 7, 10, 20, 29, 4, 31	30.147,67	0,802000	0,859963	95,83	35,97	39,59	20,27

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 25, 3, 13, 5, 6, 22, 27, 9, 26, 11, 14, 12, 2, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.111,68	0,802000	0,859963	95,79	35,93	39,59	20,27
	0, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.008,52	0,799750	0,859541	95,54	35,81	39,48	20,26
	0, 1, 25, 3, 13, 5, 6, 27, 22, 18, 26, 11, 14, 12, 2, 24, 28, 17, 31, 19, 16, 21, 10, 23, 15, 30, 7, 8, 20, 29, 4, 9	30.001,96	0,795938	0,875179	95,72	35,80	39,29	20,62
	13, 3, 25, 1, 29, 5, 6, 27, 22, 31, 26, 11, 14, 12, 2, 24, 28, 17, 21, 19, 16, 18, 10, 23, 15, 30, 7, 8, 20, 0, 4, 9	29.891,95	0,802563	0,862881	95,62	35,67	39,62	20,33
	0, 31, 25, 3, 13, 5, 6, 27, 22, 1, 26, 11, 14, 12, 2, 24, 28, 17, 18, 19, 16, 21, 10, 23, 15, 30, 7, 8, 20, 29, 4, 9	29.876,31	0,795250	0,865190	95,30	35,65	39,26	20,39

*Continua na próxima página*



Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	29, 3, 25, 1, 13, 5, 6, 27, 22, 31, 26, 11, 14, 12, 2, 24, 28, 17, 21, 19, 16, 18, 8, 23, 15, 30, 7, 10, 20, 0, 4, 9	29.759,32	0,803938	0,864898	95,58	35,51	39,69	20,38
	29, 3, 25, 1, 13, 5, 6, 27, 22, 31, 26, 11, 14, 12, 2, 24, 28, 17, 21, 19, 16, 18, 10, 23, 15, 30, 7, 8, 20, 0, 4, 9	29.723,32	0,803938	0,864898	95,54	35,47	39,69	20,38
	29, 15, 25, 1, 13, 5, 6, 27, 22, 18, 26, 11, 14, 12, 2, 24, 28, 17, 31, 19, 16, 21, 10, 23, 3, 30, 7, 8, 20, 0, 4, 9	29.680,52	0,801688	0,838915	94,76	35,41	39,58	19,77
	0, 15, 25, 1, 13, 5, 6, 27, 22, 18, 26, 11, 14, 12, 2, 24, 28, 17, 31, 19, 16, 21, 10, 23, 3, 30, 7, 8, 20, 29, 4, 9	29.666,29	0,803313	0,851158	95,11	35,40	39,66	20,06
	0, 15, 25, 18, 13, 5, 6, 27, 22, 3, 26, 11, 14, 12, 2, 24, 28, 17, 1, 19, 31, 21, 10, 23, 16, 30, 7, 8, 20, 29, 4, 9	29.488,41	0,798563	0,854491	94,74	35,18	39,42	20,14

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 15, 25, 18, 13, 5, 6, 27, 22, 3, 26, 11, 14, 12, 2, 24, 28, 17, 31, 19, 1, 21, 10, 23, 16, 30, 7, 8, 20, 29, 4, 9	29.386,38	0,799188	0,854107	94,65	35,06	39,45	20,13
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 26, 20, 21, 22, 23, 24, 25, 19, 27, 28, 29, 30, 31	33.043,72	0,810938	0,854328	99,59	39,43	40,03	20,13
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 8, 20, 21, 22, 23, 24, 25, 19, 27, 28, 29, 30, 31	32.908,57	0,810000	0,860214	99,53	39,27	39,99	20,27
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 19, 18, 8, 20, 21, 22, 17, 24, 25, 23, 27, 28, 29, 30, 31	32.800,00	0,808000	0,865262	99,42	39,14	39,89	20,39
	0, 1, 2, 3, 4, 23, 5, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 8, 20, 21, 22, 19, 24, 25, 6, 27, 28, 29, 30, 31	32.756,77	0,806625	0,854648	99,05	39,08	39,82	20,14
	0, 1, 2, 3, 4, 23, 5, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 21, 8, 20, 18, 22, 19, 24, 25, 6, 27, 28, 29, 30, 31	32.737,61	0,809563	0,853545	99,14	39,06	39,97	20,11

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 23, 5, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 19, 18, 8, 20, 21, 22, 17, 24, 25, 6, 27, 28, 29, 30, 31	32.285,17	0,805500	0,859742	98,55	38,52	39,77	20,26
	13, 1, 2, 3, 4, 23, 5, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 19, 21, 8, 20, 18, 22, 17, 24, 25, 6, 27, 28, 29, 30, 31	32.170,35	0,807188	0,858788	98,47	38,38	39,85	20,24
	13, 21, 2, 3, 4, 23, 5, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 19, 1, 8, 20, 18, 22, 17, 24, 25, 6, 27, 28, 29, 30, 31	32.160,27	0,803125	0,851079	98,08	38,37	39,65	20,06
	13, 21, 30, 3, 25, 23, 5, 7, 10, 9, 26, 11, 2, 0, 14, 15, 16, 19, 1, 8, 20, 18, 22, 17, 24, 12, 6, 27, 28, 29, 4, 31	32.114,11	0,801125	0,881171	98,63	38,32	39,55	20,77
	13, 21, 25, 3, 12, 23, 5, 7, 10, 9, 19, 11, 2, 0, 14, 15, 16, 26, 1, 8, 20, 18, 22, 17, 24, 30, 6, 27, 28, 29, 4, 31	31.742,39	0,800750	0,875095	98,03	37,87	39,53	20,62
	13, 21, 25, 3, 12, 23, 5, 7, 10, 9, 26, 11, 2, 0, 14, 15, 16, 19, 18, 8, 20, 1, 22, 17, 24, 30, 6, 27, 28, 29, 4, 31	31.431,39	0,801688	0,879258	97,80	37,50	39,58	20,72

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 21, 25, 3, 12, 23, 5, 7, 10, 9, 26, 11, 2, 0, 14, 15, 16, 19, 1, 8, 20, 18, 22, 17, 24, 30, 6, 27, 28, 29, 4, 31	31.389,40	0,799500	0,869635	97,42	37,45	39,47	20,49
	0, 21, 25, 3, 13, 23, 5, 7, 8, 9, 26, 11, 14, 12, 2, 15, 16, 19, 1, 10, 28, 18, 22, 17, 24, 30, 6, 27, 20, 29, 4, 31	31.015,04	0,800250	0,854545	96,65	37,01	39,51	20,14
	0, 21, 25, 3, 13, 23, 5, 7, 10, 9, 26, 11, 14, 12, 2, 15, 16, 19, 1, 8, 28, 18, 22, 17, 24, 30, 6, 27, 20, 29, 4, 31	30.969,93	0,799375	0,862500	96,74	36,95	39,46	20,33
	0, 21, 25, 3, 13, 23, 5, 7, 10, 9, 26, 11, 14, 12, 2, 15, 28, 19, 1, 8, 20, 18, 22, 17, 24, 30, 6, 27, 16, 29, 4, 31	30.930,83	0,797875	0,856210	96,47	36,91	39,39	20,18
	0, 21, 25, 3, 13, 23, 5, 7, 10, 9, 26, 11, 14, 12, 2, 15, 28, 19, 1, 8, 16, 18, 22, 17, 24, 30, 6, 27, 20, 29, 4, 31	29.983,66	0,795688	0,862249	95,38	35,78	39,28	20,32

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	29, 21, 25, 3, 13, 23, 5, 7, 10, 9, 26, 11, 0, 12, 2, 15, 28, 19, 1, 8, 16, 18, 22, 17, 24, 30, 6, 27, 20, 14, 4, 31	29.964,87	0,800938	0,873361	95,88	35,75	39,54	20,58
	0, 21, 25, 3, 13, 23, 5, 7, 10, 9, 26, 11, 29, 12, 2, 15, 28, 19, 1, 8, 16, 18, 22, 17, 24, 30, 6, 27, 20, 14, 4, 31	29.931,34	0,802500	0,864312	95,70	35,71	39,62	20,37
	0, 9, 25, 18, 13, 23, 5, 7, 10, 21, 26, 11, 29, 12, 2, 24, 28, 19, 1, 8, 16, 3, 22, 17, 15, 30, 6, 27, 20, 14, 4, 31	29.875,47	0,817063	0,860946	96,27	35,65	40,34	20,29
	0, 9, 25, 18, 13, 23, 5, 7, 10, 1, 26, 11, 29, 12, 2, 24, 28, 19, 21, 8, 16, 3, 22, 17, 15, 30, 6, 27, 20, 14, 4, 31	29.678,88	0,815688	0,860883	95,97	35,41	40,27	20,29
	0, 11, 25, 18, 13, 23, 5, 7, 10, 31, 26, 1, 14, 12, 2, 24, 28, 19, 21, 8, 16, 3, 22, 17, 15, 30, 6, 27, 20, 29, 4, 9	29.660,67	0,799813	0,869351	95,36	35,39	39,48	20,49

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 11, 25, 18, 13, 23, 5, 7, 10, 31, 26, 1, 29, 12, 2, 24, 28, 19, 21, 8, 16, 3, 22, 17, 15, 30, 6, 27, 20, 14, 4, 9	29.608,35	0,803375	0,860494	95,27	35,33	39,66	20,28
	0, 9, 25, 18, 13, 23, 5, 7, 10, 11, 26, 1, 14, 12, 2, 24, 28, 19, 21, 8, 16, 3, 22, 17, 15, 30, 6, 27, 20, 29, 4, 31	29.509,88	0,815438	0,833780	95,12	35,21	40,26	19,65
	0, 9, 25, 18, 13, 23, 5, 7, 10, 11, 26, 1, 29, 12, 2, 24, 28, 19, 21, 8, 16, 3, 22, 17, 15, 30, 6, 27, 20, 14, 4, 31	29.457,57	0,819250	0,847972	95,58	35,15	40,44	19,98
	0, 21, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 1, 22, 23, 24, 25, 10, 27, 28, 29, 30, 31	33.276,11	0,809813	0,864957	100,07	39,70	39,98	20,38
	0, 1, 2, 3, 4, 5, 6, 27, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 7, 10, 28, 29, 30, 31	32.447,33	0,806438	0,863752	98,88	38,72	39,81	20,36
	0, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 25, 7, 10, 28, 29, 30, 31	32.315,19	0,808063	0,873599	99,04	38,56	39,89	20,59

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 7, 8, 28, 29, 30, 31	32.279,20	0,808063	0,873599	98,99	38,51	39,89	20,59
	13, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 29, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 25, 7, 10, 28, 0, 30, 31	32.206,81	0,805250	0,867474	98,62	38,43	39,75	20,44
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 28, 12, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 7, 8, 4, 29, 30, 31	32.097,41	0,804438	0,876665	98,67	38,30	39,71	20,66
	13, 1, 25, 3, 12, 5, 6, 27, 22, 9, 26, 11, 2, 29, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 4, 7, 8, 28, 0, 30, 31	31.812,20	0,802813	0,853801	97,71	37,96	39,63	20,12
	13, 1, 25, 3, 12, 5, 6, 27, 22, 9, 26, 11, 2, 29, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 30, 7, 10, 28, 0, 4, 31	31.435,95	0,802813	0,853801	97,26	37,51	39,63	20,12
	13, 1, 25, 3, 12, 5, 6, 27, 22, 9, 26, 11, 2, 29, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 28, 0, 4, 31	31.399,96	0,802813	0,853801	97,22	37,47	39,63	20,12

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 25, 3, 28, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 30, 7, 8, 13, 29, 4, 31	31.361,96	0,802625	0,854094	97,17	37,42	39,62	20,13
	0, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 28, 12, 2, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	31.092,81	0,805375	0,874390	97,46	37,10	39,76	20,61
	0, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 28, 12, 2, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	31.091,23	0,805375	0,876113	97,50	37,10	39,76	20,65
	29, 1, 25, 3, 13, 5, 6, 22, 27, 9, 26, 11, 14, 12, 2, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 20, 0, 4, 31	31.041,03	0,801938	0,861977	96,94	37,04	39,59	20,31
	29, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 20, 0, 4, 31	30.933,53	0,803938	0,867266	97,04	36,91	39,69	20,44

*Continua na próxima página*



Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.930,64	0,803688	0,848781	96,58	36,91	39,68	20,00
	0, 1, 25, 3, 16, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 13, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.313,95	0,801875	0,869503	96,25	36,17	39,59	20,49
	29, 1, 25, 3, 16, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 13, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 20, 0, 4, 31	30.305,27	0,800938	0,856286	95,88	36,16	39,54	20,18
	29, 1, 25, 3, 16, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 28, 17, 18, 19, 13, 21, 10, 23, 24, 30, 7, 8, 20, 0, 4, 31	30.295,72	0,800438	0,863760	96,02	36,15	39,52	20,36
	0, 1, 25, 3, 16, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 28, 17, 18, 19, 13, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.281,49	0,801750	0,880675	96,47	36,13	39,58	20,75

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	29, 1, 25, 3, 28, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 13, 17, 18, 19, 16, 21, 8, 23, 24, 30, 7, 10, 20, 0, 4, 31	30.230,72	0,800750	0,876049	96,25	36,07	39,53	20,65
	0, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 29, 12, 2, 15, 28, 17, 21, 19, 16, 18, 8, 23, 24, 30, 7, 10, 20, 14, 4, 31	30.122,93	0,802063	0,860524	95,82	35,94	39,60	20,28
	0, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 29, 12, 2, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 20, 14, 4, 31	30.086,93	0,802063	0,860524	95,77	35,90	39,60	20,28
	0, 1, 2, 3, 4, 5, 6, 7, 19, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 26, 20, 21, 22, 23, 24, 25, 8, 27, 28, 29, 30, 31	33.195,66	0,810000	0,872091	100,15	39,61	39,99	20,55
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 10, 27, 28, 29, 30, 31	33.193,93	0,810250	0,848675	99,61	39,61	40,00	20,00

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 8, 27, 28, 29, 30, 31	33.129,66	0,807375	0,874681	100,00	39,53	39,86	20,61
	13, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 19, 20, 18, 22, 23, 24, 25, 8, 27, 28, 29, 30, 31	33.110,50	0,807188	0,872159	99,91	39,51	39,85	20,55
	13, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 10, 27, 28, 29, 30, 31	33.105,72	0,806313	0,876853	99,97	39,50	39,81	20,66
	0, 1, 2, 3, 4, 5, 6, 7, 19, 9, 10, 11, 12, 13, 14, 15, 16, 26, 18, 17, 20, 21, 8, 23, 24, 25, 22, 27, 28, 29, 30, 31	33.087,51	0,810250	0,867384	99,92	39,48	40,00	20,44
	13, 21, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 1, 22, 23, 24, 25, 27, 8, 28, 29, 30, 31	33.009,77	0,805813	0,866520	99,59	39,39	39,78	20,42
	13, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 10, 20, 21, 22, 23, 24, 25, 19, 27, 28, 29, 30, 31	32.864,68	0,808563	0,865081	99,52	39,21	39,92	20,39

Continua na próxima página

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 4, 5, 6, 7, 22, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 27, 8, 28, 29, 30, 31	32.699,25	0,806250	0,865394	99,21	39,02	39,80	20,39
	13, 1, 2, 3, 4, 5, 6, 7, 22, 9, 26, 11, 12, 29, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 27, 8, 28, 0, 30, 31	32.679,07	0,805938	0,874130	99,38	38,99	39,79	20,60
	13, 1, 2, 3, 4, 5, 6, 7, 19, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 8, 20, 18, 27, 23, 24, 25, 22, 10, 28, 29, 30, 31	32.623,46	0,806313	0,868528	99,20	38,93	39,81	20,47
	13, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 27, 23, 24, 25, 22, 10, 28, 29, 30, 31	32.452,78	0,806313	0,876853	99,19	38,72	39,81	20,66
	13, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 19, 20, 18, 8, 23, 24, 25, 22, 10, 28, 29, 30, 31	32.310,65	0,805125	0,872526	98,86	38,55	39,75	20,56
	13, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 29, 14, 15, 16, 17, 21, 19, 20, 18, 8, 23, 24, 25, 22, 10, 28, 0, 30, 31	32.290,47	0,804313	0,865785	98,64	38,53	39,71	20,40

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Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 19, 20, 18, 8, 23, 24, 25, 7, 10, 28, 29, 30, 31	32.228,57	0,805500	0,852810	98,32	38,45	39,77	20,10
	28, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 29, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 7, 8, 13, 0, 30, 31	32.197,24	0,805375	0,864234	98,54	38,42	39,76	20,37
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 4, 7, 8, 28, 29, 30, 31	32.075,46	0,806125	0,867035	98,50	38,27	39,80	20,43
	28, 1, 2, 3, 29, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 13, 17, 21, 19, 20, 18, 10, 23, 24, 4, 7, 8, 16, 0, 30, 31	31.904,05	0,803063	0,861875	98,02	38,07	39,65	20,31
	13, 1, 2, 3, 29, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 21, 19, 20, 18, 10, 23, 24, 4, 7, 8, 16, 0, 30, 31	31.860,56	0,803438	0,831088	97,26	38,02	39,66	19,59
	29, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 21, 19, 20, 18, 10, 23, 24, 4, 7, 8, 16, 0, 30, 31	31.698,00	0,803563	0,860090	97,76	37,82	39,67	20,27

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 21, 19, 20, 18, 10, 23, 24, 4, 7, 8, 16, 29, 30, 31	31.650,09	0,803875	0,846543	97,40	37,76	39,69	19,95
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 18, 19, 20, 21, 10, 23, 24, 4, 7, 8, 16, 29, 30, 31	31.648,50	0,804063	0,845123	97,37	37,76	39,69	19,92
	13, 1, 2, 3, 0, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 16, 29, 4, 31	31.438,42	0,803625	0,863152	97,53	37,51	39,67	20,34
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 16, 29, 4, 31	31.207,37	0,802500	0,855353	97,01	37,24	39,62	20,16
	13, 1, 2, 3, 0, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 4, 7, 8, 20, 29, 30, 31	30.919,30	0,800688	0,865615	96,82	36,89	39,53	20,40

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 0, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.478,17	0,799313	0,858430	96,06	36,37	39,46	20,23
	29, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 20, 0, 4, 31	30.022,75	0,798938	0,875604	95,90	35,82	39,44	20,63
	0, 9, 25, 3, 13, 5, 6, 27, 22, 11, 26, 1, 14, 12, 2, 24, 28, 17, 21, 19, 16, 18, 10, 23, 15, 30, 7, 8, 20, 29, 4, 31	30.000,31	0,806938	0,842673	95,49	35,80	39,84	19,86
	29, 9, 25, 18, 13, 5, 6, 27, 22, 11, 26, 1, 14, 12, 2, 24, 28, 17, 21, 19, 16, 3, 10, 23, 15, 30, 7, 8, 20, 0, 4, 31	29.527,02	0,804188	0,865311	95,32	35,23	39,70	20,39
	0, 9, 25, 18, 13, 5, 6, 27, 22, 11, 26, 1, 14, 12, 2, 24, 28, 17, 21, 19, 16, 3, 10, 23, 15, 30, 7, 8, 20, 29, 4, 31	29.512,79	0,804750	0,853772	95,06	35,21	39,73	20,12

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 26, 18, 17, 20, 21, 22, 23, 24, 25, 19, 27, 28, 29, 30, 31	33.467,32	0,810563	0,871348	100,48	39,93	40,02	20,53
	0, 1, 30, 3, 12, 5, 6, 7, 8, 9, 10, 11, 2, 28, 14, 15, 16, 17, 18, 26, 20, 21, 22, 23, 24, 25, 19, 27, 13, 29, 4, 31	32.808,25	0,808813	0,859220	99,32	39,15	39,93	20,25
	0, 1, 2, 3, 4, 5, 6, 27, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 8, 20, 21, 22, 23, 24, 25, 7, 19, 28, 29, 30, 31	32.623,53	0,807813	0,867251	99,24	38,93	39,88	20,44
	0, 21, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 1, 10, 20, 18, 27, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.610,31	0,808000	0,863059	99,14	38,91	39,89	20,34
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 8, 20, 21, 27, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.525,80	0,810000	0,860214	99,07	38,81	39,99	20,27
	13, 21, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 0, 14, 15, 16, 17, 1, 19, 20, 18, 10, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.334,01	0,804250	0,863154	98,63	38,58	39,70	20,34

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Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 21, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 29, 14, 15, 16, 17, 1, 19, 20, 18, 10, 23, 24, 25, 22, 8, 28, 0, 30, 31	32.313,84	0,804750	0,866338	98,70	38,56	39,73	20,42
	13, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.274,65	0,805125	0,872526	98,82	38,51	39,75	20,56
	13, 21, 25, 3, 12, 5, 6, 27, 22, 9, 26, 11, 2, 0, 14, 15, 16, 17, 18, 19, 20, 1, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.516,73	0,802000	0,863322	97,54	37,61	39,59	20,35
	13, 1, 25, 3, 12, 5, 6, 27, 22, 9, 26, 11, 2, 0, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.420,13	0,802313	0,867287	97,54	37,49	39,61	20,44
	0, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.381,06	0,803000	0,870736	97,61	37,44	39,64	20,52

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 25, 3, 28, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 13, 29, 4, 31	31.360,38	0,803438	0,852097	97,16	37,42	39,66	20,08
	0, 1, 4, 3, 20, 5, 6, 7, 8, 9, 26, 11, 12, 13, 2, 15, 16, 17, 18, 19, 29, 21, 22, 23, 24, 25, 10, 27, 28, 14, 30, 31	33.245,33	0,801938	0,874637	99,87	39,67	39,59	20,61
	0, 1, 4, 3, 20, 23, 6, 7, 8, 9, 10, 11, 12, 13, 2, 15, 16, 26, 18, 19, 14, 21, 22, 17, 24, 25, 5, 27, 28, 29, 30, 31	32.926,13	0,797813	0,871214	99,20	39,29	39,39	20,53
	0, 1, 4, 3, 20, 23, 6, 7, 8, 9, 10, 11, 12, 13, 2, 15, 16, 26, 18, 19, 29, 21, 22, 17, 24, 25, 5, 27, 28, 14, 30, 31	32.784,42	0,800438	0,856148	98,81	39,12	39,52	20,18
	0, 1, 2, 3, 4, 5, 6, 27, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 7, 8, 28, 29, 30, 31	32.507,54	0,806313	0,864965	98,98	38,79	39,81	20,38
	0, 1, 4, 3, 20, 5, 6, 22, 8, 9, 26, 11, 12, 14, 2, 15, 16, 17, 18, 19, 28, 21, 27, 23, 24, 25, 7, 10, 29, 13, 30, 31	32.250,91	0,802438	0,864120	98,46	38,48	39,61	20,36

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 4, 3, 20, 5, 6, 7, 27, 9, 26, 11, 12, 14, 2, 15, 16, 17, 18, 19, 13, 21, 10, 23, 24, 25, 22, 8, 29, 28, 30, 31	32.209,02	0,804000	0,853619	98,24	38,43	39,69	20,12
	13, 1, 25, 3, 20, 5, 6, 7, 8, 9, 26, 11, 12, 14, 2, 15, 16, 17, 18, 19, 28, 21, 27, 23, 24, 4, 22, 10, 0, 29, 30, 31	32.051,48	0,800625	0,880837	98,53	38,24	39,52	20,76
	13, 1, 25, 3, 20, 5, 6, 7, 27, 9, 26, 11, 12, 14, 2, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 4, 22, 8, 29, 0, 30, 31	31.836,08	0,798250	0,874285	98,00	37,99	39,41	20,60
	0, 1, 25, 3, 20, 5, 6, 7, 8, 9, 26, 11, 12, 14, 2, 15, 16, 17, 18, 19, 28, 21, 27, 23, 24, 30, 22, 10, 29, 13, 4, 31	31.757,03	0,803625	0,872644	98,13	37,89	39,67	20,56
	13, 1, 25, 3, 20, 5, 6, 7, 27, 9, 26, 11, 12, 14, 2, 15, 16, 17, 18, 19, 0, 21, 10, 23, 24, 30, 22, 8, 29, 28, 4, 31	31.706,29	0,800438	0,880217	98,09	37,83	39,52	20,74
	0, 1, 2, 3, 20, 5, 6, 7, 8, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 28, 21, 27, 23, 24, 30, 22, 10, 29, 13, 4, 31	31.673,81	0,804750	0,875714	98,16	37,79	39,73	20,64

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	28, 1, 2, 3, 20, 5, 6, 22, 8, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 13, 21, 27, 23, 24, 30, 7, 10, 29, 0, 4, 31	31.591,18	0,798875	0,883755	97,96	37,69	39,44	20,83
	28, 1, 2, 3, 20, 5, 6, 7, 8, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 13, 21, 27, 23, 24, 30, 22, 10, 29, 0, 4, 31	31.586,50	0,801063	0,882740	98,04	37,69	39,55	20,80
	0, 1, 2, 3, 20, 5, 6, 7, 27, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 28, 21, 8, 23, 24, 30, 22, 10, 29, 13, 4, 31	31.550,84	0,803938	0,874270	97,94	37,65	39,69	20,60
	13, 1, 2, 3, 20, 5, 6, 7, 8, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 28, 21, 27, 23, 24, 30, 22, 10, 29, 0, 4, 31	31.462,85	0,799625	0,875051	97,64	37,54	39,48	20,62
	13, 1, 2, 3, 20, 5, 6, 22, 27, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 28, 21, 8, 23, 24, 30, 7, 10, 29, 0, 4, 31	31.344,55	0,797500	0,860381	97,05	37,40	39,37	20,28

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 20, 5, 6, 7, 27, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 28, 21, 8, 23, 24, 30, 22, 10, 29, 0, 4, 31	31.339,88	0,799188	0,871977	97,40	37,39	39,45	20,55
	13, 1, 2, 3, 20, 5, 6, 7, 27, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 30, 22, 8, 29, 0, 4, 31	31.303,88	0,799188	0,871977	97,35	37,35	39,45	20,55
	13, 1, 2, 3, 20, 5, 6, 27, 22, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 28, 21, 8, 23, 24, 30, 7, 10, 29, 0, 4, 31	31.237,06	0,798500	0,881949	97,48	37,27	39,42	20,78
	13, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 2, 14, 25, 15, 16, 17, 21, 19, 28, 18, 8, 23, 24, 30, 7, 10, 29, 0, 4, 31	31.169,28	0,796313	0,869161	96,99	37,19	39,31	20,48
	13, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 2, 14, 25, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 29, 0, 4, 31	31.069,13	0,794438	0,879922	97,03	37,07	39,22	20,74

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 2, 25, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.688,08	0,803375	0,862015	96,59	36,62	39,66	20,31
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 25, 2, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.538,75	0,805250	0,866187	96,60	36,44	39,75	20,41
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 25, 2, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.528,34	0,805188	0,868065	96,63	36,43	39,75	20,46
	29, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 16, 25, 2, 15, 28, 17, 18, 19, 13, 21, 10, 23, 24, 30, 7, 8, 14, 0, 4, 31	30.383,54	0,802000	0,871126	96,37	36,25	39,59	20,53
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 21, 19, 20, 18, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	33.504,80	0,810375	0,858205	100,21	39,98	40,01	20,22

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 10, 28, 29, 30, 31	32.955,59	0,810250	0,848675	99,32	39,32	40,00	20,00
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 21, 19, 20, 18, 22, 23, 24, 25, 27, 10, 28, 29, 30, 31	32.936,42	0,810188	0,872463	99,86	39,30	40,00	20,56
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 21, 19, 20, 18, 27, 23, 24, 25, 22, 10, 28, 29, 30, 31	32.521,82	0,808750	0,873947	99,33	38,80	39,93	20,60
	13, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 19, 20, 18, 27, 23, 24, 25, 22, 10, 28, 29, 30, 31	32.433,61	0,803313	0,866494	98,78	38,70	39,66	20,42
	13, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 25, 22, 10, 28, 29, 30, 31	32.329,81	0,805875	0,861050	98,65	38,58	39,78	20,29

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 30, 3, 12, 5, 6, 7, 8, 9, 26, 11, 2, 13, 14, 15, 16, 17, 18, 19, 20, 21, 27, 23, 24, 25, 22, 10, 28, 29, 4, 31	32.227,51	0,809500	0,866574	98,84	38,45	39,96	20,42
	0, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 8, 20, 21, 10, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.728,74	0,810250	0,858346	99,28	39,05	40,00	20,23
	0, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 10, 20, 21, 8, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.693,08	0,810625	0,858682	99,26	39,01	40,02	20,24
	13, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 10, 20, 21, 27, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.481,91	0,808563	0,865081	99,06	38,76	39,92	20,39
	0, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 13, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.362,85	0,808188	0,865632	98,91	38,61	39,90	20,40

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Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 12, 5, 6, 27, 22, 9, 26, 11, 13, 14, 25, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.796,97	0,802813	0,860093	97,84	37,94	39,63	20,27
	0, 1, 12, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 25, 2, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 30, 7, 10, 28, 29, 4, 31	31.462,30	0,806750	0,870141	97,87	37,54	39,83	20,51
	0, 1, 2, 3, 14, 5, 6, 27, 22, 9, 26, 11, 13, 12, 25, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	31.316,24	0,803625	0,852140	97,12	37,37	39,67	20,08
	0, 1, 12, 3, 13, 5, 6, 27, 22, 9, 26, 11, 28, 25, 2, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 30, 7, 10, 14, 29, 4, 31	30.703,38	0,804125	0,865361	96,73	36,63	39,70	20,39
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 16, 2, 25, 15, 13, 17, 18, 19, 28, 21, 8, 23, 24, 30, 7, 10, 14, 29, 4, 31	30.562,48	0,802938	0,864838	96,49	36,47	39,64	20,38

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 16, 2, 25, 15, 13, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.526,48	0,802938	0,864838	96,44	36,42	39,64	20,38
	0, 1, 12, 3, 20, 5, 6, 22, 27, 9, 26, 11, 16, 25, 2, 15, 13, 17, 18, 19, 28, 21, 8, 23, 24, 30, 7, 10, 14, 29, 4, 31	30.520,65	0,800875	0,866076	96,36	36,42	39,54	20,41
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 16, 25, 2, 15, 13, 17, 18, 19, 28, 21, 8, 23, 24, 30, 7, 10, 14, 29, 4, 31	30.413,15	0,802125	0,868574	96,36	36,29	39,60	20,47
	28, 1, 2, 3, 14, 5, 6, 27, 22, 9, 26, 11, 13, 12, 25, 15, 16, 17, 18, 19, 0, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	31.293,07	0,801688	0,857958	97,13	37,34	39,58	20,22
	0, 1, 2, 3, 14, 5, 6, 27, 22, 9, 26, 11, 13, 12, 25, 15, 28, 19, 18, 17, 16, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.724,70	0,805875	0,838996	96,22	36,66	39,78	19,77

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.257,44	0,802813	0,850008	95,77	36,10	39,63	20,03
	13, 1, 25, 3, 0, 5, 6, 27, 22, 9, 26, 11, 29, 12, 2, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 20, 14, 4, 31	30.160,06	0,798000	0,857619	95,59	35,99	39,40	20,21
	13, 1, 25, 3, 0, 5, 6, 27, 22, 9, 26, 11, 29, 12, 2, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 14, 4, 31	30.155,72	0,802938	0,851481	95,69	35,98	39,64	20,07
	29, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 0, 4, 31	30.018,41	0,801688	0,865748	95,80	35,82	39,58	20,40
	29, 15, 25, 1, 13, 5, 6, 27, 22, 3, 26, 11, 14, 12, 2, 24, 28, 17, 18, 19, 16, 21, 10, 23, 9, 30, 7, 8, 20, 0, 4, 31	29.920,13	0,799813	0,864727	95,56	35,70	39,48	20,38

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 15, 25, 1, 13, 5, 6, 27, 22, 3, 26, 11, 14, 12, 2, 24, 28, 17, 18, 19, 16, 21, 10, 23, 9, 30, 7, 8, 20, 29, 4, 31	29.905,90	0,800813	0,860540	95,50	35,68	39,53	20,28
	0, 15, 25, 18, 13, 5, 6, 27, 22, 3, 26, 11, 14, 12, 2, 24, 28, 17, 21, 19, 16, 1, 10, 23, 9, 30, 7, 8, 20, 29, 4, 31	29.796,33	0,803563	0,873612	95,81	35,55	39,67	20,59
	0, 15, 25, 18, 13, 5, 6, 27, 22, 3, 26, 11, 14, 12, 2, 24, 28, 17, 1, 19, 16, 21, 8, 23, 9, 30, 7, 10, 20, 29, 4, 31	29.595,04	0,802813	0,872928	95,52	35,31	39,63	20,57
	0, 15, 25, 18, 13, 5, 6, 27, 22, 3, 26, 11, 14, 12, 2, 24, 28, 17, 1, 19, 16, 21, 10, 23, 9, 30, 7, 8, 20, 29, 4, 31	29.559,04	0,802813	0,872928	95,47	35,27	39,63	20,57
	29, 15, 25, 18, 13, 5, 6, 27, 22, 3, 26, 11, 0, 12, 2, 24, 28, 17, 31, 19, 1, 21, 10, 23, 16, 30, 7, 8, 20, 14, 4, 9	29.487,72	0,804375	0,865002	95,28	35,18	39,71	20,38

*Continua na próxima página*

Tabela 34 – Resultados do RSA para a rede Geant2

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Melhor custo x benefício	0, 15, 25, 18, 13, 5, 6, 27, 22, 3, 26, 11, 14, 12, 2, 24, 28, 17, 31, 19, 1, 21, 10, 23, 16, 30, 7, 8, 20, 29, 4, 9	29.386,38	0,799188	0,854107	94,65			

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	33.523,96	0,752125	0,892007	100,00	40,00	40,00	20,00
	0, 1, 2, 3, 4, 23, 6, 7, 27, 9, 10, 11, 12, 13, 14, 15, 16, 26, 18, 19, 20, 21, 22, 17, 24, 25, 5, 8, 28, 29, 30, 31	33.101,61	0,749313	0,871022	98,88	39,50	39,85	19,53
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 19, 18, 8, 20, 21, 22, 23, 24, 25, 17, 27, 28, 29, 30, 31	32.880,20	0,754938	0,881257	99,14	39,23	40,15	19,76

Continua na próxima página

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 27, 18, 8, 20, 21, 17, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.824,44	0,754625	0,884033	99,12	39,17	40,13	19,82
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 21, 10, 20, 18, 27, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.550,95	0,754313	0,885556	98,81	38,84	40,12	19,86
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 21, 8, 20, 18, 27, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.506,64	0,752625	0,894361	98,87	38,79	40,03	20,05
	13, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 19, 20, 18, 27, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.477,58	0,750938	0,881502	98,45	38,75	39,94	19,76
	13, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 8, 20, 18, 27, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.418,43	0,750063	0,899954	98,75	38,68	39,89	20,18
	13, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 29, 14, 15, 16, 17, 21, 8, 20, 18, 27, 23, 24, 25, 22, 19, 28, 0, 30, 31	32.398,26	0,750063	0,876321	98,20	38,66	39,89	19,65

*Continua na próxima página*

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 29, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 22, 8, 28, 0, 30, 31	32.254,48	0,749938	0,878750	98,07	38,49	39,88	19,70
	13, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 7, 8, 28, 29, 30, 31	32.190,99	0,750250	0,874942	97,93	38,41	39,90	19,62
	13, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 29, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 7, 8, 28, 0, 30, 31	32.170,82	0,750813	0,889722	98,26	38,39	39,93	19,95
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 4, 7, 8, 28, 29, 30, 31	32.077,04	0,749375	0,885011	97,97	38,27	39,85	19,84
	0, 11, 2, 3, 13, 5, 6, 27, 22, 9, 26, 1, 14, 12, 25, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.817,72	0,758250	0,880645	98,04	37,96	40,33	19,75
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.635,91	0,748250	0,895771	97,63	37,75	39,79	20,08

Continua na próxima página

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 11, 2, 3, 0, 5, 6, 27, 22, 9, 26, 1, 14, 12, 25, 15, 28, 17, 21, 19, 20, 18, 10, 23, 24, 30, 7, 8, 16, 29, 4, 31	31.621,81	0,751188	0,897063	97,79	37,73	39,95	20,11
	0, 11, 2, 3, 13, 5, 6, 27, 22, 9, 26, 1, 14, 12, 25, 15, 28, 17, 21, 19, 20, 18, 10, 23, 24, 30, 7, 8, 16, 29, 4, 31	31.390,76	0,753938	0,892558	97,56	37,45	40,10	20,01
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 21, 19, 20, 18, 10, 23, 24, 30, 7, 8, 16, 29, 4, 31	31.208,95	0,746500	0,894802	97,00	37,24	39,70	20,06
	13, 11, 2, 3, 0, 5, 6, 27, 22, 9, 26, 1, 14, 12, 25, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.659,98	0,746688	0,881554	96,06	36,58	39,71	19,77
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.261,78	0,741000	0,893709	95,55	36,11	39,41	20,04

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 25, 3, 28, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 13, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.203,40	0,742188	0,897387	95,63	36,04	39,47	20,12
	0, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.004,18	0,744938	0,888209	95,33	35,80	39,62	19,91
	0, 1, 2, 3, 4, 5, 6, 7, 26, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 25, 22, 27, 28, 29, 30, 31	33.202,88	0,754313	0,881582	99,50	39,62	40,12	19,77
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 25, 22, 27, 28, 29, 30, 31	32.932,24	0,754438	0,878821	99,12	39,29	40,12	19,70
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 22, 27, 28, 29, 30, 31	32.852,27	0,754750	0,891644	99,33	39,20	40,14	19,99

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 22, 27, 28, 29, 30, 31	32.764,07	0,750375	0,890867	98,97	39,09	39,91	19,97
	13, 1, 2, 3, 4, 5, 6, 22, 8, 9, 26, 11, 12, 29, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 7, 27, 28, 0, 30, 31	32.748,57	0,748125	0,890850	98,84	39,07	39,79	19,97
	28, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 29, 14, 15, 16, 17, 18, 19, 20, 21, 27, 23, 24, 25, 22, 8, 0, 13, 30, 31	32.617,63	0,748750	0,888008	98,65	38,92	39,82	19,91
	13, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 27, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.496,75	0,749125	0,887055	98,50	38,77	39,84	19,89
	13, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 8, 20, 21, 27, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.437,60	0,750063	0,888767	98,52	38,70	39,89	19,93
	0, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.382,02	0,751438	0,881596	98,37	38,64	39,96	19,77

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.293,82	0,749500	0,886769	98,28	38,53	39,86	19,88
	13, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 29, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 22, 8, 28, 0, 30, 31	32.273,64	0,748938	0,879322	98,05	38,51	39,83	19,72
	13, 21, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 29, 14, 15, 16, 17, 18, 19, 20, 1, 10, 23, 24, 25, 7, 8, 28, 0, 30, 31	32.267,42	0,749875	0,880859	98,13	38,50	39,88	19,75
	0, 1, 2, 3, 4, 5, 6, 7, 26, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 8, 27, 28, 29, 30, 31	33.488,51	0,757125	0,885918	100,09	39,96	40,27	19,86
	0, 1, 2, 3, 4, 5, 6, 7, 26, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 8, 28, 29, 30, 31	33.349,08	0,754938	0,877671	99,62	39,79	40,15	19,68
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 8, 27, 28, 29, 30, 31	33.217,87	0,754938	0,881385	99,55	39,63	40,15	19,76

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 28, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 8, 13, 29, 30, 31	33.093,79	0,754938	0,883347	99,44	39,49	40,15	19,81
	28, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 25, 22, 27, 13, 29, 30, 31	32.914,69	0,750625	0,882029	98,97	39,27	39,92	19,78
	13, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 25, 22, 27, 28, 29, 30, 31	32.844,03	0,749438	0,890720	99,02	39,19	39,86	19,97
	0, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 13, 14, 15, 20, 17, 21, 19, 16, 18, 10, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.770,39	0,752438	0,865036	98,51	39,10	40,02	19,40
	13, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 0, 14, 15, 20, 17, 21, 19, 16, 18, 10, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.667,52	0,749375	0,874242	98,43	38,98	39,85	19,60

*Continua na próxima página*

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 27, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.584,95	0,753938	0,893263	99,00	38,88	40,10	20,03
	0, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 28, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 22, 8, 13, 29, 30, 31	32.460,02	0,752125	0,881168	98,49	38,73	40,00	19,76
	13, 1, 2, 3, 4, 5, 6, 22, 27, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 7, 8, 28, 29, 30, 31	32.298,49	0,744625	0,897129	98,25	38,54	39,60	20,11
	28, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 7, 8, 13, 29, 30, 31	32.261,65	0,752813	0,885929	98,39	38,49	40,04	19,86
	13, 1, 30, 3, 2, 5, 6, 27, 22, 9, 26, 11, 25, 29, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 12, 7, 8, 28, 0, 4, 31	32.166,21	0,746563	0,908362	98,45	38,38	39,70	20,37
	0, 1, 30, 3, 2, 5, 6, 27, 22, 9, 26, 11, 25, 13, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 12, 7, 8, 28, 29, 4, 31	32.092,05	0,751313	0,897887	98,38	38,29	39,96	20,13

Continua na próxima página

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 30, 3, 2, 5, 6, 27, 22, 9, 26, 11, 25, 13, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 12, 7, 8, 28, 29, 4, 31	32.090,47	0,749750	0,892864	98,18	38,29	39,87	20,02
	0, 1, 2, 3, 12, 5, 6, 27, 22, 9, 26, 11, 25, 13, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	32.054,69	0,747875	0,898772	98,17	38,25	39,77	20,15
	0, 1, 2, 3, 12, 5, 6, 27, 22, 9, 26, 11, 25, 13, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	32.053,10	0,747875	0,887545	97,92	38,25	39,77	19,90
	0, 1, 30, 3, 14, 5, 6, 27, 22, 9, 26, 11, 13, 2, 25, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 12, 7, 8, 28, 29, 4, 31	31.918,03	0,761625	0,892626	98,60	38,08	40,51	20,01
	0, 1, 12, 3, 14, 5, 6, 27, 22, 9, 26, 11, 13, 2, 25, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.478,52	0,752938	0,887119	97,49	37,56	40,04	19,89

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 12, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 2, 25, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.454,71	0,751688	0,896370	97,61	37,53	39,98	20,10
	0, 1, 12, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 25, 2, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.426,31	0,756063	0,896431	97,81	37,50	40,21	20,10
	29, 1, 12, 3, 28, 5, 6, 27, 22, 9, 26, 11, 14, 25, 2, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 13, 0, 4, 31	31.422,87	0,749125	0,892546	97,35	37,49	39,84	20,01
	0, 1, 12, 3, 28, 5, 6, 27, 22, 9, 26, 11, 14, 25, 2, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 13, 29, 4, 31	31.410,82	0,751563	0,887790	97,35	37,48	39,97	19,91
	0, 1, 12, 3, 28, 5, 6, 27, 10, 9, 26, 11, 13, 25, 2, 15, 16, 17, 21, 19, 20, 18, 22, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.809,71	0,746563	0,894011	96,51	36,76	39,70	20,04

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 12, 3, 13, 5, 6, 27, 22, 9, 26, 11, 28, 25, 2, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.667,39	0,750625	0,886631	96,39	36,59	39,92	19,88
	0, 1, 12, 3, 28, 5, 6, 27, 22, 9, 26, 11, 13, 25, 2, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.579,78	0,746875	0,884247	96,03	36,49	39,72	19,83
	29, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 25, 2, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 14, 0, 4, 31	30.556,06	0,741875	0,898788	96,07	36,46	39,45	20,15
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 25, 2, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.532,68	0,738813	0,902236	95,95	36,43	39,29	20,23
	29, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 16, 25, 2, 15, 28, 17, 21, 19, 13, 18, 8, 23, 24, 30, 7, 10, 14, 0, 4, 31	30.487,94	0,740750	0,895522	95,85	36,38	39,40	20,08

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 16, 25, 2, 15, 28, 17, 21, 19, 13, 18, 8, 23, 24, 30, 7, 10, 14, 29, 4, 31	30.452,98	0,742313	0,879813	95,54	36,34	39,48	19,73
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 16, 25, 2, 15, 13, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.377,16	0,740125	0,897203	95,72	36,25	39,36	20,12
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 16, 25, 2, 15, 28, 17, 18, 19, 13, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.348,58	0,740375	0,888418	95,51	36,21	39,38	19,92
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 26, 18, 19, 20, 21, 22, 17, 24, 25, 23, 27, 28, 29, 30, 31	33.181,27	0,754500	0,894133	99,77	39,59	40,13	20,05
	13, 1, 2, 3, 4, 23, 6, 7, 8, 9, 10, 11, 12, 0, 14, 15, 16, 26, 18, 19, 20, 21, 22, 17, 24, 25, 5, 27, 28, 29, 30, 31	32.775,54	0,749000	0,881080	98,70	39,11	39,83	19,75

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 27, 23, 24, 25, 22, 10, 28, 29, 30, 31	32.540,99	0,755063	0,883470	98,79	38,83	40,16	19,81
	13, 1, 2, 3, 4, 5, 6, 22, 8, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 27, 23, 24, 25, 7, 10, 28, 29, 30, 31	32.457,45	0,746750	0,888092	98,35	38,73	39,71	19,91
	0, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 25, 22, 10, 28, 29, 30, 31	32.418,02	0,752125	0,884940	98,52	38,68	40,00	19,84
	13, 1, 2, 3, 4, 5, 6, 27, 8, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 7, 10, 28, 29, 30, 31	32.359,13	0,744813	0,895974	98,31	38,61	39,61	20,09
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 26, 18, 19, 20, 21, 22, 23, 24, 25, 17, 27, 28, 29, 30, 31	33.341,68	0,753938	0,894463	99,93	39,78	40,10	20,06

*Continua na próxima página*

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 19, 11, 12, 13, 14, 15, 16, 26, 18, 10, 20, 21, 22, 23, 24, 25, 17, 27, 28, 29, 30, 31	33.300,77	0,753000	0,871691	99,32	39,73	40,05	19,54
	13, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 0, 14, 15, 16, 26, 18, 19, 20, 21, 22, 23, 24, 25, 17, 27, 28, 29, 30, 31	33.253,47	0,749813	0,891712	99,55	39,68	39,88	19,99
	13, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 29, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 22, 27, 28, 0, 30, 31	32.743,90	0,749625	0,886312	98,81	39,07	39,87	19,87
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 10, 20, 21, 27, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.570,11	0,753250	0,886838	98,81	38,86	40,06	19,88
	29, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 22, 8, 28, 0, 30, 31	32.455,40	0,751000	0,891016	98,64	38,73	39,94	19,98
	13, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 7, 8, 28, 29, 30, 31	32.192,58	0,749438	0,893252	98,30	38,41	39,86	20,03

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 29, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 7, 8, 28, 0, 30, 31	32.172,40	0,748063	0,879053	97,88	38,39	39,78	19,71
	29, 1, 2, 3, 28, 5, 6, 27, 22, 9, 26, 11, 13, 4, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 7, 8, 12, 0, 30, 31	32.010,36	0,756438	0,877184	98,09	38,19	40,23	19,67
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 28, 4, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 7, 8, 30, 29, 12, 31	31.659,33	0,755500	0,884865	97,79	37,78	40,18	19,84
	29, 1, 2, 3, 28, 5, 6, 27, 22, 9, 26, 11, 13, 4, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 7, 8, 30, 0, 12, 31	31.594,19	0,755313	0,873474	97,45	37,70	40,17	19,58
	0, 1, 2, 3, 28, 5, 6, 27, 22, 9, 26, 11, 13, 4, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 7, 8, 30, 29, 12, 31	31.566,66	0,755875	0,883925	97,68	37,66	40,20	19,82
	0, 1, 2, 3, 28, 5, 6, 27, 22, 9, 26, 11, 13, 4, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 7, 8, 30, 29, 12, 31	31.565,07	0,754563	0,883150	97,59	37,66	40,13	19,80

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 4, 14, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 25, 7, 8, 30, 29, 12, 31	31.524,04	0,752125	0,884535	97,45	37,61	40,00	19,83
	0, 1, 2, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 30, 14, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 25, 7, 8, 4, 29, 12, 31	31.514,97	0,753375	0,888348	97,59	37,60	40,07	19,92
	0, 1, 2, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 4, 14, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 25, 7, 8, 30, 29, 12, 31	31.513,63	0,751000	0,881576	97,31	37,60	39,94	19,77
	0, 1, 2, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 30, 14, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 25, 7, 8, 4, 29, 12, 31	31.504,56	0,751688	0,892469	97,58	37,59	39,98	20,01
	0, 1, 2, 3, 14, 5, 6, 27, 22, 9, 26, 11, 13, 4, 30, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 25, 7, 8, 20, 29, 12, 31	31.351,54	0,746813	0,898299	97,27	37,41	39,72	20,14
	0, 1, 2, 3, 14, 5, 6, 27, 22, 9, 26, 11, 13, 4, 25, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 29, 12, 31	31.342,07	0,744938	0,888145	96,93	37,40	39,62	19,91

*Continua na próxima página*

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	14, 1, 2, 3, 0, 5, 6, 27, 22, 9, 26, 11, 13, 12, 25, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.631,21	0,744875	0,897780	96,29	36,55	39,61	20,13
	0, 1, 2, 3, 14, 5, 6, 27, 22, 9, 26, 11, 13, 12, 25, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.389,79	0,746063	0,890673	95,91	36,26	39,68	19,97
	0, 1, 25, 3, 13, 5, 6, 22, 27, 9, 26, 11, 14, 12, 2, 15, 28, 17, 18, 19, 16, 21, 8, 23, 24, 30, 7, 10, 20, 29, 4, 31	30.147,67	0,744313	0,880629	95,30	35,97	39,58	19,74
	0, 1, 25, 3, 13, 5, 6, 22, 27, 9, 26, 11, 14, 12, 2, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.111,68	0,744250	0,880632	95,25	35,93	39,58	19,74
	0, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.008,52	0,738750	0,897240	95,21	35,81	39,29	20,12

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 25, 3, 13, 5, 6, 27, 22, 18, 26, 11, 14, 12, 2, 24, 28, 17, 31, 19, 16, 21, 10, 23, 15, 30, 7, 8, 20, 29, 4, 9	30.001,96	0,741750	0,885859	95,11	35,80	39,45	19,86
	13, 3, 25, 1, 29, 5, 6, 27, 22, 31, 26, 11, 14, 12, 2, 24, 28, 17, 21, 19, 16, 18, 10, 23, 15, 30, 7, 8, 20, 0, 4, 9	29.891,95	0,747813	0,874013	95,03	35,67	39,77	19,60
	0, 31, 25, 3, 13, 5, 6, 27, 22, 1, 26, 11, 14, 12, 2, 24, 28, 17, 18, 19, 16, 21, 10, 23, 15, 30, 7, 8, 20, 29, 4, 9	29.876,31	0,738813	0,895082	95,01	35,65	39,29	20,07
	29, 3, 25, 1, 13, 5, 6, 27, 22, 31, 26, 11, 14, 12, 2, 24, 28, 17, 21, 19, 16, 18, 8, 23, 15, 30, 7, 10, 20, 0, 4, 9	29.759,32	0,748688	0,876816	94,98	35,51	39,82	19,66
	29, 3, 25, 1, 13, 5, 6, 27, 22, 31, 26, 11, 14, 12, 2, 24, 28, 17, 21, 19, 16, 18, 10, 23, 15, 30, 7, 8, 20, 0, 4, 9	29.723,32	0,748563	0,876810	94,93	35,47	39,81	19,66

*Continua na próxima página*

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	29, 15, 25, 1, 13, 5, 6, 27, 22, 18, 26, 11, 14, 12, 2, 24, 28, 17, 31, 19, 16, 21, 10, 23, 3, 30, 7, 8, 20, 0, 4, 9	29.680,52	0,740563	0,881528	94,56	35,41	39,39	19,77
	0, 15, 25, 1, 13, 5, 6, 27, 22, 18, 26, 11, 14, 12, 2, 24, 28, 17, 31, 19, 16, 21, 10, 23, 3, 30, 7, 8, 20, 29, 4, 9	29.666,29	0,740875	0,880393	94,54	35,40	39,40	19,74
	0, 15, 25, 18, 13, 5, 6, 27, 22, 3, 26, 11, 14, 12, 2, 24, 28, 17, 1, 19, 31, 21, 10, 23, 16, 30, 7, 8, 20, 29, 4, 9	29.488,41	0,737750	0,893334	94,45	35,18	39,24	20,03
	0, 15, 25, 18, 13, 5, 6, 27, 22, 3, 26, 11, 14, 12, 2, 24, 28, 17, 31, 19, 1, 21, 10, 23, 16, 30, 7, 8, 20, 29, 4, 9	29.386,38	0,737375	0,896003	94,37	35,06	39,22	20,09
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 26, 20, 21, 22, 23, 24, 25, 19, 27, 28, 29, 30, 31	33.043,72	0,752750	0,878424	99,16	39,43	40,03	19,70

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 8, 20, 21, 22, 23, 24, 25, 19, 27, 28, 29, 30, 31	32.908,57	0,755250	0,876892	99,09	39,27	40,17	19,66
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 19, 18, 8, 20, 21, 22, 17, 24, 25, 23, 27, 28, 29, 30, 31	32.800,00	0,750750	0,889120	99,00	39,14	39,93	19,94
	0, 1, 2, 3, 4, 23, 5, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 8, 20, 21, 22, 19, 24, 25, 6, 27, 28, 29, 30, 31	32.756,77	0,750000	0,873107	98,55	39,08	39,89	19,58
	0, 1, 2, 3, 4, 23, 5, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 21, 8, 20, 18, 22, 19, 24, 25, 6, 27, 28, 29, 30, 31	32.737,61	0,753250	0,877753	98,80	39,06	40,06	19,68
	0, 1, 2, 3, 4, 23, 5, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 19, 18, 8, 20, 21, 22, 17, 24, 25, 6, 27, 28, 29, 30, 31	32.285,17	0,747313	0,876306	97,91	38,52	39,74	19,65
	13, 1, 2, 3, 4, 23, 5, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 19, 21, 8, 20, 18, 22, 17, 24, 25, 6, 27, 28, 29, 30, 31	32.170,35	0,749625	0,884500	98,08	38,38	39,87	19,83

*Continua na próxima página*

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 21, 2, 3, 4, 23, 5, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 19, 1, 8, 20, 18, 22, 17, 24, 25, 6, 27, 28, 29, 30, 31	32.160,27	0,747938	0,880928	97,90	38,37	39,78	19,75
	13, 21, 30, 3, 25, 23, 5, 7, 10, 9, 26, 11, 2, 0, 14, 15, 16, 19, 1, 8, 20, 18, 22, 17, 24, 12, 6, 27, 28, 29, 4, 31	32.114,11	0,747563	0,905767	98,38	38,32	39,76	20,31
	13, 21, 25, 3, 12, 23, 5, 7, 10, 9, 19, 11, 2, 0, 14, 15, 16, 26, 1, 8, 20, 18, 22, 17, 24, 30, 6, 27, 28, 29, 4, 31	31.742,39	0,744938	0,896668	97,60	37,87	39,62	20,10
	13, 21, 25, 3, 12, 23, 5, 7, 10, 9, 26, 11, 2, 0, 14, 15, 16, 19, 18, 8, 20, 1, 22, 17, 24, 30, 6, 27, 28, 29, 4, 31	31.431,39	0,741188	0,892426	96,93	37,50	39,42	20,01
	13, 21, 25, 3, 12, 23, 5, 7, 10, 9, 26, 11, 2, 0, 14, 15, 16, 19, 1, 8, 20, 18, 22, 17, 24, 30, 6, 27, 28, 29, 4, 31	31.389,40	0,740375	0,897389	96,95	37,45	39,38	20,12

*Continua na próxima página*

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 21, 25, 3, 13, 23, 5, 7, 8, 9, 26, 11, 14, 12, 2, 15, 16, 19, 1, 10, 28, 18, 22, 17, 24, 30, 6, 27, 20, 29, 4, 31	31.015,04	0,742813	0,889592	96,46	37,01	39,50	19,95
	0, 21, 25, 3, 13, 23, 5, 7, 10, 9, 26, 11, 14, 12, 2, 15, 16, 19, 1, 8, 28, 18, 22, 17, 24, 30, 6, 27, 20, 29, 4, 31	30.969,93	0,742750	0,872591	96,02	36,95	39,50	19,56
	0, 21, 25, 3, 13, 23, 5, 7, 10, 9, 26, 11, 14, 12, 2, 15, 28, 19, 1, 8, 20, 18, 22, 17, 24, 30, 6, 27, 16, 29, 4, 31	30.930,83	0,739500	0,894933	96,30	36,91	39,33	20,07
	0, 21, 25, 3, 13, 23, 5, 7, 10, 9, 26, 11, 14, 12, 2, 15, 28, 19, 1, 8, 16, 18, 22, 17, 24, 30, 6, 27, 20, 29, 4, 31	29.983,66	0,738688	0,882952	94,86	35,78	39,29	19,80
	29, 21, 25, 3, 13, 23, 5, 7, 10, 9, 26, 11, 0, 12, 2, 15, 28, 19, 1, 8, 16, 18, 22, 17, 24, 30, 6, 27, 20, 14, 4, 31	29.964,87	0,741938	0,892346	95,22	35,75	39,46	20,01

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 21, 25, 3, 13, 23, 5, 7, 10, 9, 26, 11, 29, 12, 2, 15, 28, 19, 1, 8, 16, 18, 22, 17, 24, 30, 6, 27, 20, 14, 4, 31	29.931,34	0,745000	0,893519	95,37	35,71	39,62	20,03
	0, 9, 25, 18, 13, 23, 5, 7, 10, 21, 26, 11, 29, 12, 2, 24, 28, 19, 1, 8, 16, 3, 22, 17, 15, 30, 6, 27, 20, 14, 4, 31	29.875,47	0,759438	0,887134	95,93	35,65	40,39	19,89
	0, 9, 25, 18, 13, 23, 5, 7, 10, 1, 26, 11, 29, 12, 2, 24, 28, 19, 21, 8, 16, 3, 22, 17, 15, 30, 6, 27, 20, 14, 4, 31	29.678,88	0,756500	0,877054	95,31	35,41	40,23	19,66
	0, 11, 25, 18, 13, 23, 5, 7, 10, 31, 26, 1, 14, 12, 2, 24, 28, 19, 21, 8, 16, 3, 22, 17, 15, 30, 6, 27, 20, 29, 4, 9	29.660,67	0,746063	0,877375	94,74	35,39	39,68	19,67
	0, 11, 25, 18, 13, 23, 5, 7, 10, 31, 26, 1, 29, 12, 2, 24, 28, 19, 21, 8, 16, 3, 22, 17, 15, 30, 6, 27, 20, 14, 4, 9	29.608,35	0,750750	0,876338	94,90	35,33	39,93	19,65

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 9, 25, 18, 13, 23, 5, 7, 10, 11, 26, 1, 14, 12, 2, 24, 28, 19, 21, 8, 16, 3, 22, 17, 15, 30, 6, 27, 20, 29, 4, 31	29.509,88	0,753500	0,884192	95,11	35,21	40,07	19,82
	0, 9, 25, 18, 13, 23, 5, 7, 10, 11, 26, 1, 29, 12, 2, 24, 28, 19, 21, 8, 16, 3, 22, 17, 15, 30, 6, 27, 20, 14, 4, 31	29.457,57	0,759750	0,885256	95,40	35,15	40,41	19,85
	0, 21, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 1, 22, 23, 24, 25, 10, 27, 28, 29, 30, 31	33.276,11	0,755938	0,897172	100,02	39,70	40,20	20,12
	0, 1, 2, 3, 4, 5, 6, 27, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 7, 10, 28, 29, 30, 31	32.447,33	0,749063	0,878309	98,25	38,72	39,84	19,69
	0, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 25, 7, 10, 28, 29, 30, 31	32.315,19	0,753938	0,883648	98,47	38,56	40,10	19,81
	0, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 7, 8, 28, 29, 30, 31	32.279,20	0,753813	0,883739	98,42	38,51	40,09	19,81

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 29, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 25, 7, 10, 28, 0, 30, 31	32.206,81	0,750938	0,889720	98,31	38,43	39,94	19,95
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 28, 12, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 7, 8, 4, 29, 30, 31	32.097,41	0,753438	0,889972	98,32	38,30	40,07	19,95
	13, 1, 25, 3, 12, 5, 6, 27, 22, 9, 26, 11, 2, 29, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 4, 7, 8, 28, 0, 30, 31	31.812,20	0,744313	0,893500	97,58	37,96	39,58	20,03
	13, 1, 25, 3, 12, 5, 6, 27, 22, 9, 26, 11, 2, 29, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 30, 7, 10, 28, 0, 4, 31	31.435,95	0,744500	0,901462	97,32	37,51	39,59	20,21
	13, 1, 25, 3, 12, 5, 6, 27, 22, 9, 26, 11, 2, 29, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 28, 0, 4, 31	31.399,96	0,744500	0,901467	97,27	37,47	39,59	20,21

*Continua na próxima página*

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 25, 3, 28, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 30, 7, 8, 13, 29, 4, 31	31.361,96	0,747813	0,888170	97,10	37,42	39,77	19,91
	0, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 28, 12, 2, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	31.092,81	0,754688	0,879599	96,96	37,10	40,14	19,72
	0, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 28, 12, 2, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	31.091,23	0,753750	0,881691	96,95	37,10	40,09	19,77
	29, 1, 25, 3, 13, 5, 6, 22, 27, 9, 26, 11, 14, 12, 2, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 20, 0, 4, 31	31.041,03	0,743688	0,882868	96,38	37,04	39,55	19,80
	29, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 20, 0, 4, 31	30.933,53	0,745750	0,876357	96,22	36,91	39,66	19,65

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.930,64	0,746188	0,884613	96,42	36,91	39,68	19,83
	0, 1, 25, 3, 16, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 13, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.313,95	0,743625	0,886192	95,59	36,17	39,55	19,87
	29, 1, 25, 3, 16, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 13, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 20, 0, 4, 31	30.305,27	0,742750	0,884932	95,50	36,16	39,50	19,84
	29, 1, 25, 3, 16, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 28, 17, 18, 19, 13, 21, 10, 23, 24, 30, 7, 8, 20, 0, 4, 31	30.295,72	0,743125	0,877921	95,35	36,15	39,52	19,68
	0, 1, 25, 3, 16, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 28, 17, 18, 19, 13, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.281,49	0,743750	0,882769	95,48	36,13	39,55	19,79

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	29, 1, 25, 3, 28, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 13, 17, 18, 19, 16, 21, 8, 23, 24, 30, 7, 10, 20, 0, 4, 31	30.230,72	0,743250	0,886533	95,48	36,07	39,53	19,88
	0, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 29, 12, 2, 15, 28, 17, 21, 19, 16, 18, 8, 23, 24, 30, 7, 10, 20, 14, 4, 31	30.122,93	0,741688	0,891082	95,37	35,94	39,44	19,98
	0, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 29, 12, 2, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 20, 14, 4, 31	30.086,93	0,741500	0,891077	95,31	35,90	39,43	19,98
	0, 1, 2, 3, 4, 5, 6, 7, 19, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 26, 20, 21, 22, 23, 24, 25, 8, 27, 28, 29, 30, 31	33.195,66	0,751250	0,890564	99,53	39,61	39,95	19,97
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 10, 27, 28, 29, 30, 31	33.193,93	0,755063	0,876599	99,42	39,61	40,16	19,65

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 8, 27, 28, 29, 30, 31	33.129,66	0,750125	0,883221	99,23	39,53	39,89	19,80
	13, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 19, 20, 18, 22, 23, 24, 25, 8, 27, 28, 29, 30, 31	33.110,50	0,753250	0,885905	99,43	39,51	40,06	19,86
	13, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 10, 27, 28, 29, 30, 31	33.105,72	0,750750	0,897727	99,56	39,50	39,93	20,13
	0, 1, 2, 3, 4, 5, 6, 7, 19, 9, 10, 11, 12, 13, 14, 15, 16, 26, 18, 17, 20, 21, 8, 23, 24, 25, 22, 27, 28, 29, 30, 31	33.087,51	0,753938	0,882168	99,36	39,48	40,10	19,78
	13, 21, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 1, 22, 23, 24, 25, 27, 8, 28, 29, 30, 31	33.009,77	0,750438	0,879264	99,01	39,39	39,91	19,71
	13, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 10, 20, 21, 22, 23, 24, 25, 19, 27, 28, 29, 30, 31	32.864,68	0,749500	0,884347	98,90	39,21	39,86	19,83

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 4, 5, 6, 7, 22, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 27, 8, 28, 29, 30, 31	32.699,25	0,751938	0,891074	98,99	39,02	39,99	19,98
	13, 1, 2, 3, 4, 5, 6, 7, 22, 9, 26, 11, 12, 29, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25, 27, 8, 28, 0, 30, 31	32.679,07	0,750000	0,889654	98,83	38,99	39,89	19,95
	13, 1, 2, 3, 4, 5, 6, 7, 19, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 8, 20, 18, 27, 23, 24, 25, 22, 10, 28, 29, 30, 31	32.623,46	0,752000	0,883859	98,74	38,93	39,99	19,82
	13, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 27, 23, 24, 25, 22, 10, 28, 29, 30, 31	32.452,78	0,748563	0,878297	98,23	38,72	39,81	19,69
	13, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 19, 20, 18, 8, 23, 24, 25, 22, 10, 28, 29, 30, 31	32.310,65	0,748250	0,887069	98,24	38,55	39,79	19,89
	13, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 29, 14, 15, 16, 17, 21, 19, 20, 18, 8, 23, 24, 25, 22, 10, 28, 0, 30, 31	32.290,47	0,750000	0,882758	98,21	38,53	39,89	19,79

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 19, 20, 18, 8, 23, 24, 25, 7, 10, 28, 29, 30, 31	32.228,57	0,749563	0,893230	98,35	38,45	39,86	20,03
	28, 1, 2, 3, 4, 5, 6, 27, 22, 9, 26, 11, 12, 29, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 7, 8, 13, 0, 30, 31	32.197,24	0,751563	0,887633	98,29	38,42	39,97	19,90
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 4, 7, 8, 28, 29, 30, 31	32.075,46	0,750250	0,883203	97,97	38,27	39,90	19,80
	28, 1, 2, 3, 29, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 13, 17, 21, 19, 20, 18, 10, 23, 24, 4, 7, 8, 16, 0, 30, 31	31.904,05	0,747688	0,886843	97,72	38,07	39,76	19,88
	13, 1, 2, 3, 29, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 21, 19, 20, 18, 10, 23, 24, 4, 7, 8, 16, 0, 30, 31	31.860,56	0,748563	0,888035	97,74	38,02	39,81	19,91
	29, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 21, 19, 20, 18, 10, 23, 24, 4, 7, 8, 16, 0, 30, 31	31.698,00	0,747563	0,888613	97,50	37,82	39,76	19,92

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 21, 19, 20, 18, 10, 23, 24, 4, 7, 8, 16, 29, 30, 31	31.650,09	0,747313	0,886540	97,39	37,76	39,74	19,88
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 18, 19, 20, 21, 10, 23, 24, 4, 7, 8, 16, 29, 30, 31	31.648,50	0,747188	0,892566	97,51	37,76	39,74	20,01
	13, 1, 2, 3, 0, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 16, 29, 4, 31	31.438,42	0,744813	0,900399	97,31	37,51	39,61	20,19
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 16, 29, 4, 31	31.207,37	0,745813	0,897635	97,03	37,24	39,66	20,13
	13, 1, 2, 3, 0, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 4, 7, 8, 20, 29, 30, 31	30.919,30	0,743938	0,886492	96,33	36,89	39,56	19,88

*Continua na próxima página*

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 0, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.478,17	0,742063	0,885145	95,68	36,37	39,46	19,85
	29, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 20, 0, 4, 31	30.022,75	0,739563	0,895029	95,22	35,82	39,33	20,07
	0, 9, 25, 3, 13, 5, 6, 27, 22, 11, 26, 1, 14, 12, 2, 24, 28, 17, 21, 19, 16, 18, 10, 23, 15, 30, 7, 8, 20, 29, 4, 31	30.000,31	0,748813	0,879340	95,34	35,80	39,82	19,72
	29, 9, 25, 18, 13, 5, 6, 27, 22, 11, 26, 1, 14, 12, 2, 24, 28, 17, 21, 19, 16, 3, 10, 23, 15, 30, 7, 8, 20, 0, 4, 31	29.527,02	0,741688	0,883871	94,49	35,23	39,44	19,82
	0, 9, 25, 18, 13, 5, 6, 27, 22, 11, 26, 1, 14, 12, 2, 24, 28, 17, 21, 19, 16, 3, 10, 23, 15, 30, 7, 8, 20, 29, 4, 31	29.512,79	0,742250	0,893908	94,73	35,21	39,47	20,04

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 26, 18, 17, 20, 21, 22, 23, 24, 25, 19, 27, 28, 29, 30, 31	33.467,32	0,755750	0,887275	100,02	39,93	40,19	19,89
	0, 1, 30, 3, 12, 5, 6, 7, 8, 9, 10, 11, 2, 28, 14, 15, 16, 17, 18, 26, 20, 21, 22, 23, 24, 25, 19, 27, 13, 29, 4, 31	32.808,25	0,753938	0,893534	99,28	39,15	40,10	20,03
	0, 1, 2, 3, 4, 5, 6, 27, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 8, 20, 21, 22, 23, 24, 25, 7, 19, 28, 29, 30, 31	32.623,53	0,751438	0,885017	98,73	38,93	39,96	19,84
	0, 21, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 1, 10, 20, 18, 27, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.610,31	0,752750	0,887835	98,85	38,91	40,03	19,91
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 8, 20, 21, 27, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.525,80	0,754250	0,880560	98,67	38,81	40,11	19,74
	13, 21, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 0, 14, 15, 16, 17, 1, 19, 20, 18, 10, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.334,01	0,747625	0,895773	98,43	38,58	39,76	20,08

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 21, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 29, 14, 15, 16, 17, 1, 19, 20, 18, 10, 23, 24, 25, 22, 8, 28, 0, 30, 31	32.313,84	0,748813	0,886947	98,27	38,56	39,82	19,89
	13, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.274,65	0,749000	0,886098	98,21	38,51	39,83	19,87
	13, 21, 25, 3, 12, 5, 6, 27, 22, 9, 26, 11, 2, 0, 14, 15, 16, 17, 18, 19, 20, 1, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.516,73	0,742313	0,899811	97,26	37,61	39,48	20,17
	13, 1, 25, 3, 12, 5, 6, 27, 22, 9, 26, 11, 2, 0, 14, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.420,13	0,743688	0,888942	96,97	37,49	39,55	19,93
	0, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.381,06	0,748500	0,882520	97,04	37,44	39,81	19,79

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 25, 3, 28, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 13, 29, 4, 31	31.360,38	0,748438	0,884030	97,04	37,42	39,80	19,82
	0, 1, 4, 3, 20, 5, 6, 7, 8, 9, 26, 11, 12, 13, 2, 15, 16, 17, 18, 19, 29, 21, 22, 23, 24, 25, 10, 27, 28, 14, 30, 31	33.245,33	0,748688	0,906292	99,81	39,67	39,82	20,32
	0, 1, 4, 3, 20, 23, 6, 7, 8, 9, 10, 11, 12, 13, 2, 15, 16, 26, 18, 19, 14, 21, 22, 17, 24, 25, 5, 27, 28, 29, 30, 31	32.926,13	0,748188	0,894631	99,14	39,29	39,79	20,06
	0, 1, 4, 3, 20, 23, 6, 7, 8, 9, 10, 11, 12, 13, 2, 15, 16, 26, 18, 19, 29, 21, 22, 17, 24, 25, 5, 27, 28, 14, 30, 31	32.784,42	0,748563	0,892668	98,94	39,12	39,81	20,01
	0, 1, 2, 3, 4, 5, 6, 27, 10, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 7, 8, 28, 29, 30, 31	32.507,54	0,750375	0,875872	98,33	38,79	39,91	19,64
	0, 1, 4, 3, 20, 5, 6, 22, 8, 9, 26, 11, 12, 14, 2, 15, 16, 17, 18, 19, 28, 21, 27, 23, 24, 25, 7, 10, 29, 13, 30, 31	32.250,91	0,749250	0,883959	98,15	38,48	39,85	19,82

Continua na próxima página

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 4, 3, 20, 5, 6, 7, 27, 9, 26, 11, 12, 14, 2, 15, 16, 17, 18, 19, 13, 21, 10, 23, 24, 25, 22, 8, 29, 28, 30, 31	32.209,02	0,745250	0,881537	97,83	38,43	39,63	19,77
	13, 1, 25, 3, 20, 5, 6, 7, 8, 9, 26, 11, 12, 14, 2, 15, 16, 17, 18, 19, 28, 21, 27, 23, 24, 4, 22, 10, 0, 29, 30, 31	32.051,48	0,741938	0,896132	97,79	38,24	39,46	20,09
	13, 1, 25, 3, 20, 5, 6, 7, 27, 9, 26, 11, 12, 14, 2, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 4, 22, 8, 29, 0, 30, 31	31.836,08	0,741813	0,902632	97,68	37,99	39,45	20,24
	0, 1, 25, 3, 20, 5, 6, 7, 8, 9, 26, 11, 12, 14, 2, 15, 16, 17, 18, 19, 28, 21, 27, 23, 24, 30, 22, 10, 29, 13, 4, 31	31.757,03	0,746438	0,890922	97,56	37,89	39,70	19,98
	13, 1, 25, 3, 20, 5, 6, 7, 27, 9, 26, 11, 12, 14, 2, 15, 16, 17, 18, 19, 0, 21, 10, 23, 24, 30, 22, 8, 29, 28, 4, 31	31.706,29	0,742063	0,897628	97,42	37,83	39,46	20,13
	0, 1, 2, 3, 20, 5, 6, 7, 8, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 28, 21, 27, 23, 24, 30, 22, 10, 29, 13, 4, 31	31.673,81	0,746000	0,892281	97,47	37,79	39,67	20,01

*Continua na próxima página*

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	28, 1, 2, 3, 20, 5, 6, 22, 8, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 13, 21, 27, 23, 24, 30, 7, 10, 29, 0, 4, 31	31.591,18	0,740250	0,889741	97,01	37,69	39,37	19,95
	28, 1, 2, 3, 20, 5, 6, 7, 8, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 13, 21, 27, 23, 24, 30, 22, 10, 29, 0, 4, 31	31.586,50	0,741500	0,896602	97,23	37,69	39,43	20,10
	0, 1, 2, 3, 20, 5, 6, 7, 27, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 28, 21, 8, 23, 24, 30, 22, 10, 29, 13, 4, 31	31.550,84	0,745563	0,886877	97,18	37,65	39,65	19,88
	13, 1, 2, 3, 20, 5, 6, 7, 8, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 28, 21, 27, 23, 24, 30, 22, 10, 29, 0, 4, 31	31.462,85	0,739813	0,901856	97,11	37,54	39,35	20,22
	13, 1, 2, 3, 20, 5, 6, 22, 27, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 28, 21, 8, 23, 24, 30, 7, 10, 29, 0, 4, 31	31.344,55	0,735813	0,908911	96,91	37,40	39,13	20,38

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	13, 1, 2, 3, 20, 5, 6, 7, 27, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 28, 21, 8, 23, 24, 30, 22, 10, 29, 0, 4, 31	31.339,88	0,741125	0,890969	96,79	37,39	39,41	19,98
	13, 1, 2, 3, 20, 5, 6, 7, 27, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 30, 22, 8, 29, 0, 4, 31	31.303,88	0,738313	0,895810	96,70	37,35	39,27	20,09
	13, 1, 2, 3, 20, 5, 6, 27, 22, 9, 26, 11, 12, 14, 25, 15, 16, 17, 18, 19, 28, 21, 8, 23, 24, 30, 7, 10, 29, 0, 4, 31	31.237,06	0,736688	0,904386	96,73	37,27	39,18	20,28
	13, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 2, 14, 25, 15, 16, 17, 21, 19, 28, 18, 8, 23, 24, 30, 7, 10, 29, 0, 4, 31	31.169,28	0,737875	0,891447	96,42	37,19	39,24	19,99
	13, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 2, 14, 25, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 29, 0, 4, 31	31.069,13	0,737375	0,894738	96,35	37,07	39,22	20,06

*Continua na próxima página*

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 2, 25, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.688,08	0,745750	0,881047	96,03	36,62	39,66	19,75
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 25, 2, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.538,75	0,745188	0,886275	95,94	36,44	39,63	19,87
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 13, 25, 2, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.528,34	0,746250	0,892217	96,12	36,43	39,69	20,00
	29, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 16, 25, 2, 15, 28, 17, 18, 19, 13, 21, 10, 23, 24, 30, 7, 8, 14, 0, 4, 31	30.383,54	0,740750	0,890211	95,61	36,25	39,40	19,96
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 21, 19, 20, 18, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	33.504,80	0,754375	0,884188	99,92	39,98	40,12	19,82

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 10, 28, 29, 30, 31	32.955,59	0,755625	0,884612	99,34	39,32	40,19	19,83
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 21, 19, 20, 18, 22, 23, 24, 25, 27, 10, 28, 29, 30, 31	32.936,42	0,753063	0,884347	99,18	39,30	40,05	19,83
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 13, 14, 15, 16, 17, 21, 19, 20, 18, 27, 23, 24, 25, 22, 10, 28, 29, 30, 31	32.521,82	0,752875	0,890214	98,80	38,80	40,04	19,96
	13, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 0, 14, 15, 16, 17, 21, 19, 20, 18, 27, 23, 24, 25, 22, 10, 28, 29, 30, 31	32.433,61	0,749375	0,875470	98,18	38,70	39,85	19,63
	13, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 25, 22, 10, 28, 29, 30, 31	32.329,81	0,746875	0,888510	98,22	38,58	39,72	19,92

*Continua na próxima página*

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 30, 3, 12, 5, 6, 7, 8, 9, 26, 11, 2, 13, 14, 15, 16, 17, 18, 19, 20, 21, 27, 23, 24, 25, 22, 10, 28, 29, 4, 31	32.227,51	0,753063	0,893540	98,54	38,45	40,05	20,03
	0, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 8, 20, 21, 10, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.728,74	0,753563	0,891779	99,12	39,05	40,08	19,99
	0, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 13, 14, 15, 16, 17, 18, 10, 20, 21, 8, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.693,08	0,753750	0,886124	98,96	39,01	40,09	19,87
	13, 1, 2, 3, 4, 5, 6, 7, 8, 9, 26, 11, 12, 0, 14, 15, 16, 17, 18, 10, 20, 21, 27, 23, 24, 25, 22, 19, 28, 29, 30, 31	32.481,91	0,750188	0,881234	98,41	38,76	39,90	19,76
	0, 1, 2, 3, 4, 5, 6, 7, 27, 9, 26, 11, 12, 13, 14, 15, 16, 17, 21, 19, 20, 18, 10, 23, 24, 25, 22, 8, 28, 29, 30, 31	32.362,85	0,753438	0,884489	98,52	38,61	40,07	19,83

*Continua na próxima página*

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 12, 5, 6, 27, 22, 9, 26, 11, 13, 14, 25, 15, 16, 17, 18, 19, 20, 21, 10, 23, 24, 30, 7, 8, 28, 29, 4, 31	31.796,97	0,744688	0,882328	97,33	37,94	39,60	19,78
	0, 1, 12, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 25, 2, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 30, 7, 10, 28, 29, 4, 31	31.462,30	0,756188	0,896442	97,86	37,54	40,22	20,10
	0, 1, 2, 3, 14, 5, 6, 27, 22, 9, 26, 11, 13, 12, 25, 15, 16, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	31.316,24	0,746063	0,870587	96,56	37,37	39,68	19,52
	0, 1, 12, 3, 13, 5, 6, 27, 22, 9, 26, 11, 28, 25, 2, 15, 16, 17, 18, 19, 20, 21, 8, 23, 24, 30, 7, 10, 14, 29, 4, 31	30.703,38	0,750688	0,886637	96,44	36,63	39,92	19,88
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 16, 2, 25, 15, 13, 17, 18, 19, 28, 21, 8, 23, 24, 30, 7, 10, 14, 29, 4, 31	30.562,48	0,743563	0,902226	96,24	36,47	39,54	20,23

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 16, 2, 25, 15, 13, 17, 18, 19, 28, 21, 10, 23, 24, 30, 7, 8, 14, 29, 4, 31	30.526,48	0,743813	0,900669	96,18	36,42	39,56	20,19
	0, 1, 12, 3, 20, 5, 6, 22, 27, 9, 26, 11, 16, 25, 2, 15, 13, 17, 18, 19, 28, 21, 8, 23, 24, 30, 7, 10, 14, 29, 4, 31	30.520,65	0,738438	0,896009	95,78	36,42	39,27	20,09
	0, 1, 12, 3, 20, 5, 6, 27, 22, 9, 26, 11, 16, 25, 2, 15, 13, 17, 18, 19, 28, 21, 8, 23, 24, 30, 7, 10, 14, 29, 4, 31	30.413,15	0,739500	0,890870	95,59	36,29	39,33	19,97
	28, 1, 2, 3, 14, 5, 6, 27, 22, 9, 26, 11, 13, 12, 25, 15, 16, 17, 18, 19, 0, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	31.293,07	0,742688	0,883250	96,64	37,34	39,50	19,80
	0, 1, 2, 3, 14, 5, 6, 27, 22, 9, 26, 11, 13, 12, 25, 15, 28, 19, 18, 17, 16, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.724,70	0,746438	0,891770	96,35	36,66	39,70	19,99

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 25, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 29, 4, 31	30.257,44	0,745063	0,883919	95,55	36,10	39,62	19,82
	13, 1, 25, 3, 0, 5, 6, 27, 22, 9, 26, 11, 29, 12, 2, 15, 28, 17, 21, 19, 16, 18, 10, 23, 24, 30, 7, 8, 20, 14, 4, 31	30.160,06	0,737500	0,894681	95,27	35,99	39,22	20,06
	13, 1, 25, 3, 0, 5, 6, 27, 22, 9, 26, 11, 29, 12, 2, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 14, 4, 31	30.155,72	0,743188	0,888324	95,42	35,98	39,52	19,92
	29, 1, 25, 3, 13, 5, 6, 27, 22, 9, 26, 11, 14, 12, 2, 15, 28, 17, 18, 19, 16, 21, 10, 23, 24, 30, 7, 8, 20, 0, 4, 31	30.018,41	0,744063	0,877477	95,06	35,82	39,57	19,67
	29, 15, 25, 1, 13, 5, 6, 27, 22, 3, 26, 11, 14, 12, 2, 24, 28, 17, 18, 19, 16, 21, 10, 23, 9, 30, 7, 8, 20, 0, 4, 31	29.920,13	0,741313	0,888596	95,05	35,70	39,42	19,92

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Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 15, 25, 1, 13, 5, 6, 27, 22, 3, 26, 11, 14, 12, 2, 24, 28, 17, 18, 19, 16, 21, 10, 23, 9, 30, 7, 8, 20, 29, 4, 31	29.905,90	0,744563	0,886983	95,17	35,68	39,60	19,89
	0, 15, 25, 18, 13, 5, 6, 27, 22, 3, 26, 11, 14, 12, 2, 24, 28, 17, 21, 19, 16, 1, 10, 23, 9, 30, 7, 8, 20, 29, 4, 31	29.796,33	0,745563	0,892777	95,22	35,55	39,65	20,02
	0, 15, 25, 18, 13, 5, 6, 27, 22, 3, 26, 11, 14, 12, 2, 24, 28, 17, 1, 19, 16, 21, 8, 23, 9, 30, 7, 10, 20, 29, 4, 31	29.595,04	0,743000	0,889752	94,78	35,31	39,51	19,95
	0, 15, 25, 18, 13, 5, 6, 27, 22, 3, 26, 11, 14, 12, 2, 24, 28, 17, 1, 19, 16, 21, 10, 23, 9, 30, 7, 8, 20, 29, 4, 31	29.559,04	0,742875	0,889788	94,73	35,27	39,51	19,95
	29, 15, 25, 18, 13, 5, 6, 27, 22, 3, 26, 11, 0, 12, 2, 24, 28, 17, 31, 19, 1, 21, 10, 23, 16, 30, 7, 8, 20, 14, 4, 9	29.487,72	0,742563	0,896585	94,78	35,18	39,49	20,10

*Continua na próxima página*

Tabela 35 – Resultados do RMLSA para a rede Geant2

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Melhor custo x benefício	0, 15, 25, 18, 13, 5, 6, 27, 22, 3, 26, 11, 14, 12, 2, 24, 28, 17, 31, 19, 1, 21, 10, 23, 16, 30, 7, 8, 20, 29, 4, 9	29.386,38	0,737375	0,896003	94,37			

Tabela 36 – Comparação da topologia original e a melhor C.B. para a rede Geant2

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	33.523,96	0,810250	0,848675	100,00	40,00	40,00	20,00
Melhor C. B. RMLSA	0, 15, 25, 18, 13, 5, 6, 27, 22, 3, 26, 11, 14, 12, 2, 24, 28, 17, 31, 19, 1, 21, 10, 23, 16, 30, 7, 8, 20, 29, 4, 9	29.386,38	0,737375	0,896003	92,58	35,06	36,40	21,12
	Diferença	4.137,59	0,072875	-0,047328	7,42	4,94	3,60	-1,12

Tabela 37 – Resultados do RSA para a rede Germany

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	3.680,29	0,620362	0,792430	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	3.680,29	0,620362	0,792430	100,00			

Tabela 38 – Resultados do RMLSA para a rede Germany

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	3.680,29	0,259729	0,873859	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	3.680,29	0,259729	0,873859	100,00			

Tabela 39 – Comparação da topologia original e a melhor C.B. para a rede Germany

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	3.680,29	0,620362	0,792430	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	3.680,29	0,259729	0,873859	78,80	40,00	16,75	22,06
	Diferença	0,00	0,360633	-0,081429	21,20	0,00	23,25	-2,06

Tabela 40 – Resultados do RSA para a rede Internet2Usa

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55	18.197,09	0,962119	0,839523	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55	18.197,09	0,962119	0,839523	100,00			

Tabela 41 – Resultados do RMLSA para a rede Internet2Usa

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55	18.197,09	0,951493	0,925625	100,00	40,00	40,00	20,00

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Tabela 41 – Resultados do RMLSA para a rede Internet2Usa

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55	18.197,09	0,951493	0,925625	100,00			

Tabela 42 – Comparação da topologia original e a melhor C.B. para a rede Internet2Usa

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55	18.197,09	0,962119	0,839523	100,00	40,00	40,00	20,00
Melhor C. B. RMLSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55	18.197,09	0,951493	0,925625	101,61	40,00	39,56	22,05

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Tabela 42 – Comparação da topologia original e a melhor C.B. para a rede Internet2Usa

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	Diferença	0,00	0,010626	-0,086102	-1,61	0,00	0,44	-2,05



Tabela 43 – Resultados do RSA para a rede Italy

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	8.393,24	0,413547	0,809147	100,00	40,00	40,00	20,00
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 13, 12, 11, 10	8.231,48	0,415517	0,833700	100,03	39,23	40,19	20,61
	1, 0, 2, 3, 4, 5, 6, 7, 8, 9, 13, 12, 11, 10	8.382,04	0,416749	0,821317	100,56	39,95	40,31	20,30
	0, 1, 2, 4, 3, 5, 6, 7, 8, 9, 13, 12, 11, 10	8.310,14	0,435468	0,815084	101,87	39,60	42,12	20,15
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 13, 12, 11, 8	8.383,21	0,420443	0,833088	101,21	39,95	40,67	20,59
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	8.393,24	0,413547	0,809147	100,00			

Tabela 44 – Resultados do RMLSA para a rede Italy

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	8.393,24	0,118227	0,886409	100,00	40,00	40,00	20,00

*Continua na próxima página*

Tabela 44 – Resultados do RMLSA para a rede Italy

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 13, 12, 11, 10	8.231,48	0,114286	0,890270	97,98	39,23	38,67	20,09
	1, 0, 2, 3, 4, 5, 6, 7, 8, 9, 13, 12, 11, 10	8.382,04	0,117734	0,883228	99,71	39,95	39,83	19,93
	0, 1, 2, 4, 3, 5, 6, 7, 8, 9, 13, 12, 11, 10	8.310,14	0,136700	0,877600	105,66	39,60	46,25	19,80
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 13, 12, 11, 8	8.383,21	0,123399	0,886537	101,71	39,95	41,75	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 13, 12, 11, 10	8.231,48	0,114286	0,890270	97,98			

Tabela 45 – Comparação da topologia original e a melhor C.B. para a rede Italy

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	8.393,24	0,413547	0,809147	100,00	40,00	40,00	20,00

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Tabela 45 – Comparação da topologia original e a melhor C.B. para a rede Italy

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Melhor C. B. - RMLSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 13, 12, 11, 10	8.231,48	0,114286	0,890270	72,29	39,23	11,05	22,01
	Diferença	161,77	0,299261	-0,081123	27,71	0,77	28,95	-2,01



Tabela 46 – Resultados do RSA para a rede LambdaRailUsa

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	15.900,32	0,755378	0,683402	100,00	40,00	40,00	20,00
	0, 1, 2, 3, 4, 5, 7, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	15.790,20	0,755378	0,683402	99,72	39,72	40,00	20,00
	0, 1, 2, 3, 4, 5, 7, 6, 8, 9, 12, 13, 11, 10, 14, 15, 16, 17, 18	15.786,10	0,754920	0,772260	102,29	39,71	39,98	22,60
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 7, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	15.790,20	0,755378	0,683402	99,72			

Tabela 47 – Resultados do RMLSA para a rede LambdaRailUsa

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	15.900,32	0,725858	0,799046	100,00	40,00	40,00	20,00

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Tabela 47 – Resultados do RMLSA para a rede LambdaRailUsa

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 7, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	15.790,20	0,726087	0,805908	99,91	39,72	40,01	20,17
	0, 1, 2, 3, 4, 5, 7, 6, 8, 9, 12, 13, 11, 10, 14, 15, 16, 17, 18	15.786,10	0,722197	0,773251	98,87	39,71	39,80	19,35
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 7, 6, 8, 9, 12, 13, 11, 10, 14, 15, 16, 17, 18	15.786,10	0,722197	0,773251	98,87			

Tabela 48 – Comparação da topologia original e a melhor C.B. para a rede LambdaRailUsa

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	15.900,32	0,755378	0,683402	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	0, 1, 2, 3, 4, 5, 7, 6, 8, 9, 12, 13, 11, 10, 14, 15, 16, 17, 18	15.786,10	0,722197	0,773251	100,59	39,71	38,24	22,63

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Tabela 48 – Comparação da topologia original e a melhor C.B. para a rede LambdaRailUsa

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	Diferença	114,22	0,033181	-0,089849	-0,59	0,29	1,76	-2,63



Tabela 49 – Resultados do RSA para a rede MemorexEurope

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	3.459,71	0,752632	0,840998	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	3.459,71	0,752632	0,840998	100,00			

Tabela 50 – Resultados do RMLSA para a rede MemorexEurope

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	3.459,71	0,527193	0,906273	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	3.459,71	0,527193	0,906273	100,00			

Tabela 51 – Comparação da topologia original e a melhor C.B. para a rede MemorexEurope

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	3.459,71	0,752632	0,840998	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	3.459,71	0,527193	0,906273	89,57	40,00	28,02	21,55
	Diferença	0,00	0,225439	-0,065275	10,43	0,00	11,98	-1,55

Tabela 52 – Resultados do RSA para a rede MetronaUK

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32	2.982,65	0,878788	0,790108	100,00	40,00	40,00	20,00
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 29, 31, 32	2.982,32	0,878566	0,778741	99,70	40,00	39,99	19,71
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 29, 31, 32	2.982,32	0,878566	0,778741	99,70			

Tabela 53 – Resultados do RMLSA para a rede MetronaUK

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32	2.982,65	0,708795	0,910314	100,00	40,00	40,00	20,00

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Tabela 53 – Resultados do RMLSA para a rede MetronaUK

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 29, 31, 32	2.982,32	0,708204	0,911890	100,00	40,00	39,97	20,03
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 29, 31, 32	2.982,32	0,708204	0,911890	100,00			

Tabela 54 – Comparação da topologia original e a melhor C.B. para a rede MetronaUK

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32	2.982,65	0,878788	0,790108	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 29, 31, 32	2.982,32	0,708204	0,911890	95,31	40,00	32,24	23,08

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Tabela 54 – Comparação da topologia original e a melhor C.B. para a rede MetronaUK

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	Diferença	0,34	0,170584	-0,121782	4,69	0,00	7,76	-3,08





Tabela 55 – Resultados do RSA para a rede Mzima

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	16.146,71	0,658246	0,787182	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	16.146,71	0,658246	0,787182	100,00			

Tabela 56 – Resultados do RMLSA para a rede Mzima

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	16.146,71	0,625263	0,795337	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	16.146,71	0,625263	0,795337	100,00			

Tabela 57 – Comparação da topologia original e a melhor C.B. para a rede Mzima

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	16.146,71	0,658246	0,787182	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	16.146,71	0,625263	0,795337	98,20	40,00	38,00	20,21
	Diferença	0,00	0,032982	-0,008154	1,80	0,00	2,00	-0,21

Tabela 58 – Resultados do RSA para a rede NewNet

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25	16.297,15	0,838337	0,814041	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25	16.297,15	0,838337	0,814041	100,00			

Tabela 59 – Resultados do RMLSA para a rede NewNet

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25	16.297,15	0,806700	0,884757	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25	16.297,15	0,806700	0,884757	100,00			

Tabela 60 – Comparação da topologia original e a melhor C.B. para a rede NewNet

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25	16.297,15	0,838337	0,814041	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25	16.297,15	0,806700	0,884757	100,23	40,00	38,49	21,74
	Diferença	0,00	0,031638	-0,070716	-0,23	0,00	1,51	-1,74

Tabela 61 – Resultados do RSA para a rede NsfNet

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	22.704,57	0,526871	0,775697	100,00	40,00	40,00	20,00
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 12	22.588,47	0,530952	0,751440	99,48	39,80	40,31	19,37
	1, 0, 2, 7, 6, 5, 4, 3, 8, 9, 10, 13, 12, 11	22.570,73	0,550340	0,703029	99,67	39,76	41,78	18,13
	1, 0, 2, 7, 6, 5, 4, 3, 8, 9, 10, 11, 13, 12	22.454,63	0,547959	0,646346	97,83	39,56	41,60	16,66
	1, 0, 2, 7, 6, 5, 4, 3, 10, 9, 11, 8, 12, 13	22.434,40	0,543197	0,602863	96,31	39,52	41,24	15,54
	2, 0, 1, 5, 6, 7, 4, 3, 8, 9, 13, 11, 10, 12	22.101,41	0,569388	0,650483	98,94	38,94	43,23	16,77
	2, 0, 1, 5, 6, 7, 4, 3, 10, 9, 12, 13, 11, 8	22.081,18	0,541497	0,747048	99,27	38,90	41,11	19,26
	2, 0, 1, 5, 6, 7, 4, 3, 8, 10, 9, 11, 12, 13	22.021,77	0,550340	0,676763	98,03	38,80	41,78	17,45
	2, 0, 1, 5, 6, 7, 4, 3, 11, 10, 9, 12, 8, 13	21.907,42	0,561565	0,690884	99,04	38,60	42,63	17,81
	2, 0, 1, 5, 6, 7, 4, 3, 8, 10, 9, 11, 13, 12	21.707,95	0,576531	0,675275	99,43	38,24	43,77	17,41
	0, 1, 2, 5, 6, 7, 4, 3, 10, 9, 12, 8, 11, 13	22.640,62	0,532653	0,712060	98,69	39,89	40,44	18,36
	0, 1, 2, 5, 6, 7, 4, 3, 8, 10, 9, 12, 11, 13	22.303,06	0,563605	0,771503	101,97	39,29	42,79	19,89
	2, 1, 0, 5, 6, 7, 4, 3, 8, 10, 9, 12, 11, 13	22.021,46	0,572109	0,783960	102,44	38,80	43,43	20,21

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Tabela 61 – Resultados do RSA para a rede NsfNet

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	2, 0, 1, 5, 6, 7, 4, 3, 8, 10, 9, 12, 11, 13	21.743,61	0,576190	0,706517	100,27	38,31	43,74	18,22
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 11, 8, 12, 13	22.672,17	0,542177	0,754629	100,56	39,94	41,16	19,46
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 11	22.588,47	0,530612	0,773886	100,03	39,80	40,28	19,95
	1, 0, 2, 7, 6, 5, 4, 3, 10, 9, 8, 11, 13, 12	22.476,71	0,537415	0,615458	96,27	39,60	40,80	15,87
	1, 0, 2, 7, 6, 5, 4, 3, 10, 9, 11, 13, 12, 8	22.434,40	0,542177	0,652827	97,52	39,52	41,16	16,83
	0, 1, 2, 5, 6, 7, 4, 3, 8, 10, 9, 12, 13, 11	22.267,39	0,563605	0,771503	101,91	39,23	42,79	19,89
	2, 1, 0, 5, 6, 7, 4, 3, 11, 10, 9, 12, 8, 13	22.185,27	0,554422	0,785923	101,44	39,09	42,09	20,26
	2, 1, 0, 5, 6, 7, 4, 3, 8, 10, 9, 11, 13, 12	21.985,80	0,572449	0,784566	102,42	38,73	43,46	20,23
	2, 0, 1, 5, 6, 7, 4, 3, 8, 10, 9, 12, 13, 11	21.707,95	0,576190	0,706517	100,20	38,24	43,74	18,22
	0, 2, 1, 3, 4, 6, 5, 9, 8, 7, 10, 11, 13, 12	22.516,74	0,541156	0,693207	98,63	39,67	41,08	17,87
	1, 0, 2, 7, 6, 5, 4, 3, 8, 9, 10, 12, 13, 11	22.454,63	0,557483	0,763801	101,58	39,56	42,32	19,69
	0, 1, 2, 5, 6, 7, 4, 3, 8, 10, 9, 11, 13, 12	22.267,39	0,568367	0,763483	102,07	39,23	43,15	19,69
	2, 0, 1, 5, 6, 7, 4, 3, 10, 9, 11, 8, 12, 13	22.267,39	0,577551	0,695471	101,01	39,23	43,85	17,93

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Tabela 61 – Resultados do RSA para a rede NsfNet

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 2, 1, 5, 6, 7, 4, 3, 8, 10, 9, 11, 13, 12	22.271,14	0,563265	0,724909	100,69	39,24	42,76	18,69
	2, 0, 1, 5, 6, 7, 4, 3, 10, 9, 12, 11, 13, 8	22.258,80	0,544558	0,726061	99,28	39,21	41,34	18,72
Melhor custo x benefício	1, 0, 2, 7, 6, 5, 4, 3, 10, 9, 8, 11, 13, 12	22.476,71	0,537415	0,615458	96,27			

Tabela 62 – Resultados do RMLSA para a rede NsfNet

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	22.704,57	0,493878	0,771434	100,00	40,00	40,00	20,00
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 12	22.588,47	0,492517	0,745857	99,02	39,80	39,89	19,34
	1, 0, 2, 7, 6, 5, 4, 3, 8, 9, 10, 13, 12, 11	22.570,73	0,502041	0,661220	97,57	39,76	40,66	17,14
	1, 0, 2, 7, 6, 5, 4, 3, 8, 9, 10, 11, 13, 12	22.454,63	0,508163	0,661860	97,88	39,56	41,16	17,16

Continua na próxima página

Tabela 62 – Resultados do RMLSA para a rede NsfNet

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	1, 0, 2, 7, 6, 5, 4, 3, 10, 9, 11, 8, 12, 13	22.434,40	0,497959	0,649977	96,71	39,52	40,33	16,85
	2, 0, 1, 5, 6, 7, 4, 3, 8, 9, 13, 11, 10, 12	22.101,41	0,503061	0,676625	97,22	38,94	40,74	17,54
	2, 0, 1, 5, 6, 7, 4, 3, 10, 9, 12, 13, 11, 8	22.081,18	0,501701	0,689190	97,40	38,90	40,63	17,87
	2, 0, 1, 5, 6, 7, 4, 3, 8, 10, 9, 11, 12, 13	22.021,77	0,478231	0,692097	95,47	38,80	38,73	17,94
	2, 0, 1, 5, 6, 7, 4, 3, 11, 10, 9, 12, 8, 13	21.907,42	0,490816	0,713683	96,85	38,60	39,75	18,50
	2, 0, 1, 5, 6, 7, 4, 3, 8, 10, 9, 11, 13, 12	21.707,95	0,500680	0,742063	98,03	38,24	40,55	19,24
	0, 1, 2, 5, 6, 7, 4, 3, 10, 9, 12, 8, 11, 13	22.640,62	0,489456	0,676462	97,07	39,89	39,64	17,54
	0, 1, 2, 5, 6, 7, 4, 3, 8, 10, 9, 12, 11, 13	22.303,06	0,502721	0,736062	99,09	39,29	40,72	19,08
	2, 1, 0, 5, 6, 7, 4, 3, 8, 10, 9, 12, 11, 13	22.021,46	0,505442	0,774917	99,82	38,80	40,94	20,09
	2, 0, 1, 5, 6, 7, 4, 3, 8, 10, 9, 12, 11, 13	21.743,61	0,502721	0,749756	98,46	38,31	40,72	19,44
	0, 1, 2, 3, 4, 5, 6, 7, 10, 9, 11, 8, 12, 13	22.672,17	0,498299	0,750995	99,77	39,94	40,36	19,47
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 11	22.588,47	0,490816	0,769534	99,50	39,80	39,75	19,95
	1, 0, 2, 7, 6, 5, 4, 3, 10, 9, 8, 11, 13, 12	22.476,71	0,494898	0,663384	96,88	39,60	40,08	17,20

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Tabela 62 – Resultados do RMLSA para a rede NsfNet

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	1, 0, 2, 7, 6, 5, 4, 3, 10, 9, 11, 13, 12, 8	22.434,40	0,502041	0,664585	97,42	39,52	40,66	17,23
	0, 1, 2, 5, 6, 7, 4, 3, 8, 10, 9, 12, 13, 11	22.267,39	0,502381	0,736088	99,00	39,23	40,69	19,08
	2, 1, 0, 5, 6, 7, 4, 3, 11, 10, 9, 12, 8, 13	22.185,27	0,474490	0,779090	97,71	39,09	38,43	20,20
	2, 1, 0, 5, 6, 7, 4, 3, 8, 10, 9, 11, 13, 12	21.985,80	0,502721	0,773384	99,50	38,73	40,72	20,05
	2, 0, 1, 5, 6, 7, 4, 3, 8, 10, 9, 12, 13, 11	21.707,95	0,501361	0,749778	98,29	38,24	40,61	19,44
	0, 2, 1, 3, 4, 6, 5, 9, 8, 7, 10, 11, 13, 12	22.516,74	0,500340	0,731230	99,15	39,67	40,52	18,96
	1, 0, 2, 7, 6, 5, 4, 3, 8, 9, 10, 12, 13, 11	22.454,63	0,511905	0,666020	98,29	39,56	41,46	17,27
	0, 1, 2, 5, 6, 7, 4, 3, 8, 10, 9, 11, 13, 12	22.267,39	0,504082	0,770423	100,03	39,23	40,83	19,97
	2, 0, 1, 5, 6, 7, 4, 3, 10, 9, 11, 8, 12, 13	22.267,39	0,525850	0,679791	99,44	39,23	42,59	17,62
	0, 2, 1, 5, 6, 7, 4, 3, 8, 10, 9, 11, 13, 12	22.271,14	0,495578	0,764040	99,18	39,24	40,14	19,81
	2, 0, 1, 5, 6, 7, 4, 3, 10, 9, 12, 11, 13, 8	22.258,80	0,498639	0,688213	97,44	39,21	40,39	17,84

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Tabela 62 – Resultados do RMLSA para a rede NsfNet

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Melhor custo x benefício	2, 0, 1, 5, 6, 7, 4, 3, 8, 10, 9, 11, 12, 13	22.021,77	0,478231	0,692097	95,47			

Tabela 63 – Comparação da topologia original e a melhor C.B. para a rede NsfNet

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	22.704,57	0,526871	0,775697	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	2, 0, 1, 5, 6, 7, 4, 3, 8, 10, 9, 11, 12, 13	22.021,77	0,478231	0,692097	92,95	38,80	36,31	17,84
	Diferença	682,80	0,048639	0,083600	7,05	1,20	3,69	2,16

Tabela 64 – Resultados do RSA para a rede OmnicomEurope

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.214,29	0,877485	0,812784	100,00	40,00	40,00	20,00
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 15, 14, 13, 12, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.196,64	0,876608	0,798403	99,56	39,96	39,96	19,65
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 14, 13, 12, 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.070,93	0,877047	0,797983	99,26	39,65	39,98	19,64
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 14, 13, 12, 16, 11, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.053,29	0,877047	0,797983	99,22	39,60	39,98	19,64
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14, 13, 12, 11, 16, 15, 17, 18, 20, 19, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.213,91	0,876754	0,806845	99,82	40,00	39,97	19,85
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 11, 16, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.053,29	0,876462	0,783866	98,84	39,60	39,95	19,29

Continua na próxima página

Tabela 64 – Resultados do RSA para a rede OmnicomEurope

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.196,64	0,877339	0,783865	99,24	39,96	39,99	19,29
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 11, 16, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.053,29	0,876462	0,783866	98,84			

Tabela 65 – Resultados do RMLSA para a rede OmnicomEurope

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.214,29	0,804045	0,879733	100,00	40,00	40,00	20,00
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 15, 14, 13, 12, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.196,64	0,804825	0,891369	100,26	39,96	40,04	20,26

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Tabela 65 – Resultados do RMLSA para a rede OmnicomEurope

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 14, 13, 12, 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.070,93	0,801657	0,877648	99,48	39,65	39,88	19,95
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 14, 13, 12, 16, 11, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.053,29	0,803314	0,881260	99,60	39,60	39,96	20,03
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14, 13, 12, 11, 16, 15, 17, 18, 20, 19, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.213,91	0,803606	0,886996	100,14	40,00	39,98	20,17
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 11, 16, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.053,29	0,805166	0,879323	99,65	39,60	40,06	19,99
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.196,64	0,804094	0,878250	99,93	39,96	40,00	19,97

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Tabela 65 – Resultados do RMLSA para a rede OmnicomEurope

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 14, 13, 12, 16, 11, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.053,29	0,803314	0,881260	99,60			

Tabela 66 – Comparação da topologia original e a melhor C.B. para a rede OmnicomEurope

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.214,29	0,877485	0,812784	100,00	40,00	40,00	20,00
Melhor C. B. RMLSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 14, 13, 12, 16, 11, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37	16.053,29	0,803314	0,881260	97,91	39,60	36,62	21,68
	Diferença	161,00	0,074172	-0,068476	2,09	0,40	3,38	-1,68

Tabela 67 – Resultados do RSA para a rede Pioner

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	3.032,00	0,765143	0,773166	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	3.032,00	0,765143	0,773166	100,00			

Tabela 68 – Resultados do RMLSA para a rede Pioner

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	3.032,00	0,516190	0,909563	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	3.032,00	0,516190	0,909563	100,00			

Tabela 69 – Comparação da topologia original e a melhor C.B. para a rede Pioner

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	3.032,00	0,765143	0,773166	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	3.032,00	0,516190	0,909563	90,51	40,00	26,99	23,53
	Diferença	0,00	0,248952	-0,136397	9,49	0,00	13,01	-3,53



Tabela 70 – Resultados do RSA para a rede Portugal

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25	6.473,75	0,813248	0,833075	100,00	40,00	40,00	20,00
	0, 1, 15, 3, 4, 5, 6, 7, 8, 9, 11, 10, 12, 13, 14, 2, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25	5.969,06	0,811111	0,793661	95,83	36,88	39,89	19,05
	0, 1, 15, 3, 24, 5, 6, 7, 8, 9, 11, 10, 12, 13, 14, 2, 16, 17, 18, 19, 20, 21, 22, 23, 4, 25	5.953,36	0,810256	0,815365	96,21	36,78	39,85	19,57
	14, 1, 15, 3, 24, 5, 6, 7, 8, 9, 11, 10, 12, 13, 0, 2, 16, 17, 18, 19, 20, 21, 22, 23, 4, 25	5.945,43	0,809936	0,807988	95,97	36,74	39,84	19,40
	0, 1, 15, 3, 24, 5, 6, 7, 8, 14, 11, 10, 12, 13, 9, 2, 16, 17, 18, 19, 20, 21, 22, 23, 4, 25	5.882,05	0,808868	0,806518	95,49	36,34	39,78	19,36
	21, 1, 15, 3, 24, 5, 6, 7, 8, 14, 11, 10, 12, 13, 9, 2, 16, 17, 18, 19, 20, 0, 22, 23, 4, 25	5.863,91	0,808868	0,806518	95,38	36,23	39,78	19,36
	21, 7, 15, 3, 24, 8, 6, 1, 5, 14, 11, 10, 12, 13, 9, 2, 16, 17, 18, 19, 20, 0, 22, 23, 4, 25	5.857,02	0,806838	0,807718	95,27	36,19	39,68	19,39
	21, 1, 15, 3, 24, 8, 6, 7, 5, 14, 11, 10, 12, 13, 9, 2, 16, 17, 18, 19, 20, 0, 22, 23, 4, 25	5.850,42	0,808761	0,817415	95,55	36,15	39,78	19,62

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Tabela 70 – Resultados do RSA para a rede Portugal

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	21, 1, 15, 3, 24, 8, 6, 7, 5, 14, 11, 22, 12, 16, 9, 2, 13, 17, 18, 19, 20, 0, 10, 23, 4, 25	5.842,01	0,804915	0,793992	94,75	36,10	39,59	19,06
	0, 1, 15, 3, 4, 8, 6, 7, 5, 14, 11, 10, 12, 16, 9, 2, 13, 17, 18, 19, 20, 21, 22, 23, 24, 25	5.825,10	0,802991	0,792157	94,51	35,99	39,50	19,02
	0, 1, 15, 3, 24, 8, 6, 7, 5, 14, 11, 10, 12, 16, 9, 2, 13, 17, 18, 19, 20, 21, 22, 23, 4, 25	5.809,39	0,802778	0,804474	94,69	35,90	39,49	19,31
	21, 1, 15, 3, 24, 8, 6, 7, 5, 14, 11, 10, 12, 16, 9, 2, 13, 17, 18, 19, 20, 0, 22, 23, 4, 25	5.791,25	0,804915	0,833357	95,38	35,78	39,59	20,01
	21, 7, 2, 3, 24, 5, 6, 1, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 0, 22, 23, 4, 25	6.471,82	0,815064	0,847203	100,42	39,99	40,09	20,34
	21, 1, 2, 3, 24, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 0, 22, 23, 4, 25	6.465,22	0,814103	0,843847	100,25	39,95	40,04	20,26
	0, 1, 2, 3, 24, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 4, 25	6.458,05	0,814103	0,843847	100,20	39,90	40,04	20,26
	0, 7, 2, 3, 24, 5, 6, 1, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 4, 25	6.464,65	0,813355	0,838919	100,09	39,94	40,01	20,14

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Tabela 70 – Resultados do RSA para a rede Portugal

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 15, 3, 4, 5, 6, 7, 8, 9, 11, 10, 12, 13, 21, 2, 16, 17, 18, 19, 20, 14, 22, 23, 24, 25	5.944,14	0,805128	0,827136	96,19	36,73	39,60	19,86
	0, 1, 15, 3, 4, 5, 6, 7, 8, 14, 11, 10, 12, 13, 9, 2, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25	5.897,76	0,809295	0,807134	95,62	36,44	39,81	19,38
	21, 1, 15, 3, 4, 5, 6, 7, 8, 14, 11, 10, 12, 13, 9, 2, 16, 17, 18, 19, 20, 0, 22, 23, 24, 25	5.879,62	0,809295	0,807134	95,51	36,33	39,81	19,38
	2, 1, 15, 3, 4, 5, 6, 7, 8, 9, 11, 22, 12, 13, 14, 21, 16, 17, 18, 19, 20, 0, 10, 23, 24, 25	5.808,18	0,804060	0,796315	94,55	35,89	39,55	19,12
	2, 7, 15, 3, 4, 5, 6, 1, 8, 9, 11, 22, 12, 13, 21, 14, 16, 17, 18, 19, 20, 0, 10, 23, 24, 25	5.787,37	0,802778	0,825265	95,06	35,76	39,49	19,81
	2, 1, 15, 3, 4, 5, 6, 7, 8, 9, 11, 22, 12, 13, 21, 14, 16, 17, 18, 19, 20, 0, 10, 23, 24, 25	5.780,77	0,804594	0,827250	95,15	35,72	39,57	19,86
	2, 1, 15, 3, 24, 5, 6, 7, 8, 9, 11, 22, 12, 13, 21, 14, 16, 17, 18, 19, 20, 0, 10, 23, 4, 25	5.765,06	0,804915	0,806431	94,57	35,62	39,59	19,36
	2, 1, 15, 3, 4, 5, 6, 7, 8, 9, 11, 22, 12, 13, 14, 0, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25	5.818,22	0,805128	0,798125	94,71	35,95	39,60	19,16

Continua na próxima página

Tabela 70 – Resultados do RSA para a rede Portugal

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	2, 7, 15, 3, 4, 5, 6, 1, 8, 9, 11, 22, 12, 13, 0, 14, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25	5.794,54	0,802778	0,825265	95,10	35,80	39,49	19,81
	2, 1, 15, 3, 4, 5, 6, 7, 8, 9, 11, 22, 12, 13, 0, 14, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25	5.787,93	0,804594	0,827250	95,20	35,76	39,57	19,86
	2, 1, 15, 3, 24, 5, 6, 7, 8, 9, 11, 22, 12, 13, 0, 14, 16, 17, 18, 19, 20, 21, 10, 23, 4, 25	5.772,23	0,804915	0,806431	94,62	35,67	39,59	19,36
	9, 1, 15, 3, 4, 5, 6, 7, 8, 14, 11, 22, 12, 13, 0, 2, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25	5.942,51	0,805556	0,796384	95,46	36,72	39,62	19,12
	21, 1, 15, 3, 4, 5, 6, 7, 8, 9, 11, 10, 12, 13, 0, 2, 16, 17, 18, 19, 20, 14, 22, 23, 24, 25	5.933,77	0,804487	0,800384	95,45	36,66	39,57	19,22
	9, 1, 15, 3, 24, 5, 6, 7, 8, 14, 11, 22, 12, 13, 0, 2, 16, 17, 18, 19, 20, 21, 10, 23, 4, 25	5.926,80	0,807479	0,816457	95,94	36,62	39,72	19,60
	21, 1, 15, 3, 24, 5, 6, 7, 8, 9, 11, 10, 12, 13, 0, 2, 16, 17, 18, 19, 20, 14, 22, 23, 4, 25	5.918,07	0,804167	0,794591	95,20	36,57	39,55	19,08
	21, 1, 15, 3, 24, 5, 6, 7, 8, 0, 11, 10, 12, 13, 9, 2, 16, 17, 18, 19, 20, 14, 22, 23, 4, 25	5.917,85	0,805342	0,785029	95,02	36,57	39,61	18,85

*Continua na próxima página*

Tabela 70 – Resultados do RSA para a rede Portugal

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 15, 3, 24, 5, 6, 7, 8, 14, 11, 10, 12, 19, 9, 2, 16, 17, 18, 13, 20, 21, 22, 23, 4, 25	5.937,80	0,808547	0,794431	95,53	36,69	39,77	19,07
	21, 1, 15, 3, 24, 5, 6, 7, 8, 14, 11, 10, 12, 19, 9, 2, 16, 17, 18, 13, 20, 0, 22, 23, 4, 25	5.919,67	0,808440	0,809063	95,76	36,58	39,76	19,42
	0, 7, 15, 3, 24, 5, 6, 1, 8, 14, 11, 10, 12, 13, 9, 2, 16, 17, 18, 19, 20, 21, 22, 23, 4, 25	5.888,65	0,806944	0,809302	95,50	36,38	39,69	19,43
	2, 1, 15, 3, 24, 5, 6, 7, 8, 9, 11, 22, 12, 13, 14, 21, 16, 17, 18, 19, 20, 0, 10, 23, 4, 25	5.792,47	0,804701	0,818616	95,02	35,79	39,58	19,65
	0, 7, 10, 3, 24, 5, 11, 1, 8, 9, 17, 16, 15, 13, 6, 12, 14, 2, 18, 19, 20, 21, 22, 23, 4, 25	6.361,34	0,806944	0,817141	98,61	39,31	39,69	19,62
	21, 7, 10, 3, 24, 5, 11, 1, 8, 9, 17, 16, 15, 13, 6, 12, 14, 2, 18, 19, 20, 0, 22, 23, 4, 25	6.354,19	0,806944	0,817141	98,57	39,26	39,69	19,62
	0, 1, 10, 3, 24, 5, 11, 7, 22, 21, 17, 16, 15, 13, 6, 12, 14, 2, 18, 19, 20, 9, 8, 23, 4, 25	6.305,72	0,808547	0,823557	98,50	38,96	39,77	19,77
	0, 7, 10, 3, 24, 5, 11, 1, 21, 22, 17, 16, 15, 13, 6, 12, 14, 2, 18, 19, 20, 9, 8, 23, 4, 25	6.268,37	0,813462	0,842070	98,96	38,73	40,01	20,22

Continua na próxima página

Tabela 70 – Resultados do RSA para a rede Portugal

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 10, 3, 24, 5, 11, 7, 21, 22, 17, 16, 15, 13, 6, 12, 14, 2, 18, 19, 20, 9, 8, 23, 4, 25	6.261,77	0,809295	0,828462	98,38	38,69	39,81	19,89
	0, 7, 17, 3, 24, 5, 11, 1, 21, 22, 10, 16, 15, 13, 6, 12, 14, 2, 18, 19, 20, 9, 8, 23, 4, 25	6.205,84	0,807906	0,846942	98,41	38,34	39,74	20,33
	2, 7, 17, 3, 4, 5, 11, 1, 21, 22, 10, 16, 15, 13, 6, 12, 14, 9, 18, 19, 20, 0, 8, 23, 24, 25	6.203,51	0,821581	0,838293	98,87	38,33	40,41	20,13
	0, 1, 17, 3, 24, 5, 11, 7, 21, 22, 10, 16, 15, 13, 6, 12, 14, 2, 18, 19, 20, 9, 8, 23, 4, 25	6.199,24	0,806090	0,834664	97,99	38,30	39,65	20,04
	9, 7, 17, 3, 24, 19, 11, 1, 21, 22, 10, 16, 15, 13, 6, 12, 14, 2, 18, 5, 20, 0, 8, 23, 4, 25	6.186,47	0,807799	0,837140	98,05	38,22	39,73	20,10
	0, 7, 17, 3, 24, 19, 11, 1, 21, 22, 10, 16, 15, 13, 6, 12, 14, 8, 18, 5, 20, 9, 2, 23, 4, 25	6.172,30	0,808654	0,830717	97,85	38,14	39,77	19,94
	0, 1, 17, 3, 24, 5, 11, 7, 21, 22, 10, 16, 15, 13, 6, 12, 14, 8, 18, 19, 20, 9, 2, 23, 4, 25	6.172,03	0,809936	0,834354	98,00	38,14	39,84	20,03
	0, 1, 17, 3, 24, 5, 11, 7, 21, 22, 10, 16, 15, 13, 6, 12, 14, 9, 18, 19, 20, 8, 2, 23, 4, 25	6.162,18	0,807051	0,812583	97,28	38,07	39,70	19,51

*Continua na próxima página*

Tabela 70 – Resultados do RSA para a rede Portugal

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 17, 3, 24, 5, 11, 7, 21, 22, 10, 16, 15, 13, 6, 12, 14, 2, 18, 19, 20, 8, 9, 23, 4, 25	6.149,26	0,807585	0,810948	97,19	37,99	39,72	19,47
	0, 1, 17, 3, 24, 5, 11, 7, 21, 22, 10, 6, 15, 13, 16, 12, 14, 2, 18, 19, 20, 8, 9, 23, 4, 25	6.147,36	0,808654	0,814293	97,31	37,98	39,77	19,55
	2, 25, 9, 3, 24, 6, 15, 7, 16, 8, 10, 21, 11, 1, 19, 14, 5, 17, 18, 13, 20, 0, 22, 23, 4, 12	6.358,17	0,808440	0,810372	98,50	39,29	39,76	19,45
	9, 25, 2, 3, 24, 6, 15, 7, 16, 8, 10, 21, 11, 1, 19, 14, 5, 17, 18, 13, 20, 0, 22, 23, 4, 12	6.330,37	0,811111	0,813180	98,53	39,11	39,89	19,52
	9, 20, 2, 3, 24, 6, 15, 7, 16, 8, 10, 21, 11, 1, 19, 14, 5, 17, 18, 13, 25, 0, 22, 23, 4, 12	6.306,18	0,812607	0,847773	99,29	38,96	39,97	20,35
	9, 25, 2, 3, 24, 6, 11, 7, 16, 8, 10, 21, 15, 1, 19, 14, 5, 17, 18, 13, 20, 0, 22, 23, 4, 12	6.297,35	0,811111	0,813180	98,33	38,91	39,89	19,52
	9, 1, 2, 3, 24, 6, 15, 7, 16, 8, 10, 21, 11, 12, 19, 14, 5, 17, 18, 13, 20, 0, 22, 23, 4, 25	6.264,75	0,813462	0,810240	98,17	38,71	40,01	19,45
	9, 1, 2, 3, 24, 6, 11, 7, 16, 8, 10, 21, 15, 12, 19, 14, 5, 17, 18, 13, 20, 0, 22, 23, 4, 25	6.218,81	0,813462	0,810240	97,89	38,42	40,01	19,45

Continua na próxima página

Tabela 70 – Resultados do RSA para a rede Portugal

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	9, 1, 2, 3, 24, 6, 11, 25, 16, 8, 10, 21, 15, 7, 19, 14, 5, 17, 18, 13, 20, 0, 22, 23, 4, 12	6.199,44	0,808226	0,846397	98,38	38,31	39,75	20,32
	9, 25, 2, 3, 24, 6, 11, 7, 0, 8, 10, 21, 15, 12, 19, 14, 5, 17, 18, 13, 20, 16, 22, 23, 4, 1	6.188,15	0,810897	0,837460	98,22	38,24	39,88	20,11
	9, 25, 2, 3, 24, 6, 11, 7, 16, 8, 10, 0, 15, 12, 19, 14, 5, 17, 18, 13, 20, 21, 22, 23, 4, 1	6.173,09	0,812073	0,824021	97,87	38,14	39,94	19,78
	9, 25, 2, 3, 24, 6, 11, 7, 16, 8, 10, 21, 15, 12, 19, 14, 5, 17, 18, 13, 20, 0, 22, 23, 4, 1	6.155,91	0,812821	0,813356	97,54	38,04	39,98	19,53
	9, 25, 2, 3, 4, 6, 11, 7, 16, 8, 10, 21, 15, 12, 19, 14, 5, 17, 18, 13, 20, 0, 22, 23, 24, 1	6.151,20	0,809081	0,812809	97,32	38,01	39,80	19,51
	8, 25, 2, 3, 24, 6, 11, 7, 0, 9, 10, 21, 15, 12, 19, 14, 5, 17, 18, 13, 20, 16, 22, 23, 4, 1	6.137,03	0,807372	0,816298	97,23	37,92	39,71	19,60
	8, 25, 2, 3, 4, 6, 11, 7, 0, 9, 22, 21, 15, 12, 19, 14, 5, 17, 18, 13, 20, 16, 10, 23, 24, 1	6.129,23	0,803846	0,847143	97,75	37,87	39,54	20,34
	8, 25, 2, 3, 4, 6, 11, 7, 14, 9, 22, 21, 15, 12, 19, 0, 5, 17, 18, 13, 20, 16, 10, 23, 24, 1	6.111,96	0,809295	0,825647	97,39	37,76	39,81	19,82

*Continua na próxima página*



Tabela 70 – Resultados do RSA para a rede Portugal

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	8, 25, 2, 3, 4, 6, 11, 7, 21, 9, 22, 0, 15, 12, 19, 5, 14, 17, 18, 13, 20, 16, 10, 23, 24, 1	6.105,44	0,803846	0,835931	97,33	37,72	39,54	20,07
	8, 25, 10, 3, 24, 6, 11, 7, 14, 9, 17, 21, 15, 12, 19, 0, 5, 22, 18, 13, 20, 16, 2, 23, 4, 1	6.066,29	0,809509	0,824246	97,09	37,48	39,82	19,79
	8, 25, 10, 3, 24, 6, 11, 7, 21, 9, 17, 0, 15, 12, 19, 5, 14, 22, 18, 13, 20, 16, 2, 23, 4, 1	6.060,72	0,806624	0,817285	96,74	37,45	39,67	19,62
	8, 25, 10, 3, 4, 6, 11, 7, 21, 9, 17, 0, 15, 12, 19, 5, 14, 22, 18, 13, 20, 16, 2, 23, 24, 1	6.056,01	0,805876	0,846227	97,37	37,42	39,64	20,32
	8, 25, 10, 3, 4, 6, 11, 7, 0, 2, 17, 21, 15, 12, 19, 5, 14, 22, 18, 13, 20, 16, 9, 23, 24, 1	6.052,28	0,805128	0,843532	97,25	37,40	39,60	20,25
	8, 25, 10, 3, 4, 6, 11, 7, 21, 2, 17, 0, 15, 12, 19, 5, 14, 22, 18, 13, 20, 16, 9, 23, 24, 1	6.048,22	0,805128	0,843532	97,22	37,37	39,60	20,25
	8, 25, 10, 3, 4, 6, 11, 7, 0, 2, 17, 14, 15, 12, 19, 5, 21, 22, 18, 13, 20, 16, 9, 23, 24, 1	6.047,89	0,804808	0,821832	96,68	37,37	39,58	19,73
	8, 25, 17, 3, 4, 6, 11, 7, 14, 22, 10, 0, 15, 12, 19, 21, 5, 2, 18, 13, 20, 16, 9, 23, 24, 1	6.042,00	0,805449	0,854736	97,47	37,33	39,62	20,52

Continua na próxima página

Tabela 70 – Resultados do RSA para a rede Portugal

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 15, 3, 4, 8, 6, 7, 5, 14, 11, 10, 12, 19, 9, 2, 16, 17, 18, 13, 20, 21, 22, 23, 24, 25	5.905,04	0,805235	0,802951	95,37	36,49	39,61	19,28
	21, 1, 15, 3, 24, 8, 6, 7, 5, 14, 11, 10, 12, 19, 9, 2, 16, 17, 18, 13, 20, 0, 22, 23, 4, 25	5.871,20	0,808547	0,828151	95,93	36,28	39,77	19,88
	21, 7, 15, 3, 4, 8, 6, 1, 5, 14, 11, 10, 12, 16, 9, 2, 13, 17, 18, 19, 20, 0, 22, 23, 24, 25	5.810,67	0,805769	0,824638	95,33	35,90	39,63	19,80
	21, 7, 15, 3, 24, 8, 6, 1, 5, 14, 11, 10, 12, 16, 9, 2, 13, 17, 18, 19, 20, 0, 22, 23, 4, 25	5.794,96	0,803846	0,804442	94,66	35,81	39,54	19,31
Melhor custo x benefício	21, 7, 15, 3, 24, 8, 6, 1, 5, 14, 11, 10, 12, 16, 9, 2, 13, 17, 18, 19, 20, 0, 22, 23, 4, 25	5.794,96	0,803846	0,804442	94,66			

Tabela 71 – Resultados do RMLSA para a rede Portugal

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25	6.473,75	0,563141	0,920049	100,00	40,00	40,00	20,00
	0, 1, 15, 3, 4, 5, 6, 7, 8, 9, 11, 10, 12, 13, 14, 2, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25	5.969,06	0,568803	0,889038	96,61	36,88	40,40	19,33
	0, 1, 15, 3, 24, 5, 6, 7, 8, 9, 11, 10, 12, 13, 14, 2, 16, 17, 18, 19, 20, 21, 22, 23, 4, 25	5.953,36	0,565064	0,881871	96,09	36,78	40,14	19,17
	14, 1, 15, 3, 24, 5, 6, 7, 8, 9, 11, 10, 12, 13, 0, 2, 16, 17, 18, 19, 20, 21, 22, 23, 4, 25	5.945,43	0,560043	0,875014	95,54	36,74	39,78	19,02
	0, 1, 15, 3, 24, 5, 6, 7, 8, 14, 11, 10, 12, 13, 9, 2, 16, 17, 18, 19, 20, 21, 22, 23, 4, 25	5.882,05	0,562393	0,904338	95,95	36,34	39,95	19,66
	21, 1, 15, 3, 24, 5, 6, 7, 8, 14, 11, 10, 12, 13, 9, 2, 16, 17, 18, 19, 20, 0, 22, 23, 4, 25	5.863,91	0,561538	0,900285	95,69	36,23	39,89	19,57
	21, 7, 15, 3, 24, 8, 6, 1, 5, 14, 11, 10, 12, 13, 9, 2, 16, 17, 18, 19, 20, 0, 22, 23, 4, 25	5.857,02	0,561966	0,910647	95,90	36,19	39,92	19,80
	21, 1, 15, 3, 24, 8, 6, 7, 5, 14, 11, 10, 12, 13, 9, 2, 16, 17, 18, 19, 20, 0, 22, 23, 4, 25	5.850,42	0,559722	0,890733	95,27	36,15	39,76	19,36

*Continua na próxima página*

Tabela 71 – Resultados do RMLSA para a rede Portugal

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	21, 1, 15, 3, 24, 8, 6, 7, 5, 14, 11, 22, 12, 16, 9, 2, 13, 17, 18, 19, 20, 0, 10, 23, 4, 25	5.842,01	0,553953	0,904799	95,11	36,10	39,35	19,67
	0, 1, 15, 3, 4, 8, 6, 7, 5, 14, 11, 10, 12, 16, 9, 2, 13, 17, 18, 19, 20, 21, 22, 23, 24, 25	5.825,10	0,559936	0,905704	95,45	35,99	39,77	19,69
	0, 1, 15, 3, 24, 8, 6, 7, 5, 14, 11, 10, 12, 16, 9, 2, 13, 17, 18, 19, 20, 21, 22, 23, 4, 25	5.809,39	0,557585	0,897130	95,00	35,90	39,61	19,50
	21, 1, 15, 3, 24, 8, 6, 7, 5, 14, 11, 10, 12, 16, 9, 2, 13, 17, 18, 19, 20, 0, 22, 23, 4, 25	5.791,25	0,558761	0,906131	95,17	35,78	39,69	19,70
	21, 7, 2, 3, 24, 5, 6, 1, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 0, 22, 23, 4, 25	6.471,82	0,564209	0,913967	99,93	39,99	40,08	19,87
	21, 1, 2, 3, 24, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 0, 22, 23, 4, 25	6.465,22	0,558868	0,919640	99,63	39,95	39,70	19,99
	0, 1, 2, 3, 24, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 4, 25	6.458,05	0,559295	0,914705	99,51	39,90	39,73	19,88
	0, 7, 2, 3, 24, 5, 6, 1, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 4, 25	6.464,65	0,565171	0,915495	99,99	39,94	40,14	19,90

*Continua na próxima página*

Tabela 71 – Resultados do RMLSA para a rede Portugal

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 15, 3, 4, 5, 6, 7, 8, 9, 11, 10, 12, 13, 21, 2, 16, 17, 18, 19, 20, 14, 22, 23, 24, 25	5.944,14	0,557051	0,910132	96,08	36,73	39,57	19,78
	0, 1, 15, 3, 4, 5, 6, 7, 8, 14, 11, 10, 12, 13, 9, 2, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25	5.897,76	0,564209	0,890410	95,87	36,44	40,08	19,36
	21, 1, 15, 3, 4, 5, 6, 7, 8, 14, 11, 10, 12, 13, 9, 2, 16, 17, 18, 19, 20, 0, 22, 23, 24, 25	5.879,62	0,565919	0,893564	95,95	36,33	40,20	19,42
	2, 1, 15, 3, 4, 5, 6, 7, 8, 9, 11, 22, 12, 13, 14, 21, 16, 17, 18, 19, 20, 0, 10, 23, 24, 25	5.808,18	0,559081	0,910786	95,40	35,89	39,71	19,80
	2, 7, 15, 3, 4, 5, 6, 1, 8, 9, 11, 22, 12, 13, 21, 14, 16, 17, 18, 19, 20, 0, 10, 23, 24, 25	5.787,37	0,546154	0,898299	94,08	35,76	38,79	19,53
	2, 1, 15, 3, 4, 5, 6, 7, 8, 9, 11, 22, 12, 13, 21, 14, 16, 17, 18, 19, 20, 0, 10, 23, 24, 25	5.780,77	0,550748	0,903488	94,48	35,72	39,12	19,64
	2, 1, 15, 3, 24, 5, 6, 7, 8, 9, 11, 22, 12, 13, 21, 14, 16, 17, 18, 19, 20, 0, 10, 23, 4, 25	5.765,06	0,550214	0,888690	94,02	35,62	39,08	19,32
	2, 1, 15, 3, 4, 5, 6, 7, 8, 9, 11, 22, 12, 13, 14, 0, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25	5.818,22	0,555342	0,918471	95,36	35,95	39,45	19,97

*Continua na próxima página*

Tabela 71 – Resultados do RMLSA para a rede Portugal

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	2, 7, 15, 3, 4, 5, 6, 1, 8, 9, 11, 22, 12, 13, 0, 14, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25	5.794,54	0,546261	0,898299	94,13	35,80	38,80	19,53
	2, 1, 15, 3, 4, 5, 6, 7, 8, 9, 11, 22, 12, 13, 0, 14, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25	5.787,93	0,550748	0,903488	94,52	35,76	39,12	19,64
	2, 1, 15, 3, 24, 5, 6, 7, 8, 9, 11, 22, 12, 13, 0, 14, 16, 17, 18, 19, 20, 21, 10, 23, 4, 25	5.772,23	0,550214	0,888690	94,07	35,67	39,08	19,32
	9, 1, 15, 3, 4, 5, 6, 7, 8, 14, 11, 22, 12, 13, 0, 2, 16, 17, 18, 19, 20, 21, 10, 23, 24, 25	5.942,51	0,561859	0,913446	96,48	36,72	39,91	19,86
	21, 1, 15, 3, 4, 5, 6, 7, 8, 9, 11, 10, 12, 13, 0, 2, 16, 17, 18, 19, 20, 14, 22, 23, 24, 25	5.933,77	0,556517	0,909317	95,96	36,66	39,53	19,77
	9, 1, 15, 3, 24, 5, 6, 7, 8, 14, 11, 22, 12, 13, 0, 2, 16, 17, 18, 19, 20, 21, 10, 23, 4, 25	5.926,80	0,559402	0,904077	96,01	36,62	39,73	19,65
	21, 1, 15, 3, 24, 5, 6, 7, 8, 9, 11, 10, 12, 13, 0, 2, 16, 17, 18, 19, 20, 14, 22, 23, 4, 25	5.918,07	0,556410	0,914226	95,96	36,57	39,52	19,87
	21, 1, 15, 3, 24, 5, 6, 7, 8, 0, 11, 10, 12, 13, 9, 2, 16, 17, 18, 19, 20, 14, 22, 23, 4, 25	5.917,85	0,561111	0,911825	96,24	36,57	39,86	19,82

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Tabela 71 – Resultados do RMLSA para a rede Portugal

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 15, 3, 24, 5, 6, 7, 8, 14, 11, 10, 12, 19, 9, 2, 16, 17, 18, 13, 20, 21, 22, 23, 4, 25	5.937,80	0,570406	0,904098	96,86	36,69	40,52	19,65
	21, 1, 15, 3, 24, 5, 6, 7, 8, 14, 11, 10, 12, 19, 9, 2, 16, 17, 18, 13, 20, 0, 22, 23, 4, 25	5.919,67	0,572222	0,918047	97,18	36,58	40,65	19,96
	0, 7, 15, 3, 24, 5, 6, 1, 8, 14, 11, 10, 12, 13, 9, 2, 16, 17, 18, 19, 20, 21, 22, 23, 4, 25	5.888,65	0,563996	0,890801	95,81	36,38	40,06	19,36
	2, 1, 15, 3, 24, 5, 6, 7, 8, 9, 11, 22, 12, 13, 14, 21, 16, 17, 18, 19, 20, 0, 10, 23, 4, 25	5.792,47	0,555021	0,906310	94,92	35,79	39,42	19,70
	0, 7, 10, 3, 24, 5, 11, 1, 8, 9, 17, 16, 15, 13, 6, 12, 14, 2, 18, 19, 20, 21, 22, 23, 4, 25	6.361,34	0,573504	0,927069	100,19	39,31	40,74	20,15
	21, 7, 10, 3, 24, 5, 11, 1, 8, 9, 17, 16, 15, 13, 6, 12, 14, 2, 18, 19, 20, 0, 22, 23, 4, 25	6.354,19	0,574786	0,922071	100,13	39,26	40,83	20,04
	0, 1, 10, 3, 24, 5, 11, 7, 22, 21, 17, 16, 15, 13, 6, 12, 14, 2, 18, 19, 20, 9, 8, 23, 4, 25	6.305,72	0,561859	0,923600	98,95	38,96	39,91	20,08
	0, 7, 10, 3, 24, 5, 11, 1, 21, 22, 17, 16, 15, 13, 6, 12, 14, 2, 18, 19, 20, 9, 8, 23, 4, 25	6.268,37	0,565812	0,925208	99,03	38,73	40,19	20,11

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Tabela 71 – Resultados do RMLSA para a rede Portugal

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 10, 3, 24, 5, 11, 7, 21, 22, 17, 16, 15, 13, 6, 12, 14, 2, 18, 19, 20, 9, 8, 23, 4, 25	6.261,77	0,563675	0,922437	98,78	38,69	40,04	20,05
	0, 7, 17, 3, 24, 5, 11, 1, 21, 22, 10, 16, 15, 13, 6, 12, 14, 2, 18, 19, 20, 9, 8, 23, 4, 25	6.205,84	0,556517	0,924838	97,98	38,34	39,53	20,10
	2, 7, 17, 3, 4, 5, 11, 1, 21, 22, 10, 16, 15, 13, 6, 12, 14, 9, 18, 19, 20, 0, 8, 23, 24, 25	6.203,51	0,577457	0,912913	99,19	38,33	41,02	19,84
	0, 1, 17, 3, 24, 5, 11, 7, 21, 22, 10, 16, 15, 13, 6, 12, 14, 2, 18, 19, 20, 9, 8, 23, 4, 25	6.199,24	0,558226	0,920976	97,97	38,30	39,65	20,02
	9, 7, 17, 3, 24, 19, 11, 1, 21, 22, 10, 16, 15, 13, 6, 12, 14, 2, 18, 5, 20, 0, 8, 23, 4, 25	6.186,47	0,560470	0,924295	98,13	38,22	39,81	20,09
	0, 7, 17, 3, 24, 19, 11, 1, 21, 22, 10, 16, 15, 13, 6, 12, 14, 8, 18, 5, 20, 9, 2, 23, 4, 25	6.172,30	0,550534	0,930191	97,46	38,14	39,10	20,22
	0, 1, 17, 3, 24, 5, 11, 7, 21, 22, 10, 16, 15, 13, 6, 12, 14, 8, 18, 19, 20, 9, 2, 23, 4, 25	6.172,03	0,558013	0,927723	97,94	38,14	39,64	20,17
	0, 1, 17, 3, 24, 5, 11, 7, 21, 22, 10, 16, 15, 13, 6, 12, 14, 9, 18, 19, 20, 8, 2, 23, 4, 25	6.162,18	0,555449	0,921651	97,56	38,07	39,45	20,03

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Tabela 71 – Resultados do RMLSA para a rede Portugal

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 17, 3, 24, 5, 11, 7, 21, 22, 10, 16, 15, 13, 6, 12, 14, 2, 18, 19, 20, 8, 9, 23, 4, 25	6.149,26	0,557372	0,923520	97,66	37,99	39,59	20,08
	0, 1, 17, 3, 24, 5, 11, 7, 21, 22, 10, 6, 15, 13, 16, 12, 14, 2, 18, 19, 20, 8, 9, 23, 4, 25	6.147,36	0,560150	0,923669	97,85	37,98	39,79	20,08
	2, 25, 9, 3, 24, 6, 15, 7, 16, 8, 10, 21, 11, 1, 19, 14, 5, 17, 18, 13, 20, 0, 22, 23, 4, 12	6.358,17	0,556410	0,921458	98,84	39,29	39,52	20,03
	9, 25, 2, 3, 24, 6, 15, 7, 16, 8, 10, 21, 11, 1, 19, 14, 5, 17, 18, 13, 20, 0, 22, 23, 4, 12	6.330,37	0,558974	0,925016	98,93	39,11	39,70	20,11
	9, 20, 2, 3, 24, 6, 15, 7, 16, 8, 10, 21, 11, 1, 19, 14, 5, 17, 18, 13, 25, 0, 22, 23, 4, 12	6.306,18	0,552564	0,927801	98,38	38,96	39,25	20,17
	9, 25, 2, 3, 24, 6, 11, 7, 16, 8, 10, 21, 15, 1, 19, 14, 5, 17, 18, 13, 20, 0, 22, 23, 4, 12	6.297,35	0,565598	0,921780	99,12	38,91	40,17	20,04
	9, 1, 2, 3, 24, 6, 15, 7, 16, 8, 10, 21, 11, 12, 19, 14, 5, 17, 18, 13, 20, 0, 22, 23, 4, 25	6.264,75	0,563248	0,918659	98,69	38,71	40,01	19,97
	9, 1, 2, 3, 24, 6, 11, 7, 16, 8, 10, 21, 15, 12, 19, 14, 5, 17, 18, 13, 20, 0, 22, 23, 4, 25	6.218,81	0,564316	0,923533	98,58	38,42	40,08	20,08

Continua na próxima página

Tabela 71 – Resultados do RMLSA para a rede Portugal

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	9, 1, 2, 3, 24, 6, 11, 25, 16, 8, 10, 21, 15, 7, 19, 14, 5, 17, 18, 13, 20, 0, 22, 23, 4, 12	6.199,44	0,555128	0,926317	97,87	38,31	39,43	20,14
	9, 25, 2, 3, 24, 6, 11, 7, 0, 8, 10, 21, 15, 12, 19, 14, 5, 17, 18, 13, 20, 16, 22, 23, 4, 1	6.188,15	0,558974	0,923991	98,03	38,24	39,70	20,09
	9, 25, 2, 3, 24, 6, 11, 7, 16, 8, 10, 0, 15, 12, 19, 14, 5, 17, 18, 13, 20, 21, 22, 23, 4, 1	6.173,09	0,563782	0,920028	98,19	38,14	40,05	20,00
	9, 25, 2, 3, 24, 6, 11, 7, 16, 8, 10, 21, 15, 12, 19, 14, 5, 17, 18, 13, 20, 0, 22, 23, 4, 1	6.155,91	0,560256	0,922764	97,89	38,04	39,80	20,06
	9, 25, 2, 3, 4, 6, 11, 7, 16, 8, 10, 21, 15, 12, 19, 14, 5, 17, 18, 13, 20, 0, 22, 23, 24, 1	6.151,20	0,560470	0,915877	97,73	38,01	39,81	19,91
	8, 25, 2, 3, 24, 6, 11, 7, 0, 9, 10, 21, 15, 12, 19, 14, 5, 17, 18, 13, 20, 16, 22, 23, 4, 1	6.137,03	0,551068	0,925323	97,18	37,92	39,14	20,11
	8, 25, 2, 3, 4, 6, 11, 7, 0, 9, 22, 21, 15, 12, 19, 14, 5, 17, 18, 13, 20, 16, 10, 23, 24, 1	6.129,23	0,548184	0,919237	96,79	37,87	38,94	19,98
	8, 25, 2, 3, 4, 6, 11, 7, 14, 9, 22, 21, 15, 12, 19, 0, 5, 17, 18, 13, 20, 16, 10, 23, 24, 1	6.111,96	0,561538	0,919605	97,64	37,76	39,89	19,99

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Tabela 71 – Resultados do RMLSA para a rede Portugal

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	8, 25, 2, 3, 4, 6, 11, 7, 21, 9, 22, 0, 15, 12, 19, 5, 14, 17, 18, 13, 20, 16, 10, 23, 24, 1	6.105,44	0,552350	0,922771	97,02	37,72	39,23	20,06
	8, 25, 10, 3, 24, 6, 11, 7, 14, 9, 17, 21, 15, 12, 19, 0, 5, 22, 18, 13, 20, 16, 2, 23, 4, 1	6.066,29	0,560043	0,927583	97,43	37,48	39,78	20,16
	8, 25, 10, 3, 24, 6, 11, 7, 21, 9, 17, 0, 15, 12, 19, 5, 14, 22, 18, 13, 20, 16, 2, 23, 4, 1	6.060,72	0,549252	0,923601	96,54	37,45	39,01	20,08
	8, 25, 10, 3, 4, 6, 11, 7, 21, 9, 17, 0, 15, 12, 19, 5, 14, 22, 18, 13, 20, 16, 2, 23, 24, 1	6.056,01	0,547650	0,922159	96,36	37,42	38,90	20,05
	8, 25, 10, 3, 4, 6, 11, 7, 0, 2, 17, 21, 15, 12, 19, 5, 14, 22, 18, 13, 20, 16, 9, 23, 24, 1	6.052,28	0,549252	0,924948	96,52	37,40	39,01	20,11
	8, 25, 10, 3, 4, 6, 11, 7, 21, 2, 17, 0, 15, 12, 19, 5, 14, 22, 18, 13, 20, 16, 9, 23, 24, 1	6.048,22	0,549252	0,924948	96,49	37,37	39,01	20,11
	8, 25, 10, 3, 4, 6, 11, 7, 0, 2, 17, 14, 15, 12, 19, 5, 21, 22, 18, 13, 20, 16, 9, 23, 24, 1	6.047,89	0,555983	0,922372	96,91	37,37	39,49	20,05
	8, 25, 17, 3, 4, 6, 11, 7, 14, 22, 10, 0, 15, 12, 19, 21, 5, 2, 18, 13, 20, 16, 9, 23, 24, 1	6.042,00	0,550962	0,917422	96,41	37,33	39,13	19,94

Continua na próxima página

Tabela 71 – Resultados do RMLSA para a rede Portugal

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 15, 3, 4, 8, 6, 7, 5, 14, 11, 10, 12, 19, 9, 2, 16, 17, 18, 13, 20, 21, 22, 23, 24, 25	5.905,04	0,570085	0,910319	96,77	36,49	40,49	19,79
	21, 1, 15, 3, 24, 8, 6, 7, 5, 14, 11, 10, 12, 19, 9, 2, 16, 17, 18, 13, 20, 0, 22, 23, 4, 25	5.871,20	0,569338	0,902067	96,33	36,28	40,44	19,61
	21, 7, 15, 3, 4, 8, 6, 1, 5, 14, 11, 10, 12, 16, 9, 2, 13, 17, 18, 19, 20, 0, 22, 23, 24, 25	5.810,67	0,562393	0,906625	95,56	35,90	39,95	19,71
	21, 7, 15, 3, 24, 8, 6, 1, 5, 14, 11, 10, 12, 16, 9, 2, 13, 17, 18, 19, 20, 0, 22, 23, 4, 25	5.794,96	0,557372	0,896614	94,89	35,81	39,59	19,49
Melhor custo x benefício	2, 1, 15, 3, 24, 5, 6, 7, 8, 9, 11, 22, 12, 13, 21, 14, 16, 17, 18, 19, 20, 0, 10, 23, 4, 25	5.765,06	0,550214	0,888690	94,02			

Tabela 72 – Comparação da topologia original e a melhor C.B. para a rede Portugal

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25	6.473,75	0,813248	0,833075	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	2, 1, 15, 3, 24, 5, 6, 7, 8, 9, 11, 22, 12, 13, 21, 14, 16, 17, 18, 19, 20, 0, 10, 23, 4, 25	5.765,06	0,550214	0,888690	84,02	35,62	27,06	21,34
	Diferença	708,69	0,263034	-0,055615	15,98	4,38	12,94	-1,34



Tabela 73 – Resultados do RSA para a rede Renater

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26	5.413,62	0,820212	0,669614	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26	5.413,62	0,820212	0,669614	100,00			

Tabela 74 – Resultados do RMLSA para a rede Renater

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26	5.413,62	0,654815	0,829349	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26	5.413,62	0,654815	0,829349	100,00			

Tabela 75 – Comparação da topologia original e a melhor C.B. para a rede Renater

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26	5.413,62	0,820212	0,669614	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26	5.413,62	0,654815	0,829349	96,70	40,00	31,93	24,77
	Diferença	0,00	0,165397	-0,159735	3,30	0,00	8,07	-4,77



Tabela 76 – Resultados do RSA para a rede RNPBrazil

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9	8.970,08	0,361667	0,770256	100,00	40,00	40,00	20,00
	8, 9, 6, 2, 3, 4, 5, 7, 1, 0	8.614,38	0,367500	0,779165	99,29	38,41	40,65	20,23
	8, 9, 6, 3, 2, 4, 5, 7, 1, 0	8.476,38	0,360000	0,749452	97,07	37,80	39,82	19,46
	0, 1, 2, 6, 4, 5, 7, 3, 8, 9	8.219,84	0,385833	0,715019	97,89	36,65	42,67	18,57
	5, 1, 2, 7, 9, 0, 6, 3, 8, 4	8.073,67	0,380000	0,717504	96,66	36,00	42,03	18,63
	5, 0, 2, 7, 9, 1, 6, 3, 8, 4	8.015,75	0,360833	0,779931	95,90	35,74	39,91	20,25
	1, 0, 2, 7, 9, 5, 6, 3, 8, 4	7.951,93	0,380000	0,717504	96,12	35,46	42,03	18,63
	9, 8, 7, 2, 5, 4, 3, 6, 0, 1	8.230,26	0,357500	0,772210	96,29	36,70	39,54	20,05
	4, 8, 7, 2, 5, 9, 3, 6, 0, 1	7.951,93	0,367500	0,776907	96,28	35,46	40,65	20,17
	0, 1, 2, 6, 9, 5, 7, 3, 8, 4	8.498,17	0,359167	0,774143	97,72	37,90	39,72	20,10
	1, 0, 2, 6, 9, 5, 7, 3, 8, 4	8.434,30	0,350833	0,783410	96,75	37,61	38,80	20,34
	0, 1, 2, 7, 9, 5, 6, 3, 8, 4	8.015,80	0,360833	0,779931	95,90	35,74	39,91	20,25
0, 1, 3, 7, 9, 5, 6, 2, 8, 4	8.277,70	0,360833	0,779931	97,07	36,91	39,91	20,25	

*Continua na próxima página*

Tabela 76 – Resultados do RSA para a rede RNPBrasil

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	1, 0, 3, 7, 9, 5, 6, 2, 8, 4	8.219,78	0,380000	0,717504	97,31	36,65	42,03	18,63
	4, 8, 7, 2, 1, 9, 3, 6, 0, 5	8.015,75	0,358333	0,765605	95,25	35,74	39,63	19,88
	5, 0, 3, 6, 4, 1, 7, 2, 8, 9	7.951,93	0,367500	0,740541	95,33	35,46	40,65	19,23
	0, 2, 3, 6, 4, 5, 7, 1, 8, 9	8.907,45	0,367500	0,740541	99,59	39,72	40,65	19,23
	0, 1, 2, 7, 4, 5, 6, 3, 8, 9	8.294,14	0,361667	0,772383	97,04	36,99	40,00	20,06
	1, 0, 2, 7, 4, 5, 6, 3, 8, 9	8.230,26	0,357500	0,786439	96,66	36,70	39,54	20,42
	2, 5, 1, 6, 4, 0, 7, 3, 8, 9	8.593,48	0,361667	0,760077	98,06	38,32	40,00	19,74
	0, 1, 2, 6, 4, 3, 7, 5, 8, 9	8.335,88	0,358333	0,740994	96,04	37,17	39,63	19,24
	1, 0, 2, 6, 4, 5, 7, 3, 8, 9	8.155,97	0,367500	0,740541	96,24	36,37	40,65	19,23
	0, 1, 3, 6, 4, 5, 7, 2, 8, 9	8.073,67	0,367500	0,740541	95,88	36,00	40,65	19,23
	5, 1, 3, 6, 4, 0, 7, 2, 8, 9	8.015,80	0,352500	0,742373	94,01	35,74	38,99	19,28
	1, 0, 2, 3, 4, 5, 7, 6, 8, 9	8.571,66	0,377500	0,704586	98,27	38,22	41,75	18,29
	1, 0, 2, 3, 4, 5, 6, 7, 8, 9	8.962,17	0,362500	0,777957	100,26	39,96	40,09	20,20

*Continua na próxima página*

Tabela 76 – Resultados do RSA para a rede RNPBrazil

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 3, 7, 4, 2, 6, 5, 8, 9	8.786,56	0,361667	0,760734	98,93	39,18	40,00	19,75
	0, 5, 3, 6, 4, 2, 7, 1, 9, 8	8.635,91	0,360000	0,761088	98,09	38,51	39,82	19,76
	0, 1, 2, 6, 4, 5, 7, 3, 9, 8	8.498,35	0,374167	0,770916	99,30	37,90	41,38	20,02
	1, 0, 3, 6, 4, 5, 7, 2, 8, 9	8.015,75	0,352500	0,742373	94,01	35,74	38,99	19,28
Melhor custo x benefício	1, 0, 3, 6, 4, 5, 7, 2, 8, 9	8.015,75	0,352500	0,742373	94,01			

Tabela 77 – Resultados do RMLSA para a rede RNPBrazil

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9	8.970,08	0,290833	0,782959	100,00	40,00	40,00	20,00
	8, 9, 6, 2, 3, 4, 5, 7, 1, 0	8.614,38	0,269167	0,788577	95,58	38,41	37,02	20,14

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Tabela 77 – Resultados do RMLSA para a rede RNPBrasil

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	8, 9, 6, 3, 2, 4, 5, 7, 1, 0	8.476,38	0,291667	0,751993	97,12	37,80	40,11	19,21
	0, 1, 2, 6, 4, 5, 7, 3, 8, 9	8.219,84	0,294167	0,780985	97,06	36,65	40,46	19,95
	5, 1, 2, 7, 9, 0, 6, 3, 8, 4	8.073,67	0,276667	0,786024	94,13	36,00	38,05	20,08
	5, 0, 2, 7, 9, 1, 6, 3, 8, 4	8.015,75	0,253333	0,800046	91,02	35,74	34,84	20,44
	1, 0, 2, 7, 9, 5, 6, 3, 8, 4	7.951,93	0,270833	0,778591	92,60	35,46	37,25	19,89
	9, 8, 7, 2, 5, 4, 3, 6, 0, 1	8.230,26	0,264167	0,792216	93,27	36,70	36,33	20,24
	4, 8, 7, 2, 5, 9, 3, 6, 0, 1	7.951,93	0,271667	0,788267	92,96	35,46	37,36	20,14
	0, 1, 2, 6, 9, 5, 7, 3, 8, 4	8.498,17	0,264167	0,794034	94,51	37,90	36,33	20,28
	1, 0, 2, 6, 9, 5, 7, 3, 8, 4	8.434,30	0,239167	0,794025	90,79	37,61	32,89	20,28
	0, 1, 2, 7, 9, 5, 6, 3, 8, 4	8.015,80	0,266667	0,786858	92,52	35,74	36,68	20,10
	0, 1, 3, 7, 9, 5, 6, 2, 8, 4	8.277,70	0,260000	0,799581	93,10	36,91	35,76	20,42
	1, 0, 3, 7, 9, 5, 6, 2, 8, 4	8.219,78	0,277500	0,788868	94,97	36,65	38,17	20,15
	4, 8, 7, 2, 1, 9, 3, 6, 0, 5	8.015,75	0,265000	0,772583	91,93	35,74	36,45	19,73

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Tabela 77 – Resultados do RMLSA para a rede RNPBrasil

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	5, 0, 3, 6, 4, 1, 7, 2, 8, 9	7.951,93	0,272500	0,750852	92,12	35,46	37,48	19,18
	0, 2, 3, 6, 4, 5, 7, 1, 8, 9	8.907,45	0,316667	0,732585	101,99	39,72	43,55	18,71
	0, 1, 2, 7, 4, 5, 6, 3, 8, 9	8.294,14	0,263333	0,797511	93,58	36,99	36,22	20,37
	1, 0, 2, 7, 4, 5, 6, 3, 8, 9	8.230,26	0,259167	0,781141	92,30	36,70	35,64	19,95
	2, 5, 1, 6, 4, 0, 7, 3, 8, 9	8.593,48	0,283333	0,767382	96,89	38,32	38,97	19,60
	0, 1, 2, 6, 4, 3, 7, 5, 8, 9	8.335,88	0,267500	0,740681	92,88	37,17	36,79	18,92
	1, 0, 2, 6, 4, 5, 7, 3, 8, 9	8.155,97	0,264167	0,766613	92,28	36,37	36,33	19,58
	0, 1, 3, 6, 4, 5, 7, 2, 8, 9	8.073,67	0,275000	0,777540	93,69	36,00	37,82	19,86
	5, 1, 3, 6, 4, 0, 7, 2, 8, 9	8.015,80	0,263333	0,781522	91,93	35,74	36,22	19,96
	1, 0, 2, 3, 4, 5, 7, 6, 8, 9	8.571,66	0,287500	0,770906	97,46	38,22	39,54	19,69
	1, 0, 2, 3, 4, 5, 6, 7, 8, 9	8.962,17	0,295000	0,799912	100,97	39,96	40,57	20,43
	0, 1, 3, 7, 4, 2, 6, 5, 8, 9	8.786,56	0,285000	0,768920	98,02	39,18	39,20	19,64
	0, 5, 3, 6, 4, 2, 7, 1, 9, 8	8.635,91	0,273333	0,769030	95,75	38,51	37,59	19,64

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Tabela 77 – Resultados do RMLSA para a rede RNPBrazil

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 6, 4, 5, 7, 3, 9, 8	8.498,35	0,279167	0,782728	96,29	37,90	38,40	19,99
	1, 0, 3, 6, 4, 5, 7, 2, 8, 9	8.015,75	0,257500	0,772090	90,88	35,74	35,42	19,72
Melhor custo x benefício	1, 0, 2, 6, 9, 5, 7, 3, 8, 4	8.434,30	0,239167	0,794025	90,79			

Tabela 78 – Comparação da topologia original e a melhor C.B. para a rede RNPBrazil

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9	8.970,08	0,361667	0,770256	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	1, 0, 2, 6, 9, 5, 7, 3, 8, 4	8.434,30	0,239167	0,794025	84,68	37,61	26,45	20,62
	Diferença	535,78	0,122500	-0,023769	15,32	2,39	13,55	-0,62







Tabela 79 – Resultados do RSA para a rede Sanet

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24	1.002,6714570,864714	0,815837	0,815837	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24	1.002,67	0,864714	0,815837	100,00			

Tabela 80 – Resultados do RMLSA para a rede Sanet

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24	1.002,67	0,584857	0,914042	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24	1.002,67	0,584857	0,914042	100,00			

Tabela 81 – Comparação da topologia original e a melhor C.B. para a rede Sanet

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24	1.002,67	0,864714	0,815837	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24	1.002,67	0,584857	0,914042	89,46	40,00	27,05	22,41
	Diferença	0,00	0,279857	-0,098204	10,54	0,00	12,95	-2,41

Tabela 82 – Resultados do RSA para a rede Spain

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.884,38	0,568067	0,807504	100,00	40,00	40,00	20,00
	1, 0, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.681,15	0,565966	0,809860	99,00	39,09	39,85	20,06
	2, 0, 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16, 13, 14, 15, 12	8.556,87	0,569748	0,785736	98,10	38,53	40,12	19,46
	2, 1, 0, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16, 13, 14, 15, 12	8.556,10	0,569118	0,821523	98,94	38,52	40,07	20,35
	4, 0, 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.744,10	0,566176	0,810449	99,31	39,37	39,87	20,07
	3, 0, 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.699,10	0,566176	0,810449	99,11	39,17	39,87	20,07
	2, 1, 0, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.556,10	0,568487	0,832177	99,16	38,52	40,03	20,61
	2, 1, 0, 4, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.669,43	0,567017	0,841875	99,81	39,03	39,93	20,85
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16, 13, 14, 15, 12	8.884,38	0,568277	0,804321	99,94	40,00	40,01	19,92
	2, 0, 1, 4, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.683,32	0,565336	0,829557	99,45	39,09	39,81	20,55
	2, 0, 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.556,87	0,569118	0,802871	98,48	38,53	40,07	19,89
	7, 0, 1, 2, 3, 4, 6, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.595,02	0,570798	0,845281	99,83	38,70	40,19	20,94
	2, 1, 0, 3, 5, 4, 6, 7, 8, 9, 10, 11, 16, 13, 14, 15, 12	8.810,98	0,568067	0,830478	100,24	39,67	40,00	20,57

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Tabela 82 – Resultados do RSA para a rede Spain

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	3, 1, 0, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 13, 15, 16	8.771,37	0,566597	0,803930	99,30	39,49	39,90	19,91
	2, 0, 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 13, 15, 16	8.628,37	0,569118	0,802871	98,81	38,85	40,07	19,89
	3, 1, 0, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.699,87	0,566597	0,803930	98,98	39,17	39,90	19,91
	3, 0, 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 16, 13, 14, 15, 12	8.699,10	0,566807	0,810096	99,14	39,17	39,91	20,06
	1, 0, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16, 13, 14, 15, 12	8.681,15	0,566176	0,817700	99,20	39,09	39,87	20,25
	7, 1, 2, 3, 4, 5, 6, 0, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.679,32	0,576261	0,830684	100,23	39,08	40,58	20,57
	1, 0, 2, 4, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.807,61	0,571429	0,797526	99,64	39,65	40,24	19,75
Melhor custo x benefício	2, 0, 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16, 13, 14, 15, 12	8.556,87	0,569748	0,785736	98,10			

Tabela 83 – Resultados do RMLSA para a rede Spain

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.884,38	0,297059	0,903668	100,00	40,00	40,00	20,00
	1, 0, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.681,15	0,302941	0,905546	99,92	39,09	40,79	20,04
	2, 0, 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16, 13, 14, 15, 12	8.556,87	0,304622	0,898310	99,43	38,53	41,02	19,88
	2, 1, 0, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16, 13, 14, 15, 12	8.556,10	0,310924	0,902384	100,36	38,52	41,87	19,97
	4, 0, 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.744,10	0,308824	0,895858	100,78	39,37	41,58	19,83
	3, 0, 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.699,10	0,308193	0,900964	100,61	39,17	41,50	19,94
	2, 1, 0, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.556,10	0,311134	0,902656	100,39	38,52	41,90	19,98
	2, 1, 0, 4, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.669,43	0,308824	0,901445	100,57	39,03	41,58	19,95
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16, 13, 14, 15, 12	8.884,38	0,300210	0,900519	100,35	40,00	40,42	19,93
	2, 0, 1, 4, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.683,32	0,309244	0,894537	100,53	39,09	41,64	19,80
	2, 0, 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.556,87	0,308824	0,900798	100,05	38,53	41,58	19,94
	7, 0, 1, 2, 3, 4, 6, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.595,02	0,292857	0,900332	98,06	38,70	39,43	19,93
	2, 1, 0, 3, 5, 4, 6, 7, 8, 9, 10, 11, 16, 13, 14, 15, 12	8.810,98	0,307983	0,906283	101,20	39,67	41,47	20,06

Continua na próxima página

Tabela 83 – Resultados do RMLSA para a rede Spain

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	3, 1, 0, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 13, 15, 16	8.771,37	0,310084	0,896733	101,09	39,49	41,75	19,85
	2, 0, 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 13, 15, 16	8.628,37	0,309454	0,901092	100,46	38,85	41,67	19,94
	3, 1, 0, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.699,87	0,309244	0,896594	100,65	39,17	41,64	19,84
	3, 0, 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 16, 13, 14, 15, 12	8.699,10	0,309244	0,903431	100,80	39,17	41,64	19,99
	1, 0, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16, 13, 14, 15, 12	8.681,15	0,302311	0,907628	99,88	39,09	40,71	20,09
	7, 1, 2, 3, 4, 5, 6, 0, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.679,32	0,312395	0,883493	100,70	39,08	42,07	19,55
	1, 0, 2, 4, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.807,61	0,314286	0,895974	101,80	39,65	42,32	19,83
Melhor custo x benefício	7, 0, 1, 2, 3, 4, 6, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.595,02	0,292857	0,900332	98,06			

Tabela 84 – Comparação da topologia original e a melhor C.B. para a rede Spain

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.884,38	0,568067	0,807504	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	7, 0, 1, 2, 3, 4, 6, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16	8.595,02	0,292857	0,900332	81,62	38,70	20,62	22,30
	Diferença	289,36	0,275210	-0,092829	18,38	1,30	19,38	-2,30





Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99	47.398,57	0,944018	0,933320	100,00	40,00	40,00	20,00
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 93, 90, 94, 98, 97, 96, 99	46.667,13	0,943304	0,912331	98,90	39,38	39,97	19,55

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Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 93, 90, 94, 96, 97, 98, 99	46.669,25	0,943246	0,929002	99,26	39,38	39,97	19,91
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 93, 94, 90, 96, 97, 98, 99	46.691,75	0,943632	0,919086	99,08	39,40	39,98	19,69

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Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 56, 53, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 93, 90, 94, 98, 97, 96, 99	46.704,05	0,943099	0,937954	99,47	39,41	39,96	20,10
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 93, 90, 94, 96, 97, 99, 98	46.706,15	0,943439	0,932546	99,37	39,42	39,98	19,98

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Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 91, 92, 93, 89, 94, 98, 97, 96, 99	46.714,56	0,943953	0,923562	99,21	39,42	40,00	19,79
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.716,68	0,944012	0,925010	99,25	39,42	40,00	19,82

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 56, 53, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 91, 92, 93, 89, 94, 98, 97, 96, 99	46.751,48	0,943667	0,940943	99,60	39,45	39,99	20,16
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 91, 92, 93, 89, 94, 96, 97, 99, 98	46.753,58	0,943865	0,937841	99,55	39,46	39,99	20,10

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 56, 53, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.753,60	0,943789	0,943428	99,66	39,46	39,99	20,22
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 91, 92, 93, 89, 97, 96, 94, 98, 99	46.766,67	0,943725	0,932399	99,43	39,47	39,99	19,98

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 86, 89, 91, 92, 93, 90, 94, 96, 97, 98, 99	46.767,86	0,943936	0,936529	99,53	39,47	40,00	20,07
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 91, 92, 93, 89, 94, 98, 97, 96, 99	46.784,56	0,944474	0,939935	99,64	39,48	40,02	20,14

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 91, 92, 93, 89, 94, 98, 97, 96, 99	46.793,41	0,943795	0,942054	99,67	39,49	39,99	20,19
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 89, 90, 91, 92, 93, 88, 94, 96, 97, 98, 99	46.808,67	0,943608	0,941966	99,67	39,50	39,98	20,19

*Continua na próxima página*



Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 86, 90, 91, 92, 93, 89, 94, 98, 97, 96, 99	46.816,27	0,943854	0,931178	99,46	39,51	39,99	19,95
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 86, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.818,39	0,943901	0,934640	99,53	39,51	40,00	20,03

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 87, 95, 86, 88, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.819,29	0,943953	0,934015	99,52	39,51	40,00	20,01
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 88, 90, 91, 92, 93, 89, 94, 98, 97, 96, 99	46.827,92	0,944105	0,911368	99,05	39,52	40,00	19,53

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 88, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.830,04	0,944123	0,906304	98,95	39,52	40,00	19,42
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 89, 90, 91, 92, 93, 88, 94, 96, 97, 98, 99	46.854,50	0,943421	0,936972	99,59	39,54	39,97	20,08

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 88, 90, 91, 92, 93, 89, 97, 96, 94, 98, 99	46.880,03	0,944082	0,944705	99,81	39,56	40,00	20,24
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 94, 90, 93, 98, 97, 96, 99	46.889,06	0,943480	0,938791	99,66	39,57	39,98	20,12

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 88, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.908,89	0,944392	0,933128	99,60	39,59	40,02	20,00
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 84, 83, 85, 86, 87, 95, 88, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.909,37	0,943994	0,942940	99,79	39,59	40,00	20,21

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 89, 90, 91, 92, 93, 86, 94, 96, 97, 98, 99	46.911,80	0,943556	0,941191	99,74	39,59	39,98	20,17
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 89, 90, 91, 92, 93, 88, 94, 96, 97, 98, 99	46.924,31	0,943556	0,942996	99,79	39,60	39,98	20,21

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 86, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.934,22	0,944456	0,925469	99,46	39,61	40,02	19,83
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 88, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.954,81	0,943936	0,939144	99,75	39,63	40,00	20,12

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 94, 90, 93, 98, 97, 96, 99	46.967,92	0,943994	0,926720	99,49	39,64	40,00	19,86
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 89, 90, 91, 92, 93, 88, 97, 96, 94, 98, 99	46.969,49	0,943474	0,936567	99,68	39,64	39,98	20,07

*Continua na próxima página*



Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 90, 89, 91, 92, 93, 88, 94, 96, 97, 98, 99	46.991,65	0,943801	0,931662	99,61	39,66	39,99	19,96
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 94, 90, 93, 98, 97, 96, 99	47.013,83	0,943468	0,931109	99,60	39,68	39,98	19,95

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 88, 90, 91, 92, 93, 94, 89, 96, 97, 98, 99	47.026,14	0,943860	0,940967	99,84	39,69	39,99	20,16
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 94, 96, 97, 98, 99	47.033,57	0,943632	0,935923	99,73	39,69	39,98	20,06

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 89, 90, 91, 92, 93, 88, 94, 96, 97, 98, 99	47.049,08	0,943749	0,927632	99,57	39,71	39,99	19,88
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 84, 83, 85, 95, 87, 88, 86, 89, 91, 92, 94, 90, 93, 98, 97, 96, 99	47.067,00	0,943520	0,933989	99,71	39,72	39,98	20,01

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 56, 53, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 94, 96, 97, 98, 99	47.070,49	0,943713	0,937593	99,80	39,72	39,99	20,09
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 94, 96, 97, 98, 99	47.079,40	0,943532	0,934404	99,73	39,73	39,98	20,02

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 89, 92, 93, 94, 91, 98, 97, 96, 99	47.105,80	0,944281	0,942222	99,95	39,75	40,01	20,19
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 86, 89, 91, 92, 94, 90, 93, 98, 97, 96, 99	47.112,44	0,943754	0,939025	99,87	39,76	39,99	20,12

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 56, 53, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 94, 96, 97, 98, 99	47.149,34	0,943906	0,936833	99,86	39,79	40,00	20,08
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 90, 89, 91, 92, 93, 88, 97, 96, 94, 98, 99	47.154,13	0,942801	0,928848	99,65	39,79	39,95	19,90

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 94, 96, 97, 98, 99	47.158,34	0,943310	0,931396	99,73	39,80	39,97	19,96
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 89, 90, 91, 92, 93, 94, 88, 96, 97, 98, 99	47.168,77	0,943819	0,941803	99,98	39,81	39,99	20,18

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 86, 89, 91, 92, 94, 90, 93, 99, 97, 98, 96	47.196,20	0,944047	0,938332	99,94	39,83	40,00	20,11
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 86, 90, 89, 92, 93, 94, 91, 98, 97, 96, 99	47.198,01	0,944895	0,936972	99,95	39,83	40,04	20,08

*Continua na próxima página*



Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 86, 90, 91, 92, 94, 89, 93, 96, 97, 98, 99	47.243,23	0,943865	0,932004	99,83	39,87	39,99	19,97
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 94, 96, 97, 98, 99	47.299,21	0,944000	0,933264	99,91	39,92	40,00	20,00

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 96, 97, 94, 98, 99	47.305,81	0,944170	0,942292	100,12	39,92	40,01	20,19
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 95, 90, 91, 92, 94, 89, 93, 96, 97, 98, 99	47.363,04	0,943596	0,931195	99,91	39,97	39,98	19,95

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 46, 38, 39, 40, 41, 42, 43, 44, 45, 37, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 94, 96, 97, 98, 99	47.368,42	0,943497	0,934498	99,98	39,97	39,98	20,03
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 94, 95, 93, 98, 97, 96, 99	47.383,22	0,943450	0,937212	100,05	39,99	39,98	20,08

*Continua na próxima página*

Tabela 85 – Resultados do RSA para a rede UsaGde

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 93, 90, 94, 98, 97, 96, 99	46.667,13	0,943304	0,912331	98,90			

Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99	47.398,57	0,902018	0,963013	100,00	40,00	40,00	20,00
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 93, 90, 94, 98, 97, 96, 99	46.667,13	0,900456	0,957143	99,19	39,38	39,93	19,88

*Continua na próxima página*

Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 93, 90, 94, 96, 97, 98, 99	46.669,25	0,900906	0,961594	99,31	39,38	39,95	19,97
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 93, 94, 90, 96, 97, 98, 99	46.691,75	0,901848	0,958867	99,31	39,40	39,99	19,91

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Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 56, 53, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 93, 90, 94, 98, 97, 96, 99	46.704,05	0,900503	0,964534	99,38	39,41	39,93	20,03
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 93, 90, 94, 96, 97, 99, 98	46.706,15	0,901655	0,955729	99,25	39,42	39,98	19,85

*Continua na próxima página*

Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 91, 92, 93, 89, 94, 98, 97, 96, 99	46.714,56	0,901579	0,965173	99,45	39,42	39,98	20,04
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.716,68	0,901626	0,963113	99,41	39,42	39,98	20,00

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Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 56, 53, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 91, 92, 93, 89, 94, 98, 97, 96, 99	46.751,48	0,901333	0,955702	99,27	39,45	39,97	19,85
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 91, 92, 93, 89, 94, 96, 97, 99, 98	46.753,58	0,901684	0,961033	99,40	39,46	39,99	19,96

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Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 56, 53, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.753,60	0,901246	0,954599	99,25	39,46	39,97	19,83
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 91, 92, 93, 89, 97, 96, 94, 98, 99	46.766,67	0,901509	0,957919	99,34	39,47	39,98	19,89

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Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 86, 89, 91, 92, 93, 90, 94, 96, 97, 98, 99	46.767,86	0,901263	0,958460	99,34	39,47	39,97	19,91
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 91, 92, 93, 89, 94, 98, 97, 96, 99	46.784,56	0,902000	0,957366	99,36	39,48	40,00	19,88

*Continua na próxima página*

Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 91, 92, 93, 89, 94, 98, 97, 96, 99	46.793,41	0,901924	0,961228	99,45	39,49	40,00	19,96
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 89, 90, 91, 92, 93, 88, 94, 96, 97, 98, 99	46.808,67	0,901246	0,960783	99,42	39,50	39,97	19,95

*Continua na próxima página*

Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 86, 90, 91, 92, 93, 89, 94, 98, 97, 96, 99	46.816,27	0,902099	0,958821	99,43	39,51	40,00	19,91
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 86, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.818,39	0,902480	0,957124	99,41	39,51	40,02	19,88

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Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 87, 95, 86, 88, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.819,29	0,901608	0,962356	99,48	39,51	39,98	19,99
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 88, 90, 91, 92, 93, 89, 94, 98, 97, 96, 99	46.827,92	0,901667	0,961492	99,47	39,52	39,98	19,97

*Continua na próxima página*

Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 88, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.830,04	0,901760	0,962247	99,49	39,52	39,99	19,98
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 89, 90, 91, 92, 93, 88, 94, 96, 97, 98, 99	46.854,50	0,901649	0,956807	99,40	39,54	39,98	19,87

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Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 88, 90, 91, 92, 93, 89, 97, 96, 94, 98, 99	46.880,03	0,902094	0,960564	99,51	39,56	40,00	19,95
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 94, 90, 93, 98, 97, 96, 99	46.889,06	0,901322	0,952699	99,32	39,57	39,97	19,79

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Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 88, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.908,89	0,902836	0,957708	99,51	39,59	40,04	19,89
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 84, 83, 85, 86, 87, 95, 88, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.909,37	0,902140	0,958670	99,50	39,59	40,01	19,91

*Continua na próxima página*

Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 89, 90, 91, 92, 93, 86, 94, 96, 97, 98, 99	46.911,80	0,901158	0,963626	99,56	39,59	39,96	20,01
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 89, 90, 91, 92, 93, 88, 94, 96, 97, 98, 99	46.924,31	0,901263	0,955192	99,40	39,60	39,97	19,84

*Continua na próxima página*

Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 86, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.934,22	0,902737	0,951904	99,41	39,61	40,03	19,77
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 88, 90, 91, 92, 93, 89, 94, 96, 97, 98, 99	46.954,81	0,902012	0,958830	99,54	39,63	40,00	19,91

*Continua na próxima página*

Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 94, 90, 93, 98, 97, 96, 99	46.967,92	0,901854	0,958699	99,54	39,64	39,99	19,91
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 89, 90, 91, 92, 93, 88, 97, 96, 94, 98, 99	46.969,49	0,901614	0,958017	99,52	39,64	39,98	19,90

*Continua na próxima página*

Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 90, 89, 91, 92, 93, 88, 94, 96, 97, 98, 99	46.991,65	0,902035	0,957847	99,55	39,66	40,00	19,89
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 94, 90, 93, 98, 97, 96, 99	47.013,83	0,901269	0,958222	99,54	39,68	39,97	19,90

*Continua na próxima página*

Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 88, 90, 91, 92, 93, 94, 89, 96, 97, 98, 99	47.026,14	0,902257	0,960765	99,65	39,69	40,01	19,95
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 94, 96, 97, 98, 99	47.033,57	0,901971	0,962711	99,68	39,69	40,00	19,99

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Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 89, 90, 91, 92, 93, 88, 94, 96, 97, 98, 99	47.049,08	0,901538	0,961483	99,65	39,71	39,98	19,97
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 84, 83, 85, 95, 87, 88, 86, 89, 91, 92, 94, 90, 93, 98, 97, 96, 99	47.067,00	0,902743	0,963723	99,77	39,72	40,03	20,01

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Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 56, 53, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 94, 96, 97, 98, 99	47.070,49	0,902439	0,960720	99,69	39,72	40,02	19,95
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 94, 96, 97, 98, 99	47.079,40	0,901819	0,960516	99,67	39,73	39,99	19,95

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Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 90, 89, 92, 93, 94, 91, 98, 97, 96, 99	47.105,80	0,902444	0,962383	99,76	39,75	40,02	19,99
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 86, 89, 91, 92, 94, 90, 93, 98, 97, 96, 99	47.112,44	0,902117	0,961451	99,73	39,76	40,00	19,97

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Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 55, 56, 53, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 94, 96, 97, 98, 99	47.149,34	0,902596	0,959106	99,73	39,79	40,03	19,92
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 90, 89, 91, 92, 93, 88, 97, 96, 94, 98, 99	47.154,13	0,901678	0,954352	99,60	39,79	39,98	19,82

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Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 94, 96, 97, 98, 99	47.158,34	0,901936	0,961677	99,77	39,80	40,00	19,97
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 95, 89, 90, 91, 92, 93, 94, 88, 96, 97, 98, 99	47.168,77	0,902053	0,958919	99,72	39,81	40,00	19,91

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Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 86, 89, 91, 92, 94, 90, 93, 99, 97, 98, 96	47.196,20	0,902216	0,958884	99,75	39,83	40,01	19,91
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 86, 90, 89, 92, 93, 94, 91, 98, 97, 96, 99	47.198,01	0,903012	0,957092	99,75	39,83	40,04	19,88

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Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 88, 86, 90, 91, 92, 94, 89, 93, 96, 97, 98, 99	47.243,23	0,902047	0,963448	99,88	39,87	40,00	20,01
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 94, 96, 97, 98, 99	47.299,21	0,902450	0,957037	99,81	39,92	40,02	19,88

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Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 96, 97, 94, 98, 99	47.305,81	0,902585	0,962639	99,94	39,92	40,03	19,99
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 95, 90, 91, 92, 94, 89, 93, 96, 97, 98, 99	47.363,04	0,902526	0,964140	100,02	39,97	40,02	20,02

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Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 46, 38, 39, 40, 41, 42, 43, 44, 45, 37, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 94, 96, 97, 98, 99	47.368,42	0,901579	0,957063	99,83	39,97	39,98	19,88
	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 94, 95, 93, 98, 97, 96, 99	47.383,22	0,902000	0,956704	99,86	39,99	40,00	19,87

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Tabela 86 – Resultados do RMLSA para a rede UsaGde

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 93, 90, 94, 98, 97, 96, 99	46.667,13	0,900456	0,957143	99,19			



Tabela 87 – Comparação da topologia original e a melhor C.B. para a rede UsaGde

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99	47.398,57	0,9440175	0,9333202	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 55, 54, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 95, 87, 86, 88, 89, 91, 92, 93, 90, 94, 98, 97, 96, 99	46.667,13	0,9004561	0,9571430	98,05	39,38	38,15	20,51
	Diferença	731,44	0,0435614	- 0,0238228	1,95	0,62	1,85	-0,51



Tabela 88 – Resultados do RSA para a rede VBSN

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	16.259,96	0,481863	0,766842	100,00	40,00	40,00	20,00
	0, 1, 2, 3, 4, 5, 10, 7, 8, 9, 6, 11	16.138,77	0,481863	0,766842	99,70	39,70	40,00	20,00
	0, 1, 2, 3, 4, 5, 11, 7, 8, 9, 6, 10	15.858,09	0,481863	0,766842	99,01	39,01	40,00	20,00
	0, 1, 2, 3, 4, 5, 8, 7, 11, 9, 6, 10	15.972,74	0,491176	0,765052	100,02	39,29	40,77	19,95
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 11, 7, 8, 9, 6, 10	15.858,09	0,481863	0,766842	99,01			

Tabela 89 – Resultados do RMLSA para a rede VBSN

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	16.259,96	0,441667	0,764466	100,00	40,00	40,00	20,00
	0, 1, 2, 3, 4, 5, 10, 7, 8, 9, 6, 11	16.138,77	0,436765	0,761246	99,17	39,70	39,56	19,92

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Tabela 89 – Resultados do RMLSA para a rede VBSN

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
	0, 1, 2, 3, 4, 5, 11, 7, 8, 9, 6, 10	15.858,09	0,436275	0,751479	98,18	39,01	39,51	19,66
	0, 1, 2, 3, 4, 5, 8, 7, 11, 9, 6, 10	15.972,74	0,433333	0,758389	98,38	39,29	39,25	19,84
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 11, 7, 8, 9, 6, 10	15.858,09	0,436275	0,751479	98,18			

Tabela 90 – Comparação da topologia original e a melhor C.B. para a rede VBSN

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	16.259,96	0,481863	0,766842	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	0, 1, 2, 3, 4, 5, 11, 7, 8, 9, 6, 10	15.858,09	0,436275	0,751479	94,83	39,01	36,22	19,60
	Diferença	401,87	0,045588	0,015363	5,17	0,99	3,78	0,40





Tabela 91 – Resultados do RSA para a rede VDCN

RSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8	6.708,62	0,290741	0,776802	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8	6.708,62	0,290741	0,776802	100,00			

Tabela 92 – Resultados do RMLSA para a rede VDCN

RMLSA	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Topologia original	0, 1, 2, 3, 4, 5, 6, 7, 8	6.708,62	0,196296	0,771791	100,00	40,00	40,00	20,00
Melhor custo x benefício	0, 1, 2, 3, 4, 5, 6, 7, 8	6.708,62	0,196296	0,771791	100,00			

Tabela 93 – Comparação da topologia original e a melhor C.B. para a rede VDCN

Tipo	Topologia	SCE	TB	Fragmen- tação	Total(%)	SCE(%)	TB(%)	Fragmen- tação(%)
Original - RSA	0, 1, 2, 3, 4, 5, 6, 7, 8	6.708,62	0,290741	0,776802	100,00	40,00	40,00	20,00
Melhor C. B. - RMLSA	0, 1, 2, 3, 4, 5, 6, 7, 8	6.708,62	0,196296	0,771791	86,88	40,00	27,01	19,87
	Diferença	0,00	0,094444	0,005012	13,12	0,00	12,99	0,13