MarketScope for DNS, DHCP and IP Address Management

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The DNS, DHCP and IP address management market (known as DDI) remains an independent niche market with solutions that help network administrators improve the manageability, reliability, and operational effectiveness of their networks. IPAM is the most common driver for DDI solutions.

WHAT YOU NEED TO KNOW
If you are experiencing stability problems with Domain Name System (DNS) and/or Dynamic Host Configuration Protocol (DHCP), or if you need “power tools” to manage these core network services, then DDI solutions may be a good fit for your organization. Gartner clients that have been managing their IP address space with spreadsheets and homegrown applications report that DDI tools and services enhance the reliability of DNS/DHCP and provide more efficient management and better reporting. Because there is no margin for error when upgrading DNS infrastructures, enlisting professional services assistance is a common practice.

MARKETSCOPE
Network managers continue to purchase solutions to help them manage their internal DNS and DHCP infrastructures. Most organizations rely on the embedded DNS/DHCP services included in Windows Server, although Microsoft does not offer an IP address management (IPAM) tool, and its Microsoft Management Console (MMC) provides primitive administrative capabilities. Microsoft’s weak management, operational and reporting tools have created a market opportunity to complement and, in many cases, replace the embedded Windows DNS/DHCP services. Throughout 2010, two drivers emerged as the leading forces of the DDI market:

- Management of the IP address space — This is the primary driver for adopting a DDI solution approximately 80% of the time. IPAM applications offer a range of capabilities for controlling, automating and managing the domain name and address space, and these tools are a significant improvement over spreadsheets and homegrown address management applications.

- Stability — The reliability and availability of the DNS/DHCP infrastructure is critical to the stability of the overall IT environment. Gartner clients reported choosing DDI tools to improve the stability of DHCP (for example, improving DHCP failover and avoiding duplicate IP addresses) and DNS (avoiding configuration errors and automating error-prone manual processes).

Two other factors, the need for centralized control and operational/political tensions, are also commonly cited by Gartner clients as drivers for migrating to DDI solutions to improve stability. Centralizing control helps to improve management and administrative capabilities, which leads to a more reliable DNS/DHCP infrastructure. Political and operational tensions
stem from the fact that the server teams that are typically responsible for managing the Windows Server platform are often in conflict with the network teams that manage the embedded DNS/DHCP Microsoft services. Conflicts related to change management, in which the two teams do not agree on changes or do not communicate clearly, often drive the network team to purchase DNS/DHCP appliances so that it maintains control over the complete platform.

DDI is an independent niche market. This is good news for buyers of DDI solutions, because the decision can be made independently of other technology purchases. It’s challenging for vendors, because efforts to grow through technology partnerships have largely fallen flat. While several DDI vendors have established technology partnerships with vendors outside the DDI market, none can be categorized as market-changing moves. The most aggressive move was made by Infoblox, with its acquisition of network configuration and change management (NCCM) vendor Nectordia in May 2010. Infoblox positioned the move as a response to the virtualization trend, since virtualization creates provisioning challenges (related to the speed and automation of provisioning IP addresses). Its goal is to integrate NCCM and DDI technologies to respond to the operational challenges of virtualization. Gartner is beginning to hear this requirement from some clients with large-scale virtualized server environments (for example, private cloud), but it is still far from a mainstream requirement. Another vendor, BlueCat Networks, has integrated its DDI solution with HP’s configuration management database (CMDB) offering. Here again, integrating DDI and CMDB technologies is not a mainstream requirement. Alcatel-Lucent has integrated its VitalQIP solution with InfoExpress’ network access control (NAC) product, although other NAC and DDI partnerships have met with limited success. These examples underscore the independent nature of the DDI market.

It is worth noting that BlueCat Networks and Infoblox have filed suit against each other, if only because their competitors might bring it up in prospecting discussions. However, we advise customers and prospects of these companies that it is far too early for these legal issues to impact the DDI vendor selection process. In June 2010, BlueCat sued Infoblox, as well a number of former BlueCat employees who had left to join Infoblox, for, among other things, allegedly taking and using BlueCat’s confidential business information. In December 2010, Infoblox sued BlueCat for patent infringement. Gartner notes that lawsuits between technology vendors are common and often take several years to resolve. At the time of this writing, there have been no rulings from the courts. Gartner will monitor the litigation and advise our clients about any resolution of the cases. Organizations that require a deeper understanding of the litigation should contact their legal advisors.

Market/Market Segment Description

The DDI market is composed of solutions that provide and/or manage internal DNS and DHCP services, and IPAM is a critical component of these solutions. The market for external DNS services is separate and distinct from the DDI market. The external market consists primarily of Internet service providers (ISPs), Web hosting providers and DNS managed service vendors (such as Afflias, Akamai, Neustar, VeriSign and others) that provide primary and/or secondary authoritative DNS servers with varying degrees of reliability, security and additional features. While many DNS servers can be used for internal or external DNS, the administrative and operational requirements for internal and external DNS are quite different. The internal DDI market is primarily product-focused; the external DNS market is primarily service-focused. There are three categories of DDI solutions: bundled offerings, overlay management solutions and managed services.

Bundled Offerings

Bundled offerings, in which DNS and DHCP services share an integrated database, represent the fastest-growing segment of the DDI market. Bundled offerings are available as appliances, software or virtual images, although appliances are the dominant form factor. Bundled solution vendors provide IPAM via two models — as an embedded function or an optional component. Integrating DNS, DHCP and IPAM functions improves workflow tasks and the manageability of the IP address space, and reduces the risk of human error.

Overlay Management Solutions

Overlay management solutions are meant to complement, not replace, existing DNS and DHCP services. They are simpler to deploy than bundled solutions, which require the replacement of the DNS/DHCP infrastructure or integrating with existing DNS servers. Overlay solutions provide help in two areas — adding enterprise management capabilities to DNS and DHCP, and adding IPAM functions. Several overlay solutions can manage heterogeneous DNS (ISC BIND and Microsoft DNS) and DHCP environments (ISC DHCP, Microsoft DHCP and Cisco routers running DHCP).

Managed Services

There is a small market for managed DDI services, although Gartner estimates that it represents less than 10% of the total spending on DDI solutions. Managed service vendors deploy DDI solutions on their customers’ premises and then manage DNS and DHCP services remotely. Several providers offer managed DDI services, including AT&T, BT Diamond, HP/EDS, Neustar (a major player for external DNS services), N3K (European focus) and Tuscany Networks (European focus).
Inclusion and Exclusion Criteria
To be included in this MarketScope, a vendor’s solution must match Gartner’s description of an overlay management solution or a bundled offering, as noted in this research. Additional criteria are:

- The products with the required features and functions must be shipping as of 1 January 2011.
- The vendor must have generated at least $2.5 million in sales during the 12 months leading up to 1 January 2011.

These solutions have been excluded from this analysis:

- Global load balancers and application delivery controllers from F5, Citrix Systems and others that include DNS functionality primarily used for traffic redirection (for disaster recovery or global server load balancing). These are specialized solutions that do not offer the broader DDI feature set.
- Managed external DNS services from ISPs, Web hosts or managed DNS providers.
- Microsoft’s DNS and DHCP services (included with Windows Server 2003 and 2008) have been excluded because they have limited administration and management capabilities, and do not include an IPAM solution.
- Service providers that offer DDI managed services with other vendors’ equipment.
- Solutions that are optimized for the service provider market. For example, DNS vendors Infoweapons, Nominum and Secure64 all primarily target service providers and do not meet the criteria for this MarketScope. Cisco’s Network Registrar product, which has a strong installed base in the multiple system operator (MSO, otherwise known as cable providers) market, is not actively marketed to enterprises. Cisco indicates that it is now beginning to readdress the enterprise market, and Gartner will reassess Cisco’s progress in the 2012 market analysis.

Some IPAM-only solutions do not offer integrated DNS/DHCP solutions, nor do they provide DNS administration capabilities. These solutions were not included in this analysis because they do not match Gartner’s definition of overlay management or bundled solutions. Examples of IPAM-only solutions are Easy-IP from Crypton Computers and Orion IPAM from SolarWinds. These tools offer basic IPAM functionality that can help enterprises plan and manage an IP address space, although most Gartner clients require a more advanced feature set. However, Gartner will re-evaluate these solutions for its 2012 DDI market analysis.

Rating for Overall Market/Market Segment

Overall Market Rating: Promising

Gartner estimates that the DDI market generated approximately $216 million in 2010, representing a 23% increase over 2009. Gartner estimates that the market will grow another 28% in 2011, to approximately $276 million. The majority of Gartner clients that have implemented DDI solutions are managing more than 100,000 active IP addresses, although the popularity of appliance-based offerings and the overall momentum of the virtualization trend have made DDI products affordable for midsize enterprises with as few as 10,000 IP addresses.

Two factors that could accelerate growth for DDI vendors are DNS Security Extensions (DNSSEC) and IPv6. If these technologies see widespread adoption in 2011, then the market will grow faster than we predict. However, Gartner anticipates slow adoption, due to the complexities inherent in each technology. In July 2010, the DNS root zone was signed, and Internet Corporation for Assigned Names and Numbers (ICANN) has announced that it will sign the .com zone in 1Q11. Nonetheless, Gartner expects that, by 2014, only 30% of all DNS look-ups will be signed with DNSSEC. IPv6 is also moving slowly, although the central registrar of the Internet (the Internet Assigned Numbers Authority [IANA]) exhausted its IPv4 address pool in February 2011 (although Regional Internet Registries still have addresses to allocate). Since most enterprises already have more than enough public IPv4 addresses for their needs, and they can use private IPv4 addressing internally, they do not feel pressured to migrate to IPv6. Gartner predicts that, by 2015, 17% of global Internet users will use IPv6, with 28% of new Internet connections running the protocol. Most of the IPv6 adoption will be from mobile users, whose devices are not managed by DDI systems.
Evaluation Criteria

Table 1. Evaluation Criteria

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<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Comment</th>
<th>Weighting</th>
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<tbody>
<tr>
<td>Product/Service</td>
<td>An analysis of the breadth of the product’s feature sets. IPAM features and advanced capabilities (for example, automatic discovery/reconciliation and back-out/restoration capabilities) will be heavily weighted. Also, where appropriate, an analysis of the enhancements to basic Berkeley Internet Name Domain (BIND) services. Availability and reliability capabilities are other important components of this criterion.</td>
<td>High</td>
</tr>
<tr>
<td>Customer Experience</td>
<td>This criterion reflects feedback assessed by conducting qualitative interviews with vendor references and by obtaining feedback from Gartner clients. Customer input regarding the product’s ease of deployment and the vendor’s service and support capabilities are key factors.</td>
<td>High</td>
</tr>
<tr>
<td>Overall Viability (Business Unit, Financial, Strategy, Organization)</td>
<td>Viability includes an assessment of the vendor’s overall financial health, the financial and practical success of the business unit, and the likelihood of the individual business unit continuing to invest in a DDI solution.</td>
<td>Standard</td>
</tr>
<tr>
<td>Marketing Execution</td>
<td>This criterion assesses the effectiveness of the vendor’s marketing programs, and its ability to create awareness and “mind share.”</td>
<td>Standard</td>
</tr>
<tr>
<td>Offering (Product) Strategy</td>
<td>An evaluation of the vendor’s strategic product direction, including an analysis of its road map. Also, an assessment whether recent technology partnerships and investments reflect a good understanding of customer requirements and future market direction.</td>
<td>High</td>
</tr>
<tr>
<td>Geographic Strategy</td>
<td>The vendor’s strategy for targeting prospects and providing support beyond its “home” market.</td>
<td>Low</td>
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Source: Gartner (March 2011)

Figure 1. MarketScope for DNS, DHCP and IP Address Management

As of March 2011
Source: Gartner (March 2011)
Vendor Product/Service Analysis

**Alcatel-Lucent**

Alcatel-Lucent has emerged as a recommitted player in the DDI market after suffering through a difficult period from 2005 through 2009, when its VitalQIP solution lagged competitors in feature development and it lost market share. In January 2011, it introduced its fourth hardware appliance, the 1200 model, which includes integrated lights-out capabilities for remote management. Alcatel-Lucent has plugged many of its product holes (for example, it now offers a Web interface and its own appliances). While it has stabilized its customer base, it continues to be tested in the market. Alcatel-Lucent’s solution is highly scalable, and it has some high-reliability features that enable it to also target the service provider market (approximately 30% of VitalQIP revenue comes from service providers).

Use Case: Large enterprises should consider VitalQIP. Its price structure and Alcatel-Lucent’s lack of a strong channel program make VitalQIP a less attractive option for small and midsize businesses (SMBs).

**Strengths**

- VitalQIP supports flexible deployment options. It is available in the following form factors: hardware appliances, software appliances (packaged with Red Hat Linux), software (supported on Red Hat, Sun or Windows) and a virtual machine in VMware. All form factors can be mixed and matched.

- VitalQIP provides a broad overlay solution. It can manage BIND and Microsoft DNS, and it can also manage Microsoft DHCP, as well as managing its own DNS/DHCP services.

- Its reconciliation feature includes the ability to automatically reclaim unused IP addresses.

- VitalQIP includes an extensive list of standard reports. It also provides an open database schema to allow custom reports.

**Challenges**

- Its DHCP lease history requires a separate application (Alcatel-Lucent does not charge for this application, known as Audit Manager).

- VitalQIP requires a separate appliance to map IP addresses to LAN switch ports.

- Feedback on Alcatel-Lucent’s service and support remains mixed. Some customers expressed concerns about the company’s responsiveness to customer needs.

**Rating: Promising**

**BlueCat Networks**

BlueCat Networks is a DDI pure play that offers the Adonis family of integrated DNS and DHCP appliances. BlueCat also offers a dedicated IPAM appliance — Proteus, which is an overlay solution that manages Adonis appliances and Windows DNS and DHCP. The Adonis and Proteus components are also available as virtual machines in a VMware environment. BlueCat moved from the Positive category in the 2009 DDI MarketScope to Strong Positive in 2011, due to its success in winning several large deals (including some large U.S. government agencies), its strengthened distribution channel and its appearance on more shortlists of Gartner clients. In January 2011, BlueCat announced that its DDI solution is available as an option on Cisco’s UCS Express, a branch office platform for hosting applications and infrastructure.

Use Case: SMBs and large enterprises should consider BlueCat.

**Strengths**

- Proteus is a strong IPAM tool that includes several advanced features, including IP reconciliation and good permissions controls (for establishing tiered administration).

- Network discovery, and the ability to map endpoints to LAN switch ports, is included as a core IPAM feature. The network discovery feature works by querying Layer 2 and Layer 3 devices, which is more reliable than the “ping sweep” approach used by some competitors.

- BlueCat has exhibited strong financial management. It has largely grown organically, with only a limited amount of venture capital funding. In 2009, it raised $11 million in its first round of institutional financing.

**Challenges**

- Because BlueCat charges separately for its Proteus IPAM appliance, its overall DDI solution can be expensive for SMBs.

- Some customers noted that BlueCat’s professional services organization lacked formal processes for servicing its customers (although technical expertise was rated highly).
• While BlueCat has grown its distribution channel, some partners noted that the company needs to develop more-mature programs to help service its value-added resellers.

Rating: Strong Positive

**BT Diamond**

Diamond IP is a division of British Telecom (BT), the global carrier and services provider. Diamond IP is available as software, as an appliance and in a virtual environment on the VMware platform. IPAM capabilities are embedded in Diamond IP at no extra charge. BT Diamond’s solution is highly scalable, and approximately 15% of its revenue comes from the service provider market.

Use Case: Large enterprises should consider Diamond IP; however, its price structure and the lack of a strong channel program make BT Diamond a less attractive option for SMBs.

**Strengths**

• Diamond IP is unique; it addresses all three market categories: overlay, bundled and managed services (through parent company BT). The overlay solution manages BIND and Microsoft DNS, and it can also manage ISC DHCP and Microsoft DHCP, as well as its own DNS/DHCP services.

• Network discovery and the ability to map endpoints to LAN switch ports are included as core IPAM features. The network discovery feature works by querying Layer 2 and Layer 3 devices, which is more reliable than the “ping sweep” approach used by some competitors.

• Its advanced IPAM features, including a reconciliation capability that can automate recovery of unused address records. The solution has a strong tiered administration feature, with the ability to provide granular workflow controls for different roles.

**Challenges**

• Diamond IP’s lack of focus on its value-added reseller channel hurt its ability to broaden its market penetration (BT’s distribution channel has been heavily weighted to direct sales). To address this challenge, BT launched its Diamond IP products and services into its BT Infonet reseller channel during 2H10. Now, BT must demonstrate that its channel partners can successfully sell and support its DDI solutions.

• Several Diamond IP customers reported that it is difficult to initially configure the solution.

• Diamond IP has not adapted its product, or its pricing model, to target the growing SMB market.

Rating: Positive

**EfficientIP**

EfficientIP is a pure-play DDI provider based in France. Its customer base is also largely in France, with some customers in other parts of Europe. EfficientIP’s offering functions as a bundled solution and/or an overlay solution. It moves from the Caution category to Promising, based on product improvements, better marketing, and aggressive plans to expand its sales and distribution channels.

Use Case: SMBs and large enterprises in Europe should consider EfficientIP. Enterprises outside of Europe should do their due diligence to evaluate EfficientIP’s ability to support them.

**Strengths**

• Version 4 of EfficientIP’s solution includes an ease of deployment feature (known as Smart Architecture), which enables administrators to select from a set of DNS and DHCP architectural options to implement various failover and redundancy scenarios. DNS/DHCP appliances can be configured automatically via a centralized management platform.

• EfficientIP provides a broad overlay solution. It can manage open-source DNS (BIND) and DHCP from the Internet Systems Consortium, Microsoft DNS and DHCP, and Cisco IOS DHCP. It can also manage Nominum DNS and DHCP servers.

• Its IPAM solution provides flexible options for searching and filtering. Several customers provided favorable feedback regarding the graphical interface and its ability to be customized.

• EfficientIP partners with managed services providers that have a strong European presence (HP, IBM and Orange Business Services).

**Challenges**

• Brand awareness continues to be a challenge for EfficientIP, particularly outside of France.

• As a small company, EfficientIP will find it difficult to maintain a dual-market (service provider and enterprise) strategy.

• EfficientIP has plans to expand in North America, but it has yet to demonstrate that it can build an effective partnership channel.

Rating: Promising
Infoblox

Infoblox has the largest installed base of DDI appliances, and the company played an important role in transforming the market from software-based to appliance-based solutions. IPAM capabilities are embedded in Infoblox’s DNS/DHCP appliances at no extra charge. Infoblox’s solutions are also available as virtual machines in a VMware environment. Historically, enterprises deployed Infoblox as a bundled offering, although recently added (in 2010) Windows DNS and DHCP management capabilities now enable Infoblox to be deployed as an overlay solution. In April 2010, Infoblox acquired network configuration and change management vendor Netcordia. The move helps to diversify Infoblox’s revenue stream, because it now sells Netcordia’s NetMRI solution through its channel distribution partners. The technical synergies of the deal are less obvious.

Use Case: SMBs and large enterprises that need appliance-based (or virtualized) DDI solutions should consider Infoblox.

Strengths

- A strong global sales and distribution channel has enabled Infoblox to maintain its dominant market share (Gartner estimates greater than 40%, as measured by revenue) in the DDI market.

- Customer feedback about Infoblox’s grid-based technology, which enables DNS/DHCP reliability and availability, is highly favorable. Customers state that Infoblox’s Grid Manager simplifies several operational tasks, including distributing software updates and replacing failed units. Grid Manager also simplifies disaster recovery processes.

- Several customers commented favorably about bloxTools, Infoblox’s API for developing custom applications. Infoblox sponsors a portal where customers share their applications.

Challenges

- When Infoblox acquired Netcordia in May 2010, we highlighted that the NetMRI solution presented it with an opportunity to expand into another network automation area. Gartner believes that progress in this area has been slow, and estimates that less than 10% of Infoblox customers have deployed the NetMRI product.

- Some very large customers may face challenges with grid scalability. Infoblox’s grid-based approach is currently limited to 255 appliances per grid. By midyear 2011, Infoblox plans to enhance its management interface to manage multiple grids through a single interface.

- Infoblox requires a separate appliance (its PortIQ product or its more advanced NetMRI solution) to map IP addresses to LAN switch ports. Some competitors provide IP mapping as an embedded feature of their IPAM solutions.

Rating: Strong Positive

Men & Mice

Men & Mice was founded in 1990, and it remains a small company based in Iceland. Its strength is in overlay solutions, and it has a worldwide base of customers that use its products to manage heterogeneous DNS and DHCP environments. Men & Mice moved into the Promising category based on its success in closing several large deals in 2010 (more than 100,000 active IP addresses), and strong feedback from these customers for service and support. In 2011, Men & Mice plans to introduce a DDI virtual appliance (which includes DNS/DHCP services) for the enterprise market and a DNS server (caching only) for the service provider market.

Use Case: SMBs and large enterprises that are seeking an overlay solution with strong administrative controls should consider Men & Mice.

Strengths

- Customers report that the Men & Mice solution deploys easily, since it is an overlay product that allows them to keep their DNS and DHCP infrastructures unchanged.

- Men & Mice provides broad overlay support. It enables the management of BIND and Microsoft DNS, and it can manage DHCP services from Microsoft, ISC and Cisco routers. For example, it can centrally manage a distributed environment of Cisco routers running DHCP.

- Its tight integration with Microsoft Active Directory eases some operational tasks, particularly site/subnet management.

Challenges

- Men & Mice’s sales model remains heavily weighted toward direct sales, which is a liability, given the company’s small sales team. It has been slow to penetrate Microsoft’s Active Directory partner channel.

- Its IPAM Web interface lacks features that are available in the client version (for example, viewing split DHCP scopes is only available with the client), which causes administrators to switch back and forth between the two interfaces.

- A port mapping feature (mapping IP addresses to switch ports) is missing from the product.

Rating: Promising
Nixu Software

Nixu Software makes its first appearance in Gartner’s DDI MarketScope. It is based in Finland, and is a subsidiary of Nixu Group, an IT security consultancy that was founded in 1988. Nixu Software’s DDI components are available only as software appliances, all of which can be run in virtualized environments (VMware and Citrix Xen). Its NameSurfer Suite includes DNS management and IPAM functionality, and separate software appliances provide DNS and DHCP services. NameSurfer Suite pricing is based on the perpetual software model (with annual maintenance charges), and the DNS and DHCP servers are priced at an annual subscription rate. Enterprise licenses are available for large environments. ApplianSys licenses Nixu’s technology, which it includes in its hardware appliances.

Use Case: SMBs that want an inexpensive software-based DDI solution.

Strengths

- Nixu’s pricing model and fees are inexpensive, particularly for SMB environments. Virtualized components enable further savings.

- Nixu licenses its technology to several OEM partners, including Nokia Siemens Networks.

- All Nixu DDI components are available as software and can run virtually, including its Network Equipment Extractor, which maps IP addresses to switch ports.

Challenges

- Nixu Software’s name recognition and branding are weak.

- Nixu is a small company (approximately 100 employees) that has yet to demonstrate that it can successfully develop a sales channel outside Europe and the Middle East.

- Nixu’s DHCP monitoring has some weaknesses. For example, its DHCP server cannot report on leases per second. Also, the graphical interface for the IPAM solution does not generate alerts when active leases in a DHCP range exceed a threshold. Nixu plans to address these shortcomings in 2011.

Rating: Caution

Vendors Added or Dropped

We review and adjust our inclusion criteria for Magic Quadrants and MarketScopes as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant or MarketScope may change over time. A vendor appearing in a Magic Quadrant or MarketScope one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. This may be a reflection of a change in the market and, therefore, changed evaluation criteria, or a change of focus by a vendor.
Gartner MarketScope Defined

Gartner’s MarketScope provides specific guidance for users who are deploying, or have deployed, products or services. A Gartner MarketScope rating does not imply that the vendor meets all, few or none of the evaluation criteria. The Gartner MarketScope evaluation is based on a weighted evaluation of a vendor’s products in comparison with the evaluation criteria. Consider Gartner’s criteria as they apply to your specific requirements. Contact Gartner to discuss how this evaluation may affect your specific needs.

In the below table, the various ratings are defined:

MarketScope Rating Framework

Strong Positive
Is viewed as a provider of strategic products, services or solutions:

- Customers: Continue with planned investments.
- Potential customers: Consider this vendor a strong choice for strategic investments.

Positive
Demonstrates strength in specific areas, but execution in one or more areas may still be developing or inconsistent with other areas of performance:

- Customers: Continue planned investments.
- Potential customers: Consider this vendor a viable choice for strategic or tactical investments, while planning for known limitations.

Promising
Shows potential in specific areas; however, execution is inconsistent:

- Customers: Consider the short- and long-term impact of possible changes in status.
- Potential customers: Plan for and be aware of issues and opportunities related to the evolution and maturity of this vendor.

Caution
Faces challenges in one or more areas:

- Customers: Understand challenges in relevant areas, and develop contingency plans based on risk tolerance and possible business impact.
- Potential customers: Account for the vendor’s challenges as part of due diligence.

Strong Negative
Has difficulty responding to problems in multiple areas:

- Customers: Execute risk mitigation plans and contingency options.
- Potential customers: Consider this vendor only for tactical investment with short-term, rapid payback.