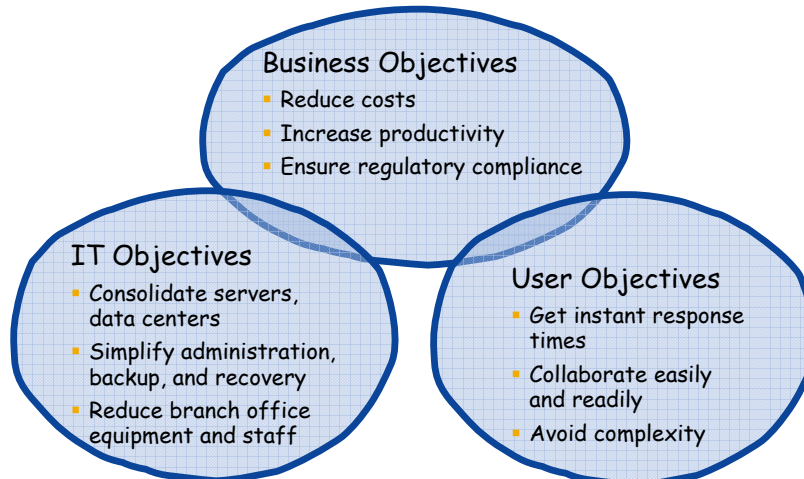


# The Future of Application Acceleration

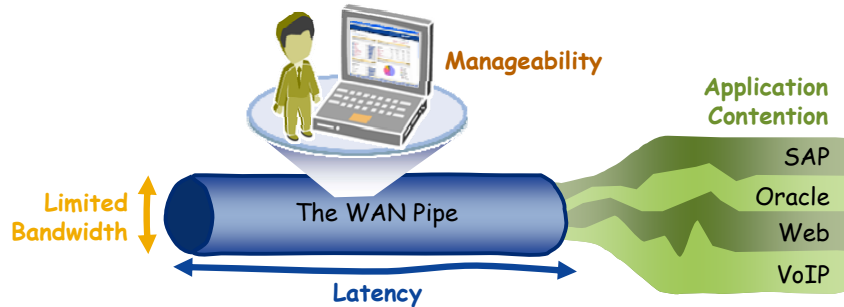
Juniper Networks WX/WXC  
Application Acceleration Platforms



## Conflict in the Distributed Enterprise



# The Impact of the WAN on Applications



More rich content

Protocol chattiness

Lower-priority apps slow down critical ones

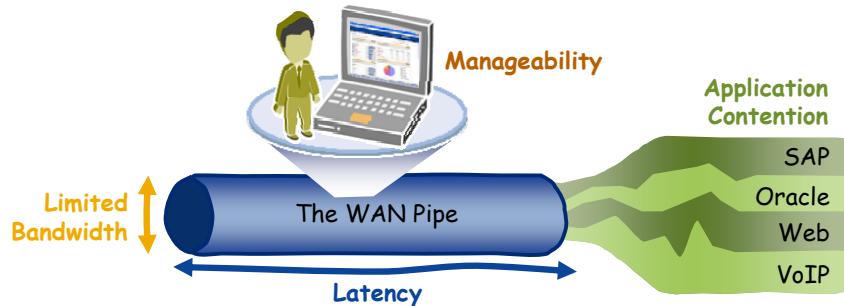
Inability to understand application and WAN performance

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# The Impact of the WAN on Applications



Compression, Caching

Acceleration

Application Control

Visibility and Reporting

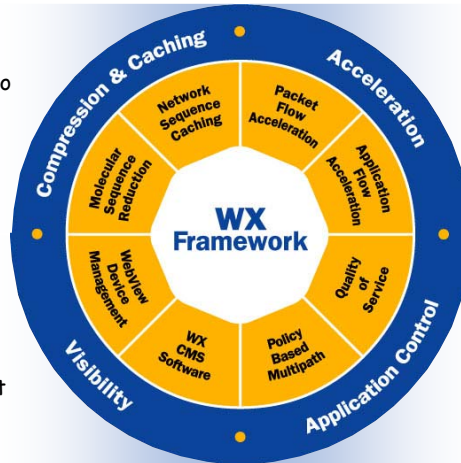
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## Key Business Initiatives: Cut Costs; Improve Productivity

- Avoid WAN upgrade
- Increase access to shared resources
- Improve disaster recovery
- Enable new application rollout
- Reduce time to troubleshoot
- Automate remote device deployment
- Manage remote sites with no local IT staff



- Improve user productivity
- Centralize servers
- Consolidate data centers
- Achieve regulatory compliance
- Enable VoIP, other money-saving apps
- Ensure critical apps get priority service
- Make use of cheaper secondary links

## WX/WXC Application Acceleration Platforms

### Leading WAN Optimization and Acceleration Solutions

- Compression & caching techniques increase WAN throughput 10-50x
- Acceleration technologies speed response times via broad TCP and protocol-specific support
- Application control features prioritize traffic & optimize application delivery over multiple links
- Visibility tools provide detailed insight into application performance over the WAN



## Compression & Sequence Caching

- Low latency & highly scalable
- Application & protocol independent
- Compresses large & small data patterns



### Molecular Sequence Reduction

- Patented memory-based compression for 2x to 10x gains
- Centralized dictionary speeds learning
- Eliminate patterns across any application type

### Network Sequence Caching

- Disk-based pattern compression delivers 10x to 100x gains
- Compresses even under simultaneous downloads
- Supports unidirectional learning
- Proactively pushes new content to warm dictionaries

## Application Acceleration

- Reduces impact of latency on slow apps
- Scales the flow & fills the pipe
- Overcomes impact of chatty protocols



### Packet Flow Acceleration

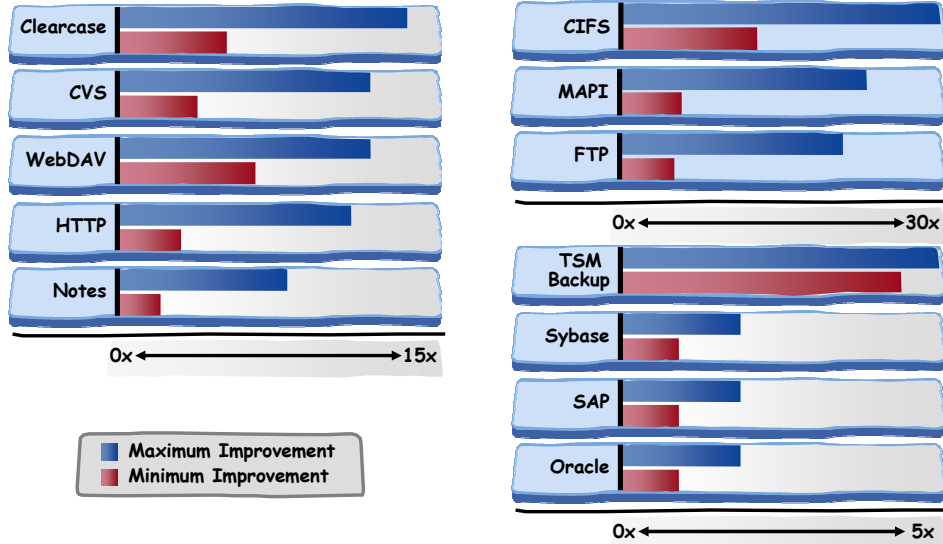
- Increases TCP throughput
- FEC recovers dropped packets

### Application Flow Acceleration

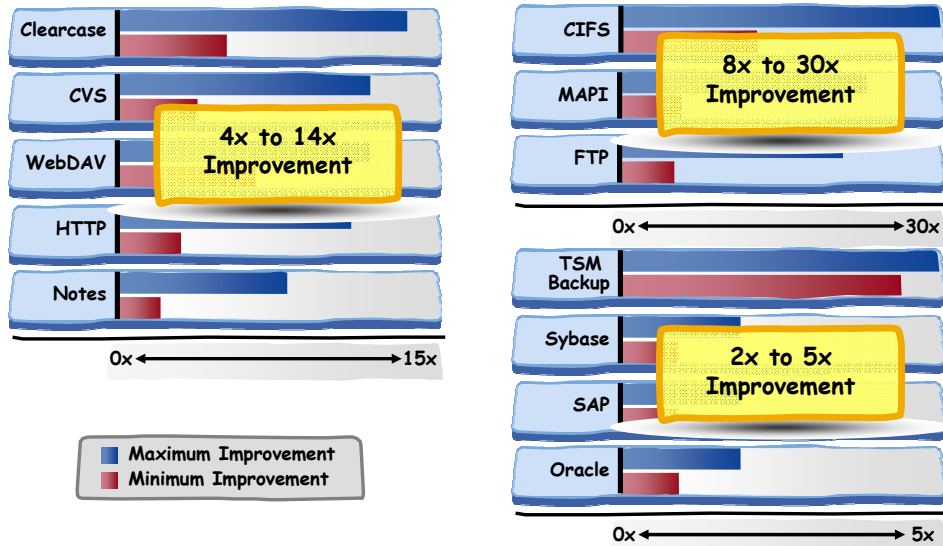
- Big gains even on low latency links (30 ms)—File services (CIFS), Exchange (MAPI)



## Application Acceleration Results



## Application Acceleration Results



## Application Control

- Integrated QoS manages newly created bandwidth
- Effectively responds to packet loss
- Use redundant links to improve availability



### Quality of Service

- Application-based policies
- Easy to use, with templates & wizards
- Designed to work with MPLS CoS

### Policy-based Multipath

- For sites with multiple links
- Select path based on app
- Monitors performance
- Diverts traffic to alternate path if link fails or degrades

## Visibility and Reporting

- WX CMS essential for large deployments
- Comprehensive reporting (36 different reports)
- Eliminates the need for on-site IT visits



### Web View

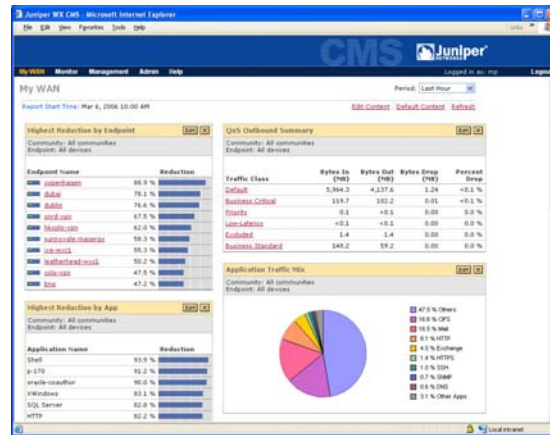
- Device-based configuration & management
- Reports on applications & traffic
- Executive dashboards

### WX CMS Software

- System-wide configuration & management
- Automated deployment & license management
- Global policies & monitoring
- Data collection for trending

# Visibility: My WAN™ Portal

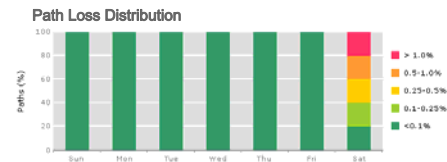
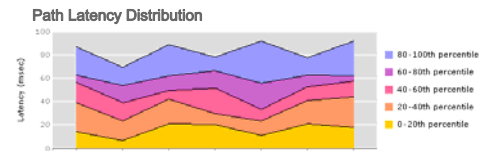
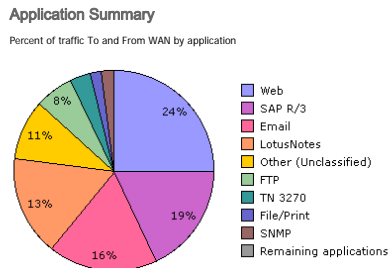
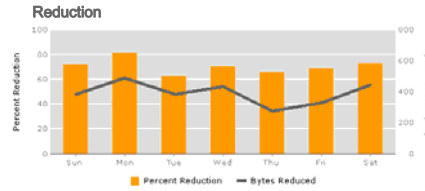
- User customizable WAN portal
- Provides an at-a-glance view of WAN performance & acceleration, including:
  - Highest reduction
  - Lowest availability
  - Highest time above latency threshold
  - Highest loss



# Visibility: WAN Executive Reporting

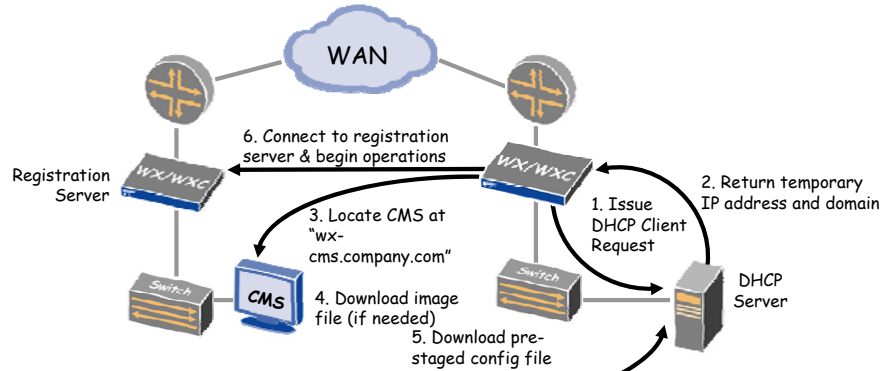
**Reduction Summary**

Peak Data Reduction	78.9 %
Total Data Reduction	71.2 %
Total Bytes into Perbit	55.5 GB
Total Bytes Reduced	39.2 GB
Total Bytes Out of Perbit	16.3 GB
Effective WAN Capacity	3.47 X



## Automated Deployment

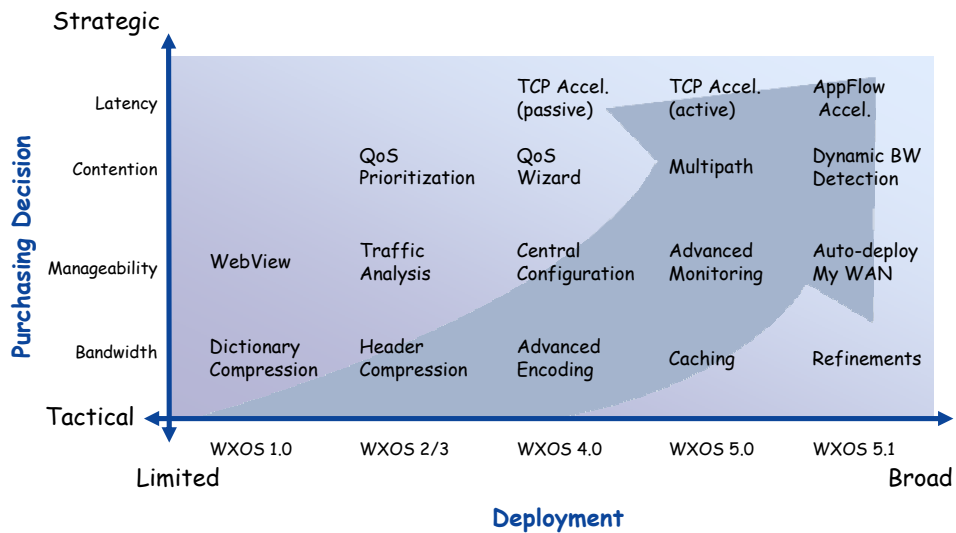
- Ideal for branch offices with no IT staff
- Create configurations centrally on WX CMS
- Just connect Ethernet and power



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## Driving Strategic Value



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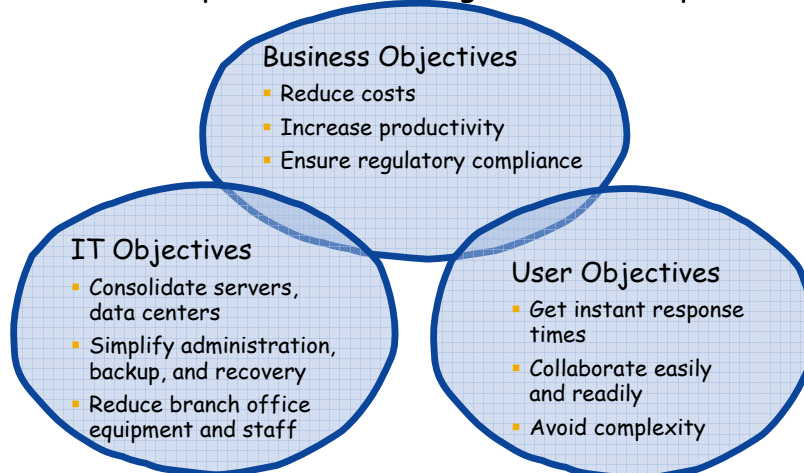


## Editor's Choice: Two for Two



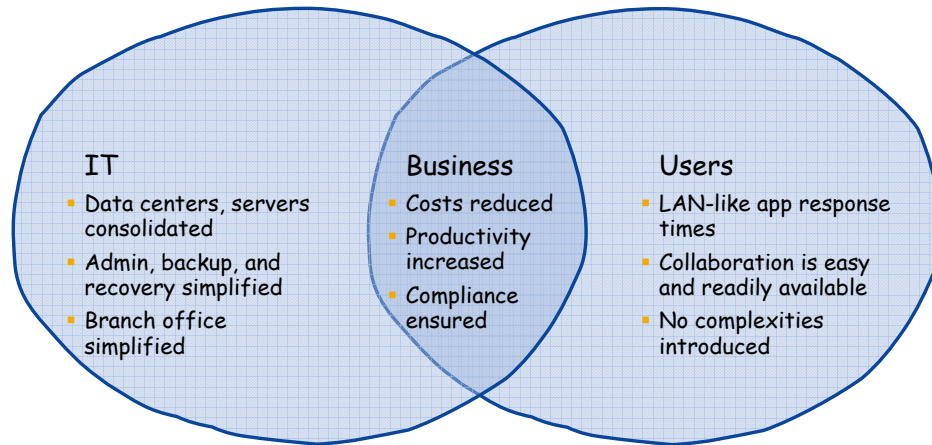
- Best WAFS Product, April 2006
  - "Juniper's WXC WAN Acceleration Appliance came out on top... when you add in-depth reporting, reliability and ease of use on the user end, it stands out as the clear winner."
- Second Award in Two Years
  - November 2004 Editor's Choice: Best WAN Accelerator
  - "World-class WAN accelerator, with superior performance and a solid feature set."

## Juniper Enables Enterprise Objectives IT streamlines ops while delivering LAN-like response times



## Juniper Enables Enterprise Objectives

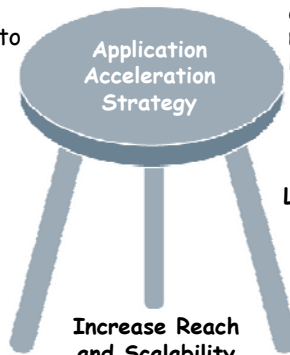
IT streamlines ops while delivering LAN-like response times



## Looking Ahead: The Juniper Networks Application Acceleration Strategy

A vision to solve important application performance issues and unique position to execute

New WX CMS software delivers key functionality for managed service providers and large Enterprises



### Accelerate More Apps

- Accelerate SSL
- Cache Web content
- Enforce AppRules in the branch
- Enable content distribution
- Add more app-specific support

### Increase Reach and Scalability

- Deliver a WX agent
- Scale OC-3 and beyond
- Increase resiliency/HA

### Leverage Visibility and Reporting

- Virtualized views
- Role-based views
- Segmented access
- Internet app classifications
- Trend Reports

# Strategy - Accelerate More Apps

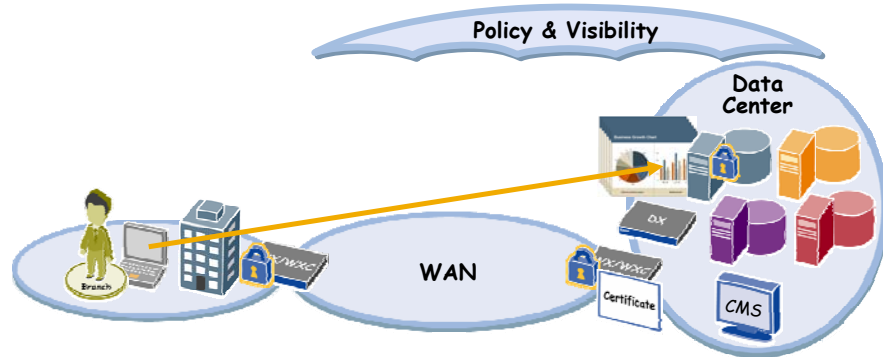


## Customer Challenges

- Accelerate SSL-encrypted applications
  - Improve the performance doubling of DX
  - Reduce round trips for rich content
  - Ensure security

## Juniper strategy

- WX accelerate SSL-encrypted flows
- Add Web content caching to WX
- Enforce DX AppRules at the branch



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# Strategy - Accelerate More Apps

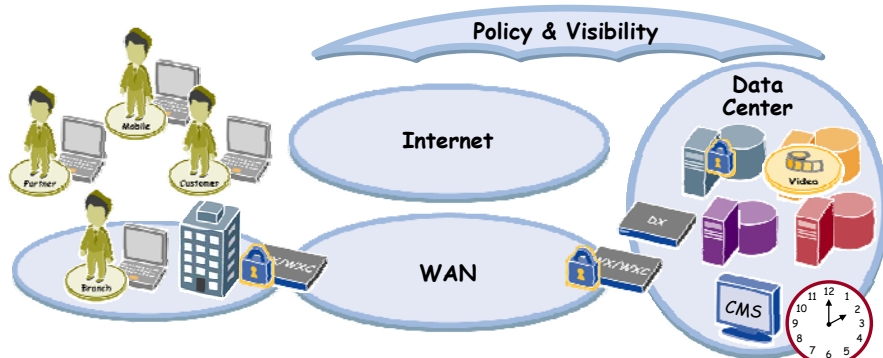


## Customer Challenges

- Inconsistent user experience

## Juniper Strategy

- Enable efficient and elegant content distribution



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# Strategy - Accelerate More Apps

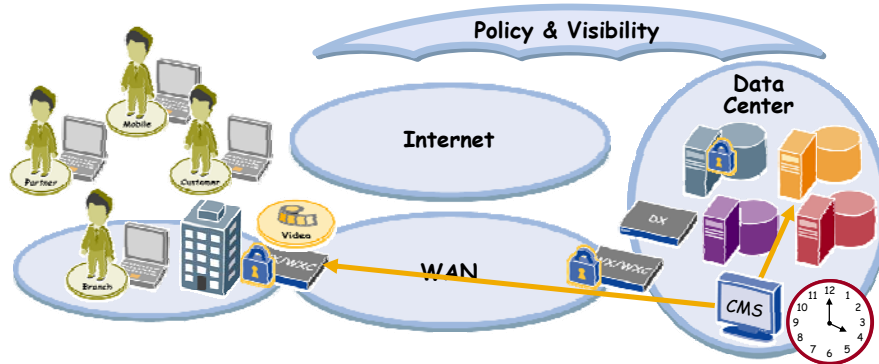


## Customer Challenges

- Inconsistent user experience

## Juniper Strategy

- Enable efficient and elegant content distribution



# Strategy - Accelerate More Apps

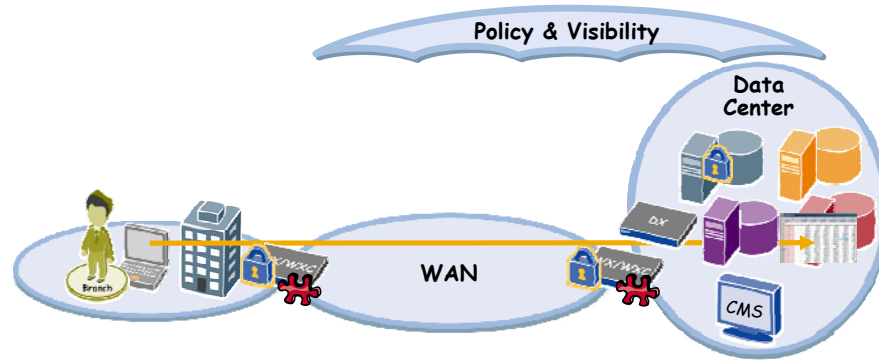


## Customer Challenges

- User application performance suffers from multiple round trips

## Juniper Strategy

- Broaden acceleration benefits to more apps



# Strategy - Increase Reach & Scalability

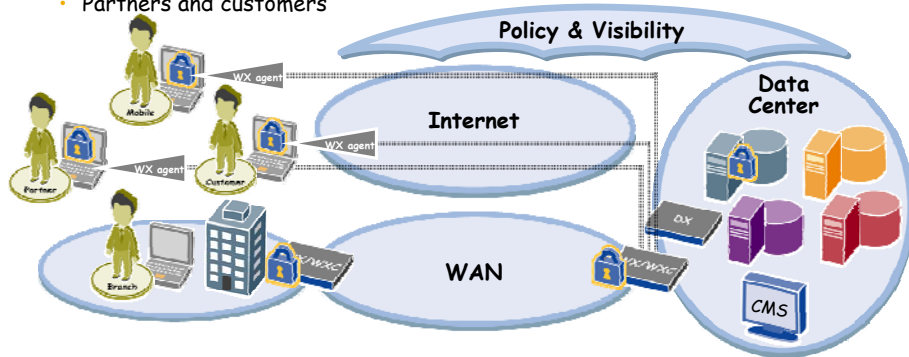


## Customer Challenges

- Branch solutions impractical for extended enterprise
  - Branch of one
  - Home and mobile workers
  - Partners and customers

## Juniper Strategy

- Deliver a WX agent



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# Strategy - Leverage Visibility & Reporting

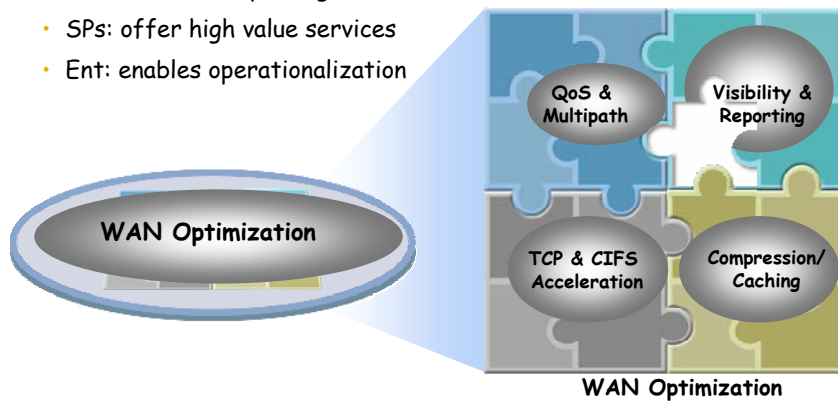


## Customer Challenges

- Large pervasive deployments require a platform that integrates visibility, acceleration, and reporting
  - SPs: offer high value services
  - Ent: enables operationalization

## Juniper Strategy

- Enhance visibility and reporting integrated with acceleration



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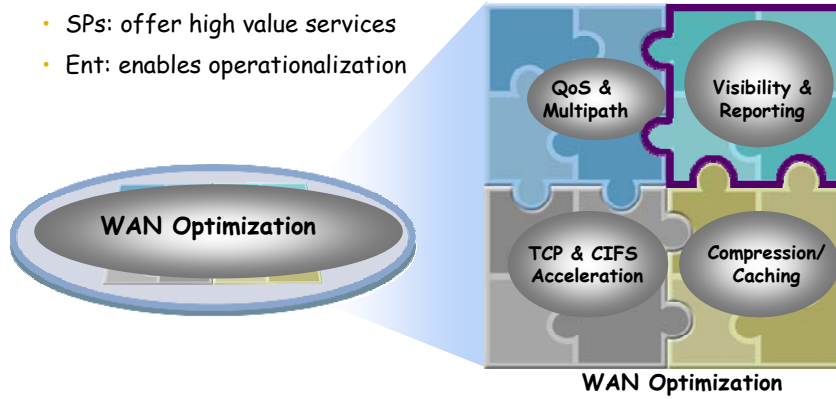
# Strategy - Leverage Visibility & Reporting

## Customer Challenges

- Large pervasive deployments require a platform that integrates visibility, acceleration, and reporting
  - SPs: offer high value services
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- Enhance visibility and reporting integrated with acceleration



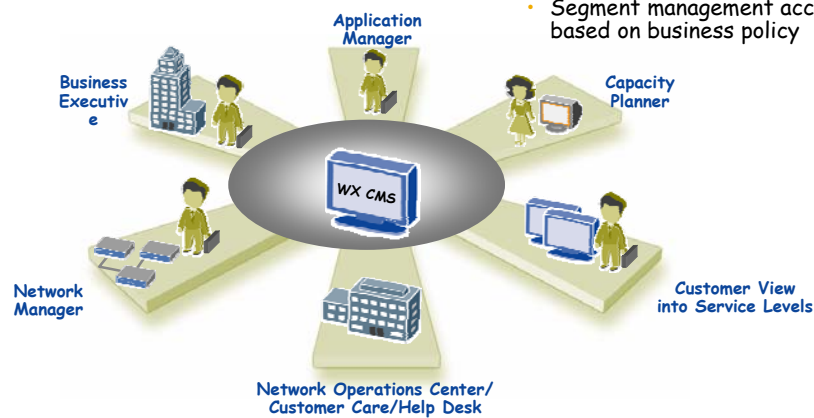
# Strategy - Leverage Visibility & Reporting

## Customer Challenges

- SPs and large enterprises need to be able to do this at scale

## Juniper Strategy

- Centralized multi-customer, multi-departmental management
  - Segment management access based on business policy



# Strategy - Leverage Visibility & Reporting

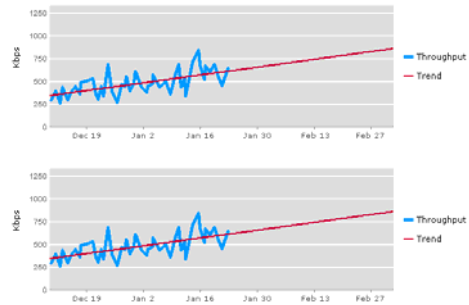
## Customer Challenges

- Lack of tools to identify and control Internet applications (e.g., Skype)
- Proactively manage WAN resources



## Juniper Strategy

- Provide app classification for Internet/port hopping apps
- Report WAN Trends

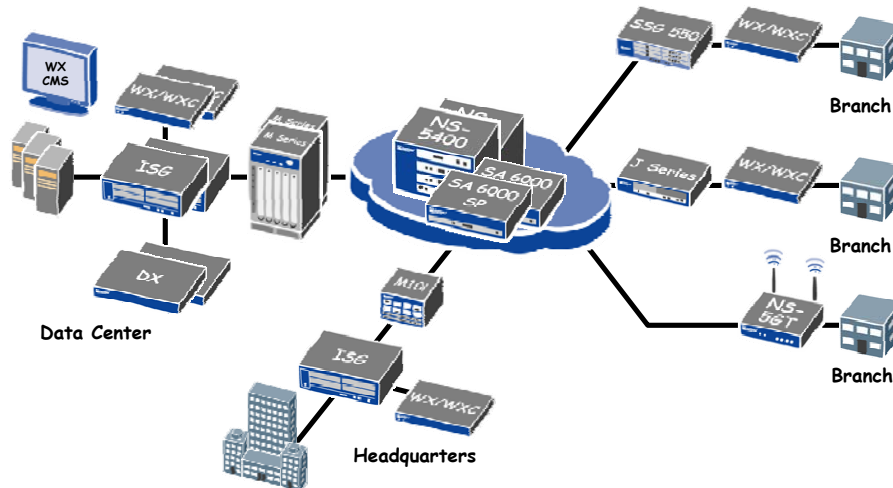


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# Broad Portfolio for Enterprise



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## Global Support Services Ensure Success



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- Worldwide spares availability
  - 557 depots in 80+ countries
- Global professional service
- Global training available



Thank You!

