

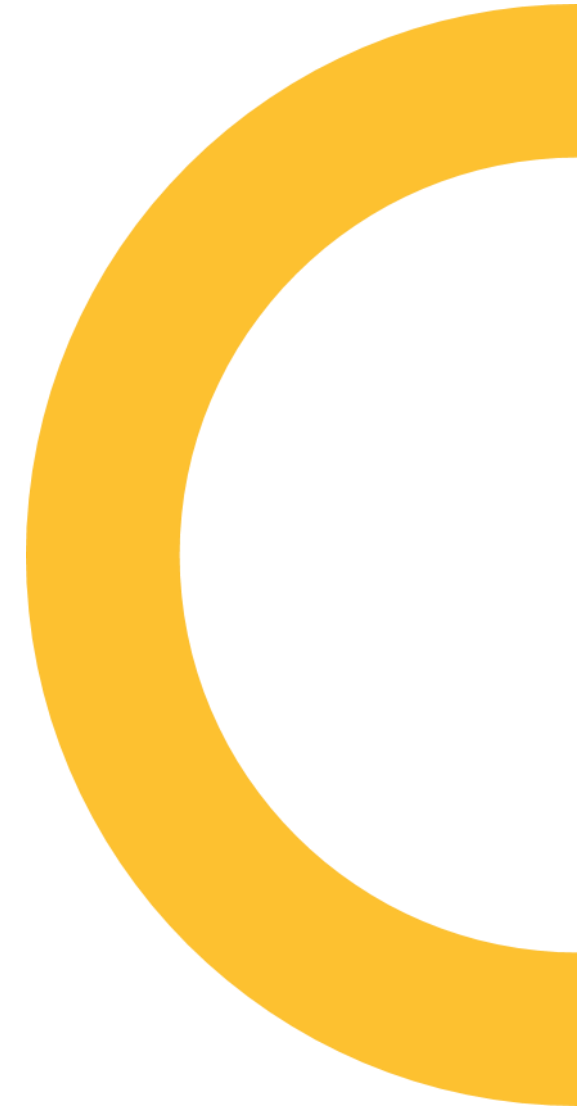
# Time Critical Management Feature

Presenter

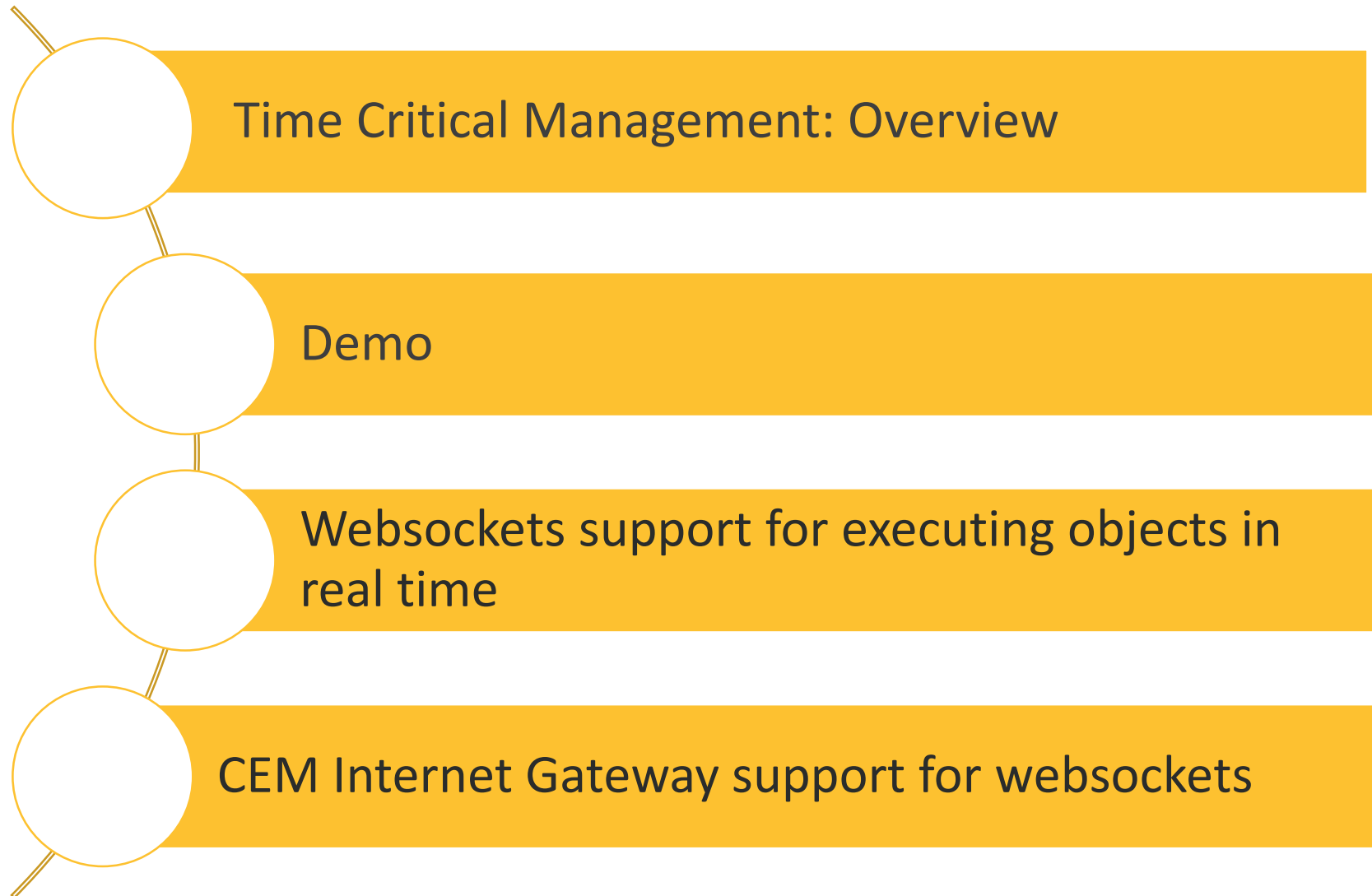
**Rob Barker**  
**Product Management**

Date

**October - 2018**



# Agenda



# On Demand Management

## NEED

*“As an administrator, I need the ability to collect information on my endpoints in real time so that I can respond to situations using up to date information.”*

## CHALLENGES

- Moderate latency with current architecture
- Endpoints must check in to receive updates
- Task Server is not CEM “aware”
- Task Services are not persistent connections

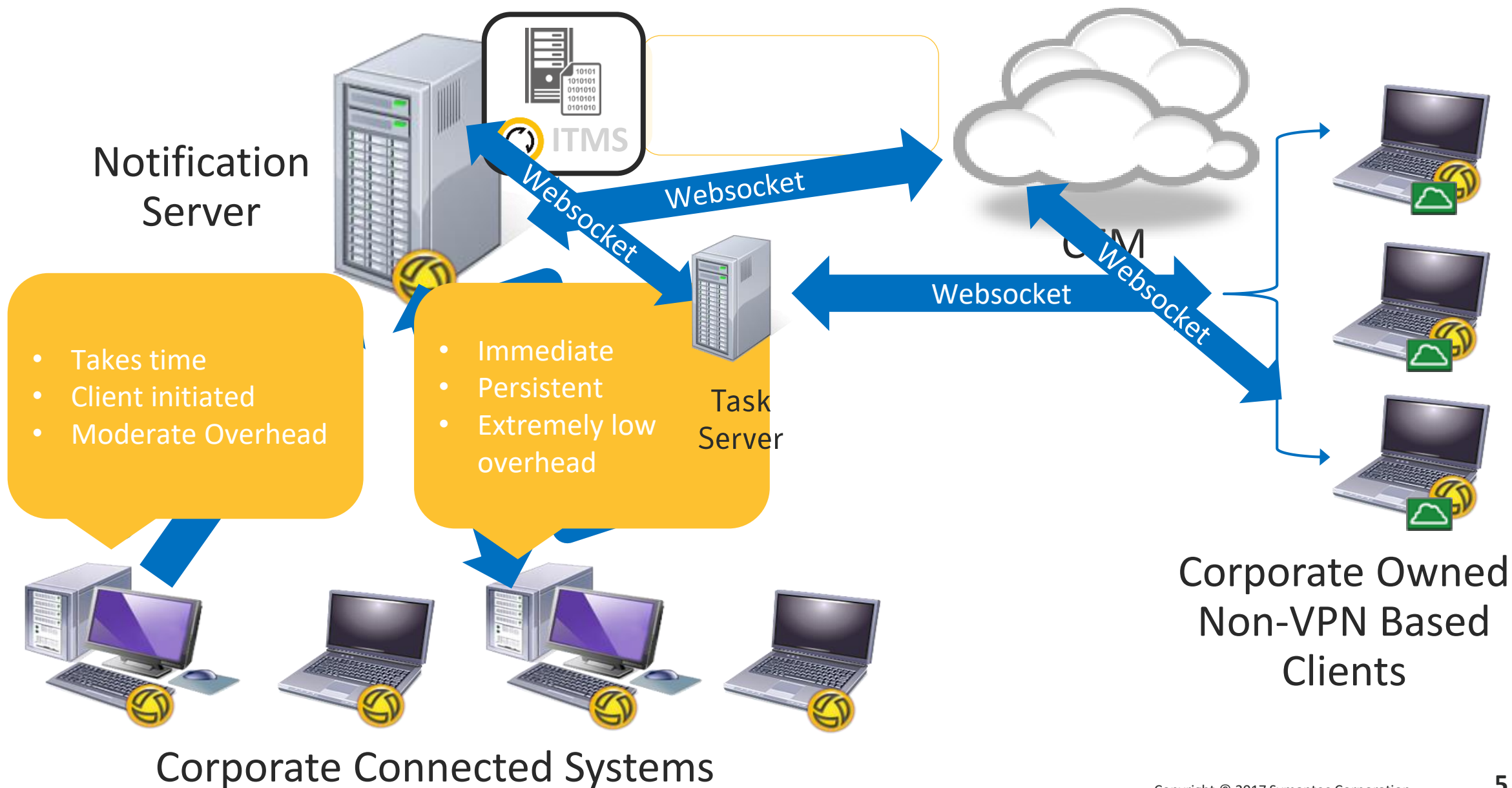
## FEATURE

Time Critical Management – On Demand Inventory

## CAPABILITIES

Provide administrators with the ability to execute actions on demand

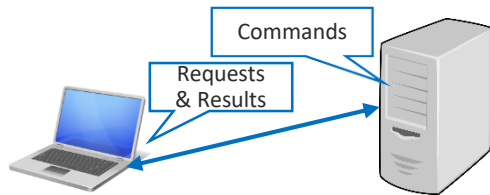
# ITMS Architecture



# Demo

# Existing Challenges in communication layer

## Chatty Client



ICMP pings to ensure connectivity

Multiple HTTP(S) request/response for management traffic\*

Overhead on Network and Management Server

## Limitations to Infrastructure from Task Management

Requires customer ports to notify (tickle) endpoint about urgent task

Push management actions are NOT supported for CEM (only pull)



## Latency of Management Actions



Due to scheduled check to request for policies from Management server

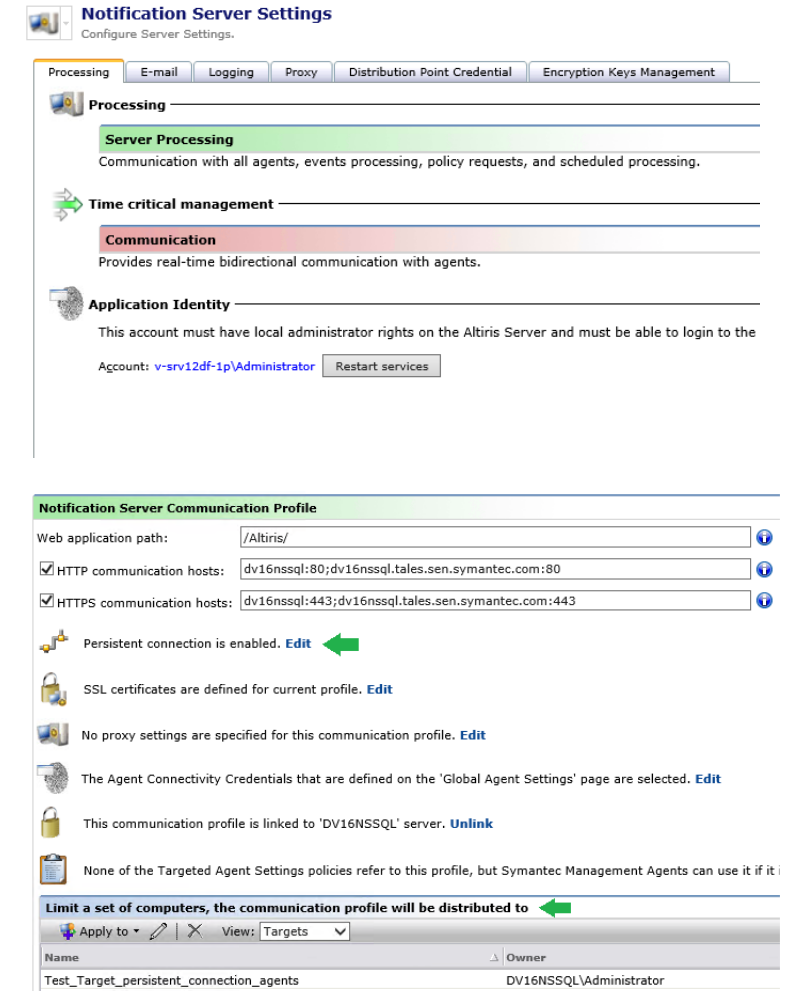
Task Management when servicing CEM endpoints or tickle ports are closed

\* For example, request and receive policy, send inventory, send patch assessment scan output, send task execution results, etc., but DOESN'T include content and package delivery.

# Websockets support for executing objects in real time

## Server side changes

- New Websocket server:
  - manages persistent connections from clients
  - embedded into AexSvc and independent from IIS
  - running on same HTTPS port and uses existing SSL certificate
  - supported on Windows Server 2012 R2 and Windows Server 2016
  - supports new actions like PushPolicy, PushTask, to speedup task and policy delivery
  - actions execution and processing is available from all Altiris services
- Setting to enable TCM communication (disabled by default)
- Added targeting mechanism for connection profiles
- Added ability to create agent installation package from connection profile



**Notification Server Settings**  
Configure Server Settings.

Processing | E-mail | Logging | Proxy | Distribution Point Credential | Encryption Keys Management

**Processing**

**Server Processing**  
Communication with all agents, events processing, policy requests, and scheduled processing.

**Time critical management**

**Communication**  
Provides real-time bidirectional communication with agents.

**Application Identity**  
This account must have local administrator rights on the Altiris Server and must be able to login to the  
Account: [v-srv12df-1p\Administrator](#) [Restart services](#)

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**Notification Server Communication Profile**

Web application path:

☒ HTTP communication hosts:

☒ HTTPS communication hosts:

Persistent connection is enabled. [Edit](#)

SSL certificates are defined for current profile. [Edit](#)

No proxy settings are specified for this communication profile. [Edit](#)

The Agent Connectivity Credentials that are defined on the 'Global Agent Settings' page are selected. [Edit](#)

This communication profile is linked to 'DV16NSSL' server. [Unlink](#)

None of the Targeted Agent Settings policies refer to this profile, but Symantec Management Agents can use it if it is

**Limit a set of computers, the communication profile will be distributed to**

Apply to: View: [Targets](#)

Name	Owner
Test_Target_persistent_connection_agents	DV16NSSL\Administrator

# Websockets support for executing objects in real time

## Agent side changes

- New Websocket client transport:
  - Used for persistent connections from client
  - Embedded into AeXNetComms.dll and exposed via COM API
  - Supported on Windows 7 and above
- Software Portal proxy is modified
  - Still used for routing Software Portal traffic through CEM gateway
  - Used to route WebSocket connections to servers requiring SSL
  - Used to route WebSocket SSL connections through CEM gateway
  - Will be used to route WebSocket connections through proxy servers
- Core Agent:
  - Establishes and maintain persistent connection to SMP Server
  - Routes all core agent HTTP requests through SMP persistent connection
  - Able to receive data or actions from SMP server
  - Provides fallback mechanism to pure HTTP connectivity

Network Status	
Notification Server:	Available via internet gateway Cryptographic protocol: TLS 1.0 Cipher suite: TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA_P256 <a href="#">View Notification Server certificate</a>
CEM Mode:	Cloud-enabled Management mode is active Cryptographic protocol: TLS 1.0 Cipher suite: TLS_RSA_WITH_AES_128_CBC_SHA <a href="#">View internet gateway certificate</a>
Server Connection:	Persistent Sent: 28.90 KB Received: 0.78 KB <a href="#">Terminate persistent connection</a>
Peer Downloading:	Disabled
Network Usage:	Unrestricted

**NEW**

- Client Task Agent changes:
  - Establishes and maintain persistent connection to Task Server
  - Routes all CTA HTTP requests through the SMP persistent connection and TS persistent connection.
  - Able to receive data or actions from SMP or TS servers
  - Provides fallback mechanism to pure HTTP connectivity



# CEM Internet Gateway support for websockets

## New Internet Gateway introduced

- Replaces existing IG
  - Hence removes dependency on Apache HTTP Server and OpenSSL – less maintenance efforts on security updates for IG
  - In-place upgrade with complete settings migration
- OS support
  - Windows Server 2008R2, 2012R2 and 2016 (including Core Edition)
  - Further support is possible for Linux (i.e. CentOS) via cross platform .net framework
- Implemented based on open source cross-platform .NET Core 2.0 stack
- Supports websockets
- Improved Management UI
- Extended functionality
  - Reporting to several notification servers
  - Performance counters
- Scalability increase in few times
  - Exact numbers are TBD pending full scalability testing. Target is to support not less than 15-20K per IG. Existing IG supports only 3K

