Virtualization Drives New Approaches to Backup

Nikolay Yamakawa
451 Research
Nikolay Yamakawa
Analyst

Nikolay is an analyst for 451 Research's TheInfoPro service, where he identifies trends, relationships and synergies within and across five key IT sectors: cloud computing, information security, networking, servers & virtualization, and storage.

nikolay.yamakawa@451research.com

@nikoray4u
TheInfoPro Business Overview

Fundamental, ‘voice of the customer’ research on key information technology (IT) sectors.

Founded in 2002, acquired by The 451 Group in 2011.

Source: Extensive one-on-one interviews with thousands of pre-screened senior level IT professionals.

Representing a variety of verticals, majority of Commentator Network Members’ organizations gross more $1B annually.


Quantitative and qualitative data includes: customer spending, vendor shortlists, vendor performance and technology roadmaps.
“The research is timely and relevant. It is good to know what others are experiencing or doing since it is sometimes difficult to get very honest vendor reference calls.” LE, Financial Services

“...and for strategic and planning purposes.” LE, Financial Services
TheInfoPro Interview

Company Profile
- Overall Budgets & Changes
- Pain Points
- Exciting Vendors
- Top Projects

Technology Roadmap
- Status
- Vendor
- $ Trend
- $ Spend
  (40 technologies for each sector)

Vendor Performance
- Forward Looking Spending Data
- Vulnerability
- Ratings
  (4-6 Vendors)

Timely Topics
- Rank the Importance
- Motivators & Inhibitors
- Organizational Dynamics
Demographics: Wave 17

Industry Verticals

- Financial Services: 22%
- Telecom/Technology: 16%
- Consumer Goods/Retail: 11%
- Healthcare/Pharmaceuticals: 8%
- Energy/Utilities: 5%
- Transportation: 4%
- Public Sector: 4%
- Services: Business/Accounting/Engineering: 5%
- Industrial/Manufacturing: 8%
- Architect/Engineer/Analyst Level: 47%
- Education: 9%
- Other: 6%
- Materials/Chemicals: 2%

Enterprise Revenue

- <$200K: 4%
- $200K-$1.4M: 30%
- $1.5M-$3.9M: 21%
- $4M-$7.9M: 17%
- $8M-$14.9M: 14%
- $10B-$19.99B: 13%
- $5B-$9.99B: 12%
- $1B-$4.99B: 36%
- $500M-$999.99M: 8%
- >$50M: 7%
- <$499.99M: 11%
- >$40B: 9%

Respondent’s Title

- VP Level and Above: 8%
- Director/Manager Level: 45%
- Architect/Engineer/Analyst Level: 47%

Storage Budget Level

- <$20K: 4%
- $20K-$1.4M: 30%
- $1.5M-$3.9M: 21%
- $4M-$7.9M: 17%
- $8M-$14.9M: 14%
- $10B-$19.99B: 13%
- $5B-$9.99B: 12%
- $1B-$4.99B: 36%
- >$40B: 9%
- >$50M: 7%
- <$499.99M: 11%
- >$40B: 9%

Source: Storage – Wave 17 | Top Left Chart: n=260; Top Right Chart, n=260; Bottom Left Chart, n=260; Bottom Right Chart, n=196.
Current Situation
Storage Budget Trends

Storage Budget Changes

2011 vs. 2010 (1H '12)
- Decreasing: 19%
- No Change: 35%
- Increasing: 46%

2012 vs. 2011 (1H '13)
- Decreasing: 18%
- No Change: 35%
- Increasing: 47%

2013 vs. 2012 (1H '13)
- Decreasing: 26%
- No Change: 36%
- Increasing: 38%

2013 vs. 2012
- > 50% More: 38% plan increased spending
- 25%-50% More: 36%
- 11%-24% More: 26%
- 5%-10% More: 36%
- < 5% More: 36%
- < 5% Less: 26%
- 5%-10% Less: 35%
- 11%-24% Less: 18%
- 25%-50% Less: 19%
- > 50% Less: 20%

Server Backup Software

Implementation Roadmap*

1H '12
- In Use Now: 96%
- Near-term Plan (In Next 6 Months): 0%
- Past Long-term Plan (Later Than 18 Months Out): 1%
- Not in Plan: 2%

1H '13
- In Use Now: 98%
- Near-term Plan (In Next 6 Months): 2%
- Past Long-term Plan (Later Than 18 Months Out): 0%
- Not in Plan: 0%

Spending Change

2012 vs. 2011
- Less Spending: 6%
- About the Same: 63%
- More Spending: 27%

2013 vs. 2012
- Less Spending: 10%
- About the Same: 51%
- More Spending: 33%

"With storage, getting accurate backups. Sheer volume of information. People never factor in backup when they budget."
– LE, Telecom/Technology

Source: Storage – Wave 17 | Top Chart: 1H '12, n=251; 1H '13, n=252. Bottom Chart: 2012 vs. 2011, n=253; 2013 vs. 2012, n=253. Data from respondents not using the technology or that don’t know about spending are hidden. Before 1H '13, ‘Don’t Know’ responses were removed from the calculations.
**Storage Projects – Time Series of Top Categories**

- **Technology Refresh and Capacity Expansion**: 39% (1H '12), 39% (1H '13)
- **Backup Redesign**: 19% (1H '12), 19% (1H '13)
- **DR Redesign**: 9% (1H '12), 11% (1H '13)
- **Archiving**: 9% (1H '12), 7% (1H '13)
- **Storage Virtualization**: 9% (1H '12), 6% (1H '13)
- **Consolidation**: 12% (1H '12), 8% (1H '13)
- **Moving Datacenter**: 8% (1H '12), 8% (1H '13)
- **Supporting Server Virtualization**: 7% (1H '12), 4% (1H '13)
- **Storage Network Redesign**: 8% (1H '12), 6% (1H '13)
- **Reporting/Monitoring/Forecasting**: 6% (1H '12), 6% (1H '13)

Source: Storage – Wave 17 | Q. What are your organization’s top storage-related projects in the next 12 months? 1H ’12, n=253; 1H ’13, n=254. *Note that due to multiple responses per interview, totals may exceed 100%.

- “Backup capacity expansion for regulatory requirement.” – LE, Financial Services
- “Backup capacity expansion. Need to complete line of business demand based on growth.” – LE, Financial Services

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Time Distribution of Staff

- Storage Provisioning: 17% (1H '13), 14% (1H '12)
- Backup Administration: 15% (1H '13), 14% (1H '12)
- Storage Administration: 13% (1H '12), 14% (1H '13)
- Storage Performance Troubleshooting: 12% (1H '13), 10% (1H '12)
- Storage Migrations: 17% (1H '13), 10% (1H '12)
- Meeting and Staff Management: 8% (1H '13), 7% (1H '12)
- Designing Storage Architecture/Engineering: 8% (1H '13), 7% (1H '12)
- Working with Business Units Defining Requirements: 7% (1H '13), 6% (1H '12)
- Evaluating New Storage Product: 5% (1H '13), 4% (1H '12)
- Storage Switch Administration: 4% (1H '13), 4% (1H '12)
- Working With Vendors to Negotiate Purchases: 4% (1H '13), 4% (1H '12)

Source: Storage – Wave 17 | Q. What percentage of time does your staff spend performing each of the following functions? 1H '12, n=23; 1H '13, n=25.
Top Backup Pains

- **Exceeding Backup/Recovery Window**: 46%
- **Managing Backup Hardware/Software**: 21%
- **Defining a Retention Policy**: 18%
- **Data Growth**: 18%
- **Tape Management**: 11%
- **Low De-duplication Ratio**: 7%
- **Move to Snapshot-based Backup**: 4%
- **Other**: 18%

Source: Storage – Wave 17 | Q. What are your top backup pains? n=28. *Note that due to multiple responses per interview, totals may exceed 100%.

- “Backups – Windows, data explosion, scaling backup and recovery on the same line as the growth of primary storage.” – LE, Energy/Utilities
- “Backup retention increase. There is a growing demand to keep info for a long period of time, beyond the retention standards. Primarily regulatory issues.” – MSE, Financial Services
- “Retention policy. We don't have a good one. Need a better one. Not a good policy as how long things should be kept, no discontinue between different types of data. Standard policy. Here it is. Some things do need to be kept longer than proscribed. No division of types of data.” – LE, Energy/Utilities
- “We just went through a 30% reduction in force for IT – retirements, fired and such. Impacted the backup and systems admin staff significantly.” – LE, Industrial/Manufacturing
Primary Method of Backup

- **Traditional backup software only**: 62%
- **Snapshots/replication, then backup software**: 24%
- **Snapshots/replication managed and/or cataloged by backup software**: 10%
- **Snapshots/replication only, without backup software**: 4%

Virtual Infrastructure Backup Approaches

- Backup the same as you did for physical servers: 63%
- Backup using the image-level capability of the backup product: 50%
- Backup via the hypervisor infrastructure or hypervisor-aware backup agent: 35%
- Other: 8%

Source: Storage – Wave 17 | Q. When backing up virtual machines, do you: n=60. *Note that due to multiple responses per interview, total may exceed 100%.
## Virtual Infrastructure Backup Approaches – Time Series

<table>
<thead>
<tr>
<th>Approach</th>
<th>1H '12</th>
<th>1H '13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backup the same as you did for physical servers</td>
<td>69%</td>
<td>63%</td>
</tr>
<tr>
<td>Backup using the image-level capability of the backup product</td>
<td>28%</td>
<td>50%</td>
</tr>
<tr>
<td>Backup via the hypervisor infrastructure or hypervisor-aware backup agent</td>
<td>16%</td>
<td>35%</td>
</tr>
<tr>
<td>Other</td>
<td>8%</td>
<td>16%</td>
</tr>
</tbody>
</table>

Source: Storage – Wave 17 | Q. When backing up virtual machines, do you: 1H ’12, n=58; 1H ’13, n=60. Note that due to multiple responses per interview, total may exceed 100%.
Virtualization Stage of the Cloud Journey

- **Standardize**: Lower cost, Increase performance, Reduce complexity
- **Consolidate**: Release assets, Improve efficiencies, Improve management and control
- **Virtualize**: Lower cost, Increase utilization, Higher flexibility
- **Automate**: Lower cost, Improve user experience, Speed to market
- **Orchestrate**: Dynamically aligned to the business, Self adapting, Reduce complexity

61% here
Utilization of Different Vendor/Product for Protecting Virtual Machines

Utilization of Different Vendor/Product

- Yes: 28%
- No: 67%
- Don't Know: 5%

Reasons for Leaving Current Vendor

- Cost: 32%
- Better Virtual Environment Support: 21%
- Failures of Current Vendor: 9%
- Management Fit: 3%
- Easy Migration: 3%

Source: Storage – Wave 17 | Left Chart: Q. When protecting your virtual machines (VMs), will you utilize a different vendor or product than you do for your physical servers? n=60. Right Chart: Q. If no, what would make you leave your current vendor? n=34.
Exciting Backup Products

- De-duplication Appliances: 42%
- Converged Backup, E-discovery, Archive: 16%
- Snapshots: 11%
- Cloud Appliances: 11%
- None: 16%
- Other: 5%

Source: Storage – Wave 17 | Q. What are the most exciting backup products on the market? n=19.
Backup Capacity by Destination

**IH '12**
- Appliance: 4%
- Snapshot/Disk: 20%
- Tape: 50%
- De-duplication: 26%

**IH '13**
- Appliance: 0%
- External Cloud: 4%
- Snapshot/Disk: 12%
- Tape: 54%
- De-duplication: 30%

“Incremental daily and weekly backups on tape that are sent off site. It can be tough to recover data from tape.”
– LE, Industrial/Manufacturing

Source: Storage – Wave 17 | Q. Of your overall backup capacity, what percentage is stored in the following destinations? IH '12, n=28; IH ‘13, n=26.
Production Applications Receiving Deduplication

- Backup: 63%
- Virtual Machines: 41%
- Unstructured Data: 37%
- Archive Data: 15%
- Replication: 11%
- Data Warehouses: 7%
- Databases: 4%
- Other: 22%

Source: Storage – Wave 17 | Q. What production applications are you applying de-duplication to? n=27. *Note that due to multiple responses per interview, total may exceed 100%.
De-duplication of Backup Streams

- **Inline at Target**: 39%
- **Source**: 32%
- **At Backup Server**: 21%
- **Post Process at Target**: 18%
- **Not De-duplicating Backup Streams**: 11%
- **Don't Know**: 7%

Source: Storage – Wave 17 | Q. Where does your de-duplication of backup streams occur? n=28. *Note that due to multiple responses per interview, totals may exceed 100%.
## VMware Hypervisor Features Used in Production

<table>
<thead>
<tr>
<th>Feature</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>vSphere vMotion</td>
<td>100%</td>
</tr>
<tr>
<td>vSphere Storage vMotion</td>
<td>65%</td>
</tr>
<tr>
<td>vSphere Distributed Resource Scheduler (DRS)</td>
<td>65%</td>
</tr>
<tr>
<td>vSphere High Availability</td>
<td>63%</td>
</tr>
<tr>
<td>vStorage Thin Provisioning</td>
<td>53%</td>
</tr>
<tr>
<td>vSphere Distributed Switch</td>
<td>44%</td>
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<tr>
<td>vCenter Site Recovery Manager</td>
<td>40%</td>
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<tr>
<td>vSphere Fault Tolerance</td>
<td>30%</td>
</tr>
<tr>
<td>Enhanced vMotion (moving storage &amp; system state at once)</td>
<td>23%</td>
</tr>
<tr>
<td>vSphere Data Protection (VDP)</td>
<td>19%</td>
</tr>
<tr>
<td>vSphere Storage Distributed Resource Scheduler (SDRS)</td>
<td>16%</td>
</tr>
<tr>
<td>Virtual Volumes</td>
<td>16%</td>
</tr>
<tr>
<td>vSphere Replication (any-to-any software replication feature)</td>
<td>12%</td>
</tr>
<tr>
<td>vSphere Storage Appliance</td>
<td>9%</td>
</tr>
<tr>
<td>vSphere Profile-Driven Storage</td>
<td>5%</td>
</tr>
<tr>
<td>vFlash</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: Storage – Wave 17 | Q. If using VMware, which of the following hypervisor features are you using in production? *Note that due to multiple responses per interview, total may exceed 100%.
Vendors
Utilization of Different Vendor/Product for Protecting Virtual Machines

Utilization of Different Vendor/Product:

- Yes: 28%
- No: 67%
- Don't Know: 5%

Alternate Vendors:

- NetApp: 38%
- Veeam: 31%
- VMware: 15%
- IBM TSM: 8%
- EMC NetWorker: 8%

Source: Storage – Wave 17 | Left Chart: Q. When protecting your virtual machines (VMs), will you utilize a different vendor or product than you do for your physical servers? n=60. Right Chart: Q. If yes, which vendor? n=13.
<table>
<thead>
<tr>
<th>Vendor</th>
<th>In Use Now</th>
<th>In Pilot/Evaluation (Budget Has Already Been Allocated)</th>
<th>Near-term Plan (In Next 6 Months)</th>
<th>Long-term Plan (6-18 Months)</th>
<th>Not in Plan</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symantec</td>
<td>45%</td>
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<tr>
<td>IBM</td>
<td>42%</td>
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<td>EMC</td>
<td>29%</td>
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<tr>
<td>CommVault</td>
<td>25%</td>
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<tr>
<td>Veeam Sftw</td>
<td>22%</td>
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<td>HP</td>
<td>15%</td>
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<td>NetApp</td>
<td>13%</td>
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<td>Microsoft</td>
<td>11%</td>
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<td>Dell</td>
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<td>HDS</td>
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<td>CA</td>
<td>8%</td>
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<tr>
<td>VMware</td>
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<td>Unitrends</td>
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<td>Seagate</td>
<td>6%</td>
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<tr>
<td>Red Hat</td>
<td>5%</td>
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<td>Optum</td>
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<tr>
<td>Open Source</td>
<td>3%</td>
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<tr>
<td>Homegrown</td>
<td>3%</td>
<td>-</td>
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<tr>
<td>BMC Sftw</td>
<td>2%</td>
<td>-</td>
<td>-</td>
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<td>-</td>
</tr>
</tbody>
</table>

Source: Storage – Wave 17 | Q. What is your primary in-use vendor for this technology? If any, what other vendor(s) are in use for this technology? What are your top vendors in consideration for this technology? n=252.

"Problem of having so many different vendors."
– LE, Telecom/Technology

"Trying to overhaul storage and backup infrastructure – currently using Oracle, EMC, NetApp, CommVault, Symantec – we may replace some, not all."
– LE, Telecom/Technology
Server Backup Software – Time Series of Top Vendors

**1H ’12***

- Symantec
- IBM
- EMC
- CommVault
- NetApp
- HP
- CA
- Veeam Sftw
- Oracle

**1H ’13**

- Symantec
- IBM
- EMC
- CommVault
- Veeam Sftw
- HP
- NetApp
- Microsoft
- Dell
- HDS
- CA

Source: Storage – Wave 17 | Q. What is your primary in-use vendor for this technology? If any, what other vendor(s) are in use for this technology? What are your top vendors in consideration for this technology? 1H ’12, n=251; 1H ’13, n=252. *Before 1H ’13, ‘Don’t Know’ responses were removed from the calculations.
Data Protection: Emerging Vendor Awareness

Source: Storage – Wave 17 | Q. Are you aware of the following data protection companies or products? n=240 to 243

- **Veeam Sftw**: 62% Yes, 38% No
- **Actifio**: 24% Yes, 76% No
- **Zerto**: 12% Yes, 88% No
- **Continuity Sftw**: 10% Yes, 90% No
- **PHD Virtual**: 5% Yes, 95% No
Data Protection: Likelihood of Implementing Emerging Vendors

- **Veeam Sftw**
  - Extremely Likely: 16%
  - Very Likely: 6%
  - Somewhat Likely: 12%
  - Minimally Likely: 20%
  - Not at All Likely: 46%

- **Continuity Sftw**
  - Extremely Likely: 9%
  - Very Likely: 0%
  - Somewhat Likely: 5%
  - Minimally Likely: 14%
  - Not at All Likely: 73%

- **Zerto**
  - Extremely Likely: 7%
  - Very Likely: 10%
  - Somewhat Likely: 20%
  - Minimally Likely: 17%
  - Not at All Likely: 47%

- **Actifio**
  - Extremely Likely: 4%
  - Very Likely: 11%
  - Somewhat Likely: 26%
  - Minimally Likely: 56%

- **PHD Virtual**
  - Extremely Likely: 9%
  - Very Likely: 9%
  - Somewhat Likely: 82%

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“I would like to see Veeam add more capabilities. I would like to see it be easier to define backup. I would like it to be more point and click.” – MSE, Industrial/Manufacturing

“Continuity is small enough where they still listen and react. They are very hands-on with their customers. Downside, they introduce a lot of new detection capabilities, we need better control on our end.” – LE, Financial Services

“Actifio – offering live and backup data as one. I want to see if this will help us manage data as it’s being backed up.” – LE, Industrial/Manufacturing

Source: Storage – Wave 17 | Q. Are you aware of the following data protection companies or products? If yes, how likely are you to use that company or product in the next two years? Please use a 1-5 scale where ‘1’ is not at all likely and ‘5’ is extremely likely. Veeam Sftw, n=68; Continuity Sftw, n=16; Zerto, n=14; Actifio, n=30; PHD Virtual, n=9.
# Customer Ratings

<table>
<thead>
<tr>
<th></th>
<th>AVG</th>
<th>Symantec</th>
<th>CommVault</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Vision</td>
<td>3.7</td>
<td>3.3</td>
<td>4.3</td>
</tr>
<tr>
<td>Technical Innovation</td>
<td>3.8</td>
<td>3.1</td>
<td>4.2</td>
</tr>
<tr>
<td>Brand/Reputation</td>
<td>4.1</td>
<td>3.8</td>
<td>3.8</td>
</tr>
<tr>
<td>Competitive Positioning</td>
<td>3.7</td>
<td>3.4</td>
<td>4.1</td>
</tr>
<tr>
<td>Value for Money</td>
<td>3.6</td>
<td>3.5</td>
<td>3.8</td>
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<td>Product Quality</td>
<td>4.1</td>
<td>3.6</td>
<td>4.2</td>
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<tr>
<td>Delivery as Promised</td>
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<td>3.4</td>
<td>3.9</td>
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<td>Technical Support</td>
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<td>3.1</td>
<td>3.9</td>
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<td>Interoperability</td>
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<td>4.0</td>
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<tr>
<td>Features/Functions</td>
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<td>4.3</td>
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<td>Product Performance</td>
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<td>Product Reliability</td>
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<tr>
<td>Sales Force</td>
<td>3.7</td>
<td>3.3</td>
<td>3.5</td>
</tr>
<tr>
<td>Ease of Doing Business</td>
<td>3.7</td>
<td>3.3</td>
<td>3.6</td>
</tr>
</tbody>
</table>

**Raw Scores:** Respondents rated vendors using a 1-5 scale, with ‘1’ being poor and ‘5’ being excellent. Red highlighting indicates that the average score is at least .5 standard deviations below the mean ratings and green highlighting indicates that it is at least .5 standard deviations above the mean.

Source: Storage – Wave 17 | Symantec, n=24; CommVault, n=9.
Questions?

▶ Email: nikolay.yamakawa@451research.com
▶ Twitter: @nikoray4u
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