

BSA Best Practices Webinars Distributed Installations

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Agenda

- ▶ Overview
- ▶ Use Cases
- ▶ Repeaters
- ▶ Repositories
- ▶ Proxies

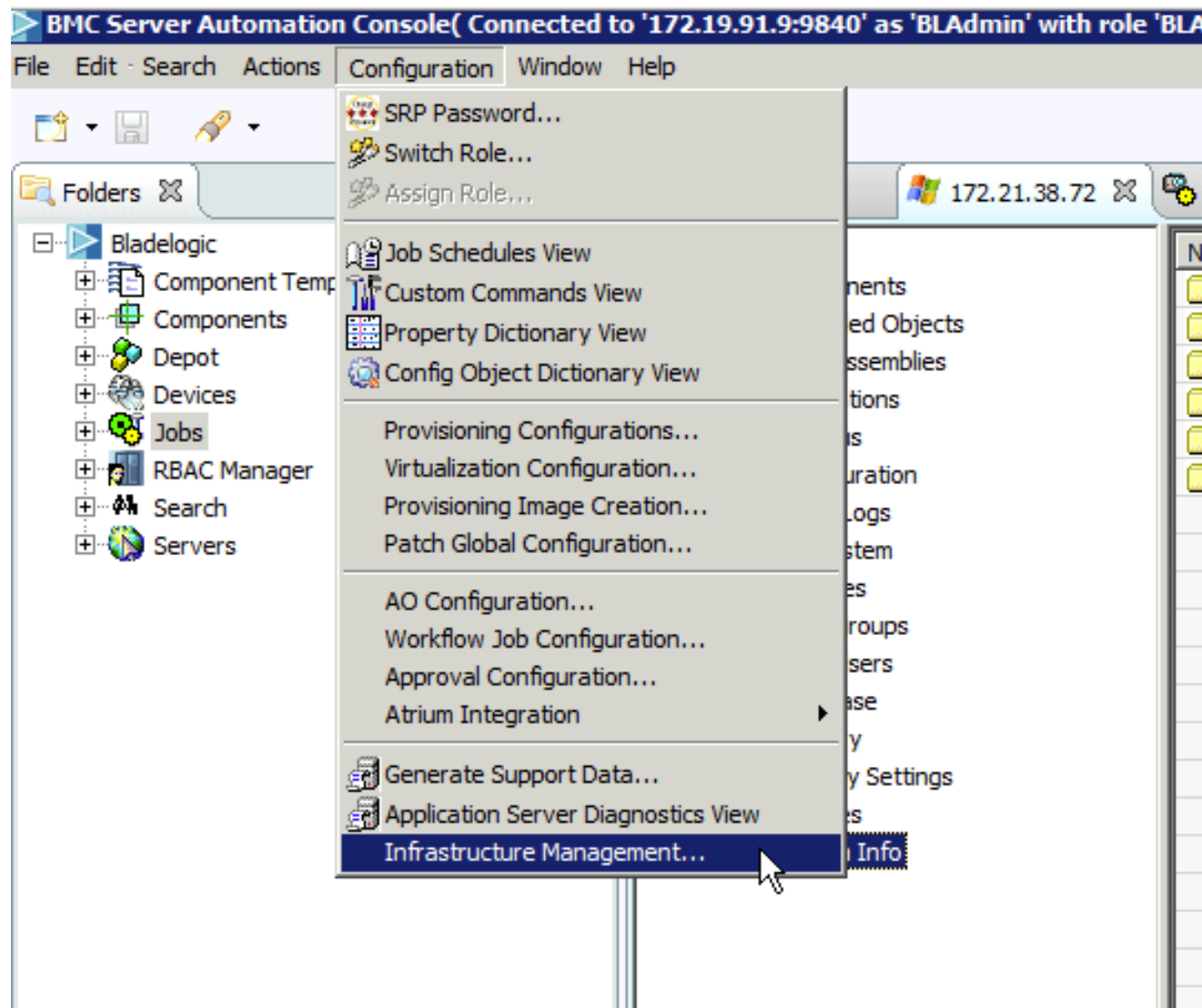
Overview



- ▶ Provisioning
 - Large payloads that don't change
- ▶ Software Deployment
 - Software installed many times
- ▶ File / Directory Deployment
 - Large files
- ▶ Content Deployment at scale
 - Web content or many many files
- ▶ Patch Remediation

- ▶ Network bandwidth/latency between data centers
- ▶ Firewalls to prevent/manage internet access
- ▶ Air-gapped environments
- ▶ Overlapping IP networks, Service Provider-managed networks
 - Multiple customers, same IP networks
 - Remote networks
 - Low-bandwidth “management” networks
- ▶ Large (1.5GB+) software packages & patch clusters

Where do I configure this?



Repeaters



- ▶ **Typical Use Case:**
 - Multiple data centers, typical remote DC has >100 servers, often 1000 or more
 - Bandwidth between data centers is not always super-fast
 - Software / Patch / Large file deployments

- ▶ **Requires:**
 - Indirect Staging checkbox
 - Repeater Routing Rules

BMC Server Automation (BladeLogic) Repeaters for Remote Networks



CONSOLE

Management Consoles

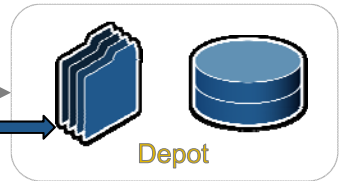
- Graphical Interface
- Command Line Interface (NSH & BLCLI)
- Authentication,



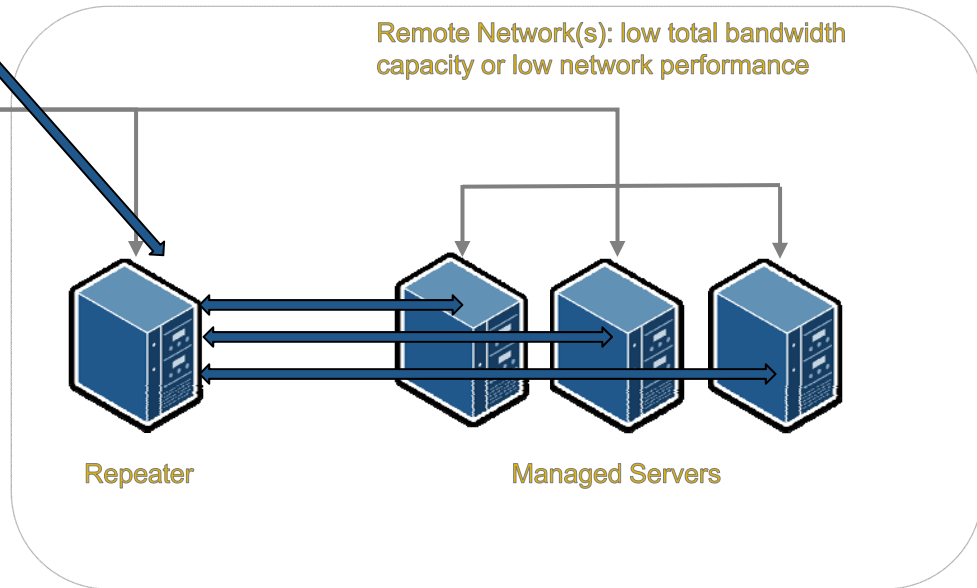
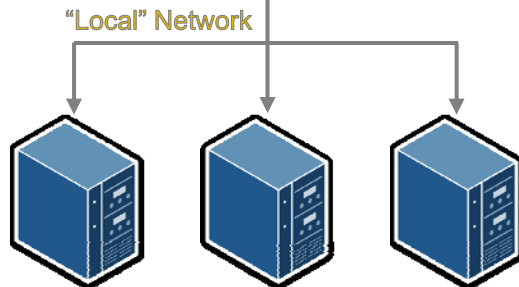
MID TIER

Application Servers

- Automation Engine
- Load Balanced
- Job Partitioning
- Role-Based Access Control



NODES



- ▶ **Uses Repeaters:**
 - File Deploy Job
 - BLPackage (BL)Deploy Job
 - Software Deploy Job
 - Compliance Remediation (but not Compliance Audit/Analysis)
 - Provisioning (deploy jobs)

- ▶ **Doesn't use Repeaters:**
 - Patching (can't use Advanced Repeaters)
 - Snapshot / Audit
 - Compliant (audit)
 - Provisioning (initial)

- ▶ Requirements:
 - NSH installed (install NSH/RSCD vs. just RSCD on UNIX)
 - 5-10GB disk space
 - Reasonable local network performance
 - Routing Rules
- ▶ Data flow
 - App -> Repeater -> Target
- ▶ Repeater-related property commonly used
- ▶ Typical Routing Rules
 - By network
 - By data center

- ▶ Job -> Staging phase
- ▶ If “Indirect Staging” is checked, and a Repeater Routing Rule is in effect, the Repeater will be used.
- ▶ App server copies file(s) from file server to Repeater’s staging directory if needed. (once per Repeater)
- ▶ Files copy from Repeater staging area to the target server(s).
- ▶ Job -> Commit phase completes same as for a “direct-staged” deploy.

- ▶ Based on Marimba technology
- ▶ Features:
 - Bandwidth Control
 - Partial transfers
- ▶ Requirements:
 - Access back to core infrastructure
 - Must be able to resolve DNS name of Advanced File Server
 - Adv. File Server standup
- ▶ Config Process:
 - Stand up AFS
 - Add AR
 - Create Routing Rule
 - Test!
- ▶ Includes Standard Repeater functionality
- ▶ Not usable for Patching as of 8.3

Proxies



- ▶ Typical Use Cases:
 - Any time direct network access isn't available
 - “Getting through the fence” / Transiting a gateway
 - Not for use in true “air-gapped” environments
- ▶ Application proxies (SOCKS/HTTP/NSH) vs. “transparent” proxies

- ▶ HTTP
 - Patch Metadata & Payloads
 - SQUID, NTLM, NTLMv2
 - May require explicit hostnames
 - Offline downloaders

- ▶ Overlapping IP address networks
- ▶ SOCKS Demo
 - https://communities.bmc.com/community/bmcdn/bmc_service_automation/server_configuration_automation_bladelogic/blog/2012/11/30/how-to-use-socks-proxies-with-bsa-to-deal-with-firewalls-and-overlapping-ip-ranges
- ▶ Routing rules, proxy rules.

BMC Server Automation (BladeLogic) SOCKS Proxy for Restricted Networks



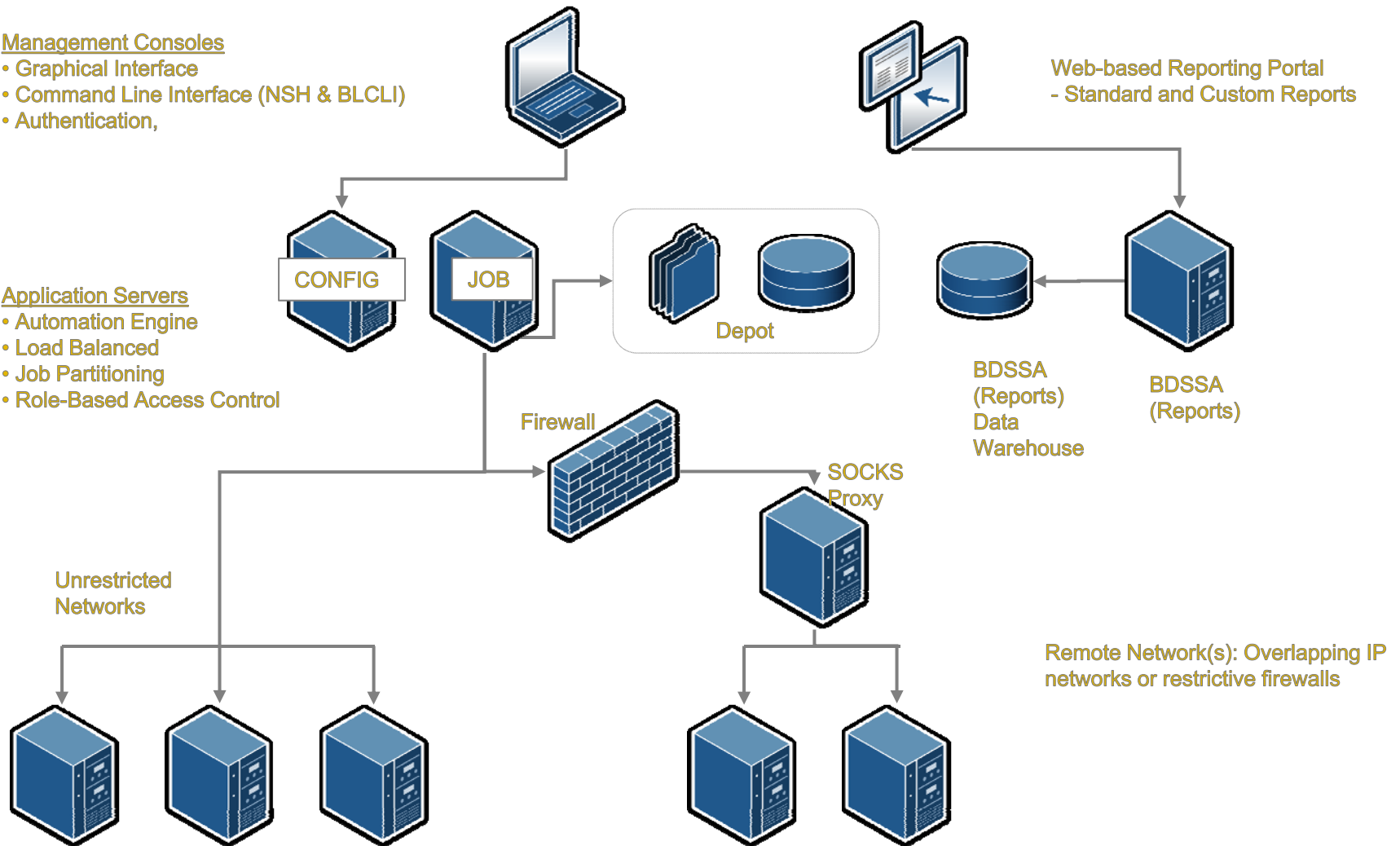
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Application Servers

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- ▶ NSH
 - Security tool used to audit & manage direct access to servers
 - Exports syntax (including subnet)
- ▶ Logging
- ▶ Access Control
- ▶ Appservers -> NSH Proxy
- ▶ Bastion Hosts

Repositories



- ▶ **Typical files:**
 - SQL Server 2008 installer: 2GB, only ~400MB used during install
 - Large install packages
 - OS with small staging directories, cf. AIX

- ▶ **Access Methods:**
 - SMB
 - NFS
 - URL formations

- ▶ **Caveats:**
 - DMZ
 - Potentially more than one package to manage

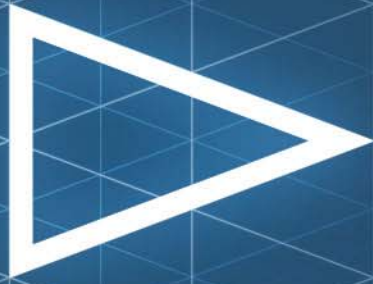
- ▶ Provide potentially significantly faster / lower overhead access to payloads
- ▶ Configure in Catalog Update Job
- ▶ Local (Primary) Patch Repository
- ▶ Remote Patch Repository
 - May use an existing share
 - NFS or SMB
 - Local network path to payloads (vs. via central data center)
 - May be unsuitable for DMZs or security-sensitive environments

“Offline” Downloaders

- ▶ Acquire Patch Content “external” to the appserver environment
- ▶ Metadata & Payloads
- ▶ Internet access elsewhere
- ▶ Air-gapped

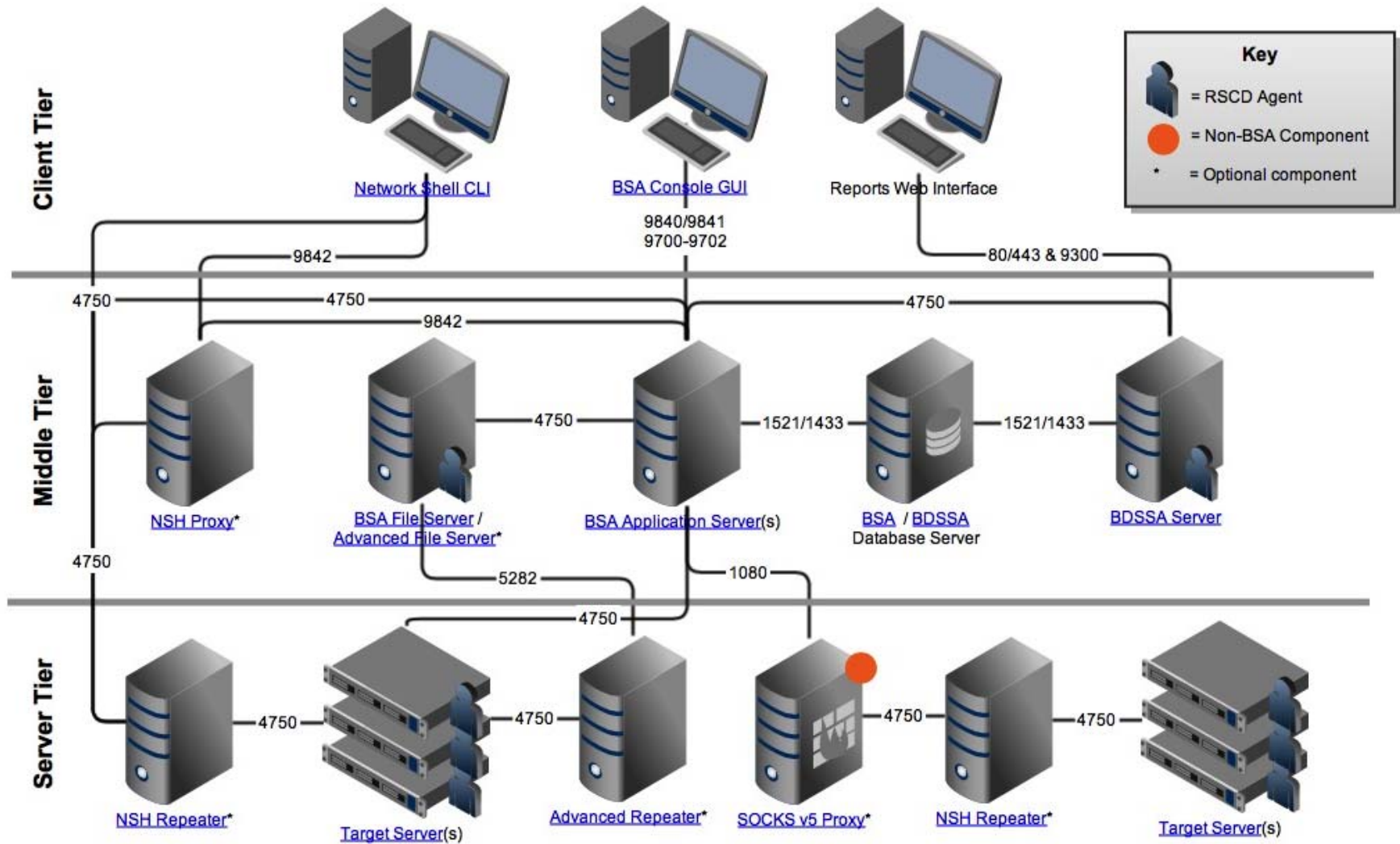
- ▶ Best Practices Webinars <https://communities.bmc.com/communities/docs/DOC-21692>

▶ Date	Subject Area
▶ 30 October 2012	BSA Deployment Architecture
▶ 4 December 2012	Best Practices for BSA Maintenance and Cleanup
▶ 8 January 2013	Demonstrating Value with BladeLogic
▶ 5 February 2013	Best Practices for Patching
▶ 5 March 2013	Best Practices for Compliance and Change Tracking
▶ 7 May 2013 Provider	BSA for Distributed Installations: Wide Area & Service Deployment: Repeaters, Proxies and Repositories
▶ 11 June 2013	BSA RBAC & Access Control: RBAC Best Practices & Use Cases
▶ 9 July 2013	BSA Reporting: Use Cases, Scalability & Common Custom Reports
▶ 6 Aug 2013	BSA Provisioning: Setup, Use Cases & BP
▶ 10 Sep 2013	BSA Software Packaging: Custom Software, OS Platform Packages



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▶ Repeaters

- Standard
 - Reduces duplicate copies over WAN links
 - Copy once to repeater, copy many times over (faster) local link
- Advanced
 - Bandwidth Control

▶ Repositories

- Patch Repos
 - Some platform dependency (Case sensitivity)
 - Patch Helpers
- Remote File/Software
 - “Mount at Install Time”
 - SMB or NFS mount (show sample URLs)
 - Potentially much faster local install
 - No staging required, execute immediately
 - Not usually practical for DMZs

▶ Proxies

- HTTP
 - Patch Metadata & Payloads
 - SQUID, NTLM, NTLMv2
 - May require explicit hostnames
 - Offline downloaders
- SOCKS
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